



## **Cisco Voice Interworking Services (VISM) Configuration Guide and Command Reference**

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<b>Preface</b>	<b>xxi</b>
Objectives	xxi
Audience	xxi
Document Organization	xxii
Documentation	xxiii
Documentation Notes for these Product Releases	xxiii
Related Documentation	xxiii
Technical Manual Order of Use	xxiv
Technical Manual Titles and Descriptions	xxv
Conventions	xxxvi
Obtaining Documentation	xxxvi
Cisco.com	xxxvii
Product Documentation DVD	xxxvii
Ordering Documentation	xxxvii
Documentation Feedback	xxxvii
Cisco Product Security Overview	xxxviii
Reporting Security Problems in Cisco Products	xxxviii
Obtaining Technical Assistance	xxxix
Cisco Technical Support & Documentation Website	xxxix
Submitting a Service Request	xl
Definitions of Service Request Severity	xl
Obtaining Additional Publications and Information	xli

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**CHAPTER 1**

<b>Overview of the VISM and VISM-PR Cards</b>	<b>1-1</b>
New Features in Release 3.3	1-1
Card Description	1-3
Card Types	1-4
Card Service Types	1-8
Card Characteristics	1-8
Card Features	1-9
Redundancy and Bulk Distribution	1-11
Redundancy with Bulk Distribution	1-12
Redundancy Without Bulk Distribution	1-13

- Operating Modes **1-13**
  - VoIP Switching and Switched AAL2 PVC Operating Modes **1-14**
    - Voice TDM Network Interface **1-15**
    - ATM Network Interface **1-15**
    - Call Agent Interface **1-15**
  - AAL2 Trunking Operating Mode **1-16**
  - VoIP Trunking Operating Mode **1-16**
  - AAL1/AAL2 SVC Operating Mode **1-17**

**CHAPTER 2**

**VISM/VISM-PR Functional Description 2-1**

- TDM Line-Handling Function **2-2**
- Bearer Processing Function **2-3**
  - Echo Cancellation, Voice Compression, and A/Mu Law Conversion **2-3**
  - Voice Activity Detection and Silence Suppression **2-3**
  - Fax and Modem Tone Detection **2-4**
  - Jitter Control **2-4**
  - CAS Handling **2-4**
- Signaling Function **2-4**
  - CAS Processing in VoIP Switching and Switched AAL2 PVC Operating Modes **2-6**
  - Processing CCS in Switched AAL2 PVC Operating Mode **2-8**
  - CAS Processing in AAL2 Trunking Operating Mode **2-10**
  - CCS Processing in AAL2 Trunking Operating Mode **2-10**
- DSP Function **2-10**
  - Transporting Voice Cells with VoIP **2-10**
  - Transporting Voice Cells with Switched AAL2 PVC **2-12**
  - Transporting Voice Cells with AAL2 Trunking **2-13**
  - Transporting Voice Cells with Switched AAL1 SVC **2-13**
- Call Control Function **2-14**
  - Connection Model **2-15**
  - xGCP Extensions for AAL2 Switched PVC and AAL2 SVC Operating Modes **2-16**
  - Endpoint Service States **2-17**
  - Restart In Progress Command **2-17**
  - Connection Admission Control **2-18**
- Embedded VISM/VISM-PR Management Functions **2-19**

**CHAPTER 3**

**VISM/VISM-PR Clocking 3-1**

- Description of Network Clocking **3-1**
- Clocking Sources **3-2**

Revertive and Nonrevertive Clocking	3-2
VISM/VISM-PR Card as a Clocking Source	3-3
PXM Card as Clocking Source	3-7
PXM1 Card as a Clocking Source	3-8
PXM1E or PXM45 Card as Clocking Source	3-12

**CHAPTER 4****VISM/VISM-PR Hardware and Software Installation 4-1**

Hardware Installation	4-1
Overview of VISM and VISM-PR Cards in MGX 8000 Series Chassis	4-2
VISM Card Guidelines	4-2
VISM-PR Card Guidelines	4-2
Installing VISM/VISM-PR Cards in an MGX 8850 and MGX 8250 Chassis	4-2
Installing VISM/VISM-PR Cards in an MGX 8230 and MGX 8830 Chassis	4-3
Installing VISM and VISM-PR Front and Back Cards	4-4
Installing a VISM or VISM-PR Front Card	4-4
Installing a VISM or VISM-PR Back Card	4-4
Connecting Cables to Cards	4-5
Cabling for RJ-48 Connectors on T1 and E1 Ports	4-5
Cabling for SMB Connectors on E1 Ports	4-6
Removing VISM and VISM-PR Front and Back Cards	4-6
Removing a VISM or VISM-PR Front Card	4-6
Removing a VISM or VISM-PR Back Card	4-7
Applying Power to the VISM/VISM-PR Card	4-7
Upgrade Procedures	4-7
Prerequisites	4-8
Check Domain Name Length	4-8
VISM/VISM-PR Upgrades with PXM1	4-10
Download VISM/VISM-PR Boot Code and Firmware to PXM1	4-10
Upgrade Boot Code with PXM1 Cards	4-10
Upgrade VISM/VISM-PR Firmware with PXM1 Card	4-11
VISM-PR Upgrades with PXM1E and PXM45	4-13
Download VISM-PR Boot Code and Firmware to PXM1E and PXM45	4-13
Upgrade Boot Code with PXM1E and PXM45 Cards	4-13
Upgrade VISM-PR Firmware with PXM1E and PXM45 Cards	4-14
VISM/VISM-PR Downgrade Procedure	4-15
VISM to VISM-PR Hardware Upgrade	4-16

**CHAPTER 5****Initial Card Configuration 5-1**

Connecting to Cisco MGX 8000 Series Platforms	5-1
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- Connecting to PXM Cards **5-1**
- Logging In to PXM and VISM/VISM-PR Cards **5-2**
- Logging Out of VISM/VISM-PR and PXM Cards **5-4**
- Using the Command-Line Interface **5-4**
  - VISM/VISM-PR Command Attributes **5-5**
- Configuring the VISM/VISM-PR Card **5-6**
  - Allocating Resources **5-6**
  - Configuring the TDM Side **5-8**
    - Configuring T1 and E1 Lines **5-9**
    - Adding Bulk Distribution **5-12**
    - Enabling and Configuring Echo Cancellation **5-13**
- Configuring Connection Admission Control **5-14**
- Configuring Jitter Mode **5-16**

**CHAPTER 6**

**AAL2 Trunking Mode 6-1**

- Configuring the Operating Mode **6-1**
- Configuring the ATM Network Side **6-3**
  - General Guidelines **6-3**
  - Configuring PVC Connections **6-4**
  - Connection CAC Configuration **6-11**
- Configuring TDM Side Signaling for Applications That Use CCS **6-12**
- Configuring TDM Side Signaling for Applications That Use CAS **6-12**
- Adding DS0 Endpoints to Lines **6-12**
- Adding CIDs **6-15**
- Modifying the Profile Table **6-20**
- Sample Configuration **6-27**
  - Sample for CAS **6-27**
  - Sample for CCS **6-28**

**CHAPTER 7**

**VoIP Switching Mode 7-1**

- Configuring the Operating Mode **7-1**
- Configuring the ATM Network Side **7-2**
  - Configuring PVC Connections **7-3**
  - Connection CAC Configuration **7-10**
- Configuring the Call Agent Interface **7-11**
  - Configuring Domain Names and IP Addresses **7-12**
  - Setting Up Call Agents and Protocols **7-12**
  - Configuring Gateway Control Protocol Port **7-17**

Configuring ISDN PRI Backhaul	7-21
Configuring TDM Side Signaling for Applications That Use CCS	7-22
Adding DS0 Endpoints to Lines	7-24
Configuring TDM Side Signaling for Applications That Use CAS	7-26
Placing Gateway Out and In Service	7-28
Sample Configuration	7-29

**CHAPTER 8****VoIP Trunking Mode 8-1**

Configuring the Operating Mode	8-1
Configuring the ATM Network Side	8-2
Configuring PVC Connections	8-3
Connection CAC Configuration	8-10
Configuring Domain Names and IP Addresses	8-11
Configuring TDM Side Signaling for Applications That Use CCS	8-12
Configuring TDM Side Signaling for Applications That Use CAS	8-14
Adding DS0 Endpoints to Lines	8-14
Adding RTP Connections	8-17
Sample Configuration	8-20
Near-End Card Configuration	8-20
Far-End Card Configuration	8-21

**CHAPTER 9****Features and Advanced Configurations 9-1**

DSP/Bearer Features	9-4
Codecs	9-4
G.729a Codec with 20 ms Packetization Period	9-5
VISM-PR Lossless Compression	9-5
Dynamic Payload for Voice Codecs	9-6
V.110	9-6
Enabling V.110	9-6
1560/980 Hz Modem Tone Detection	9-8
Prerequisites	9-8
Configuring the Tone Detection	9-8
Configurable Jitter Buffer	9-9
ATM Fax Relay	9-11
Configure ATM Fax Relay Parameters	9-11
Configure ATM Fax Relay Acknowledgment Timeout	9-14
Enable ATM Fax Relay	9-15
T.38 Fax Relay	9-16

- Call Agent-Controlled T.38 Fax **9-16**
    - Mid-Call DTMF **9-16**
    - DTMF Relay and Passthrough **9-17**
  - ATM (PVC) Features **9-17**
    - Preferred Routes **9-17**
      - Prerequisites **9-18**
      - Configure Preferred Routes **9-18**
    - Priority Bumping **9-23**
      - Configure Priority Bumping **9-23**
  - AIS Propagation Control **9-29**
    - Enabling AIS Suppression **9-30**
    - Configuring OAM Loop Count **9-31**
    - Displaying Alarms **9-31**
    - Alarms Not Suppressed **9-33**
  - Bandwidth Utilization Enhancements **9-33**
    - ATM Bandwidth Reuse for Non-overlapping Traffic **9-33**
    - Dynamic PVC Bandwidth Management **9-34**
    - Channel Current Peak Rates **9-37**
  - PVC OAM Cell Parameter Configuration **9-38**
  - Private Network-to-Network Interface Priority Routing **9-38**
  - Additional VBR Enhancements **9-40**
- Call Control **9-40**
  - Separate Bearer IP Address **9-40**
    - Configuring Bearer IP Address **9-41**
    - Bearer IP Address Ping **9-41**
  - Call Throttling **9-42**
  - Trunking Gateway Control Protocol Release 1.0 **9-43**
    - Configuring TGCP **9-43**
    - Configuring the Timers **9-45**
  - CALEA **9-47**
  - MGC Redundancy **9-48**
  - External DNS **9-48**
  - AAL1 SVC-Based TDM Hairpinning **9-48**
  - MGCP 1.0 **9-49**
  - RSVP-Based Admission Control **9-49**
  - Local Traffic Grooming **9-50**
  - Announcement File System **9-51**
    - Announcement Timeouts **9-51**
    - Announcement Direction **9-51**
    - Broadcast Announcements **9-51**



Multiple Announcement Requests for the Same Endpoint	9-51
Announcement File Server	9-52
Announcement File Server Name	9-52
Announcement File Server Directory Structure	9-52
VISM Announcement Cache Management	9-53
Announcement Expiry	9-53
Permanent Announcements	9-53
ISDN Backhaul Advanced Configuration	9-54
Advanced LAPD Configuration	9-57
Diagnostics/Statistics	9-58
Voice Quality Statistics	9-59
Diagnostic Testing for DSP Failures	9-60
Enable or Disable Diagnostics	9-60
Configure Heartbeat Timer	9-62
History Statistics Collection	9-62
Display ATM Statistics	9-67
Display Cells Per Second	9-68
Static and Real-Time Configuration Display	9-69
VoIP Switching/VoIP Trunking	9-72
AAL2 Trunking	9-74
AAL1 Switching	9-75
Switched AAL2 SVC	9-76
Switched AAL2 PVC	9-78
VoIP and AAL1 SVC	9-80
VoIP Trunking/AAL2 Trunking	9-82
Trap Filtering	9-83
Configure Trap Filtering	9-85
VISM-PR Bulk Statistics Upload to CWM	9-87
Line Statistics	9-88
ATM Connection Statistics	9-89
CID Statistics	9-92
RTP Connection Statistics	9-93
Clock Slip Counters	9-94
Channel Alarm Enhancement	9-94
VISM TDM Line Statistics Collection	9-94
Loopbacks for Lines and Connections	9-94
TDM Features	9-96
E1 CAS Idle Code Configuration	9-96
Idle Code Configuration	9-96
CAS Code Sent When a CID is Added	9-100

- CAS Code Sent When a CID is Deleted **9-100**
- Programmable Tone Plans **9-100**
- Call Progress Tones **9-102**
  - Default Values **9-102**
  - Call Progress Tone Configuration **9-105**
- Wireless Tones **9-107**
  - List of Supported Tones **9-108**
  - Tone Plan File Description **9-109**
  - Tone Plan Addition **9-112**
- TDM Companding Law Configuration **9-118**
  - Configure Companding Law **9-118**
- Programmable CAS Bit Mapping (ABCD CAS bits) **9-119**
  - Configure CAS Bit Mapping Templates **9-119**
- Line Trunk Conditioning **9-124**
  - Adjustable Gain **9-124**
  - Adjustable Music On-Hold Threshold **9-124**
- CAS Features **9-125**
  - Configuring TDM Side Signaling for Applications Using CAS **9-125**
  - Loop Start, DID, and Dial Delay **9-131**
  - Feature Group D **9-131**
  - Configure Flash Hook and Glare Condition Attributes **9-132**
  - Configure ANI and DNIS Digit Order **9-132**
  - CAS Immediate Start and Ground Start Glare Handling **9-132**
- RFC 3064 Package Support **9-133**
- VISM Network Continuity Test **9-133**

**CHAPTER 10**

**CLI Commands 10-1**

- VoIP Switching/VoIP Trunking **10-2**
- AAL2 Trunking **10-13**
- AAL1 Switching **10-20**
- Switched AAL2 SVC **10-29**
- Switched AAL2 PVC **10-38**
- VoIP and AAL1 SVC **10-48**
- VoIP Trunking/AAL2 Trunking **10-60**

**APPENDIX A**

**VISM-PR Traps A-1**

- Card Traps **A-2**
- Port Traps **A-2**

Channel/Line Traps	<b>A-3</b>
Connection Traps	<b>A-3</b>
CID Traps	<b>A-4</b>
Endpoint Traps	<b>A-4</b>
Media Gateway Traps	<b>A-4</b>
HDLC Traps	<b>A-5</b>
Tone Plan Traps	<b>A-6</b>
CAC Trap	<b>A-6</b>
CAS Traps	<b>A-6</b>
RTP Traps	<b>A-7</b>
LAPD Traps	<b>A-7</b>
RSVP Traps	<b>A-7</b>
Announcement Traps	<b>A-8</b>
RUDP Traps	<b>A-8</b>
xGCP Traps	<b>A-9</b>

---

**INDEX**





## FIGURES

<i>Figure 1-1</i>	VISM T1 and E1 Front Cards	<b>1-5</b>
<i>Figure 1-2</i>	VISM-PR T1 and E1 Front Cards	<b>1-6</b>
<i>Figure 1-3</i>	VISM T1 and E1 Back Cards	<b>1-7</b>
<i>Figure 1-4</i>	Cisco MGX 8850 and VISM as a Voice Gateway	<b>1-7</b>
<i>Figure 1-5</i>	VISM Card Block Diagram	<b>1-9</b>
<i>Figure 1-6</i>	VISM Block Diagram for VoIP Switching and Switched AAL2 PVC Operating Modes	<b>1-14</b>
<i>Figure 1-7</i>	VISM Block Diagram for the AAL2 Trunking Operating Mode	<b>1-16</b>
<i>Figure 2-1</i>	VISM/VISM-PR Detailed Functional Blocks	<b>2-2</b>
<i>Figure 2-2</i>	VISM/VISM-PR Signaling Paths	<b>2-5</b>
<i>Figure 2-3</i>	CAS Processing—Message Structure	<b>2-6</b>
<i>Figure 2-4</i>	CAS in Initiating and Terminating a Call	<b>2-7</b>
<i>Figure 2-5</i>	PRI/Backhaul Path	<b>2-9</b>
<i>Figure 2-6</i>	RUDP Hierarchy of Sets, Groups, and Sessions	<b>2-9</b>
<i>Figure 2-7</i>	VoIP Protocol Stack	<b>2-11</b>
<i>Figure 2-8</i>	VoIP Cell Packetization and Transmission	<b>2-11</b>
<i>Figure 2-9</i>	AAL2 Cell Packetization and Transmission	<b>2-13</b>
<i>Figure 2-10</i>	Call Agent Communications Links	<b>2-14</b>
<i>Figure 2-11</i>	Basic Connection Model	<b>2-15</b>
<i>Figure 3-1</i>	VISM Configured for Loop Clocking	<b>3-3</b>
<i>Figure 3-2</i>	VISM Configured for Local Clocking	<b>3-8</b>
<i>Figure 4-1</i>	Available Chassis Slots for VISM Cards in the MGX 8850 and MGX 8250—Front View	<b>4-3</b>
<i>Figure 4-2</i>	Available Chassis Slots for VISM Cards in the Cisco MGX 8230—Front View	<b>4-4</b>
<i>Figure 4-3</i>	RJ-48 Connector	<b>4-5</b>
<i>Figure 7-1</i>	VISM to Call Agent Communication	<b>7-11</b>





## TABLES

<i>Table 1</i>	Technical Manuals and Release Notes for Cisco MGX and BPX Switches and Media Gateways	<b>xxv</b>
<i>Table 2</i>	Documents that Ship with Multiservice Switch Products	<b>xxxii</b>
<i>Table 3</i>	Descriptions of Technical Manuals and Release Notes for Cisco Multiservice Switch Products	<b>xxxiii</b>
<i>Table 1-1</i>	VISM/VISM-PR Release 3.3 Features	<b>1-1</b>
<i>Table 1-2</i>	VISM/VISM-PR and MGX 8000 Series Switch Support	<b>1-4</b>
<i>Table 1-3</i>	Service Module Redundancy	<b>1-12</b>
<i>Table 3-1</i>	Revertive/Nonrevertive Clocking and PXM Back Card Support	<b>3-2</b>
<i>Table 3-2</i>	Parameters for cnfln Command	<b>3-4</b>
<i>Table 3-3</i>	Parameters for cnfln Command	<b>3-10</b>
<i>Table 3-4</i>	Parameters for cnfclsrc Command	<b>3-13</b>
<i>Table 4-1</i>	RJ-48 Connector Schematic	<b>4-5</b>
<i>Table 5-1</i>	VISM/VISM-PR Command Attributes—Log File, Card State, and Privilege Level	<b>5-5</b>
<i>Table 5-2</i>	Codec Templates	<b>5-7</b>
<i>Table 5-3</i>	Parameters for cnfln Command	<b>5-9</b>
<i>Table 5-4</i>	Parameters for addlink Command	<b>5-12</b>
<i>Table 5-5</i>	Parameters for cnfcacparams Command	<b>5-15</b>
<i>Table 5-6</i>	Parameters for cnfvbdpol Command	<b>5-16</b>
<i>Table 6-1</i>	Parameters for addcon Command	<b>6-4</b>
<i>Table 6-2</i>	Parameters for cnfcon Command	<b>6-6</b>
<i>Table 6-3</i>	Parameters for cnfconcacparams Command	<b>6-11</b>
<i>Table 6-4</i>	Parameters for addccs Command	<b>6-12</b>
<i>Table 6-5</i>	Parameters for addendpts Command	<b>6-13</b>
<i>Table 6-6</i>	Parameters for addcid Command	<b>6-16</b>
<i>Table 6-7</i>	dspaal2profile Field Descriptions	<b>6-20</b>
<i>Table 6-8</i>	AAL2 Operating Mode Profiles	<b>6-21</b>
<i>Table 6-9</i>	Parameters for cnfprofparams Command	<b>6-23</b>
<i>Table 6-10</i>	Parameters for cnfprofelemvoice Command	<b>6-24</b>
<i>Table 6-11</i>	Parameters for cnfprofelemvbd Command	<b>6-25</b>
<i>Table 7-1</i>	Parameters for addcon Command	<b>7-3</b>
<i>Table 7-2</i>	Parameters for cnfcon Command	<b>7-6</b>
<i>Table 7-3</i>	Parameters for cnfconprotect Command	<b>7-7</b>

<i>Table 7-4</i>	Parameters for cnfconcacparams Command	<b>7-10</b>
<i>Table 7-5</i>	Parameters for cnfvismip Command	<b>7-12</b>
<i>Table 7-6</i>	Parameters for adddn Command	<b>7-13</b>
<i>Table 7-7</i>	Parameters for adddnip Command	<b>7-13</b>
<i>Table 7-8</i>	Parameters for addmgcgrpentry Command	<b>7-14</b>
<i>Table 7-9</i>	Parameters for cnfmgcgrpparam Command	<b>7-15</b>
<i>Table 7-10</i>	Parameters for addmgcgrpprotocol Command	<b>7-15</b>
<i>Table 7-11</i>	Parameters for cnfxgcppeer Command	<b>7-17</b>
<i>Table 7-12</i>	Parameters for cnfxgcpretry Command	<b>7-18</b>
<i>Table 7-13</i>	Parameters for cnfxgcpbt Command	<b>7-18</b>
<i>Table 7-14</i>	Parameters for cnfsrcppeergrpparam Command	<b>7-20</b>
<i>Table 7-15</i>	Parameters for cnfsrcpretry Command	<b>7-20</b>
<i>Table 7-16</i>	Parameters for addsesgrp Command	<b>7-21</b>
<i>Table 7-17</i>	Parameters for addses Command	<b>7-22</b>
<i>Table 7-18</i>	Parameters for addlapd Command	<b>7-23</b>
<i>Table 7-19</i>	Parameters for cnflapdtype Command	<b>7-23</b>
<i>Table 7-20</i>	Parameters for addendpts Command	<b>7-24</b>
<i>Table 7-21</i>	Parameters for addcasvar Command	<b>7-27</b>
<i>Table 7-22</i>	Parameters for cnfcasvar Command	<b>7-28</b>
<i>Table 7-23</i>	Parameters for cnfcasendpt Command	<b>7-28</b>
<i>Table 8-1</i>	Parameters for addcon Command	<b>8-3</b>
<i>Table 8-2</i>	Parameters for cnfcon Command	<b>8-6</b>
<i>Table 8-3</i>	Parameters for cnfconprotect Command	<b>8-7</b>
<i>Table 8-4</i>	Parameters for cnfconcacparams Command	<b>8-10</b>
<i>Table 8-5</i>	Parameters for cnfvismip Command	<b>8-11</b>
<i>Table 8-6</i>	Parameters for addrudprtrunk Command	<b>8-12</b>
<i>Table 8-7</i>	Parameters for addlapdtrunk Command	<b>8-13</b>
<i>Table 8-8</i>	Parameters for addlapd Command	<b>8-13</b>
<i>Table 8-9</i>	Parameters for cnflapdtype Command	<b>8-14</b>
<i>Table 8-10</i>	Parameters for addendpts Command	<b>8-15</b>
<i>Table 8-11</i>	Parameters for addrtprcon Command	<b>8-17</b>
<i>Table 9-1</i>	VISM/VISM-PR Features and Advanced Configurations	<b>9-1</b>
<i>Table 9-2</i>	Supported Codecs	<b>9-4</b>
<i>Table 9-3</i>	Parameters for cnfcodejtrdelay Command	<b>9-10</b>
<i>Table 9-4</i>	Parameters for cnffaxrelayparams Command	<b>9-12</b>



<i>Table 9-5</i>	Parameters for addcon Command	<b>9-18</b>
<i>Table 9-6</i>	Parameters for cnfcon Command	<b>9-21</b>
<i>Table 9-7</i>	Parameters for addcon Command	<b>9-24</b>
<i>Table 9-8</i>	Parameters for cnfcon Command	<b>9-26</b>
<i>Table 9-9</i>	Parameters for the cnfaissuppression Command	<b>9-30</b>
<i>Table 9-10</i>	Parameters for cnfcidis Command	<b>9-35</b>
<i>Table 9-11</i>	Parameters for cnfcidoos Command	<b>9-35</b>
<i>Table 9-12</i>	Parameters for cnfoamparams Command	<b>9-38</b>
<i>Table 9-13</i>	Parameters for the cnfvismip Command	<b>9-41</b>
<i>Table 9-14</i>	Parameters for the addmgcgrpprotocol Command	<b>9-44</b>
<i>Table 9-15</i>	Parameters for the cnfdisctimers Command	<b>9-46</b>
<i>Table 9-16</i>	CLI Commands for Configuring MGCP	<b>9-49</b>
<i>Table 9-17</i>	CLI Commands for Configuring RSVP-Based Admission Control	<b>9-50</b>
<i>Table 9-18</i>	CLI Commands for Configuring the Announcement File System Feature	<b>9-53</b>
<i>Table 9-19</i>	Parameters for cnfsesack Command	<b>9-54</b>
<i>Table 9-20</i>	Parameters for cnfsesport Command	<b>9-55</b>
<i>Table 9-21</i>	Parameters for cnfsesretrans Command	<b>9-56</b>
<i>Table 9-22</i>	Parameters for cnflapdwinize Command	<b>9-57</b>
<i>Table 9-23</i>	Parameters for cnflapdretrans Command	<b>9-57</b>
<i>Table 9-24</i>	Parameters for cnflapdtimer Command	<b>9-58</b>
<i>Table 9-25</i>	Parameters for dsphistorystats Command	<b>9-63</b>
<i>Table 9-26</i>	Parameters for clrhistorystats Command	<b>9-67</b>
<i>Table 9-27</i>	VoIP Switching/VoIP Trunking Static Display Commands	<b>9-72</b>
<i>Table 9-28</i>	VoIP Switching/VoIP Trunking Run-time Display Commands	<b>9-73</b>
<i>Table 9-29</i>	AAL2 Trunking Static Display Commands	<b>9-74</b>
<i>Table 9-30</i>	AAL2 Trunking Run-time Display Commands	<b>9-75</b>
<i>Table 9-31</i>	AAL1 Switching Static Display Commands	<b>9-75</b>
<i>Table 9-32</i>	AAL1 Switching Run-time Display Commands	<b>9-76</b>
<i>Table 9-33</i>	Switched AAL2 SVC Static Display Commands	<b>9-76</b>
<i>Table 9-34</i>	Switched AAL2 SVC Run-time Display Commands	<b>9-78</b>
<i>Table 9-35</i>	Switched AAL2 PVC Static Display Commands	<b>9-78</b>
<i>Table 9-36</i>	Switched AAL2 PVC Run-time Display Commands	<b>9-79</b>
<i>Table 9-37</i>	VoIP and AAL1 Static Display Commands	<b>9-80</b>
<i>Table 9-38</i>	VoIP and AAL1 Run-time Display Commands	<b>9-81</b>
<i>Table 9-39</i>	VoIP Trunking/AAL2 Trunking Static Display Commands	<b>9-82</b>

<i>Table 9-40</i>	VoIP Trunking/AAL2 Trunking Run-time Display Commands	<b>9-83</b>
<i>Table 9-41</i>	VISM-PR T1 Line Statistics	<b>9-88</b>
<i>Table 9-42</i>	VISM-PR E1 Line Statistics	<b>9-88</b>
<i>Table 9-43</i>	VISM-PR PVC Statistics	<b>9-89</b>
<i>Table 9-44</i>	VISM-PR CID Statistics	<b>9-92</b>
<i>Table 9-45</i>	Parameters for cnfdsOloop Command	<b>9-95</b>
<i>Table 9-46</i>	Parameters for the cnfcascode Command	<b>9-97</b>
<i>Table 9-47</i>	Call Progress Tones	<b>9-102</b>
<i>Table 9-48</i>	Parameters for the addualtonedet Command	<b>9-105</b>
<i>Table 9-49</i>	Parameters for the cnfseqtonedet Command	<b>9-106</b>
<i>Table 9-50</i>	Mandatory Values for Defining Tones	<b>9-111</b>
<i>Table 9-51</i>	Optional Parameters for Defining Tones	<b>9-112</b>
<i>Table 9-52</i>	Parameters for the adddn Command	<b>9-113</b>
<i>Table 9-53</i>	Parameters for the adddnip Command	<b>9-113</b>
<i>Table 9-54</i>	Parameters for the addtoneplan Command	<b>9-114</b>
<i>Table 9-55</i>	Parameters for the addcastranstbl Command	<b>9-120</b>
<i>Table 9-56</i>	Parameters for the cnfcastransendpt Command	<b>9-121</b>
<i>Table 9-57</i>	Parameters for cnfcasparamsource Command	<b>9-125</b>
<i>Table 9-58</i>	Parameters for cnfcasonhooktime Command	<b>9-126</b>
<i>Table 9-59</i>	Parameters for cnfcasoffhooktime Command	<b>9-126</b>
<i>Table 9-60</i>	Parameters for cnfcaswinktime Command	<b>9-126</b>
<i>Table 9-61</i>	Parameters for cnfcasglaretime Command	<b>9-127</b>
<i>Table 9-62</i>	Parameters for cnfcasguardtime Command	<b>9-127</b>
<i>Table 9-63</i>	Parameters for cnfcasdialdelaytime Command	<b>9-127</b>
<i>Table 9-64</i>	Parameters for cnfcascode Command	<b>9-128</b>
<i>Table 9-65</i>	Parameters for cnfdsOlocalcas Command	<b>9-129</b>
<i>Table 9-66</i>	Parameters for addcasvar Command	<b>9-130</b>
<i>Table 9-67</i>	Parameters for cnfcasvar Command	<b>9-130</b>
<i>Table 9-68</i>	Parameters for cnfcasendpt Command	<b>9-131</b>
<i>Table 10-1</i>	VISM/VISM-PR Operating Modes	<b>10-1</b>
<i>Table 10-2</i>	VoIP Switching/VoIP Trunking Commands	<b>10-2</b>
<i>Table 10-3</i>	AAL2 Trunking Commands	<b>10-13</b>
<i>Table 10-4</i>	AAL1 Switching Commands	<b>10-20</b>
<i>Table 10-5</i>	Switched AAL2 SVC Commands	<b>10-29</b>
<i>Table 10-6</i>	Switched AAL2 PVC Commands	<b>10-38</b>

<i>Table 10-7</i>	VoIP and AAL1 Commands	<b>10-48</b>
<i>Table 10-8</i>	VoIP Trunking/AAL2 Trunking Commands	<b>10-60</b>
<i>Table 10-9</i>	Mandatory Parameters for Defining Tones	<b>10-124</b>
<i>Table 10-10</i>	Optional Parameters for Defining Tones	<b>10-125</b>
<i>Table A-1</i>	Card Trap Group	<b>A-2</b>
<i>Table A-2</i>	Port Trap Group	<b>A-2</b>
<i>Table A-3</i>	Channel/Line Trap Group	<b>A-3</b>
<i>Table A-4</i>	Connection Trap Group	<b>A-3</b>
<i>Table A-5</i>	CID Trap Group	<b>A-4</b>
<i>Table A-6</i>	Endpoint Trap Group	<b>A-4</b>
<i>Table A-7</i>	Media Gateway Trap Group	<b>A-4</b>
<i>Table A-8</i>	HDLC Trap Group	<b>A-5</b>
<i>Table A-9</i>	Tone Plan Trap Group	<b>A-6</b>
<i>Table A-10</i>	CAC Trap Group	<b>A-6</b>
<i>Table A-11</i>	CAS Group	<b>A-6</b>
<i>Table A-12</i>	RTP Group	<b>A-7</b>
<i>Table A-13</i>	LAPD Group	<b>A-7</b>
<i>Table A-14</i>	RSVP Group	<b>A-7</b>
<i>Table A-15</i>	Announcement Group	<b>A-8</b>
<i>Table A-16</i>	RUDP Group	<b>A-8</b>
<i>Table A-17</i>	xGCP Group	<b>A-9</b>





## Preface

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The *Cisco Voice Interworking Services (VISM) Configuration Guide and Command Reference* provides information about the VISM/VISM-PR Software Release 3.3.

This preface includes the following sections:

- Objectives, page xxi
- Audience, page xxi
- Document Organization, page xxii
- Documentation, page xxiii
- Conventions, page xxxvi
- Obtaining Documentation, page xxxvi
- Documentation Feedback, page xxxvii
- Cisco Product Security Overview, page xxxviii
- Obtaining Technical Assistance, page xxxix
- Obtaining Additional Publications and Information, page xli

## Objectives

The *Cisco Voice Interworking Services (VISM) Configuration Guide and Command Reference* describes features, functions, installation, operation, and command line interface of the VISM/VISM-PR card.

## Audience

This document is intended for the following personnel:

- Technicians responsible for installing VISM/VISM-PR cards on the Cisco MGX 8230, Cisco MGX 8250, Cisco MGX 8830, and Cisco MGX 8850 (PXM1, PXM1E, and PXM45-based) shelves.
- Network administrators responsible for configuring a Cisco MGX 8000 series shelves.

We recommend that installers be familiar with electronic circuitry and wiring practices and have experience as an electronic or electromechanical technician.

Installers and network administrators should also be familiar with Cisco switches and routers, T1 and E1 voice lines, and Cisco wide area networks. Cisco also recommends that you have a system administrator, who is familiar with your network and UNIX servers, present during the initial installation of a Cisco MGX 8000 Series platform.

## Document Organization

This document contains the following chapters and appendices:

Chapter 1	Overview of the VISM and VISM-PR Cards Describes the new features added to the VISM/VISM-PR card in Release 3.3. Provides a general description of the VISM/VISM-PR card.
Chapter 2	VISM/VISM-PR Functional Description Provides conceptual VISM/VISM-PR functional information.
Chapter 3	VISM/VISM-PR Clocking Describes clocking concepts and configurations for VISM/VISM-PR and PXM cards.
Chapter 4	VISM/VISM-PR Hardware and Software Installation Describes the VISM/VISM-PR hardware and installation process. Provides software installation and upgrade information.
Chapter 5	Initial Card Configuration Describes the procedures for initially configuring the VISM/VISM-PR card.
Chapter 6	AAL2 Trunking Mode Describes the procedures for configuring the VISM/VISM-PR card for the AAL2 trunking mode.
Chapter 7	VoIP Switching Mode Describes the procedures for configuring the VISM/VISM-PR card for the VoIP switching mode.
Chapter 8	VoIP Trunking Mode Describes the procedures for configuring the VISM/VISM-PR card for the VoIP trunking mode.
Chapter 9	Features and Advanced Configurations Describes the features of the VISM/VISM-PR card and provides some advanced configurations.

Chapter 10	CLI Commands
	Describes the syntax and semantics of each VISM/VISM-PR command line interface (CLI) command.
Appendix A	VISM-PR Traps
	Provides a list of traps that can be filtered on the VISM-PR card.

An index is also included.

## Documentation

*A Guide to Cisco Multiservice Switch Documentation* ships with your product. That guide contains general information about how to locate Cisco MGX, BPX, SES, and CWM documentation online.

## Documentation Notes for these Product Releases

This release includes new hardware or features for the following releases:

- Cisco MGX Release 5.1 introduces the Cisco MGX 8850/B multiservice switch
- Cisco MGX Release 5.1, for these multiservice switches:
  - Cisco MGX 8850 (PXM1E)
  - Cisco MGX 8850 (PXM45)
  - Cisco MGX 8950
  - Cisco MGX 8830
- Cisco MGX Release 1.3, for these multiservice switches:
  - Cisco MGX 8850 (PXM1)
  - Cisco MGX 8230
  - Cisco MGX 8250
- Cisco MGX Release 5.1, for the Route Processor Modules (RPM-XF and RPM-PR)
- Cisco WAN Manager Release 15.1. CWM Release 15 introduced a helpful new documentation feature: web-based *online help*. To invoke online help, press **F1** on a PC, press the **Help** key on a UNIX workstation, or select **Help** from the main or popup menu. Cisco WAN Manager online help has been updated for Release 15.1.

Other components of multiservice WAN products, such as the Service Expansion Shelf (SES) and WAN switching software have no new features for this release.

## Related Documentation

This section describes the technical manuals and release notes that support this release of Cisco Multiservice Switch products.

## Technical Manual Order of Use

Use the technical manuals listed here in the following order:

- 
- Step 1** Refer to the documents that ship with your product. Observe all safety precautions.
- *Regulatory Compliance and Safety Information for Cisco Multiservice Switch Products (MGX, BPX, and SES)*—This document familiarizes you with safety precautions for your product.
  - *Guide to Cisco Multiservice Switch Documentation*—This document explains how to find documentation for MGX, BPX, and SES multiservice switches and media gateways as well as CWM network management software. These documents are available only online.
  - *Installation Warning Card*—This document provides precautions about installing your cards. It explains such subjects as removing the shipping tab and inserting cards properly into the correct slots.
- Step 2** Refer to the release notes for your product.
- Step 3** If your network uses the CWM network management system, upgrade CWM. (If you are going to install CWM for the first time, do so *after* Step 4.) Upgrade instructions are included in the following documents:
- *Cisco WAN Manager Installation Guide, Release 15*
  - *Cisco WAN Manager User's Guide, Release 15*
- Step 4** If your network contains MGX and SES products, refer to this manual for planning information:
- *Cisco PNNI Network Planning Guide for MGX and SES Products*
- Step 5** Refer to these manuals for information about installing cards and cables in the MGX chassis:
- *Cisco MGX 8850 (PXM1E/PXM45), Cisco MGX 8950, and Cisco MGX 8830 Hardware Installation Guide, Releases 2 Through 5.1* for installing cards and cables in these chassis.
  - *Cisco MGX 8xxx Edge Concentrator Installation and Configuration Guide* for installing cards and cables in the Cisco MGX 8230, Cisco MGX 8250, or Cisco MGX 8850 (PXM1) chassis.
- Step 6** Refer to the manuals that help you configure your MGX switch and processor cards:
- *Cisco MGX 8850 (PXM1E/PXM45), Cisco MGX 8950, and Cisco MGX 8830 Configuration Guide, Release 5.1* for these chassis.
  - *Cisco MGX 8xxx Edge Concentrator Installation and Configuration Guide* for the Cisco MGX 8230, Cisco MGX 8250, or Cisco MGX 8850 (PXM1) chassis.
- Step 7** Refer to the manual that supports the additional cards you intend to install in your switch. For example:
- The services books can help you establish ATM, Frame Relay, or circuit emulation services on your switch.
  - The VISM book can help you set up your switch as a voice gateway, and the RPM book can help you implement IP on the switch.
- Step 8** Additional books, such as command reference guides and error message books, can help with the daily operation and maintenance of your switch.
- 



**Note**

Manual titles may be different for earlier software releases.

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## Technical Manual Titles and Descriptions

Books and release notes in Table 1 are listed in order of use and include information about which multiservice switch or media gateway the document supports.

The books for Cisco MGX 8230, Cisco MGX 8250, and Cisco MGX 8850 (PXM1) switches were not updated, therefore, some information about configuring and using the new MPSM-8-T1E1 card in these switches is included in the following books:

- *Cisco ATM Services (AUSM/MPSM) Configuration Guide and Command Reference for MGX Switches, Release 5.1*
- *Cisco Frame Relay Services (FRSM/MPSM) Configuration Guide and Command Reference for MGX Switches, Release 5.1*
- *Cisco Circuit Emulation Services (CESM/MPSM) Configuration Guide and Command Reference for MGX Switches, Release 5.1*

Information about how to install or upgrade to the MPSM-8-T1E1 card in Cisco MGX 8230, Cisco MGX 8250, and Cisco MGX 8850 (PXM1) switches is in the *Release Notes for Cisco MGX 8230, Cisco MGX 8250, and Cisco MGX 8850 (PXM1) Switches, Release 1.3.12*.



### Note

Refer to each product's release notes for the latest information on features, bug fixes, and more.

## Terms

Two main types of ATM cards are used in MGX switches: AXSM and AUSM. *AXSM* stands for ATM Switching Service Module. *AUSM* stands for ATM UNI (User Network Interface) Service Module.

*CWM* stands for Cisco WAN Manager, our multiservice switch network management system.

*Legacy service module* refers to a previously introduced card. For this release, the term is used specifically for the CESM-8-T1E1, FRSM-8-T1E1, and AUSM-8-T1E1 cards, which can now be replaced by the new MPSM-8-T1E1 card.

*MPSM* stands for Multiprotocol Service Module. (MPSM is also an ATM card.)

*RPM* stands for Route Processor Module.

*SES* stands for Service Expansion Shelf.

*VISM* stands for Voice Interworking Service Module.

*VXSM* stands for Voice Switch Service Module.

**Table 1** Technical Manuals and Release Notes for Cisco MGX and BPX Switches and Media Gateways

Document Title and Part Number	BPX with SES Rel. 4	MGX 8230 Rel. 1.3	MGX 8250 Rel. 1.3	MGX 8850 (PXM1) Rel. 1.3	MGX 8830 Rel. 5.1	MGX 8850 (PXM1E) Rel. 5.1	MGX 8850 (PXM45) Rel. 5.1	MGX 8950 Rel. 5.1	MGX 8880 Rel. 5.1.
<b>Overview and Safety Documents</b>									
<i>Guide to Cisco Multiservice Switch Documentation</i> DOC-7814807=	x	x	x	x	x	x	x	x	x
<i>Installation Warning Card</i> DOC-7812348=	x	x	x	x	x	x	x	x	x

**Table 1** Technical Manuals and Release Notes for Cisco MGX and BPX Switches and Media Gateways (continued)

Document Title and Part Number	BPX with SES Rel. 4	MGX 8230 Rel. 1.3	MGX 8250 Rel. 1.3	MGX 8850 (PXM1) Rel. 1.3	MGX 8830 Rel. 5.1	MGX 8850 (PXM1E) Rel. 5.1	MGX 8850 (PXM45) Rel. 5.1	MGX 8950 Rel. 5.1	MGX 8880 Rel. 5.1.
<i>Regulatory Compliance and Safety Information for Cisco Multiservice Switch Products (MGX, BPX, and SES)</i> DOC-7814790=	x	x	x	x	x	x	x	x	x
<i>Release Notes for the Cisco MGX 8880 Media Gateway, Release 5.0.20</i> OL-6942-01	—	—	—	—	—	—	—	—	x
<i>Release Notes for Cisco MGX 8850 (PXM1E/PXM45), Cisco MGX 8950, and Cisco MGX 8830 Switches, Release 5.1.00</i> OL-6478-01	—	—	—	—	x	x	x	x	
<i>Release Notes for Cisco MGX 8230, Cisco MGX 8250, and Cisco MGX 8850 (PXM1) Switches, Release 1.3.12</i> OL-7660-01	—	x	x	x	—	—	—	—	—
<i>Release Notes for the Cisco Voice Switch Service Module (VXSM), Release 5.0.70</i> OL-7088-01	—	—	—	—	—	—	x	—	x
<i>Release Notes for Cisco WAN Manager, Release 15.0.00</i> OL-6495-01	x	x	x	x	x	x	x	x	x
<i>Release Notes for the Cisco Voice Interworking Service Module (VISM), Release 3.3.20</i> OL-7575-01	—	x	x	x	x	x	x	—	x
<i>Release Notes for Cisco MGX Route Processor Module (RPM-XF) IOS Release 12.3(7)T3 for PXM45-based Switches, Release 5.0.10</i> OL-6305-01	—	—	—	—	x	—	x	x	x

**Table 1** Technical Manuals and Release Notes for Cisco MGX and BPX Switches and Media Gateways (continued)

Document Title and Part Number	BPX with SES Rel. 4	MGX 8230 Rel. 1.3	MGX 8250 Rel. 1.3	MGX 8850 (PXM1) Rel. 1.3	MGX 8830 Rel. 5.1	MGX 8850 (PXM1E) Rel. 5.1	MGX 8850 (PXM45) Rel. 5.1	MGX 8950 Rel. 5.1	MGX 8880 Rel. 5.1.
<i>Release Notes for Cisco MGX Route Processor Module (RPM-PR) IOS Release 12.3(7)T3 for MGX Releases 1.3.10 and 5.0.10</i> OL-6309-01	—	x	x	x	x	x	x	x	x
<i>Cisco MGX 8230 Edge Concentrator Overview, Release 1.1.3</i> DOC-7812899=	—	x	—	—	—	—	—	—	—
<i>Cisco MGX 8250 Edge Concentrator Overview, Release 1.1.3</i> DOC-7811576=	—	—	x	—	—	—	—	—	—
<i>Cisco MGX 8850 Multiservice Switch Overview, Release 1.1.3</i> OL-1154-01	—	—	—	x	—	—	—	—	—
<b>Hardware Installation Guides</b>									
<i>Cisco MGX 8850 (PXM1E/PXM45), Cisco MGX 8950, and Cisco MGX 8830 Hardware Installation Guide, Releases 2 Through 5.1</i> OL-4545-01	—	—	—	—	x	x	x	x	x
<i>Cisco Service Expansion Shelf Hardware Installation Guide, Release 1</i> DOC-786122=	x	—	—	—	—	—	—	—	—
<b>Planning and Configuration Guides</b>									
<i>Cisco PNNI Network Planning Guide for MGX and SES Products</i> OL-3847-01	x	—	—	—	x	x	x	x	x
<i>Cisco MGX 8850 (PXM1E/PXM45), Cisco MGX 8950, and Cisco MGX 8830 Configuration Guide, Release 5.1</i> OL-6482-01	—	—	—	—	x	x	x	x	x
<i>Cisco WAN Manager Installation Guide, Release 15</i> OL-6259-01	x	x	x	x	x	x	x	x	x

**Table 1** Technical Manuals and Release Notes for Cisco MGX and BPX Switches and Media Gateways (continued)

Document Title and Part Number	BPX with SES Rel. 4	MGX 8230 Rel. 1.3	MGX 8250 Rel. 1.3	MGX 8850 (PXM1) Rel. 1.3	MGX 8830 Rel. 5.1	MGX 8850 (PXM1E) Rel. 5.1	MGX 8850 (PXM45) Rel. 5.1	MGX 8950 Rel. 5.1	MGX 8880 Rel. 5.1.
<i>Cisco WAN Manager User's Guide, Release 15</i> OL-6257-01	x	x	x	x	x	x	x	x	x
<i>Cisco MGX 8850 Edge Concentrator Installation and Configuration, Release 1.1.3</i> DOC-7811223=	—	—	—	x	—	—	—	—	—
<i>Cisco SES PNNI Controller Software Configuration Guide, Release 3</i> DOC-7814258=	x	—	—	—	—	—	—	—	—
<i>Cisco MGX 8230 Edge Concentrator Installation and Configuration, Release 1.1.3</i> DOC-7811215=	—	x	—	—	—	—	—	—	—
<i>Cisco MGX 8250 Edge Concentrator Installation and Configuration, Release 1.1.3</i> DOC-7811217=	—	—	x	—	—	—	—	—	—
<b>Service Module Configuration and Reference Guides</b>									
<i>Cisco MGX Route Processor Module (RPM-PR) Installation and Configuration Guide, Release 2.1</i> 78-12510-02	—	x	x	x	—	—	—	—	—
<i>Frame Relay Software Configuration Guide and Command Reference for the Cisco MGX 8850 FRSM12 Card, Release 3</i> DOC-7810327=	—	—	—	—	—	—	x	—	—
<i>Cisco ATM Services (AUSM/MPSM) Configuration Guide and Command Reference for MGX Switches, Release 5.1<sup>1</sup></i> OL-6479-01	—	1	2	2	x	x	x	—	—
<i>Cisco Frame Relay Services (FRSM/MPSM) Configuration Guide and Command Reference for MGX Switches, Release 5.1<sup>1</sup></i> OL-6480-01	—	2	2	2	x	x	x	—	—

**Table 1** Technical Manuals and Release Notes for Cisco MGX and BPX Switches and Media Gateways (continued)

Document Title and Part Number	BPX with SES Rel. 4	MGX 8230 Rel. 1.3	MGX 8250 Rel. 1.3	MGX 8850 (PXM1) Rel. 1.3	MGX 8830 Rel. 5.1	MGX 8850 (PXM1E) Rel. 5.1	MGX 8850 (PXM45) Rel. 5.1	MGX 8950 Rel. 5.1	MGX 8880 Rel. 5.1.
<i>Cisco Circuit Emulation Services (CESM/MPSM) Configuration Guide and Command Reference for MGX Switches, Release 5.1<sup>1</sup></i> OL-6481-01	—	2	2	2	x	x	x	—	—
<i>Cisco MGX Route Processor Module (RPM-XF) Installation and Configuration Guide, Release 5.1</i> OL-6594-01	—	—	—	—	—	—	x	x	x
<i>Cisco ATM Services (AXSM) Configuration Guide and Command Reference for MGX Switches, Release 5</i> OL-6484-01	—	—	—	—	—	—	x	x	x
<i>Cisco ATM and Frame Relay Services (MPSM-T3E3-155) Configuration Guide and Command Reference for MGX Switches, Release 5.1</i> OL-6487-01	—	—	—	—	x	—	x	—	—
<i>Cisco Voice Switch Services (VXSM) Configuration Guide and Command Reference for MGX Switches, Release 5</i> OL-4625-01	—	—	—	—	—	—	x	—	x
<i>Cisco Voice Interworking Services (VISM) Configuration Guide and Command Reference, Release 3.3</i> OL-5358-01	—	x	x	x	x	x	x	—	x
<b>Reference Guides</b>									
<i>Cisco MGX 8230 Multiservice Gateway Error Messages, Release 1.1.3</i> DOC-78112113=	—	x	—	—	—	—	—	—	—
<i>Cisco MGX 8230 Multiservice Gateway Command Reference, Release 1.1.3</i> DOC-7811211=	—	x	—	—	—	—	—	—	—

**Table 1** Technical Manuals and Release Notes for Cisco MGX and BPX Switches and Media Gateways (continued)

Document Title and Part Number	BPX with SES Rel. 4	MGX 8230 Rel. 1.3	MGX 8250 Rel. 1.3	MGX 8850 (PXM1) Rel. 1.3	MGX 8830 Rel. 5.1	MGX 8850 (PXM1E) Rel. 5.1	MGX 8850 (PXM45) Rel. 5.1	MGX 8950 Rel. 5.1	MGX 8880 Rel. 5.1.
<i>Cisco MGX 8250 Multiservice Gateway Command Reference, Release 1.1.3</i> DOC-7811212=	—	—	x	—	—	—	—	—	—
<i>Cisco MGX 8250 Multiservice Gateway Error Messages, Release 1.1.3</i> DOC-7811216=	—	—	x	—	—	—	—	—	—
<i>Cisco MGX 8800 Series Switch Command Reference, Release 1.1.3<sup>1</sup></i> DOC-7811210=	—	x	x	x	—	—	—	—	—
<i>Cisco MGX 8800 Series Switch System Error Messages, Release 1.1.3</i> DOC-7811240=	—	x	x	x	—	—	—	—	—
<i>Cisco SES PNNI Controller Command Reference, Release 3</i> DOC-7814260=	x	—	—	—	—	—	—	—	—
<i>Cisco MGX 8850 (PXM45/PXM1E), Cisco MGX 8950, and Cisco MGX 8830 Command Reference, Release 5.1</i> OL-6483-01	—	—	—	—	x	x	x	x	x
<i>Cisco WAN Manager SNMP Service Agent, Release 15</i> OL-6260-01	x	x	x	x	x	x	x	x	x
<i>Cisco WAN Manager Database Interface Guide, Release 15</i> OL-6261-01	x	x	x	x	x	x	x	x	x
<i>Cisco MGX and Service Expansion Shelf Error Messages, Release 5</i> OL-6485-01	x	—	—	—	x	x	x	x	x

1. Some configuration and command information is included in this book for using the multiprotocol service module (MPSM-8-T1E1/MPSM-16-T1E1) in a Cisco MGX 8230, MGX 8250, or MGX 8850 (PXM1) switch.

**Note**

For this product release, there are no new features for the Service Expansion Shelf (SES) of the BPX switch and BPX WAN switching software. Therefore, documentation for these items was not updated. Table 1 lists the most recent technical manuals and release notes for these products.

Table 1 also lists the latest documentation available for the Cisco MGX 8230, Cisco MGX 8250, and Cisco MGX 8850 (PXM1) switches. These switches use the PXM1 processor card. Although there are new features in MGX Release 1.3 for these switches, only the release notes were updated. And the following books contain some information about configuring the MPSM-8-T1E1 and MPSM-16-T1E1 cards for use in these switches:

- *Cisco Circuit Emulation Services (CESM/MPSM) Configuration Guide and Command Reference for MGX Switches, Release 5.1*
- *Cisco Frame Relay Services (FRSM/MPSM) Configuration Guide and Command Reference for MGX Switches, Release 5.1*
- *Cisco ATM Services (AUSM/MPSM) Configuration Guide and Command Reference for MGX Switches, Release 5.1*

Table 2 lists the documents that ship with product.

Table 3 contains alphabetized titles and descriptions of all the manuals and release notes listed in Table 1.

**Table 2 Documents that Ship with Multiservice Switch Products**

Document Title	Description
<i>Guide to Cisco Multiservice Switch Documentation</i> DOC-7814807=	Describes how to find the manuals and release notes that support multiservice switches and network management products. These documents are available only online. <b>This guide ships with product.</b>
<i>Installation Warning Card</i> DOC-7812348=	<b>Contains precautions that you should take before you insert a card into a slot. This Warning Card ships with product.</b>
<i>Regulatory Compliance and Safety Information for Cisco Multiservice Switch Products (MGX, BPX, and SES)</i> DOC-7814790=	Provides regulatory compliance information, product warnings, and safety recommendations for all the Cisco MGX multiservice switches: MGX 8230, MGX 8250, MGX 8850 (PXM1), MGX 8850 (PXM45), MGX 8850 (PXM1E), MGX 8830 and MGX 8950. Also provides such information for the MGX 8880 Media Gateway. <b>This book ships with product.</b>

**Table 3** Descriptions of Technical Manuals and Release Notes for Cisco Multiservice Switch Products

Document Title	Description
<i>Cisco ATM and Frame Relay Services (MPSM-T3E3-155) Configuration Guide and Command Reference for MGX Switches, Release 5.1</i> OL-6487-01	Provides software configuration procedures for provisioning ATM and Frame Relay connections on the new MPSM-T3E3-155 multiprotocol service module. Also describes all MPSM-T3E3-155 commands.
<i>Cisco ATM Services (AUSM/MPSM) Configuration Guide and Command Reference for MGX Switches, Release 5.1</i> OL-6479-01	Provides software configuration procedures for provisioning connections and managing the AUSM cards supported in this release. Also describes all AUSM commands. Includes software configuration procedures for provisioning connections and managing the MPSM-8-T1E1 card as an AUSM card replacement.
<i>Cisco ATM Services (AXSM) Configuration Guide and Command Reference for MGX Switches, Release 5</i> OL-4548-01	Explains how to configure the AXSM cards and provides a command reference that describes the AXSM commands in detail. The AXSM cards covered in this manual are the AXSM-XG, AXSM/A, AXSM/B, AXSM-E, and AXSM-32-T1E1-E.
<i>Cisco Circuit Emulation Services (CESM/MPSM) Configuration Guide and Command Reference for MGX Switches, Release 5.1</i> OL-6481-01	Provides software configuration procedures for provisioning connections and managing the Circuit Emulation Service Module (CESM) cards supported in this release. Also describes all CESM commands. Includes software configuration procedures for provisioning connections and managing the MPSM-8-T1E1 card as a CESM card replacement.
<i>Cisco Frame Relay Services (FRSM/MPSM) Configuration Guide and Command Reference for MGX Switches, Release 5.1</i> OL-6480-01	Provides software configuration procedures for provisioning connections and managing the Frame Relay Service Module (FRSM) cards supported in this release. Also describes all FRSM commands. Includes software configuration procedures for provisioning connections and managing the MPSM-8-T1E1 card as an FRSM card replacement.
<i>Cisco MGX 8230 Edge Concentrator Installation and Configuration, Release 1.1.3</i> DOC-7811215=	Provides installation instructions for the Cisco MGX 8230 edge concentrator.
<i>Cisco MGX 8230 Edge Concentrator Overview, Release 1.1.3</i> DOC-7812899=	Describes the system components and function of the Cisco MGX 8250 edge concentrator.
<i>Cisco MGX 8230 Multiservice Gateway Command Reference, Release 1.1.3</i> DOC-7811211=	Provides detailed information on the general command line interface commands.
<i>Cisco MGX 8230 Multiservice Gateway Error Messages, Release 1.1.3</i> DOC-78112113=	Provides error message descriptions and recovery procedures.
<i>Cisco MGX 8250 Edge Concentrator Installation and Configuration, Release 1.1.3</i> DOC-7811217=	Provides installation instructions for the Cisco MGX 8250 edge concentrator.



**Table 3**      **Descriptions of Technical Manuals and Release Notes for Cisco Multiservice Switch Products (continued)**

Document Title	Description
<i>Cisco MGX 8250 Edge Concentrator Overview, Release 1.1.3</i> DOC-7811576=	Describes the system components and function of the Cisco MGX 8250 edge concentrator.
<i>Cisco MGX 8250 Multiservice Gateway Command Reference, Release 1.1.3</i> DOC-7811212=	Provides detailed information on the general command line interface commands.
<i>Cisco MGX 8250 Multiservice Gateway Error Messages, Release 1.1.3</i> DOC-7811216=	Provides error message descriptions and recovery procedures.
<i>Cisco MGX 8800 Series Switch Command Reference, Release 1.1.3</i> DOC-7811210=	Provides detailed information on the general command line for the Cisco MGX 8850 (PXM1), Cisco MGX 8250, and Cisco MGX 8230 edge concentrators.
<i>Cisco MGX 8800 Series Switch System Error Messages, Release 1.1.3</i> DOC-7811240=	Provides error message descriptions and recovery procedures for Cisco MGX 8850 (PXM1), Cisco MGX 8250, and Cisco MGX 8230 edge concentrators.
<i>Cisco MGX 8850 (PXM1E/PXM45), Cisco MGX 8950, and Cisco MGX 8830 Hardware Installation Guide, Releases 2 Through 5.1</i> OL-4545-01	Describes how to install the Cisco MGX 8950, the Cisco MGX 8850 (PXM1E/PXM45), the Cisco MGX 8850/B (PXM1E/PXM45), and the Cisco MGX 8830 switches. Also describes how to install the MGX 8880 Media Gateway. This document explains what each switch does and covers site preparation, grounding, safety, card installation, and cabling. The Cisco MGX 8850 switch uses either a PXM45 or a PXM1E controller card and provides support for both serial bus-based and cellbus-based service modules. The Cisco MGX 8830 switch uses a PXM1E controller card and supports cellbus-based service modules. The Cisco MGX 8950 supports only serial bus-based service modules. The Cisco MGX 8880 uses a PXM45/C controller card, and supports only serial bus-based service modules. <i>This hardware installation guide replaces all previous hardware guides for these switches.</i>
<i>Cisco MGX 8850 (PXM1E/PXM45), Cisco MGX 8950, and Cisco MGX 8830 Configuration Guide, Release 5.1</i> OL-6482-01	Describes how to configure the Cisco MGX 8880 Media Gateway. Also describes how to configure Cisco MGX 8850 (PXM1E), Cisco MGX 8850 (PXM45), the Cisco MGX 8850/B (PXM1E/PXM45), and Cisco MGX 8830 switches to operate as ATM edge switches and the Cisco MGX 8950 switch to operate as a core switch. This guide also provides some operation and maintenance procedures.
<i>Cisco MGX 8850 (PXM45/PXM1E), Cisco MGX 8950, and Cisco MGX 8830 Command Reference, Release 5.1</i> OL-6483-01	Describes the PXM commands that are available in the CLI of the Cisco MGX 8850 (PXM45), Cisco MGX 8850 (PXM1E), Cisco MGX 8950, and Cisco MGX 8830 switches. Also describes the PXM commands that are available in the CLI of the Cisco MGX 8880 Media Gateway.

**Table 3** Descriptions of Technical Manuals and Release Notes for Cisco Multiservice Switch Products (continued)

Document Title	Description
<i>Cisco MGX 8850 Edge Concentrator Installation and Configuration, Release 1.1.3</i> DOC-7811223=	Provides installation instructions for the Cisco MGX 8850 (PXM1) edge concentrator.
<i>Cisco MGX 8850 Multiservice Switch Overview, Release 1.1.3</i> OL-1154-01	Describes the system components and function of the Cisco MGX 8850 (PXM1) edge concentrator.
<i>Cisco MGX and Service Expansion Shelf Error Messages, Release 5</i> OL-6485-01	Provides error message descriptions and recovery procedures.
<i>Cisco MGX Route Processor Module (RPM-XF) Installation and Configuration Guide, Release 5.1</i> OL-6954-01	Describes how to install and configure the Cisco MGX Route Processor Module (RPM-XF) in the Cisco MGX 8850 (PXM45), Cisco MGX 8880 (PXM45), and Cisco MGX 8950 switch. Also provides site preparation procedures, troubleshooting procedures, maintenance procedures, cable and connector specifications, and basic Cisco IOS configuration information.
<i>Cisco MGX Route Processor Module (RPM-PR) Installation and Configuration Guide, Release 2.1</i> 78-12510-02	Describes how to install and configure the Cisco MGX Route Processor Module (RPM/B or RPM-PR) in the Cisco MGX 8850 (PXM1), the Cisco MGX 8250, and the Cisco MGX 8230 edge concentrators. Also provides site preparation procedures, troubleshooting procedures, maintenance procedures, cable and connector specifications, and basic Cisco IOS configuration information.
<i>Cisco PNNI Network Planning Guide for MGX and SES Products</i> OL-3847-01	Provides guidelines for planning a PNNI network that uses Cisco MGX 8830, Cisco MGX 8850 (PXM45 and PXM1E), Cisco MGX 8950, or Cisco BPX 8600 switches or the MGX 8880 Media Gateway. When connected to a PNNI network, each Cisco BPX 8600 Series switch requires an SES for PNNI route processing.
<i>Cisco Service Expansion Shelf Hardware Installation Guide, Release 1</i> DOC-786122=	Provides instructions for installing and maintaining an SES controller.
<i>Cisco SES PNNI Controller Command Reference, Release 3</i> DOC-7814260=	Describes the commands used to configure and operate the SES PNNI controller.
<i>Cisco SES PNNI Controller Software Configuration Guide, Release 3</i> DOC-7814258=	Describes how to configure, operate, and maintain the SES PNNI controller.
<i>Cisco Voice Interworking Services (VISM) Configuration Guide and Command Reference, Release 3.3</i> OL-5358-01	Describes how to install and configure the Voice Interworking Service Module (VISM) in the Cisco MGX 8830, Cisco MGX 8850 (PXM45), and Cisco MGX 8850 (PXM1E) multiservice switches. Provides site preparation procedures, troubleshooting procedures, maintenance procedures, cable and connector specifications, and Cisco CLI configuration information.

**Table 3** Descriptions of Technical Manuals and Release Notes for Cisco Multiservice Switch Products (continued)

Document Title	Description
<i>Cisco Voice Switch Services (VXSM) Configuration and Command Reference Guide for MGX Switches, Release 5</i> OL-4625-01	Describes the features and functions of the new Voice Switch Service Module (VXSM) in the Cisco MGX 8880 Media Gateway and in the Cisco MGX8850 (PXM45 and PXM1E) multiservice switches. Also provides configuration procedures, troubleshooting procedures, and Cisco CLI configuration information.
<i>Cisco WAN Manager Database Interface Guide, Release 15</i> OL-6261-01	Provides information about accessing the CWM Informix database that is used to store information about the network elements.
<i>Cisco WAN Manager Installation Guide, Release 15</i> OL-6259-01	Provides procedures for installing Release 15.1 of the CWM network management system.
<i>Cisco WAN Manager SNMP Service Agent, Release 15</i> OL-6260-01	Provides information about the CWM Simple Network Management Protocol service agent, an optional adjunct to CWM that is used for managing Cisco WAN switches through SNMP.
<i>Cisco WAN Manager User's Guide, Release 15</i> OL-6257-01	Describes how to use the CWM Release 15.1 software, which consists of user applications and tools for network management, connection management, network configuration, statistics collection, and security management.  <b>Note</b> The CWM interface now has built-in documentation support in the form of online Help. On a PC, press <b>F1</b> to access Help; on a UNIX workstation, press the <b>Help</b> key. Alternatively, on either system you can select <b>Help</b> from the main or popup menu.
<i>Frame Relay Software Configuration Guide and Command Reference for the Cisco MGX 8850 FRSM12 Card, Release 3</i> DOC-7810327=	Describes how to use the high-speed Frame Relay (FRSM-12-T3E3) commands that are available in the CLI of the Cisco MGX 8850 (PXM45) switch.
<i>Release Notes for Cisco MGX 8230, Cisco MGX 8250, and Cisco MGX 8850 (PXM1) Switches, Release 1.3.12</i> OL-7660-01	Provides new feature, upgrade, and compatibility information, as well as information about known and resolved anomalies.
<i>Release Notes for Cisco MGX 8850 (PXM1E/PXM45), Cisco MGX 8950, and Cisco MGX 8830 Switches, Release 5.1.00</i> OL-6478-01	Provides new feature, upgrade, and compatibility information, as well as information about known and resolved anomalies.
<i>Release Notes for the Cisco MGX 8880 Media Gateway, Release 5.0.20</i> OL-6942-01	Provides new feature and compatibility information, as well as information about known and resolved anomalies.
<i>Release Notes for Cisco MGX Route Processor Module (RPM-PR) IOS Release 12.3(7)T3 for MGX Releases 1.3.10 and 5.0.10</i> OL-6309-01	Provides upgrade and compatibility information, as well as information about known and resolved anomalies.

**Table 3** Descriptions of Technical Manuals and Release Notes for Cisco Multiservice Switch Products (continued)

Document Title	Description
<i>Release Notes for Cisco MGX Route Processor Module (RPM-XF) IOS Release 12.3(7)T3 for PXM45-based Switches, Release 5.0.10</i> OL-6305-01	Provides upgrade and compatibility information, as well as information about known and resolved anomalies.
<i>Release Notes for the Cisco Voice Interworking Service Module (VISM), Release 3.3.20</i> OL-7575-01	Provides new feature, upgrade, and compatibility information, as well as information about known and resolved anomalies.
<i>Release Notes for the Cisco Voice Switch Service Module (VXSM), Release 5.0.70</i> OL-7088-01	Provides new feature, upgrade, and compatibility information, as well as information about known and resolved anomalies.
<i>Release Notes for Cisco WAN Manager, Release 15.0.00</i> OL-6936-01	Provides new feature, upgrade, and compatibility information, as well as information about known and resolved anomalies.

## Conventions

This publication uses the following conventions to describe commands:

- **Bold** type—indicates command names and user entry text.
- *Italic* type—indicates arguments for which you supply values.
- | |—vertical bars indicate optional arguments.

This publication uses the following conventions to describe examples:

- `Courier` font—indicates terminal sessions and system display information.
- **Courier bold** font—indicates user entry.



### Note

Means *reader take note*. Notes contain helpful suggestions or references to materials not contained in this manual.



### Caution

Means *reader be careful*. In this situation, you might do something that could result in equipment damage or loss of data.

## Obtaining Documentation

Cisco documentation and additional literature are available on Cisco.com. Cisco also provides several ways to obtain technical assistance and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

## Cisco.com

You can access the most current Cisco documentation at this URL:

<http://www.cisco.com/techsupport>

You can access the Cisco website at this URL:

<http://www.cisco.com>

You can access international Cisco websites at this URL:

[http://www.cisco.com/public/countries\\_languages.shtml](http://www.cisco.com/public/countries_languages.shtml)

## Product Documentation DVD

Cisco documentation and additional literature are available in the Product Documentation DVD package, which may have shipped with your product. The Product Documentation DVD is updated regularly and may be more current than printed documentation.

The Product Documentation DVD is a comprehensive library of technical product documentation on portable media. The DVD enables you to access multiple versions of hardware and software installation, configuration, and command guides for Cisco products and to view technical documentation in HTML. With the DVD, you have access to the same documentation that is found on the Cisco website without being connected to the Internet. Certain products also have .pdf versions of the documentation available.

The Product Documentation DVD is available as a single unit or as a subscription. Registered Cisco.com users (Cisco direct customers) can order a Product Documentation DVD (product number DOC-DOCDVD=) from Cisco Marketplace at this URL:

<http://www.cisco.com/go/marketplace/>

## Ordering Documentation

Beginning June 30, 2005, registered Cisco.com users may order Cisco documentation at the Product Documentation Store in the Cisco Marketplace at this URL:

<http://www.cisco.com/go/marketplace/>

Nonregistered Cisco.com users can order technical documentation from 8:00 a.m. to 5:00 p.m. (0800 to 1700) PDT by calling 1 866 463-3487 in the United States and Canada, or elsewhere by calling 011 408 519-5055. You can also order documentation by e-mail at [tech-doc-store-mkpl@external.cisco.com](mailto:tech-doc-store-mkpl@external.cisco.com) or by fax at 1 408 519-5001 in the United States and Canada, or elsewhere at 011 408 519-5001.

## Documentation Feedback

You can rate and provide feedback about Cisco technical documents by completing the online feedback form that appears with the technical documents on Cisco.com.

You can send comments about Cisco documentation to [bug-doc@cisco.com](mailto:bug-doc@cisco.com).

You can submit comments by using the response card (if present) behind the front cover of your document or by writing to the following address:

Cisco Systems  
Attn: Customer Document Ordering  
170 West Tasman Drive  
San Jose, CA 95134-9883

We appreciate your comments.

## Cisco Product Security Overview

Cisco provides a free online Security Vulnerability Policy portal at this URL:

[http://www.cisco.com/en/US/products/products\\_security\\_vulnerability\\_policy.html](http://www.cisco.com/en/US/products/products_security_vulnerability_policy.html)

From this site, you can perform these tasks:

- Report security vulnerabilities in Cisco products.
- Obtain assistance with security incidents that involve Cisco products.
- Register to receive security information from Cisco.

A current list of security advisories and notices for Cisco products is available at this URL:

<http://www.cisco.com/go/psirt>

If you prefer to see advisories and notices as they are updated in real time, you can access a Product Security Incident Response Team Really Simple Syndication (PSIRT RSS) feed from this URL:

[http://www.cisco.com/en/US/products/products\\_psirt\\_rss\\_feed.html](http://www.cisco.com/en/US/products/products_psirt_rss_feed.html)

## Reporting Security Problems in Cisco Products

Cisco is committed to delivering secure products. We test our products internally before we release them, and we strive to correct all vulnerabilities quickly. If you think that you might have identified a vulnerability in a Cisco product, contact PSIRT:

- Emergencies—[security-alert@cisco.com](mailto:security-alert@cisco.com)  
An emergency is either a condition in which a system is under active attack or a condition for which a severe and urgent security vulnerability should be reported. All other conditions are considered nonemergencies.
- Nonemergencies—[psirt@cisco.com](mailto:psirt@cisco.com)

In an emergency, you can also reach PSIRT by telephone:

- 1 877 228-7302
- 1 408 525-6532

**Tip**

We encourage you to use Pretty Good Privacy (PGP) or a compatible product to encrypt any sensitive information that you send to Cisco. PSIRT can work from encrypted information that is compatible with PGP versions 2.x through 8.x.

Never use a revoked or an expired encryption key. The correct public key to use in your correspondence with PSIRT is the one linked in the Contact Summary section of the Security Vulnerability Policy page at this URL:

[http://www.cisco.com/en/US/products/products\\_security\\_vulnerability\\_policy.html](http://www.cisco.com/en/US/products/products_security_vulnerability_policy.html)

The link on this page has the current PGP key ID in use.

## Obtaining Technical Assistance

Cisco Technical Support provides 24-hour-a-day award-winning technical assistance. The Cisco Technical Support & Documentation website on Cisco.com features extensive online support resources. In addition, if you have a valid Cisco service contract, Cisco Technical Assistance Center (TAC) engineers provide telephone support. If you do not have a valid Cisco service contract, contact your reseller.

## Cisco Technical Support & Documentation Website

The Cisco Technical Support & Documentation website provides online documents and tools for troubleshooting and resolving technical issues with Cisco products and technologies. The website is available 24 hours a day, at this URL:

<http://www.cisco.com/techsupport>

Access to all tools on the Cisco Technical Support & Documentation website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a user ID or password, you can register at this URL:

<http://tools.cisco.com/RPF/register/register.do>

**Note**

Use the Cisco Product Identification (CPI) tool to locate your product serial number before submitting a web or phone request for service. You can access the CPI tool from the Cisco Technical Support & Documentation website by clicking the **Tools & Resources** link under Documentation & Tools. Choose **Cisco Product Identification Tool** from the Alphabetical Index drop-down list, or click the **Cisco Product Identification Tool** link under Alerts & RMAs. The CPI tool offers three search options: by product ID or model name; by tree view; or for certain products, by copying and pasting **show** command output. Search results show an illustration of your product with the serial number label location highlighted. Locate the serial number label on your product and record the information before placing a service call.

## Submitting a Service Request

Using the online TAC Service Request Tool is the fastest way to open S3 and S4 service requests. (S3 and S4 service requests are those in which your network is minimally impaired or for which you require product information.) After you describe your situation, the TAC Service Request Tool provides recommended solutions. If your issue is not resolved using the recommended resources, your service request is assigned to a Cisco engineer. The TAC Service Request Tool is located at this URL:

<http://www.cisco.com/techsupport/servicerequest>

For S1 or S2 service requests or if you do not have Internet access, contact the Cisco TAC by telephone. (S1 or S2 service requests are those in which your production network is down or severely degraded.) Cisco engineers are assigned immediately to S1 and S2 service requests to help keep your business operations running smoothly.

To open a service request by telephone, use one of the following numbers:

Asia-Pacific: +61 2 8446 7411 (Australia: 1 800 805 227)

EMEA: +32 2 704 55 55

USA: 1 800 553-2447

For a complete list of Cisco TAC contacts, go to this URL:

<http://www.cisco.com/techsupport/contacts>

## Definitions of Service Request Severity

To ensure that all service requests are reported in a standard format, Cisco has established severity definitions.

**Severity 1 (S1)**—Your network is “down,” or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

**Severity 2 (S2)**—Operation of an existing network is severely degraded, or significant aspects of your business operation are negatively affected by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

**Severity 3 (S3)**—Operational performance of your network is impaired, but most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

**Severity 4 (S4)**—You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.



# Obtaining Additional Publications and Information

Information about Cisco products, technologies, and network solutions is available from various online and printed sources.

- Cisco Marketplace provides a variety of Cisco books, reference guides, documentation, and logo merchandise. Visit Cisco Marketplace, the company store, at this URL:  
<http://www.cisco.com/go/marketplace/>
- *Cisco Press* publishes a wide range of general networking, training and certification titles. Both new and experienced users will benefit from these publications. For current Cisco Press titles and other information, go to Cisco Press at this URL:  
<http://www.ciscopress.com>
- *Packet* magazine is the Cisco Systems technical user magazine for maximizing Internet and networking investments. Each quarter, Packet delivers coverage of the latest industry trends, technology breakthroughs, and Cisco products and solutions, as well as network deployment and troubleshooting tips, configuration examples, customer case studies, certification and training information, and links to scores of in-depth online resources. You can access Packet magazine at this URL:  
<http://www.cisco.com/packet>
- *iQ Magazine* is the quarterly publication from Cisco Systems designed to help growing companies learn how they can use technology to increase revenue, streamline their business, and expand services. The publication identifies the challenges facing these companies and the technologies to help solve them, using real-world case studies and business strategies to help readers make sound technology investment decisions. You can access iQ Magazine at this URL:  
<http://www.cisco.com/go/iqmagazine>  
or view the digital edition at this URL:  
<http://ciscoiq.texterity.com/ciscoiq/sample/>
- *Internet Protocol Journal* is a quarterly journal published by Cisco Systems for engineering professionals involved in designing, developing, and operating public and private internets and intranets. You can access the Internet Protocol Journal at this URL:  
<http://www.cisco.com/ipj>
- Networking products offered by Cisco Systems, as well as customer support services, can be obtained at this URL:  
<http://www.cisco.com/en/US/products/index.html>
- Networking Professionals Connection is an interactive website for networking professionals to share questions, suggestions, and information about networking products and technologies with Cisco experts and other networking professionals. Join a discussion at this URL:  
<http://www.cisco.com/discuss/networking>
- World-class networking training is available from Cisco. You can view current offerings at this URL:  
<http://www.cisco.com/en/US/learning/index.html>





# Overview of the VISM and VISM-PR Cards

This section introduces the Voice Interworking Service Module (VISM/VISM-PR) cards and software modules. It includes the following topics:

- New Features in Release 3.3, page 1-1
- Card Description, page 1-3
- Card Types, page 1-4
- Card Service Types, page 1-8
- Card Characteristics, page 1-8
- Card Features, page 1-9
- Redundancy and Bulk Distribution, page 1-11
- Operating Modes, page 1-13

## New Features in Release 3.3

Table 1-1 summarizes the new features in VISM/VISM-PR Release 3.3 and provides links to the corresponding sections in the documentation.

**Table 1-1** VISM/VISM-PR Release 3.3 Features

Feature	Summary
V.110	VISM-PR can support V.110 data traffic transport in AAL2 trunking mode. See the “V.110” section on page 9-6.
1560/980 Hz Modem Tone Detection	VISM-PR card can detect the 1560/980 Hz modem tone in the VoIP switching mode. See the “1560/980 Hz Modem Tone Detection” section on page 9-8.
Voice Quality Statistics	VISM-PR can collect real-time voice quality statistics to assist with network analysis and troubleshooting system performance. See the “Voice Quality Statistics” section on page 9-59.
ATM Fax Relay	VISM-PR can transport fax in AAL2 trunking mode using less bandwidth than fax pass through. See the “ATM Fax Relay” section on page 9-11.

Table 1-1 VISM/VISM-PR Release 3.3 Features (continued)

Feature	Summary
Filtering Traps	To reduce the load on Cisco WAN Manager (CWM), you can filter the VISM-PR traps while the card is being configured. See the “Trap Filtering” section on page 9-83.
VISM-PR Bulk Statistics Upload to CWM	You can upload history statistics data collected on a VISM-PR card to CWM. See the “VISM-PR Bulk Statistics Upload to CWM” section on page 9-87.
Display History Statistics	VISM and VISM-PR can collect history statistics. See the “History Statistics Collection” section on page 9-62.
Display All Static Configuration	On the VISM/VISM-PR card, you can use the <b>dspall</b> command to display static configurations, run-time statistics, and real-time dynamic data. See the “Static and Real-Time Configuration Display” section on page 9-69.
TDM Companding Law	VISM-PR supports nonstandard law companding on the TDM interface. See the “TDM Companding Law Configuration” section on page 9-118.
G.729a Codec with 20 ms	VISM/VISM-PR cards contain a new custom profile, 210, with upspeed to support G.729a with a 20-millisecond (ms) packetization period. See the “G.729a Codec with 20 ms Packetization Period” section on page 9-5.
Preferred Routes	In a PNNI network with a large number of SPVCs, the Cisco MGX 8850 (PXM1E and PXM45) can route SPVCs and SPVPs over pre-defined trunk routes in a PNNI group. See the “Preferred Routes” section on page 9-17.
Priority Bumping	On the VISM-PR card, you can set up high-priority connections when the available resources on the links are not enough for the call to be routed. See the “Priority Bumping” section on page 9-23.
Bearer IP Address Ping	On the VISM/VISM-PR card, you can <b>ping</b> both the controller traffic IP address and the bearer traffic IP address. See the “Bearer IP Address Ping” section on page 9-41.
Call Throttling	VISM-PR card supports call throttling to maintain the stability of the card when the call rate exceeds the maximum allowable limit. See the “Call Throttling” section on page 9-42.

**Table 1-1** VISM/VISM-PR Release 3.3 Features (continued)

Feature	Summary
Programmable CAS Bit Mapping	The CAS mapping feature allows you to map the output ABCD bits to input ABCD bits on a signaling channel on the VISM-PR card instead of using a PBX or another external device. See the “Programmable CAS Bit Mapping (ABCD CAS bits)” section on page 9-119.
E1 Trunk Conditioning	You can enable and disable trunk conditioning on a T1 and an E1 line. See the “Line Trunk Conditioning” section on page 9-124.
Bandwidth Utilization Enhancements	Bandwidth utilization features include <ul style="list-style-type: none"> <li>• ATM Bandwidth Reuse for Non-overlapping Traffic</li> <li>• Dynamic PVC Bandwidth Management</li> <li>• Channel Current Peak Rates</li> </ul> See the “Bandwidth Utilization Enhancements” section on page 9-33.
AIS Propagation Control	The purpose of this feature is to prevent the CPE from dropping calls when a network link failure is temporary. See the “AIS Propagation Control” section on page 9-29.

## Card Description

The VISM/VISM-PR card, in combination with a Cisco MGX 8000 Series platform, enables telephone calls on conventional time-division multiplexed voice circuits to be transported over Asynchronous Transfer Mode (ATM) and VoIP packet-switched networks.

The VISM card is a single height card designed to operate in the following platforms:

- Cisco MGX 8850 PXM1-based, wide-area switch
- Cisco MGX 8250, edge concentrator
- Cisco MGX 8230, edge concentrator

The VISM-PR card is a single height card designed to operate in the following platforms:

- Cisco MGX 8850 PXM1-based, wide area switch
- Cisco MGX 8250, edge concentrator
- Cisco MGX 8230, edge concentrator
- Cisco MGX 8830
- Cisco MGX 8850 PXM45-based
- Cisco MGX 8850 PXM1E-based
- Cisco MGX 8880



### Note

VISM/VISM-PR is not supported on the Cisco MGX 8260 switch.

You can use the VISM-PR card in combination with any of the following MGX 8000 Series switch Processor Module cards:

- PXM1
- PXM1E
- PXM45

Table 1-2 lists the configuration requirements for VISM/VISM-PR in combination with the MGX 8000 Series switches and supported processor modules.

**Table 1-2 VISM/VISM-PR and MGX 8000 Series Switch Support**

VISM Module	Cisco MGX 8230	Cisco MGX 8830 (PXM1E)	Cisco MGX 8250 with PXM1	Cisco MGX 8850 with PXM1	Cisco MGX 8850 with PXM1E	Cisco MGX 8850 with PXM45	Cisco MGX 8880 (PXM45)
MGX-VISM-8T1	Yes	No	Yes	Yes	No	No	No
MGX-VISM-8E1	Yes	No	Yes	Yes	No	No	No
MGX-VISM-PR-8T1	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MGX-VISM-PR-8E1	Yes	Yes	Yes	Yes	Yes	Yes	Yes

For information on installing and maintaining the PXM1, PXM1E, and PXM45 cards, refer to the *Cisco MGX 8850 (PXM1E/PXM45)*, *Cisco MGX 8950*, and *Cisco MGX 8830 Hardware Installation Guide, Release 2 through 5*.



**Note**

You cannot use the VISM card in combination with either the PXM1E or the PXM45 card.

## Card Types

VISM and VISM-PR cards are installed in Cisco MGX 8000 Series switches as front cards and corresponding back cards—card sets.

VISM has the following two types of front cards (see Figure 1-1):

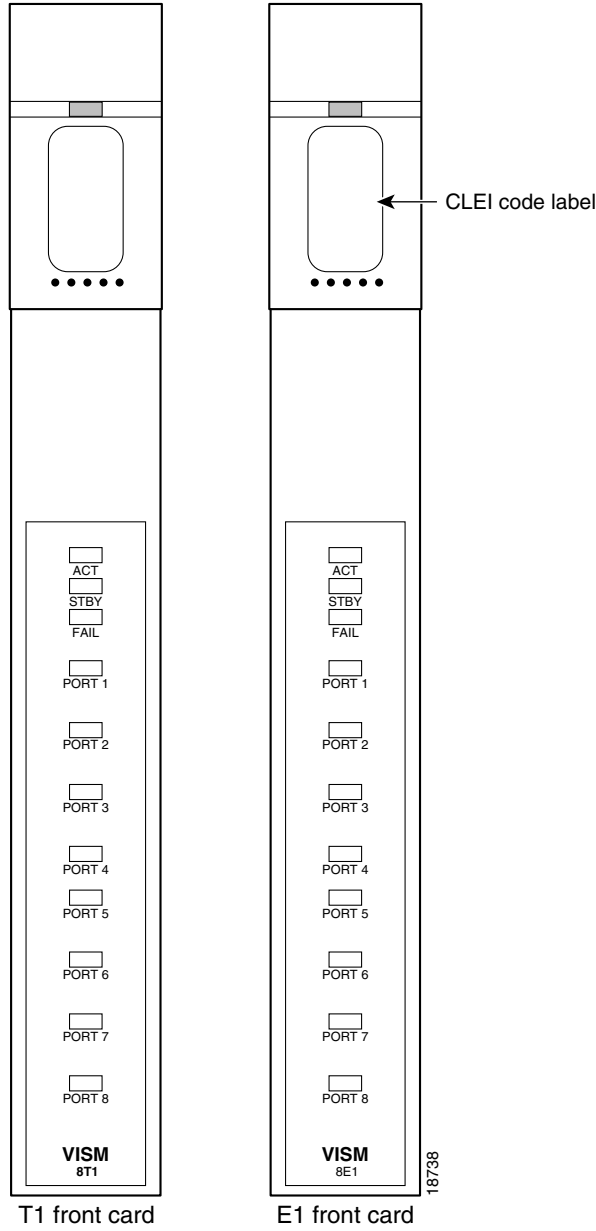
- MGX-VISM-8T1—Supports up to eight T1 lines carrying digitized voice
- MGX-VISM-8E1—Supports up to eight E1 lines carrying digitized voice



**Note**

Other physical configurations are supported while using the Service Resource Module (SRM) and 1:N redundancy. For more details, see the “Card Features” section on page 1-9.

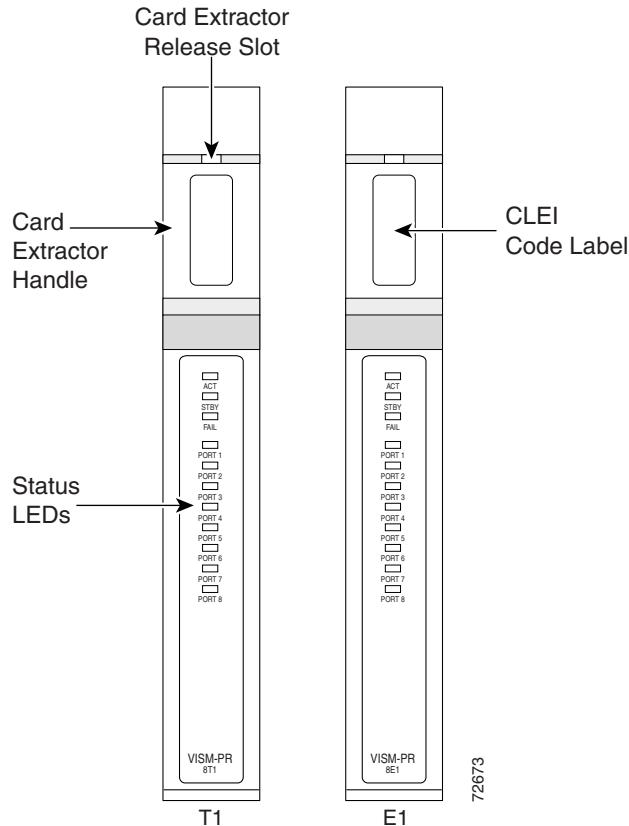
Figure 1-1 VISM T1 and E1 Front Cards



VISM-PR has the following two types of front cards (see Figure 1-2):

- MGX-VISM-PR-8T1—Supports up to eight T1 lines carrying digitized voice
- MGX-VISM-PR-8E1—Supports up to eight E1 lines carrying digitized voice

**Figure 1-2 VISM-PR T1 and E1 Front Cards**



The VISM and VISM-PR front cards have the same associated back cards.

VISM/VISM-PR has the following types of T1 back cards (see Figure 1-3):

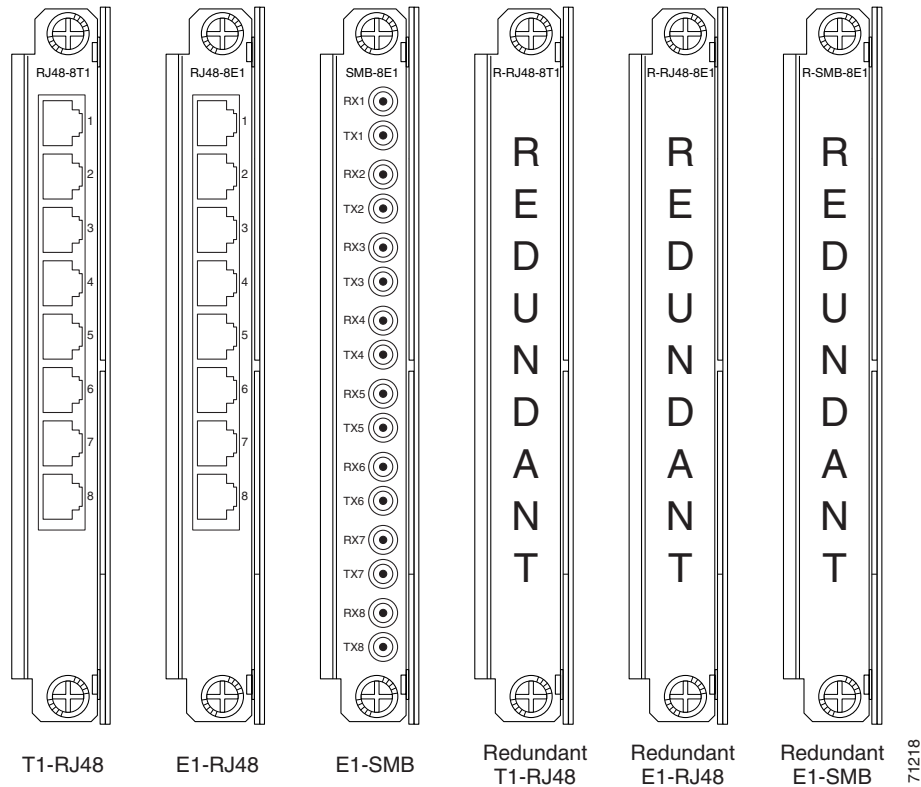
- AX-RJ48-8T1—Supports eight T1 lines using RJ-48 connectors; use with a T1 front card.
- AX-R-RJ48-8T1—Supports eight T1 lines; use with a redundant T1 front card.

VISM/VISM-PR has the following types of E1 back cards (see Figure 1-3):

- AX-RJ48-8E1—Supports eight E1 lines using RJ-48 connectors; use with an E1 front card.
- MGX-RJ48-8E1—Supports eight E1 lines using RJ-48 connectors.
- AX-R-RJ48-8E1—Supports eight E1 lines; use with a redundant E1 front card.
- AX-SMB-8E1—Supports eight E1 lines using SMB connectors; use with an E1 front card.
- AX-R-SMB-8E1—Supports eight E1 lines; use with a redundant E1 front card.

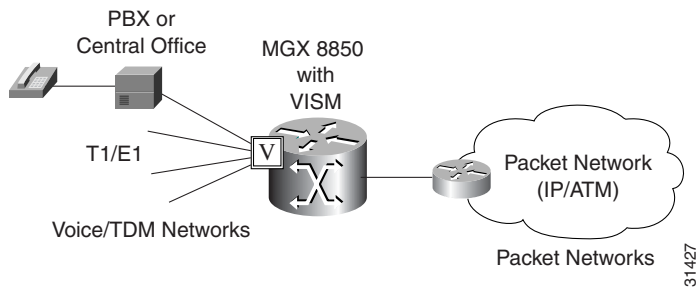


**Figure 1-3 VISM T1 and E1 Back Cards**



The VISM or VISM-PR card and MGX 8000 Series switch combination provides an interface, or voice gateway, between conventional TDM networks and packet-switched networks (see Figure 1-4).

**Figure 1-4 Cisco MGX 8850 and VISM as a Voice Gateway**



Cisco MGX 8000 Series switch Processor Module cards—PXM1, PXM1E, and PXM45—connect to the packet network. These cards communicate with a VISM/VISM-PR card through the switch midplane cellbus. For more information on the MGX 8000 Series switch midplane cellbus, see the documents listed in the “Documentation” section on page xxiii.

## Card Service Types

VISM/VISM-PR cards are configured with the following service types:

- Constant bit rate (CBR)




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**Note** CBR is not supported with a combination of a PXM1 and either an RPM card or external router.

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- Real time variable bit rate real (rt-VBR)
- VBR non-real time (nrt-VBR)

VISM/VISM-PR card connections with the RPM-PR require the nrt-VBR3 service type.

VISM-PR card connections with the RPM-XF card support the rt-VBR and nrt-VBR.

The following connection service types can be configured with Release 3.3:

- rt-VBR2
- rt-VBR3
- nrt-VBR2

## Card Characteristics

VISM/VISM-PR cards have the following physical characteristics:

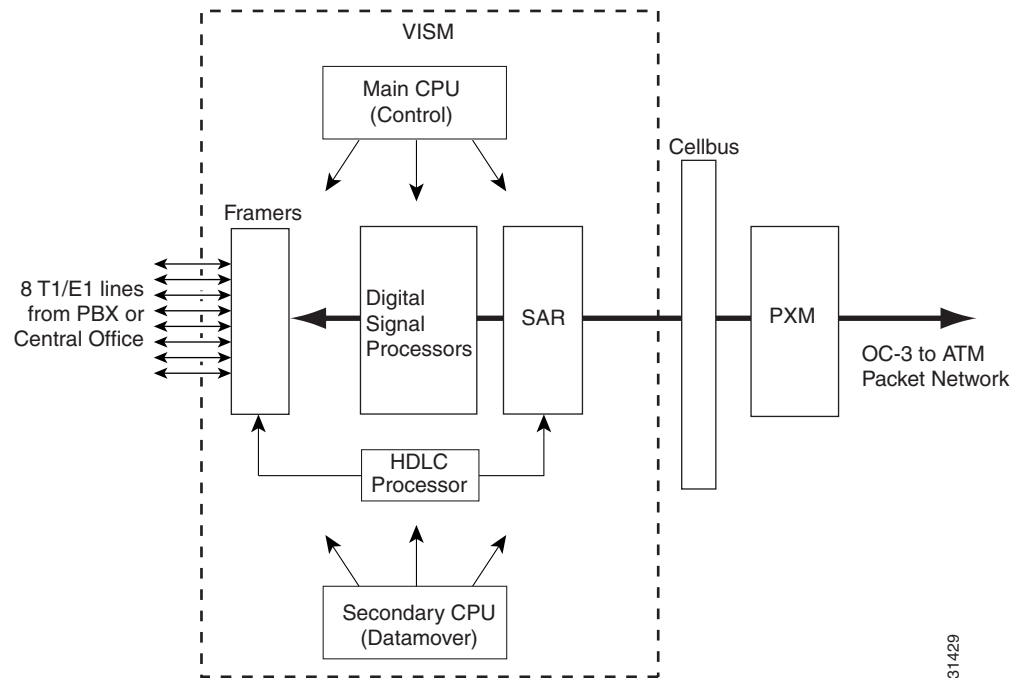
- Eight T1 or E1 ports
- Digital signal processors (DSPs)
- High-Level Data Link Control (HDLC) framer
- Broadband interface to the packet network

VISM/VISM-PR card architecture provides the following qualities:

- Flexibility that allows the incorporation of new or improved technology as it becomes available
- Application flexibility that allows VISM/VISM-PR to be used in a range of situations that provide interoperability with a wide variety of equipment types
- Modularity that allows equipment to be purchased and installed as it is needed for scalability

Figure 1-5 shows a simplified diagram of the VISM/VISM-PR architecture and major components.

**Figure 1-5** VISM Card Block Diagram



31429

The card is broadly divided into a TDM side and an ATM side. The T1/E1 framers, the array of DSPs, and the HDLC processor support the TDM side. The ATM adaptation layer (AAL) and the segmentation and reassembly (SAR) sections support the ATM side.

VISM/VISM-PR is under the control of two independent processors. The main processor performs the control tasks—configuration, call setup and teardown, and management. The second processor, the data mover, handles the moving and processing of the voice and voiceband data traffic through the system.

The VISM/VISM-PR card itself does not contain any ports for connecting management stations.

Workstations, PCs, or terminals that are used to manage VISM/VISM-PR must be attached via the PXM card, which provides both serial EIA/TIA-232 and Ethernet ports.

## Card Features

VISM/VISM-PR cards process high-density digital voice circuits and provide dynamic compression, echo cancellation, dejittering, silence suppression, and packetization. The VISM/VISM-PR card uses the following features, each of which you can configure:

- Eight standard T1 or E1 interfaces with the following line coding:
  - Bipolar 8-zero substitution (B8ZS)—for T1
  - Alternate mark inversion (AMI)—for T1
  - High-density bipolar 3 (HDB3)—for E1

- Voice over ATM (VoATM) using AAL2 cells—No Logical Link Control/Subnetwork Access Protocol (LLC/SNAP) encapsulation.




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**Note** Subcell multiplexing is not supported for AAL2 switched virtual connections (SVCs).

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- VoIP using AAL5 cells.
- Extended Superframe (ESF) framing with or without cyclic redundancy check (CRC).
- Pulse code modulation (PCM) A/Mu law codecs.
- Programmable 24, 32, 48, 64, 80, 96, 112, or 128 ms tail delay near-end echo cancellation (ECAN).
- Voice compression with the following standards:
  - G.711
  - Clear Channel
  - Lossless Codec
  - G.726-16k
  - G.726-24k
  - G.726-32k
  - G.726-40k
  - G.729a
  - G.729ab
  - G.723.1-H
  - G.723.1a-H
  - G.723.1-L
  - G.723.1a-L
- Voice activity detection (VAD) and comfort noise generation (CNG) using variable threshold energy (Cisco proprietary).
- Call agent Simple Gateway Control Protocol (SGCP), Version 1.0, 1.1, or 1.5; SGCP 1.1+ or 1.5; Media Gateway Control Protocol (MGCP) 0.1 and 1.0; and Trunking Gateway Control Protocol (TGCP) 1.0.
- Backhauling channel-associated signaling (CAS) to a call agent using xGCP (backhauling can be accomplished with any supported SGCP and MGCP protocol).
- Backhauling Primary Rate Interface (PRI) signaling through Reliable User Datagram Protocol (RUDP) to a call agent.
- Common channel signaling (CCS) transport across an AAL5 or AAL2 trunk.
- Fax and modem VoIP bearer transmissions.
- Redundant PVC support.
- Separate bearer and signaling PVCs.
- Full continuity testing (COT). This testing supports origination and terminating loopback and transponder COT between VISM and the central office on the TDM side.
- Line loopback (DS1) toward the TDM lines.
- Channel loopback (DS0) toward both the TDM lines and the ATM network.

- Redundant alarm indication (RAI) and alarm indication signal (AIS) alarms.
- DS0 CCS channel extraction and assignment to the TDM signaling function.
- 1:N cold redundancy. In switching modes, calls do not persist during a switchover. In AAL2 or AAL5 trunking mode, calls are not persistent and are dropped during a switchover.
- Graceful shutdown of ongoing voice calls when the VISM/VISM-PR is taken out of service for maintenance or other reasons. Forced shutdown is also supported.

## Redundancy and Bulk Distribution

With or without bulk distribution, redundancy allows for the spare VISM/VISM-PR card to automatically take over the functions of a failed VISM/VISM-PR card.

After a VISM/VISM-PR card switches from standby to active state, executing the **dspecds** command on the PXM shows the new active and standby cards.

For example, the VISM card in slot 1.1 (with a PXM1 card) went from standby to active.

```
nodename.1.8.PXM.a > dspecds
```

Slot	CardState	CardType	CardAlarm	Redundancy
1.1	Active	VISM-8T1	Clear	Covering slot 14
1.2	Reserved	VISM-8T1	Clear	
1.3	Active	VISM-8T1	Clear	
1.4	Empty		Clear	
1.5	Active	VISM-PR-8T1	Clear	
1.6	Empty		Clear	
1.7	Standby	PXM1-OC12	Clear	
1.8	Active	PXM1-OC12	Minor	
1.9	Empty		Clear	
1.10	Empty		Clear	
1.11	Empty		Clear	
1.12	Reserved	VISM-8T1	Clear	
1.13	Active	VISM-PR-8T1	Clear	
1.14	Standby	VISM-8T1	Clear	Covered by slot 1
1.15	Standby	SRM-3T3	Clear	
1.16	Active	SRM-3T3	Clear	
1.17	Empty		Clear	
1.18	Active	VISM-8T1	Major	
1.19	Empty		Clear	

Type <CR> to continue, Q<CR> to stop:

However, when you change cards to the new active VISM/VISM-PR card using the `cc` command, the display shows the active card as standby.

```
nodename.1.8.PXM.a > cc 1
```

```
(session redirected)
```

```
nodename.1.1.VISM8.s >
```

When the failed card is repaired, switching back to the repaired card is not automatic. You must manually change the repaired card back to the active state with the command line interface.

**Note**

VISM/VISM-PR card does not support 1:1 redundancy using Y-cables.

Redundancy for VISM/VISM-PR cards with or without bulk distribution can be provided through the following Service Redundancy Module (SRM) card types:

- SRM-3T3/C
- SRM-E
- SRM-E/B

VISM/VISM-PR redundancy is cold redundancy in which ongoing calls do not persist during switchover in switching modes. In AAL2 or AAL5 trunking mode, calls are not persistent and are dropped during a switchover.

See Table 1-3 for the support level for 1:N service module redundancy (N = 1 through 11).

**Note**

With SRM-3T3/C cards, 1:N redundancy is supported for up to 9 cards only (slots 9 and 10 are not supported) on PXM1 with SRM bulk distribution active.

**Table 1-3 Service Module Redundancy**

Front Card Model Number	Redundancy Support
MGX-VISM-8T1	1:N redundancy (bulk mode support for T1 lines only)
MGX-VISM-8E1	1:N redundancy (bulk mode support for E1 lines only)
MGX-VISM-PR-8T1	1:N redundancy (bulk mode support for T1 lines only)
MGX-VISM-PR-8E1	1:N redundancy (bulk mode support for E1 lines only)

**Note**

You can use a VISM-PR card as a redundant card for a VISM card, but a VISM card cannot be used as a redundant card for a VISM-PR card.

## Redundancy with Bulk Distribution

Redundancy with bulk distribution requires a spare VISM/VISM-PR card to be installed. The system uses the three T3 ports of the SRM back card instead of the normal T1 lines on the VISM/VISM-PR back cards.

In a redundancy configuration VISM/VISM-PR cards in bulk distribution mode do not require any back cards.

The TDM voice data transmitted or received over the T3 ports is distributed to the VISM/VISM-PR card as if it had been received over T1 back card ports in the normal manner. This feature reduces the number of physical lines required for VISM support, but it requires that external equipment multiplex and demultiplex the T1 data onto the T3 lines.

## Redundancy Without Bulk Distribution

Redundancy without bulk distribution also requires a spare VISM/VISM-PR card equipped with a VISM/VISM-PR T1 redundant back card. In this arrangement the VISM/VISM-PR cards require and use their normal T1 back cards.

In VoIP modes, redundancy can also be configured at the ATM permanent virtual circuit (PVCs) level. Two separate connections (PVCs) can be set up, each using a different destination physical port and each routed to a separate router. Configure one PVC as active and the other as standby. Both PVCs are monitored by heartbeat Operation, Administration, and Maintenance (OAM) F5 loopback cells every 200 ms. If three consecutive OAM cells are lost, the PVC fails, and only the remaining PVC is active. A PVC recovers automatically when five consecutive OAM cells are received while the PVC remains in standby mode (no automatic fallback to active state is provided).

In VoIP modes, control and bearer PVCs can be set up with a redundant PVC.

## Operating Modes

The VISM/VISM-PR card has the following operating modes:

- Voice over IP (VoIP) switching/VoIP trunking
- AAL2 trunking
- AAL1 switching
- Switched AAL2 SVC
- Switched AAL2 PVC
- VoIP and AAL1 SVC
- VoIP trunking/AAL2 trunking

To support these operating modes, the VISM/VISM-PR card supports connections to the following three major interfaces:

1. Voice TDM network
2. ATM network
3. Call agent—signaling (either CAS or CCS but not both) and call control
4. IP network via RPM

In VoIP switching, switched AAL2 PVC, AAL1 SVC, and AAL2 SVC interfaces are always present and active. In AAL2 trunking mode, the interface to the call agent interface is not present, and the only active interfaces are to the TDM network and the ATM network.

The operating modes, combined with features you configure, can be used by VISM/VISM-PR cards to

- Provide many of the functions of a tandem (Class 4) switch. VISM/VISM-PR can be used to replace, or partially off load, a tandem switch by directing calls over a packet network rather than over the conventional voice TDM network.
- Concentrate voice and data user services onto a single broadband circuit for transmission over the packet network. In this application, VISM/VISM-PR performs as a front end to a voice gateway.
- Use the VISM/MGX combination to concentrate voice (and fax/modem voiceband data) user services over a preprovisioned AAL2 trunk. VISM/VISM-PR passes bearer and signaling data across a packet network and does not perform call setup and teardown functions.

## VoIP Switching and Switched AAL2 PVC Operating Modes

In VoIP switching mode and switched AAL2 PVC mode, VISM/VISM-PR operates under the control of a call agent to set up and tear down calls. When a call is set up, VISM/VISM-PR transports voice payloads over an ATM network to the called station destination. VISM-PR performs either as a voice gateway or as a multiservice access front end to a voice gateway.

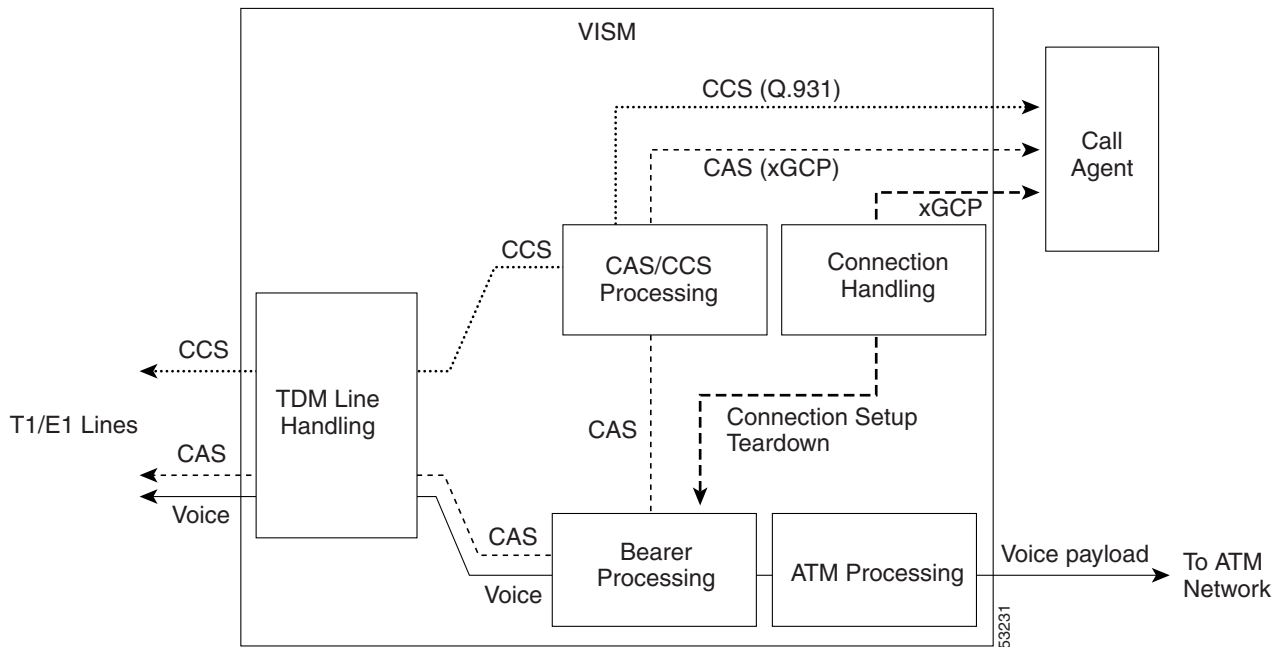


### Note

This document refers to the device that provides the interface between VISM/VISM-PR and the telephone Signaling System 7 (SS7) as a call agent. Other terms that describe the same device are virtual switch controller, media gateway controller, and gatekeeper.

Figure 1-6 shows the major functional blocks and interfaces for the VoIP switching and switched AAL2 PVC operating modes.

**Figure 1-6** VISM Block Diagram for VoIP Switching and Switched AAL2 PVC Operating Modes





The CAS path on the TDM side is embedded in the voice stream but is separated at the bearer processing function. CAS then joins the CCS path for CAS/CCS processing and is backhauled to the call agent. The path between the call agent and bearer processing, via a connection handling function, is for call setup and teardown.

## Voice TDM Network Interface

The voice payload path is shown as a solid line along the bottom of Figure 1-6. All external TDM streams arrive and depart on the T1/E1 lines. Depending on the application, these streams consist of voice bearer channels (with or without CAS) and separate CCS channels (if CCS is used). The TDM line-handling function provides the physical layer interface, which includes framing, line codes, clocking, loopbacks, physical alarms, and so forth. Bearer channels, including CAS, are sent to the bearer processing function. CCS channels are sent to the CAS/CCS processing function.

Further processing of the bearer channels is performed by the DSPs. This processing provides echo canceling, compression, A/Mu law conversion, silence suppression, and fax/modem handling. If CAS is present, signaling bits are extracted at the DSP stage and sent to the CAS/CCS processing function.

## ATM Network Interface

The ATM network interface receives the processed DS0 voice streams and prepares them for transport over a packet network. The voice streams are divided into specific sample periods (for example, 5 ms or 10 ms) and formatted into service-specific convergence sublayer (SSCS) packets appropriate for transport over the ATM network. The available transport methods are VoIP (using AAL5) and voice over AAL2. Processing of the ATM packets further segments the voice payload into ATM cells for transport over the network by means of a SONET port on the PXM card.

## Call Agent Interface

The call agent interface consists of CAS or CCS and call control. The path between the call agent and bearer processing, through a connection handling function, is for call setup and teardown.

The CAS path on the TDM side is embedded in the voice stream (bearer DS0s) and is separated at the bearer processing function. CAS (robbed bits, digits, and tones) is passed to the CAS/CCS processing function where it is passed (backhauled) to the call agent under the control of the call agent. The mechanism for communicating between VISM/VISM-PR and the call agent is gateway control protocols:

- MGCP
- TGCP
- SGCP
- SRCP

The separate CCS path channels are passed to the CAS/CCS processing function and backhauled to the call agent. CCS is transported as ISDN Q.931 messages both on the TDM side and on the call agent side. On the TDM side, the messages are carried in the Q.921 layer protocol (which terminates at the VISM/VISM-PR card). On the call agent side, communication with the call agent consists of Q.931 messages encapsulated in RUDP/UDP/IP packets. The Q.931 connection is terminated at the call agent and not at the VISM/VISM-PR card.

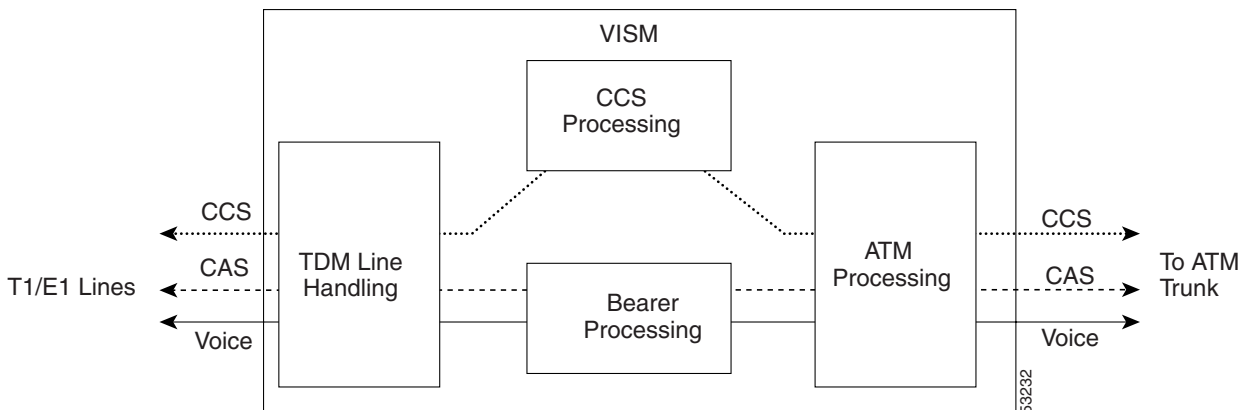
The call control path uses MGCP, TGCP, SGCP, and SRCP for call setup and teardown. Because signaling and call control are so intertwined, both call control and CAS use the same path and protocol for the VISM/VISM-PR card-to-call agent communications.

## AAL2 Trunking Operating Mode

In the AAL2 trunking operating mode, the VISM/VISM-PR card serves as an access to one or more trunks to preprovisioned locations. VISM/VISM-PR can be used at both ends of the trunk or at one end with a compatible device at the other.

In AAL2 trunking mode, VISM/VISM-PR plays no part in call setup and teardown. Other network elements handle call control while VISM/VISM-PR handles voice transport over the trunks. Figure 1-7 shows the major functional blocks for the AAL2 trunking operating mode.

Figure 1-7 VISM Block Diagram for the AAL2 Trunking Operating Mode



The AAL2 trunking mode is less complex than the VoIP switching or AAL2 PVC switched modes because call control is not involved, and a call agent is not needed.

The voice bearer path is treated in the same manner as in the VoIP switching and AAL2 PVC modes, except that only preprovisioned AAL2 PVCs are available for transport of voice over the trunks. CAS data is transported over the ATM network in the same AAL2 trunk as Type 3 messages. The CCS data can also be transported over the ATM network in a separate AAL5 PVC.

## VoIP Trunking Operating Mode

The Voice over IP (VoIP) trunking feature allows the VISM/VISM-PR to connect to the PBX, or central office digital systems, using T1/E1 digital interfaces. The TDM bit stream is converted into RTP packets after echo cancellation and compression. These packets are transported over the IP network.

No call agent is required for setting up and tearing down calls. You must configure the DS0 circuits. An ATM link joins VISM/VISM-PR card and the first router. After that, the connection is IP only.

VISM/VISM-PR and the router can have one or more PVCs to transport the data. You have the option to configure a PVC for bearer or control. If the PVC is configured as bearer and no control PVC exists, then PRI signal traffic and bearer traffic go through this PVC. If you configure separate PVCs for control and bearer, PRI signaling goes through control traffic only. You can modify some of the connection parameters after the PVC is added.

CAS is transported to the far-end by means of a Cisco proprietary format, not named signaling events (NSEs). PRI is transported over RUDP to the far-end once the trunk is provisioned between the originating and terminating VISM/VISM-PR cards.

PRI transport is handled like PRI backhaul, except that the PRI traffic is sent to a remote gateway instead of to a call agent. You can configure one line for PRI trunking and another line for PRI backhauling.

You must provision the Link Access Protocol D Channel (LAPD) trunk when configuring one line for PRI trunking and another line for PRI backhauling.

You must configure a line number, remote gateway IP address, local UDP port, and remote gateway UDP port, and then open a trunk. You must then configure the D channel as a trunk or backhaul:

- To configure the D channel as trunk, use the **addlapdtrunk** command before the **addlapd** command. If the **addlapd** command has been previously executed for that line, the **addlapd** command is rejected.



---

**Note** Two D channels on one line are not supported.

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- To configure the D channel as backhaul, use the **adds** command before the **addlapd** command. If you do not configure either trunk or session, the **addlapd** command is rejected.

## AAL1/AAL2 SVC Operating Mode

The AAL1 and AAL2 switched virtual circuit (SVC) operating modes are supported for VISM-PR cards.

Each AAL1/AAL2 SVC operating mode requires you to use a PXM1E or PXM45 in your MGX 8000 Series switch chassis.

AAL1 SVC is supported with the G.711 codec and clear channel. VAD is not supported in combination with AAL1 SVCs. CAS is not supported in combination with SVCs.

AAL2 SVC is supported with the G.711, G.726, G.729a, and G.729ab codecs and profiles 1, 2, 3, 7, 8, 100, 101, 110, and 200.



**Note**

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In AAL2 SVC mode, the AAL2 subcell multiplexing capability is not supported.

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## VISM/VISM-PR Functional Description

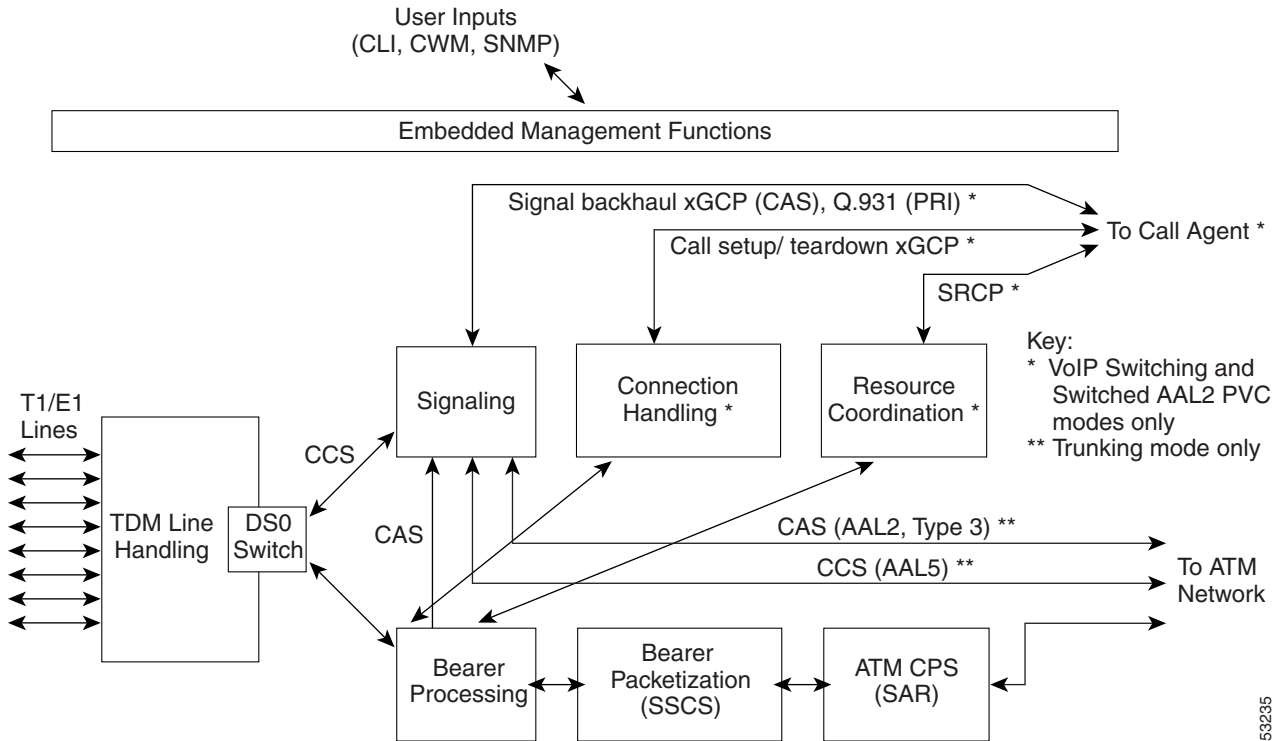
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The following sections describe the VISM/VISM-PR functions:

- TDM Line-Handling Function, page 2-2
- Bearer Processing Function, page 2-3
- Signaling Function, page 2-4
- DSP Function, page 2-10
- Call Control Function, page 2-14
- Embedded VISM/VISM-PR Management Functions, page 2-19

Figure 2-1 shows the functional blocks of VISM/VISM-PR. Items with single asterisks indicate VoIP switching and switched AAL2 PVC functions. Items with double asterisks indicate AAL2 trunking functions. Items without asterisks indicate VoIP switching, switched AAL2 PVC, and AAL2 trunking functions.

Figure 2-1 VISM/VISM-PR Detailed Functional Blocks



## TDM Line-Handling Function

The TDM line-handling function provides the physical layer interface to the T1/E1 lines and handles the following functions:

- Framing
- Line codes
- Physical layer alarms and failures
- Clocking
- Loopbacks
- Distinguishes between bearer and CCS channels

Outgoing traffic—in from the TDM network and out to the packet network—is processed by the T1/E1 framers. Each DS0 is extracted from its DS1 stream and is routed by a DS0 switch to the appropriate function. Bearer DS0s are routed to the bearer processing function. Common channel signaling (CCS) DS0s are routed to the TDM signaling function.

Outgoing traffic—in from the packet network and out to the TDM network—is processed in the opposite manner. The DS0s received from the ATM side are inserted into their respective DS1s and transmitted over the appropriate line in the TDM network.

# Bearer Processing Function

The bearer processing function processes raw bearer DS0 streams from the T1/E1 lines in preparation for packetization and segmentation and reassembly (SAR) processing on the ATM side. Most of the bearer processing is performed by the VISM/VISM-PR daughter card's DSPs.

The main processing categories are

- Echo Cancellation, Voice Compression, and A/Mu Law Conversion, page 2-3
- Voice Activity Detection and Silence Suppression, page 2-3
- Fax and Modem Tone Detection, page 2-4
- Jitter Control, page 2-4
- CAS Handling, page 2-4

## Echo Cancellation, Voice Compression, and A/Mu Law Conversion

Bearer DS0 streams are received from the T1/E1 line function, and each is assigned to a DSP configured for echo cancellation (ECAN). You can configure the following ECAN parameters:

- Residual echo control
- Maximum tail in milliseconds (up to 128 ms)
- Fax and modem tone detection

If voice compression is required, the ECAN voice streams are assigned to a second DSP configured with the required codec. Available compression schemes are:

- G.711 64 kbps (A/Mu law, user configurable)
- G.726-16k
- G.726-24k
- G.726-32k
- G.726-40k
- G.729a
- G.729ab
- G.723.1-H
- G.723.1a-H
- G.723.1-L
- G.723.1a-L

## Voice Activity Detection and Silence Suppression

You can configure the VISM/VISM-PR card DSPs to monitor the TDM voice stream for voice activity. If the voice activity detection (VAD) feature is enabled and no voice activity (silence) is detected for more than a specified period of time, typically 250 ms, the silent voice samples are suppressed. During periods of silence, parameters defining background noises transmit periodically. You can configure the remote VISM/VISM-PR to use the background noise information to generate comfort noise at the called end while silence suppression is in operation.

## Fax and Modem Tone Detection

You can configure the VISM/VISM-PR card DSPs to detect the modem or fax tones on the data lines. For VoIP operating mode, the action is specified through the use of command line interface (CLI) commands. See Chapter 10, “CLI Commands,” for more information on CLI commands. For AAL2 connections, the action is specified in the AAL2 profile. Generally, when a modem or fax tone is detected, VAD and ECAN are turned off, and the codec changes to the specified type (for example G.711 or clear channel).



### Note

If the codec is already set to clear channel, the DSP cannot detect any tones; fax and modem tones are not detected.

## Jitter Control

The VISM/VISM-PR card uses voice buffers on the DSP to reduce jitter on outgoing voice streams. Jitter control operates in the following modes:

- **Fixed**—Allows you to configure a fixed buffer size in the range 0 to 100 ms. This mode is used when latency jitter is nearly constant. This is the default mode for any G.711u/a or clear channel codec with a 100-ms buffer size.

The fixed jitter mode is always used with AAL2 trunking.

- **Adaptive**—Allows you to configure a starting buffer size but adapts the size of the buffer according to the jitter. Use this mode when latency jitter varies greatly. This is the default mode for all codecs other than G.711u/a and clear channel.

The adaptive mode is applicable only to VoIP modes.

## CAS Handling

In applications using CAS, you can configure the VISM/VISM-PR card DSPs to monitor incoming traffic and extract the following CAS information:

- ABCD bits
- Digits
- Tones

You can configure VISM/VISM-PR to handle different CAS variations such as immediate start, wink start, and ground start. The extracted CAS information is sent to the TDM signaling function.

## Signaling Function

All TDM signaling enters and exits VISM/VISM-PR on the T1/E1 lines and is directed to the signaling function. CAS information is received from the bearer processing function, described in the “Bearer Processing Function” section on page 2-3. CCS information arrives directly from the TDM line handling function, described in the “TDM Line-Handling Function” section on page 2-2.



VISM/VISM-PR depends on a combination of the following two features to handle signaling:

- Operating mode:
  - VoIP switching/VoIP trunking
  - AAL2 trunking
  - AAL1 SVC
  - AAL2 SVC
  - Switched AAL2 PVC
  - AAL1/VoIP (for TDM grooming)
  - VoIP trunking/AAL2 trunking?
- Signaling type:
  - CAS
  - CCS

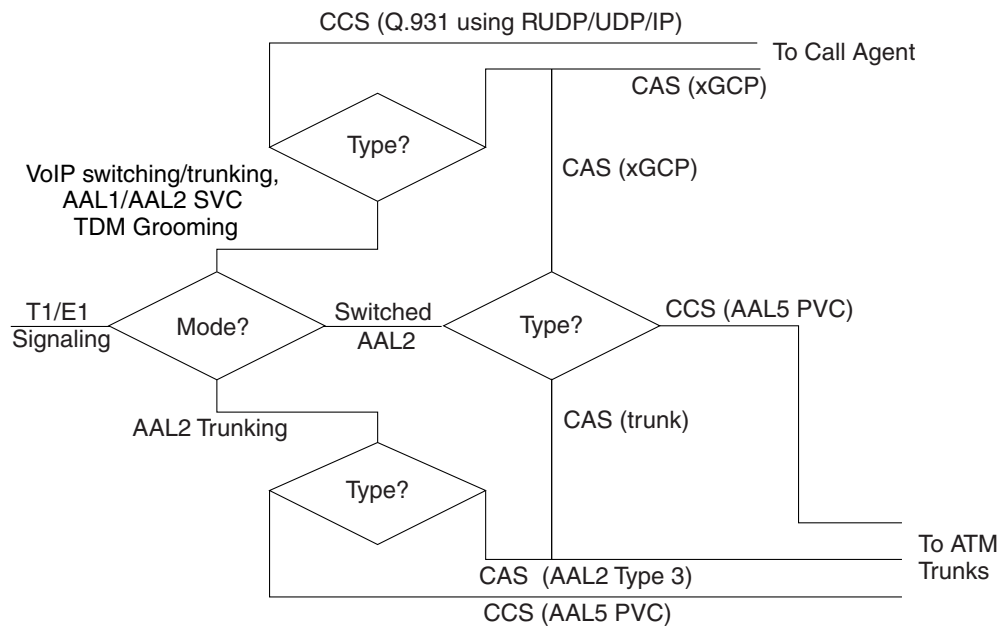
Signaling enters from the T1/E1 lines and, depending upon the mode and the type of signaling, is processed for the correct protocol and directed to either the call agent or the ATM trunks (see Figure 2-2).



**Note**

You can configure the VISM/VISM-PR card to support CCS without card involvement. In this configuration, a CCS channel is connected directly to the call agent that handles all necessary processing of signaling information.

**Figure 2-2 VISM/VISM-PR Signaling Paths**



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CAS can be configured, in the switched AAL2 PVC operating mode, to send the signaling to the call agent or, instead, to send it over an AAL2 PVC as in the AAL2 application.

## CAS Processing in VoIP Switching and Switched AAL2 PVC Operating Modes

In the VoIP switching and switched AAL2 operating modes, CAS is processed by the call agent using xGCP protocols.

The call agent performs the following functions:

- Issues the xGCP Notification Request command to instruct VISM/VISM-PR which CAS signals are to be reported to the call agent
- Instructs VISM/VISM-PR which CAS signals to send out the DS0

The VISM/VISM-PR card performs the following functions:

- Sends acknowledgment messages in response to call agent commands.
- Sends received CAS signals back to the call agent by using the SGCP Notify command.
- Interfaces with the DSP drivers, which detect and generate CAS signals.

Figure 2-3 shows the message structure involved in CAS processing with the VoIP switching and switched AAL2 PVC operating modes.

**Figure 2-3 CAS Processing—Message Structure**

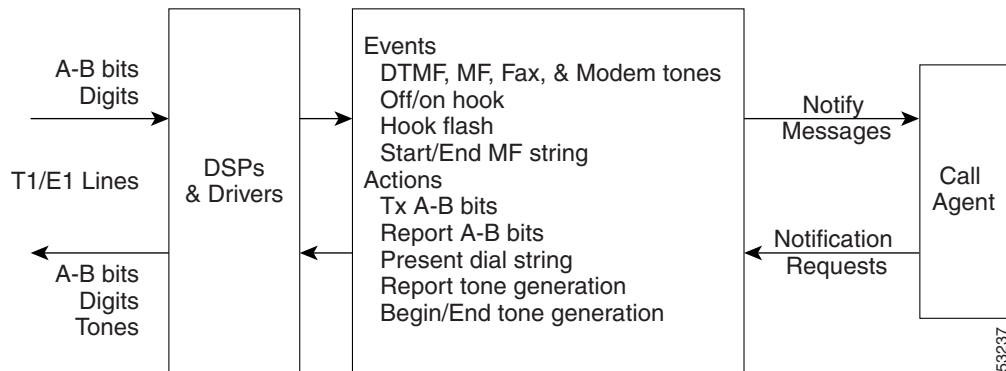
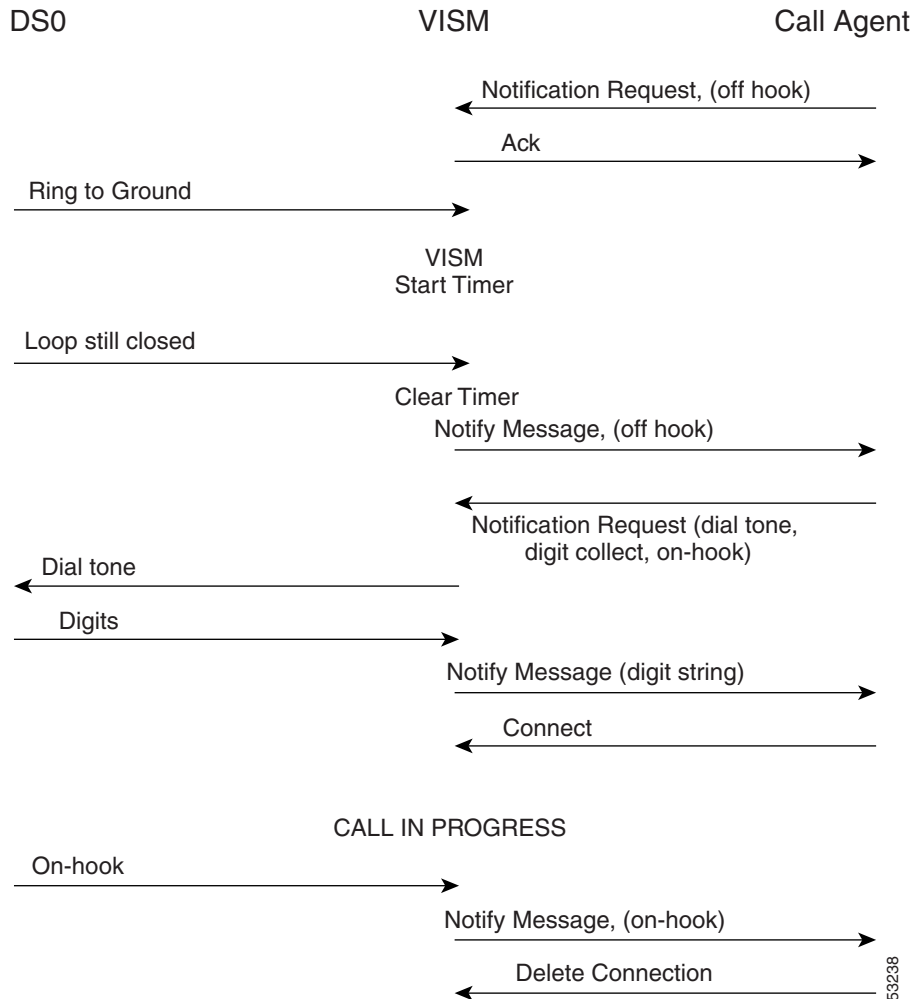


Figure 2-4 shows the local CAS processing call setup message sequences which occur between VISM/VISM-PR, the call agent, and the telephone equipment on the DS0.

**Figure 2-4 CAS in Initiating and Terminating a Call**



**Note**

Figure 2-4 shows only the local CAS aspects of call setup. The entire process of call setup involves many more messages between the local and remote call agents and the local and remote VISM/VISM-PRs. For more information, see the “Call Control Function” section on page 2-14.

The call processing for the VoIP switching and switched AAL2 operating modes has this sequence:

1. The call agent requests VISM/VISM-PR to look for an off-hook signal when the line is idle.
2. Upon receipt of an on-hook signal, VISM/VISM-PR starts a timer and checks later to ensure that the line is still off-hook.
3. VISM/VISM-PR notifies the call agent that the caller has gone off-hook. The timer mentioned in Step 2 is also used when the card processes on-hook/off-hook signaling bring about flash-hook events.

4. When the call agent is informed that the user is off-hook, the call agent instructs VISM/VISM-PR to generate dial tone and to look for dialed digits.
5. When the call agent receives the dialed number, the local call agent uses the dial plan to communicate with the remote call agent to set up the call.
6. The call is terminated when either the called or calling party goes on-hook.

## Processing CCS in Switched AAL2 PVC Operating Mode

In the switched AAL2 PVC operating mode, you can configure CCS to pass (backhaul) CCS signals between the user PBXs and the call agents.

You can configure T1 and E1 lines for CCS. You must specify a particular DS0 as an Integrated Services Digital Network (ISDN) D channel to carry the Primary Rate Interface (PRI) signaling. Signaling from the private branch exchange (PBX) is received on the D channel as level 3 Q.931 messages encapsulated in the information field of level 2 Q.921 LAPD information frames.

The Q.921 link is terminated at the VISM/VISM-PR and on the call agent side. A Redundant User Datagram Protocol/User Datagram Protocol/Internet Protocol (RUDP/UDP/IP) connection is used to carry level 3 Q.931 signaling between VISM/VISM-PR and the call agent. This link to the call agent flows through an intermediate router. From VISM/VISM-PR to the router, the RUDP/UDP/IP packets are segmented and transported as AAL5 ATM cells.

The VISM/VISM-PR PRI/backhaul feature passes the Q.931 messages between the PBX and the call agent.

VISM handles all Q.921 frame types. Here is the sequence information frames:

1. VISM/VISM-PR extracts the Q.931 frame.
2. VISM/VISM-PR places the frame in an RUDP datagram.
3. The RUDP datagram is encapsulated in UDP and IP packets. These packets use the IP address and a specified port number of the destination call agent).
4. The SAR section of VISM/VISM-PR segments the IP message into AAL5 ATM cells for transport to the call agent via an edge router.

In CCS processing, communication between VISM/VISM-PR and the call agent involves both call control information, which uses xGCP protocols, and CCS, which uses Q.931 protocol. Both call control information and signaling are transported using the AAL5 ATM connection.

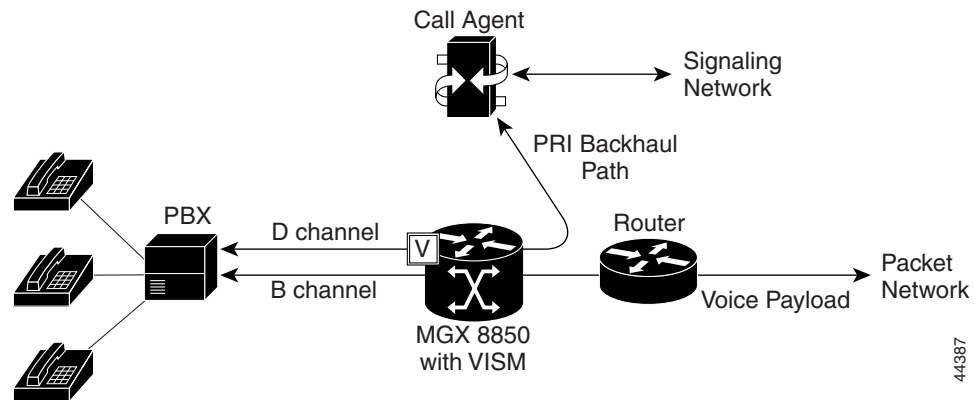
Signaling from the call agent to the PBX is handled in the following manner:

1. Signals from the call agent are stripped of its RUDP/UDP/IP headers and trailers.
2. Signals are then encapsulated into Q.921 information type frames for transmission to the PBX.

VISM/VISM-PR is not involved with the signaling content but acts as an interface between the PBX and the call agent.

Figure 2-5 shows the VISM/VISM-PR PRI/backhaul path.

**Figure 2-5 PRI/Backhaul Path**

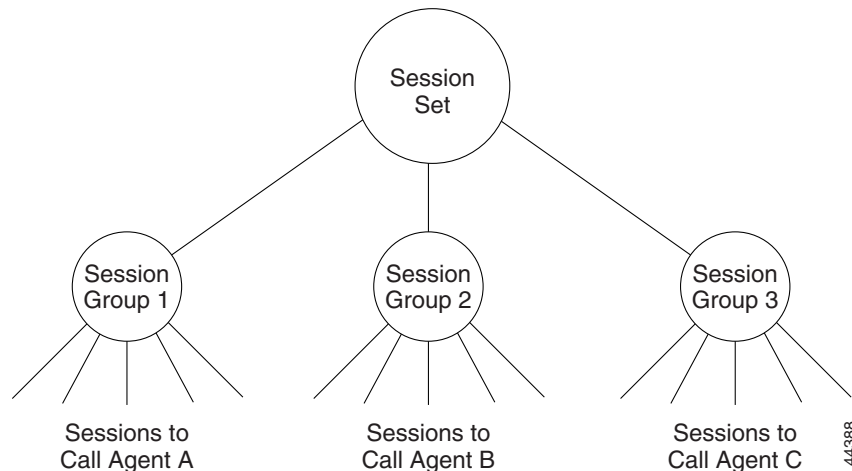


For RUDP links between VISM/VISM-PR and the call agents, use a session with a session manager.

A session represents a single RUDP link to a specified call agent. Sessions are organized into session groups, and session groups are organized into session sets. VISM/VISM-PR architecture supports up to 64 sessions and up to 16 session groups.

You can set up multiple RUDP links as sessions in a single group for a specified call agent. A group is required for each call agent for which CCS is to be backhailed. Within a group, each session is assigned a priority level. When an active session fails, the session manager switches to the next highest priority backup session within the group. Figure 2-6 shows the hierarchy of RUDP sets, groups, and sessions.

**Figure 2-6 RUDP Hierarchy of Sets, Groups, and Sessions**



VISM/VISM-PR maintains a set of counters for the collection of statistics at both the Q.921 and Q.931 protocol levels. The collected statistics include the number of frames/packets/bytes sent and received, the number of resets, the number of discards and retransmissions, and so forth. See the CCS session and LAPD display commands in Chapter 10, "CLI Commands," for more information on collected statistics for the CCS session and LAPD display commands.

Use the CLI PRI/backhaul commands to do the following:

- Create and delete session sets
- Create, delete, configure, and display sessions and sessions groups
- Create, delete, configure, and display D channels for CCS
- Display PRI/backhaul statistics

See Chapter 10, “CLI Commands,” for more information on CLI commands.

## CAS Processing in AAL2 Trunking Operating Mode

CAS is extracted from the voice data and is transported across the packet network in AAL2 trunking operating mode. The signaling is transported across the same trunk (VC) and the same channel identifier (CID) as its associated voice stream. This transportation uses AAL2 Type 3 messages in accordance with ITU-T I.366.2. The messages are used for CAS (A, B, C, and D) robbed bits, fax/modem tones, and digits and are transported with triple redundancy.

## CCS Processing in AAL2 Trunking Operating Mode

CCS is maintained as Q.931 messages and transported across the packet network through the use of an AAL5 PVC in AAL2 trunking operating mode. The local and remote ends of the PVC are the same as those for the AAL2 PVC trunk carrying the associated voice data.

## DSP Function

The VISM/VISM-PR digital signaling processors (DSPs) process incoming voice data (for compression, ECAN, and so forth), and the data is prepared for transport over the ATM network. Voice samples are processed into ATM packets and then into ATM cells in preparation for transport. VISM/VISM-PR then transports the cells to Voice over ATM (VoATM) networks that support the following operating modes:

- VoIP
- Switched AAL2 PVC
- AAL2 trunking
- AAL1 SVC

## Transporting Voice Cells with VoIP

In the VoIP switching operating mode, voice cells are processed in the following way before they are transported over ATM networks:

1. Formats them into Real-Time Transport Protocol (RTP) packets.



**Note** RTP allows time-stamping of the voice samples, which permits dejittering of the samples transmitted to the destination TDM line.

2. Encapsulates the RTP packets into UDP packets.

3. Encapsulates the UDP packets into IP packets.
4. Encapsulates the IP packets to AAL5 ATM cells for transmission to an edge router on the network.

Figure 2-7 shows the protocol stack for VoIP.

**Figure 2-7 VoIP Protocol Stack**

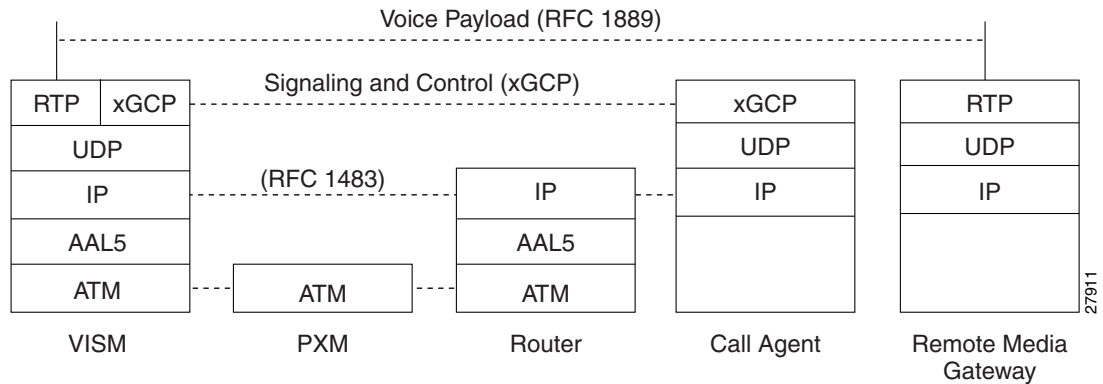
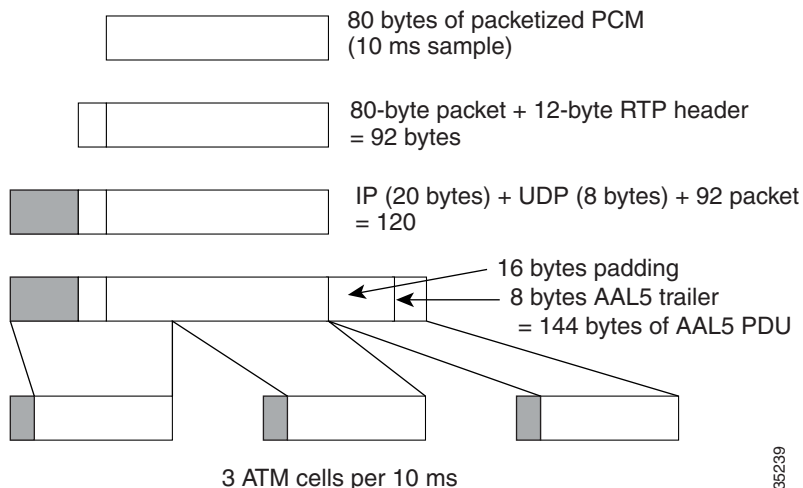


Figure 2-8 shows how a voice sample is packetized and transmitted as cells.

**Figure 2-8 VoIP Cell Packetization and Transmission**



At the layer containing RTP, a 12-byte header is added to the 80 bytes of packetized PCM. At the layer containing UDP, an 8-byte header is added. At the layer containing IP, a 20-byte header is added for a total of 120 bytes.

At the layer containing AAL5, the 8-byte AAL5 trailer is added and the data is padded with 16 bytes to make an integral number of ATM cell payload bytes. The resulting protocol data unit (PDU) is 144 bytes in length and is transported in three ATM cells.

A single PVC is set up between the Cisco MGX 8000 series platform and the router. All packets are sent across the PVC regardless of their destination. The router extracts the IP addresses and routes the cells accordingly.

To improve reliability, VISM/VISM-PR supports two independent VoIP bearer connections, each connected to a separate edge router and each with its own PVC. One PVC is designated the primary PVC and the other the secondary PVC. The primary circuit is used unless it fails, in which case VISM/VISM-PR switches automatically to the secondary circuit. Switchover might cause a temporary 250 ms delay on the lines.

VISM/VISM-PR communicates with the packet network about transmitting the voice payload by using the PXM port on the MGX 8000 series platform. Voice payload samples are formatted and sent across the MGX 8000 series platform cellbus and onto the connection.

## Transporting Voice Cells with Switched AAL2 PVC

The switched AAL2 PVC operating mode transports voice cells with up to 64 PVCs. Multiple calls can share a single AAL2 connection simultaneously using a CID. Each PVC is assigned a virtual connection circuit identifier (VCCI). The VCCI/CID to endpoint/DS1/DS0 binding is made dynamically by the call agent as part of the call setup procedure. However, you can permanently set the binding, which makes VISM/VISM-PR operate as if it were in AAL2 trunking operating mode.

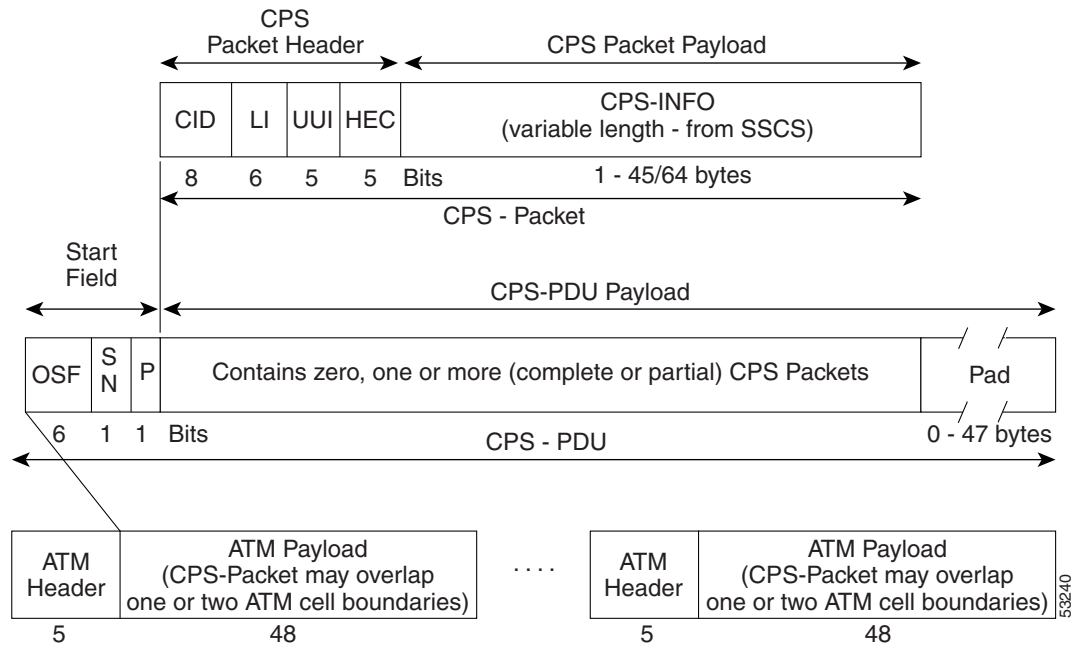
The AAL2 PVC supports AAL2 profiles and midcall upspeeding. Codec changes can be supported if they are within the agreed upon profile. The following AAL2 profiles are supported:

- Custom profile 100
- Custom profile 101
- Custom profile 110
- ITU-T I.366.2 profile 1
- ITU-T I.366.2 profile 2
- ITU-T I.366.2 profile 7
- ITU-T I.366.2 profile 8



Figure 2-9 shows the packetization and transmission process for AAL2 cells.

**Figure 2-9 AAL2 Cell Packetization and Transmission**



## Transporting Voice Cells with AAL2 Trunking

The AAL2 trunking operating mode transports voice cells with up to 64 AAL2 trunks. The CID/virtual channel identifier (VCI) for each DS1/DS0 pair is preprovisioned, which ensures that DS0 voice streams are automatically transported over the appropriate trunk.

For CAS applications, voice cells and CAS are transported across the AAL2 trunk.

If a channel is configured for CCS, the signaling is transmitted by one of the following methods:

- AAL5 transport mode—Suitable for CCS protocols, which use an ITU-T 16 bit CRC in the HDLC frames (for example, ISDN)
- 64K clear time slot mode—Bit transparent and thus suitable for CCS protocols, which cannot be transported through the use of the AAL5 transport mode (for example, SS7)

VISM/VISM-PR does not support any call control functions with the AAL2 trunking operating mode. It passes signal traffic across the trunk.

Alarm and packetization handling are the same as in the switched AAL2 PVC operating mode. See the “Transporting Voice Cells with Switched AAL2 PVC” section on page 2-12.

## Transporting Voice Cells with Switched AAL1 SVC

VISM/VISM-PR interacts with a call agent that uses an xGCP over AAL5 control PVCs. In the switched AAL1 SVC operating mode, the bearer path is VoAAL1, and the bearer connections are SVCs. VISM/VISM-PR dynamically sets up and tears down bearer connections.

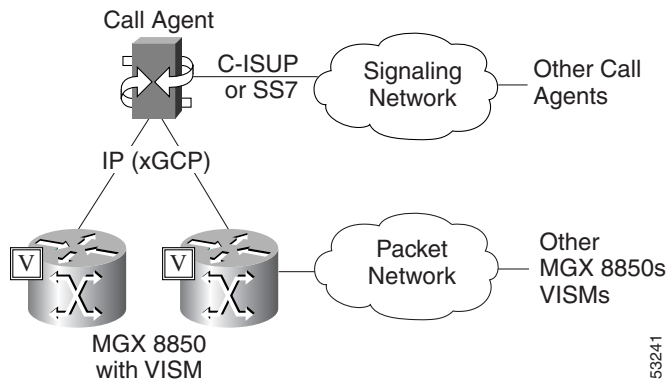
# Call Control Function

Call control is used in the VoIP switching and switched AAL2 PVC operating modes and is managed by the call agents. The call agent performs the following call control functions:

- Analyzes signaling received from VISM/VISM-PR cards and other call agents to monitor the status of all endpoints and connections
- Signals VISM/VISM-PR cards and other call agents to set up and tear down calls
- Reacts to fax, modem, alarm, and other line conditions and events
- Maintains a dial plan for locating the remote call agent by means of the dialed number
- Negotiates profiles and codecs between the called and calling locations

These functions require call agent communication with the VISM/VISM-PR cards under call agent control and with peer call agents. Figure 2-10 shows the call agent communications links.

**Figure 2-10 Call Agent Communications Links**



The interface between the call agent and VISM cards is a gateway call control protocol generically known as xGCP. The following gateway call control protocols are supported:

- Media Gateway Control Protocol (MGCP), Releases 0.1 and 1.0
- Trunking Gateway Control Protocol (TGCP), Releases 1.0
- Simple Gateway Control Protocol (SGCP), Releases 1.5
- Simple Resource Control Protocol (SRCP)

SRCP enables the VISM card and the call agent to resynchronize. Synchronization occurs when the call agent first assumes control of VISM or after the call agent loses communication with VISM.

All protocols use a UDP/IP connection between the call agent and the VISM cards. The IP address of the call agent can be resolved in either of the following ways:

- Internal table which you set up with the CLI
- External domain name server (DNS)

You can configure VISM/VISM-PR to use the internal table and external DNS in the following ways:

- Internal table only
- External DNS only
- Internal first and external second
- External first and internal second

VISM/VISM-PR supports up to 11 domain names. Each domain name can have up to eight internal and eight external IP addresses.



**Note**

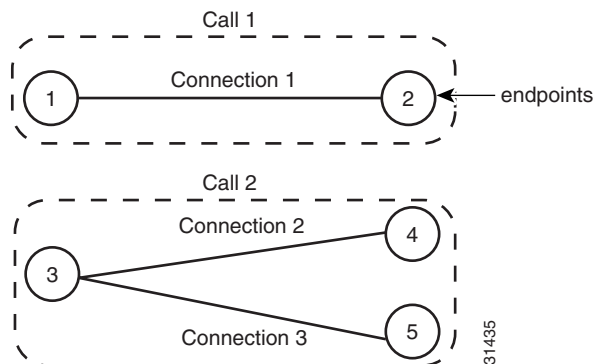
The external DNS can have up to eight internal IP addresses.

The interface between the call agent and other call agents is either Signaling System 7 (SS7) or a Cisco extended ISDN User Part (C-ISUP).

## Connection Model

The use of SGCP and MGCP gateway call control protocols follow the connection model where the basic constructs are connections and endpoints. Figure 2-11 shows a basic connection model.

**Figure 2-11 Basic Connection Model**



Connections are grouped into calls. One or more connections can belong to the same call. Several connections, that may or may not belong to the same call, can terminate in the same endpoint.

The SGCP consists of the following commands:

- Notify request—Used by the call agent. Requests the gateway to send notifications upon the occurrence of specified events in an endpoint.
- Notify messages—Used by the gateway. Sends a list of observed events to the call agent.
- Create connection—Used by the call agent. Sets up a new connection at the gateway.

- Modify connection—Used by the call agent. Modifies a gateway's view of a connection.
- Delete connection—Used by the call agent. Terminates a connection.

The MGCP extends SGCP to include the following commands:

- Audit endpoint—Used by the call agent. Audits information related to a given endpoint.
- Audit connection—Used by the call agent. Audits information related to a given connection.
- Restart in progress —Used by the gateway (VISM). Provides notification that an endpoint (or a group of endpoints) is brought into or taken out of service.
- Audit gateway—Used by the call agent. Identifies the status of the gateway.
- Audit line—Used by the call agent. Identifies the status of a given line.

The TGCP command set is the same as the MGCP command set.

## xGCP Extensions for AAL2 Switched PVC and AAL2 SVC Operating Modes

VISM/VISM-PR supports the following extensions to the Xternal Gateway Control Protocols (xGCPs) for AAL2 switched and AAL2 SVC applications.



### Note

Since TGCP Release 1.0 is supported only in VoIP switching mode, this section does not apply to TGCP.

- A new AAL2 Type 3 message (coded 010001) for telephone signal events (TSEs). The following are TSEs:
  - ECAN off
  - Request audible ring tone
  - Ack continuity test
  - Request stop audible tone
  - Request continuity test
- An extended naming structure that includes ATM endpoints. An ATM endpoint includes the following identifiers:
  - ATM address
  - VPI
  - VCI
  - VCCI
  - CID
- An extended list of connection events in MGCP, known as an ATM package. These events are
  - Setup complete (for AAL2 CID path)
  - Setup failed (for AAL2 CID path)
  - Enable CAS via type 3 packets
- Introduction of a profile type in call setup commands to describe encoding techniques.

## Endpoint Service States

Endpoints exist in one of two service states—in-service (IS) and out-of-service (OOS). The state of an endpoint is determined by user configuration commands and line alarm conditions. When an endpoint is added, the line alarm condition is automatically the state of the endpoint.

When endpoints are taken OOS, the transition can be graceful or forced. If graceful, no new connections are permitted, and ongoing connections are allowed to terminate normally. If forced, no new connections are permitted, and all ongoing connections are terminated immediately.

You can also bring an endpoint to the IS and OOS states with the following commands:

- **cnflnis**—Configure a line as IS
- **cnflnoos**—Configure a line as OOS
- **cnfgwis**—Configure a VISM card as IS
- **cnfgwoos**—Configure a VISM card as OOS

These commands allow you to specify either a graceful or forced transition.

If an alarm condition on a line is raised, all endpoints on the line are brought into a forced transition to OOS. An automatic return to IS takes place when the alarm is cleared, unless a specific OOS command is executed in the meantime.

## Restart In Progress Command

The call agent is kept informed of the state of all endpoints with the xGCP Restart In Progress (RSIP) command. The following minimum requirements must be met for this process to operate:

- At least one call agent must be configured through the use of the add media gateway controller (**addmgc**) command.
- A protocol must be added for each media gateway controller through the use of the add media gateway group entry (**addmgcgrpentry**) command.

The VISM/VISM-PR card issues an RSIP command in the following situations:

- One or more endpoints are added or deleted with the following commands:
  - **addendpt**
  - **addendpts**
  - **delendpt**
  - **delendpts**
- A line is configured as IS or OOS with one of the following commands:
  - **cnflnis**
  - **cnflnoos**

- The VISM/VISM-PR card (gateway) is configured as IS or OOS with one of the following commands:
  - **cnfgwis**
  - **cnfgwoos**
- The VISM/VISM-PR card is powered up or reset.




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**Note** The RSIP is delayed by a random amount (up to a configurable maximum duration). This delay prevents an avalanche of RSIPs from arriving at the call agent when an entire MGX 8000 series platform with multiple VISM/VISM-PR cards is powered up or reset.

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When the states of multiple endpoints are changed simultaneously, the VISM/VISM-PR card minimizes the number of RSIP commands through use of the wildcard ( \* ) convention for naming endpoints.

When an RSIP is sent to call agents, VISM/VISM-PR expects an acknowledgment. If no acknowledgment is received after a timeout period, the RSIP is sent again. This process is repeated a number of times, after which, if no acknowledgment is received, an acknowledgment is assumed.

You can configure both the timeout period and the number of retries with the **cnfxgcpretry** command.

## Connection Admission Control

The VISM/VISM-PR connection admission control (CAC) feature calculates the effect of a new call on the bandwidth utilization of the ATM PVC before a new call is either admitted or rejected.

Each call requires a connection between two endpoints and requires a certain amount of bandwidth. Bandwidth is expressed as cells per second (cps) and depends upon the following:

- Encapsulation method
- Coding/compression method
- Whether voice activity detection (VAD) is enabled or disabled




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**Note** The default condition is for CAC to be enabled.

---

CAC maintains a table of all currently active calls and their bandwidth requirements. When a new call is requested, CAC calculates the total bandwidth requirements of all the current calls and adds the bandwidth required by the newly requested call. The new total is then compared with the preprovisioned bandwidth (cps) of the ATM PVC.

If the new bandwidth total exceeds the preprovisioned bandwidth of the PVC, the call request is rejected. If the new bandwidth total is less than or equal to the preprovisioned bandwidth of the PVC, the call is accepted.

You can specify the values of the following VAD parameters in the CAC algorithm:

- Over-subscription drop ratio
- Voice duty cycle

These VAD parameter specifications allow the CAC algorithm to take into account the bandwidth savings of VAD and improves the CAC decision-making process. You can specify the values of these parameters at the card level and at the logical channel level.

## Embedded VISM/VISM-PR Management Functions

VISM/VISM-PR management tools allow you to do the following:

- Configure VISM/VISM-PR features
- Provision connections
- Display VISM/VISM-PR configurations
- Display VISM/VISM-PR statistics

Use any of the following tools to manage and configure the VISM/VISM-PR card:

- CLI—See Chapter 5, “Initial Card Configuration,” for a description of how to configure VISM/VISM-PR using the CLI. See Chapter 10, “CLI Commands,” for a description of the syntax for each CLI command.
- Third-party Simple Network Management Protocol (SNMP) manager—Permits you to display and manipulate the individual MIB objects.







## VISM/VISM-PR Clocking

---

This section explains the clocking options in the following sections:

- Description of Network Clocking, page 3-1
- Clocking Sources, page 3-2
- Revertive and Nonrevertive Clocking, page 3-2
- VISM/VISM-PR Card as a Clocking Source, page 3-3
- PXM Card as Clocking Source, page 3-7

### Description of Network Clocking

Network clocking means that a clock signal is generated or derived and distributed through a node to ensure a synchronized network operation.

If a clocking problem occurs on the voice circuits, calls can be dropped. Voice quality can be diminished because of the possible echoing and “hissing” problems.

VISM/VISM-PR typically interfaces to TDM devices (for example, public or private voice switches). These voice switches usually demand a robust clocking schema in which the clock supplied to each voice switch is traceable to the clock source of every other voice switch in the network. VISM must be introduced into this kind of network in a manner which does not breakdown the clocking integrity.

Typically, a local and remote VISM/VISM-PR must be provided with clock sources which are traceable to each other and traceable to the voice switches to which they interconnect. Failure to properly set up this clocking can result in dropped calls and frequent voice quality problems.

To avoid these problems, time the entire voice network, including the VISM and MGX switches, to a single clock source that is propagated throughout the network.

# Clocking Sources

To ascertain the optimum single clock source for the network, examine the entire configuration of the MGX 8000 Series platform.

The MGX 8850 supports the following types of internal and external clock sources.

- Building Integrated Timing Supply (BITS) clock—This type is an external clock source connected to one of two RJ-48 female connectors on the PXM-UI-S3 back card (see Figure A-1).
- Synchronous Equipment Timing Source (SETS) clock—This type is an external clock source connected to one of two RJ-48 female connectors on the PXM-UI-S3 back card (see Figure 3-1).
- External clock—This clock is derived from a service module line (for example, a VISM/VISM-PR line).
- Internal clock—This clock consists of a Stratum 3 clock circuit in the internal clock oscillator on the PXM back card - PXM-UI-S3. This clock source is distributed to all cards in the gateway.



**Note** The PXM-UI supports only Stratum 4 clock.

## Revertive and Nonrevertive Clocking

PXM1E and PXM45 support revertive or nonrevertive clocking. If your MGX switch is configured for a clock source from a BITS source or PXM line source and the source line goes into the alarm state, a revertive or nonrevertive recovery occurs.

- Revertive clocking—If a node is configured and the clock source fails (due to a physical failure such as a loss of signal or the clock frequency drifting out of specification), the node abandons the clock source and finds an alternative clock source. When the original clock source is repaired, the node automatically reverts to using the original clock source without manual intervention from a network operator.
- Nonrevertive clocking—Similar to revertive clocking, except that when the original clock source is repaired, the node does not automatically revert to the original clock source.

The choice of revertive or nonrevertive clocking depends upon the processor module back card used and the clocking source specified. See Table 3-1 to ascertain if your clocking is revertive or nonrevertive in your network configuration.

**Table 3-1 Revertive/Nonrevertive Clocking and PXM Back Card Support**

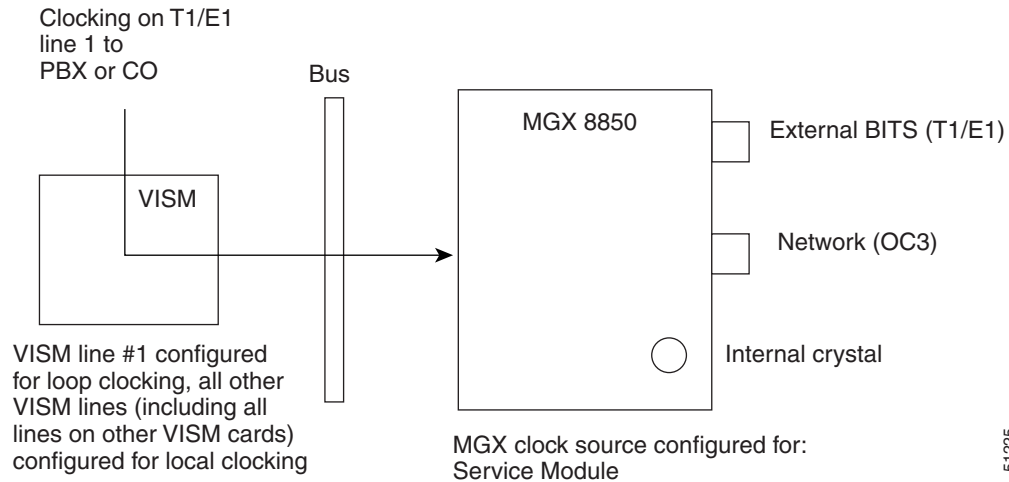
Processor Module Back Card	Using External Clock	Using Inband/Service Module Clock
PXM-UI	For loss of service: revertive	For loss of service: revertive
	For bad frequency/drift: nonrevertive	For bad frequency/drift: nonrevertive
PXM-UI-S3	For loss of service: revertive	For loss of service: revertive
	For bad frequency/drift: nonrevertive	For bad frequency/drift: nonrevertive

To make a nonrevertive clock source usable after it has failed, you must use the **cnfclksrc** command on the PXM card to remove the configuration of that particular clock source, and then use the **cnfclksrc** command again to configure it back.

# VISM/VISM-PR Card as a Clocking Source

Figure 3-1 shows the VISM card primary clocking source option, in which the clock originates at the VISM side of the VISM/PXM interface. This figure also applies to VISM-PR cards.

**Figure 3-1 VISM Configured for Loop Clocking**



With the VISM/VISM-PR card option, clocking originates from one of the T1 or E1 lines on one of the VISM/VISM-PR cards.

If the VISM/VISM-PR is the primary clocking source, the clocking originates on one of the VISM/VISM-PR T1 or E1 lines. The line that is providing the clock source must be configured for loop clocking. All remaining T1 or E1 lines on all of the VISM/VISM-PR cards in the shelf must be configured for local clocking.

To configure the VISM/VISM-PR card as the primary or secondary clocking source, complete the following steps:

- 
- Step 1** Log in to the VISM/VISM-PR card.
- Step 2** To configure the first line for loop clocking, enter the **cnfln** command.



**Note** On VISM-PR cards you can configure the clock source on any line. On VISM cards you can configure only line 1 as the clock source.

```
nodename.1.27.VISM8.a > cnfln <line_number> <line_code> <line_len> <clk_src> <line_type>
<loopback_detection> |<circuit_idenifier>|
```



**Note** You must include all argument values when using the **cnfln** command; however, the **<line\_number>** and **<clk\_src>** are the only relevant arguments for configuring the clocking source on your VISM/VISM-PR cards.

Replace the **cnfln** arguments with the values listed in Table 3-2.

**Table 3-2 Parameters for cnfln Command**

Parameter	Description
<i>line_number</i>	Line number is in the range 1–8.
<i>line_code</i>	Line coding method is specified by one of the following values: <ul style="list-style-type: none"> <li>• 2 = B8ZS (T1)</li> <li>• 3 = HDB3 for E1 lines</li> <li>• 4 = AMI for T1 or E1 lines</li> </ul>
<i>line_len</i>	Line length is specified by one of the following values: <ul style="list-style-type: none"> <li>• 8 = For E1 cards with an SMB back card</li> <li>• 9 = For E1 cards with an RJ-48 back card</li> <li>• 10 = 0–131 feet for T1</li> <li>• 11 = 131–262 feet for T1</li> <li>• 12 = 262–393 feet for T1</li> <li>• 13 = 393–524 feet for T1</li> <li>• 14 = 524–655 feet for T1</li> <li>• 15 = More than 655 feet for T1</li> </ul>
<i>clk_src</i>	Clock source. <ul style="list-style-type: none"> <li>• 1 = Loop clock. Clocking comes from the T1/E1 line. <ul style="list-style-type: none"> <li>– If the clocking source is from a line on a VISM card, configure line 1 as loop clock. Configure all remaining lines on all remaining VISM cards for local clock.</li> <li>– If the clocking source is from a line on a VISM-PR card, configure the appropriate line (range 1–8) for loop clock. Configure all remaining lines on all remaining VISM-PR cards for local clock.</li> </ul> </li> <li>• 2 = Local clock. Clocking comes from the PXM card. <p>If the clocking source to the VISM/VISM-PR cards is derived from the PXM card, configure all lines on all VISM/VISM-PR cards as local.</p> </li> </ul>

**Table 3-2** Parameters for *cnfln* Command (continued)

Parameter	Description
<i>line_type</i>	Line type is specified by one of the following values: <ul style="list-style-type: none"> <li>• 1 = dsx1ESF</li> <li>• 2 = dsx1D4</li> <li>• 3 = E1</li> <li>• 4 = E1CRC</li> <li>• 5 = E1MF</li> <li>• 6 = E1MFCRC</li> <li>• 7 = E1 Clear</li> <li>• 8 = E1Q50</li> <li>• 9 = E1Q50CRC</li> </ul>
<i>loopback_detection</i>	Loopback detection is specified by one of the following values: <ul style="list-style-type: none"> <li>• 1 = Disabled</li> <li>• 2 = Enabled (This value is not applicable to E1 lines.)</li> </ul>
<i>circuit_identifier</i>	(Optional) Name of the circuit in ASCII format. Range is 1–64 characters.

The following example shows sample syntax for adding loop clock to line 1.

```
nodename.1.27.VISM8.a > cnfln 1 3 9 1 3 1

nodename.1.27.VISM8.a >
```

**Note**

You cannot delete a line that is configured as the clock source. You must first configure the line to not be the clock source, and then you can delete the line.

See Chapter 10, “CLI Commands” for more information on VISM/VISM-PR commands.

**Step 3** To display the clocking option that you configured in Step 2, enter the **dspln** command.

The following example shows the resulting display:

```
nodename.1.27.VISM8.a > dspln 1

LineNum:                1
LineConnectorType:      RJ-48
LineEnable:             Modify
LineType:               dsx1E1CCS
LineCoding:             dsx1HDB3
LineLength:             G.703 120 ohm
LineXmtClockSource:     LoopTiming
LineLoopbackCommand:    NoLoop
LineSendCode:           NoCode
LineUsedTimeslotsBitMap: 0x2
LineLoopbackCodeDetection: codeDetectDisabled
LineSignalingType:      No Signaling
LineCcsChannels:        0x0
LineTrunkConditioning:  disable
LineBearerBusyCode:     255
```

```

CircuitIdentifier:
TxDigitOrder:          dnisThenAni
TonePlanRegion:
TonePlanVersion:       0
RingingTO:             180
RingBackTO:            180
BusyTO:                 30
ReorderTO:             30
DialTO:                 16
StutterDialTO:         16
OffHookAlertTO:        5
RemoteRingbackMethod:  proxy

```

**Step 4** To configure the remaining T1 or E1 lines for local clocking, enter the **cnfln** command.

**Step 5** To display the clocking source for all of the lines on the VISM/VISM-PR card, enter the **dsplns** command.

The following example shows the resulting display:

```

nodename.1.27.VISM8.a > dsplns

Line Conn      Type      Status/Coding      Length      XmtClock Alarm
-----
27.1 RJ-48 dsx1E1CCS Mod/dsx1HDB3 G.703 120 ohm LoopTimi No
27.2 RJ-48 dsx1E1CCS Mod/dsx1HDB3 G.703 120 ohm LocalTim No
27.3 RJ-48 dsx1E1CCS Mod/dsx1HDB3 G.703 120 ohm LocalTim Yes
27.4 RJ-48 dsx1E1CCS Mod/dsx1HDB3 G.703 120 ohm LocalTim Yes
27.5 RJ-48 dsx1E1CCS Mod/dsx1HDB3 G.703 120 ohm LocalTim Yes
27.6 RJ-48 dsx1E1CCS Mod/dsx1HDB3 G.703 120 ohm LocalTim Yes
27.7 RJ-48 dsx1E1CCS Mod/dsx1HDB3 G.703 120 ohm LocalTim Yes
27.8 RJ-48 dsx1E1CCS Mod/dsx1HDB3 G.703 120 ohm LocalTim Yes

LineNumOfValidEntries: 8

```

**Step 6** Log in to the PXM card.

**Step 7** To configure the VISM/VISM-PR card as a primary clocking source, enter the **cnfclksrc** command with the following parameters:

```
nodename.1.7.PXM.a > cnfclksrc <slot.port> P
```

Replace *<slot.port>* with the VISM/VISM-PR card slot number and line number of the loop clock. The P indicates that the VISM/VISM-PR card is configured as a primary clocking source.

**Step 8** To display the configured clock on the PXM card, enter the **dsplkinfo** command.

The following example shows the service module as the clocking source:

```

cvgmgx1a.1.7.PXM.a > dsplkinfo

***** Clock HW registers *****
SEL_T1 = t1      SEL100 = ON      SEL120 = OFF      SEL75 = OFF
NOEXTCLK = ON NOEXTCLK2 = OFF

priMuxClockSource = SERVICE_MODULE_PRI_CLK
prevPriMuxClockSource = INTERNAL_OSC
primaryInbandClockSourceLineNumber = 1
secMuxClockSource = INTERNAL_OSC
prevSecMuxClockSource = INTERNAL_OSC
secondaryInbandClockSourceLineNumber = 1
currentClockSetReq = primary
currentClockHwStat = primary
StratumLevel = STRATUM4

```

```

PreviousClockHwStat = none
extClock1Present = No
extClock2Present = No
extClkConnectorType = RJ45
extClkSrcImpedance = 100 Ohms
internal Clock Status=0, Primary Clock Status=0
Secondary Clock Status=0, Last inband Clock State=0
last Inband Clock state= 0, Last External Clock Present = 1
Last External Clock2 Present = 1

```

**Step 9** To configure the VISM/VISM-PR as a secondary clocking source, enter the **cnfclksrc** command with the following parameters:

```
nodename.1.7.PXM.a > cnfclksrc <slot.port> S
```

Replace *<slot.port>* with the VISM/VISM-PR card slot number and line number. The S indicates that the VISM card is configured as a secondary clocking source.

**Step 10** To display the configured clock on the PXM card, enter the **dspclkinfo** command.

The following example shows the service module as a secondary clock source:

```

nodename.1.7.PXM.a > dspclkinfo

***** Clock HW registers *****
SEL_T1 = t1      SEL100 = ON      SEL120 = OFF      SEL75 = OFF
NOEXTCLK = ON NOEXTCLK2 = OFF

priMuxClockSource = SERVICE_MODULE_PRI_CLK
prevPriMuxClockSource = SERVICE_MODULE_PRI_CLK
primaryInbandClockSourceLineNumber = 1
secMuxClockSource = SERVICE_MODULE_SEC_CLK
prevSecMuxClockSource = INTERNAL_OSC
secondaryInbandClockSourceLineNumber = 1
currentClockSetReq = primary
currentClockHwStat = secondary
StratumLevel = STRATUM4
PreviousClockHwStat = primary
extClock1Present = No
extClock2Present = No
extClkConnectorType = RJ45
extClkSrcImpedance = 100 Ohms
Internal Clock Status=0, Primary Clock Status=0
Secondary Clock Status=0, Last inband Clock State=0
last Inband Clock state= 0, Last External Clock Present = 1
Last External Clock2 Present = 1

```

## PXM Card as Clocking Source

You can configure the PXM cards for clocking as described in the following sections:

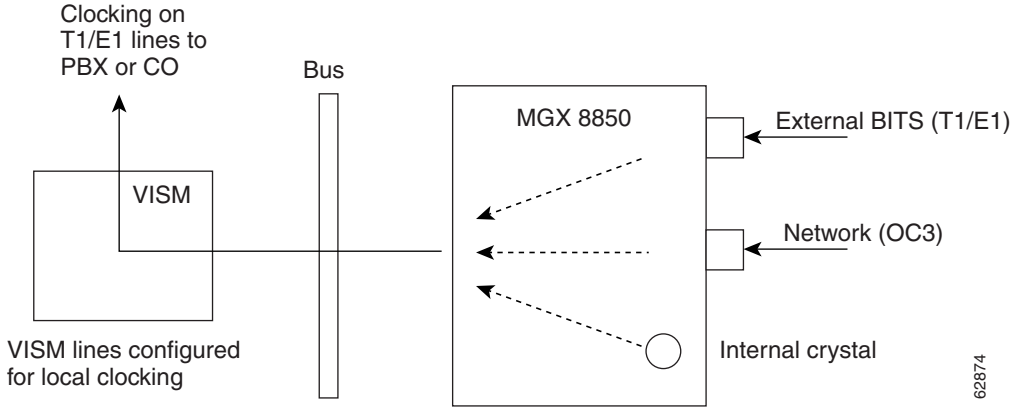
- PXM1 Card as a Clocking Source, page 3-8
- PXM1E or PXM45 Card as Clocking Source, page 3-12

The PXM card option makes the PXM the clock source for the all cards in the chassis. The VISM/VISM-PR cards then use this clocking to provide clocking for their associated T1 or E1 lines.

# PXM1 Card as a Clocking Source

Figure 3-2 shows the PXM1 card clocking source option, in which the clock originates at the PXM1 side of the VISM/PXM interface.

Figure 3-2 VISM Configured for Local Clocking



The PXM1 card option allows you to use one of the following sources:

- An external BITS clock on the PXM1 T1 or E1 back card port.
- An external signal on a PXM1 back card port.
- The PXM1 card internal crystal (default). The internal crystal is the default and is set as the primary clock source automatically when power is applied to the chassis.

To use one of the other two clocking sources, complete the following steps:

- Step 1** Log in to the active PXM card.
- Step 2** To configure the clocking source, enter the **cnfclksrc** command.

```
nodename.1.7.PXM.a > cnfclksrc <slot.port> <clktyp>
```

Replace <slot.port> with the card slot number and line number.



**Note** Between the *slot* and *port* argument values, type the period with no spaces on either side.

Replace <clktyp> with one of the following values:

- P = Primary
- S = Secondary
- T = Tertiary
- N = Null (no external clocking source)



Specify the **cnfclksrc** command argument values according to the following rules:

- If the clock source is the external BITS clock (a T1 or E1 port on the PXM1 back card), specify the configuration as:

```
nodename.1.7.PXM.a > cnfclksrc 7.35 P
```

Type **7** for the slot number, regardless of the PXM1 card location in the chassis.

Type **35** for the port number. The BITS port is always port 35.

- If the clock source is an external signal on one of the PXM1 ports, specify the configuration as:

```
nodename.1.7.PXM.a > cnfclksrc 7.n P
```

Type **7** for the slot number, regardless of the PXM1 card location in the chassis.

Replace the *n* port parameter with the port number in the range 1–4.

- If the clock source is the PXM1 internal crystal and no other clock source has been specified, do not configure the clock source. The crystal is the automatic default.
- If you want to change the clocking source from external to the PXM1 card's internal crystal, specify the configuration as:

```
nodename.1.7.PXM.a > cnfclksrc 7.n N
```

Type **7** for the slot number, regardless of the PXM1 card location in the chassis.

Replace *n* with the port number 35 or the port number, depending on which is the current source.

Type **N** to cancel the previous configuration and to return the clocking source to the default internal crystal.

- If the clock source is from a line on a VISM/VISM-PR card, specify the configuration as:

```
nodename.1.7.PXM.a > cnfclksrc y.z P
```

Replace the *y* value with the slot number of the VISM/VISM-PR card.

For VISM cards, replace *z* with 1 for the line argument value.

For VISM-PR cards, replace *z* with the line number of the clock source. Line range is 1–8.

**Step 3** To display the configured clock on the PXM card, enter the **dspclkinf** command.

```
nodename.1.7.PXM.a > dspclkinf
```

```
***** Clock HW registers *****
SEL_T1 = t1      SEL100 = ON      SEL120 = OFF      SEL75 = OFF
NOEXTCLK = ON NOEXTCLK2 = OFF

priMuxClockSource = INTERNAL_OSC
prevPriMuxClockSource = INTERNAL_OSC
primaryInbandClockSourceLineNum = 1
secMuxClockSource = INTERNAL_OSC
prevSecMuxClockSource = INTERNAL_OSC
secondaryInbandClockSourceLineNumber = 0
currentClockSetReq = primary
currentClockHwStat = primary
StratumLevel = STRATUM4
PreviousClockHwStat = primary
extClock1Present = No
extClock2Present = No
extClkConnectorType = RJ45
extClkSrcImpedance = 100 Ohms
```

```

Internal Clock Status=0, Primary Clock Status=0
Secondary Clock Status=0, Last inband Clock State=0
last Inband Clock state= 0, Last External Clock Present = 1
Last External Clock2 Present = 1

```

**Step 4** Log in to the VISM/VISM-PR card.

**Step 5** To configure a VISM/VISM-PR line for local clocking, enter the **cnfln** command.

```

nodename.1.27.VISM8.a > cnfln <line_number> <line_code> <line_length> <clk_src>
<line_type> <loopback_detection> |<circuit_identifier>|

```



**Note** You must include all argument values when using the **cnfln** command; however, the *<line\_number>* and *<clk\_src>* are the only relevant arguments for configuring the clocking source on your VISM/VISM-PR cards.

Replace the **cnfln** arguments with the values listed in Table 3-3.

**Table 3-3** Parameters for **cnfln** Command

Parameter	Description
<i>line_number</i>	Line number is in the range 1–8.
<i>line_code</i>	Line coding method is specified by one of the following values: <ul style="list-style-type: none"> <li>• 2 = B8ZS (T1)</li> <li>• 3 = HDB3 for E1 lines</li> <li>• 4 = AMI for T1 or E1 lines</li> </ul>
<i>line_length</i>	Line length is specified by one of the following values: <ul style="list-style-type: none"> <li>• 8 = AX-SMB-8E1 and AX-R-SMB-8E1 back card types</li> <li>• 9 = AX-RJ48-8E1 and AX-R-RJ48-8E1 back card types</li> <li>• 10 = T1 for 000–131 ft</li> <li>• 11 = T1 for 131–262 ft</li> <li>• 12 = T1 for 262–393 ft</li> <li>• 13 = T1 for 393–524 ft</li> <li>• 14 = T1 for 524–655 ft</li> <li>• 15 = T1 for 655 and greater ft</li> </ul>

**Table 3-3 Parameters for *cnfln* Command (continued)**

Parameter	Description
<i>clk_src</i>	<p>Clock source.</p> <ul style="list-style-type: none"> <li>• 1 = Loop clock. Clocking comes from the T1/E1 line. <ul style="list-style-type: none"> <li>– If the clocking source is from a line on a VISM card, configure line 1 as loop clock. Configure all remaining lines on all remaining VISM cards for local clock.</li> <li>– If the clocking source is from a line on a VISM-PR card, configure the appropriate line (range 1–8) for loop clock. Configure all remaining lines on all remaining VISM-PR cards for local clock.</li> </ul> </li> <li>• 2 = Local clock. Clocking comes from the PXM1 card. <p>If the clocking source to the VISM/VISM-PR cards is from the PXM1 card, configure all lines on all VISM/VISM-PR cards as local.</p> </li> </ul>
<i>line_type</i>	<p>Line type is specified by one of the following values:</p> <ul style="list-style-type: none"> <li>• 1 = dsx1ESF</li> <li>• 2 = dsx1D4</li> <li>• 3 = E1</li> <li>• 4 = E1CRC</li> <li>• 5 = E1MF</li> <li>• 6 = E1MFCRC</li> <li>• 7 = E1 Clear</li> <li>• 8 = E1Q50</li> <li>• 9 = E1Q50CRC</li> </ul>
<i>loopback_detection</i>	<p>Loopback detection is specified by one of the following values:</p> <ul style="list-style-type: none"> <li>• 1 = Disabled</li> <li>• 2 = Enabled (This value is not applicable to E1 lines.)</li> </ul>
<i>circuit_identifier</i>	<p>(Optional) Name of the circuit in ASCII format. Range is 1–64 characters.</p>

The following example shows sample syntax for adding local clock to line 1.

```
nodename.1.27.VISM8.a > cnfln 1 3 9 2 3 1
nodename.1.27.VISM8.a >
```

**Step 6** Repeat Step 5 for all other lines on the VISM/VISM-PR card.

**Step 7** To display the clocking source for all of the lines on the VISM card, enter the **dsplns** command.

```
nodename.1.27.VISM8.a > dsplns
Line Conn      Type      Status/Coding      Length      XmtClock Alarm
      Type
-----
27.1 RJ-48 dsx1E1CCS      Mod/dsx1HDB3 G.703 120 ohm LocalTim No
27.2 RJ-48 dsx1E1CCS      Mod/dsx1HDB3 G.703 120 ohm LocalTim No
27.3 RJ-48 dsx1E1CCS      Mod/dsx1HDB3 G.703 120 ohm LocalTim Yes
27.4 RJ-48 dsx1E1CCS      Mod/dsx1HDB3 G.703 120 ohm LocalTim Yes
27.5 RJ-48 dsx1E1CCS      Mod/dsx1HDB3 G.703 120 ohm LocalTim Yes
27.6 RJ-48 dsx1E1CCS      Mod/dsx1HDB3 G.703 120 ohm LocalTim Yes
27.7 RJ-48 dsx1E1CCS      Mod/dsx1HDB3 G.703 120 ohm LocalTim Yes
27.8 RJ-48 dsx1E1CCS      Mod/dsx1HDB3 G.703 120 ohm LocalTim Yes

LineNumOfValidEntries: 8
```

For more information about PXM1 card clocking, refer to the *Cisco MGX 8850 Edge Concentrator Installation and Configuration, Release 1.1.3* and to the *Cisco MGX 8800 Series Switch Command Reference, Release 1.1.3*.

## PXM1E or PXM45 Card as Clocking Source

The PXM1E and PXM45 cards have two clock source configuration options:

- Manual clocking sources
- NCDP clocking sources



### Note

NCDP is not addressed in the VISM/VISM-PR documentation. For more information on NCDP, refer to the *Cisco MGX 8850 (PXM1E/PXM45)*, *Cisco MGX 8950*, and *Cisco MGX 8830 Configuration Guide, Release 5.1*.

The clock source ports on the PXM-UI-S3 and PXM-UI-S3/B cards can be used to receive clock signals from either T1 or E1 lines; the card does not support both line types simultaneously. These clock ports support stratum levels 1 to 3.



### Note

The PXM45 and PXM1E cards support T1 data (1.544Mbps) and E1 data (2.048Mbps) clock sources, and the PXM1/B supports both T1 and E1 data types and an E1 sync (2.048MHz) line as a clock input. The E1 sync line is not supported on switches with PXM45 and PXM1E cards.

The following procedure describes how to configure the switch to use clock sources on the BITS ports.

**Step 1** Establish a configuration session using a user name with GROUP1 privileges or higher.

**Step 2** To configure a primary or secondary BITS clock source, enter the **cnfclksrc** command:

```
nodename.7.PXM.a > cnfclksrc <priority> [shelf.]slot.port -bits {e1|t1} [-revertive
{enable|disable}]
```

Table 3-4 describes the parameters for this command.

**Table 3-4 Parameters for *cnfclksrc* Command**

Parameter	Descriptions
<i>priority</i>	Priority is the type of clock source that is primary or secondary. The default is primary.
<i>shelf</i>	Shelf value is always 1 and is optional.
<i>slot</i>	For the BITS clock, the slot number is 7 for a Cisco MGX 8850 (PXM1E/PXM45) or slot 1 for a Cisco MGX 8830 switch.
<i>port</i>	Port number that identifies the line on the PXM1E-UI-S3 or PXM1E-UI-S3/B back card to which the BITS clock is connected and the type of line connected. <ul style="list-style-type: none"> <li>• Port 35 = upper line</li> <li>• Port 36 = lower line</li> </ul>
<i>-bits</i>	This option specifies whether the clock source line is an E1 or T1.
<i>-revertive</i>	This option enables or disables the revertive feature for all clock sources.



**Note**

Manual clock distribution provides a revertive function that can apply when the primary clock source fails and is subsequently restored. A failure is a loss of the primary clock source after the switch has locked on to that clock source. If the primary clock source recovers and revertive mode is enabled, the switch automatically reverts to the primary source

The following command example shows how to configure a primary E1 external clock source at the upper connector of the PXM1E-UI-S3. Note the command punctuation.

```
nodename.7.PXM.a > cnfclksrc primary 7.35 -bits e1
```

The next example configures a primary network clock source and enables the revertive option.

```
nodename.7.PXM.a > cnfclksrc primary 7.36 -bits e1 -revertive enable
```

The last example disables the revertive function for an E1 BITS clock.

```
nodename.7.PXM.a > cnfclksrc primary 7.36 -bits e1 -revertive disable
```

**Step 3** To display the parameter configuration of the BITS clock sources, enter the **dspclkparms** command as shown in the following example:

```
nodename.8.PXM.a > dspclkparms
BITS Cable Type : Twisted Pair
BITS Signal Type : Data Mode
```

The above example shows the default BITS clock configuration parameters. The cable type can be either twisted pair or coax. The signal type can be either data mode or sync mode.

**Step 4** If you need to change the BITS clock configuration parameters, enter the **cnfclkparms** command as follows:

```
nodename.8.PXM.a > cnfclkparms <signal type> <cable type>
```

Replace the *signal type* variable with **1** to select data or with **2** to select sync. Replace the *cable type* variable with **1** to select twisted pair cabling or with **2** to select coaxial cabling.

- Step 5** To configure an additional BITS clock source, repeat Step 2 using the correct parameters for the additional source. The clock parameters configured in Steps 3 and 4 apply to both BITS clock inputs.
- Step 6** To display the clock source configuration, enter the **dsplksracs** command.
-



## VISM/VISM-PR Hardware and Software Installation

---

This section describes how to install VISM/VISM-PR cards and how to upgrade the VISM/VISM-PR boot code and firmware. The following topics are described:

- Hardware Installation, page 4-1
- Upgrade Procedures, page 4-7

### Hardware Installation

This section describes the following topics:

- Overview of VISM and VISM-PR Cards in MGX 8000 Series Chassis, page 4-2
- Installing VISM and VISM-PR Front and Back Cards, page 4-4
- Connecting Cables to Cards, page 4-5
- Removing VISM and VISM-PR Front and Back Cards, page 4-6
- Applying Power to the VISM/VISM-PR Card, page 4-7

You can install VISM/VISM-PR cards in the following combinations:

- Install a VISM/VISM-PR front card and a back card as a pair. The front and back cards must occupy the same slot.
- Install a VISM/VISM-PR front card with no back card. The MGX 8000 Series bulk distribution feature allows this configuration. The Service Resource Module (SRM) and the MGX 8000 Series distribution bus provide access to the TDM lines.



---

**Note** VISM/VISM-PR cards in bulk distribution mode do not require back cards.

---

- Install a VISM/VISM-PR front card as a redundant card with a redundant back card in the same slot.



---

**Note** VISM/VISM-PR T1 front cards require T1 back cards, and E1 front cards require E1 back cards. Ensure that your configuration meets this requirement.

---

In each of these configurations, connections to the packet network are made through the MGX 8000 Series cellbus and an OC-3 port located on the MGX 8000 Series PXM card. For more information on front and back cards, see “Card Characteristics” in the Overview of the VISM and VISM-PR Cards section.

## Overview of VISM and VISM-PR Cards in MGX 8000 Series Chassis

This section contains general guidelines for installing the VISM and VISM-PR cards in an MGX 8000 Series chassis.

### VISM Card Guidelines

VISM front and back cards can be installed in the MGX 8000 Series platforms. Use these basic guidelines:

- Cisco MGX 8850 (PXM1)—Up to 24 slots can be used for VISM cards.
- Cisco MGX 8250—Up to 24 slots can be used for VISM cards.
- Cisco MGX 8230—Up to eight slots can be used for VISM cards.

The VISM card can be used with the PXM1 processor module.

### VISM-PR Card Guidelines

VISM-PR front and back cards can be installed in the MGX 8000 Series platforms. Use these basic guidelines:

- MGX 8250, MGX 8850 (PXM1, PXM1E, PXM45), and MGX 8880—Up to 24 slots can be used for VISM-PR cards.
- MGX 8230—Up to eight slots can be used for VISM-PR cards.
- MGX 8830—Up to eight slots can be used for VISM-PR cards.

The VISM-PR card can be used with the following processor modules:

- PXM1
- PXM1E
- PXM45

## Installing VISM/VISM-PR Cards in an MGX 8850 and MGX 8250 Chassis

VISM and VISM-PR card installation in a Cisco MGX 8850 (PXM1 and PXM45) or a Cisco MGX 8250 platform consists of installing one front card and one back card (without the bulk distribution feature) in either the upper or lower shelf of the chassis.

You can use slots 1 to 6, 9 to 14, 17 to 22, and 25 to 30 to install VISM/VISM-PR cards (see Figure 4-1).

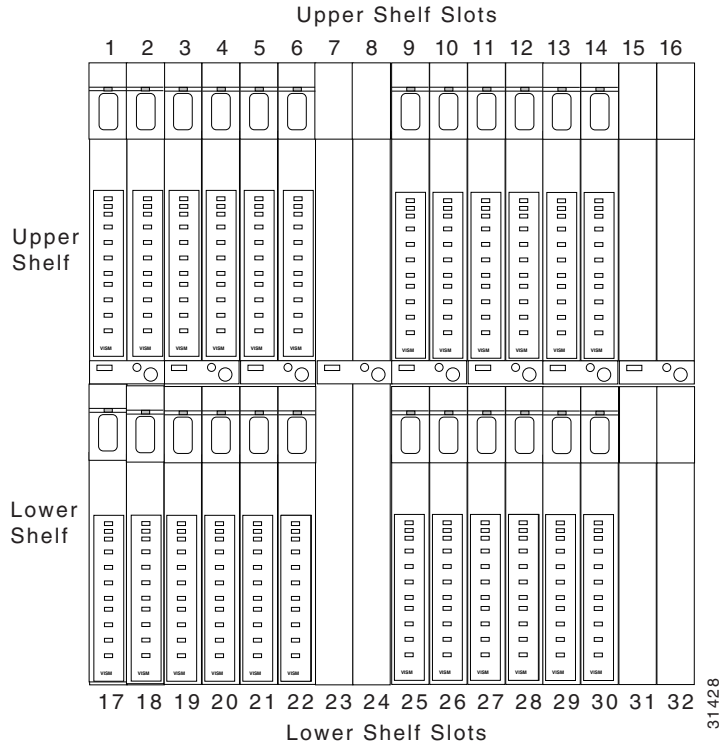


#### Note

With PXM1 and SRM-3T3/C, bulk distribution is not supported in slots 9,10,15, and 26.



**Figure 4-1 Available Chassis Slots for VISM Cards in the MGX 8850 and MGX 8250—Front View**



**Note**

If you use all of the available slots, you can configure the Cisco MGX 8850 and Cisco MGX 8250 with up to 24 VISM/VISM-PR cards. However, the two lower shelf cell buses can each sustain a bandwidth of one OC-3/STM-1 link. This bandwidth limits the number of E1 ports on the lower shelf to 39 in each half when you are using the G.711 codec. The number of VISM/VISM-PR cards is limited to 10.

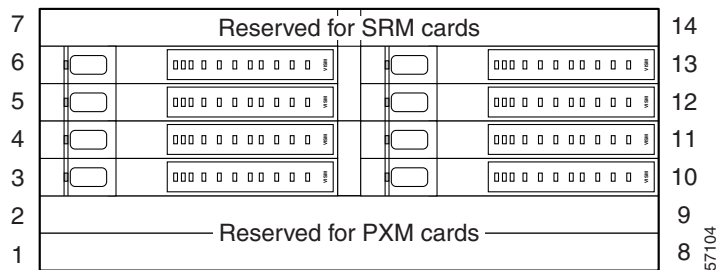
For information about MGX 8250 and MGX 8850 hardware installation, refer to the *Cisco MGX 8850 (PXM1E/PXM45), Cisco MGX 8950, and Cisco MGX 8830 Hardware Installation Guide, Releases 2 Through 5.1*.

### Installing VISM/VISM-PR Cards in an MGX 8230 and MGX 8830 Chassis

VISM/VISM-PR card installation in a Cisco MGX 8230 platform and VISM-PR card installation in a Cisco MGX 8830 platform consist of installing one front card and one back card (if you are not using the bulk distribution feature) in either a left or right shelf slot.

You can use slots 3 to 6 and 10 to 13 to install VISM/VISM-PR cards (see Figure 4-2 for an example of VISM cards in an MGX 8230). If you use all the available slots, you can configure the Cisco MGX 8230 or Cisco MGX 8830 with up to eight VISM cards.

**Figure 4-2 Available Chassis Slots for VISM Cards in the Cisco MGX 8230—Front View**



## Installing VISM and VISM-PR Front and Back Cards

This section describes the following hardware installation procedures:

1. Installing a VISM or VISM-PR Front Card, page 4-4
2. Installing a VISM or VISM-PR Back Card, page 4-4
3. Connecting Cables to Cards, page 4-5

### Installing a VISM or VISM-PR Front Card

Complete the following instructions to install a VISM or VISM-PR front card:

- 
- Step 1** Position the rear card guides over the appropriate slot in the chassis.
- Step 2** Gently slide the card all the way into the slot and press the insertion/extractor lever until it snaps into a vertical or horizontal position.

Vertical is correct for the Cisco MGX 8250 or Cisco MGX 8850 (PXM1 and PXM45). Horizontal is correct for the Cisco MGX 8230 or Cisco MGX 8830.



**Caution**

The card should slide in and out with only slight friction on the EMI gaskets on the adjacent board. Do not use force. Investigate any binding.

---

### Installing a VISM or VISM-PR Back Card

Complete the following instructions to install a VISM or VISM-PR back card:

- 
- Step 1** Ensure that the two extractor levers are at the “in” or down position.
- When you insert the card into the slot, ensure that the levers are parallel to the back card.
- Step 2** Position the rear card guides over the appropriate slot in the chassis.

- Step 3** Gently slide the card all the way into the slot.
- Step 4** Tighten the two captive screws on the back card's faceplate.
- Step 5** Tighten the upper and lower screws to prevent misalignment of the card.



**Note** Do not overtighten the screws. Tighten them only enough to secure the card.

## Connecting Cables to Cards

After you install the VISM/VISM-PR front and back cards, connect the T1 or E1 cables to the RJ-48 or SMB connectors on the back cards. The T1 and E1 cables connect the eight ports on the back cards to the voice T1 or E1 lines. The T1 lines use RJ-48 connectors. The E1 lines use either RJ-48 or SMB connectors.

### Cabling for RJ-48 Connectors on T1 and E1 Ports

T1 and E1 ports use RJ-48 connector wiring shown in Figure 4-3.

**Figure 4-3 RJ-48 Connector**

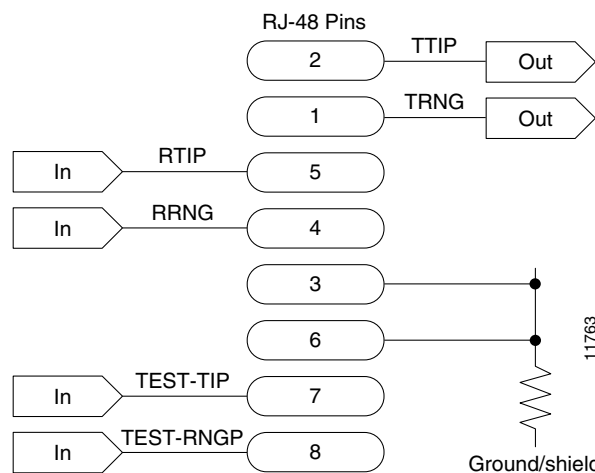


Table 4-1 provides the connector schema for T1 and E1 ports that connect through an RJ-48 connector.

**Table 4-1 RJ-48 Connector Schematic**

Pin Number	Description
1	Transmit ring (TRNG)
2	Transmit tip (TTIP)
3	Ground/shield
4	Receive ring (RRNG)

**Table 4-1 RJ-48 Connector Schematic (continued)**

Pin Number	Description
5	Receive tip (RTIP)
6	Ground/shield
7	Test tip (TEST-TIP)
8	Test ring (TEST-RNGP)

**Note**

In all text references to cables, “transmit” refers to a cable used for data moving away from the VISM/VISM-PR card, and “receive” refers to a cable used for data moving toward the VISM/VISM-PR card.

## Cabling for SMB Connectors on E1 Ports

When you use the E1 VISM/VISM-PR back card with SMB cables, the E1 trunk cables connect the customer DSX-1 cross-connect point or E1 channel service unit (CSU) to the node. The connection is made with 75-ohm coaxial cable fitted with SMB connectors.

## Removing VISM and VISM-PR Front and Back Cards

This section describes how to remove VISM/VISM-PR front and back cards and contains the following topics:

- Removing a VISM or VISM-PR Front Card, page 4-6
- Removing a VISM or VISM-PR Back Card, page 4-7

### Removing a VISM or VISM-PR Front Card

To remove a VISM or VISM-PR front card, complete the following steps:

- 
- Step 1** Insert a small, flat-blade screwdriver into the slot in the insertion/extractor lever and press until the latch springs open, to approximately 10 degrees.
- Step 2** Continue to lift the insertion/extractor lever to disconnect the connector.
- Step 3** Gently pull the card out of the chassis.
-

## Removing a VISM or VISM-PR Back Card

To remove a VISM or VISM-PR back card, complete the following steps:

- 
- Step 1** Remove any cables connected to the back card.
- Step 2** Use a small, flat-blade screwdriver to unscrew the two retaining screws in the back card faceplate.
- Step 3** Pull both of the extractor levers out to the horizontal position.  
This action starts the removal of the card.
- Step 4** Gently pull the card out of the chassis.
- 

## Applying Power to the VISM/VISM-PR Card

Apply power to a VISM/VISM-PR card by installing the card in an already running MGX 8000 Series platform. Alternatively, you can apply power to a chassis that has a previously installed VISM/VISM-PR card.

When power is applied, the VISM/VISM-PR card performs extensive testing and initialization functions. If the card has already been configured, the initialization downloads the configuration data from the disk on the PXM. This process takes approximately 2 minutes, during which the LED indicator blinks.

When the Active LED becomes solid green, the card is in the active state, is ready to be configured (if necessary), and is able to process data.

## Upgrade Procedures

This section describes the following upgrade procedures:

- Prerequisites, page 4-8
- Check Domain Name Length, page 4-8
- VISM/VISM-PR Upgrades with PXM1, page 4-10
- VISM-PR Upgrades with PXM1E and PXM45, page 4-13
- VISM/VISM-PR Downgrade Procedure, page 4-15
- VISM to VISM-PR Hardware Upgrade, page 4-16

In Release 3.3, you can gracefully upgrade VISM/VISM-PR cards. A graceful upgrade preserves the existing configuration on the VISM/VISM-PR card throughout the upgrade procedure.



### Caution

---

Installing VISM software updates from VISM Release 2.2 with CALEA to VISM Release 3.3 without CALEA is not graceful.

---

## Prerequisites

To ensure that the VISM/VISM-PR configuration is preserved throughout the upgrade procedure, you must complete the prerequisites listed here before you start the procedure:

- Configure your MGX 8000 Series shelf with at least two VISM cards in a redundant configuration. For more information on adding redundancy, refer to the add redundancy (**addred**) command in the Cisco MGX 8250, Cisco MGX 8230, and Cisco MGX 8850 PXM1-based command reference documentation and in the Cisco MGX 8830 and Cisco MGX 8850 PXM1E/ PXM45-based command reference documentation.
- Ensure that the VISM cards are running at least Release 2.1 and that the VISM-PR cards are running at least Release 3.0.
- Download software Release 3.3 for VISM/VISM-PR to the MGX 8000 Series shelf.
- If you are using the CALEA feature, ensure that you have the version of VISM/VISM-PR software that supports CALEA.
- Delete all domain names that are greater than 32 characters on the VISM/VISM-PR card. See the “Check Domain Name Length” section.

## Check Domain Name Length

Before you upgrade to Release 3.3, delete all domain names and domain name IPs that are greater than 32 characters on the VISM/VISM-PR card. After the upgrade, reread the domain names and domain name IPs.

Complete the following steps:

---

**Step 1** Log in to the VISM/VISM-PR card.

**Step 2** Display the list of domain names by entering the **dsdns** command. The following example shows sample domain names.

```
nodename.1.11.VISM8.a > dsdns
```

DomainNumber	DomainName	ResolutionType
1	mga-SOLSYS1CA.234567890987654321234567890123456789.sol.cisco.com	internalOnly
2	mga-SOLSYS1CA.234567890987654321234567890123456789.sol.cisco.dom	internalOnly
3	mga-SOLSYS1CA.234567890987654321234567890123456789.sol.cisco.eom	internalOnly

**Step 3** For each domain number, count the number of characters in the DomainName field.

If the characters are greater than 32 for each domain number, go to Step 4.

**Step 4** Check for the IP addresses associated with the domain names by entering the **dsdnallips** command.

```
nodename.1.11.VISM8.a > dsdnallips
```

ResolutionIndex	DomainName	IP	State	Pref
1	mga-SOLSYS1CA.234567890987654321234567890123456789.sol.cisco.com	10.1.3.25	Inactive	1

**Step 5** If IP addresses are present, make a note of them in the order that they appear.

**Step 6** Since you cannot delete the domain name or domain name IPs if MGCs exist, use the following commands to check for MGCs.

- a. Check for the MGC group protocols by entering the **dspmgcgrpprotocols** command.

```
nodename.1.11.VISM8.a > dspmgcgrpprotocols
```

MgcGrp Num	Prot Num	Qrntn Persist	Qrntn Def	Sign OnOff	Prov Resp	RspAck Attr	Disc Proc	Cancel Graceful
1	MGCP 1.0	Qrtn	StepProcess	DelNegEvt	Send	Send	Enable	Send

- b. Check for MGC group entries by entering the **dspmgcgrpparams** command.

```
nodename.1.11.VISM8.a > dspmgcgrpparams
```

Mgc Grp Num	Comm State	State Chg Notification	Priority
1	CommLoss	Enabled	1

- c. Check for MGC entries by entering the **dspmgcs** command.

```
nodename.1.11.VISM8.a > dspmgcs
```

mgcNumber	mgcName
1	mga-SOLSYS1CA.234567890987654321234567890123456789.sol.cisco.com

**Step 7** If any entries exist in Step 6, delete the MGC entries by entering the following commands:

- **delmgcgrpprotocol**
- **delmggrpentry**
- **delmgc**

**Step 8** Delete the domain name IP address by entering the **deldnip** command.

**Step 9** Delete the domain name by entering the **deldn** command.

**Step 10** Perform the upgrade using the procedures in the “Upgrade VISM/VISM-PR Firmware with PXM1 Card” section on page 4-11 or “Upgrade VISM-PR Firmware with PXM1E and PXM45 Cards” section on page 4-14.

**Step 11** After you complete the upgrade, use the following commands to add the domain name entries, IP addresses, and MGCs as previously configured:

- **adddn**
- **adddnip**
- **addmgc**
- **addmgcgrpentry**
- **addmgcgrpprotocol**

**Step 12** To check that you added the entries successfully, use the display commands in Step 2 to Step 6.

## VISM/VISM-PR Upgrades with PXM1

This section describes the procedures for upgrading VISM/VISM-PR software when the VISM/VISM-PR is used with a PXM1 card.

### Download VISM/VISM-PR Boot Code and Firmware to PXM1

To download the VISM/VISM-PR boot code and firmware to the PXM1 card, use TFTP.

- 
- Step 1** Log in to your TFTP server.
- Step 2** Download the bootcode and firmware images from the Cisco website.
- Step 3** Download the selected revision of service module boot code into the service module.
- a. **tftp** *<node\_name or IP address>*
  - b. **bin**
  - c. **put** *<backup boot>* POPEYE@SM\_1\_0.BT
  - d. **quit**
- Step 4** Download the selected firmware file.
- a. **tftp** *<node\_name or IP address>*
  - b. **bin**
  - c. To upgrade all VISM cards:  
**put** *<FW file>* POPEYE@SM\_1\_0.FW  
**quit**
  - d. To upgrade an individual VISM card  
**put** *<FW file>* POPEYE@SM\_1\_<slot number of card to upgrade>.FW  
**quit**




---

**Note** Do not enter two **put** commands in the same TFTP session.

---

- Step 5** Proceed to the “Upgrade VISM/VISM-PR Firmware with PXM1 Card” section on page 4-11 to install the download.
- 

### Upgrade Boot Code with PXM1 Cards

Complete the following steps to upgrade the new backup boot code when you are using PXM1 cards in a Cisco MGX 8230, Cisco MGX 8250, and Cisco MGX 8850 chassis.

- 
- Step 1** Log in to the active PXM1 card (slot 7 or 8 for Cisco MGX 8250 and Cisco MGX 8850 chassis; slot 1 or 2 for Cisco MGX 8230 and Cisco MGX 8830 chassis).




---

**Note** VISM/VISM-PR must be in the active state in order for you to update the VISM/VISM-PR boot code.

---



**Step 2** Execute the PXM1 **install** command.

```
nodename.1.27.VISM8.a > install [bt] [sm <slot>] <version>
```



**Caution**

Do not touch the VISM/VISM-PR card until the status comes back (“Sent xxx bytes in yyy seconds”). Failure to follow this recommendation corrupts the boot code, which cannot be recovered.

When the boot code is being written to PROM, you see comments displayed at the VISM/VISM-PR prompt. This behavior is normal and expected.

**Step 3** Type the **version** command to verify the correct boot code.



**Note** Step 3 is optional.

## Upgrade VISM/VISM-PR Firmware with PXM1 Card

Release 3.3 firmware is for VISM and VISM-PR cards. Ensure that the VISM and VISM-PR cards have the minimum boot code version that is required for this release.

For a list of the boot code and firmware requirements, refer to the VISM/VISM-PR Release Notes located on Cisco.com.

In this procedure the following conditions apply:

- If two VISM or VISM-PR cards are part of a redundancy group, initially the primary card is in the active state, and the secondary card is in the standby state.
- Old-rev refers to the firmware prior to this release.
- New-rev refers to the firmware after the upgrade.

Perform the firmware upgrade on the VISM or VISM-PR cards. Do not remove the VISM cards and replace them with VISM-PR cards at this time.

**Step 1** Log in to the active PXM1 card (slot 7 or 8 for Cisco MGX 8250 and Cisco MGX 8850 chassis; slot 1 or 2 for Cisco MGX 8230 and Cisco MGX 8830 chassis).

**Step 2** Save the existing configuration by entering the **savesmconf** command:

```
nodename.1.8.PXM.a > savesmconf <SM slot#>
```

This command saves the existing configuration in the C:CNF directory. This file can be used during the downgrade procedure.

**Step 3** To obtain the correct version of VISM/VISM-PR firmware, enter the **dspfwrevs** command.

The **dspfwrevs** command shows the firmware and boot code that is loaded on the chassis.

```
nodename.1.8.PXM.a > dspfwrevs
```

Card Type	Date	Time	Size	Version	File Name
VISM-8T1E1	04/26/2004	20:06:04	248688	VI8_BT_3.2.00	sm150.bt
PXM1	01/04/2004	08:19:52	2602836	1.2.11	pxm_1.2.11.fw
PXM1	01/04/2004	11:03:02	2620132	1.2.21	pxm_1.2.21.fw
VISM-8T1E1	05/11/2004	15:37:52	4077560	003.002.010.200	sm150.fw
VISM-8T1E1	06/16/2004	13:29:38	3863768	003.051.002.000	sm150_11.fw
PXM1	01/04/2004	11:01:56	1346844	1.2.21	pxm_bkup_1.2.21.fw

VISM-8T1E1	03/08/2004	08:20:16	4037880	003.002.000.000	sm150_3.fw
VISM-8T1E1	03/08/2004	08:19:44	248688	VI8_BT_3.2.00	sm150_3.bt
PXM1	01/04/2004	07:58:44	1345328	1.2.11	pxm_bkup_1.2.11.fw
VISM-8T1E1	01/07/2004	23:33:02	3863768	003.051.002.000	sm150_2.fw
VISM-8T1E1	03/08/2004	08:21:12	248688	VI8_BT_3.2.00	sm150_4.bt
VISM-8T1E1	09/10/2004	11:40:26	3865656	003.003.000.200	sm150_29.fw
VISM-8T1E1	04/26/2004	19:59:52	4037880	003.002.000.000	sm150_1.fw
VISM-8T1E1	03/08/2004	08:20:58	4037880	003.002.000.000	sm150_4.fw
VISM-8T1E1	10/28/2004	16:22:32	4135208	003.003.000.200	sm150_12.fw

**Step 4** Execute the PXM **install** command.

```
nodename.1.8.PXM.a > install sm <SM slot#> <new-rev>
```

Replace <SM slot#> with the slot number of the primary VISM or VISM-PR card.

Replace <new-rev > with the version of the new firmware.

The **install** command causes the secondary VISM or VISM-PR card to reset and come up in the standby state, running the new-rev firmware. The primary VISM or VISM-PR card is unaffected by this command.

**Caution**

Ensure that you perform Step 4. If you do not perform Step 4, the boot code is corrupted and not recoverable.

**Step 5** Execute the PXM **newrev** command.

```
nodename.1.8.PXM.a > newrev sm <SM slot#> <new-rev>
```

Replace <SM slot#> with the slot number of the primary VISM or VISM-PR card.

Replace <new-rev> with the version of the new firmware.

The **newrev** command causes the primary VISM or VISM-PR card to reset. The secondary VISM or VISM-PR card becomes active and runs the *new-rev* firmware.

**Step 6** Execute the PXM **commit** command.

```
nodename.1.8.PXM.a > commit sm <SM slot#> <new-rev>
```

Replace <SM slot#> with the slot number of the primary VISM or VISM-PR card.

Replace <new-rev> with the version of the new firmware.

The two VISM or VISM-PR cards are now back to their original condition, except that both cards are now running the *new-rev* firmware.

**Step 7** Log in to the active VISM or VISM-PR card and use the display commands (for example, **dspendpts**, **dspcasvar**, and so forth) to confirm that the configuration has been preserved through the upgrade process.

For more than one primary VISM or VISM-PR card in a redundancy group, ensure that the secondary card is in the standby state, and repeat Step 5 and Step 6 for each VISM/VISM-PR card in the redundancy group.

If the VISM or VISM-PR card is not part of a redundancy group, complete only Step 1 to Step 4.

## VISM-PR Upgrades with PXM1E and PXM45

This section describes the procedures for upgrading VISM-PR software when the VISM-PR is used with a PXM1E or PXM45 card.

For upgrade notes regarding specific releases, refer to the VISM/VISM-PR Release Notes located on Cisco.com.

### Download VISM-PR Boot Code and Firmware to PXM1E and PXM45

To download the VISM-PR boot code and firmware to the PXM1E or PXM45 card, use FTP.

- 
- Step 1** Access the bootcode and firmware images on Cisco.com.
- Step 2** To download the images, enter the **ftp** command.
- ```
ftp node-ip
```
- The *node-ip* argument is the IP address of the node to which you want to download the image.
- Step 3** Enter your user name and password.
- Step 4** Enter **bin**.
- Step 5** Change to the C:FW directory.
- ```
cd C:FW
```
- Step 6** Download the images to your C:FW directory.
- To download one file at a time, use the **put** *image-version* command.
  - To download multiple files at the same time, use the **mput** *<image-version>* *<image-version>* command.
- The *image-version* argument is the image that you accessed in Step 1.
- Step 7** To exit the download procedure, enter **bye**.
- 

### Upgrade Boot Code with PXM1E and PXM45 Cards

Complete the following steps to upgrade the new backup boot code when you are using PXM1E or PXM45 cards in your MGX 8000 Series chassis:

- 
- Step 1** Complete the steps in the “Download VISM-PR Boot Code and Firmware to PXM1E and PXM45” section on page 4-13.
- Step 2** Log in to the active PXM1E or PXM45 card.
- Step 3** To upgrade the VISM-PR boot, enter the **burnboot** command.
- ```
nodename.1.7.PXM.a > burnboot <slot> <revision>
```
- Replace *<slot>* with the number of the VISM-PR card that you want to upgrade.
- Replace *<revision>* with the version of the bootcode you downloaded from Step 1.

The following example shows sample results from the **burnboot** command.

```
nodename.1.7.PXM.a > burnboot 12 3.2(0.0)
```

```
The card in slot 12 will be reset.
burnboot:Do you want to proceed (Yes/No)? yes
```

For VISM-PR cards without redundancy, the card automatically resets and becomes active with the latest boot code image.

For VISM-PR cards with redundancy, the active card takes approximately 60 seconds to reset as standby. For the original standby card, complete Step 2–Step 3. This card now resets and becomes the standby again, and the standby card is now active.

## Upgrade VISM-PR Firmware with PXM1E and PXM45 Cards

Complete the steps in this section to upgrade the VISM-PR firmware. Ensure that the VISM-PR cards have the minimum boot code version.

For a list of the boot code and firmware requirements, refer to the VISM/VISM-PR Release Notes located on Cisco.com.



### Caution

If you plan to upgrade PXM cards and VISM-PR modules, upgrade the PXM cards first. Wait until the PXM cards are operating in active and standby modes with the correct software before upgrading the VISM-PR modules. Failing to upgrade the node in the correct order can fail VISM connections, causing significant service disruption.

Perform the firmware upgrade on the VISM-PR cards.

- Step 1** Log in to the active PXM1E or PXM45 card.
- Step 2** Ensure that the card is in the redundant mode, where the active card is the primary card.
- Step 3** To save the existing configuration, enter the **saveallcnf** command.

```
nodename.1.7.PXM.a > saveallcnf
```

- Step 4** To load the new software, enter the **loadrev** command.

```
nodename.1.7.PXM.a > loadrev <sm-primary-slot-num> <new-rev>
```

Replace *<sm-primary-slot-num>* with the slot number of the VISM-PR card on which you want to install the new software.

Replace *<new-rev>* with the new firmware version number for the VISM-PR software.



### Caution

Temporary traffic loss occurs.

**Step 5** Ensure that the redundant card is returned to the standby state by executing the **dspcds** command.



**Note** You must wait for the redundant card to return to the standby state. If you issue the **runrev** command too early, an error message is generated. The rev change does not occur.

**Step 6** To execute the download, enter the **runrev** command.

```
nodename.1.7.PXM.a > runrev <sm-primary-slot-num> <new-rev>
```

Replace *<sm-primary-slot-num>* with the slot number of the VISM-PR card on which you want to install the new software.

Replace *<new-rev>* with the new firmware version number for the VISM-PR software.



**Caution** Temporary traffic loss occurs.

**Step 7** Ensure that the primary card completes booting up and goes into the standby state by executing the **dspcds** command.



**Note** You must wait for the primary card to finish booting up and get to standby state. Issuing the **commitrev** command early might be accepted without an error. However, the active and standby cards might not be swapped back to their original states. For example, the original primary card might be left in standby, and the original redundant card might be left as active.

**Step 8** After the new release is running successfully, commit the new download to the VISM-PR card by entering the **commitrev** command.

```
nodename.1.7.PXM.a > commitrev <sm-primary-slot-num> <new-rev>
```

Replace *<sm-primary-slot-num>* with the slot number of the VISM-PR card on which you want to install the new software.

Replace *<new-rev>* with the new firmware version number for the VISM-PR software.

The **commitrev** command switches the primary card from a standby state to an active state and the redundant card from an active state back to a standby state.

**Step 9** To verify the card states, enter the **dspcds** command.

## VISM/VISM-PR Downgrade Procedure

Use this procedure to downgrade VISM/VISM-PR software from the current release to an earlier VISM/VISM-PR release. If you use the downgrade procedure described here, you can retain the configurations after the downgrade.



**Note** The configurations that existed with old-rev firmware should have been saved earlier. You cannot downgrade from VISM-PR to VISM.

Complete the following steps to downgrade the VISM/VISM-PR software:

**Step 1** If the VISM/VISM-PR card is in a redundancy group, remove the redundancy.

```
nodename.1.7.PXM.a > delred <SM slot#>
```

**Step 2** Download the old-rev firmware onto the MGX shelf using the firmware download procedures in the “Download VISM/VISM-PR Boot Code and Firmware to PXM1” section on page 4-10 or the “Download VISM-PR Boot Code and Firmware to PXM1E and PXM45” section on page 4-13.

**Step 3** Execute the PXM **clrmscnf** command.

```
nodename.1.7.PXM.a > clrmscnf <SM slot#>
```

Replace *<SM slot#>* with the slot number of the VISM/VISM-PR card to be downgraded.

Wait for the card to become active. The VISM/VISM-PR card resets after you execute this command.

**Step 4** For PXM1 cards, execute the PXM1 **restoresmcnf** command.

```
nodename.1.7.PXM.a > restoresmcnf -f <filename> -s <SM slot#>
```

Replace *<filename>* with the name of the old configuration file that was saved while the old-rev firmware was running. The file can be found in the C:CNF directory on the MGX shelf.

Replace *<SM slot#>* with the slot number of the VISM/VISM-PR card to be downgraded.

The VISM/VISM-PR card resets again. The card becomes active, running the old-rev firmware with the old configuration.

**Step 5** For PXM1E/PXM45 cards, save and restore the configuration of all cards in a chassis using the **saveallcnf** and **restoreallcnf** commands.



**Note**

For PXM1E/PXM45 cards, you cannot restore the configuration for an individual VISM-PR service module.



**Caution**

The **restoreallcnf** command reconfigures all of the cards in the chassis.

Reconfigure the redundancy group, if required.

## VISM to VISM-PR Hardware Upgrade

Complete the following steps to upgrade your system from VISM cards to VISM-PR cards.



**Caution**

For this procedure, you must install the redundant (standby) VISM-PR card first. Failure to follow this recommendation results in traffic loss. In addition, do not remove an active VISM card from your chassis. Ensure that you change an active VISM card to the standby state before you remove it and replace it with a VISM-PR card.

**Step 1** Remove the redundant (standby) VISM card from its slot in your chassis.

**Step 2** Install a VISM-PR card in the same slot.

- Step 3** Administratively configure the VISM-PR card you installed in Step 2 as primary (active).
- Step 4** Remove the now redundant VISM card from your chassis.
- Step 5** Install a VISM-PR card in the slot from which you removed the VISM card in Step 4.
- Step 6** Log in to the redundant (secondary) VISM-PR card and execute the **dspcd** command. Verify that the output from the **dspcd** command lists the card type under `FunctionModuleType` as a VISM-PR card. If the card type still indicates the VISM card, execute the **resetcd slot-num** command from the PXM and repeat the **dspcd** command to ensure that the correct card type is shown.
- Step 7** Log in to the active VISM-PR card and execute the **dspcd** command. Verify that the output from the **dspcd** command lists the card type under `FunctionModuleType` as a VISM-PR card. If the card type still indicates the VISM card, execute the **resetcd slot-num** command from the PXM. Repeat the **dspcd** command to ensure that the correct card type is shown.
- Step 8** If you have no other VISM cards in your chassis, you have completed the hardware upgrade procedure; do not proceed to Step 9. If you have more VISM cards in your chassis, proceed to Step 9.
- Step 9** Remove a standby VISM card from its slot in your chassis.
- Step 10** Install a VISM-PR card in the same slot.
- Step 11** Repeat Step 9 and Step 10 to remove any remaining VISM cards in your chassis and replace them with VISM-PR cards.
- Step 12** Repeat Step 6 and Step 7 on the remaining VISM-PR cards to ensure that the correct card type is shown for each.
-







## Initial Card Configuration

---

The following sections describe how to install VISM/VISM-PR cards and how to initially configure the cards:

- Connecting to Cisco MGX 8000 Series Platforms, page 5-1
- Using the Command-Line Interface, page 5-4
- Configuring the VISM/VISM-PR Card, page 5-6
- Configuring Connection Admission Control, page 5-14
- Configuring Jitter Mode, page 5-16



**Note**

---

Except where noted, the use of PXM refers to the three different PXM cards (PXM1, PXM1E, and PXM45).

---

## Connecting to Cisco MGX 8000 Series Platforms

This section contains the following topics:

- Connecting to PXM Cards, page 5-1
- Logging In to PXM and VISM/VISM-PR Cards, page 5-2
- Logging Out of VISM/VISM-PR and PXM Cards, page 5-4

## Connecting to PXM Cards

Use any of the following devices to connect to a PXM card:

- A simple alphanumeric terminal (such as a DEC VT100 or equivalent) connected to the control port of the MGX 8000 Series platform PXM back card.
- A computer with a program that emulates an alphanumeric terminal (such as the Microsoft Windows Hyper Terminal program), which is connected to the control port of the MGX 8000 Series platform PXM back card.
- A computer running a Telnet session over Ethernet and connected to the LAN port on the MGX 8000 Series platform PXM back card.

For more information about connecting to PXM1E or PXM45 cards, refer to the *Cisco MGX 8850 (PXM1E/PXM45), Cisco MGX 8950, and Cisco MGX 8830 Configuration Guide, Release 5.1*.

For more information about connecting to PXM1 cards, refer to the *Cisco MGX 8850 Edge Concentrator Installation and Configuration, Release 1.1.3*.



**Note** The MGX 8000 Series platform PXM back card contains all of the connections needed for managing VISM/VISM-PR cards. The VISM/VISM-PR card itself has no physical management ports.

## Logging In to PXM and VISM/VISM-PR Cards

To log in to the PXM or VISM/VISM-PR card, complete the following steps.

**Step 1** Connect your terminal or workstation to the PXM back card through one of the methods listed in the above bullets.

The login prompt is displayed:

```
Login:
```

**Step 2** At the prompt, type your username.



**Note** The default username is **cisco**. You can change this username after you complete the initial login. Consult the system administrator for valid usernames.

The password prompt is displayed:

```
password:
```

**Step 3** At the prompt, type your password.

For security, the password is displayed as asterisks:

```
password: *****
```



**Note** The default password is **cisco**. You can change this password after you complete the initial login. Consult the system administrator for valid passwords.

For PXM1E or PXM45 cards, the active PXM card is automatically displayed:

```
nodename.7.PXM.a >
```

For PXM1 cards, the following prompt is displayed:

```
card number [7]:
```

**Step 4** To go to the active PXM1 card, press **enter** or **return**.

```
nodename.1.7.PXM.a >
```

**Step 5** To display the available cards, enter the **dspecds** command.

A list of available card types and associated states is displayed for the MGX 8000 Series platform to which you are connected. The display is similar to the following for all of the PXM cards:

```
nodename.1.7.PXM.a > dspecds
```

| Slot | CardState | CardType | CardAlarm | Redundancy |
|------|-----------|----------|-----------|------------|
| 1.1  | Empty     |          | Clear     |            |
| 1.2  | Active    | VISM-8T1 | Clear     |            |
| 1.3  | Empty     |          | Clear     |            |
| 1.4  | Empty     |          | Clear     |            |
| 1.5  | Empty     |          | Clear     |            |
| 1.6  | Empty     |          | Clear     |            |
| 1.7  | Active    | PXM1-OC3 | Minor     |            |
| 1.8  | Empty     |          | Clear     |            |
| 1.9  | Active    | VISM-8E1 | Clear     |            |
| 1.10 | Empty     |          | Clear     |            |
| 1.11 | Active    | VISM-8T1 | Clear     |            |
| 1.12 | Boot      | VISM-8T1 | Clear     |            |
| 1.13 | Active    | VISM-8T1 | Clear     |            |
| 1.14 | Active    | VISM-8E1 | Clear     |            |
| 1.15 | Empty     |          | Clear     |            |
| 1.16 | Empty     |          | Clear     |            |
| 1.17 | Empty     |          | Clear     |            |
| 1.18 | Empty     |          | Clear     |            |
| 1.19 | Empty     |          | Clear     |            |
| 1.20 | Empty     |          | Clear     |            |
| 1.21 | Boot      | VISM-8T1 | Clear     |            |
| 1.22 | Empty     |          | Clear     |            |
| 1.25 | Reserved  | VISM-8E1 | Clear     |            |
| 1.26 | Empty     |          | Clear     |            |
| 1.27 | Empty     |          | Clear     |            |
| 1.28 | Active    | VISM-8E1 | Clear     |            |
| 1.29 | Empty     |          | Clear     |            |
| 1.30 | Empty     |          | Clear     |            |
| 1.31 | Empty     |          | Clear     |            |
| 1.32 | Empty     |          | Clear     |            |

```
nodename.1.7.PXM.a >
```

**Step 6** Identify, from the list displayed in Step 5, the slot number of the VISM/VISM-PR card you want to configure.

**Step 7** To change to the VISM/VISM-PR card you identified in Step 6, enter the **cc** command (to change card), with the corresponding VISM/VISM-PR card slot number.

The VISM/VISM-PR card prompt is displayed when you successfully log in to a VISM/VISM-PR card. It has the following format:

```
nodename.1.9.VISM8.a
```

The VISM/VISM-PR card prompt contains the following data:

- Name of the MGX 8000 Series platform to which you are connected
- Number of the shelf—always 1
- Slot number
- Card type
- Card state—active (a) or standby (s)

You have completed logging in to the PXM and VISM/VISM-PR cards and can now perform the mandatory initial VISM/VISM-PR card configuration.

## Logging Out of VISM/VISM-PR and PXM Cards

To log out of the VISM/VISM-PR or PXM card, enter one of the following commands:

- **bye**
- **exit**
- **logout**

## Using the Command-Line Interface

Command-line interface (CLI) commands can be followed by a string of required or optional argument identifiers and argument values.

For a list of commands in a particular category, type a **?** followed by the prefix of the command.

```
nodename.1.1.VISM8.a > ? clr
```

| Command         | Logging | State  | Priority           |
|-----------------|---------|--------|--------------------|
| clralm          | No      | Any    | Group 1            |
| clralmcnt       | No      | Any    | Group 1            |
| clralmcnts      | No      | Any    | Group 1            |
| clralms         | No      | Any    | Group 1            |
| clrcacfailentrs | Yes     | Active | Group 1            |
| clrhystats      | Yes     | Active | Group 1            |
| clrrtpcnt       | No      | Any    | Group 1            |
| clrsarcnt       | No      | Any    | Group 1            |
| clrsarcnts      | No      | Any    | Group 1            |
| clrsarmsgcnt    | No      | Any    | Group 1            |
| clrscrn         | No      | Any    | Any User           |
| clrslipcnt      | No      | Any    | Group 1            |
| clrtaskinfo     | No      | Any    | Service Group (-1) |

If you do not know the syntax of a command, type the command name and then press **Enter**. The syntax displays with the parameter ranges.

```
nodename.1.21.VISM8.a > addlapdtrunk

ERR : incorrect number of parameters (not enough)

Syntax : addlapdtrunk "Line_Num Lapd_Rudp_Index"
        Line_Num -- Value: 1 - 8
        Lapd_Rudp_Index -- Value: 1 - 64

        possible errors are :
Incorrect number of parameters

nodename.1.21.VISM8.a >
```

The entire string, from the command to the last argument value, is referred to as a command line. Spaces are used to separate all elements in a command line. Type the command and any necessary argument identifiers and argument values, and then press **Enter**.


**Note**

You must press the **Enter** key at the end of each CLI command line to complete the command.

For example, the Add Endpoint command, **addendpt**, adds an endpoint to VISM/VISM-PR and has three required arguments. An endpoint defines one end of a connection. The **addendpt** command format is as follows:

```
nodename.1.21.VISM8.a > addendpt <endpt_num> <ds1_num> <ds0_num>
```

When you type a command, use argument values to represent the arguments. For example, to add an endpoint with number 10 on DS1 number 4 and DS0 number 3, you would use this command line:

```
nodename.1.21.VISM8.a > addendpt 10 4 3
```

Some commands require you to type an argument identifier before the argument value. For example, the Clear Alarm command, **clralm**, requires you to enter an identifier, **-ds1**, before the argument value. The **clralm** command format is as follows:

```
nodename.1.21.VISM8.a > clralm -ds1 <LineNum>
```

To clear alarms on line 4, you would use this command line:

```
nodename.1.21.VISM8.a > clralm -ds1 4
```

## VISM/VISM-PR Command Attributes

Use the information in Table 5-1 to ascertain the log file attributes, VISM/VISM-PR card state requirements for command use, and personnel privileges for all VISM/VISM-PR commands.

**Table 5-1 VISM/VISM-PR Command Attributes—Log File, Card State, and Privilege Level**

| Commands that begin with... | ...write to the log file? | ...are usable in what state? | ...can be used by personnel with what privilege level? |
|-----------------------------|---------------------------|------------------------------|--------------------------------------------------------|
| ? <sup>1</sup>              | No                        | All                          | All                                                    |
| add                         | Yes                       | Active                       | 1                                                      |
| cc <sup>1</sup>             | Yes                       | All                          | All                                                    |

**Table 5-1** VISM/VISM-PR Command Attributes—Log File, Card State, and Privilege Level (continued)

| Commands that begin with...  | ...write to the log file? | ...are usable in what state? | ...can be used by personnel with what privilege level? |
|------------------------------|---------------------------|------------------------------|--------------------------------------------------------|
| <b>chkflash</b> <sup>1</sup> | Yes                       | Active                       | 1                                                      |
| clr                          | No                        | Active                       | 1 to 5                                                 |
| cnf                          | Yes                       | Active                       | 1                                                      |
| del                          | Yes                       | Active                       | 1                                                      |
| dsp                          | No                        | Active                       | All                                                    |
| <b>Help</b> <sup>1</sup>     | No                        | All                          | All                                                    |
| <b>pingldsp</b> <sup>1</sup> | No                        | Active                       | All                                                    |
| tst                          | No                        | Active                       | All                                                    |
| <b>version</b> <sup>1</sup>  | No                        | Active                       | All                                                    |

1. The text shown represents the complete CLI command name.



**Note**

For a complete description of the CLI commands in this chapter, see Chapter 10, “CLI Commands.”

## Configuring the VISM/VISM-PR Card

You must complete the following configuration tasks when you initially configure your VISM/VISM-PR card.

- Allocating Resources, page 5-6
- Configuring the TDM Side, page 5-8

## Allocating Resources

To allocate resources—virtual ports, controller resources, and codec templates—to your VISM/VISM-PR card, complete the following step:

**Step 1** To add a virtual port, enter the **addport** command (no arguments).

This command adds an ATM port on a VISM/VISM-PR card. This command does not have arguments. When you add the ATM port, the bandwidth, VPI range, and VCI range are determined.

The VPI range is a single VPI value, the slot ID. The added port is not detected by the controller until you create a resource partition (see Step 3).

**Step 2** To verify that the port was added successfully, enter the **dspport** command.

```
nodename.1.27.VISM8.a > dspport
Provisioned BW      : 5651320 cps
Used              BW      :      0 cps
Available         BW      : 5651320 cps
```

**Step 3** To specify the controller resources, enter the **addrscprtn** command.

```
nodename.1.28.VISM8.a > addrscprtn <controller_id>
```

Replace <controller\_id> with the following values:

- 1 = PXM1 (PAR)
- 2 = PXM1E/PXM45 (PNNI)

A port supports only one controller at a time.

All resources of a port are associated with the resource partition you specify. When you add a resource partition, the associated controller detects the port as limited by the resource partition.

**Step 4** To specify the codec template used with your VISM/VISM-PR card, enter the **cnfcoectmpl** command.

```
nodename.1.28.VISM8.a > cnfcoectmpl <template_number>
```

For the VISM card, replace <template\_number> with one of the following values listed in Table 5-2.

**Table 5-2 Codec Templates**

| Codec Template Number | Codec Supported                                                                                                                                               | VISM-PR T1 Maximum Channels | VISM-PR E1 Maximum Channels | VISM Maximum Channels |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-----------------------------|-----------------------|
| 1                     | G.711u, G.711a, G.729a, G.729ab, G.726-32K, CLR-CHAN, G.726-16K, G.726-24K, G.726-40K                                                                         | 192                         | 248                         | 145                   |
| 2                     | G.711u and G.711a uncompressed and CLR-CHAN                                                                                                                   | 192                         | 248                         | 192                   |
| 3                     | Template #1 with T38 Support: G.711u, G.711a, G.729a, G.729ab, G.726-32K, CLR-CHAN, G.726-16K, G.726-24K, G.726-40K                                           | 192                         | 248                         | 120                   |
| 4                     | G.711u, G.711a, G.729a, G.729ab, G.726-32K, CLR-CHAN, G.726-16K, G.726-24K, G.726-40K, G.723.1-H, G.723.1a-H, G.723.1-L, G.723.1a-L, T.38 support for VISM-PR | 144                         | 144                         | 64                    |
| 5                     | G.711u, G.711a, G.729a, G.729ab, G.726-32K, CLR-CHAN, G.726-16K, G.726-24K, G.726-40K, Lossless                                                               | 192                         | 248                         | 145                   |

**Step 5** Type a **y** at the following message:

```
The card will be reset, do you want to proceed (Yes/No)? y
```

The card resets and returns the prompt.



**Note**

Although the prompt indicates that you are accessing the VISM/VISM-PR card, once you type a character or press **Enter**, the session automatically falls back to the PXM card. Use the **cc** command to change back to the VISM/VISM-PR card.

**Step 6** To display the codec you selected in Step 4, enter the **dspvismparam** command.

```
nodename.1.27.VISM8.a > dspvismparam

VISM mode:                aal2Trunking
VISM features Bit Map:    0x2b2
FunctionModuleType:      VISM-PR-8E1
CAC flag:                 enable
DS0s available:          248
Template number:       2
Percent of functional DSPs: 100
IP address:               0.0.0.0
Subnet mask:              0.0.0.0
Bearer IP address:       0.0.0.0
Bearer Subnet mask:      0.0.0.0
Bearer IP ping:          disable
RTCP report interval:    5000 msec
RTCP receive multiplier: 3
RTP receive timer:       disable
ControlPrecedence/Tos:   0x60
BearerPrecedence/Tos:    0xa0
Aal2 muxing status:      disable
Tftp Server Dn           TFTPDOMAIN
Aggregate Clipping       enable
```

Type <CR> to continue, Q<CR> to stop:

```
Aggregate Svc Bandwidth    0
Codec negotiation option   1
Profile negotiation option 1
VAD Duty Cycle             61
VAD Tolerance              100
VISM Initiated NW COT      Off
VISM CO4 Timer             1000 msec
CALEA flag                 disable
SupportdModuleType:       VISM-PR-8E1.
VismNSAP:                  47009181000000000001a53337700000107dbff00
```

## Configuring the TDM Side

Perform the following tasks to configure the TDM side of your networking application:

1. Configuring T1 and E1 Lines, page 5-9
2. Adding Bulk Distribution, page 5-12
3. Configuring Jitter Mode, page 5-16



## Configuring T1 and E1 Lines

Use the steps in this section to complete the following procedures:

- Add and configure your eight T1 or E1 line ports on the VISM/VISM-PR back card.
- If your application requires bulk distribution, add and configure your eight T1 and E1 line ports on the Service Resource Module (SRM) card.



### Note

Configure the DS0s on a line after you add and configure the line.

### Step 1

To add a line to your VISM/VISM-PR card, enter the **addln** command with the following argument:

```
nodename.1.12.VISM8.a > addln <line_number>
```

Replace <line\_number> with a value in the range 1–8. This example shows line 1 being added.

```
nodename.1.12.VISM8.a > addln 1
```



### Note

A delay of three seconds occurs before the command completes.

### Step 2

To provide values for the parameters of the line you added, enter the **cnfln** command with the following arguments:

```
nodename.1.12.VISM8.a > cnfln <line_number> <line_code> <line_length> <clk_src>  
<line_type> <loopback_detection> |<circuit_identifier>|
```



### Note

A delay of three seconds occurs before the command completes.

Replace the above arguments with the values listed in Table 5-3. This example shows the recommended E1 parameters.

```
nodename.1.12.VISM8.a > cnfln 1 3 9 2 7 1
```

**Table 5-3** Parameters for **cnfln** Command

| Parameter          | Description                                                                                                                                                  |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>line_number</i> | Line number in the range 1–8.                                                                                                                                |
| <i>line_code</i>   | Line coding method. <ul style="list-style-type: none"> <li>• 2 = B8ZS (T1)</li> <li>• 3 = HDB3 for E1 lines</li> <li>• 4 = AMI for T1 or E1 lines</li> </ul> |

**Table 5-3 Parameters for *cnfln* Command (continued)**

| Parameter                   | Description                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>line_length</i>          | Line length. <ul style="list-style-type: none"> <li>• 8 = AX-SMB-8E1 and AX-R-SMB-8E1 back card types</li> <li>• 9 = AX-RJ48-8E1 and AX-R-RJ48-8E1 back card types</li> <li>• 10 = T1 for 000–131 ft</li> <li>• 11 = T1 for 131–262 ft</li> <li>• 12 = T1 for 262–393 ft</li> <li>• 13 = T1 for 393–524 ft</li> <li>• 14 = T1 for 524–655 ft</li> <li>• 15 = T1 for 655 and greater ft</li> </ul> |
| <i>clk_src</i>              | Clock source. <ul style="list-style-type: none"> <li>• 1 = Loop clock</li> <li>• 2 = Local clock</li> </ul>                                                                                                                                                                                                                                                                                       |
| <i>line_type</i>            | Line type.<br>Use one of the following values for E1 lines: <ul style="list-style-type: none"> <li>• 1 = dsx1ESF</li> <li>• 2 = dsx1D4</li> <li>• 3 = E1</li> <li>• 4 = E1CRC</li> <li>• 5 = E1MF</li> <li>• 6 = E1MFCRC</li> <li>• 7 = E1 Clear</li> <li>• 8 = E1Q50</li> <li>• 9 = E1Q50CRC</li> </ul>                                                                                          |
| <i>loopback_detection</i>   | Loopback detection. <ul style="list-style-type: none"> <li>• 1 = Disabled</li> <li>• 2 = Enabled (This value is not applicable to E1 lines.)</li> </ul>                                                                                                                                                                                                                                           |
| <i> circuit_identifier </i> | (Optional) Name of the circuit in ASCII format. Range is 1–64 characters.                                                                                                                                                                                                                                                                                                                         |

**Step 3** To configure signaling on the line, enter the **cnflnsig** command with the following arguments:

```
nodename.1.12.VISM8.a > cnflnsig <line_number> <signaling_type>
```

Replace <line\_number> with the value of the line you added in Step 1.

Replace <signaling\_type> with one of the following values:

- 1 = Channel-associated signaling (CAS)
- 2 = Common channel signaling (CCS)
- 3 = No signaling (SS7 or when signaling is not required on the lines)



**Note** A delay of three seconds occurs before the command completes.

**Step 4** To display the values of the line, enter the **dspln** command with the *line\_number* (1) argument value.

```
nodename.1.12.VISM8.a > dspln 1
```

The following example shows some of the sample output from the **dspln** command:

```
LineNum:                1
LineConnectorType:     RJ-48
LineEnable:            Modify
LineType:              dsx1E1CLEAR
LineCoding:            dsx1HDB3
LineLength:            G.703 120 ohm
LineXmtClockSource:    LocalTiming
LineLoopbackCommand:  NoLoop
LineSendCode:          NoCode
LineUsedTimeslotsBitMap: 0xfffffffffe
LineLoopbackCodeDetection: codeDetectDisabled
LineSignalingType:     CCS
LineCcsChannels:       0x0
LineTrunkConditioning: disable
CircuitIdentifier:
TxDigitOrder:          aniThenDnis
TonePlanRegion:
TonePlanVersion:       0
RingingTO:             180
RingBackTO:           180
BusyTO:                30
Type <CR> to continue, Q<CR> to stop:
ReorderTO:             30
DialTO:                16
StutterDialTO:        16
OffHookAlertTO:       5
RemoteRingbackMethod: proxy
LineNumOfValidEntries: 8
```

## Adding Bulk Distribution

If your system requires bulk distribution, complete the following steps:

**Step 1** Log in to the PXM card.

**Step 2** To activate a broadband line on the SRM card, enter the **upln** command.

```
nodename.1.12.VISM8.a > upln <slot.line>
```

Replace the *slot* argument with the slot number of the SRM card (15 or 31 for a 32-slot chassis; 7 or 14 for a 14-slot chassis).

Replace the *line* argument with the line number that you want to activate (1, 2, or 3).

**Step 3** To link a line on the SRM card to the VISM/VISM-PR card, enter the **addlink** command.

```
nodename.1.12.VISM8.a > addlink <SrmStartLinkIf> <NumberOfLinks> <TargetIf>
```

Replace the above arguments with the values listed in Table 5-4 for the **addlink** command.

**Table 5-4 Parameters for addlink Command**

| Parameter             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>SrmStartLinkIf</i> | <p>Logical SRM slot and link number, in the form of <i>slot.line.link</i>.</p> <p>For a 32-slot chassis, replace <i>slot</i> with 15 for the upper bay or 31 for the lower bay.</p> <p>For a 14-slot chassis, the logical slot number is 7.</p> <p>Replace <i>line</i> with 1 for SONET/SDH interfaces or a number in the range of 1–3 for T3 interfaces.</p> <p>The <i>link</i> number identifies the starting link number on the SRM line you are configuring. The link number must be available (no other line connected to it).</p> <p>Replace <i>link</i> with a number in one of the following ranges:</p> <ul style="list-style-type: none"> <li>For SONET/SDH interfaces, T1 line tributary type configuration (VT15/VC11) range is 1 to 84.</li> <li>For SONET/SDH interfaces, E1 line tributary type configuration (VT2/VC12) range is 1 to 63.</li> <li>For T3 interfaces, range is 1 to 28.</li> </ul> <p><b>Note</b> T3 links 1 through 28 for each line connect to channels 1 to 28, respectively in the respective T3 line. The links within a SONET SDH line map to the VTs and VCs within a line.</p> |
| <i>NumberOfLinks</i>  | <p>Number of links you want to configure with this command. Replace <i>NumberOfLinks</i> with a number from 1 through 8.</p> <p>If you specify 1, you create one link. If you specify 8, you can configure links for all 8 lines on a service module at the same time.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <i>TargetIf</i>       | <p>Targeted starting line in the format <i>SMslot.SMline</i>.</p> <p>Replace <i>SMslot</i> with the slot number of the VISM card.</p> <p>Replace <i>SMline</i> with a line number in the range 1–8.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

## Enabling and Configuring Echo Cancellation

Complete the following steps to enable and configure echo cancellation (ECAN) on a line-by-line basis:

**Step 1** To enable ECAN for a line, enter the **cnfecanenable** command.

```
nodename.1.28.VISM8.a > cnfecanenable <lineNum> <ECANEnable>
```

Replace *<lineNum>* with a value in the range 1–8.

Replace *<ECANEnable>* with one of the following values:

- 1 = Disable
- 2 = Enable (Default)

**Step 2** To set the residual echo control, enter the **cnfecanrec** command.

```
nodename.1.28.VISM8.a > cnfecanrec <lineNum> <residualEchoControl>
```

Replace *<lineNum>* with the value used in Step 1.

Replace *<residualEchoControl>* with one of the following values:



**Note** The value of 3 is omitted.

- 1 = Cancel only
- 2 = Suppress residual
- 4 = Comfort noise



**Note** We recommend that you use Comfort noise.

**Step 3** To specify the ECAN algorithm maximum tail length, enter the **cnfecantail** command.

```
nodename.1.28.VISM8.a > cnfecantail <lineNum> <maximumTail>
```

Replace *<lineNum>* with the value used in Step 1.

Replace *<maximumTail>* with one of the following values:

- 24 ms
- 32 ms (default)
- 48 ms
- 64 ms
- 80 ms
- 96 ms
- 112 ms
- 128 ms



**Note** Although the default ECAN tail is 32 ms, we recommend that you use 64 ms.

**Step 4** To show the ECAN configurations for line 1, enter the **dsplndsp** command.

```
nodename.1.28.VISM8.a > dsplndsp <lineNum>

VismLineNum:          1
ECANEnable:           enable
MaximumTail:          64 milliseconds
ResidualEcho:         SuppressResidual
VoiceDetection:       Enable
```

---

## Configuring Connection Admission Control

Connection admission control (CAC) is a set of actions that ascertain if a connection request can be accepted or must be rejected.

By default, CAC is enabled.

Use the steps in this section to complete the following procedures:

- Define CAC parameters.
  - Configure voiceband data policies for fax/modem carrier loss and fax/modem CAC failure events.
- 

**Step 1** To enable or disable CAC, enter the **cnfcac** command.

```
nodename.1.28.VISM8.a > cnfcac <enableFlag>
```

Replace the *<enableFlag>* with one of the following values:

- 1 = Disable
- 2 = Enable

**Step 2** To ensure that CAC is enabled or disabled, enter the **dspvismparam** command.

```
nodename.1.28.VISM8.a > dspvismparam

VISM mode:                aal2Trunking
VISM features Bit Map:    0x2b2
FunctionModuleType:       VISM-8T1
CAC flag:                  enable
DSOs available:           24
Template number:          3
Percent of functional DSPs: 100
IP address:                11.11.11.1
Subnet mask:              255.255.255.248
Bearer IP address:        15.15.15.1
Bearer Subnet mask:       255.255.255.248
RTCP report interval:     5000 msec
RTCP receive multiplier:  3
RTP receive timer:        disable
ControlPrecedence/Tos:    0x20
BearerPrecedence/Tos:     0x40
Aal2 muxing status:       disable
Tftp Server Dn            TFTPDOMAIN
Aggregate Clipping        enable
Aggregate Svc Bandwidth   0
```

**Step 3** To enter card level CAC parameter values for voice activity detection (VAD) duty cycle and VAD tolerance, which are used in CAC algorithms, enter the **cnfcacparams** command.

```
nodename.1.28.VISM8.a > cnfcacparams <VAD_duty_cycle> <VAD_Tolerance>
```

Replace each of the above arguments with a value listed in Table 5-5. The following example shows the typical values for VAD duty cycle and VAD tolerance:

```
nodename.1.28.VISM8.a > cnfcacparams 61 100
```

**Table 5-5 Parameters for cnfcacparams Command**

| Parameter             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>VAD_duty_cycle</i> | <p>VAD duty cycle is the ratio of speech and holdover duration to the total duration expressed as a percentage.</p> <p>Holdover is the period after silence begins, and silence suppression is turned on. In VISM/VISM-PR, the holdover time is 250 ms.</p> <p>A typical value for this parameter is 61 which means that 61% of the time is taken by speech and holdover. Range is 1–99. Default is 61.</p>                                            |
| <i>VAD_Tolerance</i>  | <p>VAD tolerance is the expression for VAD over-subscription drop ratio, where tolerance = 10000 x over-subscription drop ratio (expressed as a percentage).</p> <p>A typical value for VAD tolerance is 100. Some examples are:</p> <ul style="list-style-type: none"> <li>• 10000 (tolerance) = 1% (over-subscription drop ratio)</li> <li>• 100 = 0.01% (default)</li> <li>• 10 = 0.001%</li> <li>• 1 = 0.0001%</li> </ul> <p>Range is 0–10000.</p> |

- Step 4** To specify card level default policies for a fax/modem carrier loss and a fax/modem CAC failure, enter the **cnfvbdpol** command.



**Note** This command is not applicable in the AAL1 switching mode.

```
nodename.1.28.VISM8.a > cnfvbdpol <sysCarrLossPol> <sysCacRejPol>
```

Replace the above arguments with the values listed in Table 5-6.

**Table 5-6 Parameters for cnfvbdpol Command**

| Parameter             | Description                                                                                                                                                                           |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>sysCarrLossPol</i> | Card level carrier loss policy. <ul style="list-style-type: none"> <li>• 1 = Revert to the previous codec.</li> <li>• 2 = Maintain the upspeed codec.</li> </ul>                      |
| <i>sysCacRejPol</i>   | Card level CAC reject policy. <ul style="list-style-type: none"> <li>• 1 = Delete the connection.</li> <li>• 2 = Maintain the connection and revert to the previous codec.</li> </ul> |

## Configuring Jitter Mode

You can dejitter the voice payload to improve the quality of the egress voice stream.



**Note** If your application uses the AAL2 trunking operation mode, changes to the jitter modes are affected only when you delete the CIDs and re-add the CIDs. We recommend that you use the fixed jitter mode for AAL2 trunking.

Complete the following steps to specify and configure jitter mode:

- Step 1** To set the jitter mode, enter the **cnfjtrmode** command.

```
nodename.1.28.VISM8.a > cnfjtrmode <jtr_mode>
```

Replace *<jtr\_mode>* with one of the following values:

- 1 = Fixed. We recommend fixed mode if latency jitter is constant.
- 2 = Adaptive. We recommend adaptive mode if latency jitter is variable.



**Note** This command changes the mode for all codec types.



**Step 2** To display the codec delay mode and initial delay, enter the **dspscodecjrtdelays** command.

```
nodename.1.1.VISM8.a > dspscodecjrtdelays
```

| codecType       | delay mode | timestamp | initial delay |
|-----------------|------------|-----------|---------------|
| 1 - G.711u      | fixed      | Yes       | hundred       |
| 2 - G.711a      | fixed      | Yes       | hundred       |
| 3 - G.726-32K   | fixed      | Yes       | sixty         |
| 4 - G.729a      | fixed      | Yes       | sixty         |
| 5 - G.729ab     | fixed      | Yes       | sixty         |
| 6 - clr chan    | fixed      | Yes       | hundred       |
| 7 - G.726-16K   | fixed      | Yes       | sixty         |
| 8 - G.726-24K   | fixed      | Yes       | sixty         |
| 9 - G.726-40K   | fixed      | Yes       | sixty         |
| 11 - G.723.1-H  | fixed      | Yes       | sixty         |
| 12 - G.723.1a-H | fixed      | Yes       | sixty         |
| 13 - G.723.1-L  | fixed      | Yes       | sixty         |
| 14 - G.723.1a-L | fixed      | Yes       | sixty         |
| 15 - Lossless   | fixed      | Yes       | sixteen       |

---





## AAL2 Trunking Mode

---

This section contains the following tasks for configuring the VISM/VISM-PR card for AAL2 trunking:

- Configuring the Operating Mode, page 6-1
- Configuring the ATM Network Side, page 6-3
- Configuring TDM Side Signaling for Applications That Use CCS, page 6-12
- Configuring TDM Side Signaling for Applications That Use CAS, page 6-12
- Adding DS0 Endpoints to Lines, page 6-12
- Adding CIDs, page 6-15
- Modifying the Profile Table, page 6-20

Sample AAL2 trunking configurations are shown in the “Sample Configuration” section on page 6-27.

## Configuring the Operating Mode

To configure the correct operating mode for your VISM/VISM-PR card, complete the following steps:

**Step 1** To configure the VISM/VISM-PR operating mode, enter the **cnfvismmode** command.

```
nodename.1.28.VISM8.a > cnfvismmode <mode_number>
```

Replace *<mode\_number>* with value of 2.

- 1 = VoIP switching/VoIP trunking (default)
- 2 = AAL2 trunking
- 3 = AAL1 switching
- 7 = Switched AAL2 SVC
- 8 = Switched AAL2 PVC
- 9 = VoIP and AAL1 SVC
- 10 = VoIP trunking and AAL2 trunking

**Step 2** Type a **y** at the following message:

```
WARNING: Available CLI Commands will be changed, do you want to proceed (Yes/No)? y
```

A message about the number of available commands displays before the card returns the prompt. The following example shows the number of available commands for AAL2 trunking mode:

```
INFORMATION: The new 'aal2Trunking' mode has 226 CLI commands.
```

**Step 3** To enable or disable subcell multiplexing, enter the **cnfaal2subcellmuxing** command.

```
nodename.1.28.VISM8.a > cnfaal2subcellmuxing <muxing status>
```

Replace <muxing status> with one of the following values:

- 1 = On
- 2 = Off

**Step 4** To display the current VISM/VISM-PR operating mode and subcell multiplexing status, enter the **dspvismparam** command.

```
nodename.1.28.VISM8.a > dspvismparam

VISM mode:                aal2Trunking
VISM features Bit Map:    0x2b2
FunctionModuleType:      VISM-PR-8T1
CAC flag:                 enable
DS0s available:          192
Template number:         2
Percent of functional DSPs: 100
IP address:               0.0.0.0
Subnet mask:              0.0.0.0
Bearer IP address:       0.0.0.0
Bearer Subnet mask:      0.0.0.0
RTCP report interval:    5000 msec
RTCP receive multiplier: 3
RTP receive timer:       disable
ControlPrecedence/Tos:  0x60
BearerPrecedence/Tos:   0xa0
Aal2 muxing status:      disable
Tftp Server Dn           TFTPDOMAIN
Aggregate Clipping       enable
Aggregate Svc Bandwidth  0
```

Type <CR> to continue, Q<CR> to stop:

```
Codec negotiation option 1
Profile negotiation option 1
VAD Duty Cycle           61
VAD Tolerance            100
VISM Initiated NW COT    Off
VISM CO4 Timer           1000 msec
CALEA flag               disable
SupportdModuleType:     VISM-PR-8T1.
VismNSAP:                47009181000000000142265b9900000107f3ff00
```

# Configuring the ATM Network Side

Configuring the ATM network side consists of setting up ATM PVCs across the network and providing the mechanism by which calls are routed over the correct PVC.

Each PVC is set up as three segments: two local segments and one network segment. The local segments are set up between the two VISM cards (one at each end of the PVC) and their respective PXM cards. The network segment is set up between the two PXM cards across the network.

For more information about PXM1E or PXM45 segments, refer to the *Cisco MGX 8850 (PXM1E/PXM45), Cisco MGX 8950, and Cisco MGX 8830 Configuration Guide, Release 5.1*.

For more information about PXM1 segments, refer to the *Cisco MGX 8850 Edge Concentrator Installation and Configuration, Release 1.1.3*.

The AAL2 trunking operating mode supports as many as 64 AAL2 PVCs connected to each remote endpoint in the network. The PVCs carry voice traffic and optional channel-associated signaling (CAS).

PVCs can be established in a non PNNI environment (PXM1) and a PNNI environment (PXM1E/PXM45).

## General Guidelines

Use the following guidelines when you set up the ATM side in the AAL2 trunking mode:

- Add the slave connection first; then add the master connection.

Note the slave connection ID, which you need to set up the master connection. In a non PNNI environment, the slave connection is the PXM1 card. In a PNNI environment, the slave connection is the remote gateway.

- Create connection identifiers (CIDs) for each PVC. CIDs bind the endpoints to the PVC.



---

**Note** CID numbers must match on the master and slave sides.

---

Calls that arrive at a specific DS0 are automatically routed to the preconfigured CID and PVC over trunks.

- The master and slave connection base parameters, PCR, SCR, and MBS values must match.

If these values do not match, PXM1E and PXM45 cards display an error. PXM1 cards do not display an error.

- If the connections are through a physical loopback on a PXM line, make sure that the VPI and VCI values are the same on both ends of the loopback.

Complete the following tasks to configure the ATM side:

- Configuring PVC Connections, page 6-4
- Connection CAC Configuration, page 6-11

# Configuring PVC Connections

The AAL2 trunking mode has the following two types of PVCs:

- AAL2—Supports bearer data; supports signaling data in clear channel codec mode.
- AAL5—Supports signaling data.

Complete the following steps to configure PVC connections:



**Note**

You must add the slave connection first before adding the master connection. Retain the remote connection ID to use when setting up the master connection.

**Step 1**

To add an ATM PVC between the VISM card and the MGX 8000 Series platform PXM card, enter the **addcon** command.

```
nodename.1.28.VISM8.a > addcon <localVCI> <preference> <pvcType> <application> <PCR>
<mastership> |<remoteConnId> <serviceType> <scr> <mbs> <priority> <prefrte> <direct>|
```

Replace the above arguments with the values listed in Table 6-1.

**Table 6-1 Parameters for addcon Command**

| Parameter          | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>localVCI</i>    | Local virtual channel identifier (VCI) to be used for the connection. Range is 131–510. The value you enter for this argument is also used as the LCN.                                                                                                                                                                                                                                                                                                     |
| <i>preference</i>  | Preference level of the local VCI. <ul style="list-style-type: none"> <li>• 1 = Primary—Choose 1 for AAL2 trunking mode.</li> <li>• 2 = Secondary</li> </ul>                                                                                                                                                                                                                                                                                               |
| <i>pvcType</i>     | AAL type of connection. <ul style="list-style-type: none"> <li>• 1 = AAL5 (For signaling over AAL2 trunking)</li> <li>• 2 = AAL2 (For bearer over AAL2 trunking)</li> <li>• 3 = AAL1</li> </ul>                                                                                                                                                                                                                                                            |
| <i>application</i> | The connection’s application. <ul style="list-style-type: none"> <li>• 1 = Control</li> <li>• 2 = Bearer—Use this option if <i>pvcType</i> is 2.</li> <li>• 3 = Signaling—Use this option if <i>pvcType</i> is 1.</li> </ul>                                                                                                                                                                                                                               |
| <i>PCR</i>         | Peak cell rate (PCR) measured in cells per second. Ranges are <ul style="list-style-type: none"> <li>• 1–96000 for AAL5 bearer</li> <li>• 1–20000 for AAL5 control PVC</li> <li>• 1–50000 for T1 AAL2 PVCs</li> <li>• 1–60000 for E1 AAL2 PVCs</li> <li>• 1–400 for signaling PVCs in AAL2 trunking mode</li> </ul> <p><b>Note</b> If the <i>serviceType</i> argument is variable bit rate (VBR), the <i>PCR</i> argument value must be 15 or greater.</p> |

**Table 6-1 Parameters for addcon Command (continued)**

| Parameter             | Description                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>mastership</i>     | <p>Connection type.</p> <ul style="list-style-type: none"> <li>• 1 = Master</li> <li>• 2 = Slave (default)</li> </ul>                                                                                                                                                                                                                                                                                                       |
| <i>lremoteConnIdl</i> | <p>(Optional) Remote connection identifier.</p> <p>For PXM1 connections, specify this argument with the following format: nodename.slot.port.vpi.vci</p> <p>For PXM1E/PXM45, specify this argument with the following format: Nsapaddr.Vpi.Vci.</p> <p><b>Note</b> This argument is used only when the <i>mastership</i> argument is set to 1 (Master).</p>                                                                 |
| <i>lserviceType </i>  | <p>(Optional) Service type is one of the following values:</p> <ul style="list-style-type: none"> <li>• 1 = Constant bit rate (CBR)</li> <li>• 2 = Variable bit rate real time (rt-VBR)</li> <li>• 3 = Variable bit rate non-real time (nrt-VBR)</li> <li>• 4 = rt-VBR3</li> <li>• 5 = rt-VBR2</li> <li>• 6 = nrt-VBR2</li> <li>• 7 = nrt-VBR3</li> </ul> <p><b>Note</b> Use value 7 for VISM-PR to RPM-PR connections.</p> |
| <i>lscr </i>          | <p>(Optional) Sustainable cell rate (SCR) defined in cells per second. Range is from 15 to the value you configured for the <i>PCR</i> argument.</p> <p><b>Note</b> This argument value is required if the <i>serviceType</i> argument value is in the range 2–7.</p>                                                                                                                                                       |
| <i>lmbs </i>          | <p>(Optional) Maximum burst size (MBS) is the maximum number of cells transmitted at the peak cell rate. Range is from 1 cell to 10 times the value you configured for the <i>scr</i> argument value.</p> <p><b>Note</b> This argument value is required if the <i>serviceType</i> argument value is in the range 2–7.</p>                                                                                                  |
| <i>lpriority </i>     | <p>(Optional) Route priority. Priority number is assigned to the PVC during configuration of the connection.</p> <p>Range is 1–15. Default is 8.</p> <p>A value of 1 indicates highest priority, and a value of 15 indicates the lowest priority.</p> <p><b>Note</b> This parameter is applicable only to VISM-PR cards.</p>                                                                                                |

**Table 6-1** Parameters for *addcon* Command (continued)

| Parameter        | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i> prefrte </i> | <p>(Optional) Unique identifier of the preferred route to which this connection is associated.</p> <p>Range is 0–65535. Default is 0.</p> <p>When the specified route identifier is 0, the connection is not associated with a preferred route. This parameter is not applicable to the slave end of an SPVC connection.</p> <p><b>Note</b> This parameter is applicable only to VISM-PR cards.</p>                                                                                                                                                                                                           |
| <i> direct </i>  | <p>(Optional) Parameter to specify whether or not the associated preferred route is the only permissible route for the connection to take.</p> <ul style="list-style-type: none"> <li>1 = Yes—The connection is not allowed to pick an alternate route. This option is not applicable when a preferred route is not specified.</li> <li>2 = No (default)—The connection is allowed to try another route if the preferred route is unavailable.</li> </ul> <p>If the directed preferred route is unavailable, the connection fails.</p> <p><b>Note</b> This parameter is applicable only to VISM-PR cards.</p> |

**Step 2** If you need to refine the configuration parameters of the connection added in Step 1, enter the **cnfcon** command.

```
nodename.1.28.VISM8.a > cnfcon <LCN> <PCR> <service_type> [<SCR_ingress>] <MBS_ingress>
<priority> <prefrte> <direct>|
```

Replace the above arguments with the values listed in Table 6-2.

**Table 6-2** Parameters for *cnfcon* Command

| Parameter  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>LCN</i> | Type the value you entered for the <i>localVCI</i> argument in Step 1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <i>PCR</i> | <p>PCR described in cells per second.</p> <p><b>Note</b> The <i>PCR</i> argument value cannot be changed if the calls or connections for signaling and control are active.</p> <p>Ranges are</p> <ul style="list-style-type: none"> <li>1–400 = Signaling PVCs in AAL2 trunking mode</li> <li>1–20000 = AAL5 control PVC</li> <li>1–50000 = T1 AAL2 bearer PVCs</li> <li>1–60000 = E1 AAL2 bearer PVCs</li> <li>1–96000 = AAL5 bearer PVC</li> </ul> <p><b>Note</b> If the <i>service_type</i> argument value is a VBR, the <i>PCR</i> argument value must be 15 or greater.</p> |



**Table 6-2** Parameters for *cnfcon* Command (continued)

| Parameter           | Description                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>service_type</i> | <p>Service type. Values are</p> <ul style="list-style-type: none"> <li>• 1 = Constant bit rate (CBR)</li> <li>• 2 = Variable bit rate real time—rt-VBR</li> <li>• 3 = Variable bit rate non-real time—nrt-VBR</li> <li>• 4 = rt-VBR3</li> <li>• 5 = rt-VBR2</li> <li>• 6 = nrt-VBR</li> <li>• 7 = nrt-VBR</li> </ul> <p><b>Note</b> For VISM-PR to RPM-PR connections, use one of the values 4–7.</p> |
| <i>SCR_ingress</i>  | <p>(Optional) SCR. Range is from 15 to the value you configured for the <i>PCR</i> argument.</p> <p><b>Note</b> This argument value is required if the <i>service_type</i> argument value is in the range 2–7.</p>                                                                                                                                                                                    |
| <i>MBS_ingress</i>  | <p>(Optional) MBS. Maximum number of cells transmitted at the peak cell rate. Range is from 1 cell to 10 times the value you configured for the <i>SCR_ingress</i> argument.</p> <p><b>Note</b> This argument value is required if the <i>service_type</i> argument value is in the range 2–7.</p>                                                                                                    |
| <i>priority</i>     | <p>(Optional) Route priority is the priority number assigned to the PVC during configuration of the connection.</p> <p>Range is 1–15. Default is 8.</p> <p>A value of 1 indicates highest priority, and a value of 15 indicates the lowest priority.</p> <p><b>Note</b> This parameter is applicable only to VISM-PR cards.</p>                                                                       |

**Table 6-2 Parameters for *cnfcon* Command (continued)**

| Parameter        | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i> prefrtel</i> | <p>(Optional) Unique identifier of the preferred route to which this connection is associated.</p> <p>Range is 0–65535. Default is 0.</p> <p>When the specified route identifier is 0, the connection is not associated with a preferred route. This parameter is not applicable to the slave end of an SPVC connection.</p> <p><b>Note</b> This parameter is applicable only to VISM-PR cards.</p>                                                                                                                                                                                                                             |
| <i> directl</i>  | <p>(Optional) Parameter to specify whether or not the associated preferred route is the only permissible route for the connection to take.</p> <ul style="list-style-type: none"> <li>• 1 = Yes—The connection is not allowed to pick an alternate route. This option is not applicable when a preferred route is not specified.</li> <li>• 2 = No (Default)—The connection is allowed to try another alternate route if the preferred route is unavailable.</li> </ul> <p>If the directed preferred route is unavailable, the connection is failed.</p> <p><b>Note</b> This parameter is applicable only to VISM-PR cards.</p> |

**Step 3** To display the details of the connection, enter the **dspcon** command.

```
nodename.1.11.VISM8.a > dspcon <LCN>
```

Replace the <LCN> argument with a value in the range 131–510.

The following example shows sample configuration for a bearer PVC.

```
nodename.1.5.VISM8.a > dspcon 131

ChanNum:                131
ChanRowStatus:          Mod
ChanLocalRemoteLpbkState: Disabled
ChanTestType:           TestOff
ChanTestState:          Passed
ChanRTDresult:          56 us
ChanPortNum:            255
ChanPvcType:            AAL2
ChanConnectionType:     PVC
ChanLocalVpi:           5
ChanLocalVci:           131
ChanLocalNSAP:           470091810000000059a3f9761000001072bff00
ChanRemoteVpi:          0
ChanRemoteVci:          0
ChanRemoteNSAP:         NULL NSAP
ChanMastership:         Slave
ChanVpcFlag:            Vcc
ChanConnServiceType:    CBR
ChanRoutingPriority:     8
ChanMaxCost:            2147483647
ChanRestrictTrunkType:  No Restriction
```

Type <CR> to continue, Q<CR> to stop:

```

ChanConnPCR:          50000
ChanConnPercentUtil: 100
ChanPreference:      1
ChanRemotePCR:       50000
ChanRemotePercentUtil: 100
ChanProtection:      unprotected
ChanActivityState:   unknown
ChanLockingState:    unlock
ChanApplication:     bearer
ChanServiceType:     cbr
ChanScrIngress:      50000
ChanMbsIngress:      50000
ChanVCCI:            0
ChanFarEndAddrType:  notapplicable
ChanFarEndE164Addr:  0
ChanFarEndGWIDAddr:  .
ChanFarEndNSAPAddr:  NULL NSAP
ChanAdminStatus:     Up
ChanReroute:         False
ChanPrefRouteId:     0
ChanDirectRoute:     False

```

Type <CR> to continue, Q<CR> to stop:

```

ChanUserPcrNumber:   User BW Off
ChanUserMinPCRBW:    10
ChanUserMaxPCRBW:    50000
ChanUserMaxScrBW:    0
ChanUserMaxMbsBW:    0

```

ChanNumNextAvailable: 133

The following example shows sample configuration for a signaling connection with CCS.

nodename.1.5.VISM8.a > **dspon** 231

```

ChanNum:              231
ChanRowStatus:        Mod
ChanLocalRemoteLpbkState: Disabled
ChanTestType:         TestOff
ChanTestState:        NotInProgress
ChanRTDresult:        65535 us
ChanPortNum:          255
ChanPvcType:          AAL5
ChanConnectionType:   PVC
ChanLocalVpi:         5
ChanLocalVci:         231
ChanLocalNSAP:        4700918100000000059a3f9761000001072bfff0
ChanRemoteVpi:        0
ChanRemoteVci:        0
ChanRemoteNSAP:       NULL NSAP
ChanMastership:       Slave
ChanVpcFlag:          Vcc
ChanConnServiceType:  CBR
ChanRoutingPriority:  8
ChanMaxCost:          2147483647
ChanRestrictTrunkType: No Restriction

```

Type <CR> to continue, Q<CR> to stop:

```

ChanConnPCR:          400
ChanConnPercentUtil: 100
ChanPreference:      1
ChanRemotePCR:       400

```

```

ChanRemotePercentUtil: 100
ChanProtection:        unprotected
ChanActivityState:    unknown
ChanLockingState:     unlock
ChanApplication:      signaling
ChanServiceType:      cbr
ChanScrIngress:       400
ChanMbsIngress:       400
ChanVCCI:             0
ChanFarEndAddrType:   notapplicable
ChanFarEndE164Addr:   0
ChanFarEndGWIDAddr:   .
ChanFarEndNSAPAddr:   NULL NSAP
ChanAdminStatus:      Up
ChanReroute:          False
ChanPrefRouteId:      0
ChanDirectRoute:      False

```

Type <CR> to continue, Q<CR> to stop:

```

ChanUserPcrNumber:    User BW Off
ChanUserMinPCRBW:     10
ChanUserMaxPCRBW:     0
ChanUserMaxScrBW:     0
ChanUserMaxMbsBW:     0

```

```
ChanNumNextAvailable: 133
```

**Step 4** To verify the integrity or continuity of a connection, enter the **tstcon** command.

```
nodename.1.11.VISM8.a > tstcon
```

The following example shows a connection test for LCN 131.

```
nodename.1.11.VISM8.a > tstcon 131
test type is..... 1
```

```
TestCon in progress.
```

```
TestCon Passed.
```

**Step 5** To configure the holdover and maximum wait time arguments, enter the **cnfaal2timerparams** command.

```
nodename.1.28.VISM8.a > cnfaal2timerparams <VadTimer> <CidFillTimer>
```

Replace <VadTimer> with the VAD holdover time in the range 250–65535 ms. Default is 250 ms.

Replace <CidFillTimer> with the maximum wait time for cell content filling when the next packet is not ready. Range is 250–65535 ms. Default is 250 ms.

## Connection CAC Configuration



### Note

CAC must be enabled on the card.

To configure VAD tolerance and VAD duty cycle for a specific logical connection number (LCN) used for PVCs, enter the **cnfconcacparams** command.

```
nodename.1.28.VISM8.a > cnfconcacparams <LCN> <VADTolerance> <VADDutyCycle>
```

Replace the above arguments with the values listed in Table 6-3 for the **cnfconcacparams** command.

**Table 6-3 Parameters for cnfconcacparams Command**

| Parameter           | Description                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>LCN</i>          | Logical channel number (LCN) of the connection. Range is 131–510.                                                                                                                                                                                                                                                                                                                                                                                      |
| <i>VADTolerance</i> | <p>VAD tolerance is the expression for VAD over-subscription drop ratio, where tolerance = 10000 x over-subscription drop ratio (expressed as a percentage).</p> <p>A typical value for VAD tolerance is 100. Some examples are:</p> <ul style="list-style-type: none"> <li>• 10000 (tolerance) = 1% (over-subscription drop ratio)</li> <li>• 100 = 0.01% (default)</li> <li>• 10 = 0.001%</li> <li>• 1 = 0.0001%</li> </ul> <p>Range is 0–10000.</p> |
| <i>VADDutyCycle</i> | <p>VAD duty cycle is the ratio of speech and holdover duration to the total duration expressed as a percentage.</p> <p>Holdover is the period after silence begins, and silence suppression is turned on. In VISM/VISM-PR, the holdover time is 250 ms.</p> <p>A typical value for this parameter is 61 which means that 61% of the time is taken by speech and holdover. Range is 1–99. Default is 61.</p>                                            |

## Configuring TDM Side Signaling for Applications That Use CCS

Common channel signaling (CCS) uses a dedicated channel on a DS1 line to carry the signaling for the other channels on the line. Signaling is transported across the trunk as Q.931 messages in ATM cells using AAL5.

You must identify the signaling channel to the VISM/VISM-PR card.

To add a CCS channel to your VISM/VISM-PR card, enter the **addccs** command.

```
nodename.1.28.VISM8.a > addccs <line_number> <ds0_number> <LCN>
```

Replace the above arguments with the values listed in Table 6-4.

**Table 6-4** Parameters for **addccs** Command

| Parameter          | Description                                                                                                                                                                             |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>line_number</i> | Line number. Range is 1–8.                                                                                                                                                              |
| <i>ds0_number</i>  | DS0 number. <ul style="list-style-type: none"> <li>• 1–24 = T1 lines</li> <li>• 1–31 = E1 lines</li> </ul> For T1 lines, 24 is the typical DS0.<br>For E1 lines, 16 is the typical DS0. |
| <i>LCN</i>         | Logical channel number of the CCS channel to be added. Range is 131–510.                                                                                                                |

## Configuring TDM Side Signaling for Applications That Use CAS

In AAL2 mode basic CAS configurations are not required.

### Adding DS0 Endpoints to Lines

The number of DS0s you can add depends on the template that you are using.

Complete the following steps to add DS0 endpoints to lines:

**Step 1** To add multiple endpoints with one command, enter the **addendpts** command.

```
nodename.1.12.VISM8.a > addendpts <endpt_num> <ds1_num> <ds0_num> <endpts_num>
```

Replace the above arguments with the values listed in Table 6-5.

**Table 6-5 Parameters for *addendpts* Command**

| Parameter        | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>endpt_num</i> | <p>First endpoint number of a range of consecutive endpoints.</p> <ul style="list-style-type: none"> <li>• Template 1 <ul style="list-style-type: none"> <li>- 1-145 for VISM</li> <li>- 1-192 for VISM-PR T1</li> <li>- 1-248 for VISM-PR E1</li> </ul> </li> <li>• Template 2 <ul style="list-style-type: none"> <li>- 1-192 for T1</li> <li>- 1-248 for E1</li> </ul> </li> <li>• Template 3 <ul style="list-style-type: none"> <li>- 1-120 for VISM</li> <li>- 1-192 for VISM-PR T1</li> <li>- 1-248 for VISM-PR E1</li> </ul> </li> <li>• Template 4 <ul style="list-style-type: none"> <li>- 1-64 for VISM</li> <li>- 1-144 for VISM-PR</li> </ul> </li> <li>• Template 5 <ul style="list-style-type: none"> <li>- 1-192 for VISM-PR T1</li> <li>- 1-248 for VISM-PR E1</li> </ul> </li> </ul> |
| <i>dsl_num</i>   | Starting physical line number in the range 1-8.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

**Table 6-5** Parameters for *addendpts* Command (continued)

| Parameter         | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>ds0_num</i>    | <p>Starting DS0 number from which the endpoints are added.</p> <ul style="list-style-type: none"> <li>• 1–24 for T1 lines</li> <li>• 1–31 for non-CAS E1 lines</li> <li>• 1–15 and 17–31 for CAS E1 lines</li> </ul> <p>For VISM/VISM-PR E1 cards, 16 is preallocated as the CAS channel.</p> <p><b>Note</b> If the application requires CAS, issue the <b>cnflnsig</b> command before adding the endpoints.</p>                                                                                                                                                                                                                                                                                                                                                      |
| <i>endpts_num</i> | <p>Number of endpoints to add.</p> <ul style="list-style-type: none"> <li>• Template 1 <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2 <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3 <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4 <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5 <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul> |

**Step 2** To add a single DS0 to a line, enter the **addendpt** command.

```
nodename.1.28.VISM8.a > addendpt <endpt_num> <ds1_num> <ds0_num>
```

Replace the above arguments with the values listed in Table 6-5.



- Step 3** To validate the endpoints that you added, enter the **dspendpts** command. The following example shows sample syntax for the endpoints on the VISM-PR card.

```
nodename.1.28.VISM8.a > dspendpts
```

| EndptNum | Ena/Speed |
|----------|-----------|
| 1        | act/ 64k  |
| 2        | act/ 64k  |
| 3        | act/ 64k  |
| 4        | act/ 64k  |
| 5        | act/ 64k  |
| 6        | act/ 64k  |
| 7        | act/ 64k  |
| 8        | act/ 64k  |
| 9        | act/ 64k  |
| 10       | act/ 64k  |
| 11       | act/ 64k  |
| 12       | act/ 64k  |
| 13       | act/ 64k  |
| 14       | act/ 64k  |
| 15       | act/ 64k  |
| 16       | act/ 64k  |
| 17       | act/ 64k  |
| 18       | act/ 64k  |
| 19       | act/ 64k  |
| 20       | act/ 64k  |

Type <CR> to continue, Q<CR> to stop:

## Adding CIDs

The CID is a mechanism within AAL2 that allows multiple calls to be transported across a single AAL2 PVC. The **addcid** command binds an endpoint to a logical channel (PVC).

To add and configure CIDs, complete the following steps:

- Step 1** To add a channel identifier (CID) to an AAL2 PVC, enter the **addcid** command.

```
nodename.1.28.VISM8.a > addcid <endpt_num> <LCN> <cid_num> <codec_type> <profile_type>
<profile_number> |<voice_activity_detection> <vad_init_timer> <echo_cancellation>
<triple_redundancy_protection> <cas_signaling_transport> <dtmf_tone_transport_as_AAL2>
<ICS_enable> <pktPeriod>|
```

Replace the above arguments with the values listed in Table 6-6.

**Table 6-6 Parameters for addcid Command**

| Parameter        | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>endpt_num</i> | <p>Endpoint number which is to be related to the LCN/CID pair being added.</p> <ul style="list-style-type: none"> <li>• Template 1 <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2 <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3 <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4 <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5 <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul> |
| <i>LCN</i>       | Logical channel number (LCN) of the LCN/CID pair. Range is 131–510.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <i>cid_num</i>   | Channel identification number of the LCN/CID pair. Range is 8–255.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

**Table 6-6 Parameters for addcid Command (continued)**

| Parameter             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>codec_type</i>     | Type of coding/decoding to be performed on the data stream. <ul style="list-style-type: none"> <li>• 1 = G.711u</li> <li>• 2 = G.711a</li> <li>• 3 = G.726-32k</li> <li>• 4 = G.729a</li> <li>• 5 = G.729ab</li> <li>• 6 = Clear channel (VAD must be off)</li> <li>• 7 = G.726-16k</li> <li>• 8 = G.726-24k</li> <li>• 9 = G.726-40k</li> <li>• 11 = G.723.1-H</li> <li>• 12 = G.723.1a-H</li> <li>• 13 = G.723.1-L</li> <li>• 14 = G.723.1a-L</li> <li>• 15 = Lossless (VAD must be off)</li> </ul> |
| <i>profile_type</i>   | Profile type to be used for the CID. <ul style="list-style-type: none"> <li>• 1 = International Telecommunication Union (ITU) I.366.2</li> <li>• 3 = Custom</li> </ul> <p><b>Note</b> If the <i>profile_type</i> and <i>profile_number</i> argument values are both 1, you cannot turn VAD on.</p>                                                                                                                                                                                                    |
| <i>profile_number</i> | Number of the profile. <ul style="list-style-type: none"> <li>• 1 = ITU profile</li> <li>• 2 = ITU profile</li> <li>• 3 = ITU profile</li> <li>• 7 = ITU profile</li> <li>• 8 = ITU profile</li> <li>• 12 = ITU profile</li> <li>• 100 = Custom profile</li> <li>• 101 = Custom profile</li> <li>• 110 = Custom profile</li> <li>• 200 = Custom profile</li> <li>• 201 = Custom profile</li> <li>• 210 = Custom profile</li> </ul>                                                                    |

Table 6-6 Parameters for addcid Command (continued)

| Parameter                    | Description                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| voice_activity_detection     | (Optional) Value you can use to enable or disable voice activity detection (VAD). <ul style="list-style-type: none"> <li>• 1 = On</li> <li>• 2 = Off (default)</li> </ul> <b>Note</b> If the <i>profile_type</i> and <i>profile_number</i> argument values are both 1, you cannot turn VAD on.                                                                                                       |
| vad_init_timer               | (Optional) VAD initial (holdover) timer. Range is 250–65535 ms. Default is 250 ms.                                                                                                                                                                                                                                                                                                                   |
| echo_cancellation            | (Optional) Value you can use to enable or disable echo cancellation (ECAN). <ul style="list-style-type: none"> <li>• 1 = On (default)</li> <li>• 2 = Off</li> </ul>                                                                                                                                                                                                                                  |
| triple_redundancy_protection | (Optional) Value you can use to enable or disable triple redundancy protection for type 3 packets. <ul style="list-style-type: none"> <li>• 1 = On</li> <li>• 2 = Off</li> </ul> <b>Note</b> If you select 1 for this argument value, either the <i>cas_signaling_transport</i> or <i>dtmf_tone_transport_as_AAL2</i> argument value must be set to 1 (on).                                          |
| cas_signaling_transport      | (Optional) Value you can use to enable or disable CAS transport as AAL2 type 3 packets. <ul style="list-style-type: none"> <li>• 1 = On (default)</li> <li>• 2 = Off</li> </ul> This parameter does not affect any inbound signaling.                                                                                                                                                                |
| dtmf_tone_transport_as_AAL2  | (Optional) Value you can use to enable or disable DTMF tone transport as AAL2 type 3 packets. It can be one of the following values: <ul style="list-style-type: none"> <li>• 1 = On (default)</li> <li>• 2 = Off</li> </ul> <b>Note</b> The <i>dtmf_tone_transport_as_AAL2</i> argument value must be set to 1 (on) when the <i>codec_type</i> is configured for codecs other than G.711 and G.726. |

**Table 6-6 Parameters for addcid Command (continued)**

| Parameter                 | Description                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code> ICS_enable </code> | (Optional) Value you can use to enable or disable idle code suppression (ICS) for the CID. <ul style="list-style-type: none"> <li>• 1 = Enable</li> <li>• 2 = Disable</li> </ul>                                                                                                                                                                                                                                          |
| <code> pktPeriod </code>  | (Optional) Packetization period (defined in milliseconds). This parameter applies only to G.729a compression. <ul style="list-style-type: none"> <li>• 10 ms</li> <li>• 20 ms</li> <li>• 30 ms</li> </ul> <p><b>Note</b> The <code>pktPeriod</code> argument applies only to G.729a compression (<code>codec_type</code> argument value = 4). If you have selected any other compression value, ignore this argument.</p> |

**Step 2** To verify the CIDs you added, enter the `dspcids` command.

```
nodename.1.28.VISM8.a > dspcids <LCN>
```

Replace the `<LCN>` argument with a value in the range 131–510.

The following example shows sample CID information for LCN 131.

```
nodename.1.28.VISM8.a > dspcids 131
```

| LCN Num | CID Num | Endpt Num | Cid Status | Type3 Redun | VAD VAD | Timer | Prof Type | Prof Num | Codec Type | Cas Tran | DTMF Tran | Ecan | ICS Enable | Pkt Period | Admin State |
|---------|---------|-----------|------------|-------------|---------|-------|-----------|----------|------------|----------|-----------|------|------------|------------|-------------|
| 131     | 11      | 1         | active     | enabl       | ena     | 250   | Custo     | 210      | G.729a     | ena      | ena       | ena  | Dis        | 20         | IS          |
| 131     | 12      | 2         | active     | enabl       | ena     | 250   | Custo     | 210      | G.729a     | ena      | ena       | ena  | Dis        | 20         | IS          |
| 131     | 13      | 3         | active     | enabl       | ena     | 250   | Custo     | 210      | G.729a     | ena      | ena       | ena  | Dis        | 20         | IS          |
| 131     | 14      | 4         | active     | enabl       | ena     | 250   | Custo     | 210      | G.729a     | ena      | ena       | ena  | Dis        | 20         | IS          |
| 131     | 15      | 5         | active     | enabl       | ena     | 250   | Custo     | 210      | G.729a     | ena      | ena       | ena  | Dis        | 20         | IS          |
| 131     | 16      | 6         | active     | enabl       | ena     | 250   | Custo     | 210      | G.729a     | ena      | ena       | ena  | Dis        | 20         | IS          |
| 131     | 17      | 7         | active     | enabl       | ena     | 250   | Custo     | 210      | G.729a     | ena      | ena       | ena  | Dis        | 20         | IS          |
| 131     | 18      | 8         | active     | enabl       | ena     | 250   | Custo     | 210      | G.729a     | ena      | ena       | ena  | Dis        | 20         | IS          |
| 131     | 19      | 9         | active     | enabl       | ena     | 250   | Custo     | 210      | G.729a     | ena      | ena       | ena  | Dis        | 20         | IS          |
| 131     | 20      | 10        | active     | enabl       | ena     | 250   | Custo     | 210      | G.729a     | ena      | ena       | ena  | Dis        | 20         | IS          |
| 131     | 21      | 11        | active     | enabl       | ena     | 250   | Custo     | 210      | G.729a     | ena      | ena       | ena  | Dis        | 20         | IS          |
| 131     | 22      | 12        | active     | enabl       | ena     | 250   | Custo     | 210      | G.729a     | ena      | ena       | ena  | Dis        | 20         | IS          |
| 131     | 23      | 13        | active     | enabl       | ena     | 250   | Custo     | 210      | G.729a     | ena      | ena       | ena  | Dis        | 20         | IS          |
| 131     | 24      | 14        | active     | enabl       | ena     | 250   | Custo     | 210      | G.729a     | ena      | ena       | ena  | Dis        | 20         | IS          |
| 131     | 25      | 15        | active     | enabl       | ena     | 250   | Custo     | 210      | G.729a     | ena      | ena       | ena  | Dis        | 20         | IS          |
| 131     | 26      | 16        | active     | enabl       | ena     | 250   | Custo     | 210      | G.729a     | ena      | ena       | ena  | Dis        | 20         | IS          |
| 131     | 27      | 17        | active     | enabl       | ena     | 250   | Custo     | 210      | G.729a     | ena      | ena       | ena  | Dis        | 20         | IS          |
| 131     | 28      | 18        | active     | enabl       | ena     | 250   | Custo     | 210      | G.729a     | ena      | ena       | ena  | Dis        | 20         | IS          |
| 131     | 29      | 19        | active     | enabl       | ena     | 250   | Custo     | 210      | G.729a     | ena      | ena       | ena  | Dis        | 20         | IS          |
| 131     | 30      | 20        | active     | enabl       | ena     | 250   | Custo     | 210      | G.729a     | ena      | ena       | ena  | Dis        | 20         | IS          |
| 131     | 31      | 21        | active     | enabl       | ena     | 250   | Custo     | 210      | G.729a     | ena      | ena       | ena  | Dis        | 20         | IS          |
| 131     | 32      | 22        | active     | enabl       | ena     | 250   | Custo     | 210      | G.729a     | ena      | ena       | ena  | Dis        | 20         | IS          |
| 131     | 33      | 23        | active     | enabl       | ena     | 250   | Custo     | 210      | G.729a     | ena      | ena       | ena  | Dis        | 20         | IS          |
| 131     | 34      | 24        | active     | enabl       | ena     | 250   | Custo     | 210      | G.729a     | ena      | ena       | ena  | Dis        | 20         | IS          |

**Step 3** To verify the values for a single CID, enter the **dspsid** command.

```
nodename.1.28.VISM8.a > dspsid <LCN> <cidNum>
```

Replace the **<LCN>** argument with a value in the range 131–510.

Replace the **<cidNum>** argument with a value in the range 8–255.

The following example shows the values for CID 131.

```
nodename.1.28.VISM8.a > dspsid 131
  LCN number :      131
  CID number:      8
  Endpoint number : 4
  CidRowStatus:    active
  Type3redundancy: enabled
  VAD:             disabled
  VADInitTimer:    250
  Profile type:    ITU
  Profile number:  1
  Codec type:      G.711u
  Cas transport:   disabled
  DTMF transport:  enabled
  Ecan on/off:     enabled
  ICS enable:      Disabled
  pkt period:      5
  Cid state:       Active
  Cid Fail Reason: Not Fail
  Cid Admin State: OOS
```

## Modifying the Profile Table

A profile table is associated with each AAL2 operating mode. This profile table specifies the encoding format, which tells the card how to interpret the packets.

You can use the **dspaal2profile** command to see the values for a profile type. Example 6-1 shows the default values for ITU profile type 1.

### Example 6-1 Default Values for ITU Profile 1

```
nodename.1.28.VISM8.a > dspaal2profile 1 1
```

| UUI Codepoint Range | Packet Length (octets) | Codec | SID    | M | Packet Time (ms) | Seq. No. Interval (ms) |
|---------------------|------------------------|-------|--------|---|------------------|------------------------|
| 0-15                | 40                     | PCMU  | No SID | 1 | 5                | 5                      |
| 0-15                | 40                     | PCMA  | No SID | 1 | 5                | 5                      |

Table 6-7 describes the fields shown in the display.

**Table 6-7** *dspaal2profile* Field Descriptions

| Field                  | Description                            |
|------------------------|----------------------------------------|
| UUI Codepoint Range    | User-to-user indication.               |
| Packet Length (octets) | Packet length for the encoding format. |
| Codec                  | Type of codec.                         |

**Table 6-7** *dspaal2profile* Field Descriptions (continued)

| Field                  | Description                                                                                     |
|------------------------|-------------------------------------------------------------------------------------------------|
| SID                    | Silence insertion descriptor.                                                                   |
| M                      | Multiple of the service data unit (SDU) for the profile. The SDU is the smallest packet length. |
| Packet Time (ms)       | Voice packetization period.                                                                     |
| Seq. No. Interval (ms) | Sequence number interval.                                                                       |

VISM/VISM-PR creates the profile table with the defaults that are listed in Table 6-8. This table is a summary of the output from the **dspaal2profile** command.

**Table 6-8** *AAL2 Operating Mode Profiles*

| Profile Type | Profile Number | UII Codepoint Range | Packet Length (octets) | Voice codec | VAD    | M | Voice Packet Period (ms) | Sequence Number Interval (ms) | Voiceband Data Codec | Voiceband Data Packet Period (ms) |
|--------------|----------------|---------------------|------------------------|-------------|--------|---|--------------------------|-------------------------------|----------------------|-----------------------------------|
| ITU          | 1              | 0–15                | 40                     | G.711u      | Off    | 1 | 5                        | 5                             | G.711u               | 5                                 |
| ITU          | 2              | 0–15                | 40                     | G.711u      | SIDG   | 1 | 5                        | 5                             | G.711u               | 5                                 |
| ITU          | 3              | 0–15                | 40                     | G.711u      | SIDG   | 1 | 5                        | 5                             | G.711u               | 5                                 |
|              |                | 0–15                | 10                     | G.726-16k   |        | 1 | 5                        | 5                             |                      |                                   |
|              |                | 0–15                | 15                     | G.726-24k   |        | 1 | 5                        | 5                             |                      |                                   |
|              |                | 0–15                | 20                     | G.726-32k   |        | 1 | 5                        | 5                             |                      |                                   |
|              |                | 0–15                | 25                     | G.726-40k   |        | 1 | 5                        | 5                             |                      |                                   |
| ITU          | 7              | 0–15                | 40                     | G.711u      | SIDG   | 1 | 5                        | 5                             | G.711u               | 5                                 |
|              |                | 0–15                | 10                     | G.729a      | Off    | 1 | 10                       | 5                             |                      |                                   |
|              |                | 0–15                | 10                     | G.729ab     | SID729 | 1 | 10                       | 5                             |                      |                                   |
| ITU          | 8              | 0–15                | 40                     | G.711u      | Off    | 1 | 5                        | 5                             | G.711u               | 5                                 |
|              |                | 0–15                | 20                     | G.726-32k   | Off    | 1 | 5                        | 5                             |                      |                                   |
|              |                | 0–15                | 10                     | G.729a      | Off    | 1 | 10                       | 5                             |                      |                                   |
|              |                | 0–15                | 10                     | G.729ab     | SID729 | 1 | 10                       | 5                             |                      |                                   |
| ITU          | 12             | 0–15                | 24                     | G.723.1-H   | Off    | 1 | 30                       | 5                             | G.711u               | 5                                 |
|              |                | 0–15                | 24                     | G.723.1a-H  | SID723 | 1 | 30                       | 5                             |                      |                                   |
|              |                | 0–15                | 20                     | G.723.1-L   | Off    | 1 | 30                       | 5                             |                      |                                   |
|              |                | 0–15                | 20                     | G.723.1a-L  | SID723 | 1 | 30                       | 5                             |                      |                                   |
| Custom       | 100            | 0–7                 | 40                     | G.711u      | SIDG   | 1 | 5                        | 5                             | G.711u               | 5                                 |
|              |                | 8–15                | 40                     | G.726-32    | SIDG   | 2 | 10                       | 5                             |                      |                                   |

Table 6-8 AAL2 Operating Mode Profiles (continued)

| Profile Type | Profile Number | UII Codepoint Range | Packet Length (octets) | Voice codec   | VAD    | M  | Voice Packet Period (ms) | Sequence Number Interval (ms) | Voiceband Data Codec | Voiceband Data Packet Period (ms) |
|--------------|----------------|---------------------|------------------------|---------------|--------|----|--------------------------|-------------------------------|----------------------|-----------------------------------|
| Custom       | 101            | 0-7                 | 40                     | G.711u        | Off    | 1  | 5                        | 5                             | G.711u               | 5                                 |
|              |                | 8-15                | 40                     | G.726-32      | Off    | 2  | 10                       | 5                             |                      |                                   |
|              |                | 8-15                | 10                     | G.729a        | Off    | 1  | 10                       | 5                             |                      |                                   |
|              |                | 8-15                | 10                     | G.729ab       | SID729 | 1  | 10                       | 5                             |                      |                                   |
| Custom       | 110            | 0-7                 | 40                     | G.711u        | SIDG   | 1  | 5                        | 5                             | G.711u               | 5                                 |
|              |                | 8-15                | 40                     | G.726-32      | SIDG   | 2  | 10                       | 5                             |                      |                                   |
|              |                | 8-15                | 30                     | G.729a        | Off    | 3  | 30                       | 5                             |                      |                                   |
|              |                | 8-15                | 30                     | G.729ab       | SID729 | 3  | 30                       | 5                             |                      |                                   |
| Custom       | 200            | 0-15                | 40                     | Clear channel | Off    | 40 | 5                        | 5                             | G.711u               | 5                                 |
| Custom       | 201            | 0-15                | 40                     | Lossless      | Off    | 40 | 5                        | 5                             | G.711u               | 5                                 |
| Custom       | 210            | 0-7                 | 40                     | G.711u        | Off    | 1  | 5                        | 5                             | G.711u               | 5                                 |
|              |                | 8-15                | 40                     | G.726-32      | Off    | 2  | 10                       | 5                             |                      |                                   |
|              |                | 8-15                | 20                     | G.729a        | Off    | 2  | 20                       | 5                             |                      |                                   |
|              |                | 8-15                | 20                     | G.729ab       | SID729 | 2  | 20                       | 5                             |                      |                                   |

Complete the following steps to assign a profile preference and to modify the packet period and SID values of the profile table, as necessary.

**Note**

Modifying the AAL2 profile table is not mandatory.

**Step 1**

To specify the preference for a given profile during call setup profile negotiation, enter the **cnfprofparams** command.

```
nodename.1.28.VISM8.a > cnfprofparams <profileType> <profileNumber> <profilePreference>
```



Replace the above arguments with the values listed in Table 6-9.

**Table 6-9 Parameters for *cnfproparams* Command**

| Parameter                | Description                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>profileType</i>       | Profile type to be used for the CID. <ul style="list-style-type: none"> <li>• 1 = International Telecommunication Union (ITU) I.366.2</li> <li>• 3 = Custom</li> </ul>                                                                                                                                                                                                                                                             |
| <i>profileNumber</i>     | Number of the profile. <ul style="list-style-type: none"> <li>• 1 = ITU profile</li> <li>• 2 = ITU profile</li> <li>• 3 = ITU profile</li> <li>• 7 = ITU profile</li> <li>• 8 = ITU profile</li> <li>• 12 = ITU profile</li> <li>• 100 = Custom profile</li> <li>• 101 = Custom profile</li> <li>• 110 = Custom profile</li> <li>• 200 = Custom profile</li> <li>• 201 = Custom profile</li> <li>• 210 = Custom profile</li> </ul> |
| <i>profilePreference</i> | Profile preference. It can be one of the following values: <ul style="list-style-type: none"> <li>• 0 = No preference; exclude the profile from xGCP profile negotiation</li> <li>• 1–11, where 1 is the highest preference (default) and 11 is the lowest preference</li> </ul>                                                                                                                                                   |

**Step 2** To configure the voice profile element for a specified profile, enter the **cnfprofelemvoice** command.

```
nodename.1.28.VISM8.a > cnfprofelemvoice <profileType> <profileNumber> <voice_codec_type>
<pktPeriod> <sid>
```

Replace the above arguments with the values listed in Table 6-10.

**Table 6-10 Parameters for *cnfprofelemvoice* Command**

| Parameter               | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>profileType</i>      | Profile type to be used for the CID. <ul style="list-style-type: none"> <li>• 1 = International Telecommunication Union (ITU) I.366.2</li> <li>• 3 = Custom</li> </ul>                                                                                                                                                                                                                                                                                                                                |
| <i>profileNumber</i>    | Number of the profile. <ul style="list-style-type: none"> <li>• 1 = ITU profile</li> <li>• 2 = ITU profile</li> <li>• 3 = ITU profile</li> <li>• 7 = ITU profile</li> <li>• 8 = ITU profile</li> <li>• 12 = ITU profile</li> <li>• 100 = Custom profile</li> <li>• 101 = Custom profile</li> <li>• 110 = Custom profile</li> <li>• 200 = Custom profile</li> <li>• 201 = Custom profile</li> <li>• 210 = Custom profile</li> </ul>                                                                    |
| <i>voice_codec_type</i> | Type of coding/decoding to be performed on the data stream. <ul style="list-style-type: none"> <li>• 1 = G.711u</li> <li>• 2 = G.711a</li> <li>• 3 = G.726-32k</li> <li>• 4 = G.729a</li> <li>• 5 = G.729ab</li> <li>• 6 = Clear channel (VAD must be off)</li> <li>• 7 = G.726-16k</li> <li>• 8 = G.726-24k</li> <li>• 9 = G.726-40k</li> <li>• 11 = G.723.1-H</li> <li>• 12 = G.723.1a-H</li> <li>• 13 = G.723.1-L</li> <li>• 14 = G.723.1a-L</li> <li>• 15 = Lossless (VAD must be off)</li> </ul> |

**Table 6-10 Parameters for *cnfprofelemvoice* Command (continued)**

| Parameter        | Description                                                                                                                                                         |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>pktPeriod</i> | Voice packetization period (defined in milliseconds). <ul style="list-style-type: none"> <li>• 5</li> <li>• 10</li> <li>• 20</li> <li>• 30</li> <li>• 40</li> </ul> |
| <i>sid</i>       | SID. <ul style="list-style-type: none"> <li>• 1 = VAD off</li> <li>• 2 = VAD on</li> <li>• 3 = SID generic</li> <li>• 4 = SID 729</li> <li>• 5 = SID 723</li> </ul> |

**Step 3** To configure the voiceband data element for a specified profile, enter the **cnfprofelemvbd** command.

```
nodename.1.28.VISM8.a > cnfprofelemvbd <profileType> <profileNumber> <codecType>
<pktPeriod>
```

Replace the above arguments with the values listed in Table 6-11.

**Table 6-11 Parameters for *cnfprofelemvbd* Command**

| Parameter            | Description                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>profileType</i>   | Profile type to be used for the CID. <ul style="list-style-type: none"> <li>• 1 = International Telecommunication Union (ITU) I.366.2</li> <li>• 3 = Custom</li> </ul>                                                                                                                                                                                                                                                             |
| <i>profileNumber</i> | Number of the profile. <ul style="list-style-type: none"> <li>• 1 = ITU profile</li> <li>• 2 = ITU profile</li> <li>• 3 = ITU profile</li> <li>• 7 = ITU profile</li> <li>• 8 = ITU profile</li> <li>• 12 = ITU profile</li> <li>• 100 = Custom profile</li> <li>• 101 = Custom profile</li> <li>• 110 = Custom profile</li> <li>• 200 = Custom profile</li> <li>• 201 = Custom profile</li> <li>• 210 = Custom profile</li> </ul> |

**Table 6-11** Parameters for *cnfprofelemvbd* Command (continued)

| Parameter        | Description                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>codecType</i> | Type of coding/decoding to be performed on the data stream. <ul style="list-style-type: none"> <li>• 1 = G.711u</li> <li>• 2 = G.711a</li> <li>• 3 = G.726-32k</li> <li>• 6 = Clear channel (VAD must be off)</li> <li>• 7 = G.726-16k</li> <li>• 8 = G.726-24k</li> <li>• 9 = G.726-40k</li> <li>• 11 = G.723.1-H</li> <li>• 13 = G.723.1-L</li> <li>• 14 = G.723.1a-L</li> <li>• 15 = Lossless (VAD must be off)</li> </ul> |
| <i>pktPeriod</i> | Voice packetization period (defined in milliseconds). <ul style="list-style-type: none"> <li>• 5</li> <li>• 10</li> <li>• 20</li> <li>• 30</li> <li>• 40</li> </ul>                                                                                                                                                                                                                                                           |

**Step 4** To display the profile elements and preferences for all profiles, enter the **dspprofparams** command.

```
nodename.1.27.VISM8.a > dspprofparams
```

```

-----
Profile Type           : ITU
Profile Number        : 1
Profile Preference    : 4
Voice Profile Codec   : G.711a
Voice Profile Packetization-period(ms) : five
Voice Profile SID     : VAD on
VBD Profile Codec     : G.711a
VBD Profile Packetization-period (ms) : five
-----
Profile Type           : ITU
Profile Number        : 2
Profile Preference    : 3
Voice Profile Codec   : G.711a
Voice Profile Packetization-period(ms) : five
Voice Profile SID     : sidGeneric
VBD Profile Codec     : G.711a
VBD Profile Packetization-period (ms) : five

```

```
Type <CR> to continue, Q<CR> to stop:
```

# Sample Configuration

This section contains sample configuration set-up for VISM/VISM-PR cards operating in the AAL2 trunking mode.

## Sample for CAS

The following steps are followed by the corresponding commands with example configurations for setting your VISM/VISM-PR card for CAS in AAL2 trunking mode.

1. Set VISM/VISM-PR mode to AAL2 trunking with subcell multiplexing and codec template 1.

```
cnfvismmode 2
cnfaal2subcellmuxing 1
cnfcodectmpl 1
```




---

**Note** When you make changes to the codec template, the VISM/VISM-PR card resets.

---

2. Add a resource partition to communicate with the PXM card.

```
addport
addrscprtn 2
```

3. Add the line, set the line signaling to CAS, and add the endpoints.

```
addln 1
cnflnsig 1 1
addendpts 1 1 1 24
```

4. Add the slave connection on an AXSM card.

```
addcon 3 101 201 1 2 -lpcr 550 -rpcr 550
addcon 3 101 202 1 2 -lpcr 550 -rpcr 550
addcon 3 101 301 1 2 -lpcr 400 -rpcr 400
```

5. Add the master connection on the VISM/VISM-PR card.

```
addcon 131 1 2 2 550 1 47009181000000000142265B9900000109180300.101.201 1
```

6. Add the CIDs 11–34 on the endpoints 1–24.

```
addcid 1 131 11 4 3 210 1 250 1 2 1 1 2 20
addcid 2 131 12 4 3 210 1 250 1 2 1 1 2 20
addcid 3 131 13 4 3 210 1 250 1 2 1 1 2 20
addcid 4 131 14 4 3 210 1 250 1 2 1 1 2 20
addcid 5 131 15 4 3 210 1 250 1 2 1 1 2 20
addcid 6 131 16 4 3 210 1 250 1 2 1 1 2 20
addcid 7 131 17 4 3 210 1 250 1 2 1 1 2 20
addcid 8 131 18 4 3 210 1 250 1 2 1 1 2 20
addcid 9 131 19 4 3 210 1 250 1 2 1 1 2 20
addcid 10 131 20 4 3 210 1 250 1 2 1 1 2 20
addcid 11 131 21 4 3 210 1 250 1 2 1 1 2 20
addcid 12 131 22 4 3 210 1 250 1 2 1 1 2 20
addcid 13 131 23 4 3 210 1 250 1 2 1 1 2 20
addcid 14 131 24 4 3 210 1 250 1 2 1 1 2 20
addcid 15 131 25 4 3 210 1 250 1 2 1 1 2 20
addcid 16 131 26 4 3 210 1 250 1 2 1 1 2 20
addcid 17 131 27 4 3 210 1 250 1 2 1 1 2 20
addcid 18 131 28 4 3 210 1 250 1 2 1 1 2 20
addcid 19 131 29 4 3 210 1 250 1 2 1 1 2 20
addcid 20 131 30 4 3 210 1 250 1 2 1 1 2 20
```

```

addcid 21 131 31 4 3 210 1 250 1 2 1 1 2 20
addcid 22 131 32 4 3 210 1 250 1 2 1 1 2 20
addcid 23 131 33 4 3 210 1 250 1 2 1 1 2 20
addcid 24 131 34 4 3 210 1 250 1 2 1 1 2 20

```

## Sample for CCS

The following steps show sample configuration for CCS on line 2.

1. Add the bearer PVC for CCS.

```
addcon 132 1 2 2 550 1 47009181000000000142265B9900000109180300.101.202 1
```

2. Add the signaling PVC for CCS.

```
addcon 232 1 1 3 400 1 47009181000000000142265B9900000109180300.101.301 1
```

3. Add the line, and set the line signaling to CCS.

```
addln 2
cnflnsig 2 2
```

4. Add CCS to the DS0 and LCN, and adds the endpoints.

```
addccs 2 24 232
addendpts 25 2 1 23
```

5. Add the CIDs 11–33 on the endpoints 24–46.

```

addcid 24 132 11 1 1 1 2
addcid 25 132 12 1 1 1 2
addcid 26 132 13 1 1 1 2
addcid 27 132 14 1 1 1 2
addcid 28 132 15 1 1 1 2
addcid 29 132 16 1 1 1 2
addcid 30 132 17 1 1 1 2
addcid 31 132 18 1 1 1 2
addcid 32 132 19 1 1 1 2
addcid 33 132 20 1 1 1 2
addcid 34 132 21 1 1 1 2
addcid 35 132 22 1 1 1 2
addcid 36 132 23 1 1 1 2
addcid 37 132 24 1 1 1 2
addcid 38 132 25 1 1 1 2
addcid 39 132 26 1 1 1 2
addcid 40 132 27 1 1 1 2
addcid 41 132 28 1 1 1 2
addcid 42 132 29 1 1 1 2
addcid 43 132 30 1 1 1 2
addcid 44 132 31 1 1 1 2
addcid 45 132 32 1 1 1 2
addcid 46 132 33 1 1 1 2

```



## VoIP Switching Mode

---

This section contains the following tasks for configuring the VISM/VISM-PR card for VoIP switching:

- Configuring the Operating Mode, page 7-1
- Configuring the ATM Network Side, page 7-2
- Configuring the Call Agent Interface, page 7-11
- Configuring TDM Side Signaling for Applications That Use CCS, page 7-22
- Adding DS0 Endpoints to Lines, page 7-24
- Configuring TDM Side Signaling for Applications That Use CAS, page 7-26
- Placing Gateway Out and In Service, page 7-28

Sample VoIP switching configurations are shown in the “Sample Configuration” section on page 7-29.

## Configuring the Operating Mode

To configure your VISM/VISM-PR card for the VoIP switching mode, complete the following steps:

**Step 1** To configure the VISM/VISM-PR operating mode, enter the **cnfvismmode** command.

```
nodename.1.28.VISM8.a > cnfvismmode <mode_number>
```

Replace *<mode\_number>* with value of 1.

- 1 = VoIP switching/VoIP trunking (default)
- 2 = AAL2 trunking
- 3 = AAL1 switching
- 7 = Switched AAL2 SVC
- 8 = Switched AAL2 PVC
- 9 = VoIP and AAL1 SVC
- 10 = VoIP trunking and AAL2 trunking

**Step 2** Type a **y** at the following message:

```
WARNING: Available CLI Commands will be changed, do you want to proceed (Yes/No)? y
```

A message about the number of available commands displays before the card returns the prompt. The following example shows the number of available commands for the VoIP switching mode:

```
INFORMATION: The new 'voipSwitching' mode has 355 CLI commands.
```

**Step 3** To display the current VISM/VISM-PR operating mode, enter the **dspvismparam** command.

```
nodename.1.28.VISM8.a > dspvismparam

VISM mode: voipSwitching/voipTrunking
VISM features Bit Map: 0x5bc
FunctionModuleType: VISM-PR-8T1
CAC flag: enable
DS0s available: 192
Template number: 2
Percent of functional DSPs: 100
IP address: 10.31.19.99
Subnet mask: 255.255.255.0
Bearer IP address: 0.0.0.0
Bearer Subnet mask: 0.0.0.0
RTCP report interval: 5000 msec
RTCP receive multiplier: 3
RTP receive timer: disable
ControlPrecedence/Tos: 0x60
BearerPrecedence/Tos: 0xa0
Aal2 muxing status: disable
Tftp Server Dn TFTPDOMAIN
Aggregate Clipping enable
Aggregate Svc Bandwidth 0

Type <CR> to continue, Q<CR> to stop:

Codec negotiation option 1
Profile negotiation option 1
VAD Duty Cycle 61
VAD Tolerance 100
VISM Initiated NW COT Off
VISM CO4 Timer 1000 msec
CALEA flag disable
SupportdModuleType: VISM-PR-8T1.
VismNSAP: 47009181000000000142265b99000001079bff00
```

## Configuring the ATM Network Side

Configuring the ATM network side consists of setting up ATM permanent virtual connections (PVCs) across the network and providing the mechanism by which calls are routed over the correct PVC.

The VoIP switching operating mode requires you to set up an AAL5 PVC between the VISM/VISM-PR card and the PXM card and then from the PXM card to an edge router. A single PVC is set up (a secondary PVC can also be set up for redundancy). The PVC is used for bearer voice traffic and gateway protocol communication between the VISM/VISM-PR and the call agent. The router extracts the IP frames from the ATM cells and routes the frames.



Use the following guidelines when you set up the ATM side in the VoIP switching mode.

- The master and slave connection base parameters, PCR, SCR, and MBS values must match. If these values do not match, PXM1E and PXM45 cards display an error. PXM1 cards do not display an error.
- If the connections are through a physical loopback on a PXM line, make sure that the VPI and VCI values are the same on both ends of the loopback.

Complete the following tasks to configure the ATM side:

- Configuring PVC Connections, page 7-3
- Connection CAC Configuration, page 7-10

## Configuring PVC Connections

The VoIP switching mode has the following two types of PVCs:

- Bearer PVCs—Support both bearer data and control data.
- Control PVCs—Support only control data.

VISM/VISM-PR can have two different connection configurations:

1. One bearer PVC
2. Separate bearer and control PVCs

Complete the following steps to configure PVC connections:



### Note

You must add the slave connection first before adding the master connection. Retain the remote connection ID to use when setting up the master connection.

### Step 1

To add an ATM PVC between the VISM/VISM-PR card and the MGX 8000 Series platform PXM card, enter the **addcon** command.

```
nodename.1.28.VISM8.a > addcon <localVCI> <preference> <pvcType> <application> <PCR>
<mastership> |<remoteConnId> <serviceType> <scr> <mbs> <priority> <prefrte> <direct> |
```

Replace the above arguments with the values listed in Table 7-1.

**Table 7-1** Parameters for **addcon** Command

| Parameter         | Description                                                                                                                                                                                                                   |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>localVCI</i>   | Local virtual channel identifier (VCI) to be used for the connection. Range is 131–510. The value you enter for this argument is also used as the LCN.                                                                        |
| <i>preference</i> | Preference level of the local VCI. <ul style="list-style-type: none"> <li>• 1 = Primary</li> <li>• 2 = Secondary</li> </ul> <p><b>Note</b> If you have two PVCs for redundancy, one PVC is primary; one PVC is secondary.</p> |

**Table 7-1 Parameters for addcon Command (continued)**

| Parameter             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>pvcType</i>        | <p>AAL type of connection.</p> <ul style="list-style-type: none"> <li>• 1 = AAL5 (For signaling and bearer trunking)</li> <li>• 2 = AAL2</li> <li>• 3 = AAL1</li> </ul>                                                                                                                                                                                                                                                                                           |
| <i>application</i>    | <p>The connection's application.</p> <ul style="list-style-type: none"> <li>• 1 = Control—Use this option for the control channel if you have separate control and bearer PVCs.</li> <li>• 2 = Bearer—Use this option if you have one PVC for both bearer and control data going over this PVC. Or, use this option for the bearer PVC when you are using separate control and bearer PVCs.</li> <li>• 3 = Signaling</li> </ul>                                   |
| <i>PCR</i>            | <p>Peak cell rate (PCR) measured in cells per second. Ranges are</p> <ul style="list-style-type: none"> <li>• 1–96000 for AAL5 bearer</li> <li>• 1–20000 for AAL5 control PVC</li> <li>• 1–50000 for T1 AAL2 PVCs</li> <li>• 1–60000 for E1 AAL2 PVCs</li> <li>• 1–400 for signaling PVCs in AAL2 trunking mode</li> </ul> <p><b>Note</b> If the <i>serviceType</i> argument is variable bit rate (VBR), the <i>PCR</i> argument value must be 15 or greater.</p> |
| <i>mastership</i>     | <p>Connection type.</p> <ul style="list-style-type: none"> <li>• 1 = Master</li> <li>• 2 = Slave (default)</li> </ul>                                                                                                                                                                                                                                                                                                                                             |
| <i> remoteConnId </i> | <p>(Optional) Remote connection identifier.</p> <p>For PXM1 connections, specify this argument with the following format: nodename.slot.port.vpi.vci</p> <p>For PXM1E/PXM45, specify this argument with the following format: Nsapaddr.Vpi.Vci</p> <p><b>Note</b> This argument is used only when the <i>mastership</i> argument is set to 1 (Master).</p>                                                                                                        |

Table 7-1 Parameters for *addcon* Command (continued)

| Parameter          | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>serviceType</i> | <p>(Optional) Service type is one of the following values:</p> <ul style="list-style-type: none"> <li>• 1 = Constant bit rate (CBR)</li> <li>• 2 = Variable bit rate real time (rt-VBR)</li> <li>• 3 = Variable bit rate non-real time (nrt-VBR)</li> <li>• 4 = rt-VBR3</li> <li>• 5 = rt-VBR2</li> <li>• 6 = nrt-VBR2</li> <li>• 7 = nrt-VBR3</li> </ul> <p><b>Note</b> Use value 7 for VISM-PR to RPM-PR connections.</p>                                                                                                                                                                                       |
| <i>scr</i>         | <p>(Optional) Sustainable cell rate (SCR) defined in cells per second. Range is from 15 to the value you configured for the <i>PCR</i> argument.</p> <p><b>Note</b> This argument value is required if the <i>serviceType</i> argument value is in the range 2–7.</p>                                                                                                                                                                                                                                                                                                                                             |
| <i>mbsl</i>        | <p>(Optional) Maximum burst size (MBS) is the maximum number of cells transmitted at the peak cell rate. Range is from 1 cell to 10 times the value you configured for the <i>scr</i> argument value.</p> <p><b>Note</b> This argument value is required if the <i>serviceType</i> argument value is in the range 2–7.</p>                                                                                                                                                                                                                                                                                        |
| <i>priority</i>    | <p>(Optional) Route priority. Priority number is assigned to the PVC during configuration of the connection.</p> <p>Range is 1–15. Default is 8.</p> <p>A value of 1 indicates highest priority, and a value of 15 indicates the lowest priority.</p> <p><b>Note</b> This parameter is applicable only to VISM-PR cards.</p>                                                                                                                                                                                                                                                                                      |
| <i>prefrtel</i>    | <p>(Optional) Unique identifier of the preferred route to which this connection is associated.</p> <p>Range is 0–65535. Default is 0.</p> <p>When the specified route identifier is 0, the connection is not associated with a preferred route. This parameter is not applicable to the slave end of an SPVC connection.</p> <p><b>Note</b> This parameter is applicable only to VISM-PR cards.</p>                                                                                                                                                                                                               |
| <i>directl</i>     | <p>(Optional) Parameter to specify whether or not the associated preferred route is the only permissible route for the connection to take.</p> <ul style="list-style-type: none"> <li>• 1 = Yes—The connection is not allowed to pick an alternate route. This option is not applicable when a preferred route is not specified.</li> <li>• 2 = No (default)—The connection is allowed to try another route if the preferred route is unavailable.</li> </ul> <p>If the directed preferred route is unavailable, the connection fails.</p> <p><b>Note</b> This parameter is applicable only to VISM-PR cards.</p> |

**Step 2** If you need to refine the configuration parameters of the connection added in Step 1, enter the **cnfcon** command.

```
nodename.1.28.VISM8.a > cnfcon <LCN> <PCR> <service_type> [SCR_ingress] <MBS_ingress>
<priority> <prefrte> <direct>|
```

Replace the above arguments with the values listed in Table 7-2.

**Table 7-2 Parameters for cnfcon Command**

| Parameter           | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>LCN</i>          | Type the value you entered for the <i>localVCI</i> argument in Step 1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <i>PCR</i>          | <p>PCR described in cells per second.</p> <p><b>Note</b> The <i>PCR</i> argument value cannot be changed if the calls or connections for signaling and control are active.</p> <p>Ranges are</p> <ul style="list-style-type: none"> <li>• 1–400 = Signaling PVCs in AAL2 trunking mode</li> <li>• 1–20000 = AAL5 control PVC</li> <li>• 1–50000 = T1 AAL2 bearer PVCs</li> <li>• 1–60000 = E1 AAL2 bearer PVCs</li> <li>• 1–96000 = AAL5 bearer PVC</li> </ul> <p><b>Note</b> If the <i>service_type</i> argument value is a VBR, the <i>PCR</i> argument value must be 15 or greater.</p> |
| <i>service_type</i> | <p>Service type. Values are</p> <ul style="list-style-type: none"> <li>• 1 = Constant bit rate (CBR)</li> <li>• 2 = Variable bit rate real time—rt-VBR</li> <li>• 3 = Variable bit rate non-real time—nrt-VBR</li> <li>• 4 = rt-VBR3</li> <li>• 5 = rt-VBR2</li> <li>• 6 = nrt-VBR</li> <li>• 7 = nrt-VBR</li> </ul> <p><b>Note</b> For VISM-PR to RPM-PR connections, use one of the values 4–7.</p>                                                                                                                                                                                      |
| <i>SCR_ingress</i>  | <p>(Optional) SCR. Range is from 15 to the value you configured for the <i>PCR</i> argument.</p> <p><b>Note</b> This argument value is required if the <i>service_type</i> argument value is in the range 2–7.</p>                                                                                                                                                                                                                                                                                                                                                                         |
| <i>MBS_ingress</i>  | <p>(Optional) MBS. Maximum number of cells transmitted at the peak cell rate. Range is from 1 cell to 10 times the value you configured for the <i>SCR_ingress</i> argument.</p> <p><b>Note</b> This argument value is required if the <i>service_type</i> argument value is in the range 2–7.</p>                                                                                                                                                                                                                                                                                         |

**Table 7-2 Parameters for *cnfcon* Command (continued)**

| Parameter         | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i> priority </i> | <p>(Optional) Route priority is the priority number assigned to the PVC during configuration of the connection.</p> <p>Range is 1–15. Default is 8.</p> <p>A value of 1 indicates highest priority, and a value of 15 indicates the lowest priority.</p> <p><b>Note</b> This parameter is applicable only to VISM-PR cards.</p>                                                                                                                                                                                                                                                                                                 |
| <i> prefrtel</i>  | <p>(Optional) Unique identifier of the preferred route to which this connection is associated.</p> <p>Range is 0–65535. Default is 0.</p> <p>When the specified route identifier is 0, the connection is not associated with a preferred route. This parameter is not applicable to the slave end of an SPVC connection.</p> <p><b>Note</b> This parameter is applicable only to VISM-PR cards.</p>                                                                                                                                                                                                                             |
| <i> direct </i>   | <p>(Optional) Parameter to specify whether or not the associated preferred route is the only permissible route for the connection to take.</p> <ul style="list-style-type: none"> <li>• 1 = Yes—The connection is not allowed to pick an alternate route. This option is not applicable when a preferred route is not specified.</li> <li>• 2 = No (Default)—The connection is allowed to try another alternate route if the preferred route is unavailable.</li> </ul> <p>If the directed preferred route is unavailable, the connection is failed.</p> <p><b>Note</b> This parameter is applicable only to VISM-PR cards.</p> |

**Step 3** To configure primary and secondary PVCs to provide protection in the event of a PVC failure, enter the **cnfconprotect** command.

```
nodename.1.28.VISM8.a > cnfconprotect <LCN> <protection> <lock_state> <fallback_LCN>
```

Replace the above arguments with the values listed in Table 7-3.

**Table 7-3 Parameters for *cnfconprotect* Command**

| Parameter           | Description                                                                                                                                                |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>LCN</i>          | Primary logical channel number of the connection (PVC). Range is 131–510.                                                                                  |
| <i>protection</i>   | <p>Value you can use to enable or disable PVC protection.</p> <ul style="list-style-type: none"> <li>• 1 = Protected</li> <li>• 2 = Unprotected</li> </ul> |
| <i>lock_state</i>   | <p>PVC lock state. Values are</p> <ul style="list-style-type: none"> <li>• 1 = Unlock</li> <li>• 2 = Lock</li> </ul>                                       |
| <i>fallback_LCN</i> | Secondary (fallback) logical channel number of the connection (PVC). Range is 131–510.                                                                     |

**Step 4** To display the details of the connection, enter the **dspcon** command.

```
nodename.1.11.VISM8.a > dspcon <LCN>
```

Replace the **<LCN>** argument with a value in the range 131–510.

The following example shows sample configuration for a bearer PVC in VoIP switching mode.

```
mgxa-pxm1e.1.30.VISM8.a > dspcon 132
```

```
ChanNum:                132
ChanRowStatus:          Mod
ChanLocalRemoteLpbkState: Disabled
ChanTestType:           TestOff
ChanTestState:          NotInProgress
ChanRTDresult:          65535 us
ChanPortNum:            255
ChanPvcType:            AAL5
ChanConnectionType:     PVC
ChanLocalVpi:           30
ChanLocalVci:           132
ChanLocalNSAP:           470091810000000007856e136300000107f3ff00
ChanRemoteVpi:          104
ChanRemoteVci:          131
ChanRemoteNSAP:         470091810000000007856e1363000001073b0400
ChanMastership:         Master
ChanVpcFlag:            Vcc
ChanConnServiceType:    CBR
ChanRoutingPriority:     8
ChanMaxCost:            2147483647
ChanRestrictTrunkType:  No Restriction
```

Type <CR> to continue, Q<CR> to stop:

```
ChanConnPCR:            58000
ChanConnPercentUtil:    100
ChanPreference:         1
ChanRemotePCR:          58000
ChanRemotePercentUtil: 100
ChanProtection:         unprotected
ChanActivityState:      unknown
ChanLockingState:       unlock
ChanApplication:        bearer
ChanServiceType:        cbr
ChanScrIngress:         58000
ChanMbsIngress:         58000
ChanVCCI:                0
ChanFarEndAddrType:     notapplicable
ChanFarEndE164Addr:     0
ChanFarEndGWIDAddr:     .
ChanFarEndNSAPAddr:     NULL NSAP
ChanAdminStatus:        Up
ChanReroute:            False
ChanPrefRouteId:        0
ChanDirectRoute:        False
```

Type <CR> to continue, Q<CR> to stop:

```
ChanUserPcrNumber:      User BW Off
ChanUserMinPCRBW:       10
ChanUserMaxPCRBW:       58000
ChanUserMaxScrBW:       0
ChanUserMaxMbsBW:       0
```

```
ChanNumNextAvailable:  133
```

The following example shows sample configuration for a control PVC in VoIP switching mode.

```

nodename.1.30.VISM8.a > dspcon 131

ChanNum:                131
ChanRowStatus:          Mod
ChanLocalRemoteLpbkState: Disabled
ChanTestType:           TestOff
ChanTestState:          NotInProgress
ChanRTDresult:          65535 us
ChanPortNum:            255
ChanPvcType:            AAL5
ChanConnectionType:    PVC
ChanLocalVpi:           30
ChanLocalVci:           131
ChanLocalNSAP:          470091810000000007856e136300000107f3ff00
ChanRemoteVpi:          104
ChanRemoteVci:          130
ChanRemoteNSAP:         470091810000000007856e1363000001073b0400
ChanMastership:         Master
ChanVpcFlag:            Vcc
ChanConnServiceType:    CBR
ChanRoutingPriority:     8
ChanMaxCost:            2147483647
ChanRestrictTrunkType:  No Restriction

Type <CR> to continue, Q<CR> to stop:

ChanConnPCR:            1000
ChanConnPercentUtil:    100
ChanPreference:         1
ChanRemotePCR:          1000
ChanRemotePercentUtil:  100
ChanProtection:         unprotected
ChanActivityState:      unknown
ChanLockingState:       unlock
ChanApplication:        control
ChanServiceType:        cbr
ChanScrIngress:         1000
ChanMbsIngress:         1000
ChanVCCI:               0
ChanFarEndAddrType:     notapplicable
ChanFarEndE164Addr:     0
ChanFarEndGWIDAddr:     .
ChanFarEndNSAPAddr:     NULL NSAP
ChanAdminStatus:        Up
ChanReroute:            False
ChanPrefRouteId:        0
ChanDirectRoute:        False
Type <CR> to continue, Q<CR> to stop:

ChanUserPcrNumber:      User BW Off
ChanUserMinPCRBW:       10
ChanUserMaxPCRBW:       0
ChanUserMaxScrBW:       0
ChanUserMaxMbsBW:       0

ChanNumNextAvailable:   133

```

**Step 5** To verify the integrity or continuity of a connection, enter the **tstcon** command.

```
nodename.1.11.VISM8.a > tstcon
```

The following example shows a connection test for LCN 131.

```
nodename.1.11.VISM8.a > tstcon 131
test type is..... 1
```

```
TestCon in progress.
```

```
TestCon Passed.
```

## Connection CAC Configuration



### Note

CAC must be enabled on the card.

To configure VAD tolerance and VAD duty cycle for a specific logical connection number (LCN) used for PVCs, enter the **cnfconcacparams** command.

```
nodename.1.28.VISM8.a > cnfconcacparams <LCN> <VADTolerance> <VADDutyCycle>
```

Replace the above arguments with the values listed in Table 7-4 for the **cnfconcacparams** command.

**Table 7-4 Parameters for cnfconcacparams Command**

| Parameter           | Description                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>LCN</i>          | Logical channel number (LCN) of the connection. Range is 131–510.                                                                                                                                                                                                                                                                                                                                                                     |
| <i>VADTolerance</i> | VAD tolerance—the expression for VAD “over-subscription drop ratio” where: tolerance = 10000 x over-subscription drop ratio (expressed as a percentage). A typical value for VAD tolerance is 10. Some examples are: <ul style="list-style-type: none"> <li>• 10000 (tolerance) = 1% (over subscription drop ratio)</li> <li>• 100 = 0.01%</li> <li>• 10 = 0.001%</li> <li>• 1 = 0.0001%</li> </ul> Range is 0–10000. Default is 100. |
| <i>VADDutyCycle</i> | VAD duty cycle—the ratio of speech and holdover duration to total duration expressed as a percentage. Holdover is the period after silence begins and silence suppression is turned on. In VISM, the holdover time is 250 ms. <p>A typical value for this parameter is 61 which means that 61% of the time is taken by speech and holdover. Range is 1–99. Default is 61.</p>                                                         |



# Configuring the Call Agent Interface


**Note**

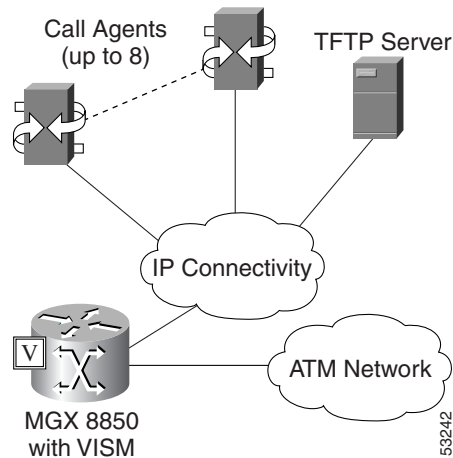
The CLI call agent configuration commands are used for the VoIP switching mode only for xGCP protocols.

VISM/VISM-PR can use one to eight call agents to accomplish the following actions:

- Receive backhauled signaling
- Perform call setup
- Perform call teardown

VISM/VISM-PR uses IP connectivity to communicate with the call agents (see Figure 7-1).

**Figure 7-1 VISM to Call Agent Communication**



Physical connectivity is through a PVC on an MGX 8000 Series platform PXM port, to a router (in the IP Connectivity cloud in Figure 7-1) or directly through an RPM card, and then to the call agents.

Logical IP connectivity is achieved by resolving domain name and IP address associations. The associations are accomplished in the following ways:

- Statically, by using the CLI call agent configuration commands
- Dynamically, by using an external domain name server (DNS), which is connected to VISM through IP connectivity

Figure 7-1 shows a TFTP server which also has an IP connection to VISM.

Complete the following tasks to configure the call agent interface:

1. Configuring Domain Names and IP Addresses, page 7-12
2. Setting Up Call Agents and Protocols, page 7-12
3. Configuring Gateway Control Protocol Port, page 7-17
4. Configuring ISDN PRI Backhaul, page 7-21 (optional)

## Configuring Domain Names and IP Addresses

Complete the following steps to configure domain names and IP addresses for VISM cards and call agents:

- Step 1** To specify a domain name for the VISM card, enter the **cnfvismdn** command.

```
nodename.1.28.VISM8.a > cnfvismdn <domain_name>
```

Replace the *domain\_name* argument value with a text string of up to 64 alphanumeric characters; spaces are not allowed. The default name is cisco.com, as shown in the following example:

```
nodename.1.28.VISM8.a > cnfvismdn cisco.com
```

- Step 2** To specify the IP address and a subnet mask for the VISM card, type the **cnfvismip** command.

```
nodename.1.28.VISM8.a > cnfvismip <vismIpAddr> <netMask> |<vismBearerIpAddr>
<bearerNetMask>|
```

Replace the above arguments with the values listed in Table 7-5.

**Table 7-5 Parameters for cnfvismip Command**

| Parameter                 | Description                                                                                                                      |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <i>vismIpAddr</i>         | Control IP address, in dotted decimal format (nnn.nnn.nnn.nnn), of the current VISM card.                                        |
| <i>netMask</i>            | Control local network subnet mask, in dotted decimal format (nnn.nnn.nnn.nnn). The recommended value is <b>255.255.255.248</b> . |
| <i> vismBearerIpAddr </i> | (Optional) Bearer IP address, in dotted decimal format (nnn.nnn.nnn.nnn).                                                        |
| <i> bearerNetMask </i>    | (Optional) Bearer IP subnet mask, in dotted decimal format (nnn.nnn.nnn.nnn).                                                    |

The following example shows the IP address and subnet mask configured for the VISM card and the output of the command.

```
nodename.1.28.VISM8.a > cnfvismip 172.29.52.003 255.255.255.248
Attaching network interface atm0... done.
```

## Setting Up Call Agents and Protocols

Complete the following steps to set up call agents and media gateway control protocols:

- Step 1** To configure the domain name server for the external domain name resolution, enter the **cnfdnssrvr** command.

```
nodename.1.28.VISM8.a > cnfdnssrvr <extDnsSrvrDn>
```

Replace the *<extDnsSrvrDn>* argument with 1–64 characters.

To remove a DNS server name, set the *<extDnsSrvrDn>* argument to NULL.

**Step 2** To add a domain name for a call agent, enter the **adddn** command.

```
nodename.1.28.VISM8.a > adddn <mg_domain_num> <mg_domain_name> |<Resolution_Type>|
```

Replace the above arguments with the values listed in Table 7-6.

**Table 7-6 Parameters for adddn Command**

| Parameter              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>mg_domain_num</i>   | Domain number used to identify the domain in the range 1–11.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <i>mg_domain_name</i>  | Call agent name, which is a text string of 1 to 64 alphanumeric characters.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <i>Resolution_Type</i> | (Optional) Resolution type to configure for the specified domain name. Use one of the following values: <ul style="list-style-type: none"> <li>• 1 = Internal only (default). You must statically provision all IP addresses on the VISM card for the domain name. The VISM card does not resolve the domain name using an external domain name server (DNS).</li> <li>• 2 = External only. The VISM card attempts to resolve the domain name using an external DNS. Statically configured IP addresses for this domain name are not used.</li> <li>• 3 = Internal first. The VISM card attempts to resolve the domain name using an external DNS. The VISM card uses the statically provisioned IP addresses for this domain name before using IP addresses obtained through external resolution.</li> <li>• 4 = External first. The VISM card attempts to resolve the domain name using an external DNS. The VISM card uses IP addresses from external resolution before using the statically provisioned IP addresses.</li> </ul> |

**Step 3** If you are not using *Resolution\_Type* = 2 to resolve domain names (in Step 2), proceed to Step 4.

If you are using *Resolution\_Type* = 2 to resolve domain names, proceed to Step 5.

**Step 4** To add the IP address for the domain name you added in Step 2, enter the **addnip** command.

```
nodename.1.28.VISM8.a > addnip <Resolution_index> <domain_name> <IP_address> <preference>
```

Replace the above arguments with the values listed in Table 7-7.

**Table 7-7 Parameters for addnip Command**

| Parameter               | Description                                                                 |
|-------------------------|-----------------------------------------------------------------------------|
| <i>Resolution_index</i> | Resolution number of the domain name. Range is 1–88.                        |
| <i>domain_name</i>      | Call agent name, which is a text string of 1 to 64 alphanumeric characters. |

**Table 7-7 Parameters for addnip Command (continued)**

| Parameter         | Description                                                                                                                                                                                                                                 |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>IP_address</i> | An IP address that corresponds to the <i>domain_name</i> argument value in the following format: nnn.nnn.nnn.nnn.                                                                                                                           |
| <i>preference</i> | An IP address resolution preference order in the range from 1 (highest) to 8 (lowest).<br><br><b>Note</b> The preference order must be unique for all IP addresses in the call agent name you specify with the <i>domain_name</i> argument. |

**Step 5** To add the call agent/media gateway controller (MGC) domain name, enter the **addmgc** command.

```
nodename.1.28.VISM8.a > addmgc <mgcNumber> <DomainName>
```

Replace the *<mgcNumber>* argument with a value in the range 1–8.

Replace the *<DomainName>* argument with a character string up to 64 characters.

**Step 6** To add the MGC to a redundancy group, enter the **addmgcgrpentry** command.

```
nodename.1.28.VISM8.a > addmgcgrpentry <Red_Group_Num> <mgcRedGrpMgcNum> <mgcRedGrpPref>
```

Replace the above arguments with the values listed in Table 7-8.

**Table 7-8 Parameters for addmgcgrpentry Command**

| Parameter              | Description                                                                                                                  |
|------------------------|------------------------------------------------------------------------------------------------------------------------------|
| <i>Red_Group_Num</i>   | Call agent redundancy group number. Range is 1–8.                                                                            |
| <i>mgcRedGrpMgcNum</i> | Call agent redundancy group identification number. Range is 1–8.                                                             |
| <i>mgcRedGrpPref</i>   | Call agent preference value—the preference of the MGC within the group. Range is 1 (highest) to 8 (lowest).<br>Default is 1. |

**Step 7** To change the parameters of the MGC group, enter the **cnfmgcgrpparam** command.



**Note** This step is optional; use it only if you need to change the MGC group parameters.

```
nodename.1.28.VISM8.a > cnfmgcgrpparam <Red_Group_Num> <mgcRedGrpStateChgNtFy>
|<mgcRedGrpPriority>|
```

Replace the above arguments with the values listed in Table 7-9.

**Table 7-9 Parameters for *cnfmgcgrpparam* Command**

| Parameter                    | Description                                                                                                                                                                                                                                     |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Red_Group_Num</i>         | Call agent redundancy group number. Range is 1–8.                                                                                                                                                                                               |
| <i>mgcRedGrpStateChgNtfy</i> | State change notification. This parameter determines if messages, such as RSIPs, are sent to notify the call agent of a VISM card state change. <ul style="list-style-type: none"> <li>1 = Enable (default)</li> <li>2 = Disable</li> </ul>     |
| <i>mgcRedGrpPriority</i>     | (Optional) Call agent priority value. It can be one of the following: <ul style="list-style-type: none"> <li>0 = No gateway-initiated requests or commands are sent.</li> <li>Range is from 1 (highest) to 8 (lowest). Default is 1.</li> </ul> |

**Step 8** To associate a call agent redundancy group with a gateway control protocol, enter the **addmgcgrpprotocol** command.

```
nodename.1.28.VISM8.a > addmgcgrpprotocol <Red_Group_Num> <protocol_number>
|<Qrntn_Persist> <Qrntn_Def> <Sign_OnOff> <Prov_Resp> <RspAck_Attr> <Disc_Proc>
<Cancel_Graceful>|
```

Replace the above arguments with the values listed in Table 7-10.

**Table 7-10 Parameters for *addmgcgrpprotocol* Command**

| Parameter              | Description                                                                                                                                                                                                                    |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Red_Group_Num</i>   | Call agent redundancy group number. Range is 1–8.                                                                                                                                                                              |
| <i>protocol_number</i> | Protocol number. Values are <ul style="list-style-type: none"> <li>1 = MGCP 0.1</li> <li>2 = SGCP 1.1+</li> <li>3 = SRCP 1.0.2</li> <li>4 = SGCP 1.5</li> <li>5 = MGCP 1.0</li> <li>6 = TGCP 1.0</li> </ul>                    |
| <i>Qrntn_Persist</i>   | (Optional) Sets the quarantine handling method for persistent events. Values are <ul style="list-style-type: none"> <li>1 = Quarantine persistent events (default)</li> <li>2 = Do not quarantine persistent events</li> </ul> |

Table 7-10 Parameters for `addmgcgrprotocol` Command (continued)

| Parameter                  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code> Qrntn_Defl</code>   | <p>(Optional) Sets the default quarantine handling method for each protocol. Values are</p> <ul style="list-style-type: none"> <li>• 1 = Step, process (default for MGCP 1.0 and TGCP 1.0)</li> <li>• 2 = Step, discard (default for MGCP 0.1, SGCP 1.1+, SRCP 1.0.2, and SGCP 1.5)</li> <li>• 3 = Loop, process</li> <li>• 4 = Loop, discard</li> </ul> <p><b>Note</b> Step means one notification command is generated per notification request. Loop means multiple notification commands are generated per notification request.</p> |
| <code> Sign_OnOffl</code>  | <p>(Optional) Value to delete events.</p> <ul style="list-style-type: none"> <li>• 1 = Delete events from the previous list which are not present in the current list. (Default for MGCP 0.1, SGCP 1.1+, SRCP 1.0.2, and SGCP 1.5.)</li> <li>• 2 = Delete events from the previous list, only if the event is present in the current list with a hyphen (-) as the parameter. (Default for MGCP 1.0 and TGCP 1.0.)</li> </ul>                                                                                                            |
| <code> Prov_Respl</code>   | <p>(Optional) Value you can use to enable or disable the sending of a provisional response.</p> <ul style="list-style-type: none"> <li>• 1 = On (default for MGCP 1.0 and TGCP 1.0)</li> <li>• 2 = Off (default for MGCP 0.1, SGCP 1.1+, SRCP 1.0.2, and SGCP 1.5)</li> </ul>                                                                                                                                                                                                                                                            |
| <code> RspAck_Attrl</code> | <p>(Optional) Value you can use to enable or disable sending a response acknowledgment.</p> <ul style="list-style-type: none"> <li>• 1 = On (default for MGCP 1.0 and TGCP 1.0)</li> <li>• 2 = Off (default for MGCP 0.1, SGCP 1.1+, SRCP 1.0.2, and SGCP 1.5)</li> </ul>                                                                                                                                                                                                                                                                |

**Table 7-10** Parameters for *addmgcgrprotocol* Command (continued)

| Parameter              | Description                                                                                                                                                                                                                                                                                                                                                  |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Disc_Procl</i>      | (Optional) Value you can use to enable or disable the disconnect method. If this value is 1, the endpoint has become disconnected and is now trying to establish connectivity. <ul style="list-style-type: none"> <li>• 1 = On (default for MGCP 1.0 and TGCP 1.0)</li> <li>• 2 = Off (default for MGCP 0.1, SGCP 1.1+, SRCP 1.0.2, and SGCP 1.5)</li> </ul> |
| <i>Cancel_Graceful</i> | (Optional) Value you can use to cancel a previously issued graceful restart in progress command. <ul style="list-style-type: none"> <li>• 1 = On (default for MGCP 1.0 and TGCP 1.0)</li> <li>• 2 = Off (default for MGCP 0.1, SGCP 1.1+, SRCP 1.0.2, and SGCP 1.5)</li> </ul>                                                                               |

**Step 9** Repeat Step 1 through Step 8 for each call agent that you need to make active in your application.

## Configuring Gateway Control Protocol Port

Complete the following steps to configure a gateway control protocol port.



**Note**

Use the configure gateway control CLI commands in this section only if you need to configure argument values for the commands that are different from the default argument values.

**Step 1** To configure a port number for a particular call agent and protocol, enter the **cnfxgcppeer** command.

```
nodename.1.28.VISM8.a > cnfxgcppeer <mgcNumber> <protocolNumber> <UDP_port>
```

Replace the above arguments with the values listed in Table 7-11.

**Table 7-11** Parameters for *cnfxgcppeer* Command

| Parameter             | Description                                                                                                                                                                                   |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>mgcNumber</i>      | A number by which the call agent is identified in the range 1–8.                                                                                                                              |
| <i>protocolNumber</i> | Protocol number. Values are <ul style="list-style-type: none"> <li>• 1 = MGCP 0.1</li> <li>• 2 = SGCP 1.1+</li> <li>• 4 = SGCP 1.5</li> <li>• 5 = MGCP 1.0</li> <li>• 6 = TGCP 1.0</li> </ul> |
| <i>UDP_port</i>       | UDP port number in the range 1025–65535. Default is 2427.                                                                                                                                     |

- Step 2** To specify the maximum waiting time before a Restart in Progress (RSIP) message is sent to the call agent, enter the **cnfxgcpmwd** command.

```
nodename.1.28.VISM8.a > cnfxgcpmwd <timeout value>
```

Replace *<timeout value>* with the maximum wait time in the range 0–600000 ms. Default is 10000 ms.



**Note** The *<timeout value>* argument value sets the maximum wait time for the entire VISM card, not for a particular call agent.

- Step 3** To specify the VISM minimum and maximum wait time and number of retries for a call agent message acknowledgment, enter the **cnfxgcpretry** command.

```
nodename.1.28.VISM8.a > cnfxgcpretry <minTimeout> <retryCount> <maxTimeout>
```

Replace the above arguments with the values listed in Table 7-12.

**Table 7-12** Parameters for **cnfxgcpretry** Command

| Parameter         | Description                                                                                                                                       |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>minTimeout</i> | Minimum time (defined in milliseconds) VISM waits for an acknowledgment message from the call agent. Range is 1–100000 ms. Default is 500 ms.     |
| <i>retryCount</i> | Number of times that a call agent retransmits an unacknowledged message before determining that VISM is unreachable. Range is 1–10. Default is 3. |
| <i>maxTimeout</i> | Maximum time (defined in milliseconds) that VISM waits for an acknowledgment message from the call agent. Range is 0–100000 ms.                   |

- Step 4** To specify the type of bearer channel VISM uses, if one is not specified by the call agent in protocol local connection options, enter the **cnfxgcpbt** command.

```
nodename.1.28.VISM8.a > cnfxgcpbt <networkType> <vcType> |<connType>|
```

Replace the above arguments with the values listed in Table 7-13.

**Table 7-13** Parameters for **cnfxgcpbt** Command

| Parameter          | Description                                                                                            |
|--------------------|--------------------------------------------------------------------------------------------------------|
| <i>networkType</i> | Network type. Values are <ul style="list-style-type: none"> <li>• 1 = IP</li> <li>• 2 = ATM</li> </ul> |



**Table 7-13 Parameters for *cnfxgcpbt* Command (continued)**

| Parameter        | Description                                                                                                                                                                                                                                                                                                                            |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>vcType</i>    | Virtual circuit type. Values are <ul style="list-style-type: none"> <li>• 1 = Permanent virtual circuit (PVC)</li> <li>• 2 = Switched virtual circuit (SVC)</li> </ul>                                                                                                                                                                 |
| <i>lconnType</i> | (Optional) Connection type. Values are <ul style="list-style-type: none"> <li>• 1 = ATM Adaptation Layer Type 1 (AAL1)</li> <li>• 2 = ATM Adaptation Layer Type 2 (AAL2)</li> <li>• 3 = Not applicable</li> </ul> <p><b>Note</b> You must select 3 (not applicable) if you selected a <i>networkType</i> argument value of 1 (IP).</p> |

**Step 5** To designate xGCP events as persistent, enter the **addxgcppersistevt** command.



**Note** Do not complete this step if persistent events are not required for your application.



**Note** This command is not applicable for TGCP.

```
nodename.1.28.VISM8.a > addxgcppersistevt <index> <persistent_event>
```

Replace *<index>* with a package event number in the range 1–16.

Replace *<persistent\_event>* with one of the following values:

- r/co3 = VISM initiated AAL2 type 3 packet (CO3) network continuity test
- r/co4 = Network continuity test detect
- g/ft = Fax tone
- g/mt = Modem tone
- g/vbd = Voiceband data
- g/vbdt = Voiceband data termination
- l/hu, bl/hu = On hook
- l/hd, blhd = Off hook
- ms/ans, dt/ans, md/ans, mo/ans = Answer
- ms/sup, dt/sup, md/sup = Setup
- ms/rel, dt/rel, md/rel, mo/rel = Release
- ms/rtc, dt/rlc, md/rlc, mo/rlc = Release complete
- ms/res, dt/res, md/res = Resume
- ms/sus, dt/sus, md/sus = Suspend
- md/awk = Acknowledgment wink
- mo/rbz = Reverse make busy

- Step 6** To specify the SRCP parameters for communication between VISM and the call agent, enter the **cnfsrcppeer** command.

```
nodename.1.28.VISM8.a > cnfsrcppeer <peerId> <port>
```

Replace *<peerId>* with a (call agent) identification number in the range 1–8.

Replace *<port>* with the UDP port number in the range 1025–65535.



**Note** If you do not execute this command, the default MGCP/SGCP port number is 2428.

- Step 7** To configure the SRCP heartbeat interval and maximum UDP size for a specified call agent redundancy group, enter the **cnfsrcppeergrpparam** command.

```
nodename.1.28.VISM8.a > cnfsrcppeergrpparam <Red_Group_Num> <Heart_beat_interval>
<max_pdu>
```

Replace the above arguments with the values listed in Table 7-14.

**Table 7-14** Parameters for **cnfsrcppeergrpparam** Command

| Parameter                  | Description                                                                                                                                        |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Red_Group_Num</i>       | Call agent redundancy group number. Range is 1–8.                                                                                                  |
| <i>Heart_beat_interval</i> | Interval between heartbeats (defined in milliseconds). Values are <ul style="list-style-type: none"> <li>• 0</li> <li>• Range 100–65535</li> </ul> |
| <i>max_pdu</i>             | Maximum allowable UDP size. Range is 4095–65535.                                                                                                   |

- Step 8** To configure the minimum and maximum timeout periods and retry attempts for transmitting SRCP commands to the call agent, enter the **cnfsrcpretry** command.

```
nodename.1.28.VISM8.a > cnfsrcpretry <minTimeout> <retryCount> <maxTimeout>
```

Replace the above arguments with the values listed in Table 7-15.

**Table 7-15** Parameters for **cnfsrcpretry** Command

| Parameter         | Description                                                                        |
|-------------------|------------------------------------------------------------------------------------|
| <i>minTimeout</i> | Minimum SRCP timeout (defined in milliseconds). Range is 1–10000. Default is 500.  |
| <i>retryCount</i> | Maximum number of SRCP retries. Range is 0–10. Default is 3.                       |
| <i>maxTimeout</i> | Maximum SRCP timeout (defined in milliseconds). Range is 1– 10000. Default is 500. |

## Configuring ISDN PRI Backhaul

Use the commands in this section only if backhauling of ISDN PRI signaling to the call agent is required for your application.

ISDN PRI backhaul configuration consists of setting up three types of RUDP session structures:

- Session sets
- Session groups
- Sessions

A session group applies to a specified call agent and allows automatic switching to another session in the group if an active session fails. You can configure individual sessions when you have completed setting up the session sets and session groups. For more information on session structures, see Chapter 2, “VISM/VISM-PR Functional Description.”

Complete the following steps to configure ISDN PRI backhaul:

**Step 1** To create a session set, enter the **addsesset** command.

```
nodename.1.28.VISM8.a > addsesset <set_number> <fault_tolerant>
```

Replace *<set\_number>* with a value in the range 1–16.



**Note** Only session set number 1 is supported.

Replace *<fault\_tolerant>* with one of the following values:

- 1 = Fault tolerance
- 2 = No fault tolerance

**Step 2** To create a session group for a session set and a call agent, enter the **addsesgrp** command.

```
nodename.1.28.VISM8.a > addsesgrp <group_number> <set_number> <mgc_name>
```

Replace the above arguments with the values listed in Table 7-16.

**Table 7-16 Parameters for addsesgrp Command**

| Parameter           | Description                                                                         |
|---------------------|-------------------------------------------------------------------------------------|
| <i>group_number</i> | Session group number in the range 1–16.                                             |
| <i>set_number</i>   | Set number in the range 1–8.<br><b>Note</b> Only session set number 1 is supported. |
| <i>mgc_name</i>     | Domain name of the call agent, a text string of 1 to 64 alphanumeric characters.    |

**Step 3** To create an ISDN PRI backhaul RUDP session within a specified group, enter the **addses** command.

**Note**

The following session configuration commands apply to a single session which is identified by the first argument, the *session\_number*.

```
nodename.1.28.VISM8.a > addses <session_number> <group_number> <priority> <local_port>
<remote_port>
```

Replace the above arguments with the values listed in Table 7-17.

**Table 7-17 Parameters for addses Command**

| Parameter             | Description                                                                                                                              |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| <i>session_number</i> | Session number in the range 1–64.<br><b>Note</b> Up to 64 sessions can be created in a session group.                                    |
| <i>group_number</i>   | The number of a session group to which the session is added. The range is 1–16.<br><b>Note</b> Currently, only group 1 is supported.     |
| <i>priority</i>       | The priority level determines which session becomes active if a session fails within the same group. Range is 1 (highest) to 4 (lowest). |
| <i>local_port</i>     | The local port number is the VISM port number used for the session. Range is 1124–49151.                                                 |
| <i>remote_port</i>    | The remote port number is the call agent port number used for the session. Range is 1124–65535.                                          |

## Configuring TDM Side Signaling for Applications That Use CCS

**Note**

If your application requires CAS, proceed to the “Configuring TDM Side Signaling for Applications That Use CAS” section on page 7-26.

Common channel signaling (CCS) uses a dedicated channel on a DS1 line to carry the signaling for the other channels on the line. You must identify the signaling channel to the VISM/VISM-PR card.

Complete the following steps to add and configure CCS:

Before proceeding to Step 1, ensure that you add a session and a session set described in the “Configuring ISDN PRI Backhaul” section on page 7-21.

**Step 1** To add an ISDN PRI channel on a DS1/DS0 line, enter the **addlapd** command.

```
nodename.1.28.VISM8.a > addlapd <line_number> <ds0_number> |<lapd_side>
<lapd_application_type>|
```

Replace the above arguments with the values listed in Table 7-18.

**Table 7-18 Parameters for addlapd Command**

| Parameter                    | Description                                                                                                                                                                      |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>line_number</i>           | Line number. Range is 1–8.                                                                                                                                                       |
| <i>ds0_number</i>            | DS0 number. <ul style="list-style-type: none"> <li>• 1–24 = T1 lines</li> <li>• 1–31 = E1 lines</li> </ul>                                                                       |
| <i>lapd_side</i>             | (Optional) The side of the LAPD link. Values are <ul style="list-style-type: none"> <li>• 1 = Network (default)</li> <li>• 2 = User</li> </ul>                                   |
| <i>lapd_application_type</i> | (Optional) Application type of the LAPD ISDN D channel. Values are <ul style="list-style-type: none"> <li>• 1 = PRI (default)</li> <li>• 2 = GR-303 (not unsupported)</li> </ul> |

**Step 2** To specify the LAPD stack type, enter the **cnflapdtype** command.

```
nodename.1.28.VISM8.a > cnflapdtype <line_number> <ds0_number> <lapd_type>
```

Replace the above arguments with the values listed in Table 7-19.

**Table 7-19 Parameters for cnflapdtype Command**

| Parameter          | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>line_number</i> | Line number. Range is 1–8.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <i>ds0_number</i>  | DS0 number. <ul style="list-style-type: none"> <li>• 1–24 = T1 lines</li> <li>• 1–31 = E1 lines</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                       |
| <i>lapd_type</i>   | Type of LAPD stack to configure on the specified line and DS0. Values are <ul style="list-style-type: none"> <li>• 1 = CCITT</li> <li>• 3 = ATT5ESSPRA</li> <li>• 4 = ATT4ESS</li> <li>• 6 = NTDMS100PRA</li> <li>• 7 = VN2 or 3</li> <li>• 8 = INSNet</li> <li>• 9 = TR6MFC</li> <li>• 10 = TR6PBX</li> <li>• 12 = AUSP</li> <li>• 13 = NIL</li> <li>• 14 = SSETSI</li> <li>• 15 = BC303TMC</li> <li>• 16 = BC303CSC</li> <li>• 17 = NTDMS250</li> <li>• 18 = Bellcore</li> <li>• 19 = NI2 (default)</li> </ul> |

# Adding DS0 Endpoints to Lines

The number of DS0s you can add depends on the template that you are using.

Complete the following steps to add DS0 endpoints to lines:

**Step 1** To add multiple endpoints with one command, enter the **addendpts** command.

```
nodename.1.12.VISM8.a > addendpts <endpt_num> <dsl_num> <ds0_num> <endpts_num>
```

Replace the above arguments with the values listed in Table 7-20.

**Table 7-20 Parameters for addendpts Command**

| Parameter        | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>endpt_num</i> | First endpoint number of a range of consecutive endpoints. <ul style="list-style-type: none"> <li>• Template 1               <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2               <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3               <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4               <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5               <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul> |
| <i>dsl_num</i>   | Starting physical line number in the range 1–8.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

**Table 7-20** Parameters for *addendpts* Command (continued)

| Parameter         | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>ds0_num</i>    | <p>Starting DS0 number from which the endpoints are added.</p> <ul style="list-style-type: none"> <li>• 1–24 for T1 lines</li> <li>• 1–31 for non-CAS E1 lines</li> <li>• 1–15 and 17–31 for CAS E1 lines</li> </ul> <p>For VISM E1 cards, 16 is pre-allocated as the CAS channel.</p> <p><b>Note</b> If the application requires CAS, issue the <b>cnflnsig</b> command before adding the endpoints.</p>                                                                                                                                                                                                                                                                                                                                                             |
| <i>endpts_num</i> | <p>Number of endpoints to add.</p> <ul style="list-style-type: none"> <li>• Template 1 <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2 <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3 <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4 <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5 <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul> |

**Step 2** To add a single DS0 to a line, enter the **addendpt** command.

```
nodename.1.28.VISM8.a > addendpt <endpt_num> <ds1_num> <ds0_num>
```

Replace the above arguments with the values listed in Table 7-20.

**Step 3** To validate the endpoints that you added, enter the **dspendpts** command.

```
nodename.1.28.VISM8.a > dspendpts
```

| EndptNum | Ena/Speed |
|----------|-----------|
| 1        | act/ 64k  |
| 2        | act/ 64k  |
| 3        | act/ 64k  |
| 4        | act/ 64k  |
| 5        | act/ 64k  |
| 6        | act/ 64k  |
| 7        | act/ 64k  |
| 8        | act/ 64k  |
| 9        | act/ 64k  |
| 10       | act/ 64k  |
| 11       | act/ 64k  |
| 12       | act/ 64k  |
| 13       | act/ 64k  |
| 14       | act/ 64k  |
| 15       | act/ 64k  |
| 16       | act/ 64k  |
| 17       | act/ 64k  |
| 18       | act/ 64k  |
| 19       | act/ 64k  |
| 20       | act/ 64k  |

Type <CR> to continue, Q<CR> to stop:

---

## Configuring TDM Side Signaling for Applications That Use CAS

Complete the following steps to add and configure CAS:



**Note**

CAS is not supported on VISM/VISM-PR E1 lines in VoIP switching.

---

**Step 1** To add a CAS variant to your VISM/VISM-PR card, enter the **addcasvar** command.

```
nodename.1.28.VISM8.a > addcasvar <variant_name> <file_name> |<cas_var_source>|
```

Replace the above arguments with the values listed in Table 7-21.



**Table 7-21 Parameters for addcasvar Command**

| Parameter             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>variant_name</i>   | Name of the CAS variant; a text string of 1 to 64 alphanumeric characters.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <i>file_name</i>      | Name of the file that contains the signal definition for the CAS variant. <ul style="list-style-type: none"> <li>wink_did_dod.o = wink start</li> <li>ground_start.o = ground start</li> <li>wink_did_dod_mf.o = wink start multifrequency</li> <li>q50.o = Q.50</li> <li>fgd_ea_incoming.o = endpoints connected to an end office</li> <li>fgd_ea_outgoing.o = endpoints connected to an access carrier</li> <li>fgd_os_e911.o = endpoints connected to FDG OSS (Feature group D operator services system)</li> <li>loop_start.o = loop start</li> <li>delay_did_dod.o = dial delay, dual tone multifrequency (DTMF)</li> <li>delay_did_dod_mf.o = dial delay, multifrequency (MF)</li> <li>immed_did_dod.o = immediate start</li> <li>immed_did_dod_mf.o = immediate start, MF</li> </ul> For user-configured files, the range is 2–32 alphanumeric characters. |
| <i>cas_var_source</i> | (Optional) CAS variant file location. <ul style="list-style-type: none"> <li>1 = Unspecified. If a TFTP domain is configured, the location is the TFTP server. If the file location is not found on the TFTP server, the file is treated as built-in.</li> <li>2 = Internal—File location is user-configured (built-in).</li> <li>3 = External—File resides on the TFTP server.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

**Step 2** To configure a CAS variant and CAS timing parameters for the variant added in Step 1, enter the **cnfcasvar** command.

```
nodename.1.28.VISM8.a > cnfcasvar <variant_name> <country_code> <Tring> <Tpart> <Tcrit>
<TMF>
```

Replace the above arguments with the values listed in Table 7-22.

**Table 7-22 Parameters for *cnfcasvar* Command**

| Parameter           | Description                                                                            |
|---------------------|----------------------------------------------------------------------------------------|
| <i>variant_name</i> | Name of the CAS variant. Type the value used in Step 1.                                |
| <i>country_code</i> | Country code of the variant. The value must be a 2-character text string.              |
| <i>Tring</i>        | Ringing time (defined in seconds). Range is 10–600 sec.                                |
| <i>Tpart</i>        | Partial dial time (defined in seconds). Range is 10–10000 sec—in increments of 10 sec. |
| <i>Tcrit</i>        | Critical timing (defined in seconds). Range is 0–10000 sec—in increments of 10 sec.    |
| <i>TMF</i>          | Interdigit timeout value for MF digits (defined in seconds). Range is 1–10 sec.        |

**Step 3** To associate an endpoint with a CAS variant, enter the **cnfcasendpt** command.

```
nodename.1.28.VISM8.a > cnfcasendpt <endpt_number> <casVariantName>
```

Replace the above arguments with the values listed in Table 7-23.

**Table 7-23 Parameters for *cnfcasendpt* Command**

| Parameter             | Description                    |
|-----------------------|--------------------------------|
| <i>endpt_number</i>   | Type the value used in Step 1. |
| <i>casVariantName</i> | Type the value used in Step 1. |

## Placing Gateway Out and In Service

To establish communication with the call agent, take the gateway out of service and then establish service.

**Step 1** To place the card out of service, enter the **cnfgwoos** command.

```
nodename.1.28.VISM8.a > cnfgwoos <shutdown_method>
```

Replace the *<shutdown\_method>* argument with one of the following values:

- 2 = Forceful. Existing connections are deleted and the VISM/VISM-PR card transitions to the “commandedOutOfService” state. New connection requests are rejected.
- 3 = Graceful. Existing connections are not released and allowed to terminate naturally. Immediately after this command is executed, the VISM/VISM-PR card transitions to the “pendingOutOfService state”. New connection requests are rejected. The VISM/VISM-PR card transitions to the ‘commandedOutOfService’ state only when all ongoing connections are deleted by the call agent.

The VISM card prompt terminates with an *s*, indicating the out-of-service (standby) state.

```
nodename.1.28.VISM8.s >
```

- Step 2** To place card in service, enter the **cnfgwis** command.

```
nodename.1.28.VISM8.s > cnfgwis
```

The VISM card prompt terminates with an *a*, indicating the in-service state.

```
nodename.1.28.VISM8.a >
```

## Sample Configuration

The following steps shows examples of initial card configuration for VoIP switching in template 1 with CCS.

1. Set the VISM/VISM-PR mode to VoIP switching and codec template to 1.

```
cnfvismmode 1
cnfcodectmpl 1
```



**Note** When you make changes to the codec template, the VISM/VISM-PR card resets.

2. Add a resource partition to communicate to the PXM card.

```
addport
addrscprtn 2
```

3. Set the domain name and IP address for the VISM/VISM-PR card.

```
cnfvismdn mgxb-v30.cisco.com
cnfvismip 10.20.30.99 255.255.255.0 10.20.31.99 255.255.255.0
```

4. Add the line interfaces 1–8.

```
addln 1
addln 2
addln 3
addln 4
addln 5
addln 6
addln 7
addln 8
```

5. Set the line signaling to CCS on each line.

```
cnflnsig 1 2
cnflnsig 2 2
cnflnsig 3 2
cnflnsig 4 2
cnflnsig 5 2
cnflnsig 6 2
cnflnsig 7 2
cnflnsig 8 2
```

6. Set the domain name and IP address for the call agent.

```

adddn 1 mga-SOLSYS1CA.sol.cisco.com
adddnip "1 mga-SOLSYS1CA.sol.cisco.com 10.1.3.25 1"
adddnip "2 mga-SOLSYS1CA.sol.cisco.com 10.1.5.25 2"

```

7. Set the media gateway controller (call agent) for the VISM/VISM-PR.

```

addmgc "1 mga-SOLSYS1CA.sol.cisco.com"

```

8. Set the MGC Protocol to the media gateway controller, and designate the port number to communicate to the call agent.

```

addmgcgrpentry 1 1 1
addmgcgrpprotocol 1 5
cnfxgcpeer 1 5 2427

```

9. Add the session set, session group, and sessions to the call agent for PRI backhaul.

```

addsesset 1 1
addsesgrp 1 1 mga-SOLSYS1CA.sol.cisco.com
addses 1 1 1 9011 9011
addses 2 1 2 9012 9012

```

10. Set the LAPD to the 24<sup>th</sup> DS0 on each line.

```

addlapd 1 24
addlapd 2 24
addlapd 3 24
addlapd 4 24
addlapd 5 24
addlapd 6 24
addlapd 7 24
addlapd 8 24

```

11. Add the endpoints for a T1 in CCS. The value of 184 is derived from total of 192 available DS0s minus the CCS channels (1 per line).

```

addendpts 1 1 1 184

```



## VoIP Trunking Mode

---

The Voice over IP (VoIP) trunking feature allows the VISM card to connect to the PBX, or central office digital systems. VISM uses T1/E1 digital interfaces, converts the TDM bit stream into Real-time Transport Protocol (RTP) packets after echo cancellation and compression, and transports the bits over the IP network.

No call agent is required for setting up and tearing down calls.

This section contains the following tasks for configuring the VISM/VISM-PR card for VoIP trunking:

- Configuring the Operating Mode, page 8-1
- Configuring the ATM Network Side, page 8-2
- Configuring Domain Names and IP Addresses, page 8-11
- Configuring TDM Side Signaling for Applications That Use CCS, page 8-12
- Configuring TDM Side Signaling for Applications That Use CAS, page 8-14
- Adding DS0 Endpoints to Lines, page 8-14
- Adding RTP Connections, page 8-17

Sample VoIP trunking configurations are shown in the “Sample Configuration” section on page 8-20.

## Configuring the Operating Mode

To configure your VISM/VISM-PR card for the VoIP trunking mode, complete the following steps:

---

**Step 1** To configure the VISM/VISM-PR operating mode, enter the **cnfvismmode** command.

```
nodename.1.28.VISM8.a > cnfvismmode <mode_number>
```

Replace *<mode\_number>* with value of 1.

- 1 = VoIP switching/VoIP trunking (default)
- 2 = AAL2 trunking
- 3 = AAL1 switching
- 7 = Switched AAL2 SVC
- 8 = Switched AAL2 PVC
- 9 = VoIP and AAL1 SVC
- 10 = VoIP trunking and AAL2 trunking

**Step 2** Type a **y** at the following message:

```
WARNING: Available CLI Commands will be changed, do you want to proceed (Yes/No)? y
```

A message about the number of available commands displays before the card returns the prompt. The following example shows the number of available commands for the VoIP trunking mode:

```
INFORMATION: The new 'voipSwitching' mode has 355 CLI commands.
```

**Step 3** To display the current VISM/VISM-PR operating mode, enter the **dspvismparam** command.

```
nodename.1.28.VISM8.a > dspvismparam

VISM mode: voipSwitching/voipTrunking
VISM features Bit Map: 0x5bc
FunctionModuleType: VISM-PR-8T1
CAC flag: enable
DS0s available: 192
Template number: 2
Percent of functional DSPs: 100
IP address: 10.31.19.99
Subnet mask: 255.255.255.0
Bearer IP address: 0.0.0.0
Bearer Subnet mask: 0.0.0.0
RTCP report interval: 5000 msec
RTCP receive multiplier: 3
RTP receive timer: disable
ControlPrecedence/Tos: 0x60
BearerPrecedence/Tos: 0xa0
Aal2 muxing status: disable
Tftp Server Dn TFTPDOMAIN
Aggregate Clipping enable
Aggregate Svc Bandwidth 0

Type <CR> to continue, Q<CR> to stop:

Codec negotiation option 1
Profile negotiation option 1
VAD Duty Cycle 61
VAD Tolerance 100
VISM Initiated NW COT Off
VISM CO4 Timer 1000 msec
CALEA flag disable
SupportdModuleType: VISM-PR-8T1.
VismNSAP: 47009181000000000142265b99000001079bff00
```

## Configuring the ATM Network Side

Configuring the ATM network side consists of setting up ATM PVCs across the network and providing the mechanism by which calls are routed over the correct PVC.

The Voice over IP trunking operating mode requires you to set up an AAL5 PVC for bearer transmission between the VISM/VISM-PR card and the PXM card or RPM. The router extracts the IP frames from the ATM cells and routes the frames.

If ISDN signaling is used, a separate control PVC might also be required.

Use the following guidelines when you set up the ATM side in the VoIP trunking mode.

- The master and slave connection base parameters, PCR, SCR, and MBS values must match. If these values do not match, PXM1E and PXM45 cards display an error. PXM1 cards do not display an error.
- If the connections are through a physical loopback on an OC-3, make sure that the VPI and VCI values are the same on both ends of the loopback.

Complete the following tasks to configure the ATM side:

- Configuring PVC Connections, page 8-3
- Connection CAC Configuration, page 8-10

## Configuring PVC Connections

The VoIP trunking mode has the following two types of PVCs:

- AAL5 Bearer PVCs—Support both bearer data and control data.
- Control PVCs—Support only control data.

Complete the following steps to configure PVC connections:



### Note

You must add the slave connection first before adding the master connection. Retain the remote connection ID to use when setting up the master connection.

### Step 1

To add an ATM PVC between the VISM/VISM-PR card and the MGX 8000 Series platform PXM card, enter the **addcon** command.

```
nodename.1.28.VISM8.a > addcon <localVCI> <preference> <pvcType> <application> <PCR>
<mastership> |<remoteConnId> <serviceType> <scr> <mbs> <priority> <prefrte> <direct>|
```

Replace the above arguments with the values listed in Table 8-1.

**Table 8-1** Parameters for **addcon** Command

| Parameter         | Description                                                                                                                                                                                                                   |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>localVCI</i>   | Local virtual channel identifier (VCI) to be used for the connection. Range is 131–510. The value you enter for this argument is also used as the LCN.                                                                        |
| <i>preference</i> | Preference level of the local VCI. <ul style="list-style-type: none"> <li>• 1 = Primary</li> <li>• 2 = Secondary</li> </ul> <p><b>Note</b> If you have two PVCs for redundancy, one PVC is primary; one PVC is secondary.</p> |
| <i>pvcType</i>    | AAL type of connection. <ul style="list-style-type: none"> <li>• 1 = AAL5 (For control and bearer trunking)</li> <li>• 2 = AAL2</li> <li>• 3 = AAL1</li> </ul>                                                                |

Table 8-1 Parameters for addcon Command (continued)

| Parameter             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>application</i>    | <p>The connection's application.</p> <ul style="list-style-type: none"> <li>1 = Control—Use this option for the control channel if you have separate control and bearer PVCs.</li> <li>2 = Bearer—Use this option if you have one PVC for both bearer and control messages that are going over this PVC. Or, use this option for the bearer PVC when you are using separate control and bearer PVCs.</li> <li>3 = Signaling</li> </ul>                  |
| <i>PCR</i>            | <p>Peak cell rate (PCR) measured in cells per second. Ranges are</p> <ul style="list-style-type: none"> <li>1–96000 for AAL5 bearer</li> <li>1–20000 for AAL5 control PVC</li> <li>1–50000 for T1 AAL2 PVCs</li> <li>1–60000 for E1 AAL2 PVCs</li> <li>1–400 for signaling PVCs in AAL2 trunking mode</li> </ul> <p><b>Note</b> If the <i>serviceType</i> argument is variable bit rate (VBR), the <i>PCR</i> argument value must be 15 or greater.</p> |
| <i>mastership</i>     | <p>Connection type.</p> <ul style="list-style-type: none"> <li>1 = Master</li> <li>2 = Slave (default)</li> </ul>                                                                                                                                                                                                                                                                                                                                       |
| <i>lremoteConnIdl</i> | <p>(Optional) Remote connection identifier.</p> <p>For PXM1 connections, specify this argument with the following format: nodename.slot.port.vpi.vci</p> <p>For PXM1E/PXM45, specify this argument with the following format: Nsapaddr.Vpi.Vci</p> <p><b>Note</b> This argument is used only when the <i>mastership</i> argument is set to 1 (Master).</p>                                                                                              |
| <i>lserviceType1</i>  | <p>(Optional) Service type is one of the following values:</p> <ul style="list-style-type: none"> <li>1 = Constant bit rate (CBR)</li> <li>2 = Variable bit rate real time (rt-VBR)</li> <li>3 = Variable bit rate non-real time (nrt-VBR)</li> <li>4 = rt-VBR3</li> <li>5 = rt-VBR2</li> <li>6 = nrt-VBR2</li> <li>7 = nrt-VBR3</li> </ul> <p><b>Note</b> Use value 7 for VISM-PR to RPM-PR connections.</p>                                           |



**Table 8-1 Parameters for addcon Command (continued)**

| Parameter | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| scr       | (Optional) Sustainable cell rate (SCR) defined in cells per second. Range is from 15 to the value you configured for the <i>PCR</i> argument.<br><b>Note</b> This argument value is required if the <i>serviceType</i> argument value is in the range 2–7.                                                                                                                                                                                                                                                                                                                                                |
| mbs       | (Optional) Maximum burst size (MBS) is the maximum number of cells transmitted at the peak cell rate. Range is from 1 cell to 10 times the value you configured for the <i>scr</i> argument value.<br><b>Note</b> This argument value is required if the <i>serviceType</i> argument value is in the range 2–7.                                                                                                                                                                                                                                                                                           |
| priority  | (Optional) Route priority. Priority number is assigned to the PVC during configuration of the connection.<br>Range is 1–15. Default is 8.<br>A value of 1 indicates highest priority, and a value of 15 indicates the lowest priority.<br><b>Note</b> This parameter is applicable only to VISM-PR cards.                                                                                                                                                                                                                                                                                                 |
| prefrte   | (Optional) Unique identifier of the preferred route to which this connection is associated.<br>Range is 0–65535. Default is 0.<br>When the specified route identifier is 0, the connection is not associated with a preferred route. This parameter is not applicable to the slave end of an SPVC connection.<br><b>Note</b> This parameter is applicable only to VISM-PR cards.                                                                                                                                                                                                                          |
| direct    | (Optional) Parameter to specify whether or not the associated preferred route is the only permissible route for the connection to take. <ul style="list-style-type: none"> <li>• 1 = Yes—The connection is not allowed to pick an alternate route. This option is not applicable when a preferred route is not specified.</li> <li>• 2 = No (default)—The connection is allowed to try another alternate route if the preferred route is unavailable.</li> </ul> If the directed preferred route is unavailable, the connection fails.<br><b>Note</b> This parameter is applicable only to VISM-PR cards. |

**Step 2** If you need to refine the configuration parameters of the connection added in Step 1, enter the **cnfcon** command.

```
nodename.1.28.VISM8.a > cnfcon <LCN> <PCR> <service_type> |<SCR_ingress> <MBS_ingress>
<priority> <prefrte> <direct>|
```

Replace the above arguments with the values listed in Table 8-2.

**Table 8-2 Parameters for *cnfcon* Command**

| Parameter           | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>LCN</i>          | Type the value you entered for the <i>localVCI</i> argument in Step 1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <i>PCR</i>          | <p>PCR described in cells per second.</p> <p><b>Note</b> The <i>PCR</i> argument value cannot be changed if the calls or connections for signaling and control are active.</p> <p>Ranges are</p> <ul style="list-style-type: none"> <li>• 1–400 = Signaling PVCs in AAL2 trunking mode</li> <li>• 1–20000 = AAL5 control PVC</li> <li>• 1–50000 = T1 AAL2 bearer PVCs</li> <li>• 1–60000 = E1 AAL2 bearer PVCs</li> <li>• 1–96000 = AAL5 bearer PVC</li> </ul> <p><b>Note</b> If the <i>service_type</i> argument value is a VBR, the <i>PCR</i> argument value must be 15 or greater.</p> |
| <i>service_type</i> | <p>Service type. Values are</p> <ul style="list-style-type: none"> <li>• 1 = Constant bit rate (CBR)</li> <li>• 2 = Variable bit rate real time—rt-VBR</li> <li>• 3 = Variable bit rate non-real time—nrt-VBR</li> <li>• 4 = rt-VBR3</li> <li>• 5 = rt-VBR2</li> <li>• 6 = nrt-VBR</li> <li>• 7 = nrt-VBR</li> </ul> <p><b>Note</b> For VISM-PR to RPM-PR connections, use one of the values 4–7.</p>                                                                                                                                                                                      |
| <i>SCR_ingress</i>  | <p>(Optional) SCR. Range is from 15 to the value you configured for the <i>PCR</i> argument.</p> <p><b>Note</b> This argument value is required if the <i>service_type</i> argument value is in the range 2–7.</p>                                                                                                                                                                                                                                                                                                                                                                         |
| <i>MBS_ingress</i>  | <p>(Optional) MBS. Maximum number of cells transmitted at the peak cell rate. Range is from 1 cell to 10 times the value you configured for the <i>SCR_ingress</i> argument.</p> <p><b>Note</b> This argument value is required if the <i>service_type</i> argument value is in the range 2–7.</p>                                                                                                                                                                                                                                                                                         |

**Table 8-2 Parameters for *cnfcon* Command (continued)**

| Parameter         | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i> priority </i> | <p>(Optional) Route priority is the priority number assigned to the PVC during configuration of the connection.</p> <p>Range is 1–15. Default is 8.</p> <p>A value of 1 indicates highest priority, and a value of 15 indicates the lowest priority.</p> <p><b>Note</b> This parameter is applicable only to VISM-PR cards.</p>                                                                                                                                                                                                                                                                                                 |
| <i> prefrtel</i>  | <p>(Optional) Unique identifier of the preferred route to which this connection is associated.</p> <p>Range is 0–65535. Default is 0.</p> <p>When the specified route identifier is 0, the connection is not associated with a preferred route. This parameter is not applicable to the slave end of an SPVC connection.</p> <p><b>Note</b> This parameter is applicable only to VISM-PR cards.</p>                                                                                                                                                                                                                             |
| <i> direct </i>   | <p>(Optional) Parameter to specify whether or not the associated preferred route is the only permissible route for the connection to take.</p> <ul style="list-style-type: none"> <li>• 1 = Yes—The connection is not allowed to pick an alternate route. This option is not applicable when a preferred route is not specified.</li> <li>• 2 = No (Default)—The connection is allowed to try another alternate route if the preferred route is unavailable.</li> </ul> <p>If the directed preferred route is unavailable, the connection is failed.</p> <p><b>Note</b> This parameter is applicable only to VISM-PR cards.</p> |

**Step 3** To configure primary and secondary PVCs to provide protection in the event of a PVC failure, enter the **cnfconprotect** command.

```
nodename.1.28.VISM8.a > cnfconprotect <LCN> <protection> <lock_state> <fallback_LCN>
```

Replace the above arguments with the values listed in Table 8-3.

**Table 8-3 Parameters for *cnfconprotect* Command**

| Parameter         | Description                                                                                                                                                |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>LCN</i>        | Primary logical channel number of the connection (PVC). Range is 131–510.                                                                                  |
| <i>protection</i> | <p>Value you can use to enable or disable PVC protection.</p> <ul style="list-style-type: none"> <li>• 1 = Protected</li> <li>• 2 = Unprotected</li> </ul> |

**Table 8-3** Parameters for *cnfconprotect* Command (continued)

| Parameter           | Description                                                                                                   |
|---------------------|---------------------------------------------------------------------------------------------------------------|
| <i>lock_state</i>   | PVC lock state. Values are <ul style="list-style-type: none"> <li>• 1 = Unlock</li> <li>• 2 = Lock</li> </ul> |
| <i>fallback_LCN</i> | Secondary (fallback) logical channel number of the connection (PVC). Range is 131–510.                        |

**Step 4** To display the details of the connection, enter the **dspcon** command.

```
nodename.1.11.VISM8.a > dspcon <LCN>
```

Replace the <LCN> argument with a value in the range 131–510.

The following example shows sample configuration for a bearer PVC in VoIP trunking mode.

```
mgxa-pxm1e.1.30.VISM8.a > dspcon 132
```

```
ChanNum:                132
ChanRowStatus:          Mod
ChanLocalRemoteLpbkState: Disabled
ChanTestType:           TestOff
ChanTestState:          NotInProgress
ChanRTDresult:          65535 us
ChanPortNum:            255
ChanPvcType:            AAL5
ChanConnectionType:     PVC
ChanLocalVpi:           30
ChanLocalVci:           132
ChanLocalNSAP:          47009181000000007856e136300000107f3ff00
ChanRemoteVpi:          104
ChanRemoteVci:          131
ChanRemoteNSAP:         47009181000000007856e1363000001073b0400
ChanMastership:         Master
ChanVpcFlag:            Vcc
ChanConnServiceType:    CBR
ChanRoutingPriority:     8
ChanMaxCost:            2147483647
ChanRestrictTrunkType:  No Restriction
```

Type <CR> to continue, Q<CR> to stop:

```
ChanConnPCR:            58000
ChanConnPercentUtil:    100
ChanPreference:         1
ChanRemotePCR:          58000
ChanRemotePercentUtil:  100
ChanProtection:         unprotected
ChanActivityState:      unknown
ChanLockingState:       unlock
ChanApplication:        bearer
ChanServiceType:        cbr
ChanScrIngress:         58000
ChanMbsIngress:         58000
ChanVCCI:                0
ChanFarEndAddrType:     notapplicable
ChanFarEndE164Addr:     0
ChanFarEndGWIDAddr:     .
ChanFarEndNSAPAddr:     NULL NSAP
```

```

ChanAdminStatus:      Up
ChanReroute:          False
ChanPrefRouteId:      0
ChanDirectRoute:      False

```

Type <CR> to continue, Q<CR> to stop:

```

ChanUserPcrNumber:    User BW Off
ChanUserMinPCRBW:     10
ChanUserMaxPCRBW:     58000
ChanUserMaxScrBW:     0
ChanUserMaxMbsBW:     0

```

ChanNumNextAvailable: 133

The following example shows sample configuration for a signaling connection with CCS.

nodename.1.5.VISM8.a > **dspcon** 231

```

ChanNum:               231
ChanRowStatus:         Mod
ChanLocalRemoteLpbkState: Disabled
ChanTestType:          TestOff
ChanTestState:         NotInProgress
ChanRTDresult:         65535 us
ChanPortNum:           255
ChanPvcType:           AAL5
ChanConnectionType:    PVC
ChanLocalVpi:          5
ChanLocalVci:          231
ChanLocalNSAP:         4700918100000000059a3f9761000001072bff00
ChanRemoteVpi:         0
ChanRemoteVci:         0
ChanRemoteNSAP:        NULL NSAP
ChanMastership:        Slave
ChanVpcFlag:           Vcc
ChanConnServiceType:   CBR
ChanRoutingPriority:   8
ChanMaxCost:           2147483647
ChanRestrictTrunkType: No Restriction

```

Type <CR> to continue, Q<CR> to stop:

```

ChanConnPCR:           400
ChanConnPercentUtil:   100
ChanPreference:        1
ChanRemotePCR:         400
ChanRemotePercentUtil: 100
ChanProtection:        unprotected
ChanActivityState:     unknown
ChanLockingState:      unlock
ChanApplication:       signaling
ChanServiceType:       cbr
ChanScrIngress:        400
ChanMbsIngress:        400
ChanVCCI:              0
ChanFarEndAddrType:    notapplicable
ChanFarEndE164Addr:    0
ChanFarEndGWIDAddr:    .
ChanFarEndNSAPAddr:    NULL NSAP
ChanAdminStatus:      Up
ChanReroute:          False
ChanPrefRouteId:      0
ChanDirectRoute:      False

```

Type <CR> to continue, Q<CR> to stop:

```
ChanUserPcrNumber:      User BW Off
ChanUserMinPCRBW:      10
ChanUserMaxPCRBW:      0
ChanUserMaxScrBW:      0
ChanUserMaxMbsBW:      0
```

```
ChanNumNextAvailable:  133
```

**Step 5** To verify the integrity or continuity of a connection, enter the **tstcon** command.

```
nodename.1.11.VISM8.a > tstcon
```

The following example shows a connection test for LCN 131.

```
nodename.1.11.VISM8.a > tstcon 131
test type is..... 1
```

```
TestCon in progress.
```

```
TestCon Passed.
```

## Connection CAC Configuration



### Note

CAC must be enabled on the card.

To configure VAD tolerance and VAD duty cycle for a specific logical connection number (LCN) used for PVCs, enter the **cnfconcacparams** command.

```
nodename.1.28.VISM8.a > cnfconcacparams <LCN> <VADTolerance> <VADDutyCycle>
```

Replace the above arguments with the values listed in Table 8-4.

**Table 8-4** Parameters for **cnfconcacparams** Command

| Parameter  | Description                                                       |
|------------|-------------------------------------------------------------------|
| <i>LCN</i> | Logical channel number (LCN) of the connection. Range is 131–510. |

**Table 8-4** Parameters for *cnfconcacparams* Command (continued)

| Parameter           | Description                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>VADTolerance</i> | VAD tolerance—the expression for VAD “over-subscription drop ratio” where: tolerance = 10000 x over-subscription drop ratio (expressed as a percentage). A typical value for VAD tolerance is 10. Some examples are: <ul style="list-style-type: none"> <li>• 10000 (tolerance) = 1% (over subscription drop ratio)</li> <li>• 100 = 0.01%</li> <li>• 10 = 0.001%</li> <li>• 1 = 0.0001%</li> </ul> Range is 0–10000. Default is 100. |
| <i>VADDutyCycle</i> | VAD duty cycle—the ratio of speech and holdover duration to total duration expressed as a percentage. Holdover is the period after silence begins and silence suppression is turned on. In VISM, the holdover time is 250 ms.<br><br>A typical value for this parameter is 61 which means that 61% of the time is taken by speech and holdover. Range is 1–99. Default is 61.                                                         |

## Configuring Domain Names and IP Addresses

Complete the following steps to configure domain names and IP addresses for VISM cards and call agents:

**Step 1** To specify a domain name for the VISM card, enter the **cnfvismdn** command.

```
nodename.1.28.VISM8.a > cnfvismdn <domain_name>
```

Replace the *domain\_name* argument value with a text string of up to 64 alphanumeric characters; spaces are not allowed. Default name is cisco.com as shown in the following example:

```
nodename.1.28.VISM8.a > cnfvismdn cisco.com
```

**Step 2** To specify the IP address and a subnet mask for the VISM card, type the **cnfvismip** command.

```
nodename.1.28.VISM8.a > cnfvismip <vismIpAddr> <netMask> | <vismBearerIpAddr> <bearerNetMask> |
```

Replace the above arguments with the values listed in Table 8-5.

**Table 8-5** Parameters for *cnfvismip* Command

| Parameter         | Description                                                                                                                      |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <i>vismIpAddr</i> | Control IP address, in dotted decimal format (nnn.nnn.nnn.nnn), of the current VISM card.                                        |
| <i>netMask</i>    | Control local network subnet mask, in dotted decimal format (nnn.nnn.nnn.nnn). The recommended value is <b>255.255.255.248</b> . |

**Table 8-5** Parameters for *cnfvismip* Command (continued)

| Parameter                 | Description                                                                   |
|---------------------------|-------------------------------------------------------------------------------|
| <i> vismBearerIpAddr </i> | (Optional) Bearer IP address, in dotted decimal format (nnn.nnn.nnn.nnn).     |
| <i> bearerNetMask </i>    | (Optional) Bearer IP subnet mask, in dotted decimal format (nnn.nnn.nnn.nnn). |

The following example shows the IP address and subnet mask configured for the VISM card and the output of the command.

```
nodename.1.28.VISM8.a > cnfvismip 172.29.52.003 255.255.255.248
Attaching network interface atm0... done.
```

## Configuring TDM Side Signaling for Applications That Use CCS

Common channel signaling (CCS) uses a dedicated channel on a DS1 line to carry the signaling for the other channels on the line. Signaling is transported across the trunk as Q.931 messages in ATM cells using AAL5.

You must identify the signaling channel to the VISM/VISM-PR card.

Complete the following steps to add and configure CCS:

- Step 1** To add a Reliable User Datagram Protocol (RUDP) trunk for a Link Access Protocol D Channel (LAPD) trunk connection, enter the **addrudptrunk** command.

```
nodename.1.21.VISM8.a > addrudptrunk <session_number> <local_port> <remote_port>
<Remote_Gw_IP>
```

Replace the above arguments with the values listed in Table 8-6.

**Table 8-6** Parameters for *addrudptrunk* Command

| Parameter             | Description                                                                     |
|-----------------------|---------------------------------------------------------------------------------|
| <i>session_number</i> | Session number in the range 1–64.                                               |
| <i>local_port</i>     | Local RUDP port number in the range 1124–49151.                                 |
| <i>remote_port</i>    | Remote RUDP port number in the range 1124–65535.                                |
| <i>Remote_Gw_IP</i>   | IP address of the remote VISM card, in dotted decimal format (nnn.nnn.nnn.nnn). |

- Step 2** To add an LAPD trunk to a specific VISM card line, enter the **addlapdtrunk** command.

```
nodename.1.21.VISM8.a > addlapdtrunk <Line_Num> <Lapd_Rudp_Index>
```

Replace the above arguments with the values listed in Table 8-7.



**Table 8-7 Parameters for addlapdtrunk Command**

| Parameter              | Description                        |
|------------------------|------------------------------------|
| <i>Line_Num</i>        | Line number in the range 1–8.      |
| <i>Lapd_Rudp_Index</i> | LAPD RUDP index in the range 1–64. |

**Step 3** To add an ISDN PRI channel on a DS1/DS0 line, enter the **addlapd** command.

```
nodename.1.28.VISM8.a > addlapd <line_number> <ds0_number> |<lapd_side>
<lapd_application_type>|
```

Replace the above arguments with the values listed in Table 8-8.

**Table 8-8 Parameters for addlapd Command**

| Parameter                    | Description                                                                                                                                                                      |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>line_number</i>           | Line number. Range is 1–8.                                                                                                                                                       |
| <i>ds0_number</i>            | DS0 number. <ul style="list-style-type: none"> <li>• 1–24 = T1 lines</li> <li>• 1–31 = E1 lines</li> </ul>                                                                       |
| <i>lapd_side</i>             | (Optional) The side of the LAPD link. Values are <ul style="list-style-type: none"> <li>• 1 = Network (default)</li> <li>• 2 = User</li> </ul>                                   |
| <i>lapd_application_type</i> | (Optional) Application type of the LAPD ISDN D channel. Values are <ul style="list-style-type: none"> <li>• 1 = PRI (default)</li> <li>• 2 = GR-303 (not unsupported)</li> </ul> |

**Step 4** To specify the LAPD stack type, enter the **cnflapdtype** command.

```
nodename.1.28.VISM8.a > cnflapdtype <line_number> <ds0_number> <lapd_type>
```

Replace the above arguments with the values listed in Table 8-9.

**Table 8-9 Parameters for *cnflapdtype* Command**

| Parameter          | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>line_number</i> | Line number. Range is 1–8.                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <i>ds0_number</i>  | DS0 number. <ul style="list-style-type: none"> <li>1–24 = T1 lines</li> <li>1–31 = E1 lines</li> </ul>                                                                                                                                                                                                                                                                                                                                                                           |
| <i>lapd_type</i>   | Type of LAPD stack to configure on the specified line and DS0. Values are <ul style="list-style-type: none"> <li>1 = CCITT</li> <li>3 = ATT5ESSPRA</li> <li>4 = ATT4ESS</li> <li>6 = NTDMS100PRA</li> <li>7 = VN2 or 3</li> <li>8 = INSNet</li> <li>9 = TR6MFC</li> <li>10 = TR6PBX</li> <li>12 = AUSP</li> <li>13 = NIL</li> <li>14 = SSETSI</li> <li>15 = BC303TMC</li> <li>16 = BC303CSC</li> <li>17 = NTDMS250</li> <li>18 = Bellcore</li> <li>19 = NI2 (default)</li> </ul> |

## Configuring TDM Side Signaling for Applications That Use CAS

In VoIP trunking mode basic CAS configurations are not required.

For advanced CAS configurations, see the “CAS Features” section on page 9-125.

### Adding DS0 Endpoints to Lines

The number of DS0s you can add depends on the template that you are using.

Complete the following steps to add DS0 endpoints to lines:

**Step 1** To add multiple endpoints with one command, enter the **addendpts** command.

```
nodename.1.12.VISM8.a > addendpts <endpt_num> <ds1_num> <ds0_num> <endpts_num>
```

Replace the above arguments with the values listed in Table 8-10.

**Table 8-10 Parameters for addendpts Command**

| Parameter        | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>endpt_num</i> | <p>First endpoint number of a range of consecutive endpoints.</p> <ul style="list-style-type: none"> <li>• Template 1 <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2 <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3 <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4 <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5 <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul> |
| <i>ds1_num</i>   | Starting physical line number in the range 1–8.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <i>ds0_num</i>   | <p>Starting DS0 number from which the endpoints are added.</p> <ul style="list-style-type: none"> <li>• 1–24 for T1 lines</li> <li>• 1–31 for non-CAS E1 lines</li> <li>• 1–15 and 17–31 for CAS E1 lines</li> </ul> <p>For VISM E1 cards, 16 is pre-allocated as the CAS channel.</p> <p><b>Note</b> If the application requires CAS, issue the <b>cnflnsig</b> command before adding the endpoints.</p>                                                                                                                                                                                                                                                                                                                                                                                            |

**Table 8-10** Parameters for *addendpts* Command (continued)

| Parameter         | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>endpts_num</i> | <p>Number of endpoints to add.</p> <ul style="list-style-type: none"> <li>• Template 1 <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2 <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3 <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4 <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5 <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul> |

**Step 2** To add a single DS0 to a line, enter the **addendpt** command.

```
nodename.1.28.VISM8.a > addendpt <endpt_num> <ds1_num> <ds0_num>
```

Replace the above arguments with the values listed in Table 8-10.

**Step 3** To validate the endpoints that you added, enter the **dspendpts** command.

```
nodename.1.28.VISM8.a > dspendpts
```

```

EndptNum  Ena/Speed
-----  -
1          act/ 64k
2          act/ 64k
3          act/ 64k
4          act/ 64k
5          act/ 64k
6          act/ 64k
7          act/ 64k
8          act/ 64k
9          act/ 64k
10         act/ 64k
11         act/ 64k
12         act/ 64k
13         act/ 64k
14         act/ 64k
15         act/ 64k

```

```

16      act/ 64k
17      act/ 64k
18      act/ 64k
19      act/ 64k
20      act/ 64k

```

Type <CR> to continue, Q<CR> to stop:

## Adding RTP Connections

A Real-Time Protocol (RTP) connection must be associated with each of the endpoints being utilized in VoIP trunking. The RTP connection binds an endpoint to a UDP port.

To add an RTP connection, complete the following steps:

**Step 1** To add a static RTP VoIP trunking connection, use the **addrtpcon** command.

```

nodename.1.28.VISM8.a > addrtpcon <rtp_conn_index> <rtp_endpt_num> <rtp_local_port>
<rtp_remote_port> <rtp_remote_GW_IP_Addr> <voice_codec_type> |<voice_packet_period>
<bearer_prec> <bearer_tos> <conn_mode> <ecan> <VAD_OnOff> <VAD_Timer> <CAS_Transport>
<DTMF_Transport> <ICS> <payload>

```

Replace the above arguments with the values listed in Table 8-11.

**Table 8-11** Parameters for **addrtpcon** Command

| Parameter              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>rtp_conn_index</i>  | Connection identification number. Range is 1–248.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <i>rtp_endp_num</i>    | Endpoint number. <ul style="list-style-type: none"> <li>• Template 1               <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2               <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3               <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4               <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5               <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul> |
| <i>rtp_local_port</i>  | Static RTP local port number. It can be an even number in the range from 49648 to 50142. <p><b>Note</b> The odd numbers within the <i>rtp_local_port</i> range are reserved for Real-Time Conferencing Protocol (RTCP) ports.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <i>rtp_remote_port</i> | Static RTP remote port number. It can be an even number in the range from 16384 to 50142. <p><b>Note</b> The odd numbers within the <i>rtp_remote_port</i> range are reserved for RTCP ports.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

**Table 8-11 Parameters for *addrtpcon* Command (continued)**

| Parameter                    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>rtp_remote_GW_IP_Addr</i> | IP address of the remote VISM card, in dotted decimal format (nnn.nnn.nnn.nnn).                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <i>voice_codec_type</i>      | Type of coding/decoding to be performed on the data stream. It can be one of the following values: <ul style="list-style-type: none"> <li>• 1 = G.711u</li> <li>• 2 = G.711a</li> <li>• 3 = G.726-32k</li> <li>• 4 = G.729a</li> <li>• 5 = G.729ab</li> <li>• 6 = Clear channel (VAD must be off)</li> <li>• 7 = G.726-16k</li> <li>• 8 = G.726-24k</li> <li>• 9 = G.726-40k</li> <li>• 11 = G.723.1-H</li> <li>• 12 = G.723.1a-H</li> <li>• 13 = G.723.1-L</li> <li>• 14 = G.723.1a-L</li> <li>• 15 = Lossless (VAD must be off)</li> </ul> |
| <i>voice_packet_period</i>   | (Optional) Packetization period (defined in milliseconds). It can be one of the following values: <ul style="list-style-type: none"> <li>• 10</li> <li>• 20</li> <li>• 30</li> <li>• 40</li> <li>• 60</li> </ul>                                                                                                                                                                                                                                                                                                                             |
| <i>bearer_prec</i>           | (Optional) Bearer precedence. Range is 0–7. Default is 5.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <i>bearer_tos</i>            | (Optional) Bearer type of service (ToS). It can be one of the following values: <ul style="list-style-type: none"> <li>• 0 (Default)</li> <li>• 1</li> <li>• 2</li> <li>• 4</li> <li>• 8</li> </ul>                                                                                                                                                                                                                                                                                                                                          |
| <i>conn_mode</i>             | (Optional) Connection mode. It can be one of the following values: <ul style="list-style-type: none"> <li>• 1 = VISM sends packets</li> <li>• 2 = VISM receives packets</li> <li>• 3 = VISM sends and receives packets (Default)</li> <li>• 4 = Inactive. VISM does not send or receive packets</li> </ul>                                                                                                                                                                                                                                   |

**Table 8-11 Parameters for *addrtpcon* Command (continued)**

| Parameter             | Description                                                                                                                                                                                                                                                                                                                                                |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>ecan</i>           | (Optional) Enables or disables echo cancellation (ECAN). It can be one of the following values: <ul style="list-style-type: none"> <li>• 1 = Enable ECAN (Default)</li> <li>• 2 = Disables ECAN</li> </ul>                                                                                                                                                 |
| <i>VAD_OnOff</i>      | (Optional) Enables or disables voice activity detection (VAD). It can be one of the following values: <ul style="list-style-type: none"> <li>• 1 = On</li> <li>• 2 = Off (Default)</li> </ul>                                                                                                                                                              |
| <i>VAD_Timer</i>      | (Optional) The VAD holdover timer (defined in milliseconds) in the range 250–65535.                                                                                                                                                                                                                                                                        |
| <i>CAS_Transport</i>  | (Optional) Enables or disables CAS transport. It can be one of the following values: <ul style="list-style-type: none"> <li>• 1 = On (Default)</li> <li>• 2 = Off</li> </ul>                                                                                                                                                                               |
| <i>DTMF_Transport</i> | (Optional) Enables or disables DTMF tone transport. It can be one of the following values: <ul style="list-style-type: none"> <li>• 1 = On (Default)</li> <li>• 2 = Off</li> </ul> <p><b>Note</b> The <i>DTMF_Transport</i> argument value must be set to 1 (on) when the <i>voice_codec_type</i> is configured for codecs other than G.711 and G.726.</p> |
| <i>ICS</i>            | (Optional) Enables or disables idle code suppression (ICS) for the channel identifier (CID). It can be one of the following values: <ul style="list-style-type: none"> <li>• 1 = Enable ICS</li> <li>• 2 = Disable ICS (Default)</li> </ul>                                                                                                                |
| <i>payload</i>        | (Optional) Assigns the payload type. Range is 0–255. <p><b>Note</b> If you do not use the <i>payload</i> argument to assign the payload type, the dynamic payload is set to the static value of the DSP codec type.</p>                                                                                                                                    |

**Note**

Ensure that the local RTP port and remote RTP port have matching port numbers on the remote gateway.

**Step 2** To display the configuration of the RTP trunking connection you added, use the **dsrtpcon** command.

```
nodename.1.28.VISM8.a > dsrtpcon <rtp_conn_index>
```

Replace *<rtp\_conn\_index>* with a value in the range 1–248. The following example shows the information for RTP connection 1.

```
nodename.1.28.VISM8.a > dsrtpcon 1

Connection Index:      1
Endpoint Number:      1
Local RTP Port:        49648
Remote RTP Port:       49648
Remote IP Address:     10.1.30.30
Codec Type:            G.711u
Packetization Period: ten msec
ECAN Status:           Enable
VAD:                   Off
VAD Timer:             250 msec
CAS Transport:         On
DTMF Transport:        On
ICS Enable:            Disable
Bearer TOS:            160
Connection Mode:       GW can send and recv packets
Conn Alarm State:      Active
Conn Fail Reason:      Not Fail
Payload Type:          256
Associated PVC:        131
```

## Sample Configuration

This section provides examples of configuring VoIP trunking between two VISM/VISM-PR cards.

### Near-End Card Configuration

The following steps show the set up for VoIP trunking on the near-end VISM/VISM-PR card.

1. Set the VISM/VISM-PR mode to VoIP switching and codec template to 1.

```
cnfvismmode 1
cnfcoectmpl 1
```



**Note** When you make changes to the codec template, the VISM/VISM-PR card resets.

2. Add a resource partition to communicate to the PXM card.

```
addport
addrscprtn 1
```

3. Add the line, configure the line, and configure the line signaling as CCS.

```
addln 3
cnfln 3 2 10 2 1 1
cnflnsig 3 2
```



4. Add the slave connection on the VISM/VISM-PR card.

```
addcon 150 1 1 2 80000 1 sol-mgx2.0.1.200.220
cnfconvbdpol 150 1 2
```

5. Set the domain name and IP address.

```
cnfvismdn vism19
cnfvismip 10.60.7.1 255.255.255.0
```

6. Add the RUDP session for ISDN Backhaul.

```
addrudptrunk 3 7000 7000 10.60.8.1
```

7. Add the LAPD on line 3.

```
addlapdtrunk 3 3
addlapd 3 24 2 1
```

8. Add the endpoints to the line.

```
addendpts 21 3 1 10
```

9. Add the RTP connections to the far-end VISM/VISM-PR card.

```
addrtpcon 21 21 49688 49736 10.60.8.1 1 10 5 0 3 2 1 250 2 1
addrtpcon 22 22 49690 49738 10.60.8.1 1 10 5 0 3 2 1 250 2 1
addrtpcon 23 23 49692 49740 10.60.8.1 1 10 5 0 3 2 1 250 2 1
addrtpcon 24 24 49694 49742 10.60.8.1 1 10 5 0 3 2 1 250 2 1
addrtpcon 25 25 49696 49744 10.60.8.1 1 10 5 0 3 2 1 250 2 1
addrtpcon 26 26 49698 49746 10.60.8.1 1 10 5 0 3 2 1 250 2 1
addrtpcon 27 27 49700 49748 10.60.8.1 1 10 5 0 3 2 1 250 2 1
addrtpcon 28 28 49702 49750 10.60.8.1 1 10 5 0 3 2 1 250 2 1
addrtpcon 29 29 49704 49752 10.60.8.1 1 10 5 0 3 2 1 250 2 1
addrtpcon 30 30 49706 49754 10.60.8.1 1 10 5 0 3 2 1 250 2 1
```

## Far-End Card Configuration

The following steps show the set up for VoIP trunking on the far-end VISM/VISM-PR card.

1. Set the VISM/VISM-PR mode to VoIP switching and codec template to 1.

```
cnfvismmode 1
cnfcodectmpl 1
```



**Note** When you make changes to the codec template, the VISM/VISM-PR card resets.

2. Add a resource partition to communicate to the PXM card.

```
addport
addrscprtn 1
```

3. Add the line, configure the line, and configure the line signaling as CCS.

```
addln 3
cnfln 3 2 10 2 1 1
cnflnsig 3 2
```

4. Add the connection on the VISM/VISM-PR card.

```
addcon 150 1 1 2 80000 1 sol-mgx2.0.2.200.220
cnfconvbdpol 150 1 2
```

5. Set the domain name and IP address.

```
cnfvismdn vism20
cnfvismip 10.60.8.1 255.255.255.0
```

6. Add the RUDP session for ISDN Backhaul.

```
addrudptrunk 3 7000 7000 10.60.7.1
addlapdtrunk 3 3
```

7. Add the LAPD on line 3.

```
addlapd 3 24 2 1
```

8. Add the endpoints to the line.

```
addendpts 21 3 1 10
```

9. Add the RTP connections to the far-end VISM/VISM-PR card.

```
addrtpcon 21 21 49736 49688 10.60.7.1 1 10 5 0 3 2 1 250 2 1
addrtpcon 22 22 49738 49690 10.60.7.1 1 10 5 0 3 2 1 250 2 1
addrtpcon 23 23 49740 49692 10.60.7.1 1 10 5 0 3 2 1 250 2 1
addrtpcon 24 24 49742 49694 10.60.7.1 1 10 5 0 3 2 1 250 2 1
addrtpcon 25 25 49744 49696 10.60.7.1 1 10 5 0 3 2 1 250 2 1
addrtpcon 26 26 49746 49698 10.60.7.1 1 10 5 0 3 2 1 250 2 1
addrtpcon 27 27 49748 49700 10.60.7.1 1 10 5 0 3 2 1 250 2 1
addrtpcon 28 28 49750 49702 10.60.7.1 1 10 5 0 3 2 1 250 2 1
addrtpcon 29 29 49752 49704 10.60.7.1 1 10 5 0 3 2 1 250 2 1
addrtpcon 30 30 49754 49706 10.60.7.1 1 10 5 0 3 2 1 250 2 1
```



# CHAPTER 9

## Features and Advanced Configurations

This section describes the VISM/VISM-PR features and advanced configurations listed in Table 9-1.

**Table 9-1** VISM/VISM-PR Features and Advanced Configurations

| Classification                       | Feature and Reference                           | Supported Modes                                                                              | Supported Hardware |
|--------------------------------------|-------------------------------------------------|----------------------------------------------------------------------------------------------|--------------------|
| <b>DSP/Bearer Features, page 9-4</b> |                                                 |                                                                                              |                    |
|                                      | Codecs, page 9-4                                | All modes                                                                                    | VISM, VISM-PR      |
|                                      | Dynamic Payload for Voice Codecs, page 9-6      | VoIP switching/VoIP trunking, AAL1 switching, VoIP and AAL1 SVC, VoIP trunking/AAL2 trunking | VISM, VISM-PR      |
|                                      | V.110, page 9-6                                 | AAL2 trunking                                                                                | VISM-PR            |
|                                      | 1560/980 Hz Modem Tone Detection, page 9-8      | VoIP switching/VoIP trunking                                                                 | VISM-PR            |
|                                      | Configurable Jitter Buffer, page 9-9            | All modes<br><b>Note</b> For AAL2 trunking mode, it is recommended that you use fixed mode.  | VISM, VISM-PR      |
|                                      | ATM Fax Relay, page 9-11                        | AAL2 trunking                                                                                | VISM-PR            |
|                                      | T.38 Fax Relay, page 9-16                       | VoIP switching                                                                               | VISM, VISM-PR      |
|                                      | Mid-Call DTMF, page 9-16                        | VoIP switching                                                                               | VISM, VISM-PR      |
|                                      | DTMF Relay and Passthrough, page 9-17           | All modes                                                                                    | VISM, VISM-PR      |
| <b>ATM (PVC) Features, page 9-17</b> |                                                 |                                                                                              |                    |
|                                      | Preferred Routes, page 9-17                     | AAL2 trunking, VoIP switching                                                                | VISM-PR            |
|                                      | Priority Bumping, page 9-23                     | AAL2 trunking                                                                                | VISM-PR            |
|                                      | AIS Propagation Control, page 9-29              | AAL2 trunking mode                                                                           | VISM, VISM-PR      |
|                                      | Bandwidth Utilization Enhancements, page 9-33   | AAL2 trunking                                                                                | VISM-PR            |
|                                      | PVC OAM Cell Parameter Configuration, page 9-38 | All modes                                                                                    | VISM, VISM-PR      |

**Table 9-1 VISM/VISM-PR Features and Advanced Configurations (continued)**

| Classification                 | Feature and Reference                                            | Supported Modes                                                                                                                                   | Supported Hardware |
|--------------------------------|------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
|                                | Private Network-to-Network Interface Priority Routing, page 9-38 | AAL1 switching, VoIP and AAL1 SVC, VoIP trunking/AAL2 trunking                                                                                    | VISM-PR            |
|                                | Additional VBR Enhancements, page 9-40                           | All modes                                                                                                                                         | VISM-PR            |
| <b>Call Control, page 9-40</b> |                                                                  |                                                                                                                                                   |                    |
|                                | Separate Bearer IP Address, page 9-40                            | VoIP switching                                                                                                                                    | VISM, VISM-PR      |
|                                | Call Throttling, page 9-42                                       | AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC                                                                           | VISM-PR            |
|                                | Trunking Gateway Control Protocol Release 1.0, page 9-43         | VoIP switching                                                                                                                                    | VISM, VISM-PR      |
|                                | CALEA, page 9-47                                                 | VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, VoIP trunking/AAL2 trunking | VISM, VISM-PR      |
|                                | MGC Redundancy, page 9-48                                        | AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC,                                                                          | VISM, VISM-PR      |
|                                | External DNS, page 9-48                                          | AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC,                                                                          | VISM, VISM-PR      |
|                                | AAL1 SVC-Based TDM Hairpinning, page 9-48                        | AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC,                                                                          | VISM, VISM-PR      |
|                                | MGCP 1.0, page 9-49                                              | AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC,                                                                          | VISM, VISM-PR      |
|                                | RSVP-Based Admission Control, page 9-49                          | VoIP switching                                                                                                                                    | VISM, VISM-PR      |
|                                | Local Traffic Grooming, page 9-50                                | VoIP switching/VoIP trunking, VoIP and AAL1 SVC                                                                                                   | VISM, VISM-PR      |
|                                | Announcement File System, page 9-51                              | VoIP switching/VoIP trunking                                                                                                                      | VISM-PR            |
|                                | ISDN Backhaul Advanced Configuration, page 9-54                  | VoIP switching                                                                                                                                    | VISM, VISM-PR      |
|                                | Advanced LAPD Configuration, page 9-57                           | VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, VoIP and AAL1 SVC                                                                | VISM, VISM-PR      |

**Table 9-1** VISM/VISM-PR Features and Advanced Configurations (continued)

| Classification                           | Feature and Reference                                    | Supported Modes               | Supported Hardware |
|------------------------------------------|----------------------------------------------------------|-------------------------------|--------------------|
| <b>Diagnostics/Statistics, page 9-58</b> |                                                          |                               |                    |
|                                          | Voice Quality Statistics, page 9-59                      | VoIP switching, VoIP trunking | VISM-PR            |
|                                          | Diagnostic Testing for DSP Failures, page 9-60           | All modes                     | VISM-PR            |
|                                          | History Statistics Collection, page 9-62                 | All modes                     | VISM-PR            |
|                                          | Static and Real-Time Configuration Display, page 9-69    | All modes                     | VISM/VISM-PR       |
|                                          | Trap Filtering, page 9-83                                | All modes                     | VISM-PR            |
|                                          | VISM-PR Bulk Statistics Upload to CWM, page 9-87         | All modes                     | VISM-PR            |
|                                          | RTP Connection Statistics, page 9-93                     | VoIP switching, VoIP trunking | VISM, VISM-PR      |
|                                          | Clock Slip Counters, page 9-94                           | All modes                     | VISM, VISM-PR      |
|                                          | Channel Alarm Enhancement, page 9-94                     | All modes                     | VISM, VISM-PR      |
|                                          | VISM TDM Line Statistics Collection, page 9-94           | All modes                     | VISM, VISM-PR      |
|                                          | Loopbacks for Lines and Connections, page 9-94           | All modes                     | VISM, VISM-PR      |
| <b>TDM Features, page 9-96</b>           |                                                          |                               |                    |
|                                          | E1 CAS Idle Code Configuration, page 9-96                | AAL2 trunking                 | VISM, VISM-PR      |
|                                          | Programmable Tone Plans, page 9-100                      | All modes                     | VISM-PR            |
|                                          | Call Progress Tones, page 9-102                          | All switching                 | VISM-PR (T1 only)  |
|                                          | Wireless Tones, page 9-107                               | VoIP switching                | VISM-PR            |
|                                          | TDM Companding Law Configuration, page 9-118             | VoIP trunking, AAL2 trunking  | VISM-PR            |
|                                          | Programmable CAS Bit Mapping (ABCD CAS bits), page 9-119 | AAL2 trunking                 | VISM-PR            |
|                                          | Line Trunk Conditioning, page 9-124                      | AAL2 trunking                 | VISM/VISM-PR       |
|                                          | Adjustable Gain, page 9-124                              | All modes                     | VISM, VISM-PR      |
|                                          | Adjustable Music On-Hold Threshold, page 9-124           | All modes                     | VISM, VISM-PR      |
|                                          | CAS Features, page 9-125                                 | All switching modes           | VISM, VISM-PR      |

**Table 9-1** VISM/VISM-PR Features and Advanced Configurations (continued)

| Classification | Feature and Reference                    | Supported Modes     | Supported Hardware |
|----------------|------------------------------------------|---------------------|--------------------|
|                | RFC 3064 Package Support, page 9-133     | All switching modes | VISM, VISM-PR      |
|                | VISM Network Continuity Test, page 9-133 | All switching modes | VISM, VISM-PR      |

## DSP/Bearer Features

This section describes the VISM/VISM-PR DSP/bearer capabilities. It includes the following sections:

- Codecs, page 9-4
- Dynamic Payload for Voice Codecs, page 9-6
- V.110, page 9-6
- 1560/980 Hz Modem Tone Detection, page 9-8
- Configurable Jitter Buffer, page 9-9
- ATM Fax Relay, page 9-11
- T.38 Fax Relay, page 9-16
- Mid-Call DTMF, page 9-16
- DTMF Relay and Passthrough, page 9-17

## Codecs

VISM/VISM-PR allows the use of codec templates in which you can select a template instead of specifying each allowable codec individually.

Within each codec template, you can specify an order of preference. At call setup time, the codec to be used from the configured template is either specified by the call agent or negotiated between the calling and called VISM/VISM-PR cards. If the codec is negotiated, the most preferred codec that both VISM/VISM-PR cards can support is selected.

Table 9-2 lists the VISM/VISM-PR codecs and their attributes.

**Table 9-2** Supported Codecs

| Codec                    | Packetization Period (milliseconds) | Templates Supported | VISM DS0 Density |     | VISM-PR DS0 Density |     |
|--------------------------|-------------------------------------|---------------------|------------------|-----|---------------------|-----|
|                          |                                     |                     | T1               | E1  | T1                  | E1  |
| G.711u                   | 5, 10, and 20                       | 1, 2, 3, 4, 5       | 192              | 248 | 192                 | 248 |
| G.711a                   | 5, 10, and 20                       | 1, 2, 3, 4, 5       | 192              | 248 | 192                 | 248 |
| G.729a                   | 10, 20, 30                          | 1, 3, 4, 5          | 145              | 145 | 192                 | 248 |
| G.729ab                  | 10, 20, 30, and 40                  | 1, 3, 4, 5          | 145              | 145 | 192                 | 248 |
| G.726-16k, 24k, 32k, 40k | 10, 20, 30, and 40                  | 1, 3, 4, 5          | 145              | 145 | 192                 | 248 |

Table 9-2 Supported Codecs (continued)

| Codec                | Packetization Period (milliseconds) | Templates Supported | VISM DS0 Density |     | VISM-PR DS0 Density |     |
|----------------------|-------------------------------------|---------------------|------------------|-----|---------------------|-----|
|                      |                                     |                     | T1               | E1  | T1                  | E1  |
| G.723.1-H            | 30 and 60                           | 4                   | 64               | 64  | 144                 | 144 |
| G.723.1a-H           | 30 and 60                           | 4                   | 64               | 64  | 144                 | 144 |
| G.723.1-L            | 30 and 60                           | 4                   | 64               | 64  | 144                 | 144 |
| G.723.1a-L           | 30 and 60                           | 4                   | 64               | 64  | 144                 | 144 |
| Clear channel        | 10 and 20                           | 1, 2, 3, 4, 5       | 192              | 248 | 192                 | 248 |
| Lossless compression | Range 0–50                          | 5                   | N/A              | N/A | 192                 | 248 |

## G.729a Codec with 20 ms Packetization Period

VISM/VISM-PR cards contain a custom profile to support the G.729a codec with a 20-millisecond (ms) packetization period.

The Custom profile type, 210, supports upspeeding from the G.729a codec with a 20-ms packetization period to other codecs, including G.711 Mu/A law and Clear Channel. Profile type 210 also includes the CCD voiceband data (VBD) codec.

For the VISM card, the G.729a codec with a 20-ms packetization period is supported for AAL2 trunking and applies to templates 1, 3, and 4.

For the VISM-PR card, the G.729a codec with a 20-ms packetization period is supported for switching and trunking modes and applies to templates 1, 3, 4, and 5.

## VISM-PR Lossless Compression

The lossless compression feature includes the lossless compressed (LLC) codec that allows higher throughput through the T1/E1 lines by removing information redundancy.

Lossless compression provides the following functions:

- Reduces the transmission bandwidth necessary between the base transceiver station (BTS) and the base station controller (BSC)
- Aggregates traffic between the BTS and BSC
- Compresses traffic
- Converts traffic from TDM to packet

The lossless compression codec supports the following specifications:

- 192 T1 and 248 E1 channels
- Template 5 for lossless codec
- Same packetization period as clear channel
- SNMP MIB
- AAL2 trunking mode

**Note**

Lossless codec is not recommended when the voice traffic stream is incompressible. If it is used with an incompressible voice traffic stream, expansion might occur due to internal compression headers.

## Dynamic Payload for Voice Codecs

VISM/VISM-PR supports the dynamic payload for voice codecs.

To configure the VISM/VISM-PR card for dynamic payload, complete the following steps:

**Step 1** To enable the VISM/VISM-PR card for dynamic payload, enter the **cnfdynamicpayload** command.

```
nodename.1.12.VISM8.a > cnfdynamicpayload <dynamic_payload>
```

Replace the <dynamic\_payload> argument with a value of 1.

- 1 = Enable
- 2 = Disable

**Step 2** To display the status of the dynamic payload feature, enter the **dspdynamicpayload** command.

```
nodename.1.12.VISM8.a > dspdynamicpayload
```

```
Dynamic Payload flag: enable
```

When dynamic payload is enabled, the session description protocol (SDP) payload type is negotiated in the range from 96 to 127 during codec negotiation.

The payload type specified in the **addrtpcon**, **cnfrtpcon**, or **cnfvbdcodesc** command is passed to the digital signal processor (DSP) to modify its static payload types. When dynamic payload is disabled, the DSP uses the static payload type values for the codec.

## V.110

VISM-PR can support V.110 data traffic transport through ATM trunks.

When V.110 is enabled on a line, VISM-PR detects the V.110 traffic and upspeeds to Clear Channel. This upspeeding allows for 64K clear data transport. When the V.110 stream is not detected, VISM-PR downspeeds from Clear Channel to a previous codec.

The total number of supported V.110 calls is the same as the total number of Clear Channel calls that are supported in AAL2 trunking mode.

You can enable or disable V.110 on a line and is applicable only to AAL2 trunking mode.

## Enabling V.110

To enable or disable V.110, complete the following steps:

**Step 1** Log in to the VISM-PR card.

**Step 2** Ensure you are in the AAL2 trunking mode.



**Step 3** Ensure that the line signaling type is common channel signaling (CCS).

**Step 4** Ensure that CIDs are not present on the line.

**Step 5** To enable or disable V.110 detection, use the **cnflnv110** command.

```
cnflnv110 <line_number> <v110_flag>
```

Replace *<line\_number>* with the line number on which you want to enable or disable V.110. Range is 1–8.

Replace *<v110\_flag>* with one of the following values to enable or disable V.110 on the line:

- 1 = Enable
- 2 = Disable (default)

The following example shows the sample syntax to enable V.110 detection on line 1.

```
nodename.1.28.VISM8.a > cnflnv110 1 1
nodename.1.28.VISM8.a >
```

**Step 6** To verify that V.110 is enabled on line 1, use the **dspln** command.

```
nodename.1.28.VISM8.a > dspln 1

LineNum:                1
LineConnectorType:      RJ-48
LineEnable:              Modify
LineType:                dsx1ESF
LineCoding:              dsx1B8ZS
LineLength:              0-131 ft
LineXmtClockSource:     LocalTiming
LineLoopbackCommand:    LocalLineLoop
LineSendCode:            NoCode
LineUsedTimeslotsBitMap: 0xffffffff
LineLoopbackCodeDetection: codeDetectDisabled
LineSignalingType:      No Signaling
LineCcsChannels:        0x0
LineTrunkConditioning:  disable
LineBearerBusyCode:     127
CircuitIdentifier:
TxDigitOrder:           aniThenDnis
TonePlanRegion:
TonePlanVersion:        0
RingingTO:              180
RingBackTO:             180
```

Type <CR> to continue, Q<CR> to stop:

```
BusyTO:                 30
ReorderTO:              30
DialTO:                 16
StutterDialTO:          16
OffHookAlertTO:         5
RemoteRingbackMethod:   proxy
V110Detection:         enable
```

```
LineNumOfValidEntries: 8
```

```
nodename.1.28.VISM8.a >
```

## 1560/980 Hz Modem Tone Detection

Some proprietary modem modulations might not be recognized as modem signals. Therefore, the modem cannot switch from a compressed voice mode channel to modem pass-through.

The 1560/980 Hz modem tone can be used to detect a proprietary signal from the modem and to carry the encrypted data over a secure modem connection in a VoIP network.

In Release 3.3.20, you can configure the VISM-PR card to detect the 1560/980 Hz modem tone in the VoIP switching mode.

When the 1560/980 Hz modem tone is detected, the VISM-PR upspeaks to the Clear Channel codec. Voice activity detector (VAD) and echo canceller (ECAN) are automatically disabled. When silence is detected, the VISM-PR downspeaks back to its voice codec and to the original VAD and ECAN states.

### Prerequisites

Before enabling 1560/980 Hz tone detection, complete the following tasks for the local and remote VISM-PR cards:

1. Ensure the VISM-PR is operating in the VoIP switching mode.
2. Configure the VBD codec for Clear Channel by entering the **cnfvbdcodec** command with option 4.



**Note** If the VBD codec is not set to Clear Channel, the modem connection might not go through. The VISM-PR card automatically upspeaks to the configured VBD codec and thus does not reject the call.

3. Ensure you are using templates 1, 2, or 3. 1560/980 Hz tone detection is not supported on template 5.

### Configuring the Tone Detection

By default, 1560/980 Hz tone detection is disabled.

To enable or disable the detection of the 1560/980 Hz tones, complete the following steps.



**Note** If calls exist on the card, enabling or disabling this feature could affect these existing calls.

**Step 1** To enable the detection of 1580/980 tones, enter the **cnfsplmodemtoneenbl** command.

```
sol-mgx2.1.19.VISM8.a > cnfsplmodemtoneenbl <tone_id>
```

Replace *<tone\_id>* with a value of 1 to indicate 1560/980 Hz tone.

```
sol-mgx2.1.19.VISM8.a > cnfsplmodemtoneenbl 1
```

```
sol-mgx2.1.19.VISM8.a >
```

**Step 2** To confirm that the 1560/980 Hz tone can be detected, enter the **dspsplmodemtone** command.

```
sol-mgx2.1.19.VISM8.a > dspsplmodemtone
```

```
1560/980 Hz Modem Tone Detection : ENABLED
```

**Step 3** To disable the detection of 1580/980 tones, enter the **cnfsplmodemtonedsbl** command.

```
sol-mgx2.1.19.VISM8.a > cnfsplmodemtonedsbl
```

Replace *<tone\_id>* with a value of 1 to indicate 1560/980 Hz tone.

```
sol-mgx2.1.19.VISM8.a > cnfsplmodemtonedsbl 1
```

```
sol-mgx2.1.19.VISM8.a >
```

**Step 4** Confirm that the 1560/980 tone cannot be detected.

```
sol-mgx2.1.19.VISM8.a > dspsplmodemtone
```

```
1560/980 Hz Modem Tone Detection : DISABLED
```

---

## Configurable Jitter Buffer

The configurable jitter buffer feature provides configuration of jitter buffer mode (fixed and adaptive) and initial delay time on a codec basis.

Fixed mode is used if the latency is expected to be constant.

Adaptive mode is used if the latency is expected to be varied.

This feature reduces packet loss for fax, modem, and CCD calls.

Use the following command to configure the jitter buffer:

```
cnfcodecjtrdelay <codecType> <jitter_mode> <jitter_initdelay>
```

Replace the above arguments with the values listed in Table 9-3.

**Table 9-3 Parameters for *cnfcodecjtrdelay* Command**

| Parameter               | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>codecType</i>        | Type of coding/decoding to be performed on the data stream. Values are <ul style="list-style-type: none"> <li>• 1 = G.711u</li> <li>• 2 = G.711a</li> <li>• 3 = G.726-32K</li> <li>• 4 = G.729a</li> <li>• 5 = G.729ab</li> <li>• 6 = Clear channel (VAD must be off)</li> <li>• 7 = G.726-16K</li> <li>• 8 = G.726-24K</li> <li>• 9 = G.726-40K</li> <li>• 11 = G.723.1-H</li> <li>• 12 = G.723.1-AH</li> <li>• 13 = G.723.1-L</li> <li>• 14 = G.723.1-AL</li> <li>• 15 = Lossless (VAD must be off)</li> </ul> |
| <i>jitter_mode</i>      | Jitter delay mode. Use one of the following values: <ul style="list-style-type: none"> <li>• 1 = Fixed. We recommend fixed mode if latency jitter is constant.</li> <li>• 2 = Adaptive. We recommend adaptive if latency jitter is variable.</li> </ul>                                                                                                                                                                                                                                                          |
| <i>jitter_initdelay</i> | Initial jitter delay (defined in milliseconds). Ranges are <ul style="list-style-type: none"> <li>• For codec templates 1, 3, 4, and 5—0–100 in increments of 10.</li> <li>• For codec template 2—0–100 in increments of 5.</li> <li>• For Lossless codec, range is 0–50.</li> </ul>                                                                                                                                                                                                                             |

Use the **dspscodecjttrdelays** command to display the jitter buffer parameters you configured with the **cnfcodecjttrdelay** command.

```
nodename.1.5.VISM8.a > dspscodecjttrdelays
-----
codecType          delay mode          timestamp          initial delay
-----
1 - G.711u          fixed               No                 hundred
2 - G.711a          fixed               No                 hundred
3 - G.726-32K       adaptive            N/A                sixty
4 - G.729a          adaptive            N/A                sixty
5 - G.729ab         adaptive            N/A                sixty
6 - clr chan        fixed               No                 hundred
7 - G.726-16K       adaptive            N/A                sixty
8 - G.726-24K       adaptive            N/A                sixty
9 - G.726-40K       adaptive            N/A                sixty
11 - G.723.1-H      adaptive            N/A                sixty
12 - G.723.1a-H     adaptive            N/A                sixty
13 - G.723.1-L      adaptive            N/A                sixty
14 - G.723.1a-L     adaptive            N/A                sixty
15 - Lossless       fixed               No                 sixteen
```

**Note**

In AAL2 trunking mode, we recommend that you use the fixed jitter delay mode.

## ATM Fax Relay

The ATM fax relay feature allows the VISM-PR card to transport fax over an ATM trunk more reliably and efficiently than fax pass through by using less bandwidth.

This feature is applicable to the VISM-PR card in AAL2 trunking mode.

**Note**

ATM fax relay is supported for templates 3 and 4.

If both the near-end and far-end gateways support ATM fax relay, an attempt is made to switch to ATM fax relay for the connection.

If neither gateway supports ATM fax relay or an attempt to switch fails, the connection remains established as a voice call or pass through until one of the endpoints goes on-hook.

ATM fax relay uses less than 50 cps bandwidth for each connection.

## Configure ATM Fax Relay Parameters

To configure ATM fax relay parameters, complete the following steps:

- Step 1** Log in to the PXM card and **cc** to the VISM-PR card.
- Step 2** Ensure that the VISM-PR card is running in AAL2 trunking mode.
- Step 3** To configure ATM fax relay parameters, enter the **cnffaxrelayparams** command.

```
nodename.1.18.VISM8.a > cnffaxrelayparams <line_number> <Max_Xmit_Rate> |<NSF_Override>
<NSF_Country_Code> <NSF_Vendor_Code> <T30_ECM>|
```

Replace the above arguments with the values listed in Table 9-4.

**Table 9-4 Parameters for *cnffaxrelayparams* Command**

| Parameter                 | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>line_number</i>        | Line number in the range 1–8.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <i>Max_Xmit_Rate</i>      | Maximum fax transmission rate. <ul style="list-style-type: none"> <li>• 1 = 2400 bps</li> <li>• 2 = 4800 bps</li> <li>• 3 = 7200 bps</li> <li>• 4 = 9600 bps</li> <li>• 5 = 12000 bps</li> <li>• 6 = 14400 bps (default)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <i>!NSF_Override!</i>     | (Optional) Parameter to enable the gateway to override the nonstandard facilities (NSF) code in the following T.30 signals: <ul style="list-style-type: none"> <li>• NSF</li> <li>• Nonstandard facilities command (NSC)</li> <li>• Nonstandard facilities setup (NSS)</li> </ul> Values are <ul style="list-style-type: none"> <li>• 1 = Enabled (default)</li> <li>• 2 = Disabled</li> </ul> The NSF code is overridden to prevent the group 3 fax machines from synchronizing with each other on the basis of a protocol other than the ITU T-series recommendations. <p>If this proprietary synchronization is prevented, the group 3 fax machines synchronize to the standard T-series protocol. This action is necessary if the fax relay capability of the media gateway is limited to the T-series recommendations.</p> |
| <i>!NSF_Country_Code!</i> | (Optional) Country code in the NSF code identifies the country where the group 3 fax equipment with nonstandard capabilities is manufactured. <p>Value range is 0–65535.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

**Table 9-4 Parameters for *cnffaxrelayparams* Command (continued)**

| Parameter       | Description                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NSF_Vendor_Code | (Optional) Vendor code. This code is also called the terminal provider code. It identifies the manufacturer of the group 3 fax equipment with nonstandard capabilities.<br>Value range is 0–65535.                                                                                                                                                                                                                                   |
| T30_ECM         | (Optional) Parameter you use to enable and disable T.30 ECM.<br>T.30 ECM is a feature that improves image quality and page compression capabilities through a reliable image data transmission protocol. If fax calls are failing due to high packet loss, then disabling T.30 ECM might improve the successful transmission rate. <ul style="list-style-type: none"> <li>• 1 = Enabled (default)</li> <li>• 2 = Disabled</li> </ul> |

Example 9-1 shows the command to configure the maximum fax transmission rate of 14400 bps on line 1. Unless the optional parameters are configured, they automatically set to the default values.

**Example 9-1 Configuring Fax Relay Parameters**

```
nodename.1.28.VISM8.a > cnffaxrelayparams 1 6
```

```
nodename.1.28.VISM8.a >
```

**Step 4** To display the ATM fax relay parameters you configured in Step 3, use the **dspfaxrelayparams** command.

```
nodename.1.28.VISM8.a > dspfaxrelayparams <line_number>
```

Replace the *<line\_number>* argument with a value in the range 1–8.

Example 9-2 shows the sample output of the fax relay parameters for line 1.

**Example 9-2 Displaying Fax Relay Parameters**

```
nodename.1.18.VISM8.a > dspfaxrelayparams 1
```

```
line_number:          1
Max_Xmit_Rate:       fx14400bps
NSF_Override:        enabled
NSF_Country_Code:   173
NSF_Vendor_Code:     81
T30_ECM:             enabled
```

```
nodename.1.18.VISM8.a >
```

## Configure ATM Fax Relay Acknowledgment Timeout

To configure the fax relay acknowledgment timeout, complete the following steps:

- Step 1** Log in to the PXM card and **cc** to the VISM-PR card.
- Step 2** Ensure the VISM-PR card is running in AAL2 trunking mode.
- Step 3** To configure the fax acknowledgment timeout, enter the **cnffaxrelaytimeout** command.

```
nodename.1.18.VISM8.a > cnffaxrelaytimeout <line_number> <Ack_Timer>
```

Replace the *<line\_number>* argument with a line number in the range 1–8.

Replace the *<Ack\_Timer>* argument with a value in the range 250–10000 ms in multiples of 250.

The acknowledgment timer is the amount of time the near-end fax waits for a response from the far-end fax. Expiration of this response time indicates that the request to switch over to ATM fax relay has been rejected or discarded by the far-end.

The following example shows the command to configure the acknowledgment timeout as 1000 ms on line 1.

```
nodename.1.28.VISM8.a > cnffaxrelaytimeout 1 1000
```

- Step 4** To display the fax acknowledgment timeout for a specified line, enter the **dspfaxrelaytimeout** command.

```
nodename.1.18.VISM8.a > dspfaxrelaytimeout <line_number>
```

Replace the *<line\_number>* argument with a value in the range 1–8.

Example 9-3 shows the default timeout value for line 1.

### **Example 9-3** Displaying Fax Relay Timeout Values for a Line

```
nodename.1.18.VISM8.a > dspfaxrelaytimeout 1
```

```
line_number:          1
FAX_Ack_Timer:       1000 ms
```

- Step 5** To display the fax acknowledgment timeout values for all of the lines, enter the **dspfaxrelaytimeouts** command. This command does not have any parameters.

```
nodename.1.18.VISM8.a > dspfaxrelaytimeouts
```



Example 9-4 shows the default fax acknowledgment timeout values for all of the lines on the VISM-PR card.

**Example 9-4 Displaying Fax Relay Timeout Values for All Lines**

```
nodename.1.18.VISM8.a > dspfaxrelaytimeouts
```

| Line_Number | FAX Ack Timeout (ms) |
|-------------|----------------------|
| 1           | 1000                 |
| 2           | 1000                 |
| 3           | 1000                 |
| 4           | 1000                 |
| 5           | 1000                 |
| 6           | 1000                 |
| 7           | 1000                 |
| 8           | 1000                 |

## Enable ATM Fax Relay

By default, ATM fax relay is enabled for the line.

To enable ATM fax relay, complete the following steps:

- 
- Step 1** Log in to the PXM card and **cc** to the VISM-PR card.
- Step 2** Ensure that the VISM-PR card is running in AAL2 trunking mode.
- Step 3** To enable ATM fax relay on a line, enter the **cnffaxrelay** command.

```
nodename.1.18.VISM8.a > cnffaxrelay <line_number> <faxrelay>
```

Replace the *<line\_number>* argument with a value in the range 1–8.

Replace the *<faxrelay>* argument with one of the following values:

- 1 = Disable
- 2 = Enable

- Step 4** To find out whether ATM fax relay is enabled on a line, enter the **dspfaxrelay** command.

```
nodename.1.18.VISM8.a > dspfaxrelay <line_number>
```

Replace the *<line\_number>* argument with a value in the range 1–8.

Example 9-5 shows that fax relay is enabled on line 1.

**Example 9-5 Displaying Fax Relay Status**

```
nodename.1.18.VISM8.a > dspfaxrelay 1
```

```
line_number:      1
faxrelay:        Enabled
```

- Step 5** To find out whether ATM fax relay is enabled or disabled on all of the lines, enter the **dspfaxrelays** command. This command does not have any arguments.

```
nodename.1.18.VISM8.a > dspfaxrelays
```

Example 9-6 shows that ATM fax relay is enabled on all of the lines of the VISM-PR card.

### Example 9-6 Displaying Fax Relay Status for All Lines

```
nodename.1.18.VISM8.a > dspfaxrelays
```

| Line_Number | Fax Relay |
|-------------|-----------|
| 1           | Enabled   |
| 2           | Enabled   |
| 3           | Enabled   |
| 4           | Enabled   |
| 5           | Enabled   |
| 6           | Enabled   |
| 7           | Enabled   |
| 8           | Enabled   |

## T.38 Fax Relay

The ITU T.38 recommendation for the fax relay feature is for fax transmission over IP networks. To configure the T.38 fax transfer parameters for a specified line, use the **cnft38params**.

For more information about the **cnft38params** command, see “cnft38params” section on page 10-354 of Chapter 10, “CLI Commands.”



#### Note

You must use codec templates 3 and 4 with the T.38 fax relay feature enabled. When enabled, the T.38 feature supports 192 DS0s in template 3 and 144 DS0s in template 4.

## Call Agent-Controlled T.38 Fax

The call agent-controlled T.38 fax feature is an additional operational mode for MGCP 1.0. The VISM can interoperate with H.323 and non-Cisco gateways, and is supported for VoIP calls. This feature is activated by fax tone and signaling carried with the call agent.

The **cnft38fxlco** command allows you to set the local connection option fax preamble response to off.

## Mid-Call DTMF

The mid-call dual tone multifrequency (DTMF) feature enables the collection and notification of digits to the call agent following a call setup for an endpoint. This feature also supports the out-pulsing of DTMF digits at a call agent's request. This feature is used for services that require two-stage dialing, such as calling card applications.

Mid-call DTMF is supported for all the channel-associated signaling (CAS) variants, for DTMF mode only.

## DTMF Relay and Passthrough

VISM/VISM-PR supports DTMF relay using named telephony events (NTEs), named signaling event (NSE) based relay, and Cisco-RTP based relay. For all other tones, VISM uses NSEs.

By default, DTMF relay is enabled. In VoIP switching mode, if you want to run DTMF in passthrough mode, use the **cnfvoiptransparams** command to disable the DTMF relay.

```
nodename.1.27.VISM8.a > cnfvoiptransparams <DtmfRelay> <CasBits> |<EventNego>
<EventNegoPolicy> <SIDPayloadType>|
```

Use the following parameter values to disable the DTMF relay:

```
nodename.1.27.VISM8.a > cnfvoiptransparams 2 1 2 1
```

The optional *<EventNego>* argument is used to enable and disable event negotiation since this argument is used by VISM/VISM-PR to decide whether or not to advertise a named telephony event (NTE) for DTMF relay.

VISM/VISM-PR card looks at a combination of the *<DtmfRelay>* and *<EventNego>* arguments to ascertain whether or not to enable the DTMF relay or to fall back to DTMF passthrough (inband).

If event negotiation is disabled, the VISM/VISM-PR card does not advertise the DTMF relay NTE capability.

## ATM (PVC) Features

This section contains the VISM/VISM-PR ATM (PVC) features described in the following sections:

- Preferred Routes, page 9-17
- Priority Bumping, page 9-23
- AIS Propagation Control, page 9-29
- Bandwidth Utilization Enhancements, page 9-33
- PVC OAM Cell Parameter Configuration, page 9-38
- Private Network-to-Network Interface Priority Routing, page 9-38
- Additional VBR Enhancements, page 9-40

## Preferred Routes



### Note

This feature is not supported with PXM1E and PXM45 software Releases 4.x and prior.

In a PNNI network with a large number of SPVCs, the Cisco MGX 8850 (PXM1E and PXM45) can route SPVCs and SPVPs over predefined trunk routes in a PNNI group. This capability means that fewer connections need to be manually rerouted.

You can provision the VISM-PR card to specify a routing preference in case the preferred route is not available.

This feature is applicable to VISM-PR cards operating in AAL2 trunking or VoIP switching mode.

Preferred route configuration is done on the PXM card. Therefore, only VISM-PR SPVC connections that have master endpoints can be added as preferred routes.

For more information on configuring preferred routes, refer to the *Cisco MGX 8850 (PXM1E/PXM45)*, *Cisco MGX 8950*, and *Cisco MGX 8830 Configuration Guide, Release 5.1*.

## Prerequisites

Before configuring your SPVC as a preferred route, complete the following prerequisites:

- Ensure your PXM1E and PXM45 cards are running at least software Release 5.0.
- Install and perform initial configurations for the following items on your VISM-PR card:
  - Operating mode (**cnfvismmode**)
  - Codec template (**cnfcodectmpl**)
  - Port (**addport**)
  - Resource partition (**addrseprtn**)

## Configure Preferred Routes

To configure your VISM-PR card for preferred routes, complete the following steps:

- 
- Step 1** Log in to the PXM1E or PXM45 card and **cc** to the VISM-PR card.
- Step 2** Ensure you have completed the initial configurations listed in the “Prerequisites” section.
- Step 3** To add a PVC between the VISM-PR and PXM cards and associate the connection as a preferred route, enter the **addcon** command.

Use the following optional *<prefrte>* and *<direct>* arguments, which support the preferred route feature.

```
nodename.1.12.VISM8.a > addcon <localVCI> <preference> <pvc_type> <application> <PCR>
<mastership> |<remoteConnId> <serviceType> <scr> <mbs> <priority> <prefrte> <direct>|
```

Replace the above arguments with the values listed in Table 9-5.

**Table 9-5 Parameters for addcon Command**

| Parameter         | Description                                                                                                                                  |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| <i>localVCI</i>   | Local virtual channel identifier (VCI) to be used for the connection. Range is 131–510.                                                      |
| <i>preference</i> | Preference level of the local VCI. <ul style="list-style-type: none"> <li>• 1 = Primary</li> <li>• 2 = Secondary (for redundancy)</li> </ul> |
| <i>pvc_type</i>   | AAL type of connection. <ul style="list-style-type: none"> <li>• 1 = AAL5</li> <li>• 2 = AAL2</li> <li>• 3 = AAL1</li> </ul>                 |

**Table 9-5 Parameters for addcon Command (continued)**

| Parameter             | Description                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>application</i>    | <p>Connection application.</p> <ul style="list-style-type: none"> <li>• 1 = Control</li> <li>• 2 = Bearer</li> <li>• 3 = Signaling</li> </ul> <p><b>Note</b> If the connection is used for bearer <i>and</i> signaling, specify 2 for bearer.</p>                                                                                                                                                                                      |
| <i>PCR</i>            | <p>Peak cell rate measured in cells per second.</p> <ul style="list-style-type: none"> <li>• 1–96000 = AAL5 bearer</li> <li>• 1–20000 = AAL5 control PVC</li> <li>• 1–50000 = T1 AAL2 PVCs</li> <li>• 1–60000 = E1 AAL2 PVCs</li> <li>• 1–400 = Signaling PVCs in AAL2 trunking mode</li> </ul> <p><b>Note</b> If the <i>serviceType</i> argument is variable bit rate (VBR), the <i>PCR</i> argument value must be 15 or greater.</p> |
| <i>mastership</i>     | <p>Type of connection.</p> <ul style="list-style-type: none"> <li>• 1 = Master</li> <li>• 2 = Slave</li> </ul> <p>Set this value to 1.</p>                                                                                                                                                                                                                                                                                             |
| <i> remoteConnId </i> | <p>(Optional) Remote connection identifier.</p> <p>Type the value in the following format:<br/><i>nodename.slot.port.vpi.vci</i></p> <p><b>Note</b> Use the optional <i> remoteConnId </i> argument only if you selected the <i>mastership</i> argument value of 1 (Master).</p>                                                                                                                                                       |
| <i> serviceType </i>  | <p>Service type.</p> <ul style="list-style-type: none"> <li>• 1 = Constant bit rate (CBR)</li> <li>• 2 = Variable bit rate real time (rt-VBR)</li> <li>• 3 = Variable bit rate non-real time (nrt-VBR)</li> <li>• 4 = rt3-VBR</li> <li>• 5 = rt2-VBR</li> <li>• 6 = nrt2-VBR</li> <li>• 7 = nrt3-VBR</li> </ul>                                                                                                                        |
| <i> scr </i>          | <p>Sustainable cell rate (SCR) in the range from 15 to the value you specified for the <i>PCR</i> argument. The rate is measured in cells per second.</p> <p>This argument is required if the <i>serviceType</i> is rt-VBR or nrt-VBR.</p>                                                                                                                                                                                             |

**Table 9-5 Parameters for addcon Command (continued)**

| Parameter         | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i> mbs </i>      | <p>Maximum burst size (MBS) is the number of cells that are transmitted at the peak cell rate.</p> <p>This value is in the range from 1 to 10 times the value you specified for the <i>scr</i> argument.</p> <p>This argument is required if the <i>serviceType</i> is rt-VBR or nrt-VBR.</p>                                                                                                                                                                                                                                                      |
| <i> priority </i> | <p>Route priority. Priority number is assigned to the PVC during configuration of the connection.</p> <p>Range is 1–15. Default is 8.</p> <p>A value of 1 indicates the highest priority, and a value of 15 indicates the lowest priority.</p>                                                                                                                                                                                                                                                                                                     |
| <i> prefrtel</i>  | <p>(Optional) Unique identifier of the preferred route with which this connection is associated.</p> <p>Range is 0–65535. Default is 0.</p> <p>When the specified route identifier is 0, the connection is not associated with a preferred route. This parameter is not applicable to the slave end of an SPVC connection.</p>                                                                                                                                                                                                                     |
| <i> direct </i>   | <p>(Optional) Parameter you use to specify whether or not the associated preferred route is the only permissible route for the connection to take.</p> <ul style="list-style-type: none"> <li>• 1 = Yes—The connection is not allowed to pick an alternate route. This option is not applicable when a preferred route is not specified.</li> <li>• 2 = No (default)—The connection is allowed to try another route if the preferred route is unavailable.</li> </ul> <p>If the directed preferred route is unavailable, the connection fails.</p> |

Example 9-7 shows a PVC being added as the master endpoint of a preferred route.

**Example 9-7 Adding a PVC as a Preferred Route**

```
nodename.1.12.VISM8.a > addcon 131 1 2 2 50000 1 mgx8850.0.4.120.120 1 150 777 1
```

- Step 4** To associate the master endpoint of an SPVC connection to a preferred route, enter the **cnfcon** command. Use the optional *<prefrte>* and *<direct>* arguments that support the preferred route feature.

```
nodename.1.12.VISM8.a > cnfcon <LCN> <PCR> <service_type> |<SCR_ingress> <MBS_ingress>
<priority> <prefrte> <direct>
```

In Example 9-8 the master endpoint of this connection is associated with a preferred route.

**Example 9-8 Associating a Master Endpoint to a Preferred Route**

```
nodename.1.12.VISM8.a > cnfcon 131 60000 1 777 1
```

where 777 is the preferred route ID, and 1 is a directed route.

Replace the above arguments with the values listed in Table 9-6.

**Table 9-6 Parameters for *cnfcon* Command**

| Parameter           | Description                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>LCN</i>          | Logical channel number of the connection. Range is 131–510.<br>This value is the same as the <i>localVCI</i> value in the <b>addcon</b> command.                                                                                                                                                                                                                                                                                            |
| <i>PCR</i>          | Peak cell rate (PCR) measured in cells per second. Ranges are <ul style="list-style-type: none"> <li>• 1–400 = Signaling PVC in AAL2 trunking mode</li> <li>• 1–20000 = AAL5 control PVC</li> <li>• 1–50000 = T1 AAL2 bearer PVC</li> <li>• 1–60000 = E1 AAL2 bearer PVC</li> <li>• 1–96000 = AAL5 bearer PVC</li> </ul> <b>Note</b> If the <i>service_type</i> argument value is VBR, the <i>PCR</i> argument value must be 15 or greater. |
| <i>service_type</i> | Service type. Values are <ul style="list-style-type: none"> <li>• 1 = CBR</li> <li>• 2 = rt-VBR</li> <li>• 3 = nrt-VBR</li> <li>• 4 = rt-VBR3</li> <li>• 5 = rt-VBR2</li> <li>• 6 = nrt-VBR</li> <li>• 7 = nrt-VBR</li> </ul>                                                                                                                                                                                                               |
| <i>SCR_ingress</i>  | (Optional) Sustainable cell rate (SCR). Range is from 15 to the value you configured for the <i>PCR</i> argument value.<br><b>Note</b> This argument value is required if the <i>service_type</i> argument value is in the range 2–7.                                                                                                                                                                                                       |
| <i>MBS_ingress</i>  | (Optional) Maximum burst size (MBS) is the maximum number of cells that are transmitted at the peak cell rate. Range is from 1 cell to 10 times the value you configured for the <i>SCR_ingress</i> argument value.<br><b>Note</b> This argument value is required if the <i>service_type</i> argument value is in the range 2–7.                                                                                                           |
| <i>priority</i>     | Route priority is the priority number assigned to the PVC during configuration of the connection.<br>Range is 1–15. Default is 8.<br>A value of 1 indicates highest priority, and a value of 15 indicates the lowest priority.                                                                                                                                                                                                              |

**Table 9-6 Parameters for *cnfcon* Command (continued)**

| Parameter        | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i> prefrtel</i> | <p>(Optional) Unique identifier of the preferred route with which this connection is associated.</p> <p>Range is 0–65535. Default is 0.</p> <p>When the specified route identifier is 0, the connection is not associated with a preferred route. This parameter is not applicable to the slave end of an SPVC connection.</p>                                                                                                                                                                                                                 |
| <i> directl</i>  | <p>(Optional) Parameter you use to specify whether or not the associated preferred route is the only permissible route for the connection to take.</p> <ul style="list-style-type: none"> <li>1 = Yes—The connection is not allowed to pick an alternate route. This option is not applicable when a preferred route is not specified.</li> <li>2 = No (default)—The connection is allowed to try another route if the preferred route is unavailable.</li> </ul> <p>If the directed preferred route is unavailable, the connection fails.</p> |

**Step 5** To display the preferred route identifier and the directed route flag of an SPVC, enter the **dspcon** command.

```
nodename.1.12.VISM8.a > dspcon <LCN>
```

Replace the <LCN> argument with the logical channel number of the SPVC you configured in Step 4.

Example 9-9 shows the preferred route information for LCN 131.

#### **Example 9-9 Displaying the Preferred Route Identifier**

```
nodename.1.12.VISM8.a > dspcon 131

ChanNum: 131
ChanRowStatus: Mod
ChanLocalRemoteLpbkState: Disabled
ChanTestType: TestOff
ChanTestState: Failed
ChanRTDresult: 65535 ms
ChanPortNum: 255
ChanPvcType: AAL2
ChanConnectionType: PVC
ChanLocalVpi: 29
ChanLocalVci: 131
ChanLocalNSAP: 47009181000000000164444b9400000107ebff00
ChanRemoteVpi: 29
ChanRemoteVci: 131
ChanRemoteNSAP: 47009181000000000164444b9400000101180400
ChanMastership: Master
ChanVpcFlag: Vcc
ChanConnServiceType: CBR
ChanRoutingPriority: 8
ChanMaxCost: 2147483647
ChanRestrictTrunkType: No Restriction

Type <CR> to continue, Q<CR> to stop:
ChanConnPCR: 50000
ChanConnPercentUtil: 100
ChanPreference: 1
```



```

ChanRemotePCR: 50000
ChanRemotePercentUtil: 100
ChanProtection: unprotected
ChanActivityState: unknown
ChanLockingState: unlock
ChanApplication: bearer
ChanServiceType: cbr
ChanScrIngress: 50000
ChanMbsIngress: 50000
ChanVCCI: 0
ChanFarEndAddrType: notapplicable
ChanFarEndE164Addr: 0
ChanFarEndGWIDAddr: .
ChanFarEndNSAPAddr: NULL NSAP
ChanAdminStatus: Up
ChanReroute: False
Pref Rte Id : 777
Directed Route: Yes
ChanUserPcrNumber:          User BW Off
ChanUserMinPCRBW:          10
ChanUserMaxPCRBW:          50000
ChanUserMaxScrBW:          0
ChanUserMaxMbsBW:          0
ChanNumNextAvailable:      133

```

For slave endpoints, the preferred route identifier value is 0, and the directed route flag is No.

## Priority Bumping



### Note

This feature is not supported with PXM1E and PXM45 software Releases 4.x and earlier.

Priority bumping can be used to set up high-priority connections even when the available bandwidth resources on the links are not enough to route the connection. With priority bumping on the VISM-PR card, the connections that have a priority lower than the priority of the incoming connection are bumped so that the necessary resources for routing the high-priority connections are available.

The lower priority calls might have to be de-routed on the ingress interface and the egress interface to free up resources.

Priority bumping is used in a PNNI network and is applicable to the VISM-PR card and AAL2 trunking mode only.

## Configure Priority Bumping

To configure priority bumping on the VISM-PR card, complete the following steps:

- Step 1** Log in to the PXM1E or PXM45 card.
- Step 2** Ensure your PXM1E and PXM45 cards are running at least software Release 5.0.
- Step 3** Ensure that priority bumping is enabled at a nodal level through the use of the `cnfndconnpribump` command on the PXM1E or PXM45.

**Step 4** Install and perform the initial configurations for the following items on your VISM-PR card:

- Operating mode (**cnfvismmode**)
- Codec template (**cnfcodectmpl**)
- Port (**addport**)
- Resource partition (**addrseprtn**)

**Step 5** To set the priority of the connection, enter the **addcon** command. Use the optional *<priority>* argument, which supports the priority bumping feature.

```
nodename.1.12.VISM8.a > addcon <localVCI> <preference> <pvc_type> <application> <PCR>
<mastership> |<remoteConnId> <serviceType> <scr> <mbs> <priority> <prefrte> <direct>|
```

Replace the above arguments with the values listed in Table 9-7.

**Table 9-7 Parameters for addcon Command**

| Parameter          | Description                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>localVCI</i>    | VCI to be used for the connection. Range is 131–510.                                                                                                                                                                                                                                                                                                                                                      |
| <i>preference</i>  | Preference level of the local VCI. <ul style="list-style-type: none"> <li>• 1 = Primary</li> <li>• 2 = Secondary (for redundancy)</li> </ul>                                                                                                                                                                                                                                                              |
| <i>pvc_type</i>    | AAL type of connection. <ul style="list-style-type: none"> <li>• 1 = AAL5</li> <li>• 2 = AAL2</li> <li>• 3 = AAL1</li> </ul>                                                                                                                                                                                                                                                                              |
| <i>application</i> | Connection application. <ul style="list-style-type: none"> <li>• 1 = Control</li> <li>• 2 = Bearer</li> <li>• 3 = Signaling</li> </ul> <p><b>Note</b> If the connection is used for bearer <i>and</i> signaling, specify 2 for bearer.</p>                                                                                                                                                                |
| <i>PCR</i>         | Peak cell rate measured in cells per second. <ul style="list-style-type: none"> <li>• 1–96000 = AAL5 bearer</li> <li>• 1–20000 = AAL5 control PVC</li> <li>• 1–50000 = T1 AAL2 PVC</li> <li>• 1–60000 = E1 AAL2 PVC</li> <li>• 1–400 = Signaling PVCs in AAL2 trunking mode</li> </ul> <p><b>Note</b> If the <i>serviceType</i> argument is VBR, the <i>PCR</i> argument value must be 15 or greater.</p> |
| <i>mastership</i>  | Type of connection. <ul style="list-style-type: none"> <li>• 1 = Master</li> <li>• 2 = Slave</li> </ul> <p>Set this value to 1.</p>                                                                                                                                                                                                                                                                       |

**Table 9-7 Parameters for addcon Command (continued)**

| Parameter    | Description                                                                                                                                                                                                                                                                                                               |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| remoteConnId | <p>(Optional) Remote connection identifier.</p> <p>Type the value in the following format:<br/><i>nodename.slot.port.vpi.vci</i></p> <p><b>Note</b> Use the optional  remoteConnId  argument only if you selected the <i>mastership</i> argument value of 1 (Master).</p>                                                 |
| serviceType  | <p>Service type.</p> <ul style="list-style-type: none"> <li>• 1 = Constant bit rate (CBR)</li> <li>• 2 = Variable bit rate real time (rt-VBR)</li> <li>• 3 = Variable bit rate non-real time (nrt-VBR)</li> <li>• 4 = rt3-VBR</li> <li>• 5 = rt2-VBR</li> <li>• 6 = nrt2-VBR</li> <li>• 7 = nrt3-VBR</li> </ul>           |
| scr          | <p>Sustainable cell rate (SCR) in the range from 15 to the value you specified for the <i>PCR</i> argument.</p> <p>This argument is required if the <i>serviceType</i> is rt-VBR or nrt-VBR.</p>                                                                                                                          |
| mbs          | <p>Maximum burst size (MBS) is the number of cells transmitted at the peak cell rate.</p> <p>This value is in the range from 1 to 10 times the value you specified for the <i>scr</i> argument.</p> <p>This argument is required if the <i>serviceType</i> is rt-VBR or nrt-VBR.</p>                                      |
| priority     | <p>Route priority is the priority number assigned to the PVC during configuration of the connection.</p> <p>Range is 1–15. Default is 8.</p> <p>A value of 1 indicates highest priority, and a value of 15 indicates lowest priority.</p> <p>This parameter is not applicable to the slave end of an SPVC connection.</p> |

**Table 9-7** Parameters for *addcon* Command (continued)

| Parameter        | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>lprefrtel</i> | <p>(Optional) Unique identifier of the preferred route with which this connection is associated.</p> <p>Range is 0–65535. Default is 0.</p> <p>When the specified route identifier is 0, the connection is not associated with a preferred route.</p> <p>This parameter is not applicable to the slave end of an SPVC connection.</p>                                                                                                                                                                                                          |
| <i>ldirectl</i>  | <p>(Optional) Parameter you use to specify whether or not the associated preferred route is the only permissible route for the connection to take.</p> <ul style="list-style-type: none"> <li>1 = Yes—The connection is not allowed to pick an alternate route. This option is not applicable when a preferred route is not specified.</li> <li>2 = No (default)—The connection is allowed to try another route if the preferred route is unavailable.</li> </ul> <p>If the directed preferred route is unavailable, the connection fails.</p> |

Example 9-10 shows a PVC being added as the master endpoint of a preferred route with the highest priority.

**Example 9-10** Adding a PVC with Highest Priority

```
nodename.1.12.VISM8.a > addcon 131 1 2 2 50000 1 mgx8850.0.4.120.120 1 150 777 1 1
```

**Step 6** To configure priority bumping on a connection, enter the **cnfcon** command. Use the optional *<priority>* argument that supports the priority bumping feature.

```
nodename.1.12.VISM8.a > cnfcon <LCN> <PCR> <service_type> /<SCR_ingress> <MBS_ingress>
<priority> <prefrte> <direct>
```

Replace the above arguments with the values listed in Table 9-8.

**Table 9-8** Parameters for *cnfcon* Command

| Parameter  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>LCN</i> | <p>Logical channel number of the connection. Range is 131–510.</p> <p>This value is the same as the <i>localVCI</i> value in the <b>addcon</b> command.</p>                                                                                                                                                                                                                                                                                                           |
| <i>PCR</i> | <p>Peak cell rate (PCR) measured in cells per second. Ranges are</p> <ul style="list-style-type: none"> <li>1–400 = Signaling PVC in AAL2 trunking mode</li> <li>1–20000 = AAL5 control PVC</li> <li>1–50000 = T1 AAL2 bearer PVC</li> <li>1–60000 = E1 AAL2 bearer PVC</li> <li>1–96000 = AAL5 bearer PVC</li> </ul> <p><b>Note</b> If the <i>service_type</i> argument value is a variable bit rate (VBR), the <i>PCR</i> argument value must be 15 or greater.</p> |

**Table 9-8 Parameters for *cnfcon* Command (continued)**

| Parameter           | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>service_type</i> | Service type. Values are <ul style="list-style-type: none"> <li>• 1 = CBR</li> <li>• 2 = rt-VBR</li> <li>• 3 = nrt-VBR</li> <li>• 4 = rt-VBR3</li> <li>• 5 = rt-VBR2</li> <li>• 6 = nrt-VBR</li> <li>• 7 = nrt-VBR</li> </ul>                                                                                                                                                                                                                                                                                                        |
| <i>SCR_ingress</i>  | (Optional) Sustainable cell rate (SCR). Range is from 15 to the value you configured for the <i>PCR</i> argument value.<br><b>Note</b> This argument value is required if the <i>service_type</i> argument value is in the range 2–7.                                                                                                                                                                                                                                                                                                |
| <i>MBS_ingress</i>  | (Optional) Maximum burst size (MBS) is the maximum number of cells transmitted at the peak cell rate. Range is from 1 cell to 10 times the value you configured for the <i>SCR_ingress</i> argument value.<br><b>Note</b> This argument value is required if the <i>service_type</i> argument value is in the range 2–7.                                                                                                                                                                                                             |
| <i>priority</i>     | Route priority is the priority number assigned to the PVC during configuration of the connection.<br>Range is 1–15. Default is 8.<br>A value of 1 indicates highest priority, and a value of 15 indicates lowest priority.<br>This parameter is not applicable to the slave end of an SPVC connection.                                                                                                                                                                                                                               |
| <i>prefrte</i>      | (Optional) Unique identifier of the preferred route with which this connection is associated.<br>Range is 0–65535. Default is 0.<br>When the specified route identifier is 0, the connection is not associated with a preferred route. This parameter is not applicable to the slave end of an SPVC connection.                                                                                                                                                                                                                      |
| <i>direct</i>       | (Optional) Parameter you use to specify whether or not the associated preferred route is the only permissible route for the connection to take. <ul style="list-style-type: none"> <li>• 1 = Yes—The connection is not allowed to pick an alternate route. This option is not applicable when a preferred route is not specified.</li> <li>• 2 = No (default)—The connection is allowed to try another route if the preferred route is unavailable.</li> </ul> If the directed preferred route is unavailable, the connection fails. |

Example 9-11 shows that the master endpoint of this connection is associated with a preferred route and that the endpoint is set as the highest priority.

### Example 9-11 Configuring Priority Bumping on a Connection

```
nodename.1.12.VISM8.a > cnfcon 131 60000 1 777 1 1
```

**Step 7** To display the priority of a connection, enter the **dspcon** command.

```
nodename.1.12.VISM8.a > dspcon <LCN>
```

Replace <LCN> with the logical channel number of the SPVC you configured in Step 6.

Example 9-12 shows the routing priority for LCN 131. The priority is shown in bold.

### Example 9-12 Displaying the Priority of a Connection

```
nodename.1.12.VISM8.a > dspcon 131
ChanNum: 131
ChanRowStatus: Mod
ChanLocalRemoteLpbkState: Disabled
ChanTestType: TestOff
ChanTestState: Failed
ChanRTDresult: 65535 ms
ChanPortNum: 255
ChanPvcType: AAL2
ChanConnectionType: PVC
ChanLocalVpi: 29
ChanLocalVci: 131
ChanLocalNSAP: 47009181000000000164444b9400000107ebff00
ChanRemoteVpi: 29
ChanRemoteVci: 131
ChanRemoteNSAP: 47009181000000000164444b9400000101180400
ChanMastership: Master
ChanVpcFlag: Vcc
ChanConnServiceType: CBR
ChanRoutingPriority: 1
ChanMaxCost: 2147483647
ChanRestrictTrunkType: No Restriction

Type <CR> to continue, Q<CR> to stop:
ChanConnPCR: 50000
ChanConnPercentUtil: 100
ChanPreference: 1
ChanRemotePCR: 50000
ChanRemotePercentUtil: 100
ChanProtection: unprotected
ChanActivityState: unknown
ChanLockingState: unlock
ChanApplication: bearer
ChanServiceType: cbr
ChanScrIngress: 50000
ChanMbsIngress: 50000
ChanVCCI: 0
ChanFarEndAddrType: notapplicable
ChanFarEndE164Addr: 0
ChanFarEndGWIDAddr: .
ChanFarEndNSAPAddr: NULL NSAP
ChanAdminStatus: Up
ChanReroute: False
Pref Rte Id : 777
Directed Route: Yes
```

```
ChanUserPcrNumber:      User BW Off
ChanUserMinPCRBW:      10
ChanUserMaxPCRBW:      50000
ChanUserMaxScrBW:      0
ChanUserMaxMbsBW:      0
ChanNumNextAvailable:  133
```

---

## AIS Propagation Control

The alarm indication signal (AIS) propagation control feature prevents the CPE from dropping calls when a network link failure is temporary.

You can configure the suppression of ATM network alarms for a particular duration. If the ATM network alarms persist beyond this duration, the alarms are allowed to propagate onto the TDM line and be considered a permanent network failure.

This section contains the following topics:

- Enabling AIS Suppression, page 9-30
- Configuring OAM Loop Count, page 9-31
- Displaying Alarms, page 9-31
- Alarms Not Suppressed, page 9-33

If an endpoint is in AAL2 trunking mode, the VISM/VISM-PR propagates a network alarm to the T1/E1 line that is associated with the network link. The CPE equipment (PBX) receives this alarm and drops the calls.

VISM/VISM-PR processes several alarms. However, for this feature, only the following alarms are suppressed:

- OAM Alarm Indication Signal
- OAM Far-End Receive Failure
- OAM Remote Defect Indication

Because this alarm suppression causes network link failures to be ignored, the Operation, Administration, and Maintenance (OAM) end-to-end loopback monitoring function must be configured to detect permanent network failures.

## Enabling AIS Suppression

By default, AIS suppression is disabled. VISM/VISM-PR cards on both ends of the AAL2 trunk need to be loaded with firmware that supports and enables AIS suppression.

To enable AIS suppression for a particular duration, complete the following steps.



### Note

You can enable or disable AIS suppression only in the AAL2 trunking mode. The other modes do not support this function.

**Step 1** Ensure that the VISM/VISM-PR card is in AAL2 trunking mode.

```
nodename.1.12.VISM8.a > cnfvismmode 2
WARNING: Available CLI Commands will be changed, do you want to proceed (Yes/No)? y
INFORMATION: The new 'aal2Trunking' mode has 182 CLI commands.
```

**Step 2** To enable AIS propagation, use the **cnfaissuppression** command.

```
nodename.1.12.VISM8.a > cnfaissuppression <enableFlag> |<LCN> <delay_time>|
```

Replace the above arguments with the values listed in Table 9-9.

**Table 9-9 Parameters for the cnfaissuppression Command**

| Parameter         | Description                                                                                                                                                                                                 |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>enableFlag</i> | Flag to enable or disable AIS propagation. Replace with a value of 1. <ul style="list-style-type: none"> <li>• 1 = Enable</li> <li>• 2 = Disable</li> </ul>                                                 |
| <i>LCN</i>        | (Optional) Logical channel number (LCN). Range is 131–510. Or, type the ALL keyword.<br>The value ALL specifies configuration of all LCNs.                                                                  |
| <i>delay time</i> | (Optional) Time that the alarm is suppressed before propagating to the line. Range is 1–60 seconds. Default is 30 seconds.<br><b>Note</b> This value is only valid if the <i>enableFlag</i> parameter is 1. |

The following example shows the syntax for enabling alarm propagation:

```
nodename.1.12.VISM8.a > cnfaissuppression 1
INFORMATION: Successfully Enabled AIS Suppression.
```

If you attempt to enable AIS propagation when it is already enabled, the following message displays:

```
WARNING: AIS Suppression is already enabled.
```

The following example enables AIS propagation with an AIS delay of 30 seconds on all enabled PVCs:

```
nodename.1.12.VISM8.a > cnfaissuppression 1 ALL 30
nodename.1.12.VISM8.a >
```



The following example disables AIS propagation on all enabled PVCs:

```
nodename.1.12.VISM8.a > cnfaissuppression 2 ALL
nodename.1.12.VISM8.a >
```

The following example enables AIS propagation on PVC 131 with an AIS delay of 60 seconds:

```
nodename.1.12.VISM8.a > cnfaissuppression 1 131 60
```

**Step 3** To show that AIS propagation has been enabled, use the **dspaissuppression** command.

```
nodename.1.12.VISM8.a > dspaissuppression
```

| ConnId                 | ChanNum | Status   | AIS Delay Time | AIS Delay Left |
|------------------------|---------|----------|----------------|----------------|
| nodename.27.255.27.131 | 131     | DISABLED | 60             | 0              |

**Step 4** To disable AIS propagation, use the **cnfaissuppression** command with the value of 2.

```
nodename.1.12.VISM8.a > cnfaissuppression 2
INFORMATION: Successfully Disabled AIS Suppression.
```

## Configuring OAM Loop Count

Since an OAM end-to-end loopback failure can still cause line alarms, you must configure the OAM loop count to be longer than the expected duration of the temporary network outage that results from a reroute.



### Note

The OAM end-to-end loopback functionality remains the same in this release.

**Step 1** Ensure that the VISM/VISM-PR is in AAL2 trunking mode.

```
nodename.1.12.VISM8.a > cnfvismmode <2>
```

**Step 2** To check the OAM loop count, enter the **dspoamloopcnt** command.

```
nodename.1.12.VISM8.a > dspoamloopcnt
```

The loop count is displayed with the default value of 5 seconds.

```
OAM Loopback Cell Timeout Count:      5
```

**Step 3** To configure the OAM loop count, enter the **cnfoamloopcnt** command.

```
nodename.1.12.VISM8.a > cnfoamloopcnt <count>
```

Replace *<count>* with the number of seconds you want to use, in the range 5 to 60.

## Displaying Alarms

VISM/VISM-PR discovers network outages by means of OAM end-to-end loopback failures. Lost OAM loopback cells can be monitored by using the following command:

```
dsprconcnt <LCN>
```

The following example shows the output:

```
mgx.1.12.VISM8.a > dspconcnt 131
ChanNum:                131
Chan State:              alarm
Chan XMT ATM State:      Sending FERF OAM
Chan RCV ATM State:      Receiving AIS OAM
Chan Status Bit Map:     0x2
OAM Lpb Lost Cells:      20
AAL2 HEC Errors:         2
AAL2 CRC Errors:         0
AAL2 Invalid OSF Cells:  1
AAL2 Invalid Parity Cells: 0
AAL2 CPS Packet Xmt:     118467937
AAL2 CPS Packet Rcv:     116227849
AAL2 Invalid CID CPS:    0
AAL2 Invalid UII CPS:    0
AAL2 Invalid Len. CPS:   0
AAL5 Invalid CPI:        0
AAL5 oversized SDU PDU:  0
AAL5 Invalid Len. PDU:   0
AAL5 PDU CRC32 Errors:   0
AAL5 Reassembly Timer expired PDU: 0
```

OAM AIS and far-end receive failure (FERF) cells that are transmitted and received are tabulated in counters. With this feature, an alarm is not generated on the line.

The following examples show alarm counts after an OC-3 failure. AIS alarm cells are received, and FERF cells are transmitted in response.

- Use the **dspsarcnt** <LCN> command to show the number of AIS, FERF, OAM end-to-end loopback, and total cells that are received and transmitted.

```
mgx.1.12.VISM8.a > dspsarcnt 131

SarShelfNum:            1
SarSlotNum:             5
SarChanNum:             131
Tx                      Rx
-----
Total Cells:            406656      333840
Total CellsCLP:         0           0
Total CellsAIS:         0           13
Total CellsFERF:        12          0
Total CellsEnd2EndLpBk: 85          69
Total CellsSegmentLpBk: 0           0
RcvCellsDiscOAM:        0           0
```

- Use the **dspalm -ds1** <LineNum> command to show the line alarm state with the AIS propagation feature. The LineAlarmState entry does not show any alarms. With the alarm propagation feature, no alarms are generated on the line in response to the OAM AIS alarm received.

```
mgx.1.12.VISM8.a > dspalm -ds1 1
LineNum:                1
LineAlarmState:         No Alarms
LineStatisticalAlarmState: Alarm(s) On --
                        SEFS24hrAlarm
                        UAS24hrAlarm
```



**Note**

Once the configured number of OAM end-to-end loopback cells are lost, the **dspalm** status shows that the lines are in alarm.

Without the AIS propagation feature, the LineAlarmState shows XmtAIS and RcvRAI.

```
mgx.1.12.VISM8.a > dspalm -ds1 1

LineNum:                1
LineAlarmState:         Alarm(s) On --
                        RcvRAI
                        XmtAIS
LineStatisticalAlarmState: Alarm(s) On --
                        SEFS24hrAlarm
                        UAS15minAlarm
                        UAS24hrAlarm
```

## Alarms Not Suppressed

Alarm suppression does not affect the following AAL2 type 3 packet alarms (transmitted and received per CID):

- external AIS
- external remote defect indication (RDI)
- connection AIS
- connection RDI

These alarms allow the line alarms that are received due to a T1/E1 failure to be propagated to the remote end.

## Bandwidth Utilization Enhancements

This section includes the following bandwidth utilization features:

- ATM Bandwidth Reuse for Non-overlapping Traffic, page 9-33
- Dynamic PVC Bandwidth Management, page 9-34
- Channel Current Peak Rates, page 9-37

### ATM Bandwidth Reuse for Non-overlapping Traffic

This feature allows you to place an unused PVC out-of-service during nonservice hours and place another PVC in-service during the service window while utilizing the same ATM bandwidth. This feature is applicable to VISM-PR cards in PNNI networks.

When a PVC is placed out-of-service, the PVC does not utilize any bandwidth and does not generate any alarms towards the CPE.

This bandwidth enhancement requirement uses the existing **dncon** command. The **dncon** command is now supported on both the master-end and the slave-end of the connections and is also used to disable the OAM end-to-end loopback functionality.

Disabling the OAM end-to-end loopback functionality on both ends of the connection avoids generating alarms to the TDM side. Therefore, you do not see alarms during non-service hours. The row status is not affected for the slave-end connection, and only the connection administrative status is changed to Down.

The existing **upcon** command is modified for both the master and slave ends. On the master end, the **upcon** command causes the OAM end-to-end loopback functionality to be re-enabled and places the PVC back in-service. The connection is re-routed if enough bandwidth is present.

On the slave end, the **upcon** command causes OAM end-to-end loopback functionality to be re-enabled, so the PVC can be monitored for failure .

To place a PVC out-of-service/in-service without causing alarms on the PVC and TDM side, complete the following steps in the order listed below:

---

**Step 1** Log in to the PXM card and **cc** to the VISM-PR card.

**Step 2** Ensure that the VISM-PR card is operating in the AAL2 trunking mode.

**Step 3** To take the slave-end of the connection out-of-service, enter the **dncon** command.

```
nodename.1.12.VISM8.a > dncon <LCN>
```

Replace <LCN> with the slave-end channel number of the connection.

The slave-end stops generating voice packets and also stops OAM end-to-end loopback request cell generation. However, incoming OAM end-to-end loopback request cells are processed, and appropriate OAM end-to-end loopback response cells are generated.

This process ensures that alarms are not generated on the slave-end when you perform Step 4.

**Step 4** To take the master-end of the connection out of service, enter the **dncon** command.

```
nodename.1.12.VISM8.a > dncon <LCN>
```

Replace <LCN> with the master-end channel number of the connection.

The PVC is placed into an administratively down state. This state tears down the PVC, stops checking for OAM end-to-end loopback failures, and stops generating voice packets.

**Step 5** To bring an administratively down connection back into service, enter the **upcon** command on the master-end of the connection.

```
nodename.1.12.VISM8.a > upcon <LCN>
```

Replace <LCN> with the master-end channel number of the connection.

**Step 6** To bring the slave-end of the connection back into service, enter the **upcon** command.

```
nodename.1.12.VISM8.a > upcon <LCN>
```

Replace <LCN> with the slave-end channel number of the connection.

---

## Dynamic PVC Bandwidth Management

You can dynamically change and manage PVC bandwidth on VISM-PR cards with calls present.

This feature also provides you with configurable administrative states at the CID (or bearer connection) level to manage the operations of used bandwidth. You can take put the PVC into a minimum mode configuration in which just enough bandwidth is used to maintain the signaling link. It is recommended that both sides of the connection be placed in a minimum mode.

To configure the administrative states and the bandwidth usage on the PVC, complete the following steps:

---

**Step 1** Log in to the PXM card and **cc** to the VISM-PR card.

**Step 2** Ensure that the VISM-PR card is operating in the AAL2 trunking mode.

**Step 3** To configure a CID as in-service, use the **cnfcidis** command.

```
nodename.1.12.VISM8.a > cnfcidis <LCN> <cid_number> |<maxcid>|
```

In-service means the CID is enabled and operationally active. To place a CID in-service, enough bandwidth must exist.

Replace the above arguments with the values listed in Table 9-10.

**Table 9-10 Parameters for cnfcidis Command**

| Parameter         | Description                                                                |
|-------------------|----------------------------------------------------------------------------|
| <i>LCN</i>        | Logical channel number of the connection. Range is 131–510.                |
| <i>cid_number</i> | Number of the CID you want to put in-service. Range is 8–255.              |
| <i>maxcid</i>     | (Optional) Maximum number of CIDs to configure as in-service in bulk mode. |

The following example shows CID 100 on LCN 131 is configured for in-service.

```
nodename.1.12.VISM8.a > cnfcidis 131 100
```

**Step 4** To configure a CID as out-of-service, use the **cnfcidoos** command.

```
nodename.1.12.VISM8.a > cnfcidoos <LCN> <cid_number> |<maxcid>|
```

An out-of-service state means that the CID(s) are disabled and not operationally active.

Replace the above arguments with the values listed in Table 9-11.

**Table 9-11 Parameters for cnfcidoos Command**

| Parameter         | Description                                                                    |
|-------------------|--------------------------------------------------------------------------------|
| <i>LCN</i>        | Logical channel number of the connection. Range is 131–510.                    |
| <i>cid_number</i> | Number of the CID you want to take out-of-service. Range is 8–255.             |
| <i>maxcid</i>     | (Optional) Maximum number of CIDs to configure as out-of-service in bulk mode. |

The following example shows CID 8 on LCN 131 is configured for out-of-service.

```
nodename.1.12.VISM8.a > cnfcidoos 131 8
```

**Step 5** To show the administrative state of the CID, enter the **dspscid** command.

```
nodename.1.12.VISM8.a > dspscid <LCN> <cid_number>
```

Replace *<LCN>* with the logical channel number of the CID, in the range 131–510.

Replace *<cid\_number>* with the number of the CID, in the range 8–255.

The following example shows the CID 8 on LCN 131 is in the out-of-service administrative state:

```
nodename.1.12.VISM8.a > dspscid 131 8
LCN number : 131
CID number: 8
Endpoint number : 1
CidRowStatus: active
Type3redundancy: enabled
```

```

VAD: disabled
VADInitTimer: 250
Profile type: ITU
Profile number: 1
Codec type: G.711u
Cas transport: disabled
DTMF transport: enabled
Ecan on/off: enabled
ICS enable: Disabled
pkt period: 5
Cid state: Failed
Cid Fail Reason: Self
Cid Admin State: OOS

```

- Step 6** To change the bandwidth usage either to a minimum usage mode or to the original PVC bandwidth configuration, enter the **cnfconbwtoggle** command.

```
nodename.1.12.VISM8.a > cnfconbwtoggle <LCN> <USER_BW_OPTIONS>
```

Replace <LCN> with the logical channel number, in the range 131–510.

Replace <USER\_BW\_OPTIONS> with one of the following bandwidth toggle options:

- 1 = BW Revert—Revert back to the original PVC bandwidth configuration.
- 2 = BW Minimum—Use the minimum bandwidth for the PVC.

- Step 7** To display the current bandwidth values, use the **dspon** command.

```
nodename.1.12.VISM8.a > dspon <LCN>
```

Replace <LCN> with the logical channel number, in the range 131–510.

The following example shows sample bandwidth values on LCN 131. The original PVC configured bandwidth is being used, shown in the ChanUserPcrNumber field (User BW Off). If the minimum bandwidth is used, the ChanUserPcrNumber field shows User BW Min.

```

mnodename.1.12.VISM8.a > dspon 131
ChanNum: 131
ChanRowStatus: Mod
ChanLocalRemoteLpbkState: Disabled
ChanTestType: TestOff
ChanTestState: NotInProgress
ChanRTDresult: 65535 ms
ChanPortNum: 1
ChanPvcType: AAL2
ChanConnectionType: PVC
ChanLocalVpi: 0
ChanLocalVci: 131
ChanLocalNSAP: 6d696c7777693033000000000000000015000100
ChanRemoteVpi: 0
ChanRemoteVci: 0
ChanRemoteNSAP: NULL NSAP
ChanMastership: Slave
ChanVpcFlag: Vcc
ChanConnServiceType: CBR
ChanRoutingPriority: 8
ChanMaxCost: 255
ChanRestrictTrunkType: No Restriction
Type <CR> to continue, Q<CR> to stop:
ChanConnPCR: 10000
ChanConnPercentUtil: 100
ChanPreference: 1
ChanRemotePCR: 10000
ChanRemotePercentUtil: 100

```

```

ChanProtection: unprotected
ChanActivityState: unknown
ChanLockingState: unlock
ChanApplication: bearer
ChanServiceType: cbr
ChanScrIngress: 10000
ChanMbsIngress: 10000
ChanVCCI: 0
ChanFarEndAddrType: notapplicable
ChanFarEndE164Addr: 0
ChanFarEndGWIDAddr: .
ChanFarEndNSAPAddr: NULL NSAP
ChanAdminStatus: Up
ChanReroute: False
ChanPrefRouteId: 0
ChanDirectRoute: False
Type <CR> to continue, Q<CR> to stop:
ChanUserPcrNumber: User BW Off
ChanUserMinPCRBW: 10
ChanUserMaxPCRBW: 10000
ChanUserMaxScrBW: 0
ChanUserMaxMbsBW: 0
ChanNumNextAvailable: 132

```

## Channel Current Peak Rates

Several real-time statistics can be collected and displayed for cell rates on the PVC.

To display the cell rate in cells per second (cps) per PVC, use the existing **dsponcmt** command.

```
nodename.1.12.VISM8.a > dsponcmt <LCN>
```

Replace <LCN> with the logical channel number, in the range 131–510.

The following example shows sample cell rates values on LCN 131:

```

nodename.1.12.VISM8.a > dsponcmt 131
ChanNum: 131
Chan State: alarm
Chan XMT ATM State: Sending FERF OAM
Chan RCV ATM State: OAM End-to-End Loopback Failure
Chan Status Bit Map: 0x4
OAM Lpb Lost Cells: 406799
AAL2 HEC Errors: 0
AAL2 CRC Errors: 0
AAL2 Invalid OSF Cells: 0
AAL2 Invalid Parity Cells: 0
AAL2 CPS Packet Xmt: 81848211
AAL2 CPS Packet Rcv: 0
AAL2 Invalid CID CPS: 0
AAL2 Invalid UII CPS: 0
AAL2 Invalid Len. CPS: 0
Chan 24Hr Peak Xmt Cell Rate (CPS):185
Chan Current Xmt Cell Rate (CPS):184
Chan 24Hr Peak Rcv Cell Rate (CPS):0
Chan Current Rcv Cell Rate (CPS):0
AAL5 Invalid CPI: 0
AAL5 oversized SDU PDU: 0

```

Type <CR> to continue, Q<CR> to stop:

```

Channel counters
AAL5 Invalid Len. PDU:          0
AAL5 PDU CRC32 Errors:         0
AAL5 Reassembly Timer expired PDU: 0
AIS Successful Suppression Count: 0

```

**Note**

The 24-hr peak transmit and receive statistics are reset at midnight.

## PVC OAM Cell Parameter Configuration

This feature allows you to configure the transmitted and received permanent virtual circuit (PVC) OAM cell parameters—cell gap, recovery cell count, and unacknowledged cell count.

Use the following command to configure OAM parameters.

```
cnfoamparams <oam_cell_gap> <retry_cnt> <recover_cnt>
```

Replace the above arguments with the values listed in Table 9-12.

**Table 9-12** Parameters for *cnfoamparams* Command

| Parameter           | Description                                                                                                                                                |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>oam_cell_gap</i> | Intercell gap—the time between cells (defined in milliseconds). Range is 10–5000 ms. Default is 500 ms.                                                    |
| <i>retry_cnt</i>    | Number of cells that must be unacknowledged before a PVC is declared as failed. Range is 1–20. Default is 3.                                               |
| <i>recover_cnt</i>  | Recovery indication cell count—the number of cells that must be received before a PVC is considered recovered from a failure. Range is 1–20. Default is 5. |

Use the **dsfoamparams** command to display the OAM parameters that you configured with the **cnfoamparams** command.

```

nodename.1.1.VISM8.a > dsfoamparams
OAM Cell Gap:          500 ms
OAM Cell Retry Count:  3
OAM Cell Recover Count: 5

```

## Private Network-to-Network Interface Priority Routing

This release supports the Private Network-to-Network Interface (PNNI) routing priority feature. This feature allows you to specify a routing priority for a connection. The PNNI controller uses your configuration selections to route the higher priority connections before routing the lower priority connections.



**Note**


---

This feature requires you to use a PXM1E or PXM45 in your MGX 8000 Series switch chassis.

---

Use the **cnfnpcon** command to configure a routing priority for a specified connection.

```
nodename.1.28.VISM8.a > cnfnpcon <LCN> <rout_priority>
```

Replace <LCN> with a value in the range 131–510.

Replace <rout\_priority> with a route priority value in the range 1–15. A value of 1 is (highest). A value of 15 is lowest. Default is 8.

Use the **dspcon** command to display the values you configured using the **cnfnpcon** command.

```
nodename.1.1.VISM8.a > dspcon 131
ChanNum: 131
ChanRowStatus: Mod
ChanLocalRemoteLpbkState: Disabled
ChanTestType: TestOff
ChanTestState: Failed
ChanRTDresult: 65535 ms
ChanPortNum: 255
ChanPvcType: AAL2
ChanConnectionType: PVC
ChanLocalVpi: 29
ChanLocalVci: 131
ChanLocalNSAP: 47009181000000000164444b9400000107ebff00
ChanRemoteVpi: 29
ChanRemoteVci: 131
ChanRemoteNSAP: 47009181000000000164444b9400000101180400
ChanMastership: Master
ChanVpcFlag: Vcc
ChanConnServiceType: CBR
ChanRoutingPriority: 8
ChanMaxCost: 2147483647
ChanRestrictTrunkType: No Restriction

Type <CR> to continue, Q<CR> to stop:
ChanConnPCR: 50000
ChanConnPercentUtil: 100
ChanPreference: 1
ChanRemotePCR: 50000
ChanRemotePercentUtil: 100
ChanProtection: unprotected
ChanActivityState: unknown
ChanLockingState: unlock
ChanApplication: bearer
ChanServiceType: cbr
ChanScrIngress: 50000
ChanMbsIngress: 50000
ChanVCCI: 0
ChanFarEndAddrType: notapplicable
ChanFarEndE164Addr: 0
ChanFarEndGWIDAddr: .
ChanFarEndNSAPAddr: NULL NSAP
ChanAdminStatus: Up
ChanReroute: False
Pref Rte Id : 777
```

```

Directed Route: Yes
ChanUserPcrNumber:      User BW Off
ChanUserMinPCRBW:      10
ChanUserMaxPCRBW:      50000
ChanUserMaxScrBW:      0
ChanUserMaxMbsBW:      0
ChanNumNextAvailable:  133

```

## Additional VBR Enhancements

Use the **addcon** or **cnfcon** commands to configure the VBR connection type. The following additional connection service types can be configured with the these commands:

- VBR (RT) 2
- VBR (RT) 3
- VBR (NRT) 2

## Call Control

This section describes the VISM/VISM-PR call control features described in the following sections:

- Separate Bearer IP Address, page 9-40
- Call Throttling, page 9-42
- Trunking Gateway Control Protocol Release 1.0, page 9-43
- CALEA, page 9-47
- MGC Redundancy, page 9-48
- External DNS, page 9-48
- AAL1 SVC-Based TDM Hairpinning, page 9-48
- MGCP 1.0, page 9-49
- RSVP-Based Admission Control, page 9-49
- Local Traffic Grooming, page 9-50
- Announcement File System, page 9-51
- ISDN Backhaul Advanced Configuration, page 9-54
- Advanced LAPD Configuration, page 9-57

## Separate Bearer IP Address

Two IP addresses allow you to add separate IP addresses for the control and bearer/data paths for VISM. This feature enables the control and data traffic to go to two different domains.

## Configuring Bearer IP Address

Use the **cnfvismip** command to configure a bearer IP address.

```
cnfvismip <vismIpAddr> <netMask> [vismBearerIpAddr] <bearerNetMask>|
```

Replace the above arguments with the values listed in Table 9-13.

**Table 9-13 Parameters for the cnfvismip Command**

| Parameter                   | Description                                                                                                                      |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <i>vismIpAddr</i>           | Control IP address, in dotted decimal format (nnn.nnn.nnn.nnn), of the current VISM card.                                        |
| <i>netMask</i>              | Control local network subnet mask, in dotted decimal format (nnn.nnn.nnn.nnn). The recommended value is <b>255.255.255.248</b> . |
| [ <i>vismBearerIpAddr</i> ] | (Optional) Bearer IP address, in dotted decimal format (nnn.nnn.nnn.nnn).                                                        |
| [ <i>bearerNetMask</i> ]    | (Optional) Bearer IP subnet mask, in dotted decimal format (nnn.nnn.nnn.nnn).                                                    |

The following example shows sample syntax for the **cnfvismip** command.

```
nodename.1.28.VISM8.a > cnfvismip 10.20.30.99 255.255.255.0 10.20.31.99 255.255.255.0
```

## Bearer IP Address Ping

In Release 3.3, you can ping both the control traffic IP address and the bearer traffic IP address on the VISM/VISM-PR card.

Before completing the steps in this section, configure control and bearer IP addresses as described in the Configuring Domain Names and IP Addresses section in the VoIP Switching Mode or VoIP Trunking Mode sections.

To configure the VISM/VISM-PR card to respond to bearer ping requests, complete the following steps:

- 
- Step 1** Log in to the PXM card and **cc** to the VISM/VISM-PR card.
- Step 2** To enable the VISM/VISM-PR card to respond to ping requests or to disable the VISM/VISM-PR card from responding to ping requests, enter the **cnfbearerippingenable** command.

```
nodename.1.28.VISM8.a > cnfbearerippingenable <enable>
```

Replace the <enable> argument with one of the following values:

- 1 = Enable
- 2 = Disable

**Step 3** To display the VISM/VISM-PR bearer IP ping feature status, enter the **dspvismparam** command.

```

nodename.1.4.VISM8.a > dspvismparam

VISM mode:                voipSwitching/voipTrunking
VISM features Bit Map:    0x5bc
FunctionModuleType:      VISM-8T1
CAC flag:                 enable
DS0s available:          192
Template number:         2
Percent of functional DSPs: 100
IP address:               25.5.4.2
Subnet mask:              255.255.255.0
Bearer IP address:       25.5.4.3
Bearer Subnet mask:      255.255.255.0
Bearer IP ping:         enable
RTCP report interval:    5000 msec
RTCP receive multiplier: 3
RTP receive timer:       disable
ControlPrecedence/Tos:   0x60
BearerPrecedence/Tos:    0xa0
Aal2 muxing status:      disable
Tftp Server Dn           TFTPDOMAIN
Aggregate Clipping       enable

Type <CR> to continue, Q<CR> to stop:

Aggregate Svc Bandwidth  0
Codec negotiation option 1
Profile negotiation option 1
VAD Duty Cycle           61
VAD Tolerance            100
VISM Initiated NW COT    Off
VISM CO4 Timer           1000 msec
CALEA flag               disable
SupportdModuleType:      VISM-8T1.
VismNSAP:                6376676d6778316100000000000000004000100

```

## Call Throttling

Call throttling is implemented on the VISM-PR card to maintain the stability of the card when the call rate exceeds the maximum allowable limit. The VISM-PR card drops the incoming calls when the maximum operational limit is exceeded. These new incoming calls are rejected with error code 409—Internal overload (xGCP).

New calls are dropped until the call rate drops below the maximum operational limit.

To display the message failure counter and 24-hr rejection counters, use the **dspxgcpdetailcnts** command.

```

nodename.1.28.VISM8.a > dspxgcpdetailcnts

IP Address : 10.86.28.56
CRCX Count : 0
CRCX Fail Count : 0
MDCX Count : 0
MDCX Fail Count : 0
DLCX Received Count : 0
DLCX Received Fail Count : 0

```

```

DLCX Sent Count : 0
DLCX Sent Fail Count : 0
RQNT Count : 0
RQNT Fail Count : 0
Notify Count : 0
Notify Fail Count : 0
Audit Endpoint Count : 0
Audit Endpoint Fail Count : 0
Audit Connection Count : 0
Audit Connection Fail Count : 0
RSIP Count : 4
RSIP Fail Count : 4
CRCX Throttled Count : 100
CRCX Throttled 24 Hr Count : 100

```

## Trunking Gateway Control Protocol Release 1.0

The Trunking Gateway Control Protocol (TGCP) is a profile of the Media Gateway Control Protocol (MGCP) 1.0 that is used to control the trunking gateway in packet cable network.

This section contains the following topics:

- Configuring TGCP, page 9-43
- Configuring the Timers, page 9-45

### Configuring TGCP

To configure the call agent for the TGCP 1.0 protocol, complete the following steps:

**Step 1** Ensure that TGCP 1.0 appears as a media gateway protocol by entering the **dspmgprotocols** command.

```
nodename.1.28.VISM8.a > dspmgprotocols
```

| Number | mgProtocol |
|--------|------------|
| 1      | MGCP 0.1   |
| 2      | SGCP 1.1+  |
| 3      | SRCP 1.0.2 |
| 4      | SGCP 1.5   |
| 5      | MGCP 1.0   |
| 6      | TGCP 1.0   |

**Step 2** Add TGCP 1.0 as MGC group protocol by entering the **addmgcgrpprotocol** command.

```

nodename.1.28.VISM8.a > addmgcgrpprotocol <Red_Group_Num> <protocol_number>
| <Qrntn_Persist> <Qrntn_Def> <Sign_OnOff> <Prov_Resp> <RspAck_Attr> <Disc_Proc>
<Cancel_Graceful>|

```

Replace the above values with the values listed in Table 9-14.

**Table 9-14 Parameters for the `addmgcgrprotocol` Command**

| Parameter                    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>Red_Group_Num</code>   | Call agent redundancy group number. Range is 1–8.                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <code>protocol_number</code> | Protocol number. <ul style="list-style-type: none"> <li>• 1 = MGCP 0.1</li> <li>• 2 = SGCP 1.1+</li> <li>• 3 = SRCP 1.0.2</li> <li>• 4 = SGCP 1.5</li> <li>• 5 = MGCP 1.0</li> <li>• 6 = TGCP 1.0</li> </ul>                                                                                                                                                                                                                                                                                                  |
| <code> Qrntn_Persist </code> | (Optional) Quarantine handling method for persistent events. <ul style="list-style-type: none"> <li>• 1 = Quarantine persistent events (default)</li> <li>• 2 = Do not quarantine persistent events</li> </ul>                                                                                                                                                                                                                                                                                                |
| <code> Qrntn_Def </code>     | (Optional) Default quarantine handling method for each protocol. <ul style="list-style-type: none"> <li>• 1 = Step, process (default for MGCP 1.0 and TGCP 1.0)</li> <li>• 2 = Step, discard (default for MGCP 0.1, SGCP 1.1+, SRCP 1.0.2, and SGCP 1.5)</li> <li>• 3 = Loop, process</li> <li>• 4 = Loop, discard</li> </ul> <p><b>Note</b> Step means one notification command is generated per notification request. Loop means multiple notification commands are generated per notification request.</p> |
| <code> Sign_OnOff </code>    | (Optional) Value you can use to delete events. <ul style="list-style-type: none"> <li>• 1 = Delete events from the previous list if they are not present in the current list. (Default for MGCP 0.1, SGCP 1.1+, SRCP 1.0.2, and SGCP 1.5.)</li> <li>• 2 = Delete negative events. Remove events from the previous list only if the event is present in the current list with hyphen (-) as the parameter. (Default for MGCP 1.0 and TGCP 1.0.)</li> </ul>                                                     |
| <code> Prov_Respl</code>     | (Optional) Value that enables or disables the sending of a provisional response. <ul style="list-style-type: none"> <li>• 1 = Send (default for MGCP 1.0 and TGCP 1.0)</li> <li>• 2 = Not send (default for MGCP 0.1, SGCP 1.1+, SRCP 1.0.2, and SGCP 1.5)</li> </ul>                                                                                                                                                                                                                                         |
| <code> RspAck_Attr </code>   | (Optional) Value that enables or disables sending a response acknowledgment. <ul style="list-style-type: none"> <li>• 1 = Send (default for MGCP 1.0 and TGCP 1.0)</li> <li>• 2 = Not send (default for MGCP 0.1, SGCP 1.1+, SRCP 1.0.2, and SGCP 1.5)</li> </ul>                                                                                                                                                                                                                                             |

**Table 9-14 Parameters for the `addmgcgrpprotocol` Command (continued)**

| Parameter              | Description                                                                                                                                                                                                                                                                                                                                                               |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Disc_Proc</i>       | (Optional) Value you can use to enable or disable the disconnect process. A disconnect indicates that the endpoint has become disconnected and is trying to establish connectivity. <ul style="list-style-type: none"> <li>• 1 = Enable (default for MGCP 1.0 and TGCP 1.0)</li> <li>• 2 = Disable (default for MGCP 0.1, SGCP 1.1+, SRCP 1.0.2, and SGCP 1.5)</li> </ul> |
| <i>Cancel_Graceful</i> | (Optional) Value you can use to cancel a previously issued graceful restart in progress command. <ul style="list-style-type: none"> <li>• 1 = Send (default for MGCP 1.0 and TGCP 1.0)</li> <li>• 2 = Not send (default for MGCP 0.1, SGCP 1.1+, SRCP 1.0.2, and SGCP 1.5)</li> </ul>                                                                                     |

The following example shows the addition of TGCP 1.0 protocol to redundancy group 1.

```
PXM1E_SJ.1.28.VISM8.a > addmgcgrpprotocol 1 6 1 1 2 1 1 1 1
```

**Step 3** To change the protocol or any optional parameters of a redundancy group, enter the **cnfmgcgrpprotocol** command with the parameters listed in Table 9-14.

**Step 4** To verify that TGCP 1.0 has been added to the MGC redundancy group, enter the **dspmgcgrpprotocols** command.

```
nodename.1.28.VISM8.a > dspmgcgrpprotocols
```

| MgcGrp<br>Num | Prot<br>Num | Qrntn<br>Persist | Qrntn<br>Def | Sign<br>OnOff | Prov<br>Resp | RspAck<br>Attr | Disc<br>Proc | Cancel<br>Graceful |
|---------------|-------------|------------------|--------------|---------------|--------------|----------------|--------------|--------------------|
| 1             | TGCP 1.0    | Qrtn             | StepProcess  | DelNegEvt     | Send         | Send           | Enable       | Send               |

The above example shows the default values for TGCP 1.0.

**Step 5** To delete TGCP 1.0 from a specified call agent redundancy group, enter the **delmgcgrpprotocol** command.

```
nodename.1.28.VISM8.a > delmgcgrpprotocol <Red_Group_Num> <protocol_number>
```

Replace *Red\_Group\_Num* with a value of 1–8 and *protocol\_number* with 6:

```
nodename.1.28.VISM8.a > delmgcgrpprotocol 1 6
```

## Configuring the Timers

To configure the timers for TGCP, complete the following steps:

**Step 1** Configure the timeout value by entering the **cnflongdurationtimer** command.

```
nodename.1.20.VISM8.a > cnflongdurationtimer <timeout>
```

Replace the *<timeout>* argument with a value in the range 0–24 hours.

The following example shows the timeout value configured to 1 hour:

```
cvngmgx1a.1.20.VISM8.a > cnflongdurationtimer 1
```

- Step 2** Display the long duration timer value by entering the **dsplongdurationtimer** command.

```
nodename.1.20.VISM8.a > dsplongdurationtimer
```

```
Long duration timer value: 1
```

- Step 3** Configure the continuity timers by entering the **cnfco1timer** and **cnfco2timer** commands.

```
nodename.1.20.VISM8.a > cnfco1timer <timeout>
```

```
nodename.1.20.VISM8.a > cnfco2timer <timeout>
```

Replace the *<timeout>* argument with a value in the range 0–60 seconds.

The following example shows that the continuity timer 1 timeout is set to 3 seconds and that the continuity timer 2 is set to 60 seconds:

```
nodename.1.20.VISM8.a > cnfco1timer 3
```

```
nodename.1.20.VISM8.a > cnfco2timer 60
```

- Step 4** Display the continuity timer timeout values by entering the **dspco1timer** and **dspco2timer** commands:

```
nodename.1.20.VISM8.a > dspco1timer
```

```
CO1 timer value: 3
```

```
nodename.1.20.VISM8.a > dspco2timer
```

```
CO2 timer value: 60
```

- Step 5** Specify the timers for TGCP 1.0 by entering the **cnfdisctimers** command.

```
nodename.1.28.VISM8.a > cnfdisctimers <TdInit> <TdMin> <TdMax>
```

Replace the above arguments with the values listed in Table 9-15.

**Table 9-15 Parameters for the cnfdisctimers Command**

| Parameter     | Description                                                                  |
|---------------|------------------------------------------------------------------------------|
| <i>TdInit</i> | Initial disconnect waiting delay time (defined in seconds). Range is 1–100.  |
| <i>TdMin</i>  | Minimum disconnect waiting delay time (defined in seconds). Range is 0–100.  |
| <i>TdMax</i>  | Maximum disconnect waiting delay time (defined in seconds). Range is 1–5000. |



## CALEA

The Commission on Accreditation for Law Enforcement Act (CALEA) feature, used with VoIP applications, provides data (through eavesdropping) about an intercepted subject (the user/subscriber) in two forms for both the receive and transmit directions. The two forms are

- Call identifying data
- Call content data

The call identifying data (called number) is provided by call agents. The call content data (voice) is provided by the edge/access routers (Cisco 7200, for example) and trunking gateways (MGX 8000 series platforms) in combination with VISM cards.

The VISM CALEA implementation supports the CALEA law intercept confirmation interface.

To enable the CALEA feature, use the **cnfcalea** command.

```
cnfcalea <calea_flag_enable>
```

Replace the <calea\_flag\_enable> argument with a value of 1 to enable.

To ascertain whether or not CALEA is enabled, use the **dspcalea** command.

```
PXM1E_SJ.1.28.VISM8.a > dspcalea
CALEA : disable
```

The **dspvismparam** also shows whether or not CALEA is enabled or disabled.

```
nodename.1.28.VISM8.a > dspvismparam
VISM mode:                voipSwitching/voipTrunking
VISM features Bit Map:    0x5bc
FunctionModuleType:      VISM-PR-8T1
CAC flag:                 enable
DSOs available:          192
Template number:         2
Percent of functional DSPs: 100
IP address:               10.10.1.99
Subnet mask:              255.255.255.0
Bearer IP address:        0.0.0.0
Bearer Subnet mask:       0.0.0.0
Bearer IP ping:           disable
RTCP report interval:    5000 msec
RTCP receive multiplier: 3
RTP receive timer:       disable
ControlPrecedence/Tos:   0x60
BearerPrecedence/Tos:    0xa0
Aal2 muxing status:      disable
Tftp Server Dn            TFTPDOMAIN
Aggregate Clipping        enable

Type <CR> to continue, Q<CR> to stop:

Aggregate Svc Bandwidth    0
Codec negotiation option   1
Profile negotiation option 1
VAD Duty Cycle             61
VAD Tolerance              100
VISM Initiated NW COT      Off
VISM CO4 Timer             1000 msec
CALEA flag                 disable
SupportdModuleType:        VISM-PR-8T1.
VismNSAP:                  470091810000000007856e1363000001070bff00
```

## MGC Redundancy

The media gateway controller (MGC) redundancy feature provides redundancy for call agents on VISM cards. You can associate one or more call agents as members of a redundancy group.

An MGC redundancy group consists of one or more MGCs (which are identified by their domain name). An MGC can be part of one redundancy group, and each redundancy group can have multiple MGCs. At any given time, only one MGC in the redundant group is active.

You can add more than one domain name and configure redundant call agents on the same logical MGC. Only the IP addresses corresponding to each physical entity are returned by the DNS server. To allow VISM to traverse the items identified by all of the IP addresses, you must identify these physical entities as redundant call agents.

You can have a maximum of 8 MGCs configured on the VISM. For more information about configuring MGCs, see “Configuring the Call Agent Interface” section on page 7-11 in Chapter 7, “VoIP Switching Mode.”

## External DNS

The external domain name server (DNS) feature allows VISM to use an external DNS to resolve the IP address you configure. The domain names can be for MGCs, call agents, or trivial file transfer protocol (TFTP) servers used for CAS file downloads. Resolution of IP addresses can be configured with the following methods:

- Internal static tables only
- External DNS only
- External DNS, followed by the internal static tables if the external DNS method fails
- Internal static tables, followed by the external DNS if the internal static table method fails.

For configuration information see the VoIP switching chapter.

## AAL1 SVC-Based TDM Hairpinning

Hairpinning prevents packet delay by looping the call through the same VISM card instead of going through an external router and back to the VISM card.

The AAL1 SVC operating mode supports TDM hairpinning.

Use the **cnfvismmode** command to configure VISM operating mode to mode 9.

VoAAL1 switched virtual circuit (SVC) operating mode is supported with the G.711 codec and clear channel.



**Note**

VAD is not supported in combination with AAL1 SVCs. CAS is not supported in combination with SVCs



**Note**

This feature requires you to use a PXM1E or PXM45 in your MGX 8000 Series switch chassis.

## MGCP 1.0

The following MGCP 1.0 features are supported (in addition to the MGCP 0.1 functionality):

- Restart in Progress wait delay timer value specifications for the following:
  - Initial
  - Minimum
  - Maximum
- Call agent redundancy group protocol configuration for the following:
  - Quarantine handling method for persistent events
  - Default quarantine handling method for each protocol
  - Ability to retain events from previous lists, until an explicit request is made that they be removed
  - Ability to send provisional responses
  - Ability to send response acknowledgments
  - Ability to provide a disconnect method
  - Ability to cancel previously issued graceful restart commands

Use the following set of CLI commands in Table 9-16 to configure MGCP.

**Table 9-16** CLI Commands for Configuring MGCP

| Command                  | Description                                                                        |
|--------------------------|------------------------------------------------------------------------------------|
| <b>addmgcgrpprotocol</b> | Associates a call agent redundancy group with a gateway control protocol           |
| <b>cnfdisctimers</b>     | Specifies the wait delay timer values                                              |
| <b>cnfmgcgrpprotocol</b> | Configures call agent group protocol data                                          |
| <b>cnfxgcppeer</b>       | Sets the UDP port number used to send gateway-initiated messages to the call agent |
| <b>delmgcgrpprotocol</b> | Deletes an MGCP from a specified call agent redundancy group                       |
| <b>dspdisctimers</b>     | Displays the Restart in Progress disconnect wait delay timers                      |

## RSVP-Based Admission Control

Resource Reservation Protocol (RSVP)-based admission control signaling with MGCP is supported, which provides quality VoIP connections. For the connections, the RSVP-MGCP interaction results in the following operations:

- Establishes unidirectional resource reservations for sending voice packets for connections established and controlled by MGCP
- Accepts unidirectional resource reservations for receiving voice packets from MGCP-controlled connections
- Tears down originated or established unidirectional resource reservations
- Tears down accepted resource reservations

**Note**

VISM supports RSVP in the VoIP switching operating mode only, with a 5 calls per second limitation; RSVP is not supported in the VoIP trunking operating mode.

The following connection data is returned in response to the call agent initiated DLCX and gateway-initiated DLCX or AUCX commands:

- Number of packets sent
- Number of octets sent
- Number of packets received
- Number of octets received
- Number of packets lost
- Inter-arrival jitter—If a DSP is configured to operate in the adaptive jitter buffer mode, the jitter data provided indicates the delay that the jitter algorithm is adapted to. If a DSP is configured to operate in the fixed jitter buffer mode, the jitter data provided indicates the value that was configured when the channel was opened.

**Note**

For adaptive mode you can indicate that the configured initial delay value is too low or too high, since the algorithm adapts according to the actual network jitter.

- Average transmission delay (latency)

Use the commands in Table 9-17 to configure the RSVP-based admission control feature.

**Table 9-17** CLI Commands for Configuring RSVP-Based Admission Control

| Command                    | Description                                                                                                    |
|----------------------------|----------------------------------------------------------------------------------------------------------------|
| <b>cnfrsvp</b>             | Configures RSVP for a specified connection                                                                     |
| <b>cnfrsvpprefreshmiss</b> | Configures the number of times VISM waits for a missed RSVP minimum refresh message for a specified connection |

## Local Traffic Grooming

VISM supports the call-agent controlled grooming feature. Grooming allows VISM to avoid routing local traffic through the IP network. Instead, voice packets from a local connection are switched locally in the ATM switch.

A call agent determines if a call needs to be set up as local. To set up a local call, the call agent selects an ATM connection over a VoIP connection. The VISM card, as a gateway, receives the connection request message from the call agent for an ATM connection. The VISM card allows VoIP calls and VoAAL1 SVC calls to coexist and allows provisioning of VoIP and ATM simultaneously.

To use the grooming feature, you must use the **cnfvismmode** command and select the VoIP and switched ATM AAL1 SVC operating mode. Using this mode does not change any other settings on your card. The type of connection for a call is determined by the connection request (CRCX) received from the call agent or by the bearer type configuration.

## Announcement File System

This release allows VISM to play prerecorded local announcements in switched VoIP connections. Under the control of a call agent, announcements can be played toward any IP endpoint or toward any VISM endpoint.

Up to 125 different announcements can be cached on the VISM card for immediate playout. The packet network has a persistent announcement storage area. Announcements are downloaded on demand from the announcement storage area and remain on the VISM card until they have expired or are replaced. If the 125 announcement maximum is reached, subsequent requests for the storage of announcements not on the VISM card result in the replacement of “cached” announcements.

Announcements can be played over established connections in any VISM-supported codec, but they must exist on the announcement file server in the desired encoding.

**Note**

---

You must play announcements in the exact codec in which they have been recorded.

---

VISM announcements require the support of the MGCP 0.1/1.0 call agent.

## Announcement Timeouts

VISM uses a provisionable timeout value of 5 seconds. If an announcement does not start playing within the timeout period (measured from the point when the request was received), the action is canceled and, if requested by the call agent, an off event is reported. If the call agent specifies a timeout value in the request, this value is ignored.

## Announcement Direction

Announcements can be played toward the packet network or toward the TDM network (not both). The direction is determined by the notation of the MGCP S: line. Announcement direction examples:

```
S: a/ann(all-lines-busy.au)
```

This notation indicates that all-lines-busy.au is to be played toward the TDM network.

```
S: a/ann@connid(all-lines-busy.au)
```

This notation indicates that all-lines-busy.au is to be played toward the packet network.

## Broadcast Announcements

VISM supports announcement requests for a single endpoint or connection. The request may only specify a single announcement to be played on a single endpoint in a single direction. Broadcast announcements are not supported.

## Multiple Announcement Requests for the Same Endpoint

If an announcement is being played on an endpoint (in one direction) and a subsequent announcement request is received for the same endpoint (in the same direction), the playing announcement continues and the new announcement request is ignored.

If an announcement is being played on an endpoint (in one direction) and a subsequent announcement request is received for the same endpoint (in the other direction), the playing announcement is stopped and the new announcement is played. Events are not generated for the stopped announcement.

## Announcement File Server

Announcements are contained in an announcement file server, which resides on an IP network reachable from the VISM through the use of Trivial File Transfer Protocol (TFTP).

## Announcement File Server Name

You can configure the announcement file server node name on the VISM the same way that you configure a node name for the TFTP server.

## Announcement File Server Directory Structure

You can use any directory or path on the file server as the main directory for storing announcement files. If you do not provision an announcement path prefix on VISM, the main announcement file directory is the default TFTP directory on the server. If a path prefix is provisioned, this prefix is used as the main announcement directory. If the prefix is not absolute (does not begin with a forward slash (/)), the prefix is understood to be in the default TFTP directory.

You can configure codec subdirectories under the main announcement directory on the announcement file server. A codec subdirectory exists for each codec used for announcement files. The subdirectories can be one or more of the following:

- g711u/
- g711a/
- g726\_32k/
- g726\_24k/
- g726\_16k/
- g729\_a/
- g7231\_high\_rate/
- g7231\_a\_high\_rate/
- g7231\_low\_rate/
- g7231\_a\_low\_rate/

When the call agent requests that an announcement be played toward the TDM network on an unconnected endpoint, you can specify the codec to be used.

You can configure another level of directories to group announcement files by language. These directories are specified by the call agent (or when the VISM is being provisioned) as part of the announcement file name. For example, the call agent might specify the announcement file name `english/ann1.au`. If the file was encoded in G.729a and the prefix was `/tftpboot`, the file would reside at `/tftpboot/g729_a/english/ann1.au`.

## VISM Announcement Cache Management

VISM manages an announcement cache in resident memory. When an announcement is requested, it is retrieved from the announcement file server and placed in the on-board announcement cache. Subsequent requests for the same announcement do not require retrieval of the announcement file from the announcement file server.



### Note

An announcement in one encoding is a different file from the same announcement in a different encoding.

## Announcement Expiry

You can provision an announcement aging policy. Once an announcement has aged (reached expiry) in the on-board cache, it is refreshed—retrieved again from the announcement file server. This provides you with the means to balance the cost of file server access with the time before an announcement changed on the file server is propagated to the VISM. In addition, you can delete dynamic files from the announcement cache at any time.

## Permanent Announcements

You can provision permanent announcements for VISM. A permanent announcement is retrieved from the announcement file server and installed permanently in the VISM announcement file cache. Permanent announcements are excluded from aging (and being automatically refreshed) and are also excluded from being replaced if the announcement cache becomes full.

Permanent announcements can be removed from the cache explicitly only by the use of a CLI command. If VISM is reset or fails over to a standby card, permanent announcements are retrieved as soon as the card becomes active. The announcement encoding must be specified when permanent announcements are provisioned or deleted.

Use the CLI commands in Table 9-18 to configure the announcement file system feature.

**Table 9-18** CLI Commands for Configuring the Announcement File System Feature

| Command                 | Description                                                                                                                            |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| <b>addannpermanent</b>  | Configures an announcement server file and associated codec type as permanent                                                          |
| <b>cnfannagetime</b>    | Configures the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache              |
| <b>cnfannndn</b>        | Designates an announcement file server domain name                                                                                     |
| <b>cnfannpathprefix</b> | Designates the main prefix directory TFTP path from which to retrieve announcement files                                               |
| <b>cnfannprefcodec</b>  | Configures the codec type used for announcements played on unconnected TDM endpoints                                                   |
| <b>cnfannreqtimeout</b> | Configures the expiration time for announcements                                                                                       |
| <b>delannalldynamic</b> | Deletes all announcement files and their associated codec types from the temporary announcement files currently saved in the VISM card |
| <b>delanndynamic</b>    | Deletes an announcement file and associated codec type from the temporary announcement files currently saved in the VISM card          |

**Table 9-18** CLI Commands for Configuring the Announcement File System Feature (continued)

| Command                 | Description                                                                                                                                      |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>delannpermanent</b>  | Deletes a permanent announcement file and its associated codec type from the announcement file server                                            |
| <b>dspannagettime</b>   | Displays the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache                          |
| <b>dspanncache</b>      | Displays all available temporary announcement file names, and associated age times                                                               |
| <b>dspanncontrols</b>   | Displays a summary list of all provisionable announcement file variables, including variables associated with all announcement file CLI commands |
| <b>dspanndn</b>         | Displays the announcement file server domain name                                                                                                |
| <b>dspannpathprefix</b> | Displays the main prefix directory path from which VISM retrieves announcement files                                                             |
| <b>dspannpermanents</b> | Displays all available permanent announcement files with their associated codec types and identifying index numbers                              |
| <b>dspannprefcodec</b>  | Displays the codec type used for announcements played on unconnected TDM endpoints                                                               |
| <b>dspannreqtimeout</b> | Displays the expiration time for announcements to begin playing before being aborted                                                             |

## ISDN Backhaul Advanced Configuration

This section describes the advanced ISDN backhaul configurations.

- Step 1** To change the timeout period for sending out an acknowledgment and the maximum number of acknowledgments that can be accumulated before they are sent, enter the **cnfsesack** command.
- ```
nodename.1.28.VISM8.a > cnfsesack <session_num> <acknowledgment_timeout> <acknowledgment>
```

Replace the above arguments with the values listed in Table 9-19.

**Table 9-19** Parameters for **cnfsesack** Command

Parameter	Description
<i>session_num</i>	Session number in the range 1–64.
<i>acknowledgment_timeout</i>	Timeout period (defined in milliseconds) for sending an acknowledgment. Range is 100–65535 ms. Default is 300.
<i>acknowledgment</i>	Maximum number of acknowledgments that can be accumulated before an acknowledgment is sent. Range is 0–255. Default is 3.

- Step 2** To configure the maximum number of resets that VISM performs before a connection is reset, enter the **cnfsesmaxreset** command.

```
nodename.1.28.VISM8.a > cnfsesmaxreset <session_number> <resets>
```



Replace *<session\_number>* with the value you entered for the *session\_num* argument in Step 1.

Replace *<resets>* with the maximum number of resets that the VISM card performs before a connection is reset. Range is 0–255. Default is 5.

- Step 3** To configure the maximum segment size VISM can receive after sending a SYN message, enter the **cnfsesmaxseg** command.

```
nodename.1.28.VISM8.a > cnfsesmaxseg <session_number> <segment_size>
```

Replace *<session\_number>* with the value you entered in Step 1.

Replace *<segment\_size>* with the maximum segment size, in octets, that can be received by a VISM card after a synchronize message is sent. Range is 30–65535.

- Step 4** To configure the maximum number of segments that can be sent without an acknowledgment being received for a specific RUDP session, enter the **cnfsesmaxwindow** command.

```
nodename.1.28.VISM8.a > cnfsesmaxwindow <session_number> <>window_size>
```

Replace *<session\_number>* with the value you entered in Step 1.

Replace *<window\_size>* with a value in the range 1–64.

- Step 5** To configure the amount of idle time before a null segment is sent, enter the **cnfsesnullsegmtout** command.

```
nodename.1.28.VISM8.a > cnfsesnullsegmtout <session_number> <timeout>
```

Replace *<session\_number>* with the value you entered in Step 1.

Replace *<timeout>* with a measure of the idle time allowed before a null segment is sent. Range is 0–65535 ms. Default is 2000 ms.

- Step 6** To configure the maximum number of out-of-sequence packets that can be accumulated before an EACK packet is sent, enter the **cnfsesoutofseq** command.

```
nodename.1.28.VISM8.a > cnfsesoutofseq <session_number> <packets>
```

Replace *<session\_number>* with the value you entered in Step 1.

Replace *<packets>* with the maximum number of out-of-sequence packets that can be accumulated before an EACK packet is transmitted. Range is 0–255.



**Note** If you specify 0 for the *<packets>* argument, a DACK message is sent immediately upon receiving an out-of-sequence packet.

- Step 7** To configure the local (VISM end) and remote (call agent end) port numbers for a given session, enter the **cnfsesport** command.

```
nodename.1.28.VISM8.a > cnfsesport <session_number> <local_port> <remote_port>
```

Replace the above arguments with the values listed in Table 9-20.

**Table 9-20 Parameters for cnfsesport Command**

Parameter	Description
<i>session_number</i>	The value you entered in Step 1.

**Table 9-20 Parameters for *cnfsesport* Command (continued)**

Parameter	Description
<i>local_port</i>	Local port number. The VISM port number used for the session. Range is 1124–49151.
<i>remote_port</i>	Remote port number. The call agent port number used for the session. Range is 1124–65535.

- Step 8** To configure the timeout period for unacknowledged packets and number of consecutive retransmission attempts allowed before the connection is considered failed, enter the **cnfsesretrans** command.

```
nodename.1.28.VISM8.a > cnfsesretrans <session_number> <retransmit_timeout>
<max_retransmits>
```

Replace the above arguments with the values listed in Table 9-21.

**Table 9-21 Parameters for *cnfsesretrans* Command**

Parameter	Description
<i>session_number</i>	Value you entered in Step 1.
<i>retransmit_timeout</i>	Timeout period (defined in milliseconds) for sending an acknowledgment. Range is 100–65535 ms. Default is 600 ms.
<i>max_retransmits</i>	Maximum number of retransmissions. Range is 0–255. Default is 3.

- Step 9** To configure the amount of time VISM waits for a transfer state to begin before executing an auto reset, enter the **cnfsesstatetmout** command.

```
nodename.1.28.VISM8.a > cnfsesstatetmout <session_number> <timeout>
```

Replace *<session\_number>* with the value you entered in Step 1.

Replace *<timeout>* with the maximum number of milliseconds that VISM waits for a transfer state before executing an auto reset. Range is 0–65535. Default is 2000.

- Step 10** To configure the maximum number of attempts to synchronize VISM with the call agent, enter the **cnfsessyncatmps** command.

```
nodename.1.28.VISM8.a > cnfsessyncatmps <session_number> <sync_attempts>
```

Replace *<session\_number>* with the value you entered in Step 1.

Replace *<sync\_attempts>* with the maximum number of attempts to synchronize VISM with the call agent. Range is 1–32. Default is 5.

- Step 11** Repeat Step 1 through Step 10 for all additional session numbers, as required for your application. You have completed configuring ISDN PRI backhaul.

## Advanced LAPD Configuration

This section describes the advanced Link Access Protocol D Channel (LAPD) configurations that are applicable to the VISM/VISM-PR cards.

**Step 1** To specify the LAPD window size, enter the **cnflapdwindow** command.

```
nodename.1.28.VISM8.a > cnflapdwindow <line_number> <ds0_number> <>window_size>
```

Replace the above arguments with the values listed in Table 9-22.

**Table 9-22 Parameters for cnflapdwindow Command**

Parameter	Description
<i>line_number</i>	Line number in the range 1–8.
<i>ds0_number</i>	DS0 number. <ul style="list-style-type: none"> <li>• 1–24 = T1 lines</li> <li>• 1–31 = E1 lines</li> </ul>
<i>window_size</i>	Maximum number of outstanding (unacknowledged) I-frames that can be accumulated before sending an acknowledgment. Range is 1–127. Default is 7.

**Step 2** To specify the maximum allowable frame retransmissions, enter the **cnflapdretrans** command.

```
nodename.1.28.VISM8.a > cnflapdretrans <line_number> <ds0_number> <N200>
```

Replace the above arguments with the values listed in Table 9-23.

**Table 9-23 Parameters for cnflapdretrans Command**

Parameter	Description
<i>line_number</i>	Line number in the range 1–8.
<i>ds0_number</i>	DS0 number. <ul style="list-style-type: none"> <li>• 1–24 = T1 lines</li> <li>• 1–31 = E1 lines</li> </ul>
<i>N200</i>	Maximum frame retransmissions. Range is 1–10. Default is 3.

**Step 3** To specify the two LAPD timers, enter the **cnflapdtimer** command.

```
nodename.1.28.VISM8.a > cnflapdtimer <line_number> <ds0_number> <timer_T200> <timer_T203>
```

Replace the above arguments with the values listed in Table 9-24.

**Table 9-24 Parameters for *cnflapdtimer* Command**

Parameter	Description
<i>line_number</i>	Line number in the range 1–8.
<i>ds0_number</i>	DS0 number. <ul style="list-style-type: none"> <li>1–24 = T1 lines</li> <li>1–31 = E1 lines</li> </ul>
<i>timer_T200</i>	T200 timer. Time (defined in milliseconds) between frame transmission initiations. Ranges are <ul style="list-style-type: none"> <li>1000–1023000 for PRI—In increments of 50. Default is 1000.</li> <li>100–350 for GR-303—In increments of 50. Default is 150.</li> </ul> <p><b>Note</b> This value must be less than the value you specify for the <i>timer_T203</i> argument.</p>
<i>timer_T203</i>	T203 timer. Maximum time (defined in milliseconds) allowed without a frame being exchanged. Ranges are <ul style="list-style-type: none"> <li>1000–1023000 for PRI—In increments of 1000. Default is 10000.</li> <li>10000–300000 for GR-303—In increments of 10000. Default is 30000.</li> </ul> <p><b>Note</b> This value must be greater than the value you specify for the <i>timer_T200</i> argument.</p>

## Diagnostics/Statistics

This section contains the VISM/VISM-PR card configurations for diagnostics and statistics described in the following sections:

- Voice Quality Statistics, page 9-59
- Diagnostic Testing for DSP Failures, page 9-60
- History Statistics Collection, page 9-62
- Static and Real-Time Configuration Display, page 9-69
- Trap Filtering, page 9-83
- VISM-PR Bulk Statistics Upload to CWM, page 9-87
- RTP Connection Statistics, page 9-93
- Clock Slip Counters, page 9-94
- Channel Alarm Enhancement, page 9-94

- VISM TDM Line Statistics Collection, page 9-94
- Loopbacks for Lines and Connections, page 9-94

## Voice Quality Statistics

On the VISM-PR, you can collect real-time voice quality statistics to assist with network analysis and troubleshooting system performance. These statistics are available when a VoIP call connection exists on a DS0.

The following voice quality parameters are reported:

- Jitter (interarrival)—Estimate of the statistical variance of the RTP data packet interarrival time.
- Latency (round-trip delay)—Time for a caller's voice to go through the VoIP network and loop back to the caller.

These statistics are applicable when the VISM-PR card is operating in the VoIP trunking and switching modes.

To display the new jitter and round-trip delay parameters, use the existing **dsprtpconnstat** command.

```
cvgmgx1a.1.1.VISM8.a > dsprtpconnstat <endpt_num>
```

Replace the *<endpt\_num>* argument with a value in the following ranges:

- For template number 1:
  - VISM-PR T1 = 1–192
  - VISM-PR E1 = 1–248
- For template number 3:
  - VISM-PR T1 = 1–192
  - VISM-PR E1 = 1–248
- For template number 4:
  - VISM-PR = 1–144
- For template number 5:
  - VISM-PR T1 = 1–192
  - VISM-PR E1 = 1–248

Example 9-13 shows the sample display of the voice quality statistics for endpoint 1.

### Example 9-13 Voice Quality Statistics Display

```
cvgmgx1a.1.1.VISM8.a > dsprtpconnstat 1

Endpoint index = 1
No. of RTP Packets Sent      = 26383402
No. of RTP Packets Received = 26383333
No. of Octets Sent          = 2110672160
No. of Octets Received      = 2110666640
No. of RTP Packets Lost     = 72
Interarrival Jitter       = 0
Latency                  = 125
cvgmgx1a.1.1.VISM8.a >
```

When the VISM-PR card receives an out-of-sequence packet, the interarrival jitter value is expected to be large.

If the playout timestamp is not enabled in fixed dejitter buffer mode, the round-trip delay value is expected to have a large deviation from the actual value.

To obtain more accurate round-trip delay values, enable the playout timestamp by using the **cnfplayouttimestamp** command.

## Diagnostic Testing for DSP Failures

When a VISM-PR card detects channel failures on the DSP, the call agent and Cisco WAN Manager (CWM) are informed. In AAL2 trunking mode a trap is generated for a DSP failure.

For DSPs to initiate diagnostics and report any failures to the call agent or CWM, the exec diag, which performs the diagnostic activities, must be enabled. If the exec diag is disabled, DSP failures are not reported.

## Enable or Disable Diagnostics

To enable or disable exec diag, use the commands in the following steps.



**Note** By default, exec diag is enabled.

**Step 1** Log in to your VISM-PR card.

**Step 2** To enable or disable the exec diag for all of the channels on a VISM-PR card, enter the **cnfexecdiag** command.

```
nodename.1.28.VISM8.a > cnfexecdiag <execdiag>
```

Replace *<execdiag>* with a value of 1 to enable or 2 to disable the exec diag on all of the channels.

**Step 3** Display the testing status (enabled or disabled) of all the channels on the VISM-PR card using the **dspexecdiag** command.

```
nodename.1.28.VISM8.a > dspexecdiag
```

LineNo/Ds0No	DSP Exec Status
1/ 1	Enable
1/ 2	Enable
1/ 3	Enable
1/ 4	Enable
1/ 5	Enable
1/ 6	Enable
1/ 7	Enable
1/ 8	Enable
1/ 9	Enable
1/10	Enable
1/11	Enable
1/12	Enable
1/13	Enable
1/14	Enable
1/15	Enable
1/16	Enable
1/17	Enable

```

1/18          Enable
1/19          Enable
1/20          Enable
1/21          Enable
1/22          Enable
1/23          Enable
1/24          Enable
INFO: line ds1 '2' is not enabled
INFO: line ds1 '3' is not enabled
INFO: line ds1 '4' is not enabled
INFO: line ds1 '5' is not enabled
INFO: line ds1 '6' is not enabled
INFO: line ds1 '7' is not enabled
INFO: line ds1 '8' is not enabled

```

**Step 4** To configure channel level diagnostics on a line, enter the **cnflnexecdiag** command.

```
nodename.1.28.VISM8.a > cnflnexecdiag <line_number> <execdiag>
```

Replace *<line\_number>* with the line number, in the range 1–8; replace *<execdiag>* with a 1 to enable or 2 to disable diagnostics. The following example shows channel diagnostics being enabled on line 1.

```
nodename.1.28.VISM8.a > cnflnexecdiag 1 1
```

**Step 5** To verify that all endpoints on the line are enabled for channel level diagnostics, enter the **dsplnexecdiag** command with the line number *<line\_number>* value.

```
nodename.1.28.VISM8.a > dsplnexecdiag 1
```

LineNo/Ds0No	DSP Exec Status
1/ 1	Enable
1/ 2	Enable
1/ 3	Enable
1/ 4	Enable
1/ 5	Enable
1/ 6	Enable
1/ 7	Enable
1/ 8	Enable
1/ 9	Enable
1/10	Enable
1/11	Enable
1/12	Enable
1/13	Enable
1/14	Enable
1/15	Enable
1/16	Enable
1/17	Enable
1/18	Enable
1/19	Enable
1/20	Enable
1/21	Enable
1/22	Enable
1/23	Enable
1/24	Enable

**Step 6** To enable testing on an individual endpoint, enter the **cnfds0execdiag** command.

```
nodename.1.28.VISM8.a > cnfds0execdiag <line_number> <ds0_number> <execdiag>
```

Replace *<line\_number>* with the line number, in the range 1–8; replace *<ds0\_number>* with a value in the range 1–24 for T1 lines or 1–31 for E1 lines; and replace *<execdiag>* with a 1 to enable or 2 to disable diagnostics.

**Step 7** To verify that testing is enabled on a channel, enter the **dspds0execdiag** command with the line number *<line\_number>* and DS0 number *<ds0\_number>*.

```
nodename.1.28.VISM8.a > dspds0execdiag 1 1
```

```
LineNo/Ds0No      DSP Exec Status
-----
          1/ 1           Enable
```

## Configure Heartbeat Timer

The DSP has a heartbeat mechanism that sends an "I'm alive and well" message at regular intervals. If a heartbeat does not reach the host, the DSP is considered failed. The host displays the heartbeat messages and the interval at which it receives the messages.

For the DSP to generate a heartbeat message within a specified period of time, the heartbeat timer value must be set on the VISM-PR card. To set that value, complete the following steps:

**Step 1** Log in to the VISM-PR card.

**Step 2** Enter the **cnfdspheartbeattimer** command.

```
nodename.1.28.VISM8.a > cnfdspheartbeattimer <Heart_beat_interval>
```

Replace *<Heart\_beat\_interval>* with a timeout value of 0 or a value in the range 100–65535. The recommended timer is 0 (disabled). The following example shows the timeout value of 0.

```
nodename.1.28.VISM8.a > cnfdspheartbeattimer 0
```

**Step 3** Display the heartbeat value configured for the VISM-PR card by entering the **dspheartbeattimer** command.

```
nodename.1.28.VISM8.a > dspheartbeattimer
```

```
DSP Heartbeat timer value: 0
```

## History Statistics Collection

Collecting history statistics can assist you with troubleshooting performance issues and fault conditions on the VISM and VISM-PR cards.

The following statistics are collected for a 24-hour duration at 15-minute intervals:

- Clock slips—VISM/VISM-PR
- ATM statistics—VISM-PR only
- Cells per second for connection—VISM-PR only



When a particular interval does not contain valid data, the interval is marked as invalid in the Valid Flag field. When the card is reset, all intervals are marked as invalid. When the data for an interval is available, the interval is marked as valid.

**Note**

The Valid Flag field does not apply to counters for clock slips.

An interval can be marked invalid in the Valid Flag field, and the Last Reset Uptime Ticks field can contain a nonzero value. This value indicates a time in ticks when the statistics are cleared by the **clrhistorystats** command. This time is relative to the time the card is reset.

Also, an interval might be marked as invalid due to a system clock time change or a data collection error.

The statistics are automatically collected and are available for display through the CLI. Some of the statistics are specific to a mode or functionality. For example, statistics with AAL2 in the name are not relevant if the connection is configured as AAL5.

**Note**

These statistics are not saved if the card is reset. When the card is initialized during bootup, the statistics are reset.

To display the history statistics, complete the following steps:

**Step 1** Log in to the PXM card and **cc** to the VISM/VISM-PR card.

**Step 2** To display the various history statistics, use the **dsphistorystats** command. This command is applicable in all operating modes.

```
nodename.1.5.VISM8.a > dsphistorystats <StatsType> <Interval> <InterfaceIndex>
|InterfaceIndex2|
```

Replace the above arguments with the values listed in Table 9-25.

**Table 9-25 Parameters for dsphistorystats Command**

Parameter	Description
<i>StatsType</i>	Type of history statistics. Values are <ul style="list-style-type: none"> <li>• 1 = PVC</li> <li>• 2 = CID</li> <li>• 3 = Line</li> </ul>
<i>Interval</i>	Interval. Range is 0–96. A value of 0 displays the 24-hr total of all of the intervals. Values 1–96 are 15-minute time intervals for the previous 24 hrs. See the following examples: <ul style="list-style-type: none"> <li>• 1 = 00:00 to 00:15</li> <li>• 2 = 00:15 to 00:30</li> <li>• 12 = 02:25 to 03:00</li> </ul>

**Table 9-25 Parameters for dsphistorystats Command (continued)**

Parameter	Description
<i>InterfaceIndex</i>	If <i>StatsType</i> is set to 1 (PVC) or 2 (CID), this value is in the range 131–510 for the logical channel number (LCN).  If <i>StatsType</i> is set to 3 (Line), this value is in the range 1–8 for the line number.
<i> InterfaceIndex2 </i>	Mandatory if <i>StatsType</i> is set to 2 (CID). Range is 8–255 for the CID number.

Example 9-14 shows PVC statistics that are collected at interval 0. The display shows the total of all valid interval data available, representing statistics for the previous 24 hours.

**Example 9-14 Displaying Statistics Collected Over 24 Hours**

```

nodename.1.5.VISM8.a > dsphistorystats 1 0 131
24 Hour Total LCN 131 History Statistics
-----
24 Hour Total ATM Xmt Cells                = 17185500
24 Hour Total ATM Rcv Cells                = 0
24 Hour Avg Per Sec ATM Xmt Cells         = 200
24 Hour Avg Per Sec ATM Rcv Cells         = 0
24 Hour Peak Per Sec ATM Xmt Cells        = 219
24 Hour Peak Per Sec ATM Rcv Cells        = 0
24 Hour Total OAM Xmt End-to-End Lpbk Req Cells = 85498
24 Hour Total OAM Rcv End-to-End Lpbk Rsp Cells = 0
24 Hour Total OAM Xmt Segment Lpbk Cells   = 0
24 Hour Total OAM Rcv Segment Lpbk Cells   = 0
24 Hour Total OAM End-to-End Lpbk Lost Cells = 85498
24 Hour Total Discarded Rcv OAM Cells      = 0
24 Hour Total AIS Suppress Cnts           = 0
24 Hour Total Xmt AIS Cnts                = 0
24 Hour Total Rcv AIS Cnts                = 0
24 Hour Total Xmt FERF Cnts               = 0
24 Hour Total Rcv FERF Cnts               = 0
24 Hour Total Xmt AIS Cells               = 0
24 Hour Total Rcv AIS Cells               = 0
24 Hour Total Xmt FERF Cells              = 85498
24 Hour Total Rcv FERF Cells              = 0
24 Hour Total AAL2 CPS Sent Pkts          = 0
24 Hour Total AAL2 CPS Rcvd Pkts         = 0
24 Hour Total AAL2 HEC Errors             = 0
24 Hour Total AAL2 CRC Errors             = 0
24 Hour Total AAL2 Invalid OSF Cells      = 0
24 Hour Total AAL2 Invalid Parity Cells   = 0
24 Hour Total AAL2 Invalid Cid Pkts      = 0
24 Hour Total AAL2 Invalid UII Pkts      = 0
24 Hour Total AAL2 Invalid Length Pkts    = 0
24 Hour Total AAL5 PDU Sent Pkts         = 0
24 Hour Total AAL5 PDU RcvdPkts         = 0
24 Hour Total AAL5 Invalid CPI PDUs       = 0
24 Hour Total AAL5 Oversized SDU Rcvd PDUs = 0
24 Hour Total AAL5 Invalid Length PDUs    = 0
24 Hour Total AAL5 CRC32 Errored PDUs     = 0
24 Hour Total AAL5 Reassembly Timer Expiry PDUs = 0
Last Completed Interval Number is 47
Number of valid intervals is 95
nodename.1.5.VISM8.a >

```

Example 9-15 shows PVC statistics that are collected from the interval 00:15 to 00:30. For the descriptions of the PVC statistics, see Table 9-43.

**Example 9-15 Displaying PVC History Statistics**

```

nodename.1.5.VISM8.a > dsphistorystats 1 2 131

PVC History Statistics: interval = 2, LCN = 131
-----
Valid Flag                               = VALID
Last Reset Uptime Ticks                   = 0
Total ATM Xmt Cells                       = 180902
Total ATM Rcv Cells                       = 0
Avg Per Sec ATM Xmt Cells                 = 201
Avg Per Sec ATM Rcv Cells                 = 0
Peak Per Sec ATM Xmt Cells                = 202
Peak Per Sec ATM Rcv Cells                = 0
Total OAM Xmt End-to-End Lpbk Req Cells = 900
Total OAM Rcv End-to-End Lpbk Rsp Cells = 0
Total OAM Xmt Segment Lpbk Cells         = 0
Total OAM Rcv Segment Lpbk Cells         = 0
Total OAM End-to-End Lpbk Lost Cells     = 900
Total Discarded Rcv OAM Cells            = 0
Total AIS Suppress Cnts                   = 0
Total Xmt AIS Cnts                        = 0
Total Rcv AIS Cnts                        = 0
Total Xmt FERF Cnts                       = 0
Total Rcv FERF Cnts                       = 0
Total Xmt AIS Cells                       = 0
Total Rcv AIS Cells                       = 0
Total Xmt FERF Cells                      = 900
Total Rcv FERF Cells                      = 0
Total AAL2 CPS Sent Pkts                  = 0
Total AAL2 CPS Rcvd Pkts                  = 0
Total AAL2 HEC Errors                     = 0
Total AAL2 CRC Errors                     = 0
Total AAL2 Invalid OSF Cells              = 0
Total AAL2 Invalid Parity Cells           = 0
Total AAL2 Invalid Cid Pkts              = 0
Total AAL2 Invalid UII Pkts              = 0
Total AAL2 Invalid Length Pkts           = 0
Total AAL5 PDU Sent Pkts                  = 0
Total AAL5 PDU RcvdPkts                   = 0
Total AAL5 Invalid CPI PDUs               = 0
Total AAL5 Oversized SDU Rcvd PDUs       = 0
Total AAL5 Invalid Length PDUs           = 0
Total AAL5 CRC32 Errored PDUs            = 0
Total AAL5 Reassembly Timer Expiry PDUs = 0

Last Completed Interval Number is 42

nodename.1.5.VISM8.a >

```

Example 9-16 shows CID history statistics for the interval 00:00 to 00:15 on CID 8 with LCN 131. For descriptions of the CID statistics, see Table 9-44.

**Example 9-16 Displaying CID History Statistics**

```
nodename.1.5.VISM8.a > dsphistorystats 2 1 131 8

CID History Statistics: interval = 1, LCN = 131, CID = 8
-----
```

```
Valid Flag                = VALID
Last Reset Uptime Ticks   = 0
Total Avg Per Second Sent Pkts = 201
Total Avg Per Second Rcvd Pkts = 0
Total Sent Pkts           = 180976
Total Rcvd Pkts           = 0
Total Sent Octets         = 7748631
Total Rcvd Octets         = 0
Total Sent Peak Per Second Pkts = 202
Total Rcvd Peak Per Second Pkts = 0
Total Ext AIS Rcvd Pkts   = 0
Total Ext RAI Rcvd Pkts  = 0
Total Ext Conn AIS Rcvd Pkts = 0
Total Ext Conn RDI RcvdPkts = 0
Total Ext AIS Rcv Cnts    = 0
Total Ext RAI Rcv Cnts    = 0
Total Ext Conn AIS Cnts   = 0
Total Ext Conn RDI Cnts   = 0
Total Ext AIS Xmt Cnts    = 0
Total Ext RAI Xmt Cnts    = 0
```

```
Last Completed Interval Number is 45
```

```
nodename.1.5.VISM8.a >
```

**Step 3** To clear history statistics, use the **clrhistorystats** command.

```
nodename.1.5.VISM8.a > clrhistorystats <StatsType> <Hours> <InterfaceIndex>
| <InterfaceIndex2>|
```

Replace the above arguments with the values listed in Table 9-26. The **clrhistorystats** command invalidates the intervals. The actual statistics are not cleared, but the 24-hour total statistics are cleared.

**Table 9-26 Parameters for *clrhistorystats* Command**

Parameter	Description
<i>StatsType</i>	Type of history statistics. Values are <ul style="list-style-type: none"> <li>• 1 = PVC</li> <li>• 2 = CID</li> </ul>
<i>Hours</i>	Number of hours prior to the current interval to clear the history statistics.
<i>InterfaceIndex</i>	If <i>StatsType</i> is set to 1 (PVC) or 2 (CID), this value is in the range 131–510 for the LCN.
<i>[InterfaceIndex2]</i>	Mandatory if <i>StatsType</i> is set to 2 (CID). Range is 8–255 for the CID number.

## Display ATM Statistics

To display the real-time ATM statistics, use the **dsponcmt** command. Example 9-17 shows sample output from the **dsponcmt** command.

### Example 9-17 Displaying ATM Statistics

```
nodename.1.5.VISM8.a > dsponcmt 131
ChanNum: 131
Chan State: okay
Chan XMT ATM State: Normal
Chan RCV ATM State: Normal
Chan Status Bit Map: 0x0
OAM Lpb Lost Cells: 0
AAL2 HEC Errors: 0
AAL2 CRC Errors: 0
AAL2 Invalid OSF Cells: 0
AAL2 Invalid Parity Cells: 0
AAL2 CPS Packet Xmt: 0
AAL2 CPS Packet Rcv: 0
AAL2 Invalid CID CPS: 0
AAL2 Invalid UII CPS: 0
AAL2 Invalid Len. CPS: 0
AAL5 PDU Packet Xmt: 0
AAL5 PDU Packet Rcv: 0
AAL5 Invalid CPI: 0
AAL5 oversized SDU PDU: 0
AAL5 Invalid Len. PDU: 0
AAL5 PDU CRC32 Errors: 0
AAL5 Reassembly Timer expired PDU: 0
AIS Successful Suppression Count: 0
AIS Alarm Transmitted Count: 0
AIS Alarm Received Count: 0
FERF Alarm Transmitted Count: 0
FERF Alarm Received Count: 0
Chan 24 Hr Peak Xmt Cell Rate(CPS): 0
Chan Current Xmt Cell Rate (CPS): 0
Chan 24 Hr Peak Rcv Cell Rate(CPS): 0
Chan Current Rcv Cell Rate (CPS): 0
```

## Display Cells Per Second

To display CPS usage, use the commands listed in the following steps:

**Step 1** Log in to the PXM card and **cc** to the VISM/VISM-PR card.

**Step 2** To display the cell rate per second for a connection, use the **dspsidcps** command.

```
nodename.1.5.VISM8.a > dspsidcps <LCN>
```

Replace *<LCN>* with a value in the range 131–510.

Example 9-18 shows the cell rates for LCN 131.

### Example 9-18 Displaying CPS for a Connection

```
nodename.1.5.VISM8.a > dspsidcps 131
```

LCN	CID	Endpt	24Hr	Peak	Xmit	24Hr	Peak	Rcv	Current	Xmit	Current	Rcv
Num	Num	Num	cell	Rate(CPS)		cell	Rate(CPS)		Cell	Rate(CPS)	Cell	Rate(CPS)
-----												
131	8	1		204						201		

**Step 3** To show CPS usage per CID for all of the CIDs on a particular line, use the **dsplncidcps** command.

```
nodename.1.5.VISM8.a > dsplncidcps <line_number>
```

Replace the *<line\_number>* argument with the line number in the range 1–8.

Example 9-19 shows CPS usage for line 1.

### Example 9-19 Displaying CPS Usage for All CIDs on a Line

```
nodename.1.5.VISM8.a > dsplncidcps 1
```

LCN	CID	Endpt	24Hr	Peak	Xmit	24Hr	Peak	Rcv	Current	Xmit	Current	Rcv
Num	Num	Num	cell	Rate(CPS)		cell	Rate(CPS)		Cell	Rate(CPS)	Cell	Rate(CPS)
-----												
131	8	1		219						201		

**Step 4** To display the current and 24-hr peak cell rates for a managed channel identifier (CID) on a specified endpoint, use the **dspmngcidcnt** command.

```
nodename.1.5.VISM8.a > dspmngcidcnt <endpt_num>
```

Replace *<endpt\_num>* with one of the following values:

- Template 1
  - 1–145 for VISM
  - 1–192 for VISM-PR T1
  - 1–248 for VISM-PR E1
- Template 2
  - 1–192 for T1
  - 1–248 for E1

- Template 3
  - 1–120 for VISM
  - 1–192 for VISM-PR T1
  - 1–248 for VISM-PR E1
- Template 4
  - 1–64 for VISM
  - 1–144 for VISM-PR
- Template 5
  - 1–192 for VISM-PR T1
  - 1–248 for VISM-PR E1

Example 9-20 shows sample output for endpoint number 1.

**Example 9-20 Displaying Managed CID Cell Rates**

```
nodename.1.5.VISM8.a > dsppmngcidcnt 1
EndptNum: 1
Lcn: 131
Cid: 11
SentPkts: 0
RcvdPkts: 0
SentOctets: 8
RcvdOctets: 8
LostPkts: 0
Jitter: 0
Latency: 0
Ext AIS Rcvd:      0
Ext RAI Rcvd:      0
Ext Conn AIS Rcvd: 0
Ext Conn RDI Rcvd: 0
Ext AIS Rcvd Cnt:  0
Ext RAI Rcvd Cnt:  0
Ext Conn AIS Rcvd Cnt: 0
Ext Conn RDI Rcvd Cnt: 0
Ext Conn AIS Xmit Cnt: 0
Ext Conn RAI Xmit Cnt: 1
24Hr Peak Xmt Cell Rate (CPS): 204

Type <CR> to continue, Q<CR> to stop:

Current   Xmt Cell Rate (CPS): 201
24Hr Peak Rcv Cell Rate (CPS): 0
Current   Rcv Cell Rate (CPS): 0
```

## Static and Real-Time Configuration Display

To troubleshoot VISM/VISM-PR issues, you can use the **dsppall** command to display static configurations, run-time statistics, and real-time dynamic data.

The **dsppall** command is available in all operating modes. This command displays all of the individual display command data for each operating mode. The display data differs depending on the mode.

Use **dspall -config** to display only the static configurations. Use **dspall -runtime** to display the static configurations, run-time statistics, and real-time dynamic data.

Example 9-21 shows a sample of static data from the **dspall -config** command in the AAL2 trunking mode.

**Example 9-21 Display Static Data**

```

nodename.1.28.VISM8.a > dspall -config
----- Displaying Card Level Configuration -----
dspaal2params
-----
AAL2 DTMF RELAY: Off
AAL2 CAS BITS TRANSPORT: Off
AAL2 TYPE3 REDUNDANCY: On
AAL2 VAD TIMER: 250
AAL2 CID FILL TIMER: 30

dspaissuppression
-----
ConnId ChanNum AIS Suppression Status AIS Delay Time
-----
milwui03.17.1.0.131 131 DISABLED 30
milwui03.17.1.0.132 132 DISABLED 30

dspcarddsp
-----
IdlePattern: 54
IdleDirection: Both
PacketSize: 80 bytes
DB loss: sixdb
Jitter buffer mode: fixed
Jitter buffer size: forty msec
Adaptive Gain Control: off

```

Example 9-22 shows sample of real-time data using the **dspall -runtime** command in the AAL2 trunking mode.

**Example 9-22 Display All Run-time Data**

```

nodename.1.28.VISM8.a > dspall -runtime
----- Displaying Card Level Runtime Configuration -----

dspcacfailcntrs
-----
PVC Addition Failures:      0
SVC Addition Failures:      0
VC CAC Failures for PVCs:   0
PVC Upspeed Failures:      0
SVC Upspeed Failures:      0

```



----- Displaying PVC Level Runtime Configuration -----

dsponcnt 131

-----

```

ChanNum: 131
Chan State:                okay
Chan XMT ATM State:       Normal
Chan RCV ATM State:       Normal
Chan Status Bit Map:      0x0
OAM Lpb Lost Cells:      122
AAL2 HEC Errors:         0
AAL2 CRC Errors:         0
AAL2 Invalid OSF Cells:  0
AAL2 Invalid Parity Cells: 0
AAL2 CPS Packet Xmt:     26732
AAL2 CPS Packet Rcv:     5245
AAL2 Invalid CID CPS:    0
AAL2 Invalid UII CPS:    0
AAL2 Invalid Len. CPS:   0
Chan 24Hr Peak Xmt Cell Rate (CPS): 2082
Chan Current Xmt Cell Rate (CPS): 120
Chan 24Hr Peak Rcv Cell Rate (CPS): 58
Chan Current Rcv Cell Rate (CPS): 51
AAL5 PDU Packet Xmt:     0
AAL5 PDU Packet Rcv:     0
AAL5 Invalid CPI:        0
AAL5 oversized SDU PDU:  0
AAL5 Invalid Len. PDU:   0
AAL5 PDU CRC32 Errors:   0
AAL5 Reassembly Timer expired PDU: 0
AIS Successful Suppression Count: 0
AIS Alarm Transmitted Count: 0
AIS Alarm Received Count: 0
FERF Alarm Transmitted Count: 7
FERF Alarm Received Count: 5

```

dspsarcnt 141

-----

```

SarShelfNum: 1
SarSlotNum: 4
SarChanNum: 141

```

	Tx	Rx
	-----	-----
Total Cells:	36564	5370
Total CellsCLP:	0	0
Total CellsAIS:	0	0
Total CellsFERF:	47	17
Total CellsEnd2EndLpBk:	342	241
Total CellsSegmentLpBk:	0	0
RcvCellsDiscOAM:		0

```
dspslipcnt 1
-----
```

```
Line 1 Slip Counters:      Tx Slip      Rx Slip
                          -----      -----

Uncontrolled Slip:        0              0
Frame Slip:                0              136
```

The following sections list the display commands that are applicable to the **dspsall -config** and the **dspsall -runtime** commands. For more information on these commands, see Chapter 10, “CLI Commands.”.

## VoIP Switching/VoIP Trunking

In the VoIP switching/VoIP trunking (mode 1), issuing the **dspsall -config** command shows the static configuration data from the commands listed in Table 9-27.

**Table 9-27** VoIP Switching/VoIP Trunking Static Display Commands

Command	Description
<b>dspscarddsp</b>	Display card configuration parameters
<b>dspscasendpts</b>	Display CAS endpoint configuration
<b>dspscasvars</b>	Display parameters of all CAS variants
<b>dspscasxgcps</b>	Display CAS/xGCP timer parameters
<b>dspsco1timer</b>	Display continuity test 1 timer value
<b>dspsco2timer</b>	Display continuity test 2 timer value
<b>dspsco4timer</b>	Display continuity test 4 timer value
<b>dspscodecjtrdelays</b>	Display codec jitter delay modes
<b>dspscodecneg</b>	Display codec negotiation option
<b>dspscodecparams</b>	Display codec parameters
<b>dspscon</b>	Display channel configuration
<b>dspsconcac</b>	Display connection admission control (CAC) configuration for a connection
<b>dspscons</b>	Display channel configuration for all connections
<b>dspsconvbdpol</b>	Display VBD policies for a channel
<b>dspsdnallips</b>	Display all IP addresses for all domain names on the card
<b>dspsdynamicpayload</b>	Display dynamic payload for the card
<b>dspsendpts</b>	Display configuration for all endpoints
<b>dspsgwstate</b>	Display gateway service state
<b>dspslapds</b>	Display configuration for all LAPD channels
<b>dspsln</b>	Display configuration of a line
<b>dspslncompanding</b>	Display companding law on the line
<b>dspslndsp</b>	Display DSP data for a line
<b>dspslns</b>	Display configuration for all lines on the card

**Table 9-27** *VoIP Switching/VoIP Trunking Static Display Commands (continued)*

Command	Description
<b>dsplnstate</b>	Display service state of the line
<b>dsploops</b>	Display all lines and DS0s in the loopback condition
<b>dspmgcgrpprotocols</b>	Display all MGC redundancy group protocols
<b>dspmgcgrps</b>	Display all configured MGC redundancy groups
<b>dspoamloopcnt</b>	Display OAM loop count
<b>dspport</b>	Display virtual port configuration
<b>dsprscrptn</b>	Display resource partition configuration
<b>dsprtpecons</b>	Display configuration for all RTP connections
<b>dsprudptrunks</b>	Display configuration for all RUDP sessions
<b>dspsesgrps</b>	Display configuration for all session groups
<b>dspsidpacket</b>	Display SID packet configuration for each line
<b>dspt38fxlcos</b>	Display fax handling instructions for all lines
<b>dspt38nsetimeouts</b>	Display NSE timeout for all lines
<b>dspt38params</b>	Display fax transfer parameters for a line
<b>dspvbdcodec</b>	Display upspeed codec for VBD
<b>dspvbdpol</b>	Display VBD policies
<b>dspvismdn</b>	Display domain name for card
<b>dspvismparam</b>	Display card configuration parameters
<b>dspvoipparams</b>	Display VoIP mode parameters
<b>dspxgcpbt</b>	Display bearer type configuration
<b>dspxgcppersistevts</b>	Display all xGCP persistent events
<b>version</b>	Display version data

In addition to the data from the commands listed in Table 9-27, the **dspall -runtime** command shows the run-time data listed in Table 9-28.

**Table 9-28** *VoIP Switching/VoIP Trunking Run-time Display Commands*

Command	Description
<b>dspcacfailentrs</b>	Display CAC failure counters
<b>dspconcnt</b>	Display counter configuration for a connection
<b>dsplnendptstatus</b>	Display endpoint status for a line
<b>dspсарnt</b>	Display SAR counter values for a channel
<b>dspslipcnt</b>	Display clock slip counters for a line
<b>dspxgcpcons</b>	Display configuration for all call agent connections
<b>dspxgcpdetailnts</b>	Display detailed message exchange statistics for all call agents
<b>dspxgcpperrcnt</b>	Display xGCP error counts

## AAL2 Trunking

In the AAL2 trunking (mode 2), issuing the **dspall -config** command shows the static configuration data from the commands listed in Table 9-29.

**Table 9-29 AAL2 Trunking Static Display Commands**

Command	Description
<b>dspaal2params</b>	Display AAL2 parameters
<b>dspaissuppression</b>	Display AIS propagation status
<b>dspcarddsp</b>	Display card configuration parameters
<b>dspcasendpts</b>	Display CAS endpoint configuration
<b>dspcastransendpts</b>	Display endpoints with their associated CAS mapping table names
<b>dspcastranstbls</b>	Display list of the CAS mapping tables
<b>dspcasvars</b>	Display parameters of all CAS variants
<b>dspcasxgeps</b>	Display CAS/xGCP timer parameters
<b>dspccschans</b>	Display CCS channels
<b>dspcids</b>	Display CIDs of LCN
<b>dspcodecjtrdelays</b>	Display codec jitter delay modes
<b>dspcon</b>	Display channel configuration
<b>dspconcac</b>	Display CAC configuration for a connection
<b>dspcons</b>	Display channel configuration for all connections
<b>dspconvbdpol</b>	Display VBD policies for a channel
<b>dspendpts</b>	Display endpoints
<b>dspln</b>	Display configuration of a line
<b>dsplncompanding</b>	Display companding law on the line
<b>dsplndsp</b>	Display DSP data for a line
<b>dsplns</b>	Display configuration for all lines on the card
<b>dsploops</b>	Display all lines and DS0s in the loopback condition
<b>dspoamloopcnt</b>	Display OAM loop count
<b>dspport</b>	Display virtual port configuration
<b>dspprofparams</b>	Display profile elements for all profiles
<b>dsprscrptn</b>	Display resource partition configuration
<b>dspvbdpol</b>	Display VBD policies
<b>dspvismparam</b>	Display card configuration parameters
<b>dspxgcpbt</b>	Display bearer type configuration
<b>version</b>	Display version data

In addition to the data from the commands listed in Table 9-29, the **dspall -runtime** command shows the run-time data listed in Table 9-30.

**Table 9-30 AAL2 Trunking Run-time Display Commands**

Command	Description
<b>dspcacfailcntrs</b>	Display CAC failure counters
<b>dsponcnt</b>	Display counter configuration for a connection
<b>dsplnendptstatus</b>	Display endpoint status for a line
<b>dspsarcent</b>	Display SAR counter values for a channel
<b>dspslipcnt</b>	Display clock slip counters for a line

## AAL1 Switching

In the AAL1 switching (mode 3), issuing the **dspall -config** command shows the static configuration data from the commands listed in Table 9-31.

**Table 9-31 AAL1 Switching Static Display Commands**

Command	Description
<b>dspaggsvcbw</b>	Display configured bandwidth
<b>dspcarddsp</b>	Display card configuration parameters
<b>dspco1timer</b>	Display continuity test 1 timer value
<b>dspco2timer</b>	Display continuity test 2 timer value
<b>dspco4timer</b>	Display continuity test 4 timer value
<b>dspcodecjtrdelays</b>	Display codec jitter delay modes
<b>dspcodecneg</b>	Display codec negotiation option
<b>dspcodecparams</b>	Display codec parameters
<b>dspon</b>	Display channel configuration
<b>dsponcac</b>	Display CAC configuration for a connection
<b>dsponcons</b>	Display channel configuration for all connections
<b>dspdnallips</b>	Display all IP addresses for all domain names on the card
<b>dspdynamipayload</b>	Display dynamic payload for the card
<b>dspendpts</b>	Display endpoints
<b>dspgwstate</b>	Display gateway service state
<b>dsplapds</b>	Display configuration for all LAPD channels
<b>dspln</b>	Display configuration of a line
<b>dsplncompanding</b>	Display companding law on the line
<b>dsplndsp</b>	Display DSP data for a line
<b>dsplns</b>	Display configuration for all lines on the card
<b>dsplnstate</b>	Display service state of the line
<b>dsploops</b>	Display all lines and DS0s in the loopback condition

**Table 9-31 AAL1 Switching Static Display Commands (continued)**

Command	Description
<b>dspmgegrprotocols</b>	Display all MGC redundancy group protocols
<b>dspmgegrps</b>	Display all configured MGC redundancy groups
<b>dsपोामloopcnt</b>	Display OAM loop count
<b>dsport</b>	Display virtual port configuration
<b>dsprscrptn</b>	Display resource partition configuration
<b>dspsesgrps</b>	Display configuration for all session groups
<b>dspsvcgw</b>	Display SVC gateway parameters
<b>dspsvcqosparam</b>	Display quality of service parameters
<b>dspsvismdn</b>	Display domain name for card
<b>dspsvismparam</b>	Display card configuration parameters
<b>dspxgcpbt</b>	Display bearer type configuration
<b>dspxgcppersistevts</b>	Display all xGCP persistent events
<b>version</b>	Display version data

In addition to displaying the data from the commands listed in Table 9-31, the **dspall -runtime** command shows the run-time data listed in Table 9-32.

**Table 9-32 AAL1 Switching Run-time Display Commands**

Command	Description
<b>dspacefailcnts</b>	Display CAC failure counters
<b>dsponcnt</b>	Display counter configuration for a connection
<b>dsplnendptstatus</b>	Display endpoint status for a line
<b>dspsarcnt</b>	Display SAR counter values for a channel
<b>dspslipcnt</b>	Display clock slip counters for a line
<b>dspxgcpcons</b>	Display configuration for all call agent connections
<b>dspxgcpdetailcnts</b>	Display detailed message exchange statistics for all call agents
<b>dspxgcpperrcnt</b>	Display xGCP error counts

## Switched AAL2 SVC

In the switched AAL2 SVC (mode 7), issuing the **dspall -config** command shows the static configuration data from the commands listed in Table 9-33.

**Table 9-33 Switched AAL2 SVC Static Display Commands**

Command	Description
<b>dsपाल2params</b>	Display AAL2 parameters
<b>dsपागgsvcbw</b>	Display configured bandwidth

**Table 9-33 Switched AAL2 SVC Static Display Commands (continued)**

<b>Command</b>	<b>Description</b>
<b>dspaissuppression</b>	Display AIS propagation settings
<b>dspcarddsp</b>	Display card configuration parameters
<b>dspcastransendpts</b>	Display endpoints with their associated CAS mapping table names
<b>dspcastranstbls</b>	Display a list of the CAS mapping tables
<b>dspco1timer</b>	Display continuity test 1 timer value
<b>dspco2timer</b>	Display continuity test 2 timer value
<b>dspco4timer</b>	Display continuity test 4 timer value
<b>dspcodecjrtdelays</b>	Display codec jitter delay modes
<b>dspcon</b>	Display channel configuration
<b>dspconcac</b>	Display CAC configuration for a connection
<b>dspcons</b>	Display channel configuration for all connections
<b>dspconvbdpol</b>	Display VBD policies for a connection
<b>dspdnallips</b>	Display all IP addresses for all domain names on the card
<b>dspendpts</b>	Display endpoints
<b>dspgwstate</b>	Display gateway service state
<b>dsplapds</b>	Display configuration for all LAPD channels
<b>dspln</b>	Display configuration of a line
<b>dsplncompanding</b>	Display companding law on the line
<b>dsplndsp</b>	Display DSP data for a line
<b>dsplns</b>	Display configuration for all lines on the card
<b>dsplnstate</b>	Display service state of the line
<b>dsploops</b>	Display all lines and DS0s in the loopback condition
<b>dspmgcgrpprotocols</b>	Display all MGC redundancy group protocols
<b>dspmgcgrps</b>	Display all configured MGC redundancy groups
<b>dspoamloopcnt</b>	Display OAM loop count
<b>dspport</b>	Display virtual port configuration
<b>dspprofparams</b>	Display profile parameters
<b>dsprscrtrn</b>	Display resource partition configuration
<b>dspsesgrps</b>	Display configuration for all session groups
<b>dspsvcgw</b>	Display SVC gateway parameters
<b>dspsvcqosparam</b>	Display quality of service parameters
<b>dspvbdpol</b>	Display VBD policies
<b>dspvismdn</b>	Display domain name for card
<b>dspvismparam</b>	Display card configuration parameters
<b>dspxgcpbt</b>	Display bearer type configuration

**Table 9-33 Switched AAL2 SVC Static Display Commands (continued)**

Command	Description
<b>dspxgcppersistevts</b>	Display all xGCP persistent events
<b>version</b>	Display version data

In addition to displaying the data from the commands listed in Table 9-33, the **dspall -runtime** command shows the run-time data listed in Table 9-34.

**Table 9-34 Switched AAL2 SVC Run-time Display Commands**

Command	Description
<b>dspcacfailentrs</b>	Display CAC failure counters
<b>dspconcnt</b>	Display counter configuration for a connection
<b>dsplnendptstatus</b>	Display endpoint status for a line
<b>dsparent</b>	Display SAR counter values for a channel
<b>dspslipcnt</b>	Display clock slip counters for a line
<b>dspxgcpcons</b>	Display configuration for all call agent connections
<b>dspxgcpdetailcnts</b>	Display detail message exchange statistics for all call agents
<b>dspxgcperrcnt</b>	Display xGCP error counts

## Switched AAL2 PVC

In the switched AAL2 PVC (mode 8), issuing the **dspall -config** command shows the static configuration data from the commands listed in Table 9-35.

**Table 9-35 Switched AAL2 PVC Static Display Commands**

Command	Description
<b>dspaal2params</b>	Display AAL2 parameters
<b>dspaissuppression</b>	Display AIS propagation status
<b>dspcarddsp</b>	Display card configuration parameters
<b>dspcasendpts</b>	Display CAS endpoint configuration
<b>dspcastransendpts</b>	Display endpoints with their associated CAS mapping table names
<b>dspcastranstbls</b>	Display a list of the CAS mapping tables
<b>dspcasvars</b>	Display parameters of all CAS variants
<b>dspcasxgcps</b>	Display CAS/xGCP timer parameters
<b>dspccschans</b>	Display CCS channels
<b>dspcids</b>	Display CIDs of LCN
<b>dspco1timer</b>	Display continuity test 1 timer value
<b>dspco2timer</b>	Display continuity test 2 timer value
<b>dspco4timer</b>	Display continuity test 4 timer value



**Table 9-35 Switched AAL2 PVC Static Display Commands (continued)**

Command	Description
<b>dspscodejtrdelays</b>	Display codec jitter delay modes
<b>dspscon</b>	Display channel configuration
<b>dspsconcac</b>	Display CAC configuration for a connection
<b>dspscons</b>	Display channel configuration for all connections
<b>dspsconvbdpol</b>	Display VBD policies for a channel
<b>dspsdnallips</b>	Display all IP addresses for all domain names on the card
<b>dspsendpts</b>	Display configurations for all endpoints
<b>dspsgwstate</b>	Display gateway service state
<b>dspln</b>	Display configuration of a line
<b>dsplncompanding</b>	Display companding law on the line
<b>dsplndsp</b>	Display DSP data for a line
<b>dsplns</b>	Display configuration for all lines on the card
<b>dsplnstate</b>	Display service state of the line
<b>dspsloops</b>	Display all lines and DS0s in the loopback condition
<b>dspsmgcgrpprotocols</b>	Display all MGC redundancy group protocols
<b>dspsmgcgrps</b>	Display all configured MGC redundancy groups
<b>dspsoamloopcnt</b>	Display OAM loop count
<b>dspsport</b>	Display virtual port configuration
<b>dspsprofparams</b>	Display profile elements for all profiles
<b>dspsrscrtn</b>	Display resource partition configuration
<b>dspsvbdpol</b>	Display VBD policies
<b>dspsvccis</b>	Display VCCI values
<b>dspsvismdn</b>	Display domain name for card
<b>dspsvismparam</b>	Display card configuration parameters
<b>dspsxgcpbt</b>	Display bearer type configuration
<b>dspsxgcppersistevts</b>	Display all xGCP persistent events
<b>version</b>	Display version data

In addition to displaying the data from the commands listed in Table 9-35, the **dspsall -runtime** command shows the run-time data listed in Table 9-36.

**Table 9-36 Switched AAL2 PVC Run-time Display Commands**

Command	Description
<b>dspscacfailcntrs</b>	Display CAC failure counters
<b>dspsconcnt</b>	Display counter configuration for a connection
<b>dsplnendptstatus</b>	Display endpoint status for a line
<b>dspsarent</b>	Display SAR counter values for a channel

**Table 9-36 Switched AAL2 PVC Run-time Display Commands (continued)**

Command	Description
<b>dpslipcnt</b>	Display clock slip counters for a line
<b>dspxgcpcons</b>	Display configuration for all call agent connections
<b>dspxgcpdetailcnts</b>	Display detailed message exchange statistics for all call agents
<b>dspxgcperrcnt</b>	Display xGCP error counts

## VoIP and AAL1 SVC

In the VoIP and AAL1 SVC mode 9, issuing the **dspall -config** command shows the static configuration data from the commands listed in Table 9-37.

**Table 9-37 VoIP and AAL1 Static Display Commands**

Command	Description
<b>dspaggsvcbw</b>	Display configured SVC bandwidth
<b>dspcarddsp</b>	Display card configuration parameters
<b>dspcasendpts</b>	Display CAS endpoint configuration
<b>dspcasvars</b>	Display parameters of all CAS variants
<b>dspcasxgcps</b>	Display CAS/xGCP timer parameters
<b>dspco1timer</b>	Display continuity test 1 timer value
<b>dspco2timer</b>	Display continuity test 2 timer value
<b>dspco4timer</b>	Display continuity test 4 timer value
<b>dspcodecjrtdelays</b>	Display codec jitter delay modes
<b>dspcodecneg</b>	Display codec negotiation option
<b>dspcodecparams</b>	Display codec parameters
<b>dspcon</b>	Display channel configuration
<b>dspconcac</b>	Display CAC configuration for a connection
<b>dspcons</b>	Display channel configurations for all connections
<b>dspconvbdpol</b>	Display VBD policies for a channel
<b>dspdnallips</b>	Display all IP addresses for all domain names on the card
<b>dspdynamicpayload</b>	Display dynamic payload for the card
<b>dspendpts</b>	Display all endpoints
<b>dspgwstate</b>	Display gateway service state
<b>dsplapds</b>	Display configuration for all LAPD channels
<b>dspln</b>	Display configuration of a line
<b>dsplncompanding</b>	Display companding law on the line
<b>dsplndsp</b>	Display DSP data for a line
<b>dsplns</b>	Display configuration for all lines on the card

**Table 9-37** *VoIP and AAL1 Static Display Commands (continued)*

Command	Description
<b>dsplnstate</b>	Display service state of the line
<b>dsploops</b>	Display all lines and DS0s in the loopback condition
<b>dspmgcgrpprotocols</b>	Display all MGC redundancy group protocols
<b>dspmgcgrps</b>	Display all configured MGC redundancy groups
<b>dspoamloopcnt</b>	Display OAM loop count
<b>dspport</b>	Display virtual port configuration
<b>dsprscrptn</b>	Display resource partition configuration
<b>dsprtpecons</b>	Display configurations for all RTP connections
<b>dsprudptrunks</b>	Display configurations for all RUDP sessions
<b>dspsesgrps</b>	Display configurations for all session groups
<b>dspsidpacket</b>	Display SID packet configuration for each line
<b>dspsvcgw</b>	Display SVC gateway parameters
<b>dspsvcqosparam</b>	Display quality of service parameters
<b>dspt38fxlcos</b>	Display fax handling instructions for all lines
<b>dspt38nsetimeouts</b>	Display NSE timeout for all lines
<b>dspt38params</b>	Display fax transfer parameters for a line
<b>dspvbdcodec</b>	Display upspeed codec for VBD
<b>dspvbdpol</b>	Display VBD policies
<b>dspvismdn</b>	Display domain name for card
<b>dspvismparam</b>	Display card configuration parameters
<b>dspvoipparams</b>	Display VoIP mode parameters
<b>dspxgcpbt</b>	Display bearer type configuration
<b>dspxgcppersistevts</b>	Display all xGCP persistent events
<b>version</b>	Display version data

In addition to displaying the data from the commands listed in Table 9-37, the **dspall -runtime** command shows the run-time data listed in Table 9-38.

**Table 9-38** *VoIP and AAL1 Run-time Display Commands*

Command	Description
<b>dspcacfailcntrs</b>	Display CAC failure counters
<b>dspconcnt</b>	Display counter configuration for a connection
<b>dsplnendptstatus</b>	Display endpoint status for a line
<b>dspсарcnt</b>	Display SAR counter values for a channel
<b>dspslipcnt</b>	Display clock slip counters for a line
<b>dspxgcpcons</b>	Display configuration for all call agent connections

**Table 9-38** *VoIP and AAL1 Run-time Display Commands (continued)*

Command	Description
<b>dspxgcpdetailcnts</b>	Display detailed message exchange statistics for all call agents
<b>dspxgcperrcnt</b>	Display xGCP error counts

## VoIP Trunking/AAL2 Trunking

In the VoIP trunking/AAL2 trunking (mode 10), issuing the **dspsall -config** command shows the static configuration data from the commands listed in Table 9-39.

**Table 9-39** *VoIP Trunking/AAL2 Trunking Static Display Commands*

Command	Description
<b>dspsaal2params</b>	Display AAL2 parameters
<b>dspsaissuppression</b>	Display AIS propagation status
<b>dspscarddsp</b>	Display card configuration parameters
<b>dspscasendpts</b>	Display CAS endpoint configuration
<b>dspscastransendpts</b>	Display endpoints with their associated CAS mapping table names
<b>dspscastranstbls</b>	Display list of the CAS mapping tables
<b>dspscasvars</b>	Display parameters of all CAS variants
<b>dspscasxgcps</b>	Display CAS/xGCP timer parameters
<b>dspsccschans</b>	Display CCS channels
<b>dspsccids</b>	Display CIDs of LCN
<b>dspscodecjrtdelays</b>	Display codec jitter delay modes
<b>dspscodecparams</b>	Display codec parameters
<b>dspscon</b>	Display channel configuration
<b>dspsconcac</b>	Display CAC configuration for a connection
<b>dspscons</b>	Display channel configurations for all connections
<b>dspsconvbpol</b>	Display VBD policies for a channel
<b>dspsdynamicpayload</b>	Display dynamic payload for the card
<b>dspsendpts</b>	Display configurations for all endpoints
<b>dspsln</b>	Display configuration of a line
<b>dspslncompanding</b>	Display companding law on the line
<b>dspslndsp</b>	Display DSP data for a line
<b>dspslns</b>	Display configuration for all lines on the card
<b>dspsloops</b>	Display all lines and DS0s in the loopback condition
<b>dspsoamloopcnt</b>	Display OAM loop count
<b>dspsport</b>	Display virtual port configuration
<b>dspsprofparams</b>	Display profile elements for all profiles

**Table 9-39** VoIP Trunking/AAL2 Trunking Static Display Commands (continued)

Command	Description
<b>dsprscrprt</b>	Display resource partition configuration
<b>dsprtpecons</b>	Display configuration for all RTP connections
<b>dsprudptrunks</b>	Display configuration for all RUDP sessions
<b>dspsidpacket</b>	Display SID packet configuration for each line
<b>dspt38fxlcos</b>	Display fax handling instructions for all lines
<b>dspt38nsetimeouts</b>	Display NSE timeout for all lines
<b>dspt38params</b>	Display fax transfer parameters for a line
<b>dspvbdcodec</b>	Display upspeed codec for VBD
<b>dspvbdpol</b>	Display VBD policies
<b>dspvismparam</b>	Display card configuration parameters
<b>dspxgcpbt</b>	Display bear type configuration
<b>version</b>	Display version data

In addition to displaying the data from the commands listed in Table 9-39, the **dspall -runtime** command shows the run-time data listed in Table 9-40.

**Table 9-40** VoIP Trunking/AAL2 Trunking Run-time Display Commands

Command	Description
<b>dspcacfailcntrs</b>	Display CAC failure counters
<b>dspecont</b>	Display counter configuration for a connection
<b>dsplnendptstatus</b>	Display endpoint status for a line
<b>dspsarent</b>	Display SAR counter values for a channel
<b>dspslipcnt</b>	Display clock slip counters for a line

## Trap Filtering

When the VISM-PR card is initially configured, many traps are sent to Cisco WAN Manager (CWM) that could lower CWM performance. To reduce the load on CWM, you can filter the VISM-PR traps while the card is being configured. After the VISM-PR is configured, you can disable the trap filtering feature, so CWM can be in sync with the card.

By default the trap filtering feature is disabled.

To display either all the traps or traps per group on the card, use the **dsptraphelp** command. This command can be used to help you obtain trap number information that you need to add trap filters.

```
nodename.1.28.VISM8.a > dsptraphelp <trapHelpOpt>
```

Replace the *<trapHelpOpt>* argument with one of the following values of the trap group:

- 1 = All
- 2 = Card
- 3 = Port

- 4 = Channel/Line
- 5 = Connection
- 6 = CID
- 7 = Endpoint
- 8 = Media Gateway and Media Gateway Controller
- 9 = HDLC
- 10 = Tone Plan
- 11 = CAC
- 12 = CAS
- 13 = RTP
- 14 = LAPD
- 15 = RSVP
- 16 = Announcement
- 17 = RUDP
- 18 = XGCP

Example 9-23 shows the list of the card traps.

**Example 9-23 Displaying Trap Help**

```
nodename.1.28.VISM8.a > dsptraphelp 2

TrapNumber      TrapDescription
=====
50680           TRAP_AVAIL_FREE_DS0_LOW
50681           TRAP_CPU_UTIL_EXCEEDED
50682           TRAP_MEM_UTIL_EXCEEDED
50687           TRAP_CALL_THROTTLE_THRESHOLD_90_PERCENT
50688           TRAP_CALL_THROTTLE_THRESHOLD_EXCEEDED
50689           TRAP_CALL_THROTTLE_THRESHOLD_90_PERCENT_CLEARED
50690           TRAP_CALL_THROTTLE_THRESHOLD_EXCEEDED_CLEARED
50691           TRAP_FILTER_ON
50692           TRAP_FILTER_OFF
50693           TRAP_FILTER_ADDED
50694           TRAP_FILTER_REMOVED
50695           TRAP_FILTER_MODIFIED
50700           TRAP_VISMIP_CHANGED
50743           TRAP_VISM_CODECTEMPLATE_CHG
50744           TRAP_VISM_MODE_CHG
50745           TRAP_VISM_SCALAR_CHANG
50746           TRAP_VISM_TABLE_CHANG
50760           TRAP_VISM_SUBCELL_MUXING_CHANG
50790           TRAP_VISM_FEATURE_CHG
```

For a list of the traps and traps numbers for each group, see Appendix A, “VISM-PR Traps.”

## Configure Trap Filtering

To configure trap filtering on the VISM-PR card, complete the following steps:

- Step 1** Log in to the PXM card and **cc** to the VISM-PR card.
- Step 2** To enable the trap filtering feature on the card, enter the **cnftrapfilterfeature** command.

```
nodename.1.28.VISM8.a > cnftrapfilterfeature <trapFilteringEn>
```

Replace the *<trapFilteringEn>* argument with one of the following values:

- 1 = Enable
- 2 = Disable

Example 9-24 shows the command to enable trap filtering.

### Example 9-24 Configuring Trap Filtering

```
nodename.1.28.VISM8.a > cnftrapfilterfeature 1
nodename.1.28.VISM8.a >
```

- Step 3** To add traps to the list of traps to be filtered, enter the **addtrapfilter** command.

```
nodename.1.28.VISM8.a > addtrapfilter <trapNumber> |<trapFilterTimer>|
```

Replace the *<trapNumber>* argument with a trap value in the range 50650–50799.

Replace the optional *|trapFilterTimer|* argument with a trap filter timer value in the range 0–65536 minutes. A value of 0 indicates forever. If this argument is not specified, a default value of 15 minutes is used.

Example 9-25 shows the command to add to the filter list the card trap TRAP\_AVAIL\_FREE\_DS0\_LOW with a 20-minute interval.

### Example 9-25 Adding a Trap to the Filter List

```
nodename.1.28.VISM8.a > addtrapfilter 50680 20
nodename.1.28.VISM8.a >
```

- Step 4** To remove traps from the list of traps to be filtered, use the **deltrapfilter** command.

```
nodename.1.28.VISM8.a > deltrapfilter <trapNumber> |<trapNumber> <trapNumber> <trapNumber>
<trapNumber>|
```

Replace the *<trapNumber>* argument with trap numbers in the range 50650–50799. Use the optional *<trapNumber>* arguments to delete up to five traps from the trap filter list.

Example 9-26 shows the command to delete the card trap TRAP\_CPU\_UTIL\_EXCEEDED from the filter list.

### Example 9-26 Deleting a Trap from the Filter List

```
nodename.1.28.VISM8.a > deltrapfilter 50681
nodename.1.28.VISM8.a >
```

- Step 5** To delete all of the traps in the trap filter list, use the **delalltrapfilters** command.

```
nodename.1.28.VISM8.a > delalltrapfilters
```

This command does not have any arguments.

- Step 6** To configure the timer for a particular trap or a set of traps, use the **cnftrapfiltertimer** command.

```
nodename.1.28.VISM8.a > cnftrapfiltertimer <trapFilterTimer> |<trapNumber> <trapNumber>
<trapNumber> <trapNumber> <trapNumber>
```

Replace the *<trapFilterTimer>* argument with the timer value for the trap filter in the range 0–65536 minutes. A value of 0 indicates forever.

Replace the optional *<trapNumber>* arguments with trap numbers in the range 50650–50799. If these values are not specified, all traps in the filter list take the new timer value. A maximum of five trap numbers can be specified at one time.

Example 9-27 shows the command to configure a timer value of 15 minutes for the card traps TRAP\_MEM\_UTIL\_EXCEEDED and TRAP\_AVAIL\_FREE\_DS0\_LOW.

#### Example 9-27 Configuring Trap Filter Timer

```
nodename.1.28.VISM8.a > cnftrapfiltertimer 15 50682 50680
```

```
nodename.1.28.VISM8.a >
```

- Step 7** To display the current filter configurations for one trap or a set of traps, use the **dspttrapfilter** command.

```
nodename.1.28.VISM8.a > dspttrapfilter <trapNumber> |<trapNumber> <trapNumber> <trapNumber>
<trapNumber>|
```

Replace the *<trapNumber>* argument with trap numbers in the range 50650–50799. Use the optional *<trapNumber>* arguments to display the details for up to five traps.

Example 9-28 shows the details for card traps TRAP\_AVAIL\_FREE\_DS0\_LOW and TRAP\_MEM\_UTIL\_EXCEEDED.

#### Example 9-28 Displaying Trap Details

```
nodename.1.28.VISM8.a > dspttrapfilter 50680 50682
```

```
Trap Filtering Feature: Enabled
```

TrapNumber	Filter Time Configured(minutes)	Filter Time Left(minutes)
50680	15	13
50682	15	13

```
nodename.1.28.VISM8.a >
```

- Step 8** To display all the currently active trap filters, use the **dspalltrapfilters** command.

```
nodename.1.28.VISM8.a > dspalltrapfilters
```

This command does not have any arguments.



Example 9-29 shows the filter times for the all of the trap filters on the VISM-PR card.

**Example 9-29 Displaying All Trap Filters**

```
nodename.1.28.VISM8.a > dspalltrapfilters

Trap Filtering Feature: Enabled
TrapNumber      Filter Time Configured(minutes)  Filter Time Left(minutes)
=====
50680           15                               14
50681           15                               15
50682           15                               14

nodename.1.28.VISM8.a >
```

## VISM-PR Bulk Statistics Upload to CWM

Statistics provide a history of network monitoring over a period of time. You can upload history statistics collected on a VISM-PR card to CWM.

Statistics are collected periodically on the VISM-PR card and are written to statistics files. Statistics files are transferred or uploaded to network management stations through FTP.

You can enable VISM-PR statistics with the CWM GUI. For information about how to enable statistics with CWM, refer to the “Collecting Statistics” section of the *Cisco WAN Manager User’s Guide, Release 15*.

To view the general status of the statistics upload functionality by means of the VISM-PR CLI, use the **dspstatparms** command. This command is applicable in all operating modes.

Example 9-30 shows the sample output of the **dspstatparms** command. This command does not take any arguments.

**Example 9-30 Statistics Upload Output**

```
nodename.1.28.VISM8.a > dspstatparms

TFTP Retry Count: 1
TFTP ACK time-out (sec): 60
Bucket Interval: 15
File Interval: 15
Peak Enable Flag: Disabled
Object Count: 2 STATS COLLECTION: Enabled
Object Subtype Counts: 2 2 0 0
Total File Memory Used: 8685
Number of File Allocated: 5
Current File Size: 123176
Stat Memory Allocated: 96832
Auto Memory Allocated: 105517
Auto Mem Rgn Size: 5242880
```

The results from the **dspstatparms** command also include the list of statistics you have enabled using CWM. The next sections discuss three categories of statistics that are collected by the VISM-PR card:

- Line Statistics, page 9-88
- ATM Connection Statistics, page 9-89
- CID Statistics, page 9-92

## Line Statistics

Table 9-41 lists the T1 line statistics that are collected by the VISM-PR card.

**Table 9-41 VISM-PR T1 Line Statistics**

Stat ID	T1 Statistics	Description
0	T1_LCV	Number of line code violations (LCVs).
1	T1_LES	Number of LCV errored seconds.
2	T1_LSES	Number of LCV severely errored seconds.
3	T1E1_SEFS	Number of severely errored framing seconds.
4	T1E1_AISS	Number of alarm indication signal (AIS) severely errored seconds.
5	T1E1_UAS	Number of unavailable seconds.
6	T1E1_PERC_ERR_FREE_SEC	Percentage of LCV error-free seconds.
7	T1E1_RCV_LOS	Number of loss of signal (LOS) errors that are detected with or without the integration of an LOS alarm.
8	T1E1_RCV_OOF	Number of times out of frame (OOF) errors are detected with or without the integration of an OOF alarm.
9	T1E1_RCV_RAI	Number of times that a yellow alarm is detected with or without the integration of a remote alarm indication (RAI).
10	T1E1_RCV_FE	Number of framing pattern errors.
11	T1E1_TX_UNCTRLD_SLIP	Number of uncontrolled slips in the transmit direction.
12	T1E1_TX_FRAME_SLIP	Number of frame slips in the transmit direction.
13	T1E1_RX_UNCTRLD_SLIP	Number of uncontrolled slips in the receive direction.
14	T1E1_RX_FRAME_SLIP	Number of frame slips in the receive direction.

Table 9-42 lists the E1 line statistics that are collected by the VISM-PR card.

**Table 9-42 VISM-PR E1 Line Statistics**

Stat ID	E1 Statistics	Description
0	E1_CRC	Number of P-bit code violations.
1	E1_CRCES	Number of P-bit code violation errored seconds.

**Table 9-42 VISM-PR E1 Line Statistics (continued)**

Stat ID	E1 Statistics	Description
2	E1_CRCSES	Number of P-bit code violation severely errored seconds.
3	T1E1_SEFS	Number of severely errored framing seconds.
4	T1E1_AISS	Number of AIS severely errored seconds.
5	T1E1_UAS	Number of unavailable seconds.
6	T1E1_PERC_ERR_FREE_SEC	Percentage of LCV error free seconds.
7	T1E1_RCV_LOS	Number of LOS errors that are detected with or without the integration of an LOS alarm.
8	T1E1_RCV_OOF	Number of times that OOF errors are detected with or without an integration of an OOF alarm.
9	T1E1_RCV_RAI	Number of times that a yellow alarm is detected with or without the integration of an RAI.
10	T1E1_RCV_FE	Number of framing pattern errors.
11	T1E1_TX_UNCTRLD_SLIP	Number of uncontrolled slips in the transmit direction.
12	T1E1_TX_FRAME_SLIP	Number of frame slips in the transmit direction.
13	T1E1_RX_UNCTRLD_SLIP	Number of uncontrolled slips in the receive direction.
14	T1E1_RX_FRAME_SLIP	Number of frame slips in the receive direction.

## ATM Connection Statistics

Table 9-43 lists the permanent virtual circuit (PVC) statistics that are collected by the VISM-PR card.

**Table 9-43 VISM-PR PVC Statistics**

Stat ID	PVC Statistics	Description
0	PVC_TotalAtmXmtCells	Total number of cells that are transmitted by this PVC to the ATM network.
1	PVC_TotalAtmRcvCells	Total number of cells that are received by this PVC from the ATM network.
2	PVC_AvgAtmXmtCellsPerSec	Average number of cells per second that are transmitted to the network.
3	PVC_AvgAtmRcvCellsPerSec	Average number of cells per second that are received from the network.
4	PVC_PeakAtmXmtCellsPerSec	Peak number of cells per second that are transmitted to the network.
5	PVC_PeakAtmRcvCellsPerSec	Peak number of cells per second that are received from the network.

Table 9-43 VISM-PR PVC Statistics (continued)

Stat ID	PVC Statistics	Description
6	PVC_TotalOamXmtEndLpbkCells	Number of OAM end-to-end loopback cells that are transmitted on this connection.  OAM loopback cells are sent every second on each PVC to monitor the health of the PVC.
7	PVC_TotalOamRcvEndLpbkCells	Number of OAM end-to-end loopback cells that are received on this connection.
8	PVC_TotalOamXmtSegLpbkCells	Number of OAM segment loopback cells that are transmitted on this connection.
9	PVC_TotalOamRcvSegLpbkCells	Number of OAM segment loopback cells that are received on this connection.
10	PVC_OamLpbkLostCells	Number of OAM loopback cells that are lost.
11	PVC_TotalDiscardedRcvOamCells	Number of cells that are discarded due to a cyclic redundancy check (CRC) error on OAM cells.
12	PVC_TotalAisSuppressCnt	Number of instances that an ATM AIS alarm is successfully suppressed. Suppression prevents the alarm from propagating to the TDM interfaces.
13	PVC_TotalXmtAisCnt	Number of instances that an ATM AIS alarm is transmitted.
14	PVC_TotalRcvAisCnt	Number of instances that an ATM AIS alarm is received.
15	PVC_TotalXmtFerfCnt	Number of instances that an ATM FERF alarm is transmitted.
16	PVC_TotalRcvFerfCnt	Number of instances that an ATM FERF alarm is received.
17	PVC_TotalXmtAisCells	Number of AIS cells that are transmitted on this connection.
18	PVC_TotalRcvAisCells	Number of AIS cells that are received on this connection.
19	PVC_TotalXmtFerfCells	Number of FERF cells that are transmitted on this connection.
20	PVC_TotalRcvFerfCells	Number of FERF cells that are received on this connection.
21	PVC_Aal2CpsSentPkts	Number of AAL2 common part sublayer (CPS) packets that are sent to the network.
22	PVC_Aal2CpsRcvdPkts	Number of AAL2 CPS packets that are received from the network. This number does not include the packets that are counted as error packets.
23	PVC_Aal2HecErrors	Count of egress AAL2 CPS PDUs that are dropped due to header error control (HEC) errors.
24	PVC_Aal2CrcErrors	Count of egress AAL2 type 3 CPS PDUs that are dropped due to invalid CRC-10 errors.  CRC validation is for type 3 packets only.

**Table 9-43** VISM-PR PVC Statistics (continued)

Stat ID	PVC Statistics	Description
25	PVC_Aal2InvOsfCells	Number of AAL2 cells that are dropped due to an invalid offset field (OSF) in the egress direction.
26	PVC_Aal2InvParCells	Number of AAL2 cells that are dropped due to an invalid parity bit field in the egress direction.
27	PVC_Aal2CpsInvCidPkts	Number of AAL2 CPS packets that are dropped in the egress direction due to invalid channel identifier (CID).  The CID is invalid if it is configured out of range or is not configured.
28	PVC_Aal2CpsInvUuiPkts	Number of AAL2 CPS packets that are dropped in the egress direction due to an invalid user-to-user information (UUI) field.
29	PVC_Aal2CpsInvLenPkts	Number of AAL2 CPS packets that are dropped in the egress direction due to an invalid length field.
30	PVC_Aal5PduSentPkts	Number of AAL5 PDUs that are transmitted to the network. This statistic is applicable only to the PVCs that are configured as AAL5 PVCs in VoIP or common channel signaling (CCS) for voice over AAL2 (VoAAL2) applications.
31	PVC_Aal5PduRcvdPkts	Number of AAL5 PDUs that are received from the network. This statistic is applicable only to the PVCs that are configured as AAL5 PVCs in VoIP or CCS for VoAAL2 applications.
32	PVC_Aal5InvCpiPdus	Number of AAL5 PDUs that are dropped in the egress direction due to an invalid common part indicator (CPI) field in the AAL5 PDU trailer.  This statistic is applicable only to the PVCs that are configured as AAL5 PVCs in VoIP or common CCS for VoAAL2 applications.
33	PVC_Aal5OversizedSdusRcvdPdus	Number of AAL5 PDUs that are dropped due to the service data unit (SDU) size being larger than the configured value.  This statistic is applicable only for AAL5 PVCs.
34	PVC_Aal5InvLenPdus	Number of AAL5 PDUs that are dropped due to length violations.  This statistic is applicable to the CCS PVCs. The High-Level Data Link Control (HDLC) frames must have a minimum frame size in order to be properly interpreted by the upper layer protocol.

**Table 9-43** VISM-PR PVC Statistics (continued)

Stat ID	PVC Statistics	Description
35	PVC_Aal5Crc32ErrorPdus	Number of AAL5 PDUs that are dropped in the egress direction due to CRC-32 errors. These errors are detected by the segmentation and reassembly (SAR) layer.
36	PVC_Aal5ReassemTimerExpiryPdus	Number of AAL5 PDU reassembly timer expirations.  The timers are maintained in the egress direction for building an AAL5 PDU from the cells.

## CID Statistics

Table 9-44 lists the CID statistics that are collected by the VISM-PR card.

**Table 9-44** VISM-PR CID Statistics

Stat ID	CID Statistics	Description
0	CID_SentPacketsPerSecond	Number of packets per second that are sent to the network.
1	CID_RcvdPacketsPerSecond	Number of packets per second that are received from the network.
2	CID_SentPackets	Number of packets that have been sent to the network since connection setup.
3	CID_RcvdPackets	Number of packets that have been received from the network since connection setup.
4	CID_SentOctets	Number of bytes that have been sent to the network since connection setup.
5	CID_RcvdOctets	Number of bytes that have been received from the network since connection setup.
6	CID_SentPeakPacketsPerSecond	Number of peak packets that are sent to the network per second.
7	CID_RcvdPeakPacketsPerSecond	Number of packets that are received from the network per second.
8	CID_Aal2ExtAISPktsRcvd	Number of external AIS AAL2 type 3 packets that are received.  The external AIS is associated with a maintenance alarm that is activated by a defective maintenance span. This alarm is transmitted in the direction of the defect as a substitute for a normal signal. The alarm shows the downstream entities that have occurred and prevents other maintenance alarms consequent to this first defect. An external AIS bit stream is represented by an all 1s signal.

Table 9-44 VISM-PR CID Statistics (continued)

Stat ID	CID Statistics	Description
9	CID_Aal2ExtRAIPktsRcvd	Number of external RAI AAL2 type 3 packets that are received.  The external RAI is transmitted upstream from an entity that has detected defects persisting long enough to constitute a received signal failure.  This alarm reports to devices in the backward direction that an interruption of service has occurred in the forward direction.
10	CID_Aal2ConnAISPktsRcvd	Number of external connection AIS AAL2 type 2 packets that are received.  The external connection AIS is transmitted in the downstream direction from the AAL2 type 2 connecting point that first detects a defect which affects the AAL type 2 connection. These alarms include defects that are indicated by lower layers.
11	CID_Aal2ConnRDIPktsRcvd	Number of external connection RDI AAL2 type 2 packets that are received.  The external connection RDI is a signal transmitted upstream by an AAL2 type 2 endpoint that is in an alarm state. This alarm state is the result of an AAL2 type 2 connection AIS or a defect that affects the AAL2 type 2 connection.
12	CID_Aal2ExtAISRcvCnt	Number of external AIS AAL2 type 3 packets that are received.
13	CID_Aal2ExtRAIRcvCnt	Number of external RAI AAL2 type 3 packets that are received.
14	CID_Aal2ConnAISCnt	Number of external connection AIS AAL2 type 2 packets that are received.
15	CID_Aal2ConnRDICnt	Number of external connection RDI AAL2 type 2 packets that are received.
16	CID_Aal2ExtAISXmtCnt	Number of external AIS AAL2 type 3 packets that are transmitted.
17	CID_Aal2ExtRAIXmtCnt	Number of external RAI AAL2 type 3 packets that are transmitted.

## RTP Connection Statistics

Real-Time Transport Protocol (RTP) connection statistics are collected for individual endpoints and sent to the call agent. Use the new **dsprtpconnstat** command to display collected RTP connection statistics.

Jitter delay data collection at call completion is on a per call basis. Jitter delay data, number of packets sent and received, and number of octets sent and received are reported to the call agent through MGCP.

## Clock Slip Counters

The clock counter information feature allows you to clear the current frame slip counters for a specified VISM or VISM-PR card line and display the current frame slip counters for a specified VISM or VISM-PR card line. Use the **clrslipcnt** and **dpslipcnt** commands to work with this feature.

## Channel Alarm Enhancement

The channel alarm enhancement feature uses the modified **dsponcnt** command, which allows you to view the channel status bit map data.

## VISM TDM Line Statistics Collection

This release allows you to configure VISM to collect time division multiplexing (TDM) line statistics. Use the **dspalmcnt** command to collect and display TDM line statistics. Use the **cnfalment** command to configure the thresholds for TDM line statistics.

## Loopbacks for Lines and Connections

To diagnose problems on lines and connections, you can set lines, DS0s, and connections for the loopback state.

---

**Step 1** To set a specified line to the local loopback state, enter the **addlnloop** command.

```
nodename.1.28.VISM8.a > addlnloop <line_number>
```

Replace *<line\_number>* with the line in which you want the local loopback, in the range 1–8.

Use the **dellnloop** command to remove the local loopback state on a VISM/VISM-PR line.




---

**Note** The VISM CLI does not have a command for setting a line to the remote loopback state. Use the **cnfbert** command on the PXM1, PXM1E, or PXM45 card to set a line to the remote loopback state.

---

**Step 2** To place a specific endpoint—and so a specific DS1/DS0—into the loopback state in the TDM direction, enter the **addendptloop** command.

```
nodename.1.28.VISM8.a > addendptloop <endpt_num>
```

Replace *<endpt\_num>* with one of the following values:

- Template 1
  - 1–145 for VISM
  - 1–192 for VISM-PR T1
  - 1–248 for VISM-PR E1
- Template 2
  - 1–192 for T1
  - 1–248 for E1



- Template 3
  - 1–120 for VISM
  - 1–192 for VISM-PR T1
  - 1–248 for VISM-PR E1
- Template 4
  - 1–64 for VISM
  - 1–144 for VISM-PR
- Template 5
  - 1–192 for VISM-PR T1
  - 1–248 for VISM-PR E1

**Step 3** To place a specific DS1/DS0 into one of three loopback states, enter the **cnfds0loop** command.

```
nodename.1.28.VISM8.a > cnfds0loop <line_number> <ds0_number> <lineloopback_type>
```

Replace the above arguments with the values listed in Table 9-45.

**Table 9-45 Parameters for cnfds0loop Command**

Parameter	Description
<i>line_number</i>	Line number. Range is 1–8.
<i>ds0_number</i>	DS0 number. <ul style="list-style-type: none"> <li>• 1–24 for T1 lines</li> <li>• 1–31 for non-CAS E1 lines</li> <li>• 1–15 and 17–31 for CAS E1 lines</li> </ul> <p><b>Note</b> If the application requires CAS, issue the <b>cnflnsig</b> command before adding the endpoints.</p>
<i>lineloopback_type</i>	Type of loop on the line. <ul style="list-style-type: none"> <li>• 1 = No loop</li> <li>• 2 = Remote loop</li> <li>• 3 = Local loop</li> </ul>

**Step 4** To set a loopback on a VISM/VISM-PR PVC with the loopback in the direction of cellbus, enter the **addconloop** command.

```
nodename.1.28.VISM8.a > addconloop <LCN>
```

Replace <LCN> with a value in the range 131–510.



**Note** You can use the **delconloop** command to remove a loopback on a VISM PVC.

# TDM Features

This section contains the VISM/VISM-PR TDM features described in the following sections:

- E1 CAS Idle Code Configuration, page 9-96
- Programmable Tone Plans, page 9-100
- Call Progress Tones, page 9-102
- Wireless Tones, page 9-107
- TDM Companding Law Configuration, page 9-118
- Programmable CAS Bit Mapping (ABCD CAS bits), page 9-119
- Line Trunk Conditioning, page 9-124
- Adjustable Gain, page 9-124
- Adjustable Music On-Hold Threshold, page 9-124
- CAS Features, page 9-125
- RFC 3064 Package Support, page 9-133
- VISM Network Continuity Test, page 9-133

## E1 CAS Idle Code Configuration

When VISM/VISM-PR is configured for E1 CAS transport in AAL2 trunking mode, the default idle signaling pattern is 13.

This section contains the following topics:

- Idle Code Configuration, page 9-96
- CAS Code Sent When a CID is Added, page 9-100
- CAS Code Sent When a CID is Deleted, page 9-100

## Idle Code Configuration

You can change the default idle ABCD CAS code on an endpoint basis on the VISM/VISM-PR E1 cards. ABCD refers to the robbed-bit signaling bits that are sent in CAS lines.

- 
- Step 1** Log in to your VISM/VISM-PR card.
- Step 2** Ensure that you are in the AAL2 trunking mode.
- Step 3** To configure the idle CAS code as 4, enter the **cnfcascode** command.




---

**Note** The **cnfcascode** command can be used only on existing endpoints.

---

```
nodename.1.14.VISM8.a > cnfcascode <endpt_num> <idle_code> <seized_code> |endpts_num|
```

Replace the arguments with the values listed in Table 9-46.

**Table 9-46 Parameters for the *cnfcascode* Command**

Parameter	Description
<i>endpt_num</i>	<p>Number of the endpoint that is to be configured with CAS idle code and seized code. Value is one of the following ranges:</p> <ul style="list-style-type: none"> <li>• Template 1 <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2 <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3 <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4 <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5 <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul> <p><b>Note</b> If the second (optional) <i>endpts_num</i> argument is specified, the <i>endpt_num</i> value is the first endpoint in a consecutive number of endpoints.</p>
<i>idle_code</i>	<p>The 4-bit idle code. Range is 0–15 and represents the four signaling bits—A, B, C, and D—in binary, as bits 3, 2, 1, and 0 respectively. Bit 3 is the most significant.</p>

**Table 9-46** Parameters for the *cnfcascode* Command (continued)

Parameter	Description
<i>seized_code</i>	The 4-bit seized code. Range is 0–15 and represents the four signaling bits—A, B, C, and D—in binary, as bits 3, 2, 1, and 0 respectively. Bit 3 is the most significant.
<i>lendpts_numl</i>	(Optional) The last endpoint in a consecutive range of endpoints. Ranges are <ul style="list-style-type: none"> <li>• Template 1 <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2 <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3 <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4 <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5 <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>

The following example shows the idle CAS code as 4 on endpoints 1–6. Seized code is not used for AAL2 trunking.

```
nodename.1.14.VISM8.a > cnfcascode 1 4 6 5
```

NOTE: In order for VISM card to use the new Idle Code :  
Either Reset the Card OR re-add the Cids

**Step 4** To show the configured idle code on endpoint 1, enter the **dspds0cascode** command.

```
nodename.1.14.VISM8.a > dspds0cascode <line_number> <ds0_number>
```

Replace the *line\_number* argument with a value in the range 1–8 and *ds0\_number* with a value in the range 1–24 for T1 lines or 1–31 for E1 lines.

The following example shows the idle CAS code on endpoint 1 that you configured in Step 3.

```
nodename.1.14.VISM8.a > dspds0cascode 1 1
```

```
Ds1 line number:      1
ds0 number:          1
Ds0 If Index:        1
Ds0 Idle Code :      4
Ds0 Seized Code:     6
```

**Step 5** To view the status of all the DS0s on a line, enter the **dsplndsx0s** command.

```
nodename.1.14.VISM8.a > dsplndsx0s <line_number>
```

The following example shows the idle code you configured using the **cnfcascode** command on line 2.

```
nodename.1.14.VISM8.a > dsplndsx0s 1
```

Ds0 Index	If Index	Robbed Bit Signaling	Idle Code	Seized Code	EndPt Num	If Type	Variant Name	Cadence OnTime	Cadence OffTime
1		False	4	6	1	bearer		75	75
2		False	4	6	2	bearer		75	75
3		False	4	6	3	bearer		75	75
4		False	4	6	4	bearer		75	75
5		False	4	6	5	bearer		75	75
6		False	4	6	6	bearer		75	75
7		False	2	4	7	bearer		75	75
8		False	2	4	8	bearer		75	75
9		False	2	4	9	bearer		75	75
10		False	2	4	10	bearer		75	75
11		False	13	15	-1	-		75	75
12		False	13	15	-1	-		75	75
13		False	13	15	-1	-		75	75
14		False	13	15	-1	-		75	75
15		False	13	15	-1	-		75	75
16		False	13	15	-1	-		75	75
17		False	13	15	-1	-		75	75
18		False	13	15	-1	-		75	75
19		False	13	15	-1	-		75	75
20		False	13	15	-1	-		75	75
21		False	13	15	-1	-		75	75
22		False	13	15	-1	-		75	75
23		False	13	15	-1	-		75	75

24	False	13	15	-1	-	75	75
25	False	13	15	-1	-	75	75
26	False	13	15	-1	-	75	75
27	False	13	15	-1	-	75	75
28	False	13	15	-1	-	75	75
29	False	13	15	-1	-	75	75
30	False	13	15	-1	-	75	75
31	False	13	15	-1	-	75	75

**Step 6** To update the new CAS code on previously existing endpoints, reset the VISM/VISM-PR card.

## CAS Code Sent When a CID is Added

If the local end CID is added first, the VISM/VISM-PR continues to provide the configured idle code on the DS0 (TDM interface) until the remote AAL2 CID is added and starts sending CAS traffic over the ATM network.

If the local end CID is added after the remote end CID is added, the VISM/VISM-PR is already receiving a CAS pattern from the remote AAL2 CID. The VISM/VISM-PR begins propagating the received signaling code on the line side (TDM interface).



### Note

The AAL2 CIDs that are added are assumed to have CAS transport enabled on them. If CAS transport is disabled, the CAS bits do not propagate end-to-end.

## CAS Code Sent When a CID is Deleted

If the remote end AAL2 CID is deleted first, the VISM/VISM-PR continues to send the last received CAS pattern from the remote CID to the line side (TDM interface).

If the local end CID is deleted first, the VISM/VISM-PR sends the idle code (configured on this endpoint) to the line side (TDM interface).

## Programmable Tone Plans

You can provision a tone plan in a CAS independent scenario so that any inband call progress tone can be played on any endpoint (CAS, CCS, or clear channel).

Example 9-31 contains the built-in (preconfigured) version 1 tone plans, which you cannot modify or remove from the system. You can obtain the list of these tone plans by using the **dsptonebuiltinplans** command.

### Example 9-31 Built-in (Preconfigured) Tone Plans

```
PXM1E_SJ.1.28.VISM8.a > dsptonebuiltinplans
```

Status	Tone Plan Region	Version	Tone Plan File Name
configure	ITU1 <sup>1</sup>	1	BUILTIN
configure	NorthAmerica	1	BUILTIN
configure	Argentina	1	BUILTIN
configure	Australia	1	BUILTIN
configure	Austria	1	BUILTIN
configure	Belgium	1	BUILTIN

configure	Brazil	1	BUILTIN
configure	Canada	1	BUILTIN
configure	China	1	BUILTIN
configure	Cyprus	1	BUILTIN
configure	CzechRepublic	1	BUILTIN
configure	Denmark	1	BUILTIN
configure	Finland	1	BUILTIN
configure	France	1	BUILTIN
configure	Germany	1	BUILTIN
configure	Greece	1	BUILTIN
configure	HongKong	1	BUILTIN
configure	Hungary	1	BUILTIN
configure	Iceland	1	BUILTIN
configure	India	1	BUILTIN
configure	Indonesia	1	BUILTIN
configure	Ireland	1	BUILTIN
configure	Israel	1	BUILTIN
configure	Italy	1	BUILTIN
configure	Japan	1	BUILTIN
configure	KoreaRepublic	1	BUILTIN
configure	Luxembourg	1	BUILTIN
configure	Malaysia	1	BUILTIN
configure	Mexico	1	BUILTIN
configure	Netherlands	1	BUILTIN
configure	NewZealand	1	BUILTIN
configure	Norway	1	BUILTIN
configure	Philippines	1	BUILTIN
configure	Poland	1	BUILTIN
configure	Portugal	1	BUILTIN
configure	Russia	1	BUILTIN
configure	Singapore	1	BUILTIN
configure	Slovakia	1	BUILTIN
configure	Slovenia	1	BUILTIN
configure	SouthAfrica	1	BUILTIN
configure	Spain	1	BUILTIN
configure	Sweden	1	BUILTIN
configure	Switzerland	1	BUILTIN
configure	Taiwan	1	BUILTIN
configure	Thailand	1	BUILTIN
configure	Turkey	1	BUILTIN
configure	UnitedKingdom	1	BUILTIN
configure	UnitedStates	1	BUILTIN

1. ITU = International Telecommunication Union (formerly CCITT)

You can configure provisional tone plans if the built-in tone plans do not meet your application needs. To create a provisional tone plan assign new region/country, version, and file names, and configure the following call progress tones:

- Ring-back
- Busy
- Reorder/Congestion
- Dial
- Stutter dial
- Offhook alert/warning

## Call Progress Tones

In a VoIP network, a call agent can originate a call to an analog network. The call supervision information from the analog switch might be sent back as special information tones. A voice gateway can detect the subscriber line tones and pass the tones to the remote gateway as telephony events.

This section contains the following topics:

- Default Values, page 9-102
- Call Progress Tone Configuration, page 9-105

The VISM-PR detects a subset of commonly used call progress tones and reports these tones to the call agent. Table 9-47 lists the supported call progress tones.

**Table 9-47 Call Progress Tones**

Tone Name	NTE Representation (Decimal)
Ringing	70
Special Ringing	71
Busy	72
Congestion	73
Special Information	74

These tones are applicable only to a VISM-PR card with PXM1, PXM1E, or PXM45 processor cards. The tones are only supported in VoIP switching mode.



### Note

This feature is not supported on VISM-PR E1 cards.

Although the NTE is sent regardless of the codec, we recommend that you use codec G.711u. Using any codec other than G.711u can cause distortion in the in-band propagated tone on the other end.

The call progress tones are supported on all of the templates.

## Default Values

This section contains the VISM-PR default values for each of the call progress tones. We recommend that you use these values for configuration.

## Dual Tones

This section contains the recommended values for the four dual tones:

- Ring-back
- Special ring-back
- Busy
- Congestion

When the two frequency components of a dual-frequency tone are less than 60 Hz apart, the frequency pair must be configured according to the following formula:

frequency pair  $(F1 + F2)/2, 0$



For example, suppose that the ring-back tone has the following frequency components: F1= 440 Hz and F2 = 480 Hz. The frequency must be configured as Freq1 = 460, Freq2 = 0.

The cadences of the tones are used to differentiate between tones that have overlapping frequencies.

**Note**

If the call agent requests multiple dual-frequency tone events which have overlapping frequencies and cadences, the VISM-PR attempts to match the tones in ascending order of the requested event IDs (event numbers). The lowest event ID that matches the frequency and cadence combination is reported to the call agent.

Example 9-32 shows the values for the ring-back tone.

**Example 9-32 Ring-back Tone**

```
nodename.1.28.VISM8.a > dspdualtonedet 1

Tone Index:           1
Event Number:        70
Freq1:               460 Hz
Freq2:               0 Hz
Oncadence:           2000 ms
OffCadence:          4000 ms
CadenceMatch:        1
FreqMaxDeviation:    30 Hz
ToneMaxPower:        -3 dB
ToneMinPwr:          -35 dB
TonePwrTwist:         10
FreqMaxDelay:        100 ms
MinOnCadence:        200 ms
MaxOffCadence:       4500 ms
```

Example 9-33 shows the values for the special ring-back tone.

**Example 9-33 Special ring-back Tone**

```
nodename.1.28.VISM8.a > dspdualtonedet 2

Tone Index:           2
Event Number:        71
Freq1:               460 Hz
Freq2:               0 Hz
Oncadence:           1000 ms
OffCadence:          3000 ms
CadenceMatch:        1
FreqMaxDeviation:    30 Hz
ToneMaxPower:        -3 dB
ToneMinPwr:          -35 dB
TonePwrTwist:         10
FreqMaxDelay:        100 ms
MinOnCadence:        200 ms
MaxOffCadence:       4500 ms
```

Example 9-34 shows the values for the busy tone.

#### **Example 9-34 Busy Tone**

```
nodename.1.28.VISM8.a > dspdualtonedet 3

Tone Index:           3
Event Number:         72
Freq1:                480 Hz
Freq2:                620 Hz
Oncadence:            500 ms
OffCadence:           500 ms
CadenceMatch:         1
FreqMaxDeviation:     30 Hz
ToneMaxPower:         -3 dB
ToneMinPwr:           -35 dB
TonePwrTwist:         10
FreqMaxDelay:         100 ms
MinOnCadence:         200 ms
MaxOffCadence:        4500 ms
```

Example 9-35 shows the values for the Congestion tone.

#### **Example 9-35 Congestion Tone**

```
nodename.1.28.VISM8.a > dspdualtonedet 4

Tone Index:           4
Event Number:         73
Freq1:                480 Hz
Freq2:                620 Hz
Oncadence:            250 ms
OffCadence:           250 ms
CadenceMatch:         1
FreqMaxDeviation:     30 Hz
ToneMaxPower:         -3 dB
ToneMinPwr:           -35 dB
TonePwrTwist:         10
FreqMaxDelay:         100 ms
MinOnCadence:         200 ms
MaxOffCadence:        4500 ms
```

### **Special Information Tone**

The following values are recommended for a sequential tone.

```
nodename.1.28.VISM8.a > dspseqtonedet

seqToneNumOfFrequencies  3
seqToneEventID           74
seqToneDurationOfEachTone 330 ms
seqToneGapBetweenEachTone 10 ms
seqToneDurationDeviation  20 ms
seqToneMaximumGapDuration 150 ms
seqToneGapDurationDeviation 20
seqToneFreqDeviation     40 Hz
seqTonePowerLevelCeiling -3 dB
seqTonePowerLevelFloor   -35 dB
seqToneFrequency1        950 Hz
seqToneFrequency2        1400 Hz
seqToneFrequency3        1800 Hz
```

seqToneFrequency4	280 Hz
seqToneFrequency5	280 Hz
seqToneFrequency6	280 Hz
seqToneFrequency7	280 Hz
seqToneFrequency8	280 Hz
seqToneFrequency9	280 Hz
seqToneFrequency10	280 Hz

## Call Progress Tone Configuration

This section contains the following call progress tone configuration information:

- Configuring Dual Tones, page 9-105
- Configuring Sequential Tones, page 9-106

### Configuring Dual Tones

To add dual tones, complete the following steps:

**Step 1** Ensure you have configured the call agent for the VISM-PR card.

**Step 2** Enter the **addualtonedet** command.

```
nodename.1.28.VISM8.a > addualtonedet <dttoneId> <dteventId> <dtfreq1> <dtfreq2>
<onCadence> <offCadence> |<cadMatch> <maxFreqDev> <maxPwr> <minPwr> <pwrTwist> <maxDelay>
<minOnCad> <maxOffCad> |
```

Replace the above arguments with the values listed in Table 9-48.



**Note** We recommend that you use the dual tone values listed in the “Default Values” section.

**Table 9-48 Parameters for the addualtonedet Command**

Parameter	Description
<i>dttoneId</i>	Dual-tone ID. Range is 1–10.
<i>dteventId</i>	Dual-tone event ID. Range is 0–255.
<i>dtfreq1</i>	Dual-tone first frequency. Range is 280–3800 Hz.
<i>dtfreq2</i>	Dual-tone second frequency. Range is 0–3800 Hz.
<i>onCadence</i>	Time duration in the tone cycle when the tone is played. Range is from the <i>minOnCad</i> value to 5000 ms in units of 10 ms.
<i>offCadence</i>	Duration of silence in the tone cycle. Range is from the <i>maxOffCad</i> value to 5000 ms in units of 10 ms.
<i>cadMatch</i>	(Optional) Number of cadence cycles to match before reporting the tone. Range is 0–6 matches.
<i>maxFreqDev</i>	(Optional) Maximum frequency deviation of the dual tone. Range is 10–125 Hz.
<i>maxPwr</i>	(Optional) Maximum power level of the dual tone. Range is absolute values of 0–30 dB.

**Table 9-48 Parameters for the `adddualtonedet` Command (continued)**

Parameter	Description
<code> minPwr </code>	(Optional) Minimum power level of the dual tone. Range is 10–35 dB.
<code> pwrTwist </code>	(Optional) Power twist in the dual tone. Range is 0–15 dB.
<code> maxDelay </code>	(Optional) Maximum delay in the dual tone. Range is 0–100 ms in units of 10 ms.
<code> minOnCad </code>	(Optional) Minimum on-time duration in the tone cycle. Range is 3–100 ms in units of 10 ms.
<code> maxOffCad </code>	(Optional) Maximum off-time duration. Range is 5–5000 ms in units of 10 ms.

**Step 3** To display a dual-frequency tone, enter the `dspdualtonedet` command.

```
nodename.1.28.VISM8.a > dspdualtonedet <tone_det_num>
```

Replace `<tone_det_num>` with the dual-tone ID.

```
nodename.1.28.VISM8.a > dspdualtonedet 1
```

**Step 4** To remove a dual-frequency tone, enter the `deldualtonedet` command.

```
PXM1E_SJ.1.28.VISM8.a > deldualtonedet <vismConfigToneDetectNum>
```

Replace `<vismConfigToneDetectNum>` with the dual tone-ID.

```
PXM1E_SJ.1.28.VISM8.a > deldualtonedet 1
```

## Configuring Sequential Tones

A sequential tone is a series of single frequencies. Sequential tones can be configured, but they cannot be deleted.



**Note** If you do not configure sequential tones, the VISM-PR uses the default system settings.

To change the default settings of a sequential tone, complete the following steps:

**Step 1** Ensure you have configured the call agent for the VISM-PR card.

**Step 2** Enter the `cnfseqtonedet` command.

```
nodename.1.28.VISM8.a > cnfseqtonedet <numfreq> <eventid> <tonedur> <tonegap> <durdev>
<maxgap> <gapdev> <freqdev> [<maxpwr> <minpwr>] <freq1>,<freq2>,<freq3>... <freq10>|
```

Replace the above arguments with the values listed in Table 9-49.

**Table 9-49 Parameters for the `cnfseqtonedet` Command**

Parameter	Description
<code>numfreq</code>	Number frequency. Range is 1–10.
<code>eventid</code>	Event ID. Range is 0–255.

**Table 9-49 Parameters for the *cnfseqtonedet* Command (continued)**

Parameter	Description
<i>tonedur</i>	Duration of the tone. Range is 1–65534 ms.
<i>tonegap</i>	Amount of time between the different frequencies of the sequential tone. Range is 1–6553 ms.
<i>durdev</i>	Deviation in the durations of the sequential tone frequencies. Range is 1–4095 ms.
<i>maxgap</i>	Maximum time between the different frequencies of the sequential tone. Range is 1–4095 ms.
<i>gapdev</i>	Deviation in the interfrequency time duration. Range is 1–4095.
<i>freqdev</i>	Deviation in the duration of the sequential tone frequencies. Range is 1–1000 Hz.
<i>maxpwr</i>	(Optional) Maximum power level of the sequential tone. Range is absolute values of 0 to –40 dB.
<i>minpwr</i>	(Optional) Minimum power level of the sequential tone. Range is 0 to –40 dB.
<i>freq1</i> (Optional: <i>freq2</i> , <i>freq3</i> ... <i>freq10</i> )	Different frequencies that make up the sequential tone. Range is 280–3800 Hz.  For example, the special information tone is made up of three frequencies. The first three frequencies ( <i>freq1</i> – <i>freq3</i> ) have valid values. The other frequencies ( <i>freq4</i> – <i>freq10</i> ) have default values of 280 Hz.

**Step 3** To display a sequential tone, enter the **dspseqtonedet** command.

```
PXM1E_SJ.1.28.VISM8.a > dspseqtonedet
```

## Wireless Tones

This release supports the addition of wireless tones to the set of call progress tones. These wireless tones are required for alerts sent to the mobile stations.

VISM-PR supports programmable tones through 48 built-in country tone plans. Also, VISM supports 32 user-defined tones through an external text file that is downloaded through a TFTP server. This feature adds wireless tones to the set of existing tone plans: dial tone, stutter tone, ring-back tone, busy tone, fast busy tone, alert tone.

Wireless tones are supported on the VISM-PR only in the switched VoIP mode. Also, wireless tones are only supported for the TDM interface and for MGC signaling.

This section contains the following topics:

- List of Supported Tones, page 9-108
- Tone Plan File Description, page 9-109
- Tone Plan Addition, page 9-112

## List of Supported Tones

VISM provides the following wireless tones for the built-in tone plans:

- Dial Tone
- Ring-back or Audible Alerting
- Intercept Tone or Mobile Reorder
- Congestion Tone or Reorder Tone
- Busy Tone
- Confirmation Tone
- Answer Tone
- Call Waiting Tone
- Offhook Tone
- Recall Dial Tone
- Berge In Tone
- PPC Insufficient Tone
- PPC Warning Tone 1
- PPC Warning Tone 2
- PPC Warning Tone 3
- PPC Disconnect Tone
- PPC Redirect Tone
- Tones Off
- Pip Tone
- Abbreviated Intercept
- Abbreviated Congestion
- Warning Tone
- Denial Tone Burst
- Dial Tone Burst
- Incoming Additional Call Tone

Up to 28 additional custom tones are supported for each user-configurable tone plan.

## Tone Plan File Description

Tone definitions are specified in ASCII files, one file per tone plan. These files are stored on a TFTP server in the directory /tftpboot.

Example 9-36 shows a tone plan file named `UnitedStates_2_tone_plan_file.txt`. Descriptions of the fields are listed below the example.

### Example 9-36 Tone Plan Definition File

```

////////////////////////////////////
// Comments : Text after '/' through the end of the line are ignored.
////////////////////////////////////
System Section
////////////////////////////////////
version 2
description "Tone Plan Defined for CompanyX"
////////////////////////////////////
Tones Section
////////////////////////////////////
dial_tone 1 14656 0 0 400 0 65535 0 65535
stutter_tone 2 4000 4000 0 350 440 100 100 1
ring_back_tone 2 3681 3681 0 440 480 2000 4000 1
busy_tone 2 2070 2070 45000 480 620 500 500 1
fast_busy_tone 2 2070 2070 16000 440 620 250 250 1
alert_tone 1 14656 0 45000 400 0 65535 0 1
intercept_tone 2 2070 2070 2000 440 620 250 250 1
confirmation_tone 1 8241 0 2000 440 0 100 150 1
answer_tone 1 8241 0 6000 440 0 100 100 1 440 0 100 900 1
call_waiting_tone 1 8241 0 6000 440 0 100 100 1 440 0 100 900 1
recall_dial_tone 1 14656 0 45000 400 0 65535 0 1
berge_in_tone 1 4634 0 0 1004 0 65535 0 65535
ppc_insuffice_tone 1 4000 4000 0 480 0 100 100 3
ppc_warn1_tone 1 4000 4000 0 480 0 200 65535 1
ppc_warn2_tone 1 4000 4000 0 480 0 100 200 2
ppc_warn3_tone 1 4000 4000 0 480 0 100 200 3
ppc_disc_tone 1 4000 4000 0 480 0 400 65535 1
ppc_redirect_tone 1 4000 4000 0 480 0 200 200 2
all_tone_off 1 0 0 0 0 0 65535 0 1 0 0 0 0 0
pip_tone 1 14656 0 0 480 0 100 900 1
warning_tone 1 4634 0 0 1004 0 65535 0 1
denial_tone 1 4634 0 0 1004 0 65535 0 1
custom1_tone 1 14656 0 0 480 0 100 900 1 // Click Tone
custom2_tone 1 4634 0 0 1004 0 65535 0 65535 // Milliwatt Tone -20dBm
custom3_tone 1 46348 0 0 1004 0 65535 0 65535 // Milliwatt Tone 0dBm
custom4_tone 1 0 0 0 0 0 65535 0 65535 // Scilence
// custom5_tone
// custom6_tone
// custom7_tone
// custom8_tone
// custom9_tone
// custom10_tone
// custom11_tone
// custom12_tone
// custom13_tone
// custom14_tone
// custom15_tone
// custom16_tone
// custom17_tone
// custom18_tone
// custom19_tone
// custom20_tone

```

```
// custom21_tone
// custom22_tone
// custom23_tone
// custom24_tone
// custom25_tone
// custom26_tone
// custom27_tone
// custom28_tone
dtmf_digit 16384 16384
mf_r1_digit 16384 16384
////////////////////////////////////////////////////////////////
```

**File Name**—The name of the tone plan file is restricted to 64 characters.

**System Section** includes mandatory keywords. Use this section to define tone plans. This section can contain only the following two lines:

- *version*—Use version 2 to define the tone plan with wireless tones. Version 2 includes the format of version 1 with additional syntax items for defining the tones.
- *description*—Provide a general description of the tone plan.

**Tones Section** includes mandatory keywords. Use this section to define the call progress tones. Specify each tone on a separate line, and use white spaces as delimiters.

The syntax of the tone plan definition file must be specified in the following order and on the same line:

```
<tone_name> <number_of_freq_components> <amp_of_first> <amp_of_second> <timeout>
<freq_1st_cadence1> <freq_2nd_cadence1> <ontime_cadence1> <offtime_cadence1>
<repeat_count_cadence1>
[<freq_1st_cadence2> <freq_2nd_cadence2> <ontime_cadence2> <offtime_cadence2>
<repeat_count_cadence2>]
[<freq_1st_cadence3> <freq_2nd_cadence3> <ontime_cadence3> <offtime_cadence3>
<repeat_count_cadence3>]
[<freq_1st_cadence4> <freq_2nd_cadence4> <ontime_cadence4> <offtime_cadence4>
<repeat_count_cadence4>]
```



Table 9-50 lists the mandatory values for defining the call tones.

**Table 9-50 Mandatory Values for Defining Tones**

Syntax Item	Description
<i>tone_name</i>	<p>Identifies the tone as one of the following values:</p> <ul style="list-style-type: none"> <li>• dial_tone</li> <li>• stutter_tone</li> <li>• ring_back_tone</li> <li>• busy_tone</li> <li>• fast_busy_tone</li> <li>• alert_tone</li> <li>• intercept_tone</li> <li>• confirmation_tone</li> <li>• answer_tone</li> <li>• call_waiting_tone</li> <li>• recall_dial_tone</li> <li>• berge_in_tone</li> <li>• ppc_insuffice_tone</li> <li>• ppc_warn1_tone</li> <li>• ppc_warn2_tone</li> <li>• ppc_warn3_tone</li> <li>• ppc_disc_tone</li> <li>• ppc_redirect_tone</li> <li>• all_tone_off</li> <li>• pip_tone</li> <li>• warning_tone</li> <li>• denial_tone</li> <li>• custom1_tone</li> <li>• custom2_tone</li> <li>• custom3_tone</li> <li>• custom4_tone</li> <li>• custom5_tone</li> <li>• custom6_tone</li> <li>• custom7_tone</li> <li>• custom8_tone</li> <li>• custom9_tone</li> <li>• custom10_tone</li> <li>• custom11_tone</li> <li>• custom12_tone</li> <li>• custom13_tone</li> <li>• custom14_tone</li> <li>• custom15_tone</li> <li>• custom16_tone</li> <li>• custom17_tone</li> <li>• custom18_tone</li> <li>• custom19_tone</li> <li>• custom20_tone</li> <li>• custom21_tone</li> <li>• custom22_tone</li> <li>• custom23_tone</li> <li>• custom24_tone</li> <li>• custom25_tone</li> <li>• custom26_tone</li> <li>• custom27_tone</li> <li>• custom28_tone</li> </ul>
<i>number_of_freq_components</i>	<p>Number of frequency components. Use one of the following values:</p> <ul style="list-style-type: none"> <li>• 1</li> <li>• 2</li> </ul>
<i>amp_of_first</i> <sup>1</sup>	<p>Peak-to-peak amplitude of the first frequency according to the following formula:</p> $46348 * 10 \text{ to the power of (dBm/20)}$ <p>Value range is 0–65535.</p>
<i>amp_of_second</i> <sup>1</sup>	<p>Peak-to-peak amplitude of the second frequency according to the following formula:</p> $46348 * 10 \text{ to the power of (dBm/20)}$ <p>Value range is 0–65535.</p>
<i>timeout</i>	<p>Time when tone generation is stopped. Range is 0–65535 ms.</p> <p>A value of 0 means no timeout, and thus the tone is stopped explicitly by the call agent.</p>
<i>freq_1st_cadence1</i>	First frequency in cadence 1. Range is 0–3999 Hz.
<i>freq_2nd_cadence1</i>	Second frequency in cadence 1. Range is 0–3999 Hz.
<i>ontime_cadence1</i>	First on time that the tone plays in cadence 1. Range is 0–65535 ms.

**Table 9-50 Mandatory Values for Defining Tones (continued)**

Syntax Item	Description
<i>offtime_cadence1</i>	First off time that the tone does not play in cadence 1. Range is 0–65535 ms.
<i>repeat_count_cadence1</i>	Repeat count for cadence 1. Range is 1–65535 ms.

- To specify amplitudes of DTMF and MFR1 tones, you must use the following syntax: **dtmf\_digit** amp-low amp-high or **mf\_r1\_digit** amp-low amp-high. The amp-low value = low group frequency. The amp-high value = high group frequency.

Table 9-51 describes the optional parameters you can use to define the tones.

**Table 9-51 Optional Parameters for Defining Tones**

Syntax Item	Description
<i>freq_1st_cadence2</i>	First frequency in cadence 2. Range is 0–3999 Hz.
<i>freq_2nd_cadence2</i>	Second frequency in cadence 2. Range is 0–3999 Hz.
<i>ontime_cadence2</i>	First on time that the tone plays in cadence 2. Range is 0–65535 ms.
<i>offtime_cadence2</i>	First off time that the tone does not play in cadence 2. Range is 0–65535 ms.
<i>repeat_count_cadence2</i>	Repeat count for cadence 2. Range is 1–65535 ms.
<i>freq_1st_cadence3</i>	First frequency in cadence 3. Range is 0–3999 Hz.
<i>freq_2nd_cadence3</i>	Second frequency in cadence 3. Range is 0–3999 Hz.
<i>ontime_cadence3</i>	First on time that the tone plays in cadence 3. Range is 0–65535 ms.
<i>offtime_cadence3</i>	First off time that the tone does not play in cadence 3. Range is 0–65535 ms.
<i>repeat_count_cadence3</i>	Repeat count for cadence 3. Range is 1–65535 ms.
<i>freq_1st_cadence4</i>	First frequency in cadence 4. Range is 0–3999 Hz.
<i>freq_2nd_cadence4</i>	Second frequency in cadence 4. Range is 0–3999 Hz.
<i>ontime_cadence4</i>	First on time that the tone plays in cadence 4. Range is 0–65535 ms.
<i>offtime_cadence4</i>	First off time that the tone does not play in cadence 4. Range is 0–65535 ms.
<i>repeat_count_cadence4</i>	Repeat count for cadence 4. Range is 1–65535 ms.

## Tone Plan Addition

To add a tone plan to the VISM-PR card, complete the following steps:

- Step 1** Use your text editor to create the new tone plan according to the format listed in “Tone Plan File Description”.



**Note** The file name must not exceed 64 characters.

- Step 2** Place the new tone plan on the TFTP server in the /tftpboot directory.

**Step 3** Add the TFTP server domain name to the VISM-PR card by entering the **adddn** command.

```
nodename.1.28.VISM8.a > adddn <mg_domain_num> <mg_domain_name> [Resolution_Type]
```

This example shows the addition of the TFTP server domain name `tftp_server`.

```
nodename.1.28.VISM8.a > adddn 1 tftp_server 1
```

Replace the above values with the values listed in Table 9-52.

**Table 9-52 Parameters for the adddn Command**

Parameter	Description
<i>mg_domain_num</i>	Number to identify this domain in the range 1–11.
<i>mg_domain_name</i>	Name of the TFTP server. Use a text string with 1–64 characters.
<i> Resolution_Type </i>	(Optional) Resolution type to be configured for the specified domain name. It can be one of the following values: <ul style="list-style-type: none"> <li>• 1 = Internal only (default). You must statically provision all IP addresses on the VISM-PR card for the domain name. The VISM-PR card does not resolve the domain name using an external domain name server (DNS).</li> <li>• 2 = External only. The VISM-PR card attempts to resolve the domain name using an external DNS. Statically configured IP addresses for this domain name are not used.</li> <li>• 3 = Internal first. The VISM-PR card attempts to resolve the domain name using an external DNS. The VISM-PR card uses the statically provisioned IP addresses for this domain name before using IP addresses from external resolution.</li> <li>• 4 = External first. The VISM-PR card attempts to resolve the domain name using an external DNS. The VISM-PR card uses IP addresses from external resolution before using the statically provisioned IP addresses.</li> </ul>

**Step 4** Add the IP address of the TFTP server by entering the **addnip** command.

```
nodename.1.28.VISM8.a > addnip <Resolution_index> <DomainName> <IpAddress> <preference>
```

This example shows the addition of the IP address of the TFTP server with the name `tftp_server`.

```
nodename.1.28.VISM8.a > addnip 1 tftp_server 172.29.52.18 1
```

Replace the above arguments with the values listed in Table 9-53.

**Table 9-53 Parameters for the addnip Command**

Parameter	Description
<i>Resolution_index</i>	Resolution number of the domain name in the range 1–88.
<i>DomainName</i>	Name of the TFTP server. Use a text string with 1–64 characters.

**Table 9-53 Parameters for the adddnip Command (continued)**

Parameter	Description
<i>IpAddress</i>	IP address which corresponds to the <i>DomainName</i> argument. This value must be in the following format: nnn.nnn.nnn.nnn.
<i>preference</i>	IP address resolution preference order in the range 1–8 where 1 is the highest preference.  <b>Note</b> The preference order must be unique for each IP address you specify with the <i>DomainName</i> argument.

**Step 5** Configure the parameters of the TFTP server domain name by entering the **cnftftpdn** command.

```
nodename.1.28.VISM8.a > cnftftpdn <domain_name>
```

Replace *<domain\_name>* with the name of your TFTP server. This example shows parameters configured for the server named *tftp\_server*.

```
nodename.1.28.VISM8.a > cnftftpdn tftp_server
```

**Step 6** Ensure you can ping the VISM-PR from the TFTP server.

Also check that the TFTP functionality is enabled on the TFTP server.

**Step 7** Add the new tone plan to the VISM card by entering the **addtoneplan** command.

```
nodename.1.28.VISM8.a > addtoneplan <tone_plan_region> <tone_plan_version>  
<tone_plan_file>
```

The following example shows the addition of the *custx2\_tone.txt* to the United States country tone plan.

```
nodename.1.28.VISM8.a > addtoneplan UnitedStates 2 custx2_tone.txt  
TFTP: Transferred file='custx2_tone.txt', size=3108 bytes, sec=0, nsec=80000000
```

Replace the above arguments with the values listed in Table 9-54.

**Table 9-54 Parameters for the addtoneplan Command**

Parameter	Description
<i>tone_plan_region</i>	Tone plan country or region to which you want to add the tone plan. This value is in the range 1–64 alphanumeric characters and can contain underscores ( _ ). This value is case sensitive.
<i>tone_plan_version</i>	Tone plan version number of the tone plan country or region to which you are adding. This value is in the range 1–65535.
<i>tone_plan_file</i>	Tone plan file name (names are located in the TFTP server /tftpboot directory). The range is 1–32 alphanumeric characters and can contain underscores ( _ ), dashes ( - ), and dots ( . ).

**Step 8** Ensure that the tone plan is added by entering the **dsptoneplans** command.

```
nodename.1.28.VISM8.a > dsptoneplans
```

Status	Tone Plan Region	Version	Tone Plan File Name
configure	UnitedStates	2	custx2_tone.txt
configure	ITU	1	BUILTIN
configure	NorthAmerica	1	BUILTIN
configure	Argentina	1	BUILTIN
configure	Australia	1	BUILTIN
configure	Austria	1	BUILTIN
configure	Belgium	1	BUILTIN
configure	Brazil	1	BUILTIN
configure	Canada	1	BUILTIN
configure	China	1	BUILTIN
configure	Cyprus	1	BUILTIN
configure	CzechRepublic	1	BUILTIN
configure	Denmark	1	BUILTIN
configure	Finland	1	BUILTIN
configure	France	1	BUILTIN
configure	Germany	1	BUILTIN
configure	Greece	1	BUILTIN
configure	HongKong	1	BUILTIN
configure	Hungary	1	BUILTIN
configure	Iceland	1	BUILTIN
configure	India	1	BUILTIN
configure	Indonesia	1	BUILTIN
configure	Ireland	1	BUILTIN
configure	Israel	1	BUILTIN
configure	Italy	1	BUILTIN
configure	Japan	1	BUILTIN
configure	KoreaRepublic	1	BUILTIN
configure	Luxembourg	1	BUILTIN
configure	Malaysia	1	BUILTIN
configure	Mexico	1	BUILTIN
configure	Netherlands	1	BUILTIN
configure	NewZealand	1	BUILTIN
configure	Norway	1	BUILTIN
configure	Philippines	1	BUILTIN
configure	Poland	1	BUILTIN
configure	Portugal	1	BUILTIN
configure	Russia	1	BUILTIN
configure	Singapore	1	BUILTIN
configure	Slovakia	1	BUILTIN
configure	Slovenia	1	BUILTIN
configure	SouthAfrica	1	BUILTIN
configure	Spain	1	BUILTIN
configure	Sweden	1	BUILTIN
configure	Switzerland	1	BUILTIN
configure	Taiwan	1	BUILTIN
configure	Thailand	1	BUILTIN
configure	Turkey	1	BUILTIN
configure	UnitedKingdom	1	BUILTIN
configure	UnitedStates	1	BUILTIN

```
Total number of Tone Plans = 50.
```

**Step 9** To display the elements of a tone plan enter the **dsptoneplan** command.

The following example shows the elements of a tone plan. (Some parts of the example here are truncated.)

```
nodename.1.28.VISM8.a > dsptoneplan UnitedStates 2
Region Name           : UnitedStates
Version               : 2
Description            : Tone Plan defined for CustX
File name              : cust2_tone.txt

DTMF Amplitude (Low Group) : 16384
DTMF Amplitude (High Group) : 16384
MF R1 Amplitude (Low Group) : 16384
MF R1 Amplitude (High Group) : 16384
```

Name	Defined	No.Freq.	Amp1	Amp2	Timeout (ms)
dial_tone	YES	1	14656	0	0
stutter_tone	YES	2	4000	4000	0
ring_back_tone	YES	2	3681	3681	0
busy_tone	YES	2	2070	2070	45000
fast_busy_tone	YES	2	2070	2070	16000
alert_tone	YES	1	14656	0	45000
intercept_tone	YES	2	2070	2070	2000
confirmation_tone	YES	1	8241	0	2000
answer_tone	YES	1	8241	0	6000
call_waiting_tone	YES	1	8241	0	6000
recall_dial_tone	YES	1	14656	0	45000
berge_in_tone	YES	1	4634	0	0
ppc_insuffice_tone	YES	1	4000	4000	0
ppc_warn1_tone	YES	1	4000	4000	0
ppc_warn2_tone	YES	1	4000	4000	0
ppc_warn3_tone	YES	1	4000	4000	0
ppc_disc_tone	YES	1	4000	4000	0
ppc_redirect_tone	YES	1	4000	4000	0
all_tone_off	YES	1	0	0	0
pip_tone	YES	1	14656	0	0
warning_tone	YES	1	4634	0	0
denial_tone	YES	1	4634	0	0
custom1_tone	YES	1	14656	0	0
custom2_tone	YES	1	4634	0	0
custom3_tone	YES	1	46348	0	0
custom4_tone	YES	1	0	0	0
custom5_tone	NO	-	-	-	-
custom6_tone	NO	-	-	-	-
custom7_tone	NO	-	-	-	-
custom8_tone	NO	-	-	-	-
custom9_tone	NO	-	-	-	-
custom10_tone	NO	-	-	-	-
custom11_tone	NO	-	-	-	-
custom12_tone	NO	-	-	-	-
custom13_tone	NO	-	-	-	-
custom14_tone	NO	-	-	-	-
custom15_tone	NO	-	-	-	-
custom16_tone	NO	-	-	-	-
custom17_tone	NO	-	-	-	-
custom18_tone	NO	-	-	-	-
custom19_tone	NO	-	-	-	-
custom20_tone	NO	-	-	-	-
custom21_tone	NO	-	-	-	-
custom22_tone	NO	-	-	-	-
custom23_tone	NO	-	-	-	-

custom24_tone	NO	-	-	-	-
custom25_tone	NO	-	-	-	-
custom26_tone	NO	-	-	-	-
custom27_tone	NO	-	-	-	-
custom28_tone	NO	-	-	-	-

Name	Cadence 1					Cade		
	Freq1 Hz	Freq2 Hz	OnTm1 ms	OffTm2 ms	Repeat count1	Freq1 Hz	Freq2 Hz	OnTt ms2
dial_tone	400	0	65535	0	65535	0	0	0
stutter_tone	350	440	100	100	1	0	0	0
ring_back_tone	440	480	2000	4000	1	0	0	0
busy_tone	480	620	500	500	1	0	0	0
fast_busy_tone	440	620	250	250	1	0	0	0
alert_tone	400	0	65535	0	1	0	0	0
intercept_tone	440	620	250	250	1	0	0	0
confirmation_tone	440	0	100	150	1	0	0	0
answer_tone	440	0	100	100	1	440	0	11
call_waiting_tone	440	0	100	100	1	440	0	11
recall_dial_tone	400	0	65535	0	1	0	0	0
berge_in_tone	1004	0	65535	0	65535	0	0	0
ppc_insuffice_tone	480	0	100	100	3	0	0	0
ppc_warn1_tone	480	0	200	65535	1	0	0	0
ppc_warn2_tone	480	0	100	200	2	0	0	0
ppc_warn3_tone	480	0	100	200	3	0	0	0
ppc_disc_tone	480	0	400	65535	1	0	0	0
ppc_redirect_tone	480	0	200	200	2	0	0	0
all_tone_off	0	0	65535	0	1	0	0	0
pip_tone	480	0	100	900	1	0	0	0
warning_tone	1004	0	65535	0	1	0	0	0
denial_tone	1004	0	65535	0	1	0	0	0
custom1_tone	480	0	100	900	1	0	0	0
custom2_tone	1004	0	65535	0	65535	0	0	0
custom3_tone	1004	0	65535	0	65535	0	0	0
custom4_tone	0	0	65535	0	65535	0	0	0
custom5_tone	-	-	-	-	-	-	-	-
custom6_tone	-	-	-	-	-	-	-	-
custom7_tone	-	-	-	-	-	-	-	-
custom8_tone	-	-	-	-	-	-	-	-
custom9_tone	-	-	-	-	-	-	-	-
custom10_tone	-	-	-	-	-	-	-	-
custom11_tone	-	-	-	-	-	-	-	-
custom12_tone	-	-	-	-	-	-	-	-
custom13_tone	-	-	-	-	-	-	-	-
custom14_tone	-	-	-	-	-	-	-	-
custom15_tone	-	-	-	-	-	-	-	-
custom16_tone	-	-	-	-	-	-	-	-
custom17_tone	-	-	-	-	-	-	-	-
custom18_tone	-	-	-	-	-	-	-	-
custom19_tone	-	-	-	-	-	-	-	-
custom20_tone	-	-	-	-	-	-	-	-
custom21_tone	-	-	-	-	-	-	-	-
custom22_tone	-	-	-	-	-	-	-	-
custom23_tone	-	-	-	-	-	-	-	-
custom24_tone	-	-	-	-	-	-	-	-
custom25_tone	-	-	-	-	-	-	-	-
custom26_tone	-	-	-	-	-	-	-	-
custom27_tone	-	-	-	-	-	-	-	-
custom28_tone	-	-	-	-	-	-	-	-

## TDM Companding Law Configuration

In standard companding law, T1 lines support Mu Law, and E1 lines support A-Law.

VISM-PR supports companding law on the TDM interface. T1 lines support A-Law, and E1 lines support Mu Law.

The support for A-Law and Mu Law on both T1 and E1 lines is typically used when one end of the network has VISM-PR E1 lines connected to the PBX on the TDM side. The other end of the network has VISM-PR T1 lines connected to the PBX on the TDM side. Both the VISM-PR E1 and T1 lines are connected via the ATM cloud through the use of AAL2 channel identifiers (CIDs).

This feature is applicable to VoIP trunking and AAL2 trunking modes.

### Configure Companding Law

To configure companding law for a T1 or E1 line, complete the following steps:

**Step 1** Log in to the PXM card and **cc** to the VISM-PR card.

**Step 2** Ensure that the VISM-PR card is running in VoIP or AAL2 trunking mode.

**Step 3** Enter the **cnflncompanding** command.

```
nodename.1.5.VISM8.a > cnflncompanding <line_number> <companding>
```

Replace the *<line\_number>* argument with a value in the range 1–8.

Replace the *<companding>* argument with one of the following values:

- 1 = U-Law (same as Mu Law)
- 2 = A-Law

The following example shows the configuring of a VISM-PR E1 line 1 as Mu-Law:

```
nodename.1.5.VISM8.a > cnflncompanding 1 1
```

**Step 4** For the companding law change to take effect, you must either reset the VISM-PR card or delete and readd the CIDs.

**Step 5** Verify the companding law you configured by entering the **dsplncompanding** command.

```
nodename.1.5.VISM8.a > dsplncompanding <line_number>
```

Replace the *<line\_number>* argument with the line number on which you configured companding law in Step 3.

```
nodename.1.5.VISM8.a > dsplncompanding 1
```

Line/Ds0	Companding
1/ 1	U-Law
1/ 2	U-Law
1/ 3	U-Law
1/ 4	U-Law
1/ 5	U-Law
1/ 6	U-Law
1/ 7	U-Law
1/ 8	U-Law
1/ 9	U-Law
1/10	U-Law
1/11	U-Law
1/12	U-Law



1/13	U-Law
1/14	U-Law
1/15	U-Law
1/16	U-Law
1/17	U-Law
1/18	U-Law
1/19	U-Law
1/20	U-Law
1/21	U-Law
1/22	U-Law
1/23	U-Law
1/24	U-Law
1/25	U-Law
1/26	U-Law
1/27	U-Law
1/28	U-Law
1/29	U-Law
1/30	U-Law
1/31	U-Law

## Programmable CAS Bit Mapping (ABCD CAS bits)

International connections include both T1 and E1 trunk interfaces. Channel-associated signaling (CAS) bits, ABCD, differ on T1 and E1 interfaces. These CAS bits carry signaling information that describe events, for example off-hook, on-hook, idle, and so forth. Typically, an external device (PBX) is used to map the ABCD signaling bits across the interfaces.

The CAS mapping feature allows you to map the output ABCD bits to input ABCD bits on a signaling channel on the VISM-PR card instead of using a PBX or another external device.

This feature is supported in AAL2 trunking mode.

The VISM-PR stores the CAS mapping information in a table. This table can be downloaded to the transmit and/or receive signaling channel of the endpoint on the TDM line.

## Configure CAS Bit Mapping Templates

To create a CAS table and apply it to the appropriate endpoint, complete the following steps:

- Step 1** Log in to the PXM card and **cc** to the VISM-PR card.
- Step 2** Ensure the VISM-PR is running in AAL2 trunking mode.
- Step 3** To create a CAS mapping table, enter the **addcastranstbl** command.

```
nodename.1.5.VISM8.a > addcastranstbl <table_name> <format> <abcd0> <abcd1> <abcd2>
<abcd3> <abcd4> <abcd5> <abcd6> <abcd7> <abcd8> <abcd9> <abcd10> <abcd11> <abcd12>
<abcd13> <abcd14> <abcd15>
```

Replace the above arguments with the values listed in Table 9-55.

**Table 9-55 Parameters for the `addcastranstbl` Command**

Parameter	Description
<i>table_name</i>	Name of the new table. Range is 1–64 characters.
<i>format</i>	Type of format of the ABCD bits. <ul style="list-style-type: none"> <li>• 1 = abcd. For parameters abcd0–abcd15, use values 0–15 to create the table.</li> <li>• 2 = swap abcd. For parameters abcd0–abcd3, use the following values to create the table:               <ul style="list-style-type: none"> <li>– 1 = casBitNoAction</li> <li>– 2 = casBitSetToZero</li> <li>– 3 = casBitSetToOne</li> </ul> </li> </ul>
<i>abcd0...abcd15</i>	Parameter values. <ul style="list-style-type: none"> <li>• For abcd0–abcd3, values are               <ul style="list-style-type: none"> <li>– 1 = casBitNoAction</li> <li>– 2 = casBitSetToZero</li> <li>– 3 = casBitSetToOne</li> <li>– 4 = casBitInvertBit</li> <li>– 5 = casBitInvertABit</li> </ul> </li> <li>• For abcd0–abcd15, values are 0–15.</li> </ul>

The following example shows adding the table, T1andE1trans, with the standard T1 and E1 seize and Idle conversions:

```
nodename.1.5.VISM8.a > addcastranstbl T1andE1trans 1 9 12 2 3 4 5 6 7 8 0 10 11 1 13 14 1
```

**Step 4** To display the mapping table configurations you defined in Step 3, enter the **dspecastranstbl** command.

```
nodename.1.5.VISM8.a > dspecastranstbl <table_name>
```

Replace *<table\_name>* with the name of the table you created in Step 3.

The following example shows the CAS bit mapping configurations in table T1andE1trans.

```
nodename.1.5.VISM8.a > dspecastranstbl T1andE1trans
CAS translation name = T1andE1trans
-----A--B--C--D-----
0      1  0  0  1
1      1  1  0  0
2      0  0  1  0
3      0  0  1  1
4      0  1  0  0
5      0  1  0  1
6      0  1  1  0
7      0  1  1  1
8      1  0  0  0
```

```

9      0 0 0 0
10     1 0 1 0
11     1 0 1 1
12     0 0 0 1
13     1 1 0 1
14     1 1 1 0
15     0 0 0 1

```

**Step 5** To display the list of the CAS mapping tables on the VISM-PR card, enter the **dspcastranstbls** command.

```

nodename.1.5.VISM8.a > dspcastranstbls
Index  CasTblName
0      E1toT1trans
1      T1andE1trans

```

**Step 6** To download the table to the signaling channel, enter the **cnfcastransendpt** command.

```

nodename.1.5.VISM8.a > cnfcastransendpt <endpt_number> <table_name> <direction>

```

Replace the above arguments with the values listed in Table 9-56.

**Table 9-56 Parameters for the cnfcastransendpt Command**

Parameter	Description
<i>endpt_number</i>	<p>Endpoint number of which you want to apply the mapping table. Value is one of the following ranges:</p> <ul style="list-style-type: none"> <li>• For template number 1: <ul style="list-style-type: none"> <li>– 1–145 for VISM (not applicable)</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• For template number 2: <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• For template number 3: <ul style="list-style-type: none"> <li>– 1–120 for VISM (not applicable)</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• For template number 4: <ul style="list-style-type: none"> <li>– 1–64 for VISM (not applicable)</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• For template number 5: <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>

**Table 9-56 Parameters for the `cnfcastransendpt` Command (continued)**

Parameter	Description
<code>table_name</code>	Name of the table you created in Step 3. Range is 1–64 characters.
<code>direction</code>	Direction to or from the TDM interface where you want to apply the CAS mapping table. <ul style="list-style-type: none"> <li>1 = Rx from TDM—Applies the mapping to the signaling bits received from the TDM. These bits are translated and then transmitted out the AAL2 trunk.</li> <li>2 = Tx to TDM—Applies the mapping to the signaling bits received from the AAL2 trunk. These bits are translated and then transmitted out the TDM interface.</li> <li>3 = Receive and Transmit—Applies the mapping to both the received and transmitted translations on the TDM interface.</li> <li>4 = None—Removes the translation table from the endpoint.</li> </ul>

The following example shows the T1andE1trans table is applied to endpoint number 1 in the receive and transmit direction:

```
nodename.1.5.VISM8.a > cnfcastransendpt 1 T1andE1trans 3
```

The following example shows the E1toT1trans table is applied to endpoint number 2 in the receive direction:

```
nodename.1.5.VISM8.a > cnfcastransendpt 2 E1toT1trans 2
```

**Step 7** To display all endpoints that are associated with this table, enter the `dsPCAstranstblendpts` command.

```
nodename.1.5.VISM8.a > dsPCAstranstblendpts <table_name>
```

Replace `<table_name>` with the name of the table you created in Step 3.

The following example shows the endpoints associated with the table T1andE1trans:

```
nodename.1.5.VISM8.a > dsPCAstranstblendpts T1andE1trans
endptNum: 1
```

```
Number of endpoints configured with CAS translation table name:T1andE1trans: 1
```

**Step 8** To display all endpoints and their associated CAS mapping table names, enter the `dsPCAstransendpts` command.

**Note** Direction column is in relationship to the AAL2 trunk.

```
nodename.1.5.VISM8.a > dsPCAstransendpts
```

```
Endpt  LineNum  Ds0Num  TX to TDM    RX fr TDM  Direction
-----
1       1           1       T1andE1trans T1andE1trans bidirectional
2       1           2       E1toT1trans  none       receive
```

**Step 9** To delete an existing CAS mapping table, enter the `delCAstranstbl` command.

```
nodename.1.5.VISM8.a > delCAstranstbl <table_name>
```

Replace `<table_name>` with the name of the table you want to delete.

**Step 10** To verify that the table is deleted, enter the `dsPCAstranstbls` command.

**Step 11** To delete a table that is associated with an endpoint, enter the **delcastransendpt** command.

```
nodename.1.5.VISM8.a > delcastransendpt <endpt_number> |<endpts_num>|
```

Replace *<endpt\_number>* with the endpoint number from which you want to delete the mapping table. This value can also be the first endpoint number of a range of consecutive endpoints. Value is one of the following ranges:

- For template number 1:
  - 1–145 for VISM (not applicable)
  - 1–192 for VISM-PR T1
  - 1–248 for VISM-PR E1
- For template number 2:
  - 1–192 for T1
  - 1–248 for E1
- For template number 3:
  - 1–120 for VISM (not applicable)
  - 1–192 for VISM-PR T1
  - 1–248 for VISM-PR E1
- For template number 4:
  - 1–64 for VISM (not applicable)
  - 1–144 for VISM-PR
- For template number 5:
  - 1–192 for VISM-PR T1
  - 1–248 for VISM-PR E1

Replace the optional *endpts\_num|* with the number of endpoints you want to delete. Ranges are

- For template number 1:
  - 1–145 for VISM (not applicable)
  - 1–192 for VISM-PR T1
  - 1–248 for VISM-PR E1
- For template number 2:
  - 1–192 for T1
  - 1–248 for E1
- For template number 3:
  - 1–120 for VISM (not applicable)
  - 1–192 for VISM-PR T1
  - 1–248 for VISM-PR E1

- For template number 4:
  - 1–64 for VISM (not applicable)
  - 1–144 for VISM-PR
- For template number 5:
  - 1–192 for VISM-PR T1
  - 1–248 for VISM-PR E1

## Line Trunk Conditioning

You can enable and disable trunk conditioning on a T1 and an E1 line.

To enable or disable trunk conditioning on a line, enter the **cnflntrunkcond** command.



**Note** This command is not applicable to the AAL1 switching and switched AAL2 SVC modes.

```
nodename.1.28.VISM8.a > cnflntrunkcond <line_number> <trunkCondType>
```

Replace *<line\_number>* with a value in the range 1–8.

Replace *<trunkCondType>* with one of the following values:

- 1 = Enable
- 2 = Disable

If you enable trunk line conditioning, VISM/VISM-PR conditions the affected DS0 when an alarm indication signal (AIS) is detected on the ATM side. Trunk line conditioning consists of transmitting an idle code pattern for 2.5 seconds followed by the seized code specified in the **cnfcascocode** command.



**Note** Before using the **cnflntrunkcond** command, disable all of the connections/CIDs on the line.

## Adjustable Gain

The adjustable gain feature allows you to adjust gain for the input and output signals on a per-DS0 channel basis. The adjustable gain can be set when there is active call going on at the DS0 channel, and at both bounded non-active and unbounded endpoints.

## Adjustable Music On-Hold Threshold

The adjustable music on-hold threshold feature allows you to adjust the decibel level, on a DS0 basis, when DSPs interpret silence or voice from the TDM side.

## CAS Features

You can configure different CAS packages on different endpoints. The CAS features described in the following sections are supported in this release.

### Configuring TDM Side Signaling for Applications Using CAS

Complete the following steps to add and configure CAS for E1.

- Step 1** To configure the source of CAS-related timer parameters for a specified endpoint, enter the **cnfcasparamsource** command.

```
nodename.1.28.VISM8.a > cnfcasparamsource <endpt_num> <ParamSource>
```

Replace the above arguments with the values listed in Table 9-57.

**Table 9-57 Parameters for cnfcasparamsource Command**

Parameter	Description
<i>endpt_num</i>	<p>The endpoint number which is to be configured with the source location, identified by the <i>ParamSource</i> argument value.</p> <ul style="list-style-type: none"> <li>• Template 1 <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2 <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3 <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4 <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5 <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>
<i>ParamSource</i>	<p>CAS-related timer parameters source location. Values are</p> <ul style="list-style-type: none"> <li>• 1 = CAS application file (default)</li> <li>• 2 = Current VISM MIB</li> </ul>



**Note** The **cnfcasparamsource** command permits different CAS-related timer values to be used for different endpoints, but all endpoints are associated with the same CAS variant.

- Step 2** To specify the minimum time an on hook-pattern must be present to be recognized as an on-hook signal, enter the **cnfcasonhooktime** command.

```
nodename.1.28.VISM8.a > cnfcasonhooktime <endpt_num> <OnHookMinTime>
```

Replace the above arguments with the values listed in Table 9-58.

**Table 9-58 Parameters for cnfcasonhooktime Command**

Parameter	Description
<i>endpt_num</i>	Type the value used in Step 1.
<i>OnHookMinTime</i>	On-hook time (defined in milliseconds). Range is 10–1000 ms. Default is 300 ms.

- Step 3** To specify the minimum time an off-hook pattern must be present to be recognized as an off-hook signal, enter the **cnfcasoffhooktime** command.

```
nodename.1.28.VISM8.a > cnfcasoffhooktime <endpt_num> <OffHookMinTime>
```

Replace the above arguments with the values listed in Table 9-59.

**Table 9-59 Parameters for cnfcasoffhooktime Command**

Parameter	Description
<i>endpt_num</i>	Type the value used in Step 1.
<i>OffHookMinTime</i>	Off-hook time (defined in milliseconds). Range is 10–1000 ms. Default is 20 ms.

- Step 4** To specify the minimum and maximum make times and the minimum break time, enter the **cnfcaswinktime** command.

```
nodename.1.28.VISM8.a > cnfcaswinktime <endpt_num> <WinkMinTime> <WinkMaxTime> <WinkBreakTime>
```

Replace the above arguments with the values listed in Table 9-60.

**Table 9-60 Parameters for cnfcaswinktime Command**

Parameter	Description
<i>endpt_num</i>	Type the value used in Step 1.
<i>WinkMinTime</i>	Minimum make duration time (defined in milliseconds) of the wink. Range is 10–1000 ms. Default is 100 ms.
<i>WinkMaxTime</i>	Maximum make duration time (defined in milliseconds) of the wink. Range is 10–3000 ms. Default is 1000 ms.
<i>WinkBreakTime</i>	Minimum break duration time (defined in milliseconds) of the wink. Range is 10–1000 ms. Default is 20 ms.



A wink is composed of the following sequential events:

1. On-hook pattern
2. Off-hook pattern
3. Return to an on-hook pattern

**Step 5** To specify the glare time, enter the **cnfcasglaretime** command.

```
nodename.1.28.VISM8.a > cnfcasglaretime <endpt_num> <GlareTime>
```

Replace the above arguments with the values listed in Table 9-61.

**Table 9-61 Parameters for cnfcasglaretime Command**

Parameter	Description
<i>endpt_num</i>	Type the value used in Step 1.
<i>GlareTime</i>	Glare time (defined in milliseconds). Range is 10–1000 ms. Default is 500 ms.

**Step 6** To specify the guard time, enter the **cnfcasguardtime** command.

```
nodename.1.28.VISM8.a > cnfcasguardtime <endpt_num> <GuardTime>
```

Replace the above arguments with the values listed in Table 9-62.

**Table 9-62 Parameters for cnfcasguardtime Command**

Parameter	Description
<i>endpt_num</i>	Type the value used in Step 1.
<i>GuardTime</i>	Guard time (defined in milliseconds). Range is 10–1000 ms. Default is 800 ms.

**Step 7** To configure the CAS dial delay (wait time), enter the **cnfcasdialdelay** command.

```
nodename.1.28.VISM8.a > cnfcasdialdelay <endpt_num> <DialDelayTime>
```

Replace the above arguments with the values listed in Table 9-63.

**Table 9-63 Parameters for cnfcasdialdelaytime Command**

Parameter	Description
<i>endpt_num</i>	Type the value used in Step 1.
<i>DialDelayTime</i>	Wait time (defined in milliseconds) before outpulsing digits are sent to the PBX after an off-hook event. Range is 10–1000. Default is 500.

Dial delay is the time that VISM waits before sending dialing digits after an off-hook event.



**Note** The **cnfcasdialdelay** command applies to immediate start protocols only.

**Step 8** To configure CAS for the switched AAL2 PVC operating mode, proceed to Step 11.

To configure CAS for the AAL2 trunking operating mode, proceed to Step 9.

**Step 9** To specify the idle and seized codes for one or more endpoints, enter the **cnfcascocode** command.

```
nodename.1.28.VISM8.a > cnfcascocode <endpt_num> <idle_code> <seized_code> |<endpts_num>|
```

Replace the above arguments with the values listed in Table 9-64.

**Table 9-64 Parameters for cnfcascocode Command**

Parameter	Description
<i>endpt_num</i>	Type the value used in Step 1.  <b>Note</b> If the second (optional) <i>endpts_num</i> argument is specified, this argument value is the first endpoint in a consecutive number of endpoints.
<i>idle_code</i>	The 4-bit idle code. Range is 0–15 and represents the four signaling bits—A, B, C, and D—in binary, as bits 3, 2, 1, and 0 respectively. Bit 3 is the most significant.
<i>seized_code</i>	The 4-bit seized code. Range is 0–15 and represents the four signaling bits—A, B, C, and D—in binary, as bits 3, 2, 1, and 0 respectively. Bit 3 is the most significant.
<i>endpts_num</i>	(Optional) The last endpoint in a consecutive range of endpoints. Ranges are <ul style="list-style-type: none"> <li>• Template 1 <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2 <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3 <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4 <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5 <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>

**Step 10** To configure a local CAS bit pattern for a T1 line and DS0, enter the **cnfds0localcas** command.

```
nodename.1.28.VISM8.a > cnfds0localcas <line_number> <ds0_number> <cas_value>  
<cas_bit_pattern>
```

Replace the above arguments with the values listed in Table 9-65.

**Table 9-65 Parameters for `cnfds0localcas` Command**

Parameter	Description
<i>line_number</i>	Number of the T1 line on which you want to configure a local CAS bit pattern. Range is 1–8.
<i>ds0_number</i>	Number of DS0 on which you want to configure a local CAS bit pattern. Range is 1–24 for T1 lines.
<i>cas_value</i>	Value you can use to enable or disable the local CAS pattern that is indicated by the <i>cas_bit_pattern</i> argument. Values are <ul style="list-style-type: none"> <li>• 1 = Enable</li> <li>• 2 = Disable</li> </ul>
<i>cas_bit_pattern</i>	The local 4-bit pattern used to specify a number in the range from 1 (default) to 15. The value indicates, in binary, the value of the A, B, C, and D signaling bits. <b>Note</b> If local CAS is enabled, this argument is mandatory.

The `cnfds0localcas` command is not applicable if you have one of the following conditions:

- The line is E1 or not enabled.
- The DS0 is in a remote loop state.
- The line signaling type is CAS.

**Step 11** To add a CAS variant to your VISM/VISM-PR card, enter the `addcasvar` command.



**Note** You must use TFTP to download a file containing the CAS variant information to your MGX 8000 Series PXM card before you can execute this command.

```
nodename.1.28.VISM8.a > addcasvar <variant_name> <file_name> |<cas_var_source>|
```

Replace the above arguments with the values listed in Table 9-66.

**Table 9-66 Parameters for *addcasvar* Command**

Parameter	Description
<i>variant_name</i>	Name of the CAS variant; a text string of 1 to 64 alphanumeric characters.
<i>file_name</i>	Name of the file that contains the signal definition for the CAS variant. <ul style="list-style-type: none"> <li><b>wink_did_dod.o</b> = wink start</li> <li><b>ground_start.o</b> = ground start</li> <li><b>wink_did_dod_mf.o</b> = wink start multifrequency</li> <li><b>q50.o</b> = Q.50</li> <li><b>fgd_ea_incoming.o</b> = for endpoints connected to an end office</li> <li><b>fgd_ea_outgoing.o</b> = for endpoints connected to an access carrier</li> <li><b>fgd_os_e911.o</b> = for endpoints connected to FDG OSS (Feature group D operator services system)</li> <li><b>loop_start.o</b> = loop start</li> <li><b>delay_did_dod.o</b> = dial delay, DTMF</li> <li><b>delay_did_dod_mf.o</b> = dial delay, MF</li> <li><b>immed_did_dod.o</b> = immediate start</li> <li><b>immed_did_dod_mf.o</b> = immediate start, MF</li> </ul> For user-configured files, the range is 2–32 alphanumeric characters.
<i>lcas_var_source</i>	(Optional) CAS variant file location. <ul style="list-style-type: none"> <li>1 = Unspecified. If TFTP domain is configured, the location is the TFTP server. If not found in the TFTP server, the file is treated as built-in.</li> <li>2 = Internal—File location is user-configured (built-in).</li> <li>3 = External—File resides on the TFTP server.</li> </ul>

**Step 12** To configure a CAS variant and CAS timing parameters for the variant added in Step 11, enter the **cnfcasvar** command.

```
nodename.1.28.VISM8.a > cnfcasvar <variant_name> <country_code> <Tring> <Tpart> <Tcrit>
<TMF>
```

Replace the above arguments with the values listed in Table 9-67.

**Table 9-67 Parameters for *cnfcasvar* Command**

Parameter	Description
<i>variant_name</i>	Name of the CAS variant. Type the value used in Step 11.
<i>country_code</i>	Country code of the variant. The value must be a two-character text string.
<i>Tring</i>	Ringing time (defined in seconds). Range is 10–600 sec.

**Table 9-67 Parameters for cnfcasvar Command (continued)**

Parameter	Description
<i>Tpart</i>	Partial dial time (defined in seconds). Range is 10–10000 sec—in increments of 10 sec.
<i>Tcrit</i>	Critical timing (defined in seconds). Range is 0–10000 sec—in increments of 10 sec.
<i>TMF</i>	Interdigit timeout value for MF digits (defined in seconds). Range is 1–10 sec.

**Step 13** To associate an endpoint with a CAS variant, enter the **cnfcasendpt** command.

```
nodename.1.28.VISM8.a > cnfcasendpt <endpt_number> <casVariantName>
```

Replace the above arguments with the values listed in Table 9-68.

**Table 9-68 Parameters for cnfcasendpt Command**

Parameter	Description
<i>endpt_number</i>	Type the value used in Step 9.
<i>casVariantName</i>	Type the value used in Step 11.

## Loop Start, DID, and Dial Delay

The exchange side (FXO) of the loop start protocol is implemented with this release. VISM can accept calls from, and terminate calls to, loop start PBXs. When a PBX sends a subscriber call to the gateway, it sends the loop-close signal through the CAS channel. To hang up, it sends the loop-open signal.

Direct inward dial (DID) enables a caller outside a company to call internal extensions without having to go through an operator or an attendant. VISM has this ability—it outpulses the digit stream handed down by the call agent.

Dial delay is an E&M signaling protocol similar to wink start. The originating VISM, on receiving a seize (AB = 11) from the PBX, responds by sending the delay-dial (AB = 11) signal back to the PBX. When the originating VISM is ready to collect the digits, it sends a start-dial (AB = 00) signal. This operation is symmetric. So the terminating VISM, on seizing a trunk, should receive AB = 11 (as an acknowledgment that the trunk is operational). Subsequently when it receives the start signal (AB = 00) from the connected PBX, it should outpulse the digits. The rest of the operation is similar to wink start.

## Feature Group D

Feature Group D (FGD) enables long distance calls through one of the following methods:

- You can preselect an access carrier (AC) by dialing 1 + area code + number.
- You can select the AC on a per call basis by dialing 101xxxx before the area code and phone number. Doing so enables you to reach a local exchange carrier's (LEC) network in North America.

FGD supports the following protocols:

- Terminating Protocol
- Equal Access North American (EANA)
- Operator Services (OS)

## Configure Flash Hook and Glare Condition Attributes

You can configure flash hook and glare condition attributes. The flash hook configuration allows you to modify the duration of a flash hook. Any duration shorter or longer than what you configured is interpreted as an incoming call, and the call disconnects. Glare condition attribute configuration allows you to control the CAS direction—incoming, outgoing, or bidirectional—and the glare handling policy—controlling or releasing.

## Configure ANI and DNIS Digit Order

You can configure the order in which a call agent sends automatic number identification (ANI) digits (the caller's number) and dial number identification service (DNIS) digits (the called number) to VISM during an outgoing FGD call for VISM endpoints.

## CAS Immediate Start and Ground Start Glare Handling

The CAS variants immediate start and immediate start, multifrequency are supported. Use the **addcasvar** command to configure CAS variants.



### Note

The immediate start protocol does not define glare-handling procedures. Do not use the immediate start protocol on incoming or outgoing endpoints only. Endpoints are added as bidirectional by default. To make them incoming or outgoing, use the **cnfcasglarepolicy** command. If the endpoints are left as bidirectional, configured for immediate start operation, and glare occurs, the results may be unpredictable.

This release supports CAS glare condition handling according to RFC 3064. The VISM sends a NACK message in response to the call agent's request for ringing with error code 401 (off hook) in the event of a glare condition.

On receiving a request for ringing from call control, CAS transmits a seize signal to the PBX and starts the glare timer, returning a provisional response code to call control indicating that CAS is still processing the request. If the timer expires (normal case) or an incoming seizure is observed on the endpoint, CAS generates an asynchronous response code to call control that is comparable to an MGCP response code of 200 or 401.

## RFC 3064 Package Support

This release fully supports the following packages from RFC 3064:

- MS—MF single stage dialing trunks. This includes wink start and immediate start PBX DID/DOD trunks as well as basic R1 and FGD Terminating Protocol.
- DT—Immediate start and basic DTMF and dial-pulse trunks.
- MD—North American MF FGD EANA and EAIN, which allows VISM to be at the end office, the carrier, or the tandem side of the circuit.
- MO—FGD Operator Services Signaling, outgoing trunks only.
- BL—DTMF and dial pulse (DP) basic PBX trunks.

## VISM Network Continuity Test

You can configure VISM network continuity testing with this release.







## CLI Commands

Command-line interface (CLI) commands allow you to configure, manage, and troubleshoot VISM/VISM-PR cards.

The VISM/VISM-PR CLI commands are described in this chapter. They are arranged according to operating mode and then presented in alphabetical order.

For information on how to access and use the CLI commands, see the “Using the Command-Line Interface” section of Chapter 5, “Initial Card Configuration.”

The available commands on the VISM/VISM-PR card depend on the operating mode that you configure. Table 10-1 shows the available operating modes.

**Table 10-1** VISM/VISM-PR Operating Modes

Mode Number	Mode Name
1	VoIP switching/VoIP trunking
2	AAL2 trunking
3	AAL1 switching
7	Switched AAL2 SVC
8	Switched AAL2 PVC
9	VoIP and AAL1 SVC
10	VoIP trunking/AAL2 trunking

The following example shows the available modes.

```
cnfvismmode "mode_number"  
mode -- Value: 1 = voipSwitching/voipTrunking,  
2 = aal2Trunking,  
3 = aal1Switching,  
7 = switchedAal2Svc,  
8 = switchedAal2Pvc,  
9 = voipAndAal1Svc,  
10 = voipTrunking/aal2Trunking.
```

The following sections list the commands in alphabetical order for each operating mode:

- VoIP Switching/VoIP Trunking, page 10-2
- AAL2 Trunking, page 10-13
- AAL1 Switching, page 10-20

- Switched AAL2 SVC, page 10-29
- Switched AAL2 PVC, page 10-38
- VoIP and AAL1 SVC, page 10-48
- VoIP Trunking/AAL2 Trunking, page 10-60

Each command is linked to its corresponding section in the document.

## VoIP Switching/VoIP Trunking

Table 10-2 lists in alphabetical order the commands that support the VoIP switching/VoIP trunking mode.

**Table 10-2** VoIP Switching/VoIP Trunking Commands

Command	Description
?	Help
addannpermanent	Add announcement server file as permanent
addcasvar	Add CAS variant
addcon	Add connection
addconloop	Add local connection loopback
adddn	Add domain name
adddnip	Add IP address to domain
adddualtonedet	Add dual-tone frequency
addendpt	Add endpoint
addendptloop	Add endpoint loopback
addendpts	Add endpoints
addlapd	Add LAPD
addlapdtrunk	Add LAPD trunk to a line
addln	Add line
addlnloop	Add line loop
addmgc	Add MGC
addmgcgrpentry	Add MGC to a call agent redundancy group
addmgcgrpprotocol	Assign a protocol to an MGC
addport	Add port
addrscprtn	Add resource partition
addrtpcon	Add RTP VoIP trunking connection
addrudptrunk	Add RUDP trunk
addses	Add PRI backhaul session
addsesgrp	Add PRI backhaul session to a group
addsesset	Add PRI backhaul session set
addtoneplan	Add tone plan

**Table 10-2** VoIP Switching/VoIP Trunking Commands (continued)

Command	Description
addtrapfilter	Add traps to the filter traps list
addxgcppersistevt	Add persistent xGCP events
cc	Change card
chkflash	Check flash memory
clralm	Clear alarms on a line
clralment	Clear alarm counters on a line
clralments	Clear all alarm counters on the card
clralms	Clear all alarms on the card
clrcacfailcntrs	Reset all CAC failure statistics to 0
clrhistorystats	Clear the history statistics
clrrtpcnt	Clear RTP counters for a static RTP connection
clrsarent	Clear SAR counters on a channel
clrsarents	Clear all SAR counters on the card
clrsarmsgcnt	Clear control message counters on the card
clrscrn	Clear control terminal screen
clrslipcnt	Clear clock slip counters for a line
clrtaskinfo	Reset the task values
cnfadapgain	Configure DSP adaptive gain
cnfalm	Configure alarm parameters for a line
cnfalment	Configure collection of TDM line statistics
cnfannagetime	Configure nonpermanent announcement time
cnfanndn	Designate announcement file server domain name
cnfannpathprefix	Designate announcement file TFTP path
cnfannprefcodec	Configure announcement codec
cnfannreqtimeout	Configure announcement expiration time
cnfbearerippingenable	Configure the card to respond to ping requests for bearer traffic
cnfcac	Configure CAC on the card
cnfcacparams	Configure CAC parameters
cnfcalea	Configure card for CALEA
cnfcascode	Configure CAS code parameters
cnfcasdelaydialtime	Configure CAS delay dial time
cnfcasdialdelay	Configure CAS wait time
cnfcasendpt	Associate endpoint with CAS name
cnfcasflashtime	Configure CAS flash time
cnfcasglareattrib	Configure CAS glare policy for an endpoint
cnfcasglaretime	Configure CAS glare time for an endpoint

**Table 10-2** VoIP Switching/VoIP Trunking Commands (continued)

Command	Description
cnfcasguardtime	Configure CAS guard time for an endpoint
cnfcasoffhooktime	Configure CAS off-hook time for an endpoint
cnfcasonhooktime	Configure CAS on-hook time for an endpoint
cnfcaspackage	Configure MGCP packages to notify CAS events
cnfcasparamsource	Configure CAS timer source parameters for an endpoint
cnfcasstartdialtime	Configure CAS start dial time for an endpoint
cnfcasvar	Configure previously added CAS variant
cnfcaswinktime	Configure CAS wink time parameters for an endpoint
cnfcasxgcp	Configure CAS retransmission parameters
cnfco1timer	Configure bearer continuity test 1 timer
cnfco2timer	Configure bearer continuity test 2 timer
cnfco4timer	Configure bearer continuity test 4 timer
cnfcodecjtrdelay	Configure jitter delay for a codec
cnfcodecneg	Configure codec list priority order
cnfcodeccparams	Configure codec parameters
cnfcodectmpl	Assign codec template to card
cnfcompvad	Configure VAD
cnfcon	Configure connection parameters
cnfconcacparams	Configure CAC parameters on a PVC
cnfconprotect	Configure protection on a PVC
cnfconvbdpol	Configure VBD policies on a channel
cnfdeftos	Configure type of service parameters
cnfdisctimers	Configure wait delay times for disconnected procedure
cnfdn	Configure resolution type for domain
cnfdnssrvr	Designate domain name as a domain name server
cnfds0execdiag	Configure testing on an endpoint
cnfds0gain	Configure adjustable gain on a DS0
cnfds0localcas	Configure local CAS on a DS0
cnfds0loop	Configure loopback type for DS0
cnfds0musicthreshold	Configure music on-hold threshold for DS0
cnfds0sidpacket	Configure SID packet on a DS0
cnfdspheartbeattimer	Configure heartbeat message time interval
cnfdynamicpayload	Configure dynamic payload
cnfecanenable	Configure echo cancellation on a line
cnfecanrec	Configure residual echo control on an echo cancellation line
cnfecantail	Configure tail length on an echo cancellation line

**Table 10-2** VoIP Switching/VoIP Trunking Commands (continued)

Command	Description
cnfendptcadence	Configure cadence times on an endpoint
cnfendptdntsend	Configure datagram size for an endpoint
cnferl	Configure return echo loss value
cnfexecdiag	Configure all channel level testing
cnfgain	Configure adjustable gain on the card
cnfgwis	Configure card to be in-service
cnfgwoos	Configure card to be out-of-service
cnfjtrmode	Configure jitter buffer delay mode
cnflapdretrans	Configure maximum retransmission
cnflapdtimer	Configure two LAPD timers
cnflapdrunkpvc	Assign a PVC to carry LAPD messages
cnflapdtype	Configure LAPD stacks
cnflapdwinsize	Configure maximum number of unacknowledged I-frames
cnflinesabyte	Configure SA bytes on a line
cnfln	Configure line parameters
cnflncompanding	Configure companding law on a line
cnflndigitorder	Configure digit order on a line
cnflnexecdial	Configure channel level testing on a line
cnflngain	Configure adjustable gain for all DS0s on a line
cnflnis	Configure line to be in-service
cnflnmusicthreshold	Configure music on-hold threshold for all DS0s on a line
cnflnoos	Configure line to be out-of-service
cnflnringback	Configure ring-back tone on a line
cnflnsidpacket	Configure SID packet on a line
cnflnsig	Configure signaling on a line
cnflntoneplan	Assign tone plan to a line
cnflntonetimeout	Configure tone timeout periods for a line
cnflntrunkcond	Configure trunk conditioning
cnflongdurationtimer	Configure long duration timer
cnfmgcgrpentry	Configure priority of call agent within a group
cnfmgcgrpparam	Configure MGCP group parameters
cnfmgcgrpprotocol	Configure call agent group protocol
cnfmidcalltimers	Configure mid-call DTMF timers
cnfmusicthreshold	Configure music on-hold threshold
cnfnwcot	Configure card for network continuity test
cnfoamloopcnt	Configure OAM loop count

**Table 10-2** VoIP Switching/VoIP Trunking Commands (continued)

Command	Description
cnfoamparams	Configure OAM parameters
cnfplayouttimestamp	Enable or disable playout timestamp
cnfnpcon	Set priority routing for a specified connection
cnfrsvp	Configure RSVP for a connection
cnfrsvprefreshmiss	Configure RSVP refresh message wait time
cnfrtcprepint	Configure RTCP report interval
cnfrtpcon	Configure RTP connection
cnfrtprxtimer	Configure the receipt of RTP messages
cnfrudptrunkrmtip	Configure remote IP address of an RUDP trunk
cnfseqtonedet	Change the default settings of a sequential tone
cnfsesack	Configure timeout period before sending an acknowledgment
cnfsesmaxreset	Configure session maximum number of resets
cnfsesmaxseg	Configure session maximum segment size
cnfsesmaxwindow	Configure session maximum number of segments
cnfsesnullsegmtout	Configure session null segment idle time
cnfsesoutofseq	Configure session out-of-sequence packets
cnfsesport	Configure session port
cnfsesretrans	Configure session retransmission times
cnfsesstatetmout	Configure session transfer state timeout
cnfsessyncatmps	Configure session sync attempts with call agent
cnfsidpacket	Configure SID packet on all lines
cnfsplmodemtonedsbl	Disable the detection of 1560/980 Hz modem tone
cnfsplmodemtoneenbl	Enable the detection of 1560/980 Hz modem tone
cnfsrcppeer	Configure SRCP port
cnfsrcppeergpparam	Configure SRCP parameters for a redundancy group
cnfsrcpretry	Configure SRCP retry count
cnfssrcenable	Configure the VISM to allow more than one SSRC per RTP session
cnft38fxlco	Configure fax handling on a line
cnft38nsetimeout	Configure timeout value for switch to fax transfer mode
cnft38params	Configure fax parameters for a line
cnftftpdn	Configure TFTP domain name
cnftranscotmode	Configure the continuity test for the TDM side
cnftrapfilterfeature	Enable the trap filtering feature
cnftrapfiltertimer	Configure the timer for a particular trap or a set of traps
cnfvbdcodec	Configure VBD codec on the card

**Table 10-2** VoIP Switching/VoIP Trunking Commands (continued)

Command	Description
cnfvbdmarconi	Enable VBD upspeed detection
cnfvbdpol	Configure VBD policies on the card
cnfvismdn	Configure card domain name
cnfvismip	Configure card IP address
cnfvismmode	Configure operating mode
cnfvoiptimerparam	Configure VAD holdover time
cnfvoiptransparams	Configure VoIP transportation parameters
cnfxgcpbt	Configure bearer type
cnfxgcpinteropsdpost	Configure SDP OST interoperability
cnfxgcpmwd	Configure maximum wait delay for sending RSIP message
cnfxgcppeer	Configure UDP port for gateway messages
cnfxgcpretry	Configure call agent communication retries
delalltrapfilters	Delete all of the traps in the trap filter list
delannalldynamic	Delete all announcement files
delanndynamic	Delete announcement file
delannpermanent	Delete permanent announcement file
delcasvar	Delete CAS variant
delcon	Delete connection
delconloop	Delete local loop-back state on a connection
deldn	Delete domain name
deldnip	Delete domain IP address
deldualtonedet	Remove a dual-frequency tone
delendpt	Delete endpoint
delendptloop	Delete loopback state on an endpoint
delendpts	Delete range of endpoints
dellapd	Delete LAPD
dellapdtrunk	Delete LAPD trunk
delln	Delete line
dellnloop	Delete loopback state on a line
delIntoneplan	Delete tone plan from a line
delmgc	Delete MGC
delmgcgrpentry	Delete MGC from a redundancy group
delmgcgrpprotocol	Delete MGC protocol from a redundancy group
delport	Delete port
delrscprtn	Delete resource partition
delrtppcon	Delete RTP connection

**Table 10-2** VoIP Switching/VoIP Trunking Commands (continued)

Command	Description
delrudptrunk	Delete RUDP trunk
delses	Delete session
delsesgrp	Delete session group
delseset	Delete session set
deltoneplan	Delete tone plan
deltrapfilter	Delete traps from the filter trap list
delxgcpcon	Delete xGCP connection
delxgcppersistevt	Delete persistent xGCP event
dncon	Down connection
dspall	Display static configurations and run-time data
dspalltrapfilters	Display all the currently active trap filters
dspalm	Display alarms for a line
dspalmcnf	Display threshold data about alarm statistics
dspalment	Display alarm counters on a line
dspalms	Display alarms for specific line type
dspannagetime	Display announcement age time
dspanncache	Display available announcement file names
dspanncontrols	Display announcement file variables
dspanndn	Display announcement file server domain name
dspannpathprefix	Display announcement prefix directory path
dspannpermanents	Display all permanent announcement files
dspannprefcodec	Display announcement preference codec
dspannreqtimeout	Display announcement timeout
dspcacfailcntrs	Display CAC failure counters
dspcalea	Display CALEA configuration status
dspcarddsp	Display card configuration parameters
dspcasendpts	Display CAS endpoint configuration
dspcasglareattrib	Display glare policy attributes
dspcaspackage	Display CAS packages
dspcasparamsource	Display CAS timer source parameters
dspcastimers	Display CAS timers for an endpoint
dspcasvar	Display CAS variant data
dspcasvarendpts	Display all endpoints associated with CAS variant
dspcasvars	Display parameters of all CAS variants
dspcasxgcps	Display CAS/xGCP timer parameters
dspcd	Display card configuration



**Table 10-2** VoIP Switching/VoIP Trunking Commands (continued)

Command	Description
dspco1timer	Display continuity test 1 timer value
dspco2timer	Display continuity test 2 timer value
dspco4timer	Display continuity test 4 timer value
dspcodecjrtdelays	Display codec jitter delay modes
dspcodecneg	Display codec negotiation option
dspcodecparams	Display codec parameters
dspcodectmpls	Display all entries in the codec template table
dspcon	Display channel configuration
dspconcac	Display CAC configuration for a connection
dspconcnt	Display counter configuration for a connection
dspcons	Display channel configurations for all connections
dspconvbdpol	Display VBD policies for a channel
dspdiags	Display results of a diagnostic test
dspdisctimers	Display disconnect type method wait delay times
dspdnallips	Display all IP addresses for all domain names on the card
dspdnips	Display all IP addresses for a specific domain name
dspdns	Display configurations for all domain names
dspdnssrvr	Display domain name for a domain server
dspds0execdiag	Verify that testing is enabled on the channel
dspds0gain	Display adjustable gain values for a DS0
dspds0localcasstatus	Display local CAS status for a DS0
dspds0loop	Display loopback type for a DS0
dspds0musicthreshold	Display music on-hold threshold for a DS0
dspds0sidpacket	Display SID packet status for a DS0
dspdualtonedet	Display dual-tone configurations
dspdynamicpayload	Display dynamic payload for the card
dspendpt	Display configuration for an endpoint
dspendptdnsend	Display the naming format for the audit endpoint response
dspendpts	Display configuration for all endpoints
dspexecdiag	Display testing status for all channel levels
dspfaxmodemtrace	Display fax/modem trace
dspgain	Display adjustable gain for the card
dspgwstate	Display gateway service state
dspheartbeattimer	Display heartbeat status of the card
dsphistorystats	Display the various history statistics
dsplapd	Display configuration of LAPD channel

**Table 10-2** VoIP Switching/VoIP Trunking Commands (continued)

Command	Description
dsplapds	Display configuration for all LAPD channels
dsplapdstat	Display LAPD channel statistics
dsplapdtrunkpvc	Display LAPD trunk PVC carrier
dsplapdtrunks	Display configuration of all LAPD trunks
dsplinecasbits	Display CAS bit values for a line
dsplinesabyte	Display SA buffers on a line
dspln	Display configuration of a line
dsplncompanding	Display companding law on a line
dsplndigitorder	Display line digit order
dsplndsp	Display DSP data for a line
dsplndsx0s	Display configuration for all DS0s on a line
dsplnendptstatus	Display endpoint status for a line
dsplnexecdiag	Display channel level testing status
dsplngain	Display adjustable gain for all DS0s on a line
dsplnmusicthreshold	Display music on-hold threshold for all DS0s on a line
dsplnringback	Display ring-back tone method for a line
dsplns	Display configurations for all lines on the card
dsplnsidpacket	Display the SID packet status for the DS0s on the line
dsplnstate	Display service state of the line
dsplntoneplan	Display tone plan configuration for a line
dsplntonetimeout	Display configured timeout periods for all line tones
dsplongdurationtimer	Display long duration timer
dsploops	Display all lines and DS0s in the loopback condition
dspmmaxmgs	Display maximum number of MGCs on the card
dspmgs	Display configuration for an MGC
dspmgsgrpparams	Display all MGC redundancy group parameters
dspmgsgrpprotocols	Display all MGC redundancy group protocols
dspmgsgrps	Display all configured MGC redundancy groups
dspmgs	Display configuration for all MGCs
dspmgsprotocols	Display the MG protocols
dspmidsalltimers	Display mid-call DTMF timers
dspmonecanendpt	Display echo cancellation activity for an endpoint
dspmgsmusicthreshold	Display music on-hold threshold for the card
dspnwcot	Display network connectivity connection configuration
dspoamloopcnt	Display OAM loop count
dspoamparams	Display OAM parameters

**Table 10-2** VoIP Switching/VoIP Trunking Commands (continued)

Command	Description
dspport	Display virtual port configuration
dsprscrprt	Display resource partition configuration
dsprsvpif	Display RSVP configuration for a connection
dsprsvpreq	Display configuration for an RSVP request
dsprsvpreqs	Display configuration for all RSVP requests on the card
dsprsvpresv	Display bandwidth reservation for an RSVP request
dsprsvpresvs	Display bandwidth reservations for all RSVP requests
dsprsvpsender	Display path state for an RSVP request
dsprsvpsenders	Display path states for all RSVP requests
dsprtpcnt	Display RTP bearer counters
dsprtpcn	Display configuration for an RTP connection
dsprtpcnstat	Display RTP connection statistics for an endpoint
dsprtpcns	Display configurations for all RTP connections
dsprudp trunk	Display configuration for an RUDP session
dsprudp trunks	Display configurations for all RUDP sessions
dspsarent	Display SAR counter values for a channel
dspsarents	Display SAR counter values for all channels
dspsarmsgcnt	Display SAR control message counter values for the card
dspsseqtonedet	Display configuration data of a sequential tone
dspses	Display configuration for a session
dspsesgrp	Display configuration for a session group
dspsesgrps	Display configurations for all session groups
dspsess	Display configuration for all sessions
dspsesset	Display configuration for a session set
dspsesstat	Display configuration of session statistics
dspsidpacket	Display SID packet configuration for each line
dspslipcnt	Display clock slip counters for a line
dspsplmodemtone	Display the detection of 1560/980 Hz modem tones
dsprrcpnt	Display SRCP counters for a call agent
dsprrcpnts	Display SRCP counters for all call agents
dsprrcppeer	Display configuration for an SRCP peer
dsprrcppeergrpparams	Display SRCP peer group parameters
dsprrcppeers	Display configurations for all SRCP peers
dsprrcpport	Display SRCP port
dsprrcpretry	Display SRCP retransmission parameters

**Table 10-2** VoIP Switching/VoIP Trunking Commands (continued)

Command	Description
dspsrcenable	Display whether or not VISM is configured to allow more than one SSRC per RTP session
dspstatparms	Display the general status of the statistics upload functionality
dspt38fxlco	Display fax handling instructions for a line
dspt38fxlcos	Display fax handling instructions for all lines
dspt38nsetimeout	Display NSE timeout for a line
dspt38nsetimeouts	Display NSE timeout for all lines
dspt38params	Display fax transfer parameters for a line
dsptaskinfo	Display operating tasks
dsptonebuiltinplans	Display built-in tone plans
dsptoneplan	Display configuration of a tone plan
dsptoneplans	Display configurations of all tone plans
dsptoneprovplans	Display all provisional tone plans
dsptoneregionplans	Display tone plans by region
dspranscotmode	Display reverse transponder continuity test mode
dspttrapfilter	Display the current trap filter configurations
dsptraphelp	Display all traps or traps per group
dsppvbdcodec	Display the VBD upspeed codec
dsppvbdmarconi	Display the Marconi dual tone flag
dsppvbdpol	Display VBD policies
dsppvismdn	Display domain name for card
dsppvismip	Display IP address for card
dsppvismparam	Display card configuration parameters
dsppvoiipparams	Display VoIP mode parameters
dspxgcpbt	Display default network type, VC type, and connection type of the VISM card
dspxgcpcalls	Display xGCP call information
dspxgcpconf	Display xGCP configuration
dspxgcpent	Display xGCP message statistics for a call agent
dspxgcpents	Display xGCP message statistics for all call agents
dspxgcpcon	Display configuration for call agent connection
dspxgcpcons	Display configurations for all call agent connections
dspxgcpdefpkg	Display xGCP default package
dspxgcpdetailent	Display details of message exchange statistics for a call agent
dspxgcpdetailents	Display details of message exchange statistics for all call agents
dspxgcpendpt	Display configuration for an xGCP endpoint

**Table 10-2** VoIP Switching/VoIP Trunking Commands (continued)

Command	Description
dspxgcpndptcons	Display configurations for all xGCP endpoint connections
dspxgcpndpts	Display configurations for all xGCP endpoints
dspxgcperrcnt	Display xGCP error counts
dspxgcpinterop	Display status of SDP OST interoperability feature
dspxgcpIncons	Display xGCP line connection information
dspxgcppeers	Display ports for xGCP peers
dspxgcppersistevts	Display all xGCP persistent events
dspxgcpport	Display local xGCP port
dspxgcpretry	Display xGCP retransmission parameters
Help	Help
memShow	Display system memory partition blocks and statistics
pingIndsp	Display DSP configuration data for all endpoints on a line
rrtcon	Trigger rerouting of a connection between two different switches
setfaxmodemtrace	Set fax/modem trace
tstcon	Test a specified connection
tstdelay	Test delay on a specified connection
upcon	Up a connection
version	Display version data

## AAL2 Trunking

Table 10-3 lists in alphabetical order the commands that support the AAL2 trunking mode.

**Table 10-3** AAL2 Trunking Commands

Command	Description
?	Help
addcastranstbl	Create a CAS mapping table
addcasvar	Add CAS variant
addccs	Add CCS channel
addcid	Add CID
addcon	Add connection
addconloop	Add local connection loopback
addendpt	Add endpoint
addendptloop	Add endpoint loopback
addendpts	Add endpoints

**Table 10-3 AAL2 Trunking Commands (continued)**

<b>Command</b>	<b>Description</b>
addln	Add line
addlnloop	Add line loop
addport	Add port
addrscprtn	Add resource partition
addtrapfilter	Add traps to the filter traps list
cc	Change card
chkflash	Check flash memory
clralm	Clear alarms on a line
clralmnt	Clear alarm counters on a line
clralmnts	Clear all alarm counters on the card
clralms	Clear all alarms on the card
clrcacfailcntrs	Reset all CAC failure statistics to 0
clrcesent	Clear CCS counter values on a line
clrcesnts	Clear CCS counter values on all lines
clrhystatst	Clear the history statistics
clrmngcidcnt	Clear CID counters
clrsarcnt	Clear SAR counters on a channel
clrsarcnts	Clear all SAR counters on the card
clrsarmsgcnt	Clear control message counters on the card
clrscrn	Clear control terminal screen
clrslipcnt	Clear clock slip counters for a line
clrtaskinfo	Reset the task values
cnfaal2subcellmuxing	Configure subcell multiplexing
cnfaal2timerparams	Configure AAL2 timer parameters
cnfadapgain	Configure DSP adaptive gain
cnfaissuppression	Configure AIS propagation
cnfalrm	Configure alarm parameters for a line
cnfalrmnt	Configure TDM line statistics
cnfcac	Configure CAC on the card
cnfcacparams	Configure CAC parameters
cnfcalea	Configure card for CALEA
cnfcascode	Configure CAS code parameters
cnfcasdelaydialtime	Configure CAS delay dial time
cnfcasdelay	Configure CAS wait time
cnfcasendpt	Associate endpoint with CAS name
cnfcasflashtime	Configure CAS flash time

**Table 10-3 AAL2 Trunking Commands (continued)**

Command	Description
cnfcasglareattrib	Configure CAS glare policy for an endpoint
cnfcasglaretime	Configure CAS glare time for an endpoint
cnfcasguardtime	Configure CAS guard time for an endpoint
cnfcasoffhooktime	Configure CAS off-hook time for an endpoint
cnfcasonhooktime	Configure CAS on-hook time for an endpoint
cnfcaspackage	Configure MGCP packages to notify CAS events
cnfcasparamsource	Configure CAS timer source parameters for an endpoint
cnfcasstartdialtime	Configure CAS start dial time for an endpoint
cnfcastransendpt	Download the CAS mapping table
cnfcasvar	Configure previously added CAS variant
cnfcaswinktime	Configure CAS wink time parameters for an endpoint
cnfcasxgcp	Configure CAS retransmission parameters
cnfcidis	Configure a CID as in-service
cnfcidoos	Configure a CID as out-of-service
cnfcodecjtrdelay	Configure jitter delay for a codec
cnfcodectmpl	Assign codec template to card
cnfcompvad	Configure VAD
cnfcon	Configure connection parameters
cnfconbwtoggle	Change the bandwidth usage
cnfconcac	Enable CAC on a connection
cnfconcacparams	Configure CAC parameters on a PVC
cnfconprotect	Configure protection on a PVC
cnfconvbdpol	Configure VBD policies on a channel
cnfds0execdiag	Configure testing on an endpoint
cnfds0gain	Configure adjustable gain on a DS0
cnfds0localcas	Configure local CAS on a DS0
cnfds0loop	Configure loopback type for DS0
cnfds0musicthreshold	Configure music on-hold threshold for DS0
cnfds0heartbeattimer	Configure heartbeat message time interval
cnfecanenable	Configure echo cancellation on a line
cnfecanrec	Configure residual echo control on an echo cancellation line
cnfecantail	Configure tail length on an echo cancellation line
cnfendptcadence	Configure cadence times on an endpoint
cnferl	Configure return echo loss value
cnfexecdiag	Configure all channel level testing
cnffaxrelay	Enable ATM fax relay on a line

**Table 10-3 AAL2 Trunking Commands (continued)**

Command	Description
cnffaxrelayparams	Configure ATM fax relay parameters
cnffaxrelaytimeout	Configure the fax relay acknowledgment timeout
cnfgain	Configure adjustable gain on the card
cnfjtrmode	Configure jitter buffer delay mode
cnflinesabyte	Configure SA bytes on a line
cnfln	Configure line parameters
cnflncompanding	Configure companding law on a line
cnflnexecdiag	Configure channel level testing on a line
cnflngain	Configure adjustable gain for all DS0s on a line
cnflnmusicthreshold	Configure music on-hold threshold for all DS0s on a line
cnflnsig	Configure signaling on a line
cnflntrunkcond	Configure trunk conditioning
cnlnv110	Enable or disable V.110 detection
cnfmusicthreshold	Configure music on-hold threshold
cnfoamloopcnt	Configure OAM loop count
cnfpncon	Configure route priority for a connection
cnfprofelemvbd	Configure profile element for a profile
cnfprofelemvoice	Configure profile voice element
cnfprofparams	Configure profile preference
cnftrapfilterfeature	Enable the trap filtering feature
cnftrapfiltertimer	Configure the timer for a particular trap or a set of traps
cnfvbdpol	Configure VBD policies on the card
cnfvismmode	Configure operating mode
cnfxgcpbt	Configure bearer type
delalltrapfilters	Delete all of the traps in the trap filter list
delcastransendpt	Delete a CAS table associated with an endpoint
delcastranstbl	Delete an existing CAS mapping table
delcasvar	Delete CAS variant
delccs	Delete CCS
delcid	Delete CID
delcon	Delete connection
delconloop	Delete local loopback state on a connection
delendpt	Delete endpoint
delendptloop	Delete loopback state on an endpoint
delendpts	Delete range of endpoints
dellapdtrunk	Delete LAPD trunk



**Table 10-3 AAL2 Trunking Commands (continued)**

<b>Command</b>	<b>Description</b>
delln	Delete line
dellnloop	Delete loopback state on a line
delpport	Delete port
delrscprtn	Delete resource partition
delrtppcon	Delete RTP connection
delrudptrunk	Delete RUDP trunk
deltrapfilter	Delete traps from the filter trap list
dncon	Down connection
dspaal2params	Display AAL2 parameters
dspaal2profile	Display data about AAL2 profile
dspaissuppression	Display AIS propagation status
dspall	Display static configurations and run-time data
dspalltrapfilters	Display all the currently active trap filters
dspalm	Display alarms for a line
dspalmcnf	Display threshold data about alarm statistics
dspalment	Display alarm counters on a line
dspalms	Display alarms for specific line type
dspcacfailcntrs	Display CAC failure counters
dspcalea	Display CALEA configuration status
dspcarddsp	Display card configuration parameters
dspcasendpts	Display CAS endpoint configuration
dspcasglareattrib	Display glare policy attributes
dspcaspackage	Display CAS packages
dspcasparamsource	Display CAS timer source parameters
dspcastimers	Display CAS timers for an endpoint
dspcastransendpts	Display all endpoints and their associated CAS mapping table names
dspcastranstbl	Display CAS mapping table configurations
dspcastranstblendpts	Display endpoints associated with CAS mapping tables
dspcastranstbls	Display a list of CAS mapping tables
dspcasvar	Display CAS variant data
dspcasvarendpts	Display all endpoints associated with CAS variant
dspcasvars	Display parameters of all CAS variants
dspcasxgcps	Display CAS/xGCP timer parameters
dspccs	Display CCS configuration
dspccschans	Display CCS channels

**Table 10-3 AAL2 Trunking Commands (continued)**

<b>Command</b>	<b>Description</b>
dsccsent	Display CCS counters
dspcd	Display card configuration
dspcid	Display configuration of CID
dspcidcps	Display the cell rate per second for a connection
dspcids	Display CIDs of LCN
dspcodecjtrdelays	Display codec jitter delay modes
dspcodectmpls	Display all entries in the codec template table
dspcon	Display channel configuration
dspconcac	Display CAC configuration for a connection
dspconcnt	Display counter configuration for a connection
dspcons	Display channel configurations for all connections
dspconvbdpol	Display VBD policies for a channel
dspdiags	Display results of a diagnostic test
dspds0execdiag	Verify that testing is enabled on the channel
dspds0gain	Display adjustable gain values for a DS0
dspds0localcasstatus	Display local CAS status for a DS0
dspds0loop	Display loopback type for a DS0
dspds0musicthreshold	Display music on-hold threshold for a DS0
dspendpt	Display configuration for an endpoint
dspendpts	Display endpoints
dspexecdiag	Display testing status for all channel levels
dspfaxmodetrace	Display fax/modem trace
dspfaxrelay	Display whether or not ATM fax relay is enabled
dspfaxrelayparams	Display the ATM fax relay parameters
dspfaxrelays	Display whether or not ATM fax relay is enabled or disabled on all of the lines
dspfaxrelaytimeout	Display the fax acknowledgment timeout for a specified line
dspfaxrelaytimeouts	Display the fax acknowledgment timeout values for all of the lines
dspgain	Display adjustable gain for the card
dspheartbeattimer	Display heartbeat status of the card
dsphistorystats	Display the various history statistics
dsplinecasbits	Display CAS bit values for a line
dsplinesabyte	Display SA buffers on a line
dspllccstats	Display lossless compression statistics
dspln	Display configuration of a line

**Table 10-3 AAL2 Trunking Commands (continued)**

<b>Command</b>	<b>Description</b>
dsplncidcps	Display CPS usage per CID for all of the CIDs on a particular line
dsplncids	Display CIDs for a line
dsplncompanding	Display companding law on a line
dsplndsp	Display DSP data for a line
dsplndsx0s	Display configuration for all DS0s on a line
dsplnendptstatus	Display endpoint status for a line
dsplnexecdial	Display channel level testing status
dsplngain	Display adjustable gain for all DS0s on a line
dsplnmusicthreshold	Display music on-hold threshold for all DS0s on a line
dsplns	Display configurations for all lines on the card
dsplloops	Display all lines and DS0s in the loopback condition
dsplmngcident	Display CID count for an endpoint
dsplmonecanendpt	Display echo cancellation activity for an endpoint
dsplmusicthreshold	Display music on-hold threshold for the card
dsplpoamloopcnt	Display OAM loop count
dsplport	Display virtual port configuration
dsplprofparams	Display profile elements for all profiles
dsplrsprtrn	Display resource partition configuration
dsplrsarent	Display SAR counter values for a channel
dsplrsarents	Display SAR counter values for all channels
dsplrsarmsgcnt	Display SAR control message counter values for the card
dsplrslicnt	Display clock slip counters for a line
dsplrsstatparms	Display the general status of the statistics upload functionality
dsplrstaskinfo	Display operating tasks
dsplrstrapfilter	Display the current trap filter configurations
dsplrstraphelp	Display all traps or traps per group
dsplrsvbdpol	Display VBD policies
dsplrsvismparam	Display card configuration parameters
dsplrsxgcpbt	Display default network type, VC type, and connection type of the VISM card
Help	Help
memShow	Display system memory partition blocks and statistics
pinglndsp	Display DSP configuration data for all endpoints on a line
rrtcon	Trigger rerouting of a connection between two different switches
setfaxmodemtrace	Set fax/modem trace

**Table 10-3** AAL2 Trunking Commands (continued)

Command	Description
tstcon	Test a specified connection
tstdelay	Test delay on a specified connection
upcon	Up a connection
version	Display version data

## AAL1 Switching

Table 10-4 lists in alphabetical order the commands that support the AAL1 switching mode.

**Table 10-4** AAL1 Switching Commands

Command	Description
?	Help
addcon	Add connection
addconloop	Add local connection loopback
adddn	Add domain name
adddnip	Add IP address to domain
addualtonedet	Add dual-tone frequency
addendpt	Add endpoint
addendptloop	Add endpoint loopback
addendpts	Add endpoints
addlapd	Add LAPD
addln	Add line
addlnloop	Add line loop
addmgc	Add MGC
addmgcgrpentry	Add MGC to a call agent redundancy group
addmgcgrpprotocol	Assign a protocol to an MGC
addport	Add port
addrscrptn	Add resource partition
addses	Add PRI backhaul session
addsesgrp	Add PRI backhaul session to a group
addsesset	Add PRI backhaul session set
addtoneplan	Add tone plan
addtrapfilter	Add traps to the filter traps list
addxcgppersistevt	Add persistent xGCP events
cc	Change card
chkflash	Check flash memory

**Table 10-4 AAL1 Switching Commands (continued)**

Command	Description
clralm	Clear alarms on a line
clralment	Clear alarm counters on a line
clralments	Clear all alarm counters on the card
clralms	Clear all alarms on the card
clrcacfailcntrs	Reset all CAC failure statistics to 0
clrhystats	Clear the history statistics
clrsarent	Clear SAR counters on a channel
clrsarcnts	Clear all SAR counters on the card
clrsarmsgcnt	Clear control message counters on the card
clrscrn	Clear control terminal screen
clrslipcnt	Clear clock slip counters for a line
clrtaskinfo	Reset the task values
cnfadapgain	Configure DSP adaptive gain
cnfaggsvcbw	Aggregate SVC bandwidth
cnfalm	Configure alarm parameters for a line
cnfalment	Configure collection of TDM line statistics
cnfbearerippingenable	Configure the card to respond to ping requests for bearer traffic
cnfcac	Configure CAC on the card
cnfcacparams	Configure CAC parameters
cnfcalea	Configure card for CALEA
cnfco1timer	Configure bearer continuity test 1 timer
cnfco2timer	Configure bearer continuity test 2 timer
cnfco4timer	Configure bearer continuity test 4 timer
cnfcodecjtrdelay	Configure jitter delay for a codec
cnfcodecneg	Configure codec list priority order
cnfcodecpars	Configure codec parameters
cnfcodectmpl	Assign codec template to card
cnfcompsize	Configure compression size
cnfcompvad	Configure VAD
cnfcon	Configure connection parameters
cnfconcacparams	Configure CAC parameters on a PVC
cnfconprotect	Configure protection on a PVC
cnfdisctimers	Configure wait delay times for disconnected procedure
cnfdn	Configure resolution type for domain
cnfdnssrvr	Designate domain name as a domain name server
cnfds0execdiag	Configure testing on an endpoint

**Table 10-4 AAL1 Switching Commands (continued)**

<b>Command</b>	<b>Description</b>
cnfds0gain	Configure adjustable gain on a DS0
cnfds0localcas	Configure local CAS on a DS0
cnfds0loop	Configure loopback type for DS0
cnfds0musicthreshold	Configure music on-hold threshold for DS0
cnfdspheartbeattimer	Configure heartbeat message time interval
cnfdynamicpayload	Configure dynamic payload
cnfecanenable	Configure echo cancellation on a line
cnfecanrec	Configure residual echo control on an echo cancellation line
cnfecantail	Configure tail length on an echo cancellation line
cnfendptdsend	Configure datagram size for an endpoint
cnferl	Configure return echo loss value
cnfexecdiag	Configure all channel level testing
cnfgain	Configure adjustable gain on the card
cnfgwis	Configure card to be in-service
cnfgwoos	Configure card to be out-of-service
cnfjtrmode	Configure jitter buffer delay mode
cnflapdretrans	Configure maximum retransmission
cnflapdtimer	Configure two LAPD timers
cnflapdtype	Configure LAPD stacks
cnflapdwinize	Configure maximum number of unacknowledged I-frames
cnflinesabyte	Configure SA bytes on a line
cnfln	Configure line parameters
cnflncompanding	Configure companding law on a line
cnflndigitorder	Configure digit order on a line
cnflnexecdiag	Configure channel level testing on a line
cnflngain	Configure adjustable gain for all DS0s on a line
cnflnis	Configure line to be in-service
cnflnmusicthreshold	Configure music on-hold threshold for all DS0s on a line
cnflnoos	Configure line to be out-of-service
cnflnringback	Configure ring-back tone on a line
cnflnsig	Configure signaling on a line
cnflntoneplan	Assign tone plan to a line
cnflntonetimeout	Configure tone timeout periods for a line
cnflongdurationtimer	Configure long duration timer
cnfmgcgrpentry	Configure priority of call agent within a group
cnfmgcgrpparam	Configure MGCP group parameters

**Table 10-4 AAL1 Switching Commands (continued)**

Command	Description
cnfmgcgrpprotocol	Configure call agent group protocol
cnfmidcalltimers	Configure mid-call DTMF timers
cnfmusicthreshold	Configure music on-hold threshold
cnfnwcot	Configure card for network continuity test
cnfoamloopcnt	Configure OAM loop count
cnfoamparams	Configure OAM parameters
cnfpncon	Configure route priority for a connection
cnfseqtonedet	Change the default settings of a sequential tone
cnfsesack	Configure timeout period before sending an acknowledgment
cnfsesmaxreset	Configure session maximum number of resets
cnfsesmaxseg	Configure session maximum segment size
cnfsesmaxwindow	Configure session maximum number of segments
cnfsesnullsegmtout	Configure session null segment idle time
cnfsesoutofseq	Configure session out-of-sequence packets
cnfsesport	Configure session port
cnfsesretrans	Configure session retransmission times
cnfsesstatetmout	Configure session transfer state timeout
cnfsessyncatmps	Configure session sync attempts with call agent
cnfsrcppeer	Configure SRCP port
cnfsrcppeergpparam	Configure SRCP parameters for a redundancy group
cnfsrcpretry	Configure SRCP retry count
cnfsvqosparam	Configure quality of service parameters
cnftftpdn	Configure TFTP domain name
cnftranscotmode	Configure the continuity test for the TDM side
cnftrapfilterfeature	Enable the trap filtering feature
cnftrapfiltertimer	Configure the timer for a particular trap or a set of traps
cnftrfaggclip	Configure traffic clipping
cnfvismdn	Configure card domain name
cnfvismip	Configure card IP address
cnfvismmode	Configure operating mode
cnfxgcpbt	Configure bearer type
cnfxgcpinteropsdpost	Configure SDP OST interoperability
cnfxgcpmwd	Configure maximum wait delay for sending RSIP message
cnfxgcppeer	Configure UDP port for gateway messages
cnfxgcpretry	Configure call agent communication retries
delalltrapfilters	Delete all of the traps in the trap filter list

**Table 10-4 AAL1 Switching Commands (continued)**

<b>Command</b>	<b>Description</b>
delcon	Delete connection
delconloop	Delete local loopback state on a connection
deldn	Delete domain name
deldnip	Delete domain IP address
deldualtonedet	Remove a dual-frequency tone
delendpt	Delete endpoint
delendptloop	Delete loopback state on an endpoint
delendpts	Delete range of endpoints
dellapd	Delete LAPD
dellapdtrunk	Delete LAPD trunk
delln	Delete line
dellnloop	Delete loopback state on a line
dellntoneplan	Delete tone plan from a line
delmgc	Delete MGC
delmgcgrpentry	Delete MGC from a redundancy group
delmgcgrpprotocol	Delete MGC protocol from a redundancy group
delport	Delete port
delrscprt	Delete resource partition
delrtpcon	Delete RTP connection
delrudptrunk	Delete RUDP trunk
delses	Delete session
delsesgrp	Delete session group
delseset	Delete session set
deltoneplan	Delete tone plan
deltrapfilter	Delete traps from the filter trap list
delxgcpcon	Delete xGCP connection
delxgcppersistevt	Delete persistent xGCP event
dncon	Down connection
dspaggsvcbw	Display configured bandwidth
dspall	Display static configurations and run-time data
dspalltrapfilters	Display all the currently active trap filters
dspalm	Display alarms for a line
dspalmcnf	Display threshold data about alarm statistics
dspalment	Display alarm counters on a line
dspalms	Display alarms for specific line type
dspavgsvctimes	Display averages for SVC SAPI message-processing statistics



**Table 10-4 AAL1 Switching Commands (continued)**

<b>Command</b>	<b>Description</b>
dspcacfailcntrs	Display CAC failure counters
dspcalea	Display CALEA configuration status
dspcarddsp	Display card configuration parameters
dspcctimes	Display call control MGCP message-processing statistics
dspcd	Display card configuration
dspco1timer	Display continuity test 1 timer value
dspco2timer	Display continuity test 2 timer value
dspco4timer	Display continuity test 4 timer value
dspcodecjrtdelays	Display codec jitter delay modes
dspcodecneg	Display codec negotiation option
dspcodecparams	Display codec parameters
dspcodectmpls	Display all entries in the codec template table
dspcon	Display channel configuration
dspconcac	Display CAC configuration for a connection
dspconcnt	Display counter configuration for a connection
dspcons	Display channel configurations for all connections
dspdiags	Display results of a diagnostic test
dspdisctimers	Display disconnect type method wait delay times
dspdallips	Display all IP addresses for all domain names on the card
dspdnips	Display all IP addresses for a specific domain name
dspdns	Display configurations for all domain names
dspdnsrvr	Display domain name for a domain server
dspds0execdiag	Verify that testing is enabled on the channel
dspds0gain	Display adjustable gain values for a DS0
dspds0localcasstatus	Display local CAS status for a DS0
dspds0loop	Display loopback type for a DS0
dspds0musicthreshold	Display music on-hold threshold for a DS0
dspdualtonedet	Display dual-tone configurations
dspdynamicpayload	Display dynamic payload for the card
dspendpt	Display configuration for an endpoint
dspendptdnsend	Display the naming format for the audit endpoint response
dspendpts	Display endpoints
dspexecdiag	Display testing status for all channel levels
dspfaxmodemtrace	Display fax/modem trace
dspgain	Display adjustable gain for the card
dspgwstate	Display gateway service state

**Table 10-4 AAL1 Switching Commands (continued)**

<b>Command</b>	<b>Description</b>
dsphheartbeattimer	Display heartbeat status of the card
dsphistorystats	Display the various history statistics
dsplapd	Display configuration of LAPD channel
dsplapds	Display configurations for all LAPD channels
dsplapdstat	Display LAPD channel statistics
dsplinesabyte	Display SA buffers on a line
dspln	Display configuration of a line
dsplncompanding	Display companding law on a line
dsplndigitorder	Display line digit order
dsplndsp	Display DSP data for a line
dsplndsx0s	Display configuration for all DS0s on a line
dsplnendptstatus	Display endpoint status for a line
dsplnexecdiag	Display channel level testing status
dsplngain	Display adjustable gain for all DS0s on a line
dsplnmusicthreshold	Display music on-hold threshold for all DS0s on a line
dsplnringback	Display ring-back tone method for a line
dsplns	Display configuration for all lines on the card
dsplnstate	Display service state of the line
dsplntoneplan	Display tone plan configuration for a line
dsplntonetimeout	Display configured timeout periods for all line tones
dsplongdurationtimer	Display long duration timer
dsploops	Display all lines and DS0s in the loopback condition
dspmmaxmgs	Display maximum number of MGCs on the card
dspmgc	Display configuration for an MGC
dspmgcgrpparams	Display all MGC redundancy group parameters
dspmgcgrpprotocols	Display all MGC redundancy group protocols
dspmgcgrps	Display all configured MGC redundancy groups
dspmgs	Display configuration for all MGCs
dspmprotocols	Display the MG protocols
dspmcalltimers	Display mid-call DTMF timers
dspmonecanendpt	Display echo cancellation activity for an endpoint
dspmusicthreshold	Display music on-hold threshold for the card
dsplnwcot	Display network connectivity connection configuration
dsपोामloopcnt	Display OAM loop count
dsपोामparams	Display OAM parameters
dsport	Display virtual port configuration

**Table 10-4 AAL1 Switching Commands (continued)**

<b>Command</b>	<b>Description</b>
dsprscrprt	Display resource partition configuration
dsparent	Display SAR counter values for a channel
dsparents	Display SAR counter values for all channels
dsparmsgcnt	Display SAR control message counter values for the card
dspseqtonedet	Display configuration data of a sequential tone
dspses	Display configuration for a session
dspsesgrp	Display configuration for a session group
dspsesgrps	Display configurations for all session groups
dspsess	Display configuration for all sessions
dspsesset	Display configuration for a session set
dspsesstat	Display configuration of session statistics
dspslipcnt	Display clock slip counters for a line
dspsrcpnt	Display SRCP counters for a call agent
dspsrcpnts	Display SRCP counters for all call agents
dspsrcppeer	Display configuration for an SRCP peer
dspsrcppeergrpparams	Display SRCP peer group parameters
dspsrcppeers	Display configurations for all SRCP peers
dspsrcpport	Display SRCP port
dspsrcpretry	Display SRCP retransmission parameters
dspstatparms	Display the general status of the statistics upload functionality
dspsvccallstruct	Display all SVC call table information
dspsvccalltable	Display SVC call table
dspsvccalltimers	Display timers pending for each call
dspsvccause	Print the text description for the identified cause
dspsvccnts	Display SVC SAPI message processing counts
dspsvccons	Display active SVCs
dspsvcgw	Display SVC gateway parameters
dspsvcqosparam	Display quality of service parameters
dsptaskinfo	Display operating tasks
dsptonebuiltinplans	Display built-in tone plans
dsptoneplan	Display configuration of a tone plan
dsptoneplans	Display configurations of all tone plans
dsptoneprovplans	Display all provisional tone plans
dsptoneregionplans	Display tone plans by region
dspranscotmode	Display reverse transponder continuity test mode
dsprtrapfilter	Display the current trap filter configurations

**Table 10-4 AAL1 Switching Commands (continued)**

<b>Command</b>	<b>Description</b>
dsptraphelp	Display all traps or traps per group
dspvismdn	Display domain name for card
dspvismip	Display IP address for card
dspvismparam	Display card configuration parameters
dspxgcpbt	Display default network type, VC type, and connection type of the VISM card
dspxgpcalls	Display xGCP call information
dspxgpcnf	Display xGCP configuration
dspxgpcnt	Display xGCP message statistics for a call agent
dspxgpcnts	Display xGCP message statistics for all call agents
dspxgcpcon	Display configuration for call agent connection
dspxgcpcons	Display configurations for all call agent connections
dspxgcpdefpkg	Display xGCP default package
dspxgcpdetailnt	Display details of message exchange statistics for a call agent
dspxgcpdetailnts	Display details of message exchange statistics for all call agents
dspxgcpndpt	Display configuration for an xGCP endpoint
dspxgcpndptcons	Display configurations for all xGCP endpoint connections
dspxgcpndpts	Display configurations for all xGCP endpoints
dspxgcperrcnt	Display xGCP error counts
dspxgcpinterop	Display status of SDP OST interoperability feature
dspxgcpIncons	Display xGCP line connection information
dspxgcppeers	Display ports for xGCP peers
dspxgcppersistevts	Display all xGCP persistent events
dspxgcpport	Display local xGCP port
dspxgcpretry	Display xGCP retransmission parameters
Help	Help
memShow	Display system memory partition blocks and statistics
pingIndsp	Display DSP configuration data for all endpoints on a line
rrtcon	Trigger rerouting of a connection between two different switches
setfaxmodemtrace	Set fax/modem trace
svccntsreset	Set SVC counters to 0
tstcon	Test a specified connection
tstdelay	Test delay on a specified connection
upcon	Up a connection
version	Display version data

# Switched AAL2 SVC

Table 10-5 lists in alphabetical order the commands that support the switched AAL2 SVC mode.

**Table 10-5** Switched AAL2 SVC Commands

Command	Description
?	Help
addcastranstbl	Create a CAS mapping table
addcon	Add connection
addconloop	Add local connection loopback
adddn	Add domain name
adddnip	Add IP address to domain
adddualtonedet	Add dual-tone frequency
addendpt	Add endpoint
addendptloop	Add endpoint loopback
addendpts	Add endpoints
addlapd	Add LAPD
addln	Add line
addlnloop	Add line loop
addmgc	Add MGC
addmgcgrpentry	Add MGC to a call agent redundancy group
addmgcgrpprotocol	Assign a protocol to an MGC
addport	Add port
addrscrptn	Add resource partition
addses	Add PRI backhaul session
addsesgrp	Add PRI backhaul session to a group
addsesset	Add PRI backhaul session set
addtoneplan	Add tone plan
addtrapfilter	Add traps to the filter traps list
addxgcppersistevt	Add persistent xGCP events
cc	Change card
chkflash	Check flash memory
clralm	Clear alarms on a line
clralment	Clear alarm counters on a line
clralmnts	Clear all alarm counters on the card
clralms	Clear all alarms on the card
clrcacfailcntrs	Reset all CAC failure statistics to 0
clrhystats	Clear the history statistics
clrsarcnt	Clear SAR counters on a channel

**Table 10-5** Switched AAL2 SVC Commands (continued)

Command	Description
clrsarcnts	Clear all SAR counters on the card
clrsarmsgcnt	Clear control message counters on the card
clrscrn	Clear control terminal screen
clrslipcnt	Clear clock slip counters for a line
clrtaskinfo	Reset the task values
cnfaal2subcellmuxing	Configure AAL2 subcell multiplexing
cnfaal2timerparams	Configure AAL2 timer parameters
cnfaal2transparams	Configure AAL2 transportation parameters
cnfadapgain	Configure DSP adaptive gain
cnfaggsvcbw	Aggregate SVC bandwidth
cnfaissuppression	Configure AIS propagation
cnfalm	Configure alarm parameters for a line
cnfalment	Configure collection of TDM line statistics
cnfbearerrippingenable	Configure the card to respond to ping requests for bearer traffic
cnfcac	Configure CAC on the card
cnfcacparams	Configure CAC parameters
cnfcalea	Configure card for CALEA
cnfco1timer	Configure bearer continuity test 1 timer
cnfco2timer	Configure bearer continuity test 2 timer
cnfco4timer	Configure bearer continuity test 4 timer
cnfcodecjrtdelay	Configure jitter delay for a codec
cnfcodectmpl	Assign codec template to card
cnfcompvad	Configure VAD
cnfcon	Configure connection parameters
cnfconbwtoggle	Change the bandwidth usage
cnfconcacparams	Configure CAC parameters on a PVC
cnfconprotect	Configure protection on a PVC
cnfconvbdpol	Configure VBD policies
cnfdisctimers	Configure wait delay times for disconnected procedure
cnfdn	Configure resolution type for domain
cnfdnssrvr	Designate domain name as a domain name server
cnfds0execdiag	Configure testing on an endpoint
cnfds0gain	Configure adjustable gain on a DS0
cnfds0localcas	Configure local CAS on a DS0
cnfds0loop	Configure loopback type for DS0
cnfds0musicthreshold	Configure music on-hold threshold for DS0

**Table 10-5 Switched AAL2 SVC Commands (continued)**

Command	Description
cnfdsphheartbeattimer	Configure heartbeat message time interval
cnfecanenable	Configure echo cancellation on a line
cnfecanrec	Configure residual echo control on an echo cancellation line
cnfecantail	Configure tail length on an echo cancellation line
cnfendptdntsend	Configure datagram size for an endpoint
cnferl	Configure return echo loss value
cnfexecdiag	Configure all channel level testing
cnffaxrelay	Enable ATM fax relay on a line
cnffaxrelayparams	Configure ATM fax relay parameters
cnffaxrelaytimeout	Configure the fax relay acknowledgment timeout
cnfgain	Configure adjustable gain on the card
cnfgwis	Configure card to be in-service
cnfgwoos	Configure card to be out-of-service
cnfjtrmode	Configure jitter buffer delay mode
cnflapdretrans	Configure maximum retransmission
cnflapdtimer	Configure two LAPD timers
cnflapdtype	Configure LAPD stacks
cnflapdwinsize	Configure maximum number of unacknowledged I-frames
cnflinesabyte	Configure SA bytes on a line
cnfln	Configure line parameters
cnflncompanding	Configure companding law on a line
cnflndigitorder	Configure digit order on a line
cnflnexecdial	Configure channel level testing on a line
cnflngain	Configure adjustable gain for all DS0s on a line
cnflnis	Configure line to be in-service
cnflnmusicthreshold	Configure music on-hold threshold for all DS0s on a line
cnflnoos	Configure line to be out-of-service
cnflnringback	Configure ring-back tone on a line
cnflnsig	Configure signaling on a line
cnflntoneplan	Assign tone plan to a line
cnflntonetimeout	Configure tone timeout periods for a line
cnflongdurationtimer	Configure long duration timer
cnfmgcgrpentry	Configure priority of call agent within a group
cnfmgcgrpparam	Configure MGCP group parameters
cnfmgcgrpprotocol	Configure call agent group protocol
cnfmidcalltimers	Configure mid-call DTMF timers

**Table 10-5** Switched AAL2 SVC Commands (continued)

Command	Description
cnfmusicthreshold	Configure music on-hold threshold
cnfnwcot	Configure card for network continuity test
cnfoamloopcnt	Configure OAM loop count
cnfoamparams	Configure OAM parameters
cnfpncon	Configure route priority for a connection
cnfprofelemvbd	Configure VBD profile
cnfprofelemvoice	Configure profile voice element
cnfprofneg	Configure profile list priority order
cnfprofparams	Configure profile parameters
cnfseqtonedet	Change the default settings of a sequential tone
cnfsesack	Configure timeout period before sending an acknowledgment
cnfsesmaxreset	Configure session maximum number of resets
cnfsesmaxseg	Configure session maximum segment size
cnfsesmaxwindow	Configure session maximum number of segments
cnfsesnullsegmtout	Configure session null segment idle time
cnfsesoutofseq	Configure session out-of-sequence packets
cnfsesport	Configure session port
cnfsesretrans	Configure session retransmission times
cnfsesstatetmout	Configure session transfer state timeout
cnfsessyncatmps	Configure session sync attempts with call agent
cnfsrcppeer	Configure SRCP port
cnfsrcppeergrpparam	Configure SRCP parameters for a redundancy group
cnfsrcpretry	Configure SRCP retry count
cnfsvcaal2cid	Configure AAL2 CID value
cnfsvcqosparam	Configure quality of service parameters
cnfsvctrfscalingfactor	Configure traffic scaling
cnftftpdn	Configure TFTP domain name
cnftranscotmode	Configure the continuity test for the TDM side
cnftrapfilterfeature	Enable the trap filtering feature
cnftrapfiltertimer	Configure the timer for a particular trap or a set of traps
cnftrfaggclip	Configure traffic clipping
cnfvbdpol	Configure VBD policies
cnfvismdn	Configure card domain name
cnfvismip	Configure card IP address
cnfvismmode	Configure operating mode
cnfxgcpbt	Configure bearer type



**Table 10-5 Switched AAL2 SVC Commands (continued)**

Command	Description
cnfxgcpinteropsdpost	Configure SDP OST interoperability
cnfxgcpmwd	Configure maximum wait delay for sending RSIP message
cnfxgcppeer	Configure UDP port for gateway messages
cnfxgcpretry	Configure call agent communication retries
delalltrapfilters	Delete all of the traps in the trap filter list
delcastransendpt	Delete a CAS table associated with an endpoint
delcastranstbl	Delete an existing CAS mapping table
delcon	Delete connection
delconloop	Delete local loopback state on a connection
deldn	Delete domain name
deldnip	Delete domain IP address
deldualtonedet	Remove a dual-frequency tone
delendpt	Delete endpoint
delendptloop	Delete loopback state on an endpoint
delendpts	Delete range of endpoints
dellapd	Delete LAPD
dellapdtrunk	Delete LAPD trunk
delln	Delete line
dellnloop	Delete loopback state on a line
dellntoneplan	Delete tone plan from a line
delmgc	Delete MGC
delmgcgrpentry	Delete MGC from a redundancy group
delmgcgrpprotocol	Delete MGC protocol from a redundancy group
delport	Delete port
delrscprtn	Delete resource partition
delrtppcon	Delete RTP connection
delrudptrunk	Delete RUDP trunk
delses	Delete session
delsesgrp	Delete session group
delsesst	Delete session set
deltoneplan	Delete tone plan
deltrapfilter	Delete traps from the filter trap list
delxgcpcon	Delete xGCP connection
delxgcppersistevt	Delete persistent xGCP event
dncon	Down connection
dspaal2params	Display AAL2 parameters

**Table 10-5** Switched AAL2 SVC Commands (continued)

Command	Description
dspaal2profile	Display AAL2 profile
dspaggsvcbw	Display configured bandwidth
dspaissuppression	Display AIS propagation status
dspall	Display static configurations and run-time data
dspalltrapfilters	Display all the currently active trap filters
dspalm	Display alarms for a line
dspalcnf	Display threshold data about alarm statistics
dspalment	Display alarm counters on a line
dspalms	Display alarms for specific line type
dspavgsvctimes	Display averages for SVC SAPI message-processing statistics
dspcacfailcntrs	Display CAC failure counters
dspcalea	Display CALEA configuration status
dspcarddsp	Display card configuration parameters
dspcastransendpts	Display all endpoints and their associated CAS mapping table names
dspcastranstbl	Display CAS mapping table configurations
dspcastranstblendpts	Display endpoints associated with CAS mapping tables
dspcastranstbls	Display a list of CAS mapping tables
dspcctimes	Display call control MGCP message-processing statistics
dspcd	Display card configuration
dspco1timer	Display continuity test 1 timer value
dspco2timer	Display continuity test 2 timer value
dspco4timer	Display continuity test 4 timer value
dspcodecjtrdelays	Display codec jitter delay modes
dspcodectmpls	Display all entries in the codec template table
dspcon	Display channel configuration
dspconcac	Display CAC configuration for a connection
dspconcnt	Display counter configuration for a connection
dspcons	Display channel configuration for all connections
dspconvbdpol	Display VBD policies for a connection
dspdiags	Display results of a diagnostic test
dspdisctimers	Display disconnect type method wait delay times
dspdnallips	Display all IP addresses for all domain names on the card
dspdnips	Display all IP addresses for a specific domain name
dspdns	Display configuration for all domain names
dspdnssrvr	Display domain name for a domain server

**Table 10-5 Switched AAL2 SVC Commands (continued)**

Command	Description
dspds0execdiag	Verify that testing is enabled on the channel
dspds0gain	Display adjustable gain values for a DS0
dspds0localcasstatus	Display local CAS status for a DS0
dspds0loop	Display loopback type for a DS0
dspds0musicthreshold	Display music on-hold threshold for a DS0
dspdualtonedet	Display dual-tone configurations
dspendpt	Display configuration for an endpoint
dspendptdnsend	Display the naming format for the audit endpoint response
dspendpts	Display endpoints
dspexecdiag	Display testing status for all channel levels
dspfaxmodemtrace	Display fax/modem trace
dspfaxrelay	Display whether or not ATM fax relay is enabled
dspfaxrelayparams	Display the ATM fax relay parameters
dspfaxrelays	Display whether or not ATM fax relay is enabled or disabled on all of the lines
dspfaxrelaytimeout	Display the fax acknowledgment timeout for a specified line
dspfaxrelaytimeouts	Display the fax acknowledgment timeout values for all of the lines
dspgain	Display adjustable gain for the card
dspgwstate	Display gateway service state
dspheartbeattimer	Display heartbeat status of the card
dsphistorystats	Display the various history statistics
dsplapd	Display configuration of LAPD channel
dsplapds	Display configuration for all LAPD channels
dsplapdstat	Display LAPD channel statistics
dsplinesabyte	Display SA buffers on a line
dspln	Display configuration of a line
dsplncompanding	Display companding law on a line
dsplndigitorder	Display line digit order
dsplndsp	Display DSP data for a line
dsplnds0s	Display configuration for all DS0s on a line
dsplnendptstatus	Display endpoint status for a line
dsplnexecdial	Display channel level testing status
dsplngain	Display adjustable gain for all DS0s on a line
dsplnmusicthreshold	Display music on-hold threshold for all DS0s on a line
dsplnringback	Display ring-back tone method for a line
dsplns	Display configurations for all lines on the card

**Table 10-5 Switched AAL2 SVC Commands (continued)**

<b>Command</b>	<b>Description</b>
dsplnstate	Display service state of the line
dsplntoneplan	Display tone plan configuration for a line
dsplntonetimeout	Display configured timeout periods for all line tones
dsplongdurationtimer	Display long duration timer
dsploops	Display all lines and DSOs in the loopback condition
dspmaxmgs	Display maximum number of MGCs on the card
dspmgc	Display configuration for an MGC
dspmgcgrpparams	Display all MGC redundancy group parameters
dspmgcgrpprotocols	Display all MGC redundancy group protocols
dspmgcgrps	Display all configured MGC redundancy groups
dspmges	Display configuration for all MGCs
dspmprotocols	Display the MG protocols
dspmcalltimers	Display mid-call DTMF timers
dspmonecanendpt	Display echo cancellation activity for an endpoint
dspmusicthreshold	Display music on-hold threshold for the card
dspnwcot	Display network connectivity connection configuration
dspoamloopcnt	Display OAM loop count
dspoamparams	Display OAM parameters
dspport	Display virtual port configuration
dspprofparams	Display profile parameters
dsprescprt	Display resource partition configuration
dsparscnt	Display SAR counter values for a channel
dsparscnts	Display SAR counter values for all channels
dsparmsgcnt	Display SAR control message counter values for the card
dspseqtonedet	Display configuration data for a sequential tone
dspses	Display configuration for a session
dspsesgrp	Display configuration for a session group
dspsesgrps	Display configurations for all session groups
dspsess	Display configuration for all sessions
dspsesset	Display configuration for a session set
dspsesstat	Display configuration of session statistics
dspslipcnt	Display clock slip counters for a line
dspsrcpcnt	Display SRCP counters for a call agent
dspsrcpcnts	Display SRCP counters for all call agents
dspsrcppeer	Display configuration for an SRCP peer
dspsrcppeergrpparams	Display SRCP peer group parameters

**Table 10-5 Switched AAL2 SVC Commands (continued)**

<b>Command</b>	<b>Description</b>
dspsrcppeers	Display configurations for all SRCP peers
dspsrepport	Display SRCP port
dspsrepretry	Display SRCP retransmission parameters
dspstatparms	Display the general status of the statistics upload functionality
dspsvcaal2cid	Display the current configured AAL2 SVC CID number
dspsvccallstruct	Display all SVC call table information
dspsvccalltable	Display SVC call table
dspsvccalltimers	Display timers pending for each call
dspsvccause	Print the text description for the identified cause
dspsvccnts	Display SVC SAPI message processing counts
dspsvcecons	Display active SVCs
dspsvcgw	Display SVC gateway parameters
dspsvcqosparam	Display quality of service parameters
dspsvctrfscalingfactor	Display SVC traffic scaling factors
dsptaskinfo	Display operating tasks
dsptonebuiltinplans	Display built-in tone plans
dsptoneplan	Display configuration of a tone plan
dsptoneplans	Display configurations of all tone plans
dsptoneprovplans	Display all provisional tone plans
dsptoneregionplans	Display tone plans by region
dspranscotmode	Display reverse transponder continuity test mode
dsprapfilter	Display the current trap filter configurations
dspraphelp	Display all traps or traps per group
dsppvbdpol	Display VBD policies
dspvismdn	Display domain name for card
dspvismip	Display IP address for card
dspvismparam	Display card configuration parameters
dspxgcpbt	Display default network type, VC type, and connection type of the VISM card
dspxgcpcalls	Display xGCP call information
dspxgpcids	Display xGCP CIDs
dspxgpcnf	Display xGCP configuration
dspxgpcnt	Display xGCP message statistics for a call agent
dspxgpcnts	Display xGCP message statistics for all call agents
dspxgpccon	Display configuration for call agent connection
dspxgpccons	Display configurations for all call agent connections

**Table 10-5** Switched AAL2 SVC Commands (continued)

Command	Description
dspxgcpdefpkg	Display xGCP default package
dspxgcpdetailcnt	Display details of message exchange statistics for a call agent
dspxgcpdetailcnts	Display details of message exchange statistics for all call agents
dspxgcpndpt	Display configuration for an xGCP endpoint
dspxgcpndptcons	Display configurations for all xGCP endpoint connections
dspxgcpndpts	Display configurations for all xGCP endpoints
dspxgcperrcnt	Display xGCP error counts
dspxgcpinterop	Display status of SDP OST interoperability feature
dspxgcpIncons	Display xGCP line connection information
dspxgcppeers	Display ports for xGCP peers
dspxgcppersistevts	Display all xGCP persistent events
dspxgcpport	Display local xGCP port
dspxgcpretry	Display xGCP retransmission parameters
Help	Help
memShow	Display system memory partition blocks and statistics
pinglndsp	Display DSP configuration data for all endpoints on a line
rrtcon	Trigger rerouting of a connection between two different switches
setfaxmodemtrace	Set fax/modem trace
svccntsreset	Set SVC counters to 0
tstcon	Test a specified connection
tstdelay	Test delay on a specified connection
upcon	Up a connection
version	Display version data

## Switched AAL2 PVC

Table 10-6 lists in alphabetical order the commands that support the switched AAL2 PVC mode.

**Table 10-6** Switched AAL2 PVC Commands

Command	Description
?	Help
addcastranstbl	Create a CAS mapping table
addcasvar	Add CAS variant
addccs	Add CCS channel
addcid	Add CID

**Table 10-6 Switched AAL2 PVC Commands (continued)**

Command	Description
addcon	Add connection
addconloop	Add local connection loopback
adddn	Add domain name
adddnip	Add IP address to domain
adddualtonedet	Add dual-tone frequency
addendpt	Add endpoint
addendptloop	Add endpoint loopback
addendpts	Add consecutive endpoints
addln	Add line
addlnloop	Add line loop
addmgc	Add MGC
addmgcgrpentry	Add MGC to a redundancy group
addmgcgrpprotocol	Add protocol to redundancy group
addport	Add port
addrscprtn	Add resource partition
addtoneplan	Add tone plan
addtrapfilter	Add traps to the filter traps list
addxgcppersistevt	Add persistent xGCP events
cc	Change card
chkflash	Check flash memory
clralm	Clear alarms on a line
clralment	Clear alarm counters on a line
clralments	Clear all alarm counters on the card
clralms	Clear all alarms on the card
clrcacfailcntrs	Reset all CAC failure statistics to 0
clrcesent	Clear CCS counter values on a line
clrcesents	Clear CCS counter values on all lines
clrhystats	Clear the history statistics
clrmngcident	Clear CID counters
clrsarent	Clear SAR counters on a channel
clrsarents	Clear all SAR counters on the card
clrsarmsgcnt	Clear control message counters on the card
clrscrn	Clear control terminal screen
clrsลิปent	Clear clock slip counters for a line
clrtaskinfo	Reset the task values
cnfaal2subcellmuxing	Configure subcell multiplexing

**Table 10-6** Switched AAL2 PVC Commands (continued)

Command	Description
cnfaal2timerparams	Configure AAL2 timer parameters
cnfaal2transparams	Configure AAL2 transportation parameters
cnfadapgain	Configure DSP adaptive gain
cnfaissuppression	Configure AIS propagation
cnfalm	Configure alarm parameters for a line
cnfalment	Configure collection of TDM statistics
cnfbearerippingenable	Configure the card to respond to ping requests for bearer traffic
cnfcac	Configure CAC on the card
cnfcacparams	Configure CAC parameters
cnfcalea	Configure card for CALEA
cnfcascode	Configure CAS code parameters
cnfcasdelaydialtime	Configure CAS delay dial time
cnfcasdialdelay	Configure CAS wait time
cnfcasendpt	Associate endpoint with CAS name
cnfcasflashtime	Configure CAS flash time
cnfcasglareattrib	Configure CAS glare policy for an endpoint
cnfcasglaretime	Configure CAS glare time for an endpoint
cnfcasguardtime	Configure CAS guard time for an endpoint
cnfcasoffhooktime	Configure CAS off-hook time for an endpoint
cnfcasonhooktime	Configure CAS on-hook time for an endpoint
cnfcaspackage	Configure MGCP packages to notify CAS events
cnfcasparamsource	Configure CAS timer source parameters for an endpoint
cnfcasstartdialtime	Configure CAS start dial time for an endpoint
cnfcastransendpt	Download the CAS mapping table
cnfcasvar	Configure previously added CAS variant
cnfcaswinktime	Configure CAS wink time parameters for an endpoint
cnfcasxgcp	Configure CAS retransmission parameters
cnfcidis	Configure a CID as in-service
cnfcidoos	Configure a CID as out-of-service
cnfco1timer	Configure bearer continuity test 1 timer
cnfco2timer	Configure bearer continuity test 2 timer
cnfco4timer	Configure bearer continuity test 4 timer
cnfcodecjrtdelay	Configure jitter delay for a codec
cnfcodectmpl	Assign codec template to card
cnfcompvad	Configure VAD
cnfcon	Configure connection parameters



**Table 10-6 Switched AAL2 PVC Commands (continued)**

Command	Description
cnfconbwtoggle	Change the bandwidth usage
cnfcac	Configure CAC
cnfconcacparams	Configure CAC parameters on a PVC
cnfconprotect	Configure protection on a PVC
cnfconvbdpol	Configure VBD policies on a channel
cnfconvcci	Configure VCCI
cnfdisctimers	Configure wait delay times for disconnected procedure
cnfdn	Configure resolution type for domain
cnfdnssrvr	Designate domain name as a domain name server
cnfds0execdiag	Configure testing on an endpoint
cnfds0gain	Configure adjustable gain on a DS0
cnfds0localcas	Configure local CAS on a DS0
cnfds0loop	Configure loopback type for DS0
cnfds0musicthreshold	Configure music on-hold threshold for DS0
cnfdspheartbeattimer	Configure heartbeat message time interval
cnfecanenable	Configure echo cancellation on a line
cnfecanrec	Configure residual echo control on an echo cancellation line
cnfecantail	Configure tail length on an echo cancellation line
cnfendptcadence	Configure cadence times on an endpoint
cnfendptdnsend	Configure cadence times
cnferl	Configure return echo loss value
cnfexecdiag	Configure all channel level testing
cnffaxrelay	Enable ATM fax relay on a line
cnffaxrelayparams	Configure ATM fax relay parameters
cnffaxrelaytimeout	Configure the fax relay acknowledgment timeout
cnfgain	Configure adjustable gain on the card
cnfgwis	Configure card to be in-service
cnfgwoos	Configure card to be out-of-service
cnfjtrmode	Configure jitter buffer delay mode
cnflinesabyte	Configure SA bytes on a line
cnfln	Configure line parameters
cnflncompanding	Configure companding law on a line
cnflndigitorder	Configure digit order on a line
cnflnexecdiag	Configure channel level testing on a line
cnflngain	Configure adjustable gain for all DS0s on a line
cnflnis	Configure line to be in-service

**Table 10-6** Switched AAL2 PVC Commands (continued)

Command	Description
cnflnmusicthreshold	Configure music on-hold threshold for all DS0s on a line
cnflnoos	Configure line to be out-of-service
cnflnringback	Configure ring-back tone on a line
cnflnsig	Configure signaling on a line
cnflntoneplan	Assign tone plan to a line
cnflntonetimeout	Configure tone timeout periods for a line
cnflntrunkcond	Configure trunk conditioning
cnlnv110	Enable or disable V.110 detection
cnflongdurationtimer	Configure long duration timer
cnfmgcgrpentry	Configure priority of call agent within a group
cnfmgcgrpparam	Configure MGCP group parameters
cnfmgcgrpprotocol	Configure call agent group protocol
cnfmidcalltimers	Configure mid-call DTMF timers
cnfmusicthreshold	Configure music on-hold threshold
cnfnwcot	Configure card for network continuity test
cnfoamloopcnt	Configure OAM loop count
cnfoamparams	Configure OAM parameters
cnfpncon	Configure route priority for a connection
cnfprofelemvbd	Configure profile element for a profile
cnfprofelemvoice	Configure profile voice element
cnfprofneg	Configure profile list priority order
cnfprofparams	Configure profile preference
cnfseqtonedet	Change the default settings of a sequential tone
cnfsrcppeer	Configure SRCP port
cnfsrcppeergpparam	Configure SRCP parameters for a redundancy group
cnfsrcpretry	Configure SRCP retry count
cnftftpdn	Configure TFTP domain name
cnftranscotmode	Configure the continuity test for the TDM side
cnftrapfilterfeature	Enable the trap filtering feature
cnftrapfiltertimer	Configure the timer for a particular trap or a set of traps
cnfvbdpol	Configure VBD policies on the card
cnfvismdn	Configure card domain name
cnfvismip	Configure card IP address
cnfvismmode	Configure operating mode
cnfxgcpbt	Configure bearer type
cnfxgcpinteropsdpost	Configure SDP OST interoperability

**Table 10-6 Switched AAL2 PVC Commands (continued)**

Command	Description
cnfxgcpmwd	Configure maximum wait delay for sending RSIP message
cnfxgcppeer	Configure UDP port for gateway messages
cnfxgcpretry	Configure call agent communication retries
delalltrapfilters	Delete all of the traps in the trap filter list
delcastransendpt	Delete a CAS table associated with an endpoint
delcastranstbl	Delete an existing CAS mapping table
delcasvar	Delete CAS variant
delccs	Delete CCS
delcid	Delete CID
delcon	Delete connection
delconloop	Delete local loopback state on a connection
deldn	Delete domain name
deldnip	Delete domain IP address
deldualtonedet	Remove a dual-frequency tone
delendpt	Delete endpoint
delendptloop	Delete loopback state on an endpoint
delendpts	Delete range of endpoints
dellapdtrunk	Delete LAPD trunk
delln	Delete line
dellnloop	Delete loopback state on a line
dellntoneplan	Delete tone plan from a line
delmgc	Delete MGC
delmgcgrpentry	Delete MGC from a redundancy group
delmgcgrpprotocol	Delete MGC protocol from a redundancy group
delport	Delete port
delrscprt	Delete resource partition
delrtptcon	Delete RTP connection
delrudptrunk	Delete RUDP trunk
deltoneplan	Delete tone plan
deltrapfilter	Delete traps from the filter trap list
delxgcpcon	Delete xGCP connection
delxgcppersistevt	Delete persistent xGCP event
dncon	Down connection
dspaal2params	Display AAL2 parameters
dspaal2profile	Display data about AAL2 profile
dspaissuppression	Display AIS propagation status

**Table 10-6 Switched AAL2 PVC Commands (continued)**

<b>Command</b>	<b>Description</b>
dspall	Display static configurations and run-time data
dspalltrapfilters	Display all the currently active trap filters
dspalm	Display alarms for a line
dspalmcnf	Display threshold data about alarm statistics
dspalment	Display alarm counters on a line
dspalms	Display alarms for specific line type
dspcafailcntrs	Display CAC failure counters
dspcalea	Display CALEA configuration status
dspcarddsp	Display card configuration parameters
dspcasendpts	Display CAS endpoint configuration
dspcasglareattrib	Display glare policy attributes
dspcaspackage	Display CAS packages
dspcasparamsource	Display CAS timer source parameters
dspcastimers	Display CAS timers for an endpoint
dspcastransendpts	Display all endpoints and their associated CAS mapping table names
dspcastranstbl	Display CAS mapping table configurations
dspcastranstblendpts	Display endpoints associated with CAS mapping tables
dspcastranstbls	Display a list of CAS mapping tables
dspcasvar	Display CAS variant data
dspcasvarendpts	Display all endpoints associated with CAS variant
dspcasvars	Display parameters of all CAS variants
dspcasxgcps	Display CAS/xGCP timer parameters
dspccs	Display CCS configuration
dspccschans	Display CCS channels
dspccsent	Display CCS counters
dspcd	Display card configuration
dspcid	Display configuration of CID
dspcidcps	Display the cell rate per second for a connection
dspcids	Display CIDs of LCN
dspco1timer	Display continuity test 1 timer value
dspco2timer	Display continuity test 2 timer value
dspco4timer	Display continuity test 4 timer value
dspcodecjtrdelays	Display codec jitter delay modes
dspcodectmpls	Display all entries in the codec template table
dspcon	Display channel configuration

**Table 10-6 Switched AAL2 PVC Commands (continued)**

Command	Description
dspconcac	Display CAC configuration for a connection
dspconcnt	Display counter configuration for a connection
dspcons	Display channel configuration for all connections
dspconvbdpol	Display VBD policies for a channel
dspdiags	Display results of a diagnostic test
dspdisc timers	Display disconnect type method wait delay times
dspdnallips	Display all IP addresses for all domain names on the card
dspdnips	Display all IP addresses for a specific domain name
dspdns	Display configurations for all domain names
dspdnssrvr	Display domain name for a domain server
dspds0execdiag	Verify that testing is enabled on the channel
dspds0gain	Display adjustable gain values for a DS0
dspds0localcasstatus	Display local CAS status for a DS0
dspds0loop	Display loopback type for a DS0
dspds0musicthreshold	Display music on-hold threshold for a DS0
dspdualtonedet	Display dual-tone configurations
dspendpt	Display configuration for an endpoint
dspendptdnsend	Display the naming format for the audit endpoint response
dspendpts	Display configurations for all endpoints
dspexecdiag	Display testing status for all channel levels
dspfaxmodemtrace	Display fax/modem trace
dspfaxrelay	Display whether or not ATM fax relay is enabled
dspfaxrelayparams	Display the ATM fax relay parameters
dspfaxrelays	Display whether or not ATM fax relay is enabled or disabled on all of the lines
dspfaxrelaytimeout	Display the fax acknowledgment timeout for a specified line
dspfaxrelaytimeouts	Display the fax acknowledgment timeout values for all of the lines
dspgain	Display adjustable gain for the card
dspgwstate	Display gateway service state
dspheartbeattimer	Display heartbeat status of the card
dsphistorystats	Display the various history statistics
dsplinecasbits	Display CAS bit values for a line
dsp linesabyte	Display SA buffers on a line
dsp llccstats	Display lossless compression statistics
dsp ln	Display configuration of a line

**Table 10-6** Switched AAL2 PVC Commands (continued)

Command	Description
dsplncidcps	Display CPS usage per CID for all of the CIDs on a particular line
dsplncids	Display CIDs for a line
dsplncompanding	Display companding law on a line
dsplndigitorder	Display line digit order
dsplndsp	Display DSP data for a line
dsplndsx0s	Display configuration for all DS0s on a line
dsplnendptstatus	Display endpoint status for a line
dsplnexecdiag	Display channel level testing status
dsplngain	Display adjustable gain for all DS0s on a line
dsplnmusicthreshold	Display music on-hold threshold for all DS0s on a line
dsplnringback	Display ring-back tone method for a line
dsplns	Display configurations for all lines on the card
dsplnstate	Display service state of the line
dsplntoneplan	Display tone plan configuration for a line
dsplntonetimeout	Display configured timeout periods for all line tones
dsplongdurationtimer	Display long duration timer
dsplloops	Display all lines and DS0s in the loopback condition
dsplmaxmgcs	Display maximum number of MGCs on the card
dsplmgc	Display configuration for an MGC
dsplmgcgrpparams	Display all MGC redundancy group parameters
dsplmgcgrpprotocols	Display all MGC redundancy group protocols
dsplmgcgrps	Display all configured MGC redundancy groups
dsplmgcs	Display configuration for all MGCs
dsplmgprotocols	Display the MG protocols
dsplmidcalltimers	Display mid-call DTMF timers
dsplmngcidcnt	Display CID count for an endpoint
dsplmonecanendpt	Display echo cancellation activity for an endpoint
dsplmusicthreshold	Display music on-hold threshold for the card
dsplnwcot	Display network connectivity connection configuration
dsplnoamloopcnt	Display OAM loop count
dsplnoamparams	Display OAM parameters
dsplport	Display virtual port configuration
dsplprofparams	Display profile elements for all profiles
dsplrsrprtntn	Display resource partition configuration
dsplrsarcnt	Display SAR counter values for a channel

**Table 10-6 Switched AAL2 PVC Commands (continued)**

Command	Description
dspsarcnts	Display SAR counter values for all channels
dspsarmsgcnt	Display SAR control message counter values for the card
dspseqtonedet	Display configuration data of a sequential tone
dspslipcnt	Display clock slip counters for a line
dspsrcpcent	Display SRCP counters for a call agent
dspsrcpents	Display SRCP counters for all call agents
dspsrcppeer	Display configuration for an SRCP peer
dspsrcppeergrpparams	Display SRCP peer group parameters
dspsrcppeers	Display configurations for all SRCP peers
dspsrcpport	Display SRCP port
dspsrcpretry	Display SRCP retransmission parameters
dspstatparms	Display the general status of the statistics upload functionality
dsptaskinfo	Display operating tasks
dsptonebuiltinplans	Display built-in tone plans
dsptoneplan	Display configuration of a tone plan
dsptoneplans	Display configurations of all tone plans
dsptoneprovplans	Display all provisional tone plans
dsptoneregionplans	Display tone plans by region
dspranscotmode	Display reverse transponder continuity test mode
dsprapfilter	Display the current trap filter configurations
dspraphelp	Display all traps or traps per group
dsprvbdpol	Display VBD policies
dsprvccis	Display VCCI values
dsprvismdn	Display domain name for card
dsprvismip	Display IP address for card
dsprvismparam	Display card configuration parameters
dsprxgcpbt	Display default network type, VC type, and connection type of the VISM card
dsprxgpcalls	Display xGCP call information
dsprxgpcids	Display xGCP CIDs
dsprxgpcnf	Display xGCP configuration
dsprxgpcnt	Display xGCP message statistics for a call agent
dsprxgpcents	Display xGCP message statistics for all call agents
dsprxgcpcon	Display configuration for call agent connection
dsprxgcpcons	Display configurations for all call agent connections
dsprxgcpdefpkg	Display xGCP default package

**Table 10-6** Switched AAL2 PVC Commands (continued)

Command	Description
dspxgcpdetailent	Display details of message exchange statistics for a call agent
dspxgcpdetailents	Display details of message exchange statistics for all call agents
dspxgcpendpt	Display configuration for an xGCP endpoint
dspxgcpendptcons	Display configurations for all xGCP endpoint connections
dspxgcpendpts	Display configurations for all xGCP endpoints
dspxgcperrcnt	Display xGCP error counts
dspxgcpinterop	Display status of SDP OST interoperability feature
dspxgcpIncons	Display xGCP line connection information
dspxgcppeers	Display ports for xGCP peers
dspxgcppersistevts	Display all xGCP persistent events
dspxgcpport	Display local xGCP port
dspxgcpretry	Display xGCP retransmission parameters
Help	Help
memShow	Display system memory partition blocks and statistics
pingIndsp	Display DSP configuration data for all endpoints on a line
rrtcon	Trigger rerouting of a connection between two different switches
setfaxmodemtrace	Set fax/modem trace
tstcon	Test a specified connection
tstdelay	Test delay on a specified connection
upcon	Up a connection
version	Display version data

## VoIP and AAL1 SVC

Table 10-7 lists in alphabetical order the commands that support the VoIP and AAL1 SVC mode.

**Table 10-7** VoIP and AAL1 Commands

Command	Description
?	Help
addannpermanent	Add announcement server file as permanent
addcasvar	Add CAS variant
addcon	Add connection
addconloop	Add local connection loopback
adddn	Add domain name
addnip	Add IP address to domain



**Table 10-7** VoIP and AAL1 Commands (continued)

Command	Description
adddualtonedet	Add dual-tone frequency
addendpt	Add endpoint
addendptloop	Add endpoint loopback
addendpts	Add endpoints
addlapd	Add LAPD
addlapdtrunk	Add LAPD trunk to a line
addln	Add line
addlnloop	Add line loop
addmgc	Add MGC
addmgcgrpentry	Add MGC to a call agent redundancy group
addmgcgrpprotocol	Assign a protocol to an MGC
addport	Add port
addrscprtn	Add resource partition
addrtpcon	Add RTP VoIP trunking connection
addrudptrunk	Add RUDP trunk
addses	Add PRI backhaul session
addsesgrp	Add PRI backhaul session to a group
addsesset	Add PRI backhaul session set
addtoneplan	Add tone plan
addtrapfilter	Add traps to the filter traps list
addxgcppersistevt	Add persistent xGCP events
cc	Change card
chkflash	Check flash memory
clralm	Clear alarms on a line
clralmct	Clear alarm counters on a line
clralmctns	Clear all alarm counters on the card
clralms	Clear all alarms on the card
clrcacfailcntrs	Reset all CAC failure statistics to 0
clrhistorystats	Clear the history statistics
clrrtpcnt	Clear RTP counters for a static RTP connection
clrsarent	Clear SAR counters on a channel
clrsarents	Clear all SAR counters on the card
clrsarmsgcnt	Clear control message counters on the card
clrscrn	Clear control terminal screen
clrslipcnt	Clear clock slip counters for a line
clrtaskinfo	Reset the task values

**Table 10-7** VoIP and AAL1 Commands (continued)

Command	Description
cnfadapgain	Configure DSP adaptive gain
cnfaggsvcbw	Aggregate SVC bandwidth
cnfalm	Configure alarm parameters for a line
cnfalment	Configure collection of TDM line statistics
cnfannagetime	Configure nonpermanent announcement time
cnfanndn	Designate announcement file server domain name
cnfannpathprefix	Designate announcement file TFTP path
cnfannprefcodec	Configure announcement codec
cnfannreqtimeout	Configure announcement expiration time
cnfbearerrippingenable	Configure the card to respond to ping requests for bearer traffic
cnfcac	Configure CAC on the card
cnfcacparams	Configure CAC parameters
cnfcalea	Configure card for CALEA
cnfcascode	Configure CAS code parameters
cnfcasdelaydialtime	Configure CAS delay dial time
cnfcasdialdelay	Configure CAS wait time
cnfcasendpt	Associate endpoint with CAS name
cnfcasflashtime	Configure CAS flash time
cnfcasglareattrib	Configure CAS glare policy for an endpoint
cnfcasglaretime	Configure CAS glare time for an endpoint
cnfcasguardtime	Configure CAS guard time for an endpoint
cnfcasoffhooktime	Configure CAS off-hook time for an endpoint
cnfcasonhooktime	Configure CAS on-hook time for an endpoint
cnfcaspackage	Configure MGCP packages to notify CAS events
cnfcasparamsource	Configure CAS timer source parameters for an endpoint
cnfcasstartdialtime	Configure CAS start dial time for an endpoint
cnfcasvar	Configure previously added CAS variant
cnfcaswinktime	Configure CAS wink time parameters for an endpoint
cnfcasxgcp	Configure CAS retransmission parameters
cnfco1timer	Configure bearer continuity test 1 timer
cnfco2timer	Configure bearer continuity test 2 timer
cnfco4timer	Configure bearer continuity test 4 timer
cnfcodecejtrdelay	Configure jitter delay for a codec
cnfcodecneg	Configure codec list priority order
cnfcodeccparams	Configure codec parameters
cnfcodectmpl	Assign codec template to card

**Table 10-7** VoIP and AAL1 Commands (continued)

Command	Description
cnfcompsize	Configure compression size
cnfcompvad	Configure VAD
cnfcon	Configure connection parameters
cnfconcacparams	Configure CAC parameters on a PVC
cnfconprotect	Configure protection on a PVC
cnfconvbdpol	Configure VBD policies on a channel
cnfdeftos	Configure type of service parameters
cnfdisc timers	Configure wait delay times for disconnected procedure
cnfdn	Configure resolution type for domain
cnfdnssrvr	Designate domain name as a domain name server
cnfds0execdiag	Configure testing on an endpoint
cnfds0gain	Configure adjustable gain on a DS0
cnfds0localcas	Configure local CAS on a DS0
cnfds0loop	Configure loopback type for DS0
cnfds0musicthreshold	Configure music on-hold threshold for DS0
cnfds0sidpacket	Configure SID packet on a DS0
cnfdspheartbeattimer	Configure heartbeat message time interval
cnfdynamicpayload	Configure dynamic payload
cnfecanenable	Configure echo cancellation on a line
cnfecanrec	Configure residual echo control on an echo cancellation line
cnfecantail	Configure tail length on an echo cancellation line
cnfendptcadence	Configure cadence times on an endpoint
cnfendptdntsend	Configure datagram size for an endpoint
cnferl	Configure return echo loss value
cnfexecdiag	Configure all channel level testing
cnfgain	Configure adjustable gain on the card
cnfgwis	Configure card to be in-service
cnfgwoos	Configure card to be out-of-service
cnfjtrmode	Configure jitter buffer delay mode
cnflapdretrans	Configure maximum retransmission
cnflapdtimer	Configure two LAPD timers
cnflapdtrunkpvc	Assign a PVC to carry LAPD messages
cnflapdtype	Configure LAPD stacks
cnflapdwinsize	Configure maximum number of unacknowledged I-frames
cnflinesabyte	Configure SA bytes on a line
cnfln	Configure line parameters

**Table 10-7** VoIP and AAL1 Commands (continued)

Command	Description
cnflncompanding	Configure companding law on a line
cnflndigitorder	Configure digit order on a line
cnflnexecdiag	Configure channel level testing on a line
cnflngain	Configure adjustable gain for all DS0s on a line
cnflnis	Configure line to be in-service
cnflnmusicthreshold	Configure music on-hold threshold for all DS0s on a line
cnflnoos	Configure line to be out-of-service
cnflnringback	Configure ring-back tone on a line
cnflnsidpacket	Configure SID packet on a line
cnflnsig	Configure signaling on a line
cnflntoneplan	Assign tone plan to a line
cnflntonetimeout	Configure tone timeout periods for a line
cnflntrunkcond	Configure trunk conditioning
cnflongdurationtimer	Configure long duration timer
cnfmgcgrpentry	Configure priority of call agent within a group
cnfmgcgrpparam	Configure MGCP group parameters
cnfmgcgrpprotocol	Configure call agent group protocol
cnfmidcalltimers	Configure mid-call DTMF timers
cnfmusicthreshold	Configure music on-hold threshold
cnfnwcot	Configure card for network continuity test
cnfoamloopcnt	Configure OAM loop count
cnfoamparams	Configure OAM parameters
cnfplayouttimestamp	Enable or disable playout timestamp
cnfnpcon	Configure route priority for a connection
cnfrsvp	Configure RSVP for a connection
cnfrsvpprefreshmiss	Configure RSVP refresh message wait time
cnfrtcprepint	Configure RTCP report interval
cnfrtpcon	Configure RTP connection
cnfrtprxtimer	Configure the receipt of RTP messages
cnfrudptrunkrmtip	Configure remote IP address of an RUDP trunk
cnfseqtonedet	Change the default settings of a sequential tone
cnfsesack	Configure timeout period before sending an acknowledgment
cnfsesmaxreset	Configure session maximum number of resets
cnfsesmaxseg	Configure session maximum segment size
cnfsesmaxwindow	Configure session maximum number of segments
cnfsesnullsegmtout	Configure session null segment idle time

**Table 10-7** VoIP and AAL1 Commands (continued)

Command	Description
cnfsesoutofseq	Configure session out-of-sequence packets
cnfsesport	Configure session port
cnfsesretrans	Configure session retransmission times
cnfsesstatetmout	Configure session transfer state timeout
cnfsessyncatmps	Configure session sync attempts with call agent
cnfsidpacket	Configure SID packet on all lines
cnfsplmodemtonedsbl	Disable the detection of 1560/980 Hz modem tone
cnfsplmodemtoneenbl	Enable the detection of 1560/980 Hz modem tone
cnfsrcppeer	Configure SRCP port
cnfsrcppeergrpparam	Configure SRCP parameters for a redundancy group
cnfsrcpretry	Configure SRCP retry count
cnfssrcenable	Configure the VISM to allow more than one SSRC per RTP session
cnfsvcqosparam	Configure quality of service parameters
cnft38fxlco	Configure fax handling on a line
cnft38nsetimeout	Configure timeout value for switch to fax transfer mode
cnft38params	Configure fax parameters for a line
cnftftpdn	Configure TFTP domain name
cnftranscotmode	Configure the continuity test for the TDM side
cnftrapfilterfeature	Enable the trap filtering feature
cnftrapfiltertimer	Configure the timer for a particular trap or a set of traps
cnftrfaggclip	Configure aggregate traffic clipping
cnfvbdcodec	Configure VBD codec on the card
cnfvbdmarconi	Enable VBD upspeed detection
cnfvbdpol	Configure VBD policies on the card
cnfvismdn	Configure card domain name
cnfvismip	Configure card IP address
cnfvismmode	Configure operating mode
cnfvoiptimerparam	Configure VAD holdover time
cnfvoiptransparams	Configure VoIP transportation parameters
cnfxgcpbt	Configure bearer type
cnfxgcpinteropsdpost	Configure SDP OST interoperability
cnfxgcpmwd	Configure maximum wait delay for sending RSIP message
cnfxgcppeer	Configure UDP port for gateway messages
cnfxgcpretry	Configure call agent communication retries
delalltrapfilters	Delete all of the traps in the trap filter list

**Table 10-7** VoIP and AAL1 Commands (continued)

Command	Description
delannalldynamic	Delete all announcement files
delanndynamic	Delete announcement file
delannpermanent	Delete permanent announcement file
delcasvar	Delete CAS variant
delcon	Delete connection
delconloop	Delete local loopback state on a connection
deldn	Delete domain name
deldnip	Delete domain IP address
deldualtonedet	Remove a dual-frequency tone
delendpt	Delete endpoint
delendptloop	Delete loopback state on an endpoint
delendpts	Delete range of endpoints
dellapd	Delete LAPD
dellapdtrunk	Delete LAPD trunk
delln	Delete line
dellnloop	Delete loopback state on a line
dellntoneplan	Delete tone plan from a line
delmgc	Delete MGC
delmgcgrpentry	Delete MGC from a redundancy group
delmgcgrpprotocol	Delete MGC protocol from a redundancy group
delport	Delete port
delrscprtn	Delete resource partition
delrtppcon	Delete RTP connection
delrudptrunk	Delete RUDP trunk
delses	Delete session
delsesgrp	Delete session group
delsesst	Delete session set
deltoneplan	Delete tone plan
deltrapfilter	Delete traps from the filter trap list
delxgcpcon	Delete xGCP connection
delxgcppersistevt	Delete persistent xGCP event
dncon	Down connection
dspaggsvcbw	Display configured SVC bandwidth
dspall	Display static configurations and run-time data
dspalltrapfilters	Display all the currently active trap filters
dspalm	Display alarms for a line

**Table 10-7** VoIP and AAL1 Commands (continued)

Command	Description
dspalmcnf	Display threshold data about alarm statistics
dspalmnt	Display alarm counters on a line
dspalms	Display alarms for specific line type
dspannagetime	Display announcement age time
dspanncache	Display available announcement file names
dspanncontrols	Display announcement file variables
dspanndn	Display announcement file server domain name
dspannpathprefix	Display announcement prefix directory path
dspannpermanents	Display all permanent announcement files
dspannprefcodec	Display announcement preference codec
dspannreqtimeout	Display announcement timeout
dspavgsvctimes	Display averages for SVC SAPI message-processing statistics
dspcacfailcntrs	Display CAC failure counters
dspcalea	Display CALEA configuration status
dspcarddsp	Display card configuration parameters
dspcasendpts	Display CAS endpoint configuration
dspcasglareattrib	Display glare policy attributes
dspcaspackage	Display CAS packages
dspcasparamsource	Display CAS timer source parameters
dspcastimers	Display CAS timers for an endpoint
dspcasvar	Display CAS variant data
dspcasvarendpts	Display all endpoints associated with CAS variant
dspcasvars	Display parameters of all CAS variants
dspcasxgcps	Display CAS/xGCP timer parameters
dspcctimes	Display call control MGCP message-processing statistics
dspcd	Display card configuration
dspco1timer	Display continuity test 1 timer value
dspco2timer	Display continuity test 2 timer value
dspco4timer	Display continuity test 4 timer value
dspcodecjrtdelays	Display codec jitter delay modes
dspcodecneg	Display codec negotiation option
dspcodecparams	Display codec parameters
dspcodectmpls	Display all entries in the codec template table
dspcon	Display channel configuration
dspconcac	Display CAC configuration for a connection
dspconcnt	Display counter configuration for a connection

**Table 10-7** VoIP and AAL1 Commands (continued)

Command	Description
dsicons	Display channel configurations for all connections
dsiconvbdpol	Display VBD policies for a channel
dsdiag	Display results of a diagnostic test
dsdisctimers	Display disconnect type method wait delay times
dsdnallips	Display all IP addresses for all domain names on the card
dsdnips	Display all IP addresses for a specific domain name
dsdns	Display configurations for all domain names
dsdnssrvr	Display domain name for a domain server
dsps0execdiag	Verify that testing is enabled on the channel
dsps0gain	Display adjustable gain values for a DS0
dsps0localcasstatus	Display local CAS status for a DS0
dsps0loop	Display loopback type for a DS0
dsps0musicthreshold	Display music on-hold threshold for a DS0
dsps0sidpacket	Display SID packet status for a DS0
dspsdualtonedet	Display dual-tone configurations
dspsdynamicpayload	Display dynamic payload for the card
dspsendpt	Display configuration for an endpoint
dspsendptnsend	Display the naming format for the audit endpoint response
dspsendpts	Display all endpoints
dspsexecdiag	Display testing status for all channel levels
dspsfaxmodemtrace	Display fax/modem trace
dspsgain	Display adjustable gain for the card
dspsgwstate	Display gateway service state
dspsheartbeattimer	Display heartbeat status of the card
dspshistorystats	Display the various history statistics
dspslapd	Display configuration of LAPD channel
dspslapds	Display configurations for all LAPD channels
dspslapdstat	Display LAPD channel statistics
dspslapdtrunkpvc	Display LAPD trunk PVC carrier
dspslapdtrunks	Display configurations of all LAPD trunks
dspslinecasbits	Display CAS bit values for a line
dspslinesabyte	Display SA buffers on a line
dspsln	Display configuration of a line
dspslncompanding	Display companding law on a line
dspslnndigitorder	Display line digit order
dspslnndsp	Display DSP data for a line



**Table 10-7** VoIP and AAL1 Commands (continued)

Command	Description
dsplndsx0s	Display configuration for all DS0s on a line
dsplnendptstatus	Display endpoint status for a line
dsplnexecdiag	Display channel level testing status
dsplngain	Display adjustable gain for all DS0s on a line
dsplnmusicthreshold	Display music on-hold threshold for all DS0s on a line
dsplnringback	Display ring-back tone method for a line
dsplns	Display configurations for all lines on the card
dsplnsidpacket	Display the SID packet status for the DS0s on the line
dsplnstate	Display service state of the line
dsplntoneplan	Display tone plan configuration for a line
dsplntonetimeout	Display configured timeout periods for all line tones
dsplongdurationtimer	Display long duration timer
dsploops	Display all lines and DS0s in the loopback condition
dspmaxmgcs	Display maximum number of MGCs on the card
dspmgc	Display configuration for an MGC
dspmgcgrpparams	Display all MGC redundancy group parameters
dspmgcgrpprotocols	Display all MGC redundancy group protocols
dspmgcgrps	Display all configured MGC redundancy groups
dspmges	Display configuration for all MGCs
dspmgsprotocols	Display the MG protocols
dspmidsalltimers	Display mid-call DTMF timers
dspmonecanendpt	Display echo cancellation activity for an endpoint
dspmusicthreshold	Display music on-hold threshold for the card
dspnwcot	Display network connectivity connection configuration
dsपोामloopcnt	Display OAM loop count
dsपोामparams	Display OAM parameters
dsport	Display virtual port configuration
dsprscrprt	Display resource partition configuration
dsprsvpif	Display RSVP configuration for a connection
dsprsvpreq	Display configuration for an RSVP request
dsprsvpreqs	Display configuration for all RSVP requests on the card
dsprsvpresv	Display bandwidth reservation for an RSVP request
dsprsvpresvs	Display bandwidth reservations for all RSVP requests
dsprsvpsender	Display path state for an RSVP request
dsprsvpsenders	Display path states for all RSVP requests
dsprtpcnt	Display RTP bearer counters

**Table 10-7** VoIP and AAL1 Commands (continued)

Command	Description
dsprtcon	Display configuration for an RTP connection
dsprtconnstat	Display RTP connection statistics for an endpoint
dsprtcons	Display configurations for all RTP connections
dsprudp trunk	Display configuration for an RUDP session
dsprudp trunks	Display configurations for all RUDP sessions
dsp sar cnt	Display SAR counter values for a channel
dsp sar cnts	Display SAR counter values for all channels
dsp sar msg cnt	Display SAR control message counter values for the card
dsp seq toned et	Display configuration data of a sequential tone
dsp ses	Display configuration for a session
dsp ses grp	Display configuration for a session group
dsp ses grps	Display configurations for all session groups
dsp sess	Display configuration for all sessions
dsp sess et	Display configuration for a session set
dsp ses stat	Display configuration of session statistics
dsp sid packet	Display SID packet configuration for each line
dsp slip cnt	Display clock slip counters for a line
dsp spl modem tone	Display the detection of 1560/980 Hz modem tones
dsp sr cp et	Display SRCP counters for a call agent
dsp sr cp cnts	Display SRCP counters for all call agents
dsp sr cp peer	Display configuration for an SRCP peer
dsp sr cp peer grp pparams	Display SRCP peer group parameters
dsp sr cp peers	Display configurations for all SRCP peers
dsp sr cp port	Display SRCP port
dsp sr cp retry	Display SRCP retransmission parameters
dsp sr c enable	Display whether or not VISM is configured to allow more than one SSRC per RTP session
dsp stat pparams	Display the general status of the statistics upload functionality
dsp sv cc all struct	Display all SVC call table information
dsp sv cc all table	Display SVC call table
dsp sv cc all timers	Display timers pending for each call
dsp sv cc cause	Print the text description for the identified cause
dsp sv cc cnts	Display SVC SAPI message processing counts
dsp sv cc cons	Display active SVCs
dsp sv cc gw	Display SVC gateway parameters
dsp sv cc qos param	Display quality of service parameters

**Table 10-7** VoIP and AAL1 Commands (continued)

Command	Description
dspt38fxlco	Display fax handling instructions for a line
dspt38fxlcos	Display fax handling instructions for all lines
dspt38nsetimeout	Display NSE timeout for a line
dspt38nsetimeouts	Display NSE timeout for all lines
dspt38params	Display fax transfer parameters for a line
dsptaskinfo	Display operating tasks
dsptonebuiltinplans	Display built-in tone plans
dsptoneplan	Display configuration of a tone plan
dsptoneplans	Display configurations of all tone plans
dsptoneprovplans	Display all provisional tone plans
dsptoneregionplans	Display tone plans by region
dspranscotmode	Display reverse transponder continuity test mode
dsprapfilter	Display the current trap filter configurations
dspraphelp	Display all traps or traps per group
dsrvbdcodec	Display the upspeed codec used for VBD
dsrvbdmarconi	Display VBD upspeed mode
dsrvbdpol	Display VBD policies
dsrvismdn	Display domain name for card
dsrvismip	Display IP address for card
dsrvismparam	Display card configuration parameters
dsrvoiiparams	Display VoIP mode parameters
dsrvxgcpbt	Display default network type, VC type, and connection type of the VISM card
dsrvxgpcalls	Display xGCP call information
dsrvxgpcnf	Display xGCP configuration
dsrvxgpcnt	Display xGCP message statistics for a call agent
dsrvxgpcnts	Display xGCP message statistics for all call agents
dsrvxgpccon	Display configuration for call agent connection
dsrvxgpccons	Display configuration for all call agent connections
dsrvxgcpdefpkg	Display xGCP default package
dsrvxgcpdetailcnt	Display details of message exchange statistics for a call agent
dsrvxgcpdetailcnts	Display details of message exchange statistics for all call agents
dsrvxgcpendpt	Display configuration for an xGCP endpoint
dsrvxgcpendptcons	Display configurations for all xGCP endpoint connections
dsrvxgcpendpts	Display configurations for all xGCP endpoints
dsrvxgcperrcnt	Display xGCP error counts

**Table 10-7** VoIP and AAL1 Commands (continued)

Command	Description
dspxgcpinterops	Display status of SDP OST
dspxgcplncons	Display xGCP line connection information
dspxgcppeers	Display ports for xGCP peers
dspxgcppersistevts	Display all xGCP persistent events
dspxgcpport	Display local xGCP port
dspxgcpretry	Display xGCP retransmission parameters
Help	Help
memShow	Display system memory partition blocks and statistics
pinglndsp	Display DSP configuration data for all endpoints on a line
rrtcon	Trigger rerouting of a connection between two different switches
setfaxmodemtrace	Set fax/modem trace
svcntsreset	Set SVC counters to 0
tstcon	Test a specified connection
tstdelay	Test delay on a specified connection
upcon	Up a connection
version	Display version data

## VoIP Trunking/AAL2 Trunking

Table 10-8 lists in alphabetical order the commands that support the VoIP trunking/AAL2 trunking mode.

**Table 10-8** VoIP Trunking/AAL2 Trunking Commands

Command	Description
?	Help
addannpermanent	Add announcement server file as permanent
addcastranstbl	Create a CAS mapping table
addcasvar	Add CAS variant
addccs	Add CCS channel
addcid	Add CID
addcon	Add connection
addconloop	Add local connection loopback
addendpt	Add endpoint
addendptloop	Add endpoint loopback
addendpts	Add endpoints
addlapdtrunk	Add LAPD trunk to a line

**Table 10-8** VoIP Trunking/AAL2 Trunking Commands (continued)

Command	Description
addln	Add line
addlnloop	Add line loop
addport	Add port
addrscprtn	Add resource partition
addrtpcon	Add RTP VoIP trunking connection
addrudptrunk	Add RUDP trunk
addtrapfilter	Add traps to the filter traps list
cc	Change card
chkflash	Check flash memory
clralm	Clear alarms on a line
clralment	Clear alarm counters on a line
clralments	Clear all alarm counters on the card
clralms	Clear all alarms on the card
clrcafailcntrs	Reset all CAC failure statistics to 0
clrcesent	Clear CCS counter values on a line
clrcesents	Clear CCS counter values on all lines
clrhistorystats	Clear the history statistics
clrmngcident	Clear CID counters
clrrtpcnt	Clear RTP counters for a static RTP connection
clrsarent	Clear SAR counters on a channel
clrsarents	Clear all SAR counters on the card
clrsarmsgcnt	Clear control message counters on the card
clrscrn	Clear control terminal screen
clrslipcnt	Clear clock slip counters for a line
clrtaskinfo	Reset the task values
cnfaal2subcellmuxing	Configure subcell multiplexing
cnfaal2timerparams	Configure AAL2 timer parameters
cnfadapgain	Configure DSP adaptive gain
cnfaissuppression	Configure AIS propagation
cnfalm	Configure alarm parameters for a line
cnfalment	Configure collection of TDM line statistics
cnfannagetime	Configure nonpermanent announcement time
cnfanndn	Designate announcement file server domain name
cnfannpathprefix	Designate announcement file TFTP path
cnfannprefcodec	Configure announcement codec
cnfannreqtimeout	Configure announcement expiration time

**Table 10-8** VoIP Trunking/AAL2 Trunking Commands (continued)

Command	Description
cnfcac	Configure CAC on the card
cnfcacparams	Configure CAC parameters
cnfcalea	Configure card for CALEA
cnfcascode	Configure CAS code parameters
cnfcasdelaydialtime	Configure CAS delay dial time
cnfcasdialdelay	Configure CAS wait time
cnfcasendpt	Associate endpoint with CAS name
cnfcasflashtime	Configure CAS flash time
cnfcasglareattrib	Configure CAS glare policy for an endpoint
cnfcasglaretime	Configure CAS glare time for an endpoint
cnfcasguardtime	Configure CAS guard time for an endpoint
cnfcasoffhooktime	Configure CAS off-hook time for an endpoint
cnfcasonhooktime	Configure CAS on-hook time for an endpoint
cnfcaspackage	Configure MGCP packages to notify CAS events
cnfcasparamsource	Configure CAS timer source parameters for an endpoint
cnfcasstartdialtime	Configure CAS start dial time for an endpoint
cnfcastransendpt	Download the CAS mapping table
cnfcasvar	Configure previously added CAS variant
cnfcaswinktime	Configure CAS wink time parameters for an endpoint
cnfcasxgcp	Configure CAS retransmission parameters
cnfcidis	Configure a CID as in-service
cnfcidoos	Configure a CID as out-of-service
cnfcodecjtrdelay	Configure jitter delay for a codec
cnfcodeparams	Configure codec parameters
cnfcodecmpl	Assign codec template to card
cnfcompvad	Configure VAD
cnfcon	Configure connection parameters
cnfconbwtoggle	Change the bandwidth usage
cnfconcac	Configure CAC on a connection
cnfconcacparams	Configure CAC parameters on a PVC
cnfconprotect	Configure protection on a PVC
cnfconvbdpol	Configure VBD policies on a channel
cnfdeftos	Configure type of service parameters
cnfds0execdiag	Configure testing on an endpoint
cnfds0gain	Configure adjustable gain on a DS0
cnfds0localcas	Configure local CAS on a DS0

**Table 10-8** VoIP Trunking/AAL2 Trunking Commands (continued)

Command	Description
cnfds0loop	Configure loopback type for DS0
cnfds0musicthreshold	Configure music on-hold threshold for DS0
cnfds0sidpacket	Configure SID packet on a DS0
cnfdspheartbeattimer	Configure heartbeat message time interval
cnfdynamicpayload	Configure dynamic payload
cnfecanenable	Configure echo cancellation on a line
cnfecanrec	Configure residual echo control on an echo cancellation line
cnfecantail	Configure tail length on an echo cancellation line
cnfendptcadence	Configure cadence times on an endpoint
cnferl	Configure return echo loss value
cnfexecdiag	Configure all channel level testing
cnffaxrelay	Enable ATM fax relay on a line
cnffaxrelayparams	Configure ATM fax relay parameters
cnffaxrelaytimeout	Configure the fax relay acknowledgment timeout
cnfgain	Configure adjustable gain on the card
cnfjtrmode	Configure jitter buffer delay mode
cnflapdtrunkpvc	Assign a PVC to carry LAPD messages
cnflinesabyte	Configure SA bytes on a line
cnfln	Configure line parameters
cnflncompanding	Configure companding law on a line
cnflnexecdiag	Configure channel level testing on a line
cnflngain	Configure adjustable gain for all DS0s on a line
cnflnmusicthreshold	Configure music on-hold threshold for all DS0s on a line
cnflnsidpacket	Configure SID packet on a line
cnflnsig	Configure signaling on a line
cnflntrunkcond	Configure trunk conditioning
cnlnv110	Enable or disable V.110 detection
cnfmusicthreshold	Configure music on-hold threshold
cnfoamloopcnt	Configure OAM loop count
cnfplayouttimestamp	Enable or disable playout timestamp
cnfpncon	Configure route priority for a connection
cnfprofelemvbd	Configure profile element for a profile
cnfprofelemvoice	Configure profile voice element
cnfprofparams	Configure profile preference
cnfrsvp	Configure RSVP for a connection
cnfrsvpprefreshmiss	Configure RSVP refresh message wait time

**Table 10-8** VoIP Trunking/AAL2 Trunking Commands (continued)

Command	Description
cnfrtcprepint	Configure RTCP report interval
cnfrtpcon	Configure RTP connection
cnfrtprxtimer	Configure the receipt of RTP messages
cnfrudptrunkrmtip	Configure remote IP address of an RUDP trunk
cnfsidpacket	Configure SID packet on all lines
cnfsplmodemtonedsbl	Disable the detection of 1560/980 Hz modem tone
cnfsplmodemtoneenbl	Enable the detection of 1560/980 Hz modem tone
cnfssrcenable	Configure the VISM to allow more than one SSRC per RTP session
cnft38fxlco	Configure fax handling on a line
cnft38nsetimeout	Configure timeout value for switch to fax transfer mode
cnft38params	Configure fax parameters for a line
cnftrapfilterfeature	Enable the trap filtering feature
cnftrapfiltertimer	Configure the timer for a particular trap or a set of traps
cnfvbdcodec	Configure VBD codec on the card
cnfvbdmarconi	Enable VBD upspeed detection
cnfvbdpol	Configure VBD policies on the card
cnfvismip	Configure card IP address
cnfvismmode	Configure operating mode
cnfxgcpbt	Configure bearer type
delalltrapfilters	Delete all of the traps in the trap filter list
delannalldynamic	Delete all announcement files
delannndynamic	Delete announcement file
delannpermanent	Delete permanent announcement file
delcastransendpt	Delete a CAS table associated with an endpoint
delcastranstbl	Delete an existing CAS mapping table
delcasvar	Delete CAS variant
delccs	Delete CCS
delcid	Delete CID
delcon	Delete connection
delconloop	Delete local loopback state on a connection
delendpt	Delete endpoint
delendptloop	Delete loopback state on an endpoint
delendpts	Delete range of endpoints
dellapdtrunk	Delete LAPD trunk
delln	Delete line



**Table 10-8** VoIP Trunking/AAL2 Trunking Commands (continued)

Command	Description
delInloop	Delete loopback state on a line
delport	Delete port
delrscprtn	Delete resource partition
delrtppcon	Delete RTP connection
delrudptrunk	Delete RUDP trunk
deltrapfilter	Delete traps from the filter trap list
dncon	Down connection
dspaal2params	Display AAL2 parameters
dspaal2profile	Display data about AAL2 profile
dspaissuppression	Display AIS propagation status
dspall	Display static configurations and run-time data
dspalltrapfilters	Display all the currently active trap filters
dspalm	Display alarms for a line
dspalmcnf	Display threshold data about alarm statistics
dspalment	Display alarm counters on a line
dspalms	Display alarms for specific line type
dspannagetime	Display announcement age time
dspanncache	Display available announcement file names
dspanncontrols	Display announcement file variables
dspanndn	Display announcement file server domain name
dspannpathprefix	Display announcement prefix directory path
dspannpermanents	Display all permanent announcement files
dspannprefcodec	Display announcement preference codec
dspannreqtimeout	Display announcement timeout
dspcacfailcntrs	Display CAC failure counters
dspcalea	Display CALEA configuration status
dspcarddsp	Display card configuration parameters
dspcasendpts	Display CAS endpoint configuration
dspcasglareattrib	Display glare policy attributes
dspcaspackage	Display CAS packages
dspcasparamsource	Display CAS timer source parameters
dspcastimers	Display CAS timers for an endpoint
dspcastransendpts	Display all endpoints and their associated CAS mapping table names
dspcastranstbl	Display CAS mapping table configurations
dspcastranstblendpts	Display endpoints associated with CAS mapping tables

**Table 10-8** VoIP Trunking/AAL2 Trunking Commands (continued)

Command	Description
dspeastranstbls	Display a list of CAS mapping tables
dspcasvar	Display CAS variant data
dspcasvarendpts	Display all endpoints associated with CAS variant
dspcasvars	Display parameters of all CAS variants
dspcasxgcps	Display CAS/xGCP timer parameters
dspccs	Display CCS configuration
dspccschans	Display CCS channels
dspccscent	Display CCS counters
dspcd	Display card configuration
dspcid	Display configuration of CID
dspcideps	Display the cell rate per second for a connection
dspcids	Display CIDs of LCN
dspcodecjtrdelays	Display codec jitter delay modes
dspcodecparams	Display codec parameters
dspcodectmpls	Display all entries in the codec template table
dspcon	Display channel configuration
dspconcac	Display CAC configuration for a connection
dspconcnt	Display counter configuration for a connection
dspcons	Display channel configurations for all connections
dspconvbdpol	Display VBD policies for a channel
dspdiags	Display results of a diagnostic test
dspds0execdiag	Verify that testing is enabled on the channel
dspds0gain	Display adjustable gain values for a DS0
dspds0localcasstatus	Display local CAS status for a DS0
dspds0loop	Display loopback type for a DS0
dspds0musicthreshold	Display music on-hold threshold for a DS0
dspds0sidpacket	Display SID packet status for a DS0
dspdynamicpayload	Display dynamic payload for the card
dspendpt	Display configuration for an endpoint
dspendpts	Display configurations for all endpoints
dspexecdiag	Display testing status for all channel levels
dspfaxmodetrace	Display fax/modem trace
dspfaxrelay	Display whether or not ATM fax relay is enabled
dspfaxrelayparams	Display the ATM fax relay parameters
dspfaxrelays	Display whether or not ATM fax relay is enabled or disabled on all of the lines

**Table 10-8** VoIP Trunking/AAL2 Trunking Commands (continued)

Command	Description
dspfaxrelaytimeout	Display the fax acknowledgment timeout for a specified line
dspfaxrelaytimeouts	Display the fax acknowledgment timeout values for all of the lines
dspgain	Display adjustable gain for the card
dspheartbeattimer	Display heartbeat status of the card
dsphistorystats	Display the various history statistics
dsplapdtrunkpvc	Display LAPD trunk PVC carrier
dsplapdtrunks	Display configurations of all LAPD trunks
dsplinecasbits	Display CAS bit values for a line
dsplinesabyte	Display SA buffers on a line
dspllcstats	Display lossless compression statistics
dspln	Display configuration of a line
dsplncidcps	Display CPS usage per CID for all of the CIDs on a particular line
dsplnuids	Display CIDs for a line
dsplncompanding	Display companding law on a line
dspln dsp	Display DSP data for a line
dspln dsx0s	Display configuration for all DS0s on a line
dsplnendptstatus	Display endpoint status for a line
dsplnexceddiag	Display channel level testing status
dsplngain	Display adjustable gain for all DS0s on a line
dsplnmusicthreshold	Display music on-hold threshold for all DS0s on a line
dsplns	Display configuration for all lines on the card
dsplnsidpacket	Display the SID packet status for the DS0s on the line
dsploops	Display all lines and DS0s in the loopback condition
dspmngcident	Display CID count for an endpoint
dspmonecanendpt	Display echo cancellation activity for an endpoint
dspmusicthreshold	Display music on-hold threshold for the card
dspoamloopcnt	Display OAM loop count
dspport	Display virtual port configuration
dspprofparams	Display profile elements for all profiles
dsprrcptn	Display resource partition configuration
dsprrsvpif	Display RSVP configuration for a connection
dsprrsvpreq	Display configuration for an RSVP request
dsprrsvpreqs	Display configurations for all RSVP requests on the card
dsprrsvpresv	Display bandwidth reservation for an RSVP request
dsprrsvpresvs	Display bandwidth reservations for all RSVP requests

**Table 10-8** VoIP Trunking/AAL2 Trunking Commands (continued)

Command	Description
dsprsvpsender	Display path state for an RSVP request
dsprsvpsenders	Display path states for all RSVP requests
dsprtptent	Display RTP bearer counters
dsprtptcon	Display configuration for an RTP connection
dsprtptconnstat	Display RTP connection statistics for an endpoint
dsprtptcons	Display configurations for all RTP connections
dsprudp trunk	Display configuration for an RUDP session
dsprudp trunks	Display configurations for all RUDP sessions
dpsarent	Display SAR counter values for a channel
dpsarents	Display SAR counter values for all channels
dpsarmsgcnt	Display SAR control message counter values for the card
dpsidpacket	Display SID packet configuration for each line
dpslipcnt	Display clock slip counters for a line
dpsplmodemtone	Display the detection of 1560/980 Hz modem tones
dpsssrcenable	Display whether or not VISM is configured to allow more than one SSRC per RTP session
dspstatparms	Display the general status of the statistics upload functionality
dspt38fxlco	Display fax handling instructions for a line
dspt38fxlcoc	Display fax handling instructions for all lines
dspt38nsetimeout	Display NSE timeout for a line
dspt38nsetimeouts	Display NSE timeout for all lines
dspt38params	Display fax transfer parameters for a line
dsptaskinfo	Display operating tasks
dspttrapfilter	Display the current trap filter configurations
dspttraphelp	Display all traps or traps per group
dspvbdcodec	Display the upspeed codec used for VBD
dspvbdmarconi	Display VBD upspeed mode
dspvbdpol	Display VBD policies
dspvismip	Display IP address for card
dspvismparam	Display card configuration parameters
dspxgcpbt	Display default network type, VC type, and connection type of the VISM card
Help	Help
memShow	Display system memory partition blocks and statistics
pinglndsp	Display DSP configuration data for all endpoints on a line
rrtcon	Trigger rerouting of a connection between two different switches

**Table 10-8** VoIP Trunking/AAL2 Trunking Commands (continued)

<b>Command</b>	<b>Description</b>
setfaxmodemtrace	Set fax/modem trace
tstcon	Test a specified connection
tstdelay	Test delay on a specified connection
upcon	Up a connection
version	Display version data

■ ?

?

To display some or all commands associated with the current card, use the ? command.

?

---

**Syntax Description** This command has no arguments.

---

**Command Modes** VoIP switching/trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

---

**Usage Guidelines** You can enter a complete or partial command name. If you do not type the name of a command, the entire command list is displayed.

---

**Examples** In the following example all commands that contain the string ecan—a partial command name—are listed:

```
nodename.1.27.VISM8.a > ? ecan
```

```
Available commands
```

```
-----
```

```
cnfecancnf
cnfecannoise
cnfecannr
cnfecanrec
cnfecantail
```

```
nodename.1.27.VISM8.a >
```

---

Related Commands	Command	Description
	Help	Displays commands associated with the current card.

---

# addannpermanent

To configure an announcement server file and associated codec type as permanent, use the **addannpermanent** command.

```
addannpermanent <ann_Index> <ann_file_name> <ann_codec>
```

## Syntax Description

<i>ann_Index</i>	Announcement file server index number. You assign the number to identify a permanent announcement server file. Range is 1–125.
<i>ann_file_name</i>	Announcement filename. The name can be from 1 to 64 alphanumeric characters, including the following symbols: period (.), forward slash (/), underscore (_), and hyphen (-).
<i>ann_codec</i>	Announcement filename is associated with one of the following codecs: <ul style="list-style-type: none"> <li>• 1 = G.711u</li> <li>• 2 = G.711a</li> <li>• 3 = G.726-32K</li> <li>• 4 = G.729a</li> <li>• 5 = G.729ab</li> <li>• 7 = G.726-16K</li> <li>• 8 = G.726-24K</li> <li>• 9 = G.726-40K</li> <li>• 10 = Not used</li> <li>• 11 = G.723-H</li> <li>• 12 = G.723.1-AH</li> <li>• 13 = G.723.1-L</li> <li>• 14 = G.723.1-AL</li> </ul>

## Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

The G.723.1 codecs are supported for VISM-PR cards and are not supported for VISM cards.

## Examples

In the following example, index server number 19 is configured with the announce1 file in the G.726-40K codec:

```
nodename.1.27.VISM8.a > addannpermanent 19 announce1 9
```

```
nodename.1.27.VISM8.a >
```

To display the permanent announcement files, use the **dspannpermanents** command.

## Related Commands

Command	Description
<b>cnfannagetime</b>	Configures the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache.
<b>cnfanndn</b>	Designates an announcement file server domain name.
<b>cnfannpathprefix</b>	Designates the main prefix directory TFTP path you can use for retrieving announcement files from the announcement file server.
<b>cnfannprefcodec</b>	Configures the codec type used for announcements played on unconnected TDM endpoints.
<b>cnfannreqtimeout</b>	Configures the time for announcements to play after the VISM receives the announcement signal (request) from the call agent.
<b>delannalldynamic</b>	Deletes all announcement files from the list of files currently saved.
<b>delanndynamic</b>	Deletes an announcement file from the list of files currently saved.
<b>delannpermanent</b>	Deletes a permanent announcement file and its associated codec type from the announcement file server.
<b>dspannagetime</b>	Displays the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache.
<b>dspanncache</b>	Displays all available temporary announcement file names and associated age times before the cache is refreshed from the announcement file server.
<b>dspanncontrols</b>	Displays a summary list of all provisionable announcement file variables, including variables associated with all announcement file CLI commands.
<b>dspanndn</b>	Displays the announcement file server domain name.
<b>dspannpathprefix</b>	Displays the main prefix directory path that the VISM uses for retrieving announcement files from the announcement file server.
<b>dspannpermanents</b>	Displays all available permanent announcement files with their associated codec types and identifying index numbers.
<b>dspannprefcodec</b>	Displays the codec type used for announcements played on unconnected TDM endpoints.



# addcastranstbl

To create a channel-associated signaling (CAS) mapping table on the VISM-PR card, use the **addcastranstbl** command.

```
addcastranstbl <table_name> <format> <abcd0> <abcd1> <abcd2> <abcd3> <abcd4>
<abcd5> <abcd6> <abcd7> <abcd8> <abcd9> <abcd10> <abcd11> <abcd12> <abcd13>
<abcd14> <abcd15>
```

Syntax Description		
	<i>table_name</i>	Name of the new table. Range is 1–64 characters.
	<i>format</i>	Type of format of the ABCD bits to use for creating the table. <ul style="list-style-type: none"> <li>• 1 = abcd. For parameters abcd0–abcd15, use values 0–15.</li> <li>• 2 = swap abcd. For parameters abcd0–abcd3, use the following values. <ul style="list-style-type: none"> <li>– 1 = casBitNoAction</li> <li>– 2 = casBitSetToZero</li> <li>– 3 = casBitSetToOne</li> <li>– 4 = casBitInvertBit</li> <li>– 5 = casBitInvertABit</li> <li>– 6 = casBitInvertBBit</li> <li>– 7 = casBitInvertCBit</li> <li>– 8 = casBitInvertDBit</li> <li>– 9 = casBitABit</li> <li>– 10 = casBitBBit</li> <li>– 11 = casBitCBit</li> <li>– 12 = casBitDBit</li> </ul> </li> </ul>

*abcd0...abcd15*

Parameter values.

- For abcd0–abcd3, values are
  - 1 = casBitNoAction
  - 2 = casBitSetToZero
  - 3 = casBitSetToOne
  - 4 = casBitInvertBit
  - 5 = casBitInvertABit
  - 6 = casBitInvertBBit
  - 7 = casBitInvertCBit
  - 8 = casBitInvertDBit
  - 9 = casBitABit
  - 10 = casBitBBit
  - 11 = casBitCBit
  - 12 = casBitDBit
- For abcd0–abcd15, values are 0–15.

**Command Modes**

AAL2 trunking, switched AAL2 SVC, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines**

This command is applicable only to the VISM-PR card.

**Examples**

In the following example, table T1andE1trans with the standard T1 and E1 seize and idle conversions is added:

```
nodename.1.5.VISM8.a > addcastranstbl T1andE1trans 1 9 12 2 3 4 5 6 7 8 0 10 11 1 13 14 1
```

```
nodename.1.5.VISM8.a >
```

To display the mapping table configurations, use the **dspecastranstbl** command.

**Related Commands**

Command	Description
<b>cnfcastransendpt</b>	Downloads the CAS mapping table to the signaling channel.
<b>delcastranstbl</b>	Deletes an existing CAS mapping table.
<b>delcastransendpt</b>	Deletes a CAS mapping table that is associated with an endpoint.
<b>dspecastransendpts</b>	Displays all endpoints and their associated CAS mapping table names.
<b>dspecastranstbl</b>	Displays the CAS mapping table configurations.
<b>dspecastranstblendpts</b>	Displays all endpoints that are associated with a CAS mapping table.
<b>dspecastranstbls</b>	Displays the list of the CAS mapping tables.

# addcasvar

To add a channel-associated signaling (CAS) variant to a VISM card, name the CAS variant file, and (optionally) set the source of the file, use the **addcasvar** command.

```
addcasvar <variant_name> <file_name> [cas_var_source]
```

## Syntax Description

<i>variant_name</i>	Name of the CAS variant, a text string of 1 to 64 alphanumeric characters.
<i>file_name</i>	Name of the file that contains the signal definition for the CAS variant. <ul style="list-style-type: none"> <li>wink_did_dod.o = Wink start</li> <li>ground_start.o = Ground start</li> <li>wink_did_dod_mf.o = Wink start multifrequency</li> <li>q50.o = Q.50</li> <li>fgd_ea_incoming.o = Endpoints connected to an end office</li> <li>fgd_ea_outgoing.o = Endpoints connected to an access carrier</li> <li>fgd_os_e911.o = Endpoints connected to FDG OSS (Feature group D operator services system)</li> <li>loop_start.o = Loop start</li> <li>delay_did_dod.o = Dial delay, dual-tone multifrequency (DTMF)</li> <li>delay_did_dod_mf.o = Dial delay, multifrequency (MF)</li> <li>immed_did_dod.o = Immediate start</li> <li>immed_did_dod_mf.o = Immediate start, MF</li> </ul> <p>For user-configured files, the range is 2–32 alphanumeric characters.</p>
<i>cas_var_source</i>	(Optional) CAS variant file location. <ul style="list-style-type: none"> <li>1 = Unspecified. If a TFTP domain is configured, the location is the TFTP server. If the file location is not found on the TFTP server, the file is treated as built-in.</li> <li>2 = Internal—File location is user-configured (built-in).</li> <li>3 = External—File resides on the TFTP server.</li> </ul>

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Before you can execute this command, you must download a file containing the variant information to the Cisco MGX 8000 Series platform PXM card. Use a separate application (such as TFTP) for the download.

This command downloads the specified file from the PXM card and configures the CAS variant on the VISM card based on the information in the file. You can use this command at any time to add a new CAS variant.

**Examples**

In the following example, a wink start CAS variant called casvar is added to a VISM card with information contained in the wink\_did\_dod.o file, which is located in the internal (built-in) location:

```
nodename.1.27.VISM8.a > addcasvar casvar wink_did_dod.o 2
```

```
nodename.1.27.VISM8.a >
```

To display information about the CAS variant you added, use the **dspcasvar** command.

**Related Commands**

Command	Description
<b>cnfcasvar</b>	Configures CAS variant and CAS timing parameters for a variant already created with the <b>addcasvar</b> command.
<b>delcasvar</b>	Deletes a CAS variant.
<b>dspcasvar</b>	Displays information about CAS variants for a given variant name.
<b>dsplnringback</b>	Displays the ring-back tone type for a specified line on the current VISM card.

# addccs

To add a common channel signaling (CCS) channel (D channel) to a VISM card, use the **addccs** command.

```
addccs <line_number> <ds0_number> <LCN>
```

## Syntax Description

<i>line_number</i>	Line number of the channel to be added in the range 1–8.
<i>ds0_number</i>	DS0 number of the channel to be added. Ranges are <ul style="list-style-type: none"> <li>• 1–24 = T1 lines</li> <li>• 1–31 = E1 lines</li> </ul>
<i>LCN</i>	Logical channel number of the CCS channel to be added in the range 131–510.

## Command Modes

AAL2 trunking, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

To use this command, you must enter the **cnflnsig** command to select CCS on the specified line. When you execute this command, a value called `ds0IfIndex` is displayed. This value is used to identify the CCS channel in subsequent CCS-related commands.

## Examples

In the following example, a CCS D channel is added to line 1, DS0 20, logical channel number 200:

```
nodename.1.27.VISM8.a > addccs 1 20 200
```

```
nodename.1.27.VISM8.a >
```

To display the information about a CCS channel, use the **dspccs** command.

## Related Commands

Command	Description
<b>delccs</b>	Deletes the association between a CCS (DS0) channel and its corresponding virtual channel.
<b>dspccs</b>	Displays the properties of a previously added CCS channel.

# addcid

To add an AAL2 channel identifier (CID) on a VISM/VISM-PR card, use the **addcid** command.

```
addcid <endpt_num> <LCN> <cid_num> <codec_type> <profile_type> <profile_number>
|<voice_activity_detection> <vad_init_timer> <echo_cancellation>
<triple_redundancy_protection> <cas_signaling_transport>
<dtmf_tone_transport_as_AAL2> <ICS_enable> <pktPeriod>|
```

## Syntax Description

<i>endpt_num</i>	Endpoint number which is related to the LCN/CID pair being added. <ul style="list-style-type: none"> <li>• Template 1 <ul style="list-style-type: none"> <li>- 1–145 for VISM</li> <li>- 1–192 for VISM-PR T1</li> <li>- 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2 <ul style="list-style-type: none"> <li>- 1–192 for T1</li> <li>- 1–248 for E1</li> </ul> </li> <li>• Template 3 <ul style="list-style-type: none"> <li>- 1–120 for VISM</li> <li>- 1–192 for VISM-PR T1</li> <li>- 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4 <ul style="list-style-type: none"> <li>- 1–64 for VISM</li> <li>- 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5 <ul style="list-style-type: none"> <li>- 1–192 for VISM-PR T1</li> <li>- 1–248 for VISM-PR E1</li> </ul> </li> </ul>
<i>LCN</i>	Logical channel number (LCN) of the LCN/CID pair. Range is 131–510.
<i>cid_num</i>	Channel identification number (CID) of the LCN/CID pair. Range is 8–255.

---

<i>codec_type</i>	Type of coding/decoding to be performed on the data stream. <ul style="list-style-type: none"><li>• 1 = G.711u</li><li>• 2 = G.711a</li><li>• 3 = G.726-32k</li><li>• 4 = G.729a</li><li>• 5 = G.729ab</li><li>• 6 = Clear channel (VAD must be off.)</li><li>• 7 = G.726-16k</li><li>• 8 = G.726-24k</li><li>• 9 = G.726-40k</li><li>• 11 = G.723.1-H</li><li>• 12 = G.723.1a-H</li><li>• 13 = G.723.1-L</li><li>• 14 = G.723.1a-L</li><li>• 15 = Lossless (VAD must be off.)</li></ul>
<i>profile_type</i>	Profile type to be used for the CID. <ul style="list-style-type: none"><li>• 1 = ITU I.366.2</li><li>• 3 = Custom</li></ul> <p><b>Note</b> If the <i>profile_type</i> and <i>profile_number</i> argument values are both 1, you cannot turn VAD on.</p>
<i>profile_number</i>	Number of the profile. <ul style="list-style-type: none"><li>• 1 = ITU profile</li><li>• 2 = ITU profile</li><li>• 3 = ITU profile</li><li>• 7 = ITU profile</li><li>• 8 = ITU profile</li><li>• 12 = ITU profile</li><li>• 100 = Custom profile</li><li>• 101 = Custom profile</li><li>• 110 = Custom profile</li><li>• 200 = Custom profile</li><li>• 201 = Custom profile</li><li>• 210 = Custom profile</li></ul>

---

<code> voice_activity_detection </code>	<p>(Optional) Value you can use to enable or disable voice activity detection (VAD).</p> <ul style="list-style-type: none"> <li>• 1 = On</li> <li>• 2 = Off (default)</li> </ul> <p><b>Note</b> If the <i>profile_type</i> and <i>profile_number</i> argument values are both 1, you cannot turn VAD on.</p>
<code> vad_init_timer </code>	<p>(Optional) VAD initial (holdover) timer. Range is 250–65535 ms. Default is 250 ms.</p>
<code> lecho_cancellation </code>	<p>(Optional) Value you can use to enable or disable echo cancellation (ECAN).</p> <ul style="list-style-type: none"> <li>• 1 = On (default)</li> <li>• 2 = Off</li> </ul>
<code> triple_redundancy_protection </code>	<p>(Optional) Value you can use to enable or disable triple redundancy protection for type 3 packets.</p> <ul style="list-style-type: none"> <li>• 1 = On</li> <li>• 2 = Off</li> </ul> <p><b>Note</b> If you select 1 for this argument value, either the <i>cas_signaling_transport</i> or <i>dtmf_tone_transport_as_AAL2</i> argument value must be set to 1 (on).</p>
<code> cas_signaling_transport </code>	<p>(Optional) Value you can use to enable or disable channel-associated signaling (CAS) transport as AAL2 type 3 packets.</p> <ul style="list-style-type: none"> <li>• 1 = On (default)</li> <li>• 2 = Off</li> </ul> <p>This parameter does not affect any inbound signaling.</p>
<code> dtmf_tone_transport_as_AAL2 </code>	<p>(Optional) Value you can use to enable or disable DTMF tone transport as AAL2 type 3 packets. It can be one of the following values:</p> <ul style="list-style-type: none"> <li>• 1 = On (default)</li> <li>• 2 = Off</li> </ul> <p><b>Note</b> The <i>dtmf_tone_transport_as_AAL2</i> argument value must be set to 1 (on) when the <i>codec_type</i> is configured for codecs other than G.711 and G.726.</p>



<code> ICS_enable </code>	(Optional) Value you can use to enable or disable idle code suppression (ICS) for the CID. <ul style="list-style-type: none"> <li>• 1 = Enable</li> <li>• 2 = Disable</li> </ul>
<code> pktPeriod </code>	(Optional) Packetization period (defined in milliseconds). <ul style="list-style-type: none"> <li>• 10 ms</li> <li>• 20 ms</li> <li>• 30 ms</li> </ul> <p><b>Note</b> The <code>pktPeriod</code> argument applies only to G.729a compression (<code>codec_type</code> argument value = 4). If you have selected any other compression value, ignore this argument.</p>

**Command Modes**

AAL2 trunking, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines**

This command establishes a relationship between an endpoint and an LCN/CID pair. The endpoint is bound to a DS0, and the CID binds a DS0 to a logical channel—ensuring an endpoint-to-endpoint trunk. The following conditions must be met before you use this command:

- A previously added endpoint must exist.
- PVC must be of bearer type and provisioned through the use of the **addcon** command.
- The current DSP template must contain the desired codec type.

This command can be used on an endpoint that has no associated CAS variant. However, if a CAS variant is specified for the endpoint, it must be a Q.50 variant (file q50.o)—the only CAS variant supported by this command.

The G.723.1 codecs are supported for VISM-PR cards and are not supported for VISM cards.

**Examples**

In the following example a CID is created for endpoint 10, LCN 140, with a CID number of 10. The codec type is 2 (G.711a), profile type is 1 (ITU), profile number is 1 (ITU), VAD is 1 (on), VAD holdover is 300 ms, type 3 redundancy is 1 (on), CAS transport is 1 (on), DTMF transport is 1 (on), idle code suppression is 1 (on), and the packet period is 10 ms.

```
nodename.1.27.VISM8.a > addcid 10 140 10 2 1 1 1 1 300 1 1 1 10
nodename.1.27.VISM8.a >
```

Use the **dspcid** or the **dspcids** command to view the CID values you configured.

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>delcid</b>	Deletes the association between an endpoint and an LCN/CID pair.
<b>dspcid</b>	Displays the argument values of an AAL2 CID on a VISM card.
<b>dspcideps</b>	Displays the CPS for a connection.
<b>dspcids</b>	Displays all the AAL2 CIDs for a specified LCN on a VISM card.
<b>dsplncideps</b>	Displays CPS usage per CID for all of the CIDs on a particular line.

# addcon

To add a permanent virtual circuit (PVC) connection between a VISM card and any service module (SM) or PXM card, use the **addcon** command.

```
addcon <localVCI> <preference> <pvcType> <application> <PCR> <mastership>
|<remoteConnId> <serviceType> <scr> <mbs> <priority> <prefrte> <direct>|
```

Syntax Description	
<i>localVCI</i>	Local virtual channel identifier (VCI) to be used for the connection. Range is 131–510. The value you enter for this argument is also used as the logical channel number (LCN).
<i>preference</i>	Preference level of the local VCI. <ul style="list-style-type: none"> <li>• 1 = Primary</li> <li>• 2 = Secondary</li> </ul>
<i>pvcType</i>	AAL type of connection. <ul style="list-style-type: none"> <li>• 1 = AAL5</li> <li>• 2 = AAL2</li> <li>• 3 = AAL1</li> </ul>
<i>application</i>	The connection's application. It can be one of the following values: <ul style="list-style-type: none"> <li>• 1 = Control</li> <li>• 2 = Bearer</li> <li>• 3 = Signaling</li> </ul> <p><b>Note</b> If the connection is used for bearer and signaling, specify 2 for bearer.</p>
<i>PCR</i>	Peak cell rate (PCR) measured in cells per second. Ranges are <ul style="list-style-type: none"> <li>• 1–96000 for AAL5 bearer</li> <li>• 1–20000 for AAL5 control PVC</li> <li>• 1–50000 for T1 AAL2 PVCs</li> <li>• 1–60000 for E1 AAL2 PVCs</li> <li>• 1–400 for signaling PVCs in AAL2 trunking mode</li> </ul> <p><b>Note</b> If the <i>serviceType</i> argument is a variable bit rate (VBR), the <i>PCR</i> argument value must be 15 or greater.</p>
<i>mastership</i>	Connection type. <ul style="list-style-type: none"> <li>• 1 = Master</li> <li>• 2 = Slave (Default)</li> </ul>
<i> remoteConnId </i>	(Optional) Remote connection identifier. Specify this argument with the following format: <code>nodename.slot.port.vpi.vci</code> <p><b>Note</b> This argument is used only when the <i>mastership</i> argument is set to 1 (Master).</p>

<code> serviceType </code>	<p>(Optional) Service type. It can be one of the following values:</p> <ul style="list-style-type: none"> <li>• 1 = Constant bit rate (CBR)</li> <li>• 2 = Variable bit rate real time (rt-VBR)</li> <li>• 3 = Variable bit rate non-real time (nrt-VBR)</li> <li>• 4 = rt-VBR3</li> <li>• 5 = rt-VBR2</li> <li>• 6 = nrt-VBR2</li> <li>• 7 = nrt-VBR3</li> </ul> <p><b>Note</b> Use value 7 for VISM-PR to RPM-PR connections.</p>
<code> scr </code>	<p>(Optional) Sustainable cell rate (SCR) defined in cells per second. Range is from 15 to the value you configured for the <i>PCR</i> argument value. The rate is measured in cells per second.</p> <p><b>Note</b> This argument value is required if the <i>serviceType</i> argument value is in the range 2–7.</p>
<code> mbs </code>	<p>(Optional) Maximum burst size (MBS)—maximum number of cells transmitted at the peak cell rate. Range is from 1 cell to 10 times the value you configured for the <i>scr</i> argument value.</p> <p><b>Note</b> This argument value is required if the <i>serviceType</i> argument value is in the range 2–7.</p>
<code> priority </code>	<p>(Optional) Route priority. A priority number is assigned to the PVC during configuration of the connection.</p> <p>Range is 1–15. Default is 8.</p> <p>A value of 1 indicates the highest priority, and a value of 15 indicates the lowest priority.</p> <p><b>Note</b> This parameter is applicable only to VISM-PR cards.</p>
<code> prefrte </code>	<p>(Optional) Unique identifier of the preferred route with which this connection is associated.</p> <p>Range is 0–65535. Default is 0.</p> <p>When the specified route identifier is 0, the connection is not associated with a preferred route. This parameter is not applicable to the slave end of an SPVC connection.</p> <p><b>Note</b> This parameter is applicable only to VISM-PR cards.</p>
<code> direct </code>	<p>(Optional) Parameter you use to specify whether or not the associated preferred route is the only permissible route for the connection to take.</p> <ul style="list-style-type: none"> <li>• 1 = Yes—VISM-PR is not allowed to pick an alternate route for the connection. This option is not applicable when a preferred route is not specified.</li> <li>• 2 = No (default)—VISM-PR is allowed to try another route for the connection if the preferred route is unavailable.</li> </ul> <p>If the directed preferred route is unavailable, the connection fails.</p> <p><b>Note</b> This parameter is applicable only to VISM-PR cards.</p>

**Command Modes**

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines**

You must execute the **addport** and **addrscrptn** commands before you use this command.

If you are using this command with the VoIP switching/trunking operating mode and dual PVCs, you must add the primary channel before the secondary channel.

If you are using this command with the AAL2 trunking operating mode, the *pvcType* argument value must be 1 (AAL5) for signaling and 2 (AAL2) for a bearer channel.

This command requires you to configure the PVC connections as follows for the different operating modes:

- VoIP switching/trunking operating mode **addcon** command configuration requirements:
  - One AAL5 PVC connection with an optional secondary AAL5 PVC connection
- AAL2 trunking operating mode **addcon** command configuration requirements:
  - One AAL2 connection and up to 63 additional optional AAL2 connections per VISM/VISM-PR card to each remote location
  - Up to eight AAL5 connections for common channel signaling (CCS) across the trunk, if your application requires CCS
- Switched AAL2 PVC operating mode **addcon** command configuration requirements:
  - One AAL2 connection
  - One AAL5 connection for communication with the call agent and external DNS

The preferred route parameters (*<priority>*, *<prefrte>*, and *<direct>*) are applicable to VISM-PR cards operating in AAL2 trunking or VoIP switching mode.

**Examples**

In the following example a master connection is added as the primary channel through the use of AAL2 for bearer traffic. The local VCI is 160 and the remote end is named node1 in slot 4, port 2, with a VPI/VCI of 223/223. The service type is CBR, the sustainable call rate is 500 cps, and the maximum burst is 6000 cells.

```
nodename.1.27.VISM8.a > addcon 160 1 2 2 1000 1 node1.4.2.223.223 1 500 6000
```

```
nodename.1.27.VISM8.a >
```

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>cnfcalea</b>	Enables or disables the CALEA feature on the current VISM card.
<b>cnfcon</b>	Configures a connection between a VISM card and an MGX 8000 Series platform PXM card.
<b>cnfconprotect</b>	Configures protection on a connection (PVC).
<b>delcon</b>	Deletes a connection (PVC) between a VISM card and a Cisco MGX 8000 Series platform PXM card.
<b>dspcalea</b>	Displays the CALEA feature configuration status of the current VISM card.
<b>dspcon</b>	Displays the parameters for a specified channel.
<b>dspcons</b>	Displays channel information for all configured connections on a VISM card.
<b>dspvismparam</b>	Displays the current VISM card configuration.

# addconloop

To set a cellbus connection to local loopback state on a current card, use the **addconloop** command.

```
addconloop <LCN>
```

<b>Syntax Description</b>	<i>LCN</i> Logical channel number (LCN) of the CCS channel to be added in the range 131–510.				
<b>Command Modes</b>	VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking				
<b>Usage Guidelines</b>	Follow standard CLI procedures for this command.				
<b>Examples</b>	In the following example the channel numbered 132 is placed in loopback state: <pre>nodename.1.27.VISM8.a &gt; <b>addconloop</b> 132</pre> <pre>nodename.1.27.VISM8.a &gt;</pre>				
<b>Related Commands</b>	<table border="1"> <thead> <tr> <th>Command</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td><b>delconloop</b></td> <td>Deletes a local loopback state on a VISM line.</td> </tr> </tbody> </table>	Command	Description	<b>delconloop</b>	Deletes a local loopback state on a VISM line.
Command	Description				
<b>delconloop</b>	Deletes a local loopback state on a VISM line.				

# addn

To add a domain name (call agent name, TFTP server name, domain name server (DNS) name, or announcement server name) and optionally configure the resolution type of the domain name, use the **addn** command.

```
addn <mg_domain_num> <mg_domain_name> [<Resolution_Type>]
```

## Syntax Description

<i>mg_domain_num</i>	Domain number used to identify the domain in the range 1–11.
<i>mg_domain_name</i>	Call agent name. Use a text string of 1–64 alphanumeric characters.
<i>[Resolution_Type]</i>	(Optional) Resolution type for the specified domain name. Use one of the following values: <ul style="list-style-type: none"> <li>• 1 = Internal only (default). You must statically provision all IP addresses on the VISM card for each domain name. The VISM card does not resolve the domain name using an external DNS.</li> <li>• 2 = External only. The VISM card attempts to resolve the domain name using an external DNS. Statistically configured IP addresses for this domain name are not used.</li> <li>• 3 = Internal first. The VISM card attempts to resolve the domain name using an external DNS. The VISM card uses the statistically provisioned IP addresses for this domain name before using IP addresses obtained through external resolution.</li> <li>• 4 = External first. The VISM card attempts to resolve the domain name using an external DNS. The VISM card uses IP addresses from external resolution before using the statistically provisioned IP addresses.</li> </ul>

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, a call agent domain name, main, with a domain number of 3 is assigned the internal first resolution type (3):

```
nodename.1.27.VISM8.a > addn 3 main 3
```

```
nodename.1.27.VISM8.a >
```

To display the domain names, use the **dsdpns** command.



**Related Commands**

<b>Command</b>	<b>Description</b>
<b>addnip</b>	Adds the IP addresses for a domain name that you added by using the <b>addn</b> command.
<b>cnfdn</b>	Configures the resolution type of a specified domain.
<b>cnfdnssrvr</b>	Designates a DNS.
<b>deldn</b>	Deletes a domain name.
<b>deldnip</b>	Deletes a statistically provisioned IP address of a domain name.
<b>dspdnallips</b>	Displays all statistically provisioned IP addresses and externally resolved IP addresses for all domain names configured on the current VISM card.
<b>dspdnips</b>	Displays all statistically provisioned and externally resolved IP addresses configured for a specified domain name.
<b>dspdns</b>	Displays the configuration data of all domain names of a call agent.
<b>dspdnssrvr</b>	Displays the domain name of the configured DNS of the current VISM card.

# addnip

To add the IP addresses for a domain name that you added by using the **addn** command, use the **addnip** command.

```
addnip <Resolution_index> <domain_name> <IP_address> <preference>
```

## Syntax Description

<i>Resolution_index</i>	Resolution number of the domain name. Range is 1–88.
<i>domain_name</i>	Call agent name. Use a text string of 1–64 alphanumeric characters.
<i>IP_address</i>	An IP address which corresponds to the <i>domain_name</i> argument. The address is in the following format: nnn.nnn.nnn.nnn.
<i>preference</i>	An IP address resolution preference order in the range 1–8 where 1 is the highest preference.
<b>Note</b>	Each IP address in the call agent name you specify with the <i>domain_name</i> argument must have a preference.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, resolution number 22 is configured for domain name callagent35, with IP address 209.165.200.224, and an address resolution preference order of 7 (low):

```
nodename.1.27.VISM8.a > addnip 22 callagent35 209.165.200.224 7
```

```
nodename.1.27.VISM8.a >
```

To display the list of IP addresses for each domain name, use the **dsdnips** command.

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>adddn</b>	Adds a domain name (call agent name) and optionally configures the resolution type of the domain name.
<b>cnfdn</b>	Configures the resolution type of a specified domain.
<b>cnfdnssrvr</b>	Designates a DNS.
<b>deldn</b>	Deletes a domain name.
<b>deldnip</b>	Deletes a statistically provisioned IP address of a domain name.
<b>dspdnallips</b>	Displays all statistically provisioned IP addresses and externally resolved IP addresses for all domain names configured on the current VISM card.
<b>dspdnips</b>	Displays all statistically provisioned and externally resolved IP addresses configured for a specified domain name.
<b>dspdns</b>	Displays the configuration data of all domain names of a call agent.
<b>dspdnssrvr</b>	Displays the domain name of the configured DNS of the current VISM card.

# addualtonedet

To add a dual-tone frequency tone, use the **addualtonedet** command.

```
addualtonedet <dtoneId> <dteventId> <dtfreq1> <dtfreq2> <onCadence> <offCadence>
|<cadMatch> <maxFreqDev> <maxPwr> <minPwr> <pwrTwist> <maxDelay>
<minOnCad> <maxOffCad>|
```

## Syntax Description

<i>dtoneId</i>	Dual-tone ID. Range is 1–10. You can add up to 10 tones.
<i>dteventId</i>	Dual-tone event ID. Range is 0–255.
<i>dtfreq1</i>	Dual-tone first frequency. Range is 280–3800 Hz.
<i>dtfreq2</i>	Dual-tone second frequency. Range is 0–3800 Hz.
<i>onCadence</i>	Time duration in the tone cycle when the tone is played. Range is from the <i>minOnCad</i> value to 5000 ms in units of 10 ms.
<i>offCadence</i>	Duration of silence in the tone cycle. Range is from the <i>maxOffCad</i> value to 5000 ms in units of 10 ms.
<i>cadMatch</i>	(Optional) Number of cadence cycles that must match before VISM reports the tone. Range is 0–6 matches.
<i>maxFreqDev</i>	(Optional) Maximum frequency deviation of the dual tone. Range is 10–125 Hz.
<i>maxPwr</i>	(Optional) Maximum power level of the dual tone. Range is absolute values of 0–30 dB.
<i>minPwr</i>	(Optional) Minimum power level of the dual tone. Range is 10–35 dB.
<i>pwrTwist</i>	(Optional) Power twist in the dual tone. Range is 0–15 dB.
<i>maxDelay</i>	(Optional) Maximum delay in the dual tone. Range is 0–100 ms in units of 10 ms.
<i>minOnCad</i>	(Optional) Minimum on-time duration in the tone cycle. Range is 3–100 ms in units of 10 ms.
<i>maxOffCad</i>	(Optional) Maximum off-time duration in the tone cycle. Range is 5–5000 ms in units of 10 ms.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.



### Note

This command is applicable only to the VISM-PR card.

## Examples

In the following example, a ring-back tone with default values is added:

```
nodename.1.27.VISM8.a > addualtonedet 1 70 460 0 2000 4000 1 30 3 35 10 100 200 4500
nodename.1.27.VISM8.a >
```

To display the dual-tone configuration you added, use the **dspdualtonedet** command.

For more information on the dual tones default values, see the “Default Values” section on page 9-102 of Chapter 9, “Features and Advanced Configurations.”

---

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>deldualtonedet</b>	Deletes a dual frequency tone.
<b>dspdualtonedet</b>	Displays a dual-tone configuration.

---

# addendpt

To add an endpoint on a line, use the **addendpt** command.

```
addendpt <endpt_num> <dsl_num> <ds0_num>
```

## Syntax Description

<i>endpt_num</i>	<p>Endpoint number. Ranges are</p> <ul style="list-style-type: none"> <li>• Template 1           <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2           <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3           <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4           <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5           <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>
<i>dsl_num</i>	Physical line number in the range 1–8.
<i>ds0_num</i>	<p>DS0 configured for the <i>endpt_num</i> value. Ranges are</p> <ul style="list-style-type: none"> <li>• 1–24 for T1 lines</li> <li>• 1–31 for non-CAS E1 lines</li> <li>• 1–15 and 17–31 for CAS E1 lines</li> </ul> <p>For VISM E1 cards, 16 is preallocated as the channel-associated signaling (CAS) channel.</p> <p><b>Note</b> If the application requires CAS, issue the <b>cnflnsig</b> command before adding the endpoints.</p>

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines**

The endpoint on VISM is a logical port that consists of one DS0. The argument values entered in this command create an endpoint ID (*endpt\_num*) which is required by the call agent for the sending of the xGCP Create Connection command (CRCX) to a VISM card. You can configure only bearer DS0s as endpoints for a previously added line.

**Note**

The endpoint number is not equal to the DS0 number of the associated time slot. For example, endpoint 1 could be associated with DS011.

If your application requires the VoIP switching/trunking operating mode, you must add the IP address for VISM with the **cnfvismip** command before you can add the endpoints.

This command sends a Restart in Progress (RSIP) message to each associated call agent indicating that the endpoint is in service.

**Examples**

In the following example an endpoint with the number 120 is added on line 5 with a DS0 number 5:

```
nodename.1.27.VISM8.a > addendpt 120 5 5
```

```
nodename.1.27.VISM8.a >
```

To display the information about the endpoint you added, use the **dspendpt** command.

**Related Commands**

Command	Description
<b>addendpts</b>	Adds multiple sequential endpoints to a VISM card.
<b>delendpt</b>	Deletes a specified endpoint on a VISM card.
<b>dspendpt</b>	Displays information about a specified endpoint on a VISM card.
<b>dspendpts</b>	Displays information about all the endpoints on a VISM card.

# addendptloop

To place an endpoint in a loopback condition in the TDM direction, use the **addendptloop** command.

**addendptloop** <endpt-num>

Syntax Description	<i>endpt_num</i>	Endpoint number. Ranges are
		<ul style="list-style-type: none"> <li>• Template 1               <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2               <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3               <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4               <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5               <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example an endpoint loopback is added to endpoint 120:

```
nodename.1.27.VISM8.a > addendptloop 120
nodename.1.27.VISM8.a >
```

Related Commands	Command	Description
	<b>delendptloop</b>	Takes an endpoint out of a loopback condition.



# addendpts

To add multiple number of endpoints with a single command, use the **addendpts** command.

```
addendpts <endpt_num> <ds1_num> <ds0_num> <endpts_num>
```

Syntax Description	<i>endpt_num</i>	First endpoint number of a range of consecutive endpoints. Ranges are
		<ul style="list-style-type: none"> <li>• Template 1               <ul style="list-style-type: none"> <li>- 1–145 for VISM</li> <li>- 1–192 for VISM-PR T1</li> <li>- 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2               <ul style="list-style-type: none"> <li>- 1–192 for T1</li> <li>- 1–248 for E1</li> </ul> </li> <li>• Template 3               <ul style="list-style-type: none"> <li>- 1–120 for VISM</li> <li>- 1–192 for VISM-PR T1</li> <li>- 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4               <ul style="list-style-type: none"> <li>- 1–64 for VISM</li> <li>- 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5               <ul style="list-style-type: none"> <li>- 1–192 for VISM-PR T1</li> <li>- 1–248 for VISM-PR E1</li> </ul> </li> </ul>
	<i>ds1_num</i>	Line number to which the endpoints are added. Range is 1–8.

---

<i>ds0_num</i>	<p>DS0 number. Ranges are</p> <ul style="list-style-type: none"> <li>• 1–24 for T1 lines</li> <li>• 1–31 for non-CAS E1 lines</li> <li>• 1–15 and 17–31 for CAS E1 lines</li> </ul> <p>For VISM E1 cards, 16 is preallocated as the channel-associated signaling (CAS) channel.</p> <p><b>Note</b> If the application requires CAS, issue the <b>cnflnsig</b> command before adding the endpoints.</p>
<i>endpts_num</i>	<p>The last endpoint in a consecutive range of endpoints. Ranges are</p> <ul style="list-style-type: none"> <li>• Template 1 <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2 <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3 <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4 <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5 <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>

---

**Command Modes**

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines**

The **addendpts** command uses a specified number of consecutive endpoints starting at a specified endpoint number, line number, and DS0 number. As endpoints are added, the command uses the next available (not added) endpoint numbers and DS0s.

**Note**

If you are running a VoIP application, you must use the **cnfvismip** command before you can add endpoints.

---

**Note**

The endpoint number is not equal to the DS0 number of the associated time slot. For example, endpoint 1 could be associated with DS011.

Before you add endpoints with this command, ensure that enough lines and DS0s exist. If you attempt to add more endpoints than are available, only the available endpoints are added.

For example, if T1 line 1 is the only line enabled and you attempt to add 25 endpoints, only 24 endpoints are added. Your terminal display shows the actual number of endpoints added.

This command sends an Restart in Progress (RSIP) message to each associated call agent indicating that the endpoints are in service.

**Examples**

In the following example, 12 consecutive endpoints are added to line 1, starting at endpoint number 6, DS0 number 12:

```
nodename.1.27.VISM8.a > addendpts 6 1 12 12
```

```
nodename.1.27.VISM8.a >
```

To display information about all of the endpoints you added, use the **dspendpts** command.

**Related Commands**

Command	Description
<b>delendpts</b>	Deletes a consecutive number of endpoints on the VISM card.
<b>dspendpts</b>	Displays information about all endpoints on a VISM card.

# addlapd

To add a Link Access Protocol D Channel (LAPD) from a specified DS0 to a VISM card, use the **addlapd** command.

```
addlapd <line_number> <ds0_number> [lapd_side] <lapd_application_type>|
```

## Syntax Description

<i>line_number</i>	Line number of the channel to which you want to add an ISDN D channel. Range is 1–8.
<i>ds0_number</i>	DS0 number of the channel to which you want to add an ISDN D channel. Ranges are <ul style="list-style-type: none"> <li>• 1–24 for T1 lines</li> <li>• 1–31 for E1 lines</li> </ul>
<i>lapd_side</i>	(Optional) The side of the LAPD link. Values are <ul style="list-style-type: none"> <li>• 1 = Network (default)</li> <li>• 2 = User</li> </ul>
<i>lapd_application_type</i>	(Optional) Application type of the LAPD ISDN D channel. Values are <ul style="list-style-type: none"> <li>• 1 = PRI (default)</li> <li>• 2 = GR-303 (currently unsupported)</li> </ul>

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

## Usage Guidelines

Before using this command, complete the following tasks:

- Specify the line as common channel signaling (CCS).
- Ensure that the DS0 is available.
- Create a session group and session with a call agent.

Use the **addlapd** command when the specified channel is backhauled to the call agent.

## Examples

In the following example, an ISDN PRI D channel is added to line 2 and DS0 7 on the network side:

```
nodename.1.27.VISM8.a > addlapd 2 7 1 1
nodename.1.27.VISM8.a >
```

To display information about the LAPD you added, use the **dsplapd** command.

## Related Commands

Command	Description
<b>dellapd</b>	Deletes an LAPD.
<b>dsplapd</b>	Displays information about an LAPD.
<b>dsplapds</b>	Displays information about all LAPDs.

# addlapdtrunk

To add a Link Access Protocol D channel (LAPD) trunk to a specific line, use the **addlapdtrunk** command.

```
addlapdtrunk <Line_num> <Lapd_Rudp_Index>
```

## Syntax Description

<i>Line_num</i>	Line number of the T1 or E1 line in the range 1–8.
<i>Lapd_Rudp_Index</i>	LAPD Reliable User Data Protocol (RUDP) number in the range 1–64.

## Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the LAPD RUDP number 1 is added to line number 2:

```
nodename.1.27.VISM8.a > addlapdtrunk 2 1
nodename.1.27.VISM8.a >
```

To display the data of the LAPD trunks, use the **dsplapdtrunks** command.

## Related Commands

Command	Description
<b>addrtpton</b>	Adds a static RTP VoIP trunking connection.
<b>addrudp trunk</b>	Adds an ISDN PRI backhaul RUDP session for an LAPD trunk connection.
<b>clrtpcnt</b>	Clears the RTP counters of the statistics for a specific static RTP connection.
<b>cnflapdtrunkpvc</b>	Assigns the PVC trunk type that carries LAPD messages for the current VISM card.
<b>cnflntrunkcond</b>	Enables or disables line conditioning on a VISM card line.
<b>cnfrtpcon</b>	Modifies an existing static RTP VoIP trunking connection.
<b>cnfrudp trunkrmtip</b>	Modifies the remote VISM IP address used in the ISDN PRI backhaul RUDP trunk for a specified session.
<b>dellapdtrunk</b>	Deletes an LAPD configured line.
<b>delrtpton</b>	Deletes a static RTP VoIP trunking connection.
<b>delrudp trunk</b>	Deletes an ISDN PRI backhaul RUDP session that is associated with an LAPD.
<b>dsplapd</b>	Displays data about an LAPD.
<b>dsplapdtrunkpvc</b>	Displays the assigned PVC trunk type that carries LAPD trunk messages for the current VISM card.
<b>dsplapdtrunks</b>	Displays the configuration data of all LAPD trunks.
<b>dsprtpcnt</b>	Displays the bearer counters of the statistics for a specific RTP VoIP trunking connection.

<b>Command</b>	<b>Description</b>
<b>dsprtpcon</b>	Displays the configuration data of a specific static RTP VoIP trunking connection.
<b>dsprtpcons</b>	Displays the configuration data of all static RTP VoIP trunking connections.
<b>dsprudp trunk</b>	Displays the configuration data of a specified ISDN PRI backhaul RUDP session.
<b>dsprudp trunks</b>	Displays the configuration data of all ISDN PRI backhaul RUDP sessions.

# addln

To add a T1 or E1 line to a VISM card, use the **addln** command.

```
addln <line_number>
```

---

## Syntax Description

*line\_number* Line number of the T1 or E1 line to be added. Range is 1–8.

---



---

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

---

## Usage Guidelines

Follow standard CLI procedures for this command.

---

## Examples

The following example shows line number 1 being added to a VISM card:

```
nodename.1.27.VISM8.a > addln 1
```

```
nodename.1.27.VISM8.a >
```

To display the configuration of the line you added, use the **dspln** command.

---

## Related Commands

Command	Description
<b>cnfln</b>	Configures line characteristics for a specified line.
<b>delln</b>	Deletes a DS1 line on a VISM card.
<b>dspln</b>	Displays the characteristics of a specified line.

---

# addInloop

To set a specified line of the current card to the local loopback state, use the **addInloop** command.

```
addInloop <line_number>
```

## Syntax Description

*line\_number* Line number of the T1 or E1 line to be added. Range is 1–8.

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.



### Note

The VISM CLI has no specific command for setting a line to a remote loopback state. To set a line to remote loopback state, use the **cnfbert** command on the PXM1, PXM1E, or PXM45 card. Refer to MGX 8000 Series platform CLI guides for more information.

## Examples

In the following example, a local line loopback state is added to line 1:

```
nodename.1.27.VISM8.a > addInloop 1
```

```
nodename.1.27.VISM8.a >
```

## Related Commands

Command	Description
<b>dellnloop</b>	Deletes a T1 or E1 local line loopback state.



# addmgc

To add a Media Gateway Controller (MGC)—also known as a call agent—use the **addmgc** command.

```
addmgc <mgcNumber> <DomainName>
```

## Syntax Description

<i>mgcNumber</i>	MGC number in the range 1–8.
<i>DomainName</i>	Domain name. Maximum length is 64 characters.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, an MGC with the name mgc1 is added:

```
nodename.1.28.VISM8.a> addmgc 1 mgc1

nodename.1.28.VISM8.a>
```

To display the configuration of the MGC you added, use the **dspmgc** command.

## Related Commands

Command	Description
<b>addmgc</b>	Adds a call agent (MGC).
<b>delmgc</b>	Deletes a specified MGC.
<b>dspmgc</b>	Displays the configuration data of a specified MGC.
<b>dspmgcs</b>	Displays the configuration data of all configured call agents.

# addmgcgrpentry

To configure a call agent as part of a Media Gateway Controller (MGC) redundancy group and assign a priority value for the call agent, use the **addmgcgrpentry** command.

```
addmgcgrpentry <Red_Group_Num> <mgcRedGrpMgcNum> <mgcRedGrpPref>
```

## Syntax Description

<i>Red_Group_Num</i>	Call agent redundancy group number. Range is 1–8.
<i>mgcRedGrpMgcNum</i>	Call agent redundancy group identification number. Range is 1–8.
<i>mgcRedGrpPref</i>	Call agent preference value. This is the preference of the MGC within the group. Range is 1–8 with 1 being the highest. Default is 1.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

You must add a call agent to a call agent redundancy group regardless of the absence of additional call agents in the redundancy group.

Use the **dspmgcgrpparams** command to verify call agent redundancy group configuration data.

## Examples

In the following example, call agent redundancy group number 1 is configured with the call agent number 5 and assigned a priority level of 3:

```
nodename.1.28.VISM8.a> addmgcgrpentry 1 5 3
```

```
nodename.1.28.VISM8.a>
```

To display a list of call agent groups, use the **dspmgcgrps** command.

## Related Commands

Command	Description
<b>addmgcgrpprotocol</b>	Associates a call agent redundancy group with a gateway control protocol.
<b>cnfmgcgrpentry</b>	Modifies the priority level of a call agent within a call agent redundancy group.
<b>cnfmgcgrpparam</b>	Modifies the notification policy of a state change and the priority level of a call agent redundancy group.
<b>cnfsrcppeer</b>	Configures the SRCP parameters when SRCP is the selected protocol for communication between the VISM card and call agent.
<b>cnfsrcppeergrpparam</b>	Modifies the SRCP heartbeat interval and maximum UDP size for a specified call agent redundancy group.
<b>delmgcgrpentry</b>	Deletes a call agent from a call agent redundancy group.
<b>delmgcgrpprotocol</b>	Deletes an MGCP from a specified call agent redundancy group.
<b>dspmgcgrpparams</b>	Displays all configured call agent redundancy group parameters.
<b>dspmgcgrpprotocols</b>	Displays all configured call agent redundancy group protocols.

<b>Command</b>	<b>Description</b>
<b>dspmgcgrps</b>	Displays all configured call agent redundancy groups.
<b>dspsrcppeergrpparams</b>	Displays the SRCP parameters for all call agent redundancy groups that have SRCP added.

# addmgcgrpprotocol

To associate a call agent redundancy group with a gateway control protocol (xGCP) and configure call agent group protocol control data, use the **addmgcgrpprotocol** command.

```
addmgcgrpprotocol <Red_Group_Num> <protocol_number> [Qrntn_Persist] <Qrntn_Def>
<Sign_OnOff> <Prov_Resp> <RspAck_Attr> <Disc_Proc> <Cancel_Graceful>|
```

Syntax Description	
<i>Red_Group_Num</i>	Call agent redundancy group number. Range is 1–8.
<i>protocol_number</i>	Protocol number. Values are <ul style="list-style-type: none"> <li>• 1 = MGCP 0.1</li> <li>• 2 = SGCP 1.1+</li> <li>• 3 = SRCP 1.0.2</li> <li>• 4 = SGCP 1.5</li> <li>• 5 = MGCP 1.0</li> <li>• 6 = TGCP 1.0</li> </ul>
<i>Qrntn_Persist</i>	(Optional) Sets the quarantine handling method for persistent events. Values are <ul style="list-style-type: none"> <li>• 1 = Quarantine persistent events (default)</li> <li>• 2 = Do not quarantine persistent events</li> </ul>
<i>Qrntn_Def</i>	(Optional) Sets the default quarantine handling method for each protocol. Values are <ul style="list-style-type: none"> <li>• 1 = Step, process (default for MGCP 1.0 and TGCP 1.0)</li> <li>• 2 = Step, discard (default for MGCP 0.1, SGCP 1.1+, SRCP 1.0.2, and SGCP 1.5)</li> <li>• 3 = Loop, process</li> <li>• 4 = Loop, discard</li> </ul> <p><b>Note</b> Step means one notification command is generated per notification request. Loop means multiple notification commands are generated per notification request.</p>
<i>Sign_OnOff</i>	(Optional) Value you can use to delete events. <ul style="list-style-type: none"> <li>• 1 = Delete events from the previous list if they are not present in the current list. (Default for MGCP 0.1, SGCP 1.1+, SRCP 1.0.2, and SGCP 1.5.)</li> <li>• 2 = Delete events from the previous list only if the event is present in the current list with a hyphen (-) as the parameter. (Default for MGCP 1.0 and TGCP 1.0.)</li> </ul>
<i>Prov_Resp</i>	(Optional) Value you can use to enable or disable the sending of a provisional response. <ul style="list-style-type: none"> <li>• 1 = On (default for MGCP 1.0 and TGCP 1.0)</li> <li>• 2 = Off (default for MGCP 0.1, SGCP 1.1+, SRCP 1.0.2, and SGCP 1.5)</li> </ul>

<code> RspAck_Attr </code>	(Optional) Value you can use to enable or disable sending a response acknowledgment. <ul style="list-style-type: none"> <li>• 1 = On (default for MGCP 1.0 and TGCP 1.0)</li> <li>• 2 = Off (default for MGCP 0.1, SGCP 1.1+, SRCP 1.0.2, and SGCP 1.5)</li> </ul>
<code> Disc_Proc </code>	(Optional) Value you can use to enable or disable the disconnect method. If this value is 1, the endpoint has become disconnected and is now trying to establish connectivity. <ul style="list-style-type: none"> <li>• 1 = On (default for MGCP 1.0 and TGCP 1.0)</li> <li>• 2 = Off (default for MGCP 0.1, SGCP 1.1+, SRCP 1.0.2, and SGCP 1.5)</li> </ul>
<code> Cancel_Graceful </code>	(Optional) Value you can use to cancel a previously issued graceful restart in progress command. <ul style="list-style-type: none"> <li>• 1 = On (default for MGCP 1.0 and TGCP 1.0)</li> <li>• 2 = Off (default for MGCP 0.1, SGCP 1.1+, SRCP 1.0.2, and SGCP 1.5)</li> </ul>

**Command Modes**

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines**

This command allows you to add multiple protocols to the same redundancy group.

**Examples**

In the following example, call agent redundancy group number 3 is assigned gateway control protocol number 5, MGC 1.0:

```
nodename.1.28.VISM8.a> addmgcgrpprotocol 3 5
```

```
nodename.1.28.VISM8.a>
```

To display the call agent redundancy group protocols, use the **dspmgcgrpprotocols** command.

**Related Commands**

Command	Description
<b>addmgcgrppentry</b>	Configures call agents as part of an MGC redundancy group and assigns a priority value for a call agent.
<b>cnfdisctimers</b>	Configures wait delay timers for the disconnected procedure.
<b>cnfmgcgrppentry</b>	Modifies the priority level of a call agent within a call agent redundancy group.
<b>cnfmgcgrpparam</b>	Modifies the notification policy of a state change and the priority level of a call agent redundancy group.
<b>cnfmgcgrpprotocol</b>	Configures call agent group protocol data.
<b>cnfsrcppeer</b>	Configures the SRCP parameters when SRCP is the selected protocol for communication between the VISM card and call agent.
<b>cnfsrcppeergrpparam</b>	Modifies the SRCP heartbeat interval and maximum UDP size for a specified call agent redundancy group.
<b>delmgcgrppentry</b>	Deletes a call agent from a call agent redundancy group.

<b>Command</b>	<b>Description</b>
<b>delmgcgrpprotocol</b>	Deletes an MGCP from a specified call agent redundancy group.
<b>dspdisctimers</b>	Displays the disconnect wait delay times.
<b>dspmgcgrpparams</b>	Displays all configured call agent redundancy group parameters.
<b>dspmgcgrpprotocols</b>	Displays all configured call agent redundancy group protocols.
<b>dspmgcgrps</b>	Displays all configured call agent redundancy groups.
<b>dspsrcppeergrpparams</b>	Displays the SRCP parameters for all call agent redundancy groups that have SRCP added.

# addport

To add a virtual port between the VISM and PXM cards, use the **addport** command.

## addport

### Syntax Description

This command has no arguments.

### Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

### Usage Guidelines

This command automatically associates the VISM card and the virtual port with the MGX 8000 Series platform.



#### Note

If the VISM card is reset after the execution of this command but before execution of the **addrscprtn** command, an error message is displayed. The error has no effect on the system and can be ignored.

When you execute this command, the port number is set to one of the following values:

- 1 = PXM1 cards
- 255 = PXM1E and PXM45 cards

### Examples

The following example shows a virtual port being added between the VISM and PXM cards:

```
nodename.1.28.VISM8.a> addport
```

```
nodename.1.28.VISM8.a>
```

### Related Commands

Command	Description
<b>delpport</b>	Deletes a VISM port on the packet network side.

# addrscrtn

To add a resource partition for a virtual port, use the **addrscrtn** command.

```
addrscrtn <controller_id>
```

## Syntax Description

<i>controller_id</i>	Identification number for the controller to which the resource partition is added. Range is 1–255.
	<ul style="list-style-type: none"> <li>• 1 = PXM1 (PAR)</li> <li>• 2 = PXM1E/PXM45 (PNNI)</li> </ul>

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

You must configure a virtual port with the **addport** command before you use this command.

If you are using a PXM1 card, this command adds an entry with resource partition number 1. If you are using a PXM1E or PXM45 card, this command adds the entries with resource partition number 2.

## Examples

In the following example, a resource partition is added to controller number 2:

```
nodename.1.28.VISM8.a> addrscrtn 2
```

```
nodename.1.28.VISM8.a>
```

To display information about the resource partition, use the **dsprscrtn** command.

## Related Commands

Command	Description
<b>delrscrtn</b>	Deletes a resource partition.
<b>dsprscrtn</b>	Displays information about a resource partition.



# addrtpcon

To add a static Real-Time Transport Protocol (RTP) VoIP trunking connection, use the **addrtpcon** command.

```
addrtpcon <rtp_conn_index> <rtp_endpt-num> <rtp_local_port> <rtp_remote_port>
<rtp_remote_GW_IP_Addr> <voice_codec_type> |<voice_packet_period> <bearer_prec>
<bearer_tos> <conn_mode> <ecan> <VAD_OnOff> <VAD_Timer> <CAS_Transport>
<DTMF_Transport> <ICS> <payload>|
```

## Syntax Description

<i>rtp_conn_index</i>	Connection identification number. It can be in the range 1–248.
<i>rtp_endpt-num</i>	Endpoint number. It can be a value from one of the following ranges: <ul style="list-style-type: none"> <li>• Template 1 <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2 <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3 <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4 <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5 <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>
<i>rtp_local_port</i>	Static RTP local port number. It can be an even number in the range from 49648 to 50142. <p><b>Note</b> The odd numbers within the <i>rtp_local_port</i> range are reserved for Real-Time Conferencing Protocol (RTCP) ports.</p>
<i>rtp_remote_port</i>	Static RTP remote port number. It can be an even number in the range from 16384 to 50142. <p><b>Note</b> The odd numbers within the <i>rtp_remote_port</i> range are reserved for RTCP ports.</p>
<i>rtp_remote_GW_IP_Addr</i>	IP address of the remote VISM card, in dotted decimal format (nnn.nnn.nnn.nnn).

<i>voice_codec_type</i>	The type of coding/decoding to be performed on the data stream. It can be one of the following values: <ul style="list-style-type: none"> <li>• 1 = G.711u</li> <li>• 2 = G.711a</li> <li>• 3 = G.726-32k</li> <li>• 4 = G.729a</li> <li>• 5 = G.729ab</li> <li>• 6 = Clear channel (VAD must be off)</li> <li>• 7 = G.726-16k</li> <li>• 8 = G.726-24k</li> <li>• 9 = G.726-40k</li> <li>• 11 = G.723.1-H</li> <li>• 12 = G.723.1a-H</li> <li>• 13 = G.723.1-L</li> <li>• 14 = G.723.1a-L</li> <li>• 15 = Lossless (VAD must be off)</li> </ul>
<i>voice_packet_period</i>	(Optional) Packetization period (defined in milliseconds). It can be one of the following values: <ul style="list-style-type: none"> <li>• 10</li> <li>• 20</li> <li>• 30</li> <li>• 40</li> <li>• 60</li> </ul>
<i>bearer_preced</i>	(Optional) Bearer precedence. It can be in the range from 0 to 7. (Default is 5.)
<i>bearer_tos</i>	(Optional) Bearer type of service (ToS). It can be one of the following values: <ul style="list-style-type: none"> <li>• 0 (default)</li> <li>• 1</li> <li>• 2</li> <li>• 4</li> <li>• 8</li> </ul>
<i>conn_mode</i>	(Optional) Connection mode. It can be one of the following values: <ul style="list-style-type: none"> <li>• 1 = VISM sends packets.</li> <li>• 2 = VISM receives packets.</li> <li>• 3 = VISM sends and receives packets (default).</li> <li>• 4 = Inactive. VISM does not send or receive packets.</li> </ul>
<i>ecan</i>	(Optional) Enables or disables echo cancellation (ECAN). It can be one of the following values: <ul style="list-style-type: none"> <li>• 1 = Enables ECAN (default)</li> <li>• 2 = Disables ECAN</li> </ul>

VAD_OnOff	(Optional) Enables or disables voice activity detection (VAD). It can be one of the following values: <ul style="list-style-type: none"> <li>• 1 = On</li> <li>• 2 = Off (default)</li> </ul>
VAD_Timer	(Optional) The VAD holdover time (defined in milliseconds) in the range 250–65535.
CAS_Transport	(Optional) Enables or disables channel-associated signaling (CAS) transport. It can be one of the following values: <ul style="list-style-type: none"> <li>• 1 = On (default)</li> <li>• 2 = Off</li> </ul>
DTMF_Transport	(Optional) Enables or disables DTMF tone transport. It can be one of the following values: <ul style="list-style-type: none"> <li>• 1 = On (default)</li> <li>• 2 = Off</li> </ul> <p><b>Note</b> The <i>DTMF_Transport</i> argument value must be set to 1 (on) when the <i>voice_codec_type</i> is configured for any codec other than G.711 or G.726.</p>
ICS	(Optional) Enables or disables idle code suppression (ICS) for the channel identifier (CID). It can be one of the following values: <ul style="list-style-type: none"> <li>• 1 = Enables ICS</li> <li>• 2 = Disables ICS (default)</li> </ul>
payload	(Optional) Assigns the payload type. Range is 0–255. <p><b>Note</b> If you do not use the <i>payload</i> argument to assign the payload type, the dynamic payload is set to the static value of the DSP codec type.</p>

**Command Modes**

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines**

The G.723.1 codecs are supported for VISM-PR cards and are not supported for VISM cards.

**Examples**

In the following example, RTP trunking connection 26 is added and configured with these values: endpoint number 200, static RTP local port number 50000, static RTP remote port number 49648, remote IP address 209.165.200.224, G.726-32 codec type, 20-ms packetization period, bearer precedence of 3, bearer ToS of 1, VISM sends and receives packets, ECAN and VAD enabled, 400-ms VAD holdover time, CAS transport enabled, DTMF tone transport enabled, idle code suppression for CID enabled, and the 255 payload type.

```
nodename.1.28.VISM8.a> addrtpcon 26 200 50000 49648 209.165.200.224 3 20 3 1 3 1 1 400 1 1 1 255
```

```
nodename.1.28.VISM8.a>
```

To display the configuration of the RTP trunking connection you added, use the **dsprtpcon** command.

## Related Commands

Command	Description
<b>addlapdtrunk</b>	Adds an LAPD trunk to a specific VISM card line.
<b>addrudptrunk</b>	Adds an ISDN PRI backhaul RUDP session for an LAPD trunk connection.
<b>clrtpcnt</b>	Clears the RTP counters (statistics) for a specific static RTP connection.
<b>cnfdynamicpayload</b>	Enables or disables the dynamic payload on the current VISM card.
<b>cnflapdtrunkpvc</b>	Assigns the PVC trunk type that carries LAPD messages for the current VISM card.
<b>cnflntrunkcond</b>	Enables or disables line conditioning on a VISM card line.
<b>cnfrtpcon</b>	Modifies an existing static RTP VoIP trunking connection.
<b>cnfrudptrunkrmtip</b>	Modifies the remote VISM IP address used in the ISDN PRI backhaul RUDP trunk for a specified session.
<b>dellapdtrunk</b>	Deletes an LAPD configured line.
<b>delrtpcon</b>	Deletes a static RTP VoIP trunking connection.
<b>delrudptrunk</b>	Deletes an ISDN PRI backhaul RUDP session that is associated with an LAPD.
<b>dsdynamicpayload</b>	Displays the card level configuration of dynamic payload on the current VISM card.
<b>dsplapd</b>	Displays data about an LAPD.
<b>dsplapdtrunkpvc</b>	Displays the assigned PVC trunk type that carries LAPD trunk messages for the current VISM card.
<b>dsplapdtrunks</b>	Displays the configuration data of all LAPD trunks.
<b>dsprtpcnt</b>	Displays the bearer counters (statistics) for a specific RTP VoIP trunking connection.
<b>dsprtpcon</b>	Displays the configuration data of a specific static RTP VoIP trunking connection.
<b>dsprtpconnstat</b>	Displays the RTP connection statistics for a specified endpoint.
<b>dsprtpcons</b>	Displays the configuration data of all static RTP VoIP trunking connections.
<b>dsprudptrunk</b>	Displays the configuration data of a specified ISDN PRI backhaul RUDP session.
<b>dsprudptrunks</b>	Displays the configuration data of all ISDN PRI backhaul RUDP sessions.

# addrudptrunk

To add an ISDN PRI backhaul Reliable User Datagram Protocol (RUDP) session for a Link Access Protocol D Channel (LAPD) trunk connection, use the **addrudptrunk** command.

```
addrudptrunk <session_number> <local_port> <remote_port> <Remote_Gw_IP>
```

## Syntax Description

<i>session_number</i>	Identifying session number in the range 1–64.
<i>local_port</i>	Local port number. Range is 1124–49151.
<i>remote_port</i>	Remote port number. Range is 1124–65535.
<i>Remote_Gw_IP</i>	IP address of the remote VISM card, in dotted decimal format (nnn.nnn.nnn.nnn).

## Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the ISDN PRI backhaul RUDP session number 40 is added to the LAPD trunk connection with local port 1024, remote port 2006, and remote IP address 209.165.200.244:

```
nodename.1.27.VISM8.a > addrudptrunk 40 1024 2006 209.165.200.244
```

```
nodename.1.27.VISM8.a >
```

To display the configuration of the RUDP you added, use the **dsprudptrunk** command.

## Related Commands

Command	Description
<b>addlapdtrunk</b>	Adds an LAPD trunk to a specific VISM card line.
<b>addrtpton</b>	Adds a static RTP VoIP trunking connection.
<b>clrrtpcnt</b>	Clears the RTP counters (statistics) for a specific static RTP connection.
<b>cnflapdtrunkpvc</b>	Assigns the PVC trunk type that carries LAPD messages for the current VISM card.
<b>cnflntrunkcond</b>	Enables or disables line conditioning on a VISM card line.
<b>cnfrtpton</b>	Modifies an existing static RTP VoIP trunking connection.
<b>cnfrudptrunkrmtip</b>	Modifies the remote VISM IP address used in the ISDN PRI backhaul RUDP trunk for a specified session.
<b>dellapdtrunk</b>	Deletes an LAPD configured line.
<b>delrtpton</b>	Deletes a static RTP VoIP trunking connection.
<b>delrudptrunk</b>	Deletes an ISDN PRI backhaul RUDP session that is associated with an LAPD.
<b>dsplapd</b>	Displays data about an LAPD.
<b>dsplapdtrunkpvc</b>	Displays the assigned PVC trunk type that carries LAPD trunk messages for the current VISM card.

Command	Description
<b>dsplapdtrunks</b>	Displays the configuration data of all LAPD trunks.
<b>dsrtpcnt</b>	Displays the bearer counters of the statistics for a specific RTP VoIP trunking connection.
<b>dsrtpcon</b>	Displays the configuration data of a specific static RTP VoIP trunking connection.
<b>dsrtpcons</b>	Displays the configuration data of all static RTP VoIP trunking connections.
<b>dsprudp trunk</b>	Displays the configuration data of a specified ISDN PRI backhaul RUDP session.
<b>dsprudp trunks</b>	Displays the configuration data of all ISDN PRI backhaul RUDP sessions.

# addses

To add a PRI backhaul session between a VISM card and a call agent, use the **addses** command.

```
addses <session_number> <group_number> <priority> <local_port> <remote_port>
```

Syntax Description	
<i>session_number</i>	Session number in the range 1–64. <b>Note</b> Up to 64 sessions can be created in a session group.
<i>group_number</i>	Number of the session group to which the session is added. The range is 1–16. <b>Note</b> Only group 1 is supported.
<i>priority</i>	The priority level determines which session becomes active if a session fails within the same group. Range is 1 (highest) to 4 (lowest).
<i>local_port</i>	The local port number is the VISM port number used for the session. Range is 1124–49151.
<i>remote_port</i>	The remote port number is the call agent port number used for the session. Range is 1124–65535.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

**Usage Guidelines** Before you use this command, add a session group for the session.

## Examples

In the following example, PRI backhaul session number 4 is added to session group 1 between the VISM card and the callagent1 call agent:

```
nodename.1.27.VISM8.a > addses 4 1 2 1124 1124
```

```
nodename.1.27.VISM8.a >
```

To display the session you added, use the **dspases** command.

Related Commands	Command	Description
	<b>delses</b>	Deletes a PRI backhaul session.
	<b>dspases</b>	Displays information about a PRI backhaul session.
	<b>dspases</b>	Displays information about all PRI backhaul sessions.

# addsesgrp

To add a PRI backhaul session group between a VISM card and a call agent, use the **addsesgrp** command.

```
addsesgrp <group_number> <set_number> <mgc_name>
```

## Syntax Description

*group\_number* Session group number in the range 1–16.

*set\_number* Set number in the range 1–8.

**Note** Only session set number 1 is supported.

*mgc\_name* Domain name of the call agent, a text string of 1 to 64 alphanumeric characters.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

## Usage Guidelines

Specify the following parameters:

- Set number to which the group belongs
- Call agent with which the group sessions are associated

Before adding a session group, you must add a session set.

## Examples

In the following example, PRI backhaul session group 2 is added between the VISM card and the Jack call agent with a session set number 1:

```
nodename.1.27.VISM8.a > addsesgrp 2 1 Jack
```

```
nodename.1.27.VISM8.a >
```

To display the configuration of the session group you added, use the **dspsesgrp** command.

## Related Commands

Command	Description
<b>delsesgrp</b>	Deletes a PRI backhaul session group.
<b>dspsesgrp</b>	Displays configuration data of a PRI backhaul session group.
<b>dspsesgrps</b>	Displays configuration data about all PRI backhaul session groups.



# addseset

To add a PRI backhaul session set between a VISM card and a call agent, use the **addseset** command.

```
addseset <set_number> <fault_tolerant>
```

## Syntax Description

<i>set_number</i>	Set number in the range from 1 to 16. <b>Note</b> Only session set number 1 is supported.
<i>fault_tolerant</i>	Enables or disables fault tolerance. Values are <ul style="list-style-type: none"> <li>1 = Fault tolerance</li> <li>2 = No fault tolerance</li> </ul>

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

## Usage Guidelines

The *set\_number* argument value must be set to 1.

## Examples

In the following example, PRI backhaul session set number 1 is added between a VISM card and a call agent:

```
nodename.1.27.VISM8.a > addseset 1
```

```
nodename.1.27.VISM8.a >
```

To display the configuration of the session set you added, use the **dspseset** command.

## Related Commands

Command	Description
<b>delseset</b>	Deletes a PRI backhaul session set.
<b>dspseset</b>	Displays configuration data about a specified PRI backhaul session set.

# addtoneplan

To add a provisional tone plan to the current VISM card, use the **addtoneplan** command.

```
addtoneplan <tone_plan_region> <tone_plan_version> <tone_plan_file>
```

## Syntax Description

<i>tone_plan_region</i>	Tone plan country or region which you want to add to VISM. Range is 1–64 alphanumeric characters and can contain underscores ( _ ). This field is case sensitive.
<i>tone_plan_version</i>	Tone plan version number of the tone plan country or region you are adding to VISM. Range is 1–65535.
<i>tone_plan_file</i>	Tone plan file name (names are located in the TFTP server /TFTPBOOT directory). Range is 1–32 alphanumeric characters, and the name can contain underscores ( _ ), dashes ( - ), and dots ( . ).

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

## Usage Guidelines

Before using the **addtoneplan** command, complete the following steps:

- Step 1** Create a new tone plan using the format below.
- Step 2** Place the new tone plan in the TFTP server /TFTPBOOT directory.
- Step 3** Add the TFTP server domain name to the VISM card by entering the **adddn** command.
- Step 4** Add the IP address of the TFTP server domain name by entering the **adddnip** command.
- Step 5** Configure the parameters of the TFTP server domain name by entering the **cnftftpdn** command.



### Note

Provisional tone plans are those that you create. Built-in, or preconfigured, tone plans cannot be added with this command. Built-in tone plans are added to the system automatically upon boot up.

You can add a maximum of 32 provisional tone plans to the system. You must create provisional tone plan files with the following format:

```

////////////////////////////////////
// Comments : Text after '/' through the end of the line are ignored.
////////////////////////////////////
System Section
////////////////////////////////////
version 2
description "Tone Plan Defined for CompanyX"
////////////////////////////////////
Tones Section
////////////////////////////////////
dial_tone 1, 2, 3, 4, 5, 6, 7
busy_tone 1, 2, 3, 4, 5, 6, 7, 8, 9, 0
stutter_tone 1, 2, 3
dtmf_digit 1, 2

```

**File Name**—The name of the tone plan file is restricted to 64 characters.

**System Section** includes mandatory keywords. Use this section to define tone plans. This section can contain only the following two lines:

- *version*—Use version 2 to define the tone plan with wireless tones. Version 2 includes the format of version 1 with additional syntax items for defining the tones.
- *description*—Provide a general description of the tone plan.

**Tones Section** includes mandatory keywords. Use this section to define the call progress tones. Specify each tone on a separate line, and use white spaces as delimiters.

The syntax of the tone plan definition file must be specified in the following order and on the same line:

```

<tone_name> <number_of_freq_components> <amp_of_first> <amp_of_second> <timeout>
<freq_1st_cadence1> <freq_2nd_cadence1> <ontime_cadence1> <offtime_cadence1>
<repeat_count_cadence1>
[<freq_1st_cadence2> <freq_2nd_cadence2> <ontime_cadence2> <offtime_cadence2>
<repeat_count_cadence2>]
[<freq_1st_cadence3> <freq_2nd_cadence3> <ontime_cadence3> <offtime_cadence3>
<repeat_count_cadence3>]
[<freq_1st_cadence4> <freq_2nd_cadence4> <ontime_cadence4> <offtime_cadence4>
<repeat_count_cadence4>]

```

Table 10-9 lists the mandatory values for defining the call tones.

**Table 10-9 Mandatory Parameters for Defining Tones**

Syntax Item	Description
<i>tone_name</i>	<p>Identifies the tone as one of the following values:</p> <ul style="list-style-type: none"> <li>• dial_tone</li> <li>• stutter_tone</li> <li>• ring_back_tone</li> <li>• busy_tone</li> <li>• fast_busy_tone</li> <li>• alert_tone</li> <li>• intercept_tone</li> <li>• confirmation_tone</li> <li>• answer_tone</li> <li>• call_waiting_tone</li> <li>• recall_dial_tone</li> <li>• berge_in_tone</li> <li>• ppc_insuffice_tone</li> <li>• ppc_warn1_tone</li> <li>• ppc_warn2_tone</li> <li>• ppc_warn3_tone</li> <li>• ppc_disc_tone</li> <li>• ppc_redirect_tone</li> <li>• all_tone_off</li> <li>• pip_tone</li> <li>• warning_tone</li> <li>• denial_tone</li> <li>• custom1_tone</li> <li>• custom2_tone</li> <li>• custom3_tone</li> </ul> <ul style="list-style-type: none"> <li>• custom4_tone</li> <li>• custom5_tone</li> <li>• custom6_tone</li> <li>• custom7_tone</li> <li>• custom8_tone</li> <li>• custom9_tone</li> <li>• custom10_tone</li> <li>• custom11_tone</li> <li>• custom12_tone</li> <li>• custom13_tone</li> <li>• custom14_tone</li> <li>• custom15_tone</li> <li>• custom16_tone</li> <li>• custom17_tone</li> <li>• custom18_tone</li> <li>• custom19_tone</li> <li>• custom20_tone</li> <li>• custom21_tone</li> <li>• custom22_tone</li> <li>• custom23_tone</li> <li>• custom24_tone</li> <li>• custom25_tone</li> <li>• custom26_tone</li> <li>• custom27_tone</li> <li>• custom28_tone</li> </ul>
<i>number_of_freq_components</i>	<p>Number of frequency components. Use one of the following values:</p> <ul style="list-style-type: none"> <li>• 1</li> <li>• 2</li> </ul>
<i>amp_of_first</i> <sup>1</sup>	<p>Peak-to-peak amplitude of the first frequency according to the following formula:</p> $46348 * 10 \text{ to the power of } (\text{dBm}/20)$ <p>Value range is 0–65535.</p>

**Table 10-9** Mandatory Parameters for Defining Tones (continued)

Syntax Item	Description
<i>amp_of_second</i> <sup>1</sup>	Peak-to-peak amplitude of the second frequency according to the following formula: $46348 * 10$ to the power of (dBm/20) Value range is 0–65535.
<i>timeout</i>	Time when tone generation is stopped. Range is 0–65535 ms. A value of 0 means no timeout, and thus the tone is stopped explicitly by call agent.
<i>freq_1st_cadence1</i>	First frequency in cadence 1. Range is 0–3999 Hz.
<i>freq_2nd_cadence1</i>	Second frequency in cadence 1. Range is 0–3999 Hz.
<i>ontime_cadence1</i>	First on-time that the tone plays in cadence 1. Range is 0–65535 ms.
<i>offtime_cadence1</i>	First off-time that the tone does not play in cadence 1. Range is 0–65535 ms.
<i>repeat_count_cadence1</i>	Repeat count for cadence 1. Range is 1–65535 ms.

1. To specify amplitudes of DTMF and MFR1 tones, you must use the following syntax: **dtmf\_digit** amp-low amp-high or **mf\_r1\_digit** amp-low amp-high. The amp-low value = low group frequency. The amp-high value = high group frequency.



**Note** If you do not specify the amplitudes of dual-tone multifrequency (DTMF) and multifrequency (MFR) 1 tones, the default value of 16384 (–9 dBm) is applied.

Table 10-10 describes the optional parameters you can use to define the tones.

**Table 10-10** Optional Parameters for Defining Tones

Syntax Item	Description
<i>freq_1st_cadence2</i>	First frequency in cadence 2. Range is 0–3999 Hz.
<i>freq_2nd_cadence2</i>	Second frequency in cadence 2. Range is 0–3999 Hz.
<i>ontime_cadence2</i>	First on time that the tone plays in cadence 2. Range is 0–65535 ms.
<i>offtime_cadence2</i>	First off time that the tone does not play in cadence 2. Range is 0–65535 ms.
<i>repeat_count_cadence2</i>	Repeat count for cadence 2. Range is 1–65535 ms.
<i>freq_1st_cadence3</i>	First frequency in cadence 3. Range is 0–3999 Hz.
<i>freq_2nd_cadence3</i>	Second frequency in cadence 3. Range is 0–3999 Hz.
<i>ontime_cadence3</i>	First on time that the tone plays in cadence 3. Range is 0–65535 ms.
<i>offtime_cadence3</i>	First off time that the tone does not play in cadence 3. Range is 0–65535 ms.
<i>repeat_count_cadence3</i>	Repeat count for cadence 3. Range is 1–65535 ms.
<i>freq_1st_cadence4</i>	First frequency in cadence 4. Range is 0–3999 Hz.
<i>freq_2nd_cadence4</i>	Second frequency in cadence 4. Range is 0–3999 Hz.

**Table 10-10** Optional Parameters for Defining Tones (continued)

Syntax Item	Description
<i>ontime_cadence4</i>	First on time that the tone plays in cadence 4. Range is 0–65535 ms.
<i>offtime_cadence4</i>	First off time that the tone does not play in cadence 4. Range is 0–65535 ms.
<i>repeat_count_cadence4</i>	Repeat count for cadence 4. Range is 1–65535 ms.

**Examples**

In the following example, the tone plan file name `singp_3`, with region `singapore` and version number 11, is added to the current VISM card:

```
nodename.1.27.VISM8.a > addtoneplan singapore 11 singp_3
```

The appropriate tone plan file, with associated region and version, is downloaded, parsed, and stored in memory. To display the configuration of the tone plan you added, use the **dsptoneplan** command.

**Related Commands**

Command	Description
<b>cnflnringback</b>	Configures the ring-back tone method for a specified line on the current VISM card.
<b>cnflntoneplan</b>	Assigns a tone plan to a specified VISM card line.
<b>cnflntonetimeout</b>	Modifies the timeout periods of all call progress tones supported by VISM on a specified VISM card line.
<b>dellntoneplan</b>	Deletes the tone plan configuration of a specified VISM card line.
<b>deltoneplan</b>	Deletes a previously added tone plan from the current VISM card.
<b>dsplnringback</b>	Displays the ring-back tone type for a specified line on the current VISM card.
<b>dsplntoneplan</b>	Displays the tone plan configuration of a specified VISM card line.
<b>dsplntonetimeout</b>	Displays the configured timeout periods for all call progress tones of a specified VISM card line.
<b>dsptonebuiltinplans</b>	Displays all preconfigured (built-in) tone plans on the current VISM card.
<b>dsptoneplan</b>	Displays the tone configuration of a specified tone plan—either a preconfigured (built-in) or user-added tone plan.
<b>dsptoneplans</b>	Displays the tone configuration of all tone plans—either preconfigured (built-in) or user-added tone plans.
<b>dsptoneprovplans</b>	Displays all user-added (provisional) tone plans.
<b>dsptoneregionplans</b>	Displays a list of all tone plans for the countries and regions whose name partially or completely matches the name you supply.

# addtrapfilter

To add traps to the list of traps to be filtered on the VISM-PR card, use the **addtrapfilter** command.

```
addtrapfilter <trapNumber> [trapFilterTimer]
```

Syntax Description	
<i>trapNumber</i>	Trap number. Range is 50650–50799.
<i>[trapFilterTimer]</i>	(Optional) Trap filter timer. Range is 0–65536 minutes. A value of 0 indicates forever. If this argument is not specified, a default value of 15 minutes is used.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** This command is applicable only to the VISM-PR card. You can add only one trap at a time. Traps 50691–50695 cannot be added to the trap list.

**Examples** In the following example, channel trap TRAP\_VISM\_CHAN\_ADDED is added:

```
nodename.1.28.VISM8.a > addtrapfilter 50755
```

```
nodename.1.28.VISM8.a >
```

To display the trap filters on the VISM-PR card, use the **dsalltrapfilters** command.

Related Commands	Command	Description
	<b>cnftrapfilterfeature</b>	Enables or disables the trap filtering feature.
	<b>cnftrapfiltertimer</b>	Configures the trap filter timer.
	<b>delalltrapfilters</b>	Deletes all traps from the filter list.
	<b>deltrapfilter</b>	Deletes a trap from the filter list.
	<b>dsalltrapfilters</b>	Displays all configured trap filters.
	<b>dsprtrapfilter</b>	Displays the current trap filter configurations.

# addxgcppersistevt

To add persistent xGCP (various gateway control protocol) events, use the **addxgcppersistevt** command.

**addxgcppersistevt** <index> <persistent\_event>

Syntax Description	
<i>index</i>	Index package event number in the range 1–16.
<i>persistent_event</i>	The xGCP package and event string listed as persistent. Values are <ul style="list-style-type: none"> <li>• r/co4 = Network continuity test detect</li> <li>• g/ft = Fax tone</li> <li>• g/mt = Modem tone</li> <li>• g/vbd = Voiceband data</li> <li>• g/vbdt = Voiceband data termination</li> <li>• l/hu, bl/hu = On hook</li> <li>• l/hd, blhd = Off hook</li> <li>• ms/ans, dt/ans, md/ans, mo/ans = Answer</li> <li>• ms/sup, dt/sup, md/sup = Setup</li> <li>• ms/rel, dt/rel, md/rel, mo/rel = Release</li> <li>• ms/rtc, dt/rlc, md/rlc, mo/rlc = Release complete</li> <li>• ms/res, dt/res, md/res = Resume</li> <li>• ms/sus, dt/sus, md/sus = Suspend</li> <li>• md/awk = Acknowledgment wink</li> <li>• mo/rbz = Reverse make busy</li> </ul>

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** This command notifies the call agent of the specified event without the need for an xGCP notification request. By default, there are no persistent xGCP events. Only valid xGCP strings (described in the *persistent\_event* syntax description list) can be configured with this command.

**Examples** In the following example, the persistent event index number 1 is added for the voiceband data package:

```
nodename.1.28.VISM8.a > addxgcppersistevt 1 g/vbd
nodename.1.28.VISM8.a >
```



Related Commands	Command	Description
	<b>cnfcasflashtime</b>	Configures the minimum and maximum CAS on-hook time periods for incoming flash hooks on a specified endpoint.
	<b>cnfcasglareattrib</b>	Configures the direction of CAS calls and the glare policy for a specified endpoint.
	<b>cnfcaspackage</b>	Configures MGCP packages to observe persistent CAS events in the context of incoming and outgoing CAS calls on a specified endpoint.
	<b>cnflndigitorder</b>	Assigns the order in which ANI digits and DNIS digits are dialed during an outgoing FGD call on the endpoints of a specified VISM card line.
	<b>delxgcpersistevt</b>	Deletes a persistent xGCP event.
	<b>dspcasglareattrib</b>	Displays the direction of CAS calls and the glare policy for a specified endpoint.
	<b>dspcaspackage</b>	Displays the MGCP packages configured to observe persistent CAS events in the context of incoming and outgoing CAS calls on a specified endpoint.
	<b>dspcastimers</b>	Displays the currently configured CAS timers for a specified endpoint.
	<b>dsplndigitorder</b>	Displays the order in which ANI digits and DNIS digits are dialed during an outgoing FGD call on the endpoints of a specified VISM card line.

## CC

To navigate from the current (logged on) card to another card in the MGX 8000 Series platform, use the **cc** command.

```
cc <slotNum>
```

---

### Syntax Description

<i>slotNum</i>	The slot number in the MGX 8000 Series platform that contains the card you want to access and configure. Ranges are <ul style="list-style-type: none"> <li>• 1–14 for MGX 8230 and MGX 8830 chassis</li> <li>• 1–32 for MGX 8250, MGX 8850 (PXM1, PXM1E, and PXM45) chassis</li> </ul>
----------------	--

---



---

### Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

---

### Usage Guidelines

When you execute this command, the card residing in the slot identified by the *slotNum* value becomes active and is identified in the command line prompt. If there is no card in the slot identified by the *slotNum* value, an error message is displayed on your terminal.

---

### Examples

In the following example, card in slot 22 was active, and now the card in slot 11 is active:

```
nodename.1.1.22.VISM.a > cc 11
node1.1.11.VISM.a >
```

---

### Related Commands

There are no related commands.

# chkflash

To verify the integrity of a VISM/VISM-PR card's flash memory, use the **chkflash** command.

## **chkflash**

---

**Syntax Description** This command has no arguments or keywords.

---

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

---

**Usage Guidelines** Follow standard CLI procedures for this command.

---

**Examples** In the following example, the current VISM card's flash memory is verified:

```
nodename.1.1.22.VISM.a > chkflash  
Program length = 248528  
Calculated checksum = 3d80a1fe stored checksum = 3d80a1fe  
Flash checksum passed
```

---

**Related Commands** There are no related commands.

# clralm

To clear alarms on a specific VISM/VISM-PR line, use the **clralm** command.

```
clralm -ds1 <LineNum>
```

## Syntax Description

<b>-ds1</b>	Mandatory line number argument identifier.
<i>LineNum</i>	Number of the line in which alarms are to be cleared. Range is 1–8.

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

This command clears alarms caused by the collection of statistical data. Alarms caused by network failure cannot be cleared by use of this command. For example, an alarm caused by a collection of bipolar errors can be cleared, but an alarm caused by a line failure cannot. Alarms that occur after you execute this command are not affected.

## Examples

In the following example, any alarms caused by statistical data are cleared from line 1:

```
nodename.1.1.22.VISM.a > clralm -ds1 1
```

```
nodename.1.1.22.VISM.a >
```

## Related Commands

Command	Description
<b>clralms</b>	Clears alarms on a VISM card.
<b>dspalm</b>	Displays the alarms associated with a specified line.
<b>dspalms</b>	Displays all alarms for the selected line type (T1 or E1) on a card.

# clralmcnt

To clear the alarm counters and statistics on a specified VISM/VISM-PR line, use the **clralmcnt** command.

**clralmcnt -ds1** *<LineNum>*

## Syntax Description

<b>-ds1</b>	Mandatory line number argument identifier.
<i>LineNum</i>	Number of the line for which you want to clear alarm counters and statistics. Range is 1–8.

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

After you execute this command, all counters are reset to 0.

## Examples

In the following example, alarm counters and statistics are cleared from line 1:

```
nodename.1.1.22.VISM.a > clralmcnt -ds1 1
```

```
nodename.1.1.22.VISM.a >
```

## Related Commands

Command	Description
<b>clralmcnts</b>	Clears all alarm counters and statistics on a VISM card.
<b>dspalmcnt</b>	Displays the alarm counters and statistics on a line.

# clralmcnts

To clear all the alarm counters and statistics on a VISM/VISM-PR card, use the **clralmcnts** command.

## **clralmcnts**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** After you execute this command, all counters are reset to 0.

**Examples** In the following example, the alarm counters and statistics are removed from the current VISM card:

```
nodename.1.1.22.VISM.a > clralmcnts
```

```
nodename.1.1.22.VISM.a >
```

## **Related Commands**

<b>Command</b>	<b>Description</b>
<b>clralmcnt</b>	Clears the alarm counters and statistics on a VISM line.
<b>dspalmcnt</b>	Displays the alarm counters and statistics for the current VISM card.

# clralms

To clear alarms on a VISM/VISM-PR card, use the **clralms** command.

## clralms

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** This command can clear alarms only if they are caused by the collection of statistical data. Alarms caused by network failure cannot be cleared. For example, an alarm caused by a collection of bipolar errors can be cleared, but an alarm caused by a line failure cannot. Alarms occurring after this command executes are not affected.

**Examples** In the following example, the alarms are cleared on the current VISM card:

```
nodename.1.1.22.VISM.a > clralms
nodename.1.1.22.VISM.a >
```

## Related Commands

Command	Description
<b>clralm</b>	Clears alarms on a specific line.
<b>dspalm</b>	Displays the alarms associated with a specified line.
<b>dspalms</b>	Displays all alarms for the selected line type.

# clrcacfailcntrs

To reset all connection admission control (CAC) failure statistics to 0, use the **clrcacfailcntrs** command.

**clrcacfailcntrs**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** This command is used for debugging purposes. It resets counters and isolates any VISM CAC-related failures. Counter values larger than 0 indicate that the gateway is low on resources.

**Examples** In the following example, the CAC failure statistics are reset to 0:

```
nodename.1.1.22.VISM.a > clrcacfailcntrs
```

```
nodename.1.1.22.VISM.a >
```

## Related Commands

Command	Description
<b>dspcacfailcntrs</b>	Displays all CAC failure statistics that are reset to 0.



# clrcscent

To reset the common channel signaling (CCS) counter values for a specified line and DS0, use the **clrcscent** command.

```
clrcscent <line_number> <ds0_number>
```

## Syntax Description

<i>line_number</i>	Number of the line for which CCS values are to be reset. Range is 1–8.
<i>ds0_number</i>	DS0 number. <ul style="list-style-type: none"> <li>• 1–24 = T1</li> <li>• 1–31 = E1</li> </ul>

## Command Modes

AAL2 trunking, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

After you execute this command, all counters are reset to 0.  
This command can be used for troubleshooting purposes.

## Examples

In the following example, the CCS counters are reset for DS0 1 on line 1:

```
nodename.1.1.22.VISM.a > clrcscent 1 1
nodename.1.1.22.VISM.a >
```

## Related Commands

Command	Description
<b>dspscsent</b>	Displays the CCS counter values for a specified line and DS0.

# clrcscnts

To reset the common channel signaling (CCS) counter values for all of the configured CCS channels on the VISM/VISM-PR card, use the **clrcscnts** command.

## clrcscnts

**Syntax Description** This command has no arguments or keywords

**Command Modes** AAL2 trunking, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** The command clears the High-Level Data Link Control (HDLC) counters of all the configured CCS channels on the VISM/VISM-PR card.

This command can be used for troubleshooting purposes.

**Examples** In the following example, the CCS counters are being reset for all of the configured CCS channels:

```
nodename.1.1.22.VISM.a > clrcscnts
```

```
nodename.1.1.22.VISM.a >
```

## Related Commands

Command	Description
<b>dspeccnt</b>	Displays the CCS counter values for a specified line and DS0.

# clrhistorystats

To clear the permanent virtual circuit (PVC) or channel identifier (CID) history statistics, use the **clrhistorystats** command.

```
clrhistorystats <StatsType> <Hours> <InterfaceIndex> [InterfaceIndex2]
```

Syntax Description	StatsType	Type of history statistics. Values are
		<ul style="list-style-type: none"> <li>• 1 = PVC</li> <li>• 2 = CID</li> </ul>
	Hours	Number of hours prior to the current interval for history statistics to be cleared.
	InterfaceIndex	If <i>StatsType</i> is set to 1 (PVC) or 2 (CID), this value is in the range 131–510 for the logical channel number (LCN).
	[InterfaceIndex2]	This argument is mandatory if <i>StatsType</i> is set to 2 (CID). Range is 8–255 for the CID number.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, Switched AAL2 SVC, Switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** The **clrhistorystats** command invalidates the intervals. The actual statistics are not cleared, but the 24 hour total statistics are cleared.

**Examples** In the following example, the PVC statistics are cleared 2 hours prior to the current interval:

```
nodename.1.5.VISM8.a > clrhistorystats 1 2 131
```

```
nodename.1.5.VISM8.a >
```

Related Commands	Command	Description
	<b>dsphistorystats</b>	Displays the history statistics.

# clrmngcidnt

To clear AAL2 channel identifier (CID) counters, use the **clrmngcidnt** command.

**clrmngcidnt** <*endpt\_num*>

Syntax Description	<i>endpt_num</i>	Number of the endpoint for which the AAL2 counters are cleared. Ranges are
		<ul style="list-style-type: none"> <li>• Template 1               <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2               <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3               <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4               <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5               <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>

**Command Modes** AAL2 trunking, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Indicate the number of the endpoint for which you want to clear AAL2 counters with the *endpt\_num* argument value.

**Examples** In the following example, the AAL2 counters for endpoint number 140 are cleared:

```
nodename.1.5.VISM8.a > clrmngcidnt 140
```

```
nodename.1.5.VISM8.a >
```

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>dspeid</b>	Displays a VISM card's AAL2 channel identifier.
<b>dspeids</b>	Displays a VISM card's AAL2 channel identifiers for a specified LCN.

# clrrtpcnt

To clear the Real-Time Transport Protocol (RTP) counters of the statistics for a specific static RTP connection, as shown by the **dsprtpcnt** command, use the **clrrtpcnt** command.

```
clrrtpcnt <rtp_conn_index>
```

## Syntax Description

<i>rtp_conn_index</i>	Connection identification number. Range is 1–248.
-----------------------	---

## Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the RTP counters for static RTP connection number 49 are cleared:

```
nodename.1.5.VISM8.a > clrrtpcnt 49
```

```
nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>addlapdtrunk</b>	Adds an LAPD trunk to a specific VISM card line.
<b>addrtpcon</b>	Adds a static RTP VoIP trunking connection.
<b>addrudptrunk</b>	Adds an ISDN PRI backhaul RUDP session for an LAPD trunk connection.
<b>cnflapdtrunkpvc</b>	Assigns the PVC trunk type that carries LAPD messages for the current VISM card.
<b>cnflntrunkcond</b>	Enables or disables line conditioning on a VISM card line.
<b>cnfrtpcon</b>	Modifies an existing static RTP VoIP trunking connection.
<b>cnfrudptrunkrmtip</b>	Modifies the remote VISM IP address used in the ISDN PRI backhaul RUDP trunk for a specified session.
<b>dellapdtrunk</b>	Deletes an LAPD configured line.
<b>delrtpcon</b>	Deletes a static RTP VoIP trunking connection.
<b>delrudptrunk</b>	Deletes an ISDN PRI backhaul RUDP session that is associated with an LAPD.
<b>dsplapd</b>	Displays data about an LAPD.
<b>dsplapdtrunkpvc</b>	Displays the assigned PVC trunk type that carries LAPD trunk messages for the current VISM card.
<b>dsplapdtrunks</b>	Displays the configuration data of all LAPD trunks.
<b>dsprtpcnt</b>	Displays the bearer counters (statistics) for a specific RTP VoIP trunking connection.
<b>dsprtpcn</b>	Displays the configuration data of a specific static RTP VoIP trunking connection.
<b>dsprtpcnstat</b>	Displays the RTP connection statistics for a specified endpoint.

Command	Description
<b>dsprtpcons</b>	Displays the configuration data of all static RTP VoIP trunking connections.
<b>dsprudptrunk</b>	Displays the configuration data of a specified ISDN PRI backhaul RUDP session.
<b>dsprudptrunks</b>	Displays the configuration data of all ISDN PRI backhaul RUDP sessions.

# clrsarcnt

To clear the segmentation and reassembly (SAR) counters on a channel, use the **clrsarcnt** command.

**clrsarcnt** <LCN>

<b>Syntax Description</b>	<i>LCN</i>	Number of the logical channel for which the SAR counters are to be cleared. Range is 131–510.
---------------------------	------------	---

<b>Command Modes</b>	VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking
----------------------	---

<b>Usage Guidelines</b>	Indicate the number of the channel for which you want to clear SAR counters with an <i>LCN</i> argument value.
-------------------------	--

**Examples** In the following example, the SAR counters are cleared on channel 140:

```
nodename.1.5.VISM8.a > clrsarcnt 140
```

```
nodename.1.5.VISM8.a >
```

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>dspsarcnt</b>	Display the values of the SAR counters for a specified channel.



# clrsarcnts

To clear all segmentation and reassembly (SAR) counters on a VISM/VISM-PR card, use the **clrsarcnts** command.

## clrsarcnts

### Syntax Description

This command has no arguments or keywords.

### Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

### Usage Guidelines

Follow standard CLI procedures when you use this command.

### Examples

In the following example, all SAR counters on the current VISM card are cleared:

```
nodename.1.5.VISM8.a > clrsarcnts
```

```
nodename.1.5.VISM8.a >
```

### Related Commands

Command	Description
<b>clrsarcnt</b>	Clears the SAR counters on a specified channel.
<b>dspsarcnt</b>	Displays the SAR counter values for a specified channel.
<b>dspsarcnts</b>	Displays the SAR counter values for a VISM card.

# clrsarmsgcnt

To clear the segmentation and reassembly (SAR) message counters from a VISM card, use the **clrsarmsgcnt** command.

**clrsarmsgcnt**

---

**Syntax Description** This command has no arguments or keywords.

---

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

---

**Usage Guidelines** Follow standard CLI procedures when you use this command.

---

**Examples** In the following example, the SAR control message counters are cleared from the current VISM card:

```
nodename.1.5.VISM8.a > clrsarmsgcnt
```

```
nodename.1.5.VISM8.a >
```

---

Related Commands	Command	Description
	<b>dspsarmsgcnt</b>	Displays the SAR control message counter values for a VISM card.

---

# clrscrn

To clear the control terminal screen, use the **clrscrn** command.

**clrscrn**

---

**Syntax Description** This command has no arguments or keywords.

---

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

---

**Usage Guidelines** After you execute this command, only the current command line prompt appears on the screen.

---

**Examples** In the following example, the control terminal screen is cleared with only the current command line prompt remaining:

```
nodename.1.5.VISM8.a > clrscrn
```

---

**Related Commands** There are no related commands.

# clrslipcnt

To clear current clock slip counters for a specified VISM/VISM-PR line, use the **clrslipcnt** command.

**clrslipcnt** <line\_number>

---

## Syntax Description

<i>line_number</i>	Number of the DS1 line for which you want to clear current clock slip counters. Range is 1–8.
--------------------	--

---



---

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

---

## Usage Guidelines

Follow standard CLI procedures for this command.

---

## Examples

In the following example, the current clock slip counters for line 3 of the VISM card are cleared:

```
nodename.1.5.VISM8.a > clrslipcnt 3

Line 3 Slip Counters:   Tx Slip   Rx Slip
Uncontrolled Slip:     0         0
Frame Slip:             0         2
```

---

## Related Commands

Command	Description
<b>dspslipcnt</b>	Displays the current clock slip counters for a specified VISM card line.

---

# clrtaskinfo

To reset the values displayed by the **dsptaskinfo** command, use the **clrtaskinfo** command.

**clrtaskinfo**

---

**Syntax Description** This command has no arguments or keywords.

---

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

---

**Usage Guidelines** When you execute this command, the values are reset to 0 and the collection of task information statistics begins again.

---

**Examples** In the following example, the values displayed by the **clrtaskinfo** command are reset:

```
nodename.1.5.VISM8.a > clrtaskinfo
```

```
nodename.1.5.VISM8.a >
```

---

<b>Command</b>	<b>Description</b>
<b>dsptaskinfo</b>	Displays information about currently operating tasks.

---

# cnfaal2subcellmuxing

To enable or disable AAL2 subcell multiplexing, use the **cnfaal2subcellmuxing** command.

**cnfaal2subcellmuxing** <muxing status>

---

## Syntax Description

*muxing status* Value you can use to enable or disable AAL2 subcell multiplexing.

- 1 = On
- 2 = Off

---



---

## Command Modes

AAL2 trunking, switched AAL2 SVC, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

---

## Usage Guidelines

When you enable multiplexing, multiple CPS packets are multiplexed onto a single AAL2 connection without partial fill (unless a timeout occurs). When you disable multiplexing, each CPS packet fills one or two cells (with padding).



### Note

---

The field length for each CPS packet can be up to 64 bytes.

---

When the multiplexing type is changed and CIDs are present, the card is reset. Existing CIDs/connections are restored with the multiplexing type.

---

## Examples

In the following example, subcell multiplexing is enabled.

```
nodename.1.27.VISM8.a > cnfaal2subcellmuxing 1
Card will be reset if cids are present, do you want to proceed (Yes/No)?y

nodename.1.27.VISM8.a >
```

---

## Related Commands

There are no related commands.

# cnfaal2timerparams

To configure the holdover time for voice activity detection (VAD) before activating silence suppression on an AAL2 PVC, use the **cnfaal2timerparams** command.

**cnfaal2timerparams** <VadTimer> <CidFillTimer>

Syntax Description		
	<i>VadTimer</i>	VAD holdover timer (defined in milliseconds) in the range 250–65535 ms. Default is 250 ms.
	<i>CidFillTimer</i>	Maximum wait time for cell content filling when the next packet is not ready (defined in milliseconds) in the range 5–100 ms. Default is 30 ms.

**Command Modes** AAL2 trunking, switched AAL2 SVC, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** If AAL2 subcell multiplexing is disabled by the **cnfaal2subcellmuxing** command, executing this command produces no effect.

**Examples** In the following example, the VAD holdover timer is set for 500 ms and the wait time for a cell to fill when the next packet is not ready is up to 50 ms:

```
nodename.1.27.VISM8.a > cnfaal2timerparams 500 50
```

```
nodename.1.27.VISM8.a >
```

**Related Commands** There are no related commands.

# cnfaal2transparams

To configure the transportation of dual-tone multifrequency (DTMF) and channel-associated signaling (CAS) bits to another endpoint and enable or disable the type 3 packet triple redundancy feature, use the **cnfaal2transparams** command.

**cnfaal2transparams** <DtmfRelay> <CasBits> <Type3Redundancy>

Syntax Description	
<i>DtmfRelay</i>	Value you can use to enable or disable DTMF tone transport as AAL2 type 3 packets. <ul style="list-style-type: none"> <li>• 1 = On. DTMF relay using RFC 2833.</li> <li>• 2 = Off. DTMF pass through (default).</li> </ul> <p><b>Note</b> The <i>DtmfRelay</i> argument value must be set to 1 (on) if you are using codecs other than G.711 and G.726.</p>
<i>CasBits</i>	Value you can use to enable or disable CAS bits transportation. <ul style="list-style-type: none"> <li>• 1 = On</li> <li>• 2 = Off (default)</li> </ul>
<i>Type3Redundancy</i>	Value you can use to enable or disable triple redundancy protection for type 3 packets. <ul style="list-style-type: none"> <li>• 1 = On (default)</li> <li>• 2 = Off</li> </ul>

**Command Modes** Switched AAL2 SVC and switched AAL2 PVC

**Usage Guidelines** Follow standard CLI procedures when using this command.

**Examples** In the following example, DTMF tone transportation, CAS bits transportation, and triple redundancy protection are enabled:

```
nodename.1.27.VISM8.a > cnfaal2transparams 1 1 1
warning! input vismAal2Type3Redundancy is same as the current value
```

```
nodename.1.27.VISM8.a >
```

A warning displays if you attempt to enable a parameter that is already enabled.

**Related Commands** There are no related commands.



# cnfadapgain

To enable or disable the DSP adaptive gain feature, use the **cnfadapgain** command.

```
cnfadapgain <adapgain_flag>
```

<b>Syntax Description</b>	<i>adapgain_flag</i> Value you can use to enable or disable adaptive gain. <ul style="list-style-type: none"><li>• 1 = On</li><li>• 2 = Off</li></ul>
<b>Command Modes</b>	VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking
<b>Usage Guidelines</b>	Follow standard CLI procedures when using this command.
<b>Examples</b>	In the following, the adaptive gain feature is enabled: nodename.1.27.VISM8.a > <b>cnfadapgain 1</b> nodename.1.27.VISM8.a >
<b>Related Commands</b>	There are no related commands.

# cnfaggsvcbw

To aggregate the switched virtual circuit (SVC) bandwidth, use the **cnfaggsvcbw** command.

**cnfaggsvcbw** <aggregateSvcBandwidth>

Syntax Description	aggregateSvcBandwidth	Value you can use to set the bandwidth. Range is 0–100,000 cps. Default is 0.
--------------------	-----------------------	---

**Command Modes** AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

**Usage Guidelines** The configured aggregate SVC bandwidth is applicable only in bearer SVC connection admission control (CAC). In addition this bandwidth is used as aggregate SVC traffic clipping bandwidth when aggregate traffic clipping is enabled.

**Examples** In the following example, the SVC bandwidth is set to 50 cps:

```
nodename.1.27.VISM8.a > cnfaggsvcbw 50
```

```
nodename.1.27.VISM8.a >
```

If the value is incorrect, the terminal displays the following message:

```
nodename.1.27.VISM8.a > cnfaggsvcbw 50
```

```
The new value is either
```

1. Less than the bw utilized by svc's, Or
2. More than the available bw on the port

```
nodename.1.27.VISM8.a >
```

Related Commands	Command	Description
	<b>dspaggsvcbw</b>	Displays the configured, used, and available SVC bandwidth.

# cnfaissuppression

To enable or disable alarm indication signal (AIS) propagation, use the **cnfaissuppression** command. You can also use this command to suppress the alarms for a certain duration they propagate to the line.

```
cnfaissuppression <enableFlag> [<LCN> <delay_time>]
```

Syntax Description		
<i>enableFlag</i>		Value you can use to enable or disable AIS propagation. <ul style="list-style-type: none"> <li>• 1 = Enable</li> <li>• 2 = Disable</li> </ul>
LCN		(Optional) Logical channel number (LCN) that you use to configure the delay time. Range is 131–510. Alternatively, you can type the ALL keyword.  The value ALL specifies configuration of all LCNs.
delay_time		(Optional) Time that the alarm is propagated before the alarms are propagated to the line. Range is 1–60 seconds. Default is 30 seconds.  <b>Note</b> This value is valid only if the <i>enableFlag</i> parameter is 1.

**Command Modes** AAL2 trunking, switched AAL2 PVC, switched AAL2 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures when using this command. You can enable AIS propagation and configure the optional delay time for one PVC or all PVCs on a VISM/VISM-PR card.

**Examples** In the following example, AIS propagation is enabled:

```
nodename.1.12.VISM8.a > cnfaissuppression 1
INFORMATION: Successfully Enabled AIS Suppression.
```

In the following example, AIS propagation is enabled with an AIS delay of 30 seconds on all PVCs:

```
nodename.1.12.VISM8.a > cnfaissuppression 1 ALL 30
nodename.1.12.VISM8.a >
```

In the following example AIS propagation is disabled on all PVCs:

```
nodename.1.12.VISM8.a > cnfaissuppression 2 ALL
nodename.1.12.VISM8.a >
```

In the following example, AIS propagation is enabled on PVC 131 with an AIS delay of 60 seconds:

```
nodename.1.12.VISM8.a > cnfaissuppression 1 131 60
nodename.1.12.VISM8.a >
```

In the following example, AIS propagation is disabled only on PVC 131:

```
nodename.1.12.VISM8.a > cnfaissuppression 2 131
nodename.1.12.VISM8.a >
```

If you attempt to enable AIS propagation when it is already enabled, the following message is displayed:

```
WARNING: AIS Suppression is already enabled.
```

Use the **dspaissuppression** command to show the AIS settings that you configured.

---

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>dspaissuppression</b>	Shows whether AIS propagation is enabled or disabled.

---

# cnfalm

To configure the alarm parameters for a specified line, use the **cnfalm** command.

```
cnfalm -ds1 <LineNum> -red <RedSeverity> -rai <RAISeverity> -neu <NEAlarmUpcount>
-ned <NEAlarmDncount> -net <NEAlarmThreshold> -feu <FEAlarmUpcount> -fed
<FEAlarmDncount> -fet <FEAlarmThreshold>
```

Syntax	Description
<b>-ds1</b>	The mandatory <i>LineNum</i> argument identifier.
<i>LineNum</i>	Number of the line on which to configure alarm parameters. Range is 1–8.
<b>-red</b>	The mandatory <i>RedSeverity</i> argument identifier.
<i>RedSeverity</i>	Red alarm severity level. Values are <ul style="list-style-type: none"> <li>• 1 = Minor</li> <li>• 2 = Major</li> </ul>
<b>-rai</b>	The mandatory <i>RAISeverity</i> argument identifier.
<i>RAISeverity</i>	Remote alarm indication (RAI) severity level. Values are <ul style="list-style-type: none"> <li>• 1 = Minor</li> <li>• 2 = Major</li> </ul>
<b>-neu</b>	The mandatory <i>NEAlarmUpCount</i> argument identifier.
<i>NEAlarmUpcount</i>	Near-end alarm up count (defined in milliseconds) in the range 1–65535 ms.
<b>-ned</b>	The mandatory <i>NEAlarmDncount</i> argument identifier.
<i>NEAlarmDncount</i>	Near-end alarm down count (defined in milliseconds) in the range 1–65535 ms.
<b>-net</b>	The mandatory <i>NEAlarmThreshold</i> argument identifier.
<i>NEAlarmThreshold</i>	Near-end alarm threshold (defined in milliseconds) in the range 1–65535.
<b>-feu</b>	The mandatory <i>FEAlarmUpcount</i> argument identifier.
<i>FEAlarmUpcount</i>	Far-end alarm up count (defined in milliseconds) in the range 1–65535.
<b>-fed</b>	The mandatory <i>FEAlarmDncount</i> argument identifier.
<i>FEAlarmDncount</i>	Far-end alarm down count (defined in milliseconds) in the range 1–65535.
<b>-fet</b>	The mandatory <i>FEAlarmThreshold</i> argument identifier.
<i>FEAlarmThreshold</i>	Far-end alarm threshold (defined in milliseconds) in the range 1–65535.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures when using this command.

**Examples**

In the following example, line 2 is configured with a red severity alarm of major and an RAI severity of minor:

```
nodename.1.12.VISM8.a > cnfalm -ds1 2 -red 1 -rai 1 -neu 1 -ned 1 -net 1 -feu 1 -fed 1
-fet 1
```

```
nodename.1.12.VISM8.a >
```

**Related Commands**

Command	Description
<b>clralm</b>	Clears alarms from a specific line of a VISM card.
<b>clralms</b>	Clears all alarms from a VISM card.
<b>dspalm</b>	Displays the alarms associated with a specified line of a VISM card.

# cnfalment

To configure the collection of time-division multiplexing (TDM) line statistics, use the **cnfalment** command.

```
cnfalment -ds1 <LineNum> -sev <StatisticalAlarmSeverity> -lcv15 <ICV15minThreshold> -lcv24
<ICV24hrThreshold> -les15 <IES15minThreshold> -les24 <IES24hrThreshold> -lses15
<ISES15minThreshold> -lses24 <ISES24hrThreshold> -crc15 <cRC15minThreshold> -crc24
<cRC24hrThreshold> -crses15 <cRCSES15minThreshold> -crses24 <cRCSES24hrThreshold>
-crses15 <cRCSES15minThreshold> -crses24 <cRCSES24hrThreshold> -sefs15
<sEFS15minThreshold> -sefs24 <sEFS24hrThreshold> -aiss15 <aISS15minThreshold>
-aiss24 <aISS24hrThreshold> -uas15 <uAS15minThreshold> -uas24 <uAS24hrThreshold>
```

Syntax	Description
<b>-ds1</b>	The mandatory <i>LineNum</i> argument identifier.
<i>LineNum</i>	Number of the T1 or E1 line for which you want to display alarms. Range is 1–8.
<b>-sev</b>	The <i>StatisticalAlarmSeverity</i> argument identifier.
<i>StatisticalAlarmSeverity</i>	Alarm severity. Values are <ul style="list-style-type: none"> <li>1 = Minor</li> <li>2 = Major</li> </ul>
<b>-lcv15</b>	The <i>ICV15minThreshold</i> argument identifier.
<i>ICV15minThreshold</i>	Number of line code violations (LCVs) encountered by the line interface in the current 15-minute interval. Range is 0–2147483647.
<b>-lcv24</b>	The <i>ICV24hrThreshold</i> argument identifier.
<i>ICV24hrThreshold</i>	Number of LCVs encountered by the interface in the last 24-hour period. Range is 0–2147483647.
<b>-les15</b>	The <i>IES15minThreshold</i> argument identifier.
<i>IES15minThreshold</i>	Number of line code violation errored seconds (ES) encountered by the interface in the last 15 minutes. Range is 0–2147483647.
<b>-les24</b>	The <i>IES24hrThreshold</i> argument identifier.
<i>IES24hrThreshold</i>	Number of line code violation ES encountered by the interface in the last 24 hours. Range is 0–2147483647.
<b>-lses15</b>	The <i>ISES15minThreshold</i> argument identifier.
<i>ISES15minThreshold</i>	Number of line code violation severely errored seconds (SES) encountered by the interface in the last 15 minutes. Range is 0–2147483647.
<b>-lses24</b>	The <i>ISES24hrThreshold</i> argument identifier.
<i>ISES24hrThreshold</i>	Number of line code violation SES encountered by the interface in the last 24 hours. Range is 0–2147483647.
<b>-crc15</b>	The <i>cRC15minThreshold</i> argument identifier.
<i>cRC15minThreshold</i>	Number of cyclic redundancy check (CRC) code violations encountered by the interface in the last 15 minutes. Range is 0–2147483647.
<b>-crc24</b>	The <i>cRC24hrThreshold</i> argument identifier.
<i>cRC24hrThreshold</i>	Number of CRC code violations encountered by the interface in the last 24 hours. Range is 0–2147483647.

<b>-crses15</b>	The <i>cRCES15minThreshold</i> argument identifier.
<i>cRCES15minThreshold</i>	Number of CRC code violations with errored seconds encountered by the interface in the last 15 minutes. Range is 0–2147483647.
<b>-crses24</b>	The <i>cRCES24hrThreshold</i> argument identifier.
<i>cRCES24hrThreshold</i>	Number of CRC code violations with errored seconds encountered by the interface in the last 24 hours. Range is 0–2147483647.
<b>-crseses15</b>	The <i>cRCSES15minThreshold</i> argument identifier.
<i>cRCSES15minThreshold</i>	Number of CRC code violations with severely errored seconds encountered by the interface in the last 15 minutes. Range is 0–2147483647.
<b>-crseses24</b>	The <i>cRCSES24hrThreshold</i> argument identifier.
<i>cRCSES24hrThreshold</i>	Number of CRC code violations with severely errored seconds encountered by the interface in the last 24 hours. Range is 0–2147483647.
<b>-sefs15</b>	The <i>sEFS15minThreshold</i> argument identifier.
<i>sEFS15minThreshold</i>	Number of severely errored framing seconds encountered by the interface in the last 15 minutes. Range is 0–2147483647.
<b>-sefs24</b>	The <i>sEFS24hrThreshold</i> argument identifier.
<i>sEFS24hrThreshold</i>	Number of severely errored framing seconds encountered in the last 24 hours by the interface. Range is 0–2147483647.
<b>-aiss15</b>	The <i>aISS15minThreshold</i> argument identifier.
<i>aISS15minThreshold</i>	Number of AIS severely errored seconds encountered by the interface in the last 15 minutes. Range is 0–2147483647.
<b>-aiss24</b>	The <i>aISS24hrThreshold</i> argument identifier.
<i>aISS24hrThreshold</i>	Number of AIS severely errored seconds encountered by the interface in the last 24 hours. Range is 0–2147483647.
<b>-uas15</b>	The <i>uAS15minThreshold</i> argument identifier.
<i>uAS15minThreshold</i>	Number of unavailable seconds encountered by the interface in the last 15 minutes. Range is 0–2147483647.
<b>-uas24</b>	The <i>uAS24hrThreshold</i> argument identifier.
<i>uAS24hrThreshold</i>	Number of unavailable seconds encountered by the interface in the last 24 hours. Range is 0–2147483647.

**Command Modes**

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines**

Values higher than 2,147,483,647 for the argument values are truncated.

The following line statistics are collected:

- LVCs encountered by the line interface in the current 15-minute interval
- LVCs in the last 15-minute period encountered by the interface
- LVCs in the last 24-hour period encountered by the interface
- LVCs with errored seconds encountered by the interface



- LVCs with errored seconds in the last 15 minutes encountered by the interface
- LVCs with errored seconds in the last 24 hours encountered by the interface
- LVCs with severely errored seconds encountered by the interface
- LVCs with severely errored seconds in the last 15 minutes encountered by the interface
- LVCs with severely errored seconds in the last 24 hours encountered by the interface
- CRC code violations encountered by the interface
- CRC code violations in the last 15 minutes encountered by the interface
- CRC code violations in the last 24 hours encountered by the interface
- CRC code violations with errored seconds encountered by the interface
- CRC code violations with errored seconds in the last 15 minutes encountered by the interface
- CRC code violations with errored seconds in the last 24 hours encountered by the interface
- P. Bit code violations severely errored seconds encountered by the interface
- CRC code violations with severely errored seconds in the last 15 minutes encountered by the interface
- CRC code violations with severely errored seconds in the last 24 hours encountered by the interface
- Severely errored framing seconds encountered by the interface
- Severely errored framing seconds in the last 15 minutes encountered by the interface
- Severely errored framing seconds in the last 24 hours encountered by the interface
- AIS severely errored seconds encountered by the interface
- AIS severely errored seconds in the last 15 minutes encountered by the interface
- AIS severely errored seconds in the last 24 hours encountered by the interface
- Unavailable seconds encountered by the interface
- Unavailable seconds in the last 15 minutes encountered by the interface
- Unavailable seconds in the last 24 hours encountered by the interface
- Percentage of LCV error free seconds
- Loss of signals detected with or without integrating to LOS alarm
- Out of frames detected with or without integrating to OOF alarm
- Yellow alarms detected with or without integrating to RAI alarm
- Framing pattern errors encountered by a DS1 interface

### Examples

In the following example, the TDM line statistics for major alarms are collected for line number 7:

```
nodename.1.27.VISM8.a > cnfalmcnt -ds1 7 -sev 2
```

```
nodename.1.27.VISM8.a >
```

### Related Commands

Command	Description
<b>dspalmcnf</b>	Displays the threshold data about the alarm statistics being collected.
<b>dspalmcnt</b>	Displays the alarm counters and statistics on a line.

# cnfannagettime

To configure the time that a nonpermanent announcement is to remain valid after it is placed in the VISM/VISM-PR announcement cache, use the **cnfannagettime** command.

**cnfannagettime** <*ann\_age\_time*>

<b>Syntax Description</b>	<i>ann_age_time</i>	Nonpermanent announcement age time (defined in minutes). Range is 0–65535 min.
	<b>Note</b>	A value of 0 equals an infinite amount of time. The nonpermanent announcement remains valid until you replace it.

**Command Modes** VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** When a nonpermanent announcement enters the announcement cache, the announcement remains valid, as is, until the time you select with the *ann\_age\_time* argument value expires. When the time expires, the nonpermanent announcement is refreshed from the announcement file server. Requests to play a nonpermanent announcement do not affect its age time or cause the file to be refreshed.

**Examples** In the following example, the nonpermanent announcements are configured to expire 2 hours after being placed in the VISM announcement cache:

```
nodename.1.27.VISM8.a > cnfannagettime 120
```

```
nodename.1.27.VISM8.a >
```

To display the announcement age time that you configured, use the **dspannagettime** command.

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>addannpermanent</b>	Configures an announcement server file and associated codec type as permanent.
	<b>cnfanndn</b>	Designates an announcement file server domain name.
	<b>cnfannpathprefix</b>	Designates the main prefix directory TFTP path you can use for retrieving announcement files from the announcement file server.
	<b>cnfannprefcodec</b>	Configures the codec type used for announcements played on unconnected TDM endpoints.
	<b>cnfannreqtimeout</b>	Configures the time for announcements to play after the VISM receives the announcement signal (request) from the call agent.
	<b>delcasvar</b>	Deletes all announcement files from the list of files currently saved.
	<b>delcasvar</b>	Deletes an announcement file from the list of files currently saved.
	<b>delcasvar</b>	Deletes a permanent announcement file and its associated codec type from the announcement file server.

<b>Command</b>	<b>Description</b>
<b>dspannagetime</b>	Displays the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache.
<b>dspanncache</b>	Displays all available temporary announcement file names and associated age times before the cache is refreshed from the announcement file server.
<b>dspanncontrols</b>	Displays a summary list of all provisionable announcement file variables, including variables associated with all announcement file CLI commands.
<b>dspanndn</b>	Displays the announcement file server domain name.
<b>dspannpathprefix</b>	Displays the main prefix directory path that the VISM uses for retrieving announcement files from the announcement file server.
<b>dspannpermanents</b>	Displays all available permanent announcement files with their associated codec types and identifying index numbers.
<b>dspannprefcodec</b>	Displays the codec type used for announcements played on unconnected TDM endpoints.

# cnfanndn

To designate the announcement file server domain name, use the **cnfanndn** command.

```
cnfanndn <ann_server>
```

## Syntax Description

*ann\_server* Announcement file server domain name. Range is 1–64 alphanumeric characters. You can also use forward slashes (/), backward slashes (\), periods, hyphens, and underscores when creating an announcement file server domain name.

**Note** Do not use forward slashes (/) or hyphens as the last character in an announcement file server name. Do not use spaces in an announcement file server domain name.

## Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Before you use this command, add the announcement file server name as a regular node name using the VISM xDNS commands.

## Examples

In the following example, the announcement file server is configured with the domain name `announceserver3`:

```
nodename.1.27.VISM8.a > cnfanndn announceserver3
```

```
nodename.1.27.VISM8.a >
```

To display the announcement file server that you configured, use the **dspanndn** command.

## Related Commands

Command	Description
<b>addannpermanent</b>	Configures an announcement server file and associated codec type as permanent.
<b>cnfannagetime</b>	Configures the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache.
<b>cnfannpathprefix</b>	Designates the main prefix directory TFTP path you can use for retrieving announcement files from the announcement file server.
<b>cnfannprefcodec</b>	Configures the codec type used for announcements played on unconnected TDM endpoints.
<b>cnfannreqtimeout</b>	Configures the time for announcements to play after the VISM receives the announcement signal (request) from the call agent.
<b>delannalldynamic</b>	Deletes all announcement files from the list of files currently saved.
<b>delanndynamic</b>	Deletes an announcement file from the list of files currently saved.
<b>delannpermanent</b>	Deletes a permanent announcement file and its associated codec type from the announcement file server.

<b>Command</b>	<b>Description</b>
<b>dspannagetime</b>	Displays the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache.
<b>dspanncache</b>	Displays all available temporary announcement file names and associated age times before the cache is refreshed from the announcement file server.
<b>dspanncontrols</b>	Displays a summary list of all provisionable announcement file variables, including variables associated with all announcement file CLI commands.
<b>dspanndn</b>	Displays the announcement file server domain name.
<b>dspannpathprefix</b>	Displays the main prefix directory path that the VISM uses for retrieving announcement files from the announcement file server.
<b>dspannpermanents</b>	Displays all available permanent announcement files with their associated codec types and identifying index numbers.
<b>dspannprefcodec</b>	Displays the codec type used for announcements played on unconnected TDM endpoints.
<b>dspannreqtimeout</b>	Displays the expiration time for announcements to play before being aborted.

# cnfannpathprefix

To designate the main prefix directory TFTP path that you can use to retrieve announcement files from the announcement file server, use the **cnfannpathprefix** command.

**cnfannpathprefix** <ann\_path\_pref>

---

## Syntax Description

<i>ann_path_pref</i>	Main directory TFTP path. Range is 1–64 alphanumeric characters. You can also use forward slashes (/), periods, hyphens, and underscores when creating an announcement file server domain name
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---



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## Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

---

## Usage Guidelines

The directory path is prefixed to the codec directory and the filename. The path prefix is relative to the default TFTP directory on the announcement file server. Examples of valid prefix directory paths are

- <null string>
- vism\_ann
- cisco/vism\_ann
- /cisco/vism\_ann




---

**Note** The /cisco/vism\_ann path starts at the root directory on the announcement file server because the path begins with a (/).

---

If you do not use the **cnfannpathprefix** command, the default TFTP directory on the announcement file server is used as the prefix directory path.

You can use any directory or path on the announcement file server as the main directory for storing announcement files. Take into consideration the following guidelines when you use this command:

- If you do not configure an announcement path prefix on the VISM, the main announcement file directory is the default TFTP directory on the server.
- If you configure a path prefix, this prefix is used as the main announcement directory.
- If the path prefix is not absolute (does not begin with /), then the prefix is relative to the default TFTP directory.

You must configure codec subdirectories under the main announcement directory on the announcement file server. One or more of the following codec subdirectories, for each encoding, are used for announcement files:

- g711u/
- g711a/
- g726\_32k/
- g726\_24k/
- g726\_16k/
- g729\_a/

- g7231\_high\_rate/
- g7231\_a\_high\_rate/
- g7231\_low\_rate/
- g7231\_a\_low\_rate/

**Note**

VISM supports G.729ab for connections and endpoints. If an announcement is to be played on a connection or endpoint provisioned for G.729ab, it must be recorded in G.729a.

If the announcement server all-lines-busy.au file is encoded in both G.711a and G.729a, the following path names and files exist on the file server (assuming the default TFTP directory is tftpboot):

- /tftpboot/g711\_a/all-lines-busy.au
- /tftpboot/g729\_a/all-lines-busy.au

When the call agent requests that the announcement server all-lines-busy.au file be played toward one end of an established call, the VISM determines the codec being used for that call and plays the corresponding announcement file.

When the call agent requests that an announcement be played toward the TDM network on an unconnected endpoint, the codec used is specified by the VISM announcement preferred codec. (The preferred codec is configured with the **cnfannprefcodec** command.)

You can configure another level of directories to group announcement files by language. Specify these directories by the call agent (or when you are provisioning the VISM) as part of the announcement file name. For example, the call agent might specify the english/ann1.au announcement file name. If the file is encoded in G.729a and the prefix is /tftpboot, the file is located at /tftpboot/g729\_a/english/ann1.au.

**Examples**

In the following example, the /cisco/vism\_ann path is designated as the prefix directory path that you can use to retrieve announcement files from the announcement file server:

```
nodename.1.27.VISM8.a > cnfannpathprefix /cisco/vism_ann
```

```
nodename.1.27.VISM8.a >
```

**Related Commands**

Command	Description
<b>addannpermanent</b>	Configures an announcement server file and associated codec type as permanent.
<b>cnfannagetime</b>	Configures the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache.
<b>cnfanndn</b>	Designates an announcement file server domain name.
<b>cnfannprefcodec</b>	Configures the codec type used for announcements played on unconnected TDM endpoints.
<b>cnfannreqtimeout</b>	Configures the time for announcements to play after the VISM receives the announcement signal (request) from the call agent.
<b>delannalldynamic</b>	Deletes all announcement files from the list of files currently saved.
<b>delanndynamic</b>	Deletes an announcement file from the list of files currently saved.
<b>delannpermanent</b>	Deletes a permanent announcement file and its associated codec type from the announcement file server.

Command	Description
<b>dspannagetime</b>	Displays the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache.
<b>dspanncache</b>	Displays all available temporary announcement file names and associated age times before the cache is refreshed from the announcement file server.
<b>dspanncontrols</b>	Displays a summary list of all provisionable announcement file variables, including variables associated with all announcement file CLI commands.
<b>dspanndn</b>	Displays the announcement file server domain name.
<b>dspannpathprefix</b>	Displays the main prefix directory path that the VISM uses for retrieving announcement files from the announcement file server.
<b>dspannpermanents</b>	Displays all available permanent announcement files with their associated codec types and identifying index numbers.
<b>dspannprefcodec</b>	Displays the codec type used for announcements played on unconnected TDM endpoints.



# cnfannprefcodec

To configure the codec type used for announcements played on unconnected time-division multiplexing (TDM) endpoints, use the **cnfannprefcodec** command.

**cnfannprefcodec** *<ann\_codec>*

Syntax Description	<i>ann_codec</i>	Announcement codec for TDM endpoints:
		<ul style="list-style-type: none"> <li>• 1 = G.711u</li> <li>• 2 = G.711a</li> <li>• 3 = G.726-32K</li> <li>• 4 = G.729a</li> <li>• 5 = G.729ab</li> <li>• 6 = Not used</li> <li>• 7 = G.726-16K</li> <li>• 8 = G.726-24K</li> <li>• 9 = G.726-40K</li> <li>• 10 = Not used</li> <li>• 11 = G.723.1-H</li> <li>• 12 = G.723.1-AH</li> <li>• 13 = G.723.1-L</li> <li>• 14 = G.723.1-AL</li> </ul>

**Command Modes** VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** The G.723.1 codecs are supported for VISM-PR cards and are not supported for VISM cards.

**Examples** In the following example, the G.723.1-H codec type is configured for announcements played on unconnected TDM endpoints:

```
nodename.1.27.VISM8.a > cnfannprefcodec 11
```

```
nodename.1.27.VISM8.a >
```

To display the announcement preference codec that you configured, use the **dspannprefcodec** command.

Related Commands	Command	Description
	<b>addannpermanent</b>	Configures an announcement server file and associated codec type as permanent.
	<b>cfnannagetime</b>	Configures the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache.
	<b>cfnann</b>	Designates an announcement file server domain name.
	<b>cfnannpathprefix</b>	Designates the main prefix directory TFTP path you can use for retrieving announcement files from the announcement file server.
	<b>cfnannreqtimeout</b>	Configures the time for announcements to play after the VISM receives the announcement signal (request) from the call agent.
	<b>delannalldynamic</b>	Deletes all announcement files from the list of files currently saved.
	<b>delanndynamic</b>	Deletes an announcement file from the list of files currently saved.
	<b>delannpermanent</b>	Deletes a permanent announcement file and its associated codec type from the announcement file server.
	<b>dspannagetime</b>	Displays the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache.
	<b>dspanncache</b>	Displays all available temporary announcement file names and associated age times before the cache is refreshed from the announcement file server.
	<b>dspanncontrols</b>	Displays a summary list of all provisionable announcement file variables, including variables associated with all announcement file CLI commands.
	<b>dspanndn</b>	Displays the announcement file server domain name.
	<b>dspannpathprefix</b>	Displays the main prefix directory path that the VISM uses for retrieving announcement files from the announcement file server.
	<b>dspannpermanents</b>	Displays all available permanent announcement files with their associated codec types and identifying index numbers.
	<b>dspannprefcodec</b>	Displays the codec type used for announcements played on unconnected TDM endpoints.

# cnfannreqtimeout

To configure the expiration time for announcements to begin playing after the VISM receives the announcement signal (request) from the call agent, use the **cnfannreqtimeout** command.

```
cnfannreqtimeout <ann_ReqTO>
```

<b>Syntax Description</b>	<i>ann_ReqTO</i>	Expiration time for a dynamic play announcement request (defined in seconds). Range is 0–15. (Default is 5.)
		<b>Note</b> If <i>ann_ReqTO</i> = 0, the expiration time is not set, no expiration occurs, and requests are not aborted.

**Command Modes** VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** If the call agent signals the announcement to be played toward the packet network on a connection that is not in send mode, the request is deferred until the call agent modifies the connection. Once the connection is placed in send mode, the expiration timer is started.

**Examples** In the following example, the announcements must begin playing within 12 seconds after the VISM receives the announcement signal from the call agent, after which time, requests are aborted:

```
nodename.1.27.VISM8.a > cnfannreqtimeout 12
```

```
nodename.1.27.VISM8.a >
```

To display the expiration time that you configured, use the **dspannreqtimeout** command.

Related Commands	Command	Description
	<b>addannpermanent</b>	Configures an announcement server file and associated codec type as permanent.
	<b>cnfannagetime</b>	Configures the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache.
	<b>cnfanndn</b>	Designates an announcement file server domain name.
	<b>cnfannpathprefix</b>	Designates the main prefix directory TFTP path you can use for retrieving announcement files from the announcement file server.
	<b>cnfannprefcodec</b>	Configures the codec type used for announcements played on unconnected TDM endpoints.
	<b>delannalldynamic</b>	Deletes all announcement files from the list of files currently saved.
	<b>delanndynamic</b>	Deletes an announcement file from the list of files currently saved.
	<b>delannpermanent</b>	Deletes a permanent announcement file and its associated codec type from the announcement file server.
	<b>dspannagetime</b>	Displays the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache.

<b>Command</b>	<b>Description</b>
<b>dspanncache</b>	Displays all available temporary announcement file names and associated age times before the cache is refreshed from the announcement file server.
<b>dspanncontrols</b>	Displays a summary list of all provisionable announcement file variables, including variables associated with all announcement file CLI commands.
<b>dspanndn</b>	Displays the announcement file server domain name.
<b>dspannpathprefix</b>	Displays the main prefix directory path that the VISM uses for retrieving announcement files from the announcement file server.
<b>dspannpermanents</b>	Displays all available permanent announcement files with their associated codec types and identifying index numbers.
<b>dspannprefcodec</b>	Displays the codec type used for announcements played on unconnected TDM endpoints.
<b>dspannreqtimeout</b>	Displays the expiration time for announcements to play before being aborted.

# cnfbearerippingenable

To configure the VISM/VISM-PR card to respond to ping requests for bearer traffic IP address, use the **cnfbearerippingenable** command.

**cnfbearerippingenable** *<enable>*

<b>Syntax Description</b>	<i>enable</i>	Flag you can use to enable or disable the bearer IP ping feature. <ul style="list-style-type: none"> <li>• 1 = Enable</li> <li>• 2 = Disable</li> </ul>
---------------------------	---------------	---

<b>Command Modes</b>	VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC
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<b>Usage Guidelines</b>	Follow standard CLI procedures when using this command.
-------------------------	---

**Examples** In the following example, the card is enabled to respond to ping requests:

```
nodename.1.28.VISM8.a > cnfbearerippingenable 1
```

```
nodename.1.28.VISM8.a >
```

To display the bearer IP ping feature status, use the **dspvismparam** command.

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>dspvismparam</b>	Displays the current card configuration.

# cnfcac

To enable or disable the connection admission control (CAC) feature on a VISM/VISM-PR card, use the **cnfcac** command.

**cnfcac** <*enableFlag*>

## Syntax Description

*enableFlag* Value you can use to enable or disable CAC.

- 1 = Disable
- 2 = Enable

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

If you enable CAC with this command, you can then use the **cnfconcac** command to enable CAC on the PVCs.

## Examples

In the following example, the CAC is disabled for the current card:

```
nodename.1.28.VISM8.a > cnfcac 1
INFORMATION: Successfully Disabled CAC.
WARNING: When CAC is disabled, none of CAC related parameters are now applicable.
```

```
nodename.1.28.VISM8.a >
```

In the following example, the CAC is enabled for the current card:

```
nodename.1.27.VISM8.a > cnfcac 2
INFORMATION: Successfully Enabled CAC.
```

```
nodename.1.28.VISM8.a >
```

## Related Commands

Command	Description
<b>cnfcacparams</b>	Configures CAC features.
<b>cnfconcac</b>	Enables CAC on an already added connection.

# cnfcacparams

To configure connection admission control (CAC) features on a card, use the **cnfcacparams** command.

```
cnfcacparams <VAD_duty_cycle> <VAD_Tolerance>
```

Syntax Description	
<i>VAD_duty_cycle</i>	<p>VAD duty cycle is the ratio of speech and holdover duration to the total duration expressed as a percentage.</p> <p>Holdover is the period after silence begins, and silence suppression is turned on. In VISM/VISM-PR, the holdover time is 250 ms.</p> <p>A typical value for this parameter is 61 which means that 61% of the time is taken by speech and holdover. Range is 1–99. Default is 61.</p>
<i>VAD_Tolerance</i>	<p>VAD tolerance is the expression for VAD over-subscription drop ratio, where tolerance = 10000 x over-subscription drop ratio (expressed as a percentage).</p> <p>A typical value for VAD tolerance is 100. Some examples are:</p> <ul style="list-style-type: none"> <li>• 10000 (tolerance) = 1% (over-subscription drop ratio)</li> <li>• 100 = 0.01% (default)</li> <li>• 10 = 0.001%</li> <li>• 1 = 0.0001%</li> </ul> <p>Range is 0–10000.</p>

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures when using this command.

**Examples** In the following example, VAD is configured for a duty cycle of 50 and a tolerance of 10:

```
nodename.1.28.VISM8.a > cnfcacparams 50 10
```

```
nodename.1.28.VISM8.a >
```

Related Commands	Command	Description
	<b>cnfcac</b>	Enables or disables the CAC feature on a VISM card

# cnfcalea

To enable or disable the Communications Assistance for Law Enforcement Act (CALEA) feature on the current VISM/VISM-PR card, use the **cnfcalea** command.

**cnfcalea** <calea\_flag\_enable>

## Syntax Description

<i>calea-enable</i>	Value you can use to enable or disable the CALEA feature.
	<ul style="list-style-type: none"> <li>• 1 = Enable</li> <li>• 2 = Disable (default)</li> </ul>

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

To use the CALEA feature, ensure that you are using the VISM/VISM-PR software version that supports CALEA. The CALEA implementation supports the CALEA law intercept confirmation interface.

## Examples

In the following example, the CALEA feature is enabled on the current VISM card:

```
nodename.1.28.VISM8.a > cnfcalea 1
```

```
nodename.1.28.VISM8.a >
```

## Related Commands

Command	Description
<b>addcon</b>	Adds a PVC connection between a VISM card and any SM or PXM card.
<b>cnfcon</b>	Configures a connection between a VISM card and an MGX 8000 Series platform PXM card.
<b>dspcalea</b>	Displays the CALEA feature configuration status of the current VISM card.
<b>dspvismparam</b>	Displays the current VISM card configuration.



# cnfcascode

To configure channel-associated signaling (CAS) idle code and seized code parameters for an endpoint, use the **cnfcascode** command.

```
cnfcascode <endpt_num> <idle_code> <seized_code> [<endpts_num>]
```

Syntax Description	
<i>endpt_num</i>	<p>Number of the endpoint which is to be configured with CAS idle code and seized code values. Ranges are</p> <ul style="list-style-type: none"> <li>• Template 1               <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2               <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3               <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4               <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5               <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul> <p><b>Note</b> If the second (optional) <i>endpts_num</i> argument is specified, the <i>endpt_num</i> value is the first endpoint in a consecutive number of endpoints.</p>
<i>idle_code</i>	<p>The 4-bit idle code. Range is 0–15 and represents the four signaling bits—A, B, C, and D—in binary, as bits 3, 2, 1, and 0 respectively. Bit 3 is the most significant.</p>

---

<i>seized_code</i>	The 4-bit seized code. Range is 0–15 and represents the four signaling bits—A, B, C, and D—in binary, as bits 3, 2, 1, and 0 respectively. Bit 3 is the most significant.
<i>lendpts_num</i>	(Optional) The last endpoint in a consecutive range of endpoints. Ranges are <ul style="list-style-type: none"> <li>• Template 1 <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2 <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3 <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4 <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5 <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>

---

**Command Modes**

VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines**

You must add the line associated with the *endpt\_num* argument value before you use this command.

**Examples**

In the following example, the idle code is binary 0100 (argument value = 4, so that A = 0, B = 1, C = 0, D = 0), and the seized code is binary 1001 (argument value = 9, so that A = 1, B = 0, C = 0, D = 1), for endpoints 1 to 4:

```
nodename.1.28.VISM8.a > cnfcascode 1 4 9 4
```

```
nodename.1.28.VISM8.a >
```

**Related Commands**

There are no related commands.

# cnfcasdelaydialtime

To configure the VISM/VISM-PR wait time (dial delay) for outpulsing digits to the PBX after the VISM sends an off-hook event, use the **cnfcasdelaydialtime** command. This command applies to the wink start protocol.

```
cnfcasdelaydialtime <endpt_number> <dial_delay_time>
```

## Syntax Description

<i>endpt_number</i>	Endpoint number. Ranges are
	<ul style="list-style-type: none"> <li>• Template 1           <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2           <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3           <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4           <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5           <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>

<i>dial_delay_time</i>	Range is 10 –1000 ms. Default is 100 ms.
------------------------	--

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

You can execute this command if the following conditions are met:

- The endpoint represented by the *endpt\_number* argument value has been previously added.
- The associated DS0 is configured for CAS.
- The protocol is wink start.
- The MIB was chosen as the source, through use of the **cnfcasparamsource** command.

---

**Examples**

In the following example, the endpoint 100 is configured with a dial delay (wait time) of 100 ms:

```
nodename.1.28.VISM8.a> cnfcasdelaydialtime 100 100
```

```
nodename.1.28.VISM8.a>
```

To display the dial delay that you configured, use the **dspcastimers** command.

---

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>dspcastimers</b>	Displays the currently configured CAS timers for a specified endpoint.

---

# cnfcasdialdelay

To configure the VISM/VISM-PR wait time (dial delay) for outpulsing digits to the PBX after the VISM sends an off-hook event, use the **cnfcasdialdelay** command. This command applies to the immediate start protocol.

```
cnfcasdialdelay <endpt_num> <DialDelayTime>
```

Syntax Description	
<i>endpt_num</i>	Number of the endpoint to which the outpulsing digits wait time is configured. Ranges are: <ul style="list-style-type: none"> <li>• Template 1               <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2               <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3               <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4               <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5               <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>
<i>DialDelayTime</i>	Wait time (defined in milliseconds) before outpulsing digits are sent to the PBX after an off-hook event. Range is 10–1000. Default is 500.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** You can execute this command if the following conditions are met:

- The endpoint represented by the *endpt\_num* argument value has been previously added.
- The associated DS0 is configured for CAS.
- The protocol is immediate start.
- The MIB was chosen as the source in the **cnfcasparamsource** command.

---

**Examples**

In the following example, the endpoint 100 is configured with a dial delay (wait time) of 50 ms:

```
nodename.1.28.VISM8.a> cnfcasdialogdelay 100 50
```

```
nodename.1.28.VISM8.a>
```

To display the dial delay that you configured, use the **dspeastimers** command.

---

**Related Commands**

Command	Description
<b>dspeastimers</b>	Displays the currently configured CAS timers for a specified endpoint.

# cnfcasendpt

To associate an endpoint with a channel-associated signaling (CAS) variant name, use the **cnfcasendpt** command.

```
cnfcasendpt <endpt_number> <casVariantName>
```

<b>Syntax Description</b>	<i>endpt_number</i>	<p>Number of the endpoint which is to be associated with the CAS variant identified by the <i>casVariantName</i> argument value. Ranges are</p> <ul style="list-style-type: none"> <li>• Template 1           <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2           <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3           <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4           <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5           <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>
	<i>casVariantName</i>	Name of the CAS variant. Use a text string of 1–64 alphanumeric characters.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Before you execute this command, add the endpoint and CAS variant.

If a connection does not exist on an endpoint when the endpoint is associated with a CAS variant, use the **cnfcasendpt** command again to change the CAS variant.

If a connection exists on an endpoint, complete the following procedures:

- Delete the endpoint.
- Add the endpoint back.
- Change the CAS variant by using the **cnfcasendpt** command.

---

**Examples**

In the following example, the endpoint number 3 is associated with the q50.o CAS variant:

```
nodename.1.28.VISM8.a> cnfcasendpt 3 q50.o
```

```
nodename.1.28.VISM8.a>
```

---

**Related Commands**

There are no related commands.



# cnfcasflashtime

To configure the minimum and maximum channel-associated signaling (CAS) on-hook time periods for incoming flash hooks on a specified endpoint, use the **cnfcasflashtime** command.

```
cnfcasflashtime <endpt_num> <FlashMinTime> <FlashMaxTime>
```

Syntax Description		
<i>endpt_num</i>	Number of the endpoint which is to be configured with a minimum and maximum flash time. Ranges are	<ul style="list-style-type: none"> <li>• Template 1               <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2               <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3               <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4               <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5               <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>
<i>FlashMinTime</i>	Minimum flash time (defined in milliseconds). Range is 50–1550 ms. Default is 300 ms.	
<i>FlashMaxTime</i>	Maximum flash time (defined in milliseconds). Range is 50–1550 ms. Default is 1400 ms.	

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking



**Note**

Although this command is accepted in the AAL2 trunking mode, this mode does not utilize these values.

**Usage Guidelines** Use this command to allow VISM/VISM-PR to distinguish flash hooks from disconnects by configuring the on-hook flash duration.

An on-hook event with a duration that falls in the configured range is interpreted as a flash hook. An on-hook event with a duration shorter than the configured range is ignored. An on-hook event longer than the configured range is interpreted as a disconnect.

### Examples

In the following example, the endpoint number 90 is configured with a 400-ms minimum CAS on-hook flash time and a 1000-ms maximum CAS on-hook flash time:

```
nodename.1.28.VISM8.a> cnfcasflashtime 90 400 1000
```

```
nodename.1.28.VISM8.a>
```

To display the dial delay that you configured, use the **dspcastimers** command.

### Related Commands

Command	Description
<b>addxgcppersistevt</b>	Adds persistent xGCP events.
<b>cnfcasglareattrib</b>	Configures the direction of CAS calls and the glare policy for a specified endpoint.
<b>cnfcaspackage</b>	Configures MGCP packages to observe persistent CAS events in the context of incoming and outgoing CAS calls on a specified endpoint.
<b>dspcasglareattrib</b>	Displays the direction of CAS calls and the glare policy for a specified endpoint.
<b>dspcaspackage</b>	Displays the MGCP packages configured to observe persistent CAS events in the context of incoming and outgoing CAS calls on a specified endpoint.
<b>dspcastimers</b>	Displays the currently configured CAS timers for a specified endpoint.

# cnfcasglareattrib

To configure the direction of channel-associated signaling (CAS) calls and the glare (dual seizure event) policy for a specified endpoint, use the **cnfcasglareattrib** command.

```
cnfcasglareattrib <endpt_num> <cas_direction> |<glare_policy>|
```

Syntax Description	
<i>endpt_num</i>	<p>Number of the endpoint which is to be configured with CAS call direction and a glare policy. Ranges are</p> <ul style="list-style-type: none"> <li>• Template 1               <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2               <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3               <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4               <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5               <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>
<i>cas_direction</i>	<p>CAS bits flow direction. It can be one of the following values:</p> <ul style="list-style-type: none"> <li>• 1 = Bidirectional (incoming and outgoing)</li> <li>• 2 = Incoming</li> <li>• 3 = Outgoing</li> </ul>
<i>glare_policy</i>	<p>(Optional) Glare condition policy. Values are</p> <ul style="list-style-type: none"> <li>• 1 = Controlling</li> <li>• 2 = Releasing</li> </ul> <p><b>Note</b> You can assign a <i>glare_policy</i> argument value of 2 only if the <i>cas_direction</i> argument is assigned a value of 1.</p>

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines**

Use this command to assist in controlling TDM glare events. Use the *cas\_direction* argument to allow or disallow glare events. Use the *glare\_policy* argument value to configure the resolution of glare events if you allow them to occur. Glare events can be resolved in either of two ways: enable VISM/VISM-PR to release a call and accept a call from the PBX, or wait for the PBX to release a call and enable VISM/VISM-PR to continue with a call.

**Examples**

In the following example, the endpoint number 136 is configured with the incoming CAS bits flow direction and the controlling glare condition policy:

```
nodename.1.28.VISM8.a> cnfcasglareattrib 136 2 1
```

```
nodename.1.28.VISM8.a>
```

To display the direction and glare policy that you configured, use the **dspcasglareattrib** command.

**Related Commands**

Command	Description
<b>addxgcppersistevt</b>	Adds persistent xGCP events.
<b>cnfcasflashtime</b>	Configures the minimum and maximum CAS on-hook time periods for incoming flash hooks on a specified endpoint.
<b>cnfcaspackage</b>	Configures MGCP packages to observe persistent CAS events in the context of incoming and outgoing CAS calls on a specified endpoint.
<b>cnflndigitorder</b>	Assigns the order in which ANI digits and DINS digits are dialed during an outgoing FGD call on the endpoints of a specified VISM card line.
<b>delxgcppersistevt</b>	Deletes a persistent xGCP event.
<b>dspcasglareattrib</b>	Displays the direction of CAS calls and the glare policy for a specified endpoint.
<b>dspcaspackage</b>	Displays the MGCP packages configured to observe persistent CAS events in the context of incoming and outgoing CAS calls on a specified endpoint.
<b>dspcastimers</b>	Displays the currently configured CAS timers for a specified endpoint.
<b>dsplndigitorder</b>	Displays the order in which ANI digits and DNIS digits are dialed during an outgoing FGD call on the endpoints of a specified VISM card line.

# cnfcasglaretime

To configure the channel-associated signaling (CAS) glare time for an endpoint, use the **cnfcasglaretime** command.

```
cnfcasglaretime <endpt_num> <GlareTime>
```

<b>Syntax Description</b>	<p><i>endpt_num</i> Number of the endpoint which is to be configured with a glare time, identified by the <i>GlareTime</i> argument value. Ranges are:</p> <ul style="list-style-type: none"> <li>• Template 1           <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2           <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3           <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4           <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5           <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>
	<p><i>GlareTime</i> Glare time (defined in milliseconds). Range is 10–1000 ms. Default is 500 ms.</p>

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** A glare condition occurs when two stations attempt to call each other simultaneously. Glare condition resolution involves a terminating VISM/VISM-PR, which, upon receiving an off-hook event from the call agent, starts a timer and verifies that the terminating PBX is also attempting an off-hook event. If it is, off-hook events from the call agent are ignored for the duration of the timer—the value you indicated with the *GlareTime* argument.

To use this command, ensure that you added the endpoint indicated by the *endpt\_num* argument value and that you configured the associated DS0 for CAS.

**Note**

To use this command, choose the MIB as the source in the **cnfcasparamsource** command.

**Examples**

In the following example, the endpoint 100 is configured with a CAS glare time value of 50 ms:

```
nodename.1.28.VISM8.a> cnfcasglaretime 100 50
```

```
nodename.1.28.VISM8.a>
```

To display the CAS glare time that you configured, use the **dspcastimers** command.

**Related Commands**

Command	Description
<b>dspcastimers</b>	Displays an endpoint's currently configured CAS timers.

# cnfcasguardtime

To configure the channel-associated signaling (CAS) guard time for an endpoint, use the **cnfcasguardtime** command.

```
cnfcasguardtime <endpt_num> <GuardTime>
```

<b>Syntax Description</b>	<p><i>endpt_num</i>      Number of the endpoint which is to be configured with a guard time, identified by the <i>GuardTime</i> argument value. Ranges are</p> <ul style="list-style-type: none"> <li>• Template 1           <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2           <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3           <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4           <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5           <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>
	<p><i>GuardTime</i>      Guard time (defined in milliseconds). Range is 10–1000 ms. Default is 800 ms.</p>

**Command Modes**      VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines**      Guard time is the minimum duration between the end of one call and the beginning of the next call. When a delete connection (DLCX) command is received from a call agent, VISM/VISM-PR starts a timer—set according to the value you indicate for the *GuardTime* argument—and ignores any off-hook events until the timer has expired.

To use this command, ensure that you added the endpoint indicated by the *endpt\_num* argument value and that you configured the associated DS0 for CAS.

**Note**

To use this command, you must choose the MIB as the source in the **cnfcasparamsource** command.

**Examples**

In the following example, the endpoint number 100 is configured with a CAS guard time of 500 ms:

```
nodename.1.28.VISM8.a> cnfcasguardtime 100 500
```

```
nodename.1.28.VISM8.a>
```

To display the CAS guard time that you configured, use the **dspcastimers** command.

**Related Commands**

Command	Description
<b>dspcastimers</b>	Displays an endpoint's currently configured CAS timers.



# cnfcasoffhooktime

To configure a minimum presence time, on an endpoint, for a channel-associated signaling (CAS) off-hook pattern to be recognized as an off-hook signal, use the **cnfcasoffhooktime** command.

```
cnfcasoffhooktime <endpt_num> <OffHookMinTime>
```

## Syntax Description

<i>endpt_num</i>	<p>Number of the endpoint which is to be configured with a guard time, identified by the <i>OffHookMinTime</i> argument value. Ranges are</p> <ul style="list-style-type: none"> <li>• Template 1 <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2 <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3 <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4 <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5 <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>
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*OffHookMinTime* Off-hook time (defined in milliseconds). Range is 10–1000 ms. Default is 20 ms.

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

To use this command, ensure that you added the endpoint indicated by the *endpt\_num* argument value, and that you configured the associated DS0 for CAS.



### Note

To use this command, you must choose the MIB as the source in the **cnfcasparams** command.

---

**Examples**

In the following example, endpoint 100 is configured with a CAS off-hook time of 500 ms:

```
nodename.1.28.VISM8.a> cnfcasoffhooktime 100 500
```

```
nodename.1.28.VISM8.a>
```

To display the CAS off-hook time that you configured, use the **dspcastimers** command.

---

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>dspcastimers</b>	Displays an endpoint's currently configured CAS timers.

---

# cnfcasonhooktime

To configure a minimum presence time, on an endpoint, for a channel-associated signaling (CAS) on-hook pattern to be recognized as an on-hook signal, use the **cnfcasonhooktime** command.

```
cnfcasonhooktime <endpt_num> <OnHookMinTime>
```

## Syntax Description

<i>endpt_num</i>	Number of the endpoint which is to be configured with a guard time, identified by the <i>OnHookMinTime</i> argument value. Ranges are: <ul style="list-style-type: none"> <li>• Template 1 <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2 <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3 <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4 <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5 <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>
<i>OnHookMinTime</i>	On-hook time (defined in milliseconds). Range is 10–1000 ms. Default is 300 ms.

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

To use this command, ensure that you added the endpoint indicated by the *endpt\_num* argument value, and that you configured the associated DS0 for CAS.



### Note

To use this command, you must choose the MIB as the source in the **cnfcasparamsource** command.

---

**Examples**

In the following example, the endpoint 100 is configured with an on-hook time of 500 ms:

```
nodename.1.28.VISM8.a> cnfcasonhooktime 100 500
```

```
nodename.1.28.VISM8.a>
```

To display the CAS on-hook time that you configured, use the **dspeastimers** command.

---

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>dspeastimers</b>	Displays an endpoint's currently configured CAS timers.

---

# cnfcaspacage

To configure the Media Gateway Control Protocol (MGCP) packages to observe persistent channel- associated signaling (CAS) events of incoming and outgoing CAS calls on a specified endpoint, use the **cnfcaspacage** command.

```
cnfcaspacage <endpt_num> <incoming_package> <outgoing_package>
```

Syntax Description	<i>endpt_num</i>	Number of the endpoint. Ranges are
		<ul style="list-style-type: none"> <li>• Template 1               <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2               <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3               <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4               <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5               <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>

---

<i>incoming_package</i>	<p>Package name to be used for persistent events observed on an incoming telephony call. Values are</p> <ul style="list-style-type: none"><li>• MS = PBX DID/ODD trunks and incoming or outgoing MF wink start trunks</li><li>• DT = DTMF and dial pulse<sup>1</sup> trunks (except basic PBX)</li><li>• MD = North American MF Feature Group D EANA and EAIN</li><li>• MO = FGD Operator Services Signaling outgoing trunks only</li><li>• BL = DTMF and dial pulse<sup>1</sup> basic PBX trunks</li><li>• L = Line</li><li>• H = Handset</li><li>• Basic = It can be one of the following:<ul style="list-style-type: none"><li>- G = Generic</li><li>- D = DTMF</li><li>- M = MF</li><li>- T = Trunk</li><li>- L = Line</li><li>- H = Handset</li><li>- R = RTP</li><li>- A = Announcement server</li><li>- Script = Script</li></ul></li></ul>
-------------------------	--

**Note** If you set the package to anything other than basic on an endpoint with this command, persistent events observed on that endpoint are encoded as an event in that package if the event is defined in that package, or dropped if they are not defined in that package.

---

---

<i>outgoing_package</i>	<p>Package name to be used for persistent events observed on an outgoing telephony call. Values are</p> <ul style="list-style-type: none"> <li>• MS = PBX DID/DOD trunks and incoming or outgoing MF wink start trunks</li> <li>• DT = DTMF and dial pulse<sup>1</sup> trunks (except basic PBX)</li> <li>• MD = North American MF Feature Group D EANA and EAIN</li> <li>• MO = FGD Operator Services Signaling outgoing trunks only</li> <li>• BL = DTMF and dial pulse<sup>1</sup> basic PBX trunks</li> <li>• L = Line</li> <li>• H = Handset</li> <li>• Basic = It can be one of the following: <ul style="list-style-type: none"> <li>– G = Generic</li> <li>– D = DTMF</li> <li>– M = MF</li> <li>– T = Trunk</li> <li>– L = Line</li> <li>– H = Handset</li> <li>– R = RTP</li> <li>– A = Announcement server</li> <li>– Script = Script</li> </ul> </li> </ul> <p><b>Note</b> If you set the package to anything other than basic on an endpoint with this command, persistent events observed on that endpoint are encoded as an event in that package if the event is defined in that package, or dropped if they are not defined in that package.</p>
-------------------------	---

---

1. Dial pulse is not supported in VISM.

---

### Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

---

### Usage Guidelines

This command enables RFC 3064 support.

---

### Examples

In the following example, the MGCP packages for endpoint number 83 are configured with `mgcplin` as the MGCP incoming package name and `mgcplout` as the MGCP outgoing package name:

```
nodename.1.28.VISM8.a> cnfcaspackage 83 mgcplin mgcplout
nodename.1.28.VISM8.a>
```

To display the MGCP packages that you configured, use the `dspscaspackage` command.

Related Commands	Command	Description
	<b>addxgcppersistevt</b>	Adds persistent xGCP events.
	<b>cnfcasflashtime</b>	Configures the minimum and maximum CAS on-hook time periods for incoming flash hooks on a specified endpoint.
	<b>cnfcasglareattrib</b>	Configures the direction of CAS calls and the glare policy for a specified endpoint.
	<b>cnflndigitorder</b>	Assigns the order in which ANI digits and DNIS digits are dialed during an outgoing FGD call on the endpoints of a specified VISM card line.
	<b>delxgcppersistevt</b>	Deletes a persistent xGCP event.
	<b>dspcasglareattrib</b>	Displays the direction of CAS calls and the glare policy for a specified endpoint.
	<b>dspcaspackage</b>	Displays the MGCP packages configured to observe persistent CAS events in the context of incoming and outgoing CAS calls on a specified endpoint.
	<b>dspcastimers</b>	Displays the currently configured CAS timers for a specified endpoint.
	<b>dsplndigitorder</b>	Displays the order in which ANI digits and DNIS digits are dialed during an outgoing FGD call on the endpoints of a specified VISM card line.



# cnfcasparamsource

To configure channel-associated signaling (CAS)-related timer source parameters for an endpoint, use the **cnfcasparamsource** command.

```
cnfcasparamsource <endpt_num> <ParamSource>
```

Syntax Description		
<i>endpt_num</i>		Number of the endpoint which is to be configured with the source location, identified by the <i>ParamSource</i> argument value. Ranges are <ul style="list-style-type: none"> <li>• Template 1               <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2               <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3               <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4               <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5               <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>
<i>ParamSource</i>		Source location for CAS-related timer parameters. Values are <ul style="list-style-type: none"> <li>• 1 = CAS application file (default)</li> <li>• 2 = Current VISM MIB</li> </ul>

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** You can configure different CAS-related timer values for different endpoints. However, you must associate all of the endpoints with the same CAS variant.

To use this command, ensure that you add the endpoint indicated by the *endpt\_num* argument value, and that you configure the associated DS0 for CAS.

**Examples**

In the following example, the endpoint number 100 is configured with CAS-related timer values located in the current VISM card's MIB:

```
nodename.1.28.VISM8.a> cnfcasparamsource 100 2
```

```
nodename.1.28.VISM8.a>
```

To display the CAS parameter source that you configured, use the **dspcasparamsource** command.

**Related Commands**

Command	Description
<b>dspcasparamsource</b>	Displays an endpoint's currently configured CAS-related timer source.

# cnfcasstartdialtime

To configure the time when the incoming digits are interpreted as the start dial signal, use the **cnfcasstartdialtime** command.

```
cnfcasstartdialtime <endpoint_number> <start_dial_time>
```

Syntax Description	
<i>endpt_number</i>	Number of the endpoint. Ranges are <ul style="list-style-type: none"> <li>• Template 1               <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2               <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3               <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4               <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5               <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>
<i>start_dial_time</i>	Start dial time. Range is 70–1000 ms. Default is 70 ms.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures when using this command.

---

**Examples**

In the following example, the endpoint 100 is configured with a start dial time of 70 ms:

```
nodename.1.28.VISM8.a> cnfcasstartdialtime 100 70
```

```
nodename.1.28.VISM8.a>
```

To display the start dial time that you configured, use the **dspecastimers** command.

---

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>dspecastimers</b>	Displays the currently configured CAS timers for a specified endpoint.

---

# cnfcastransendpt

To download the channel-associated signaling (CAS) mapping table to an endpoint, use the **cnfcastransendpt** command.

```
cnfcastransendpt <endpt_number> <table_name> <direction>
```

Syntax Description		
<i>endpt_number</i>		Number of the endpoint where you want to apply the mapping table. Value is one of the following ranges: <ul style="list-style-type: none"> <li>• Template 1               <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2               <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3               <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4               <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5               <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>
<i>table_name</i>		Name of the CAS mapping table. Range is 1–64 characters.
<i>direction</i>		Direction to or from the TDM interface where you want to apply the CAS mapping table. <ul style="list-style-type: none"> <li>• 1 = Rx from TDM—Applies the mapping to the signaling bits received from the TDM. These bits are translated and then transmitted out the AAL2 trunk.</li> <li>• 2 = Tx to TDM—Applies the mapping to the signaling bits received from the AAL2 trunk. These bits are translated and then transmitted out the TDM interface.</li> <li>• 3 = Receive and Transmit—Applies the mapping to both the received and transmitted bits on the TDM interface.</li> <li>• 4 = None—Removes the translation table from the endpoint.</li> </ul>

**Command Modes** AAL2 trunking, switched AAL2 SVC, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines**

This command is applicable only to the VISM-PR card.

**Examples**

In the following example, the E1toT1trans table is applied to endpoint number 2 in the receive direction:

```
nodename.1.5.VISM8.a > cnfcastransendpt 2 E1toT1trans 2
```

```
nodename.1.5.VISM8.a >
```

To display the endpoints and the CAS mapping table you configured, use the **dspecastransendpts** command.

**Related Commands**

Command	Description
<b>addcastranstbl</b>	Creates a CAS mapping table.
<b>delcastranstbl</b>	Deletes an existing CAS mapping table.
<b>delcastransendpt</b>	Deletes a CAS mapping table that is associated with an endpoint.
<b>dspecastransendpts</b>	Displays all endpoints and their associated CAS mapping table names.
<b>dspecastranstbl</b>	Displays the CAS mapping table configurations.
<b>dspecastranstblendpts</b>	Displays all endpoints that are associated with a CAS mapping table.
<b>dspecastranstbls</b>	Displays the list of the CAS mapping tables.

# cnfcasvar

To configure previously added channel-associated signaling (CAS) variant timing parameters, use the **cnfcasvar** command.

```
cnfcasvar <variant_name> <country_code> <Tring> <Tpart> <Tcrit> <TMF>
```

## Syntax Description

<i>variant_name</i>	Name of a previously added CAS variant. Range is 1–64 alphanumeric characters.
<i>country_code</i>	Country code of the variant. The value must be a 2-character text string.
<i>Tring</i>	Ringing time (defined in seconds). Range is 10–600 sec.
<i>Tpart</i>	Partial dial time (defined in seconds). Range is 10–10000 sec—in increments of 10 sec.
<i>Tcrit</i>	Critical timing (defined in seconds). Range is 0–10000 sec—in increments of 10 sec.
<i>TMF</i>	Interdigit timeout value for MF digits (defined in seconds). Range is 1–10 sec.

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures when using this command.

## Examples

In the following example, the var1 CAS variant for the nz country code is configured with a partial timeout of 10 seconds, a critical timing of 10 seconds, and an MF interdigit timeout of 2 seconds:

```
nodename.1.5.VISM8.a > cnfcasvar var1 nz 10 10 2
```

```
nodename.1.5.VISM8.a >
```

To display the information about the CAS variant you configured, use the **dspcasvar** command.

## Related Commands

Command	Description
<b>addcasvar</b>	Adds a CAS variant to a VISM/VISM-PR card.
<b>delcasvar</b>	Deletes a CAS variant from a VISM/VISM-PR card.
<b>dspcasvar</b>	Displays information about CAS variants for a given variant.

# cnfcaswinktime

To configure the channel-associated signaling (CAS) wink time parameters—minimum and maximum make times, and minimum break time—for an endpoint, use the **cnfcaswinktime** command.

```
cnfcaswinktime <endpt_num> <WinkMinTime> <WinkMaxTime> <WinkBreakTime>
```

## Syntax Description

<i>endpt_num</i>	Number of the endpoint which is to be configured with wink time parameters. Ranges are <ul style="list-style-type: none"> <li>• Template 1 <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2 <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3 <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4 <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5 <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>
<i>WinkMinTime</i>	Minimum make duration time (defined in milliseconds) of the wink. Range is 10–1000 ms. Default is 100 ms.
<i>WinkMaxTime</i>	Maximum make duration time (defined in milliseconds) of the wink. Range is 10–3000 ms. Default is 1000 ms.
<i>WinkBreakTime</i>	Minimum break duration time (defined in milliseconds) of the wink. Range is 10–1000 ms. Default is 20 ms.

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking



**Usage Guidelines**

A wink is composed of the following sequential events:

1. On-hook pattern
2. Off-hook pattern
3. Return to an on-hook pattern

The minimum and maximum make times are the minimum and maximum durations that the off-hook pattern persists. The minimum break time is the minimum duration that the on-hook pattern persists following the return to on-hook.

To use this command, you must ensure that the endpoint indicated by the *endpt\_num* argument value has been previously added and that the associated DS0 is configured for CAS.

**Note**

To use this command, you must choose the MIB as the source in the **cnfcasparamsource** command.

**Examples**

In the following example, the endpoint 100 is configured with a wink time specification of 100 ms for the minimum make time, 1000 ms for the maximum make time, and 20 ms for the minimum break time:

```
nodename.1.5.VISM8.a > cnfcaswinktime 100 100 100 20
```

```
nodename.1.5.VISM8.a >
```

To display the wink time that you configured, use the **dspcastimers** command.

**Related Commands**

Command	Description
<b>dspcastimers</b>	Displays an endpoint's currently configured CAS timers.

# cnfcasxgcp

To configure channel-associated signaling (CAS) variant retransmission parameters, use the **cnfcasxgcp** command.

```
cnfcasxgcp <variant_name> <rexTime> <initRexmitTime> <retries>
```

## Syntax Description

<i>variant_name</i>	Name of the CAS variant to be configured with retransmission parameters. Range is a string of 1–64 alphanumeric characters.
<i>rexTime</i>	Retransmission time (defined in milliseconds). Range is 10–10000 ms—in 10-ms increments.
<i>initRexmitTime</i>	Initial retransmission time (defined in milliseconds). Range is 10–10000 ms—in 10-ms increments.
<i>retries</i>	Maximum number of retransmission retries. Range is 0–10.

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the var1 CAS variant is configured for 100-ms retransmission time, 100-ms initial retransmission time, and up to two retransmission attempts:

```
nodename.1.5.VISM8.a > cnfcasxgcp var1 100 100 2
```

```
nodename.1.5.VISM8.a >
```

To display the CAS variant parameters that you configured, use the **dspcasvar** command.

## Related Commands

Command	Description
<b>addcasvar</b>	Adds a CAS variant to a VISM/VISM-PR card.
<b>delcasvar</b>	Deletes a CAS variant from a VISM/VISM-PR card.
<b>dspcasvar</b>	Displays information about CAS variants for a given variant.

# cnfcidis

To configure a channel ID (CID) as in-service, use the **cnfcidis** command.

```
cnfcidis <LCN> <cid_number> [<maxcid>]
```

## Syntax Description

<i>LCN</i>	Logical channel number of the connection. Range is 131–510.
<i>cid_number</i>	Number of the CID you want to put in-service. Range is 8–255.
<i>[maxcid]</i>	(Optional) Maximum number of CIDs to configure as in-service in bulk mode.

## Command Modes

AAL2 trunking, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

This command is applicable only to the VISM-PR card.

In-service means the CID is enabled and operationally active. In order for you to place a CID in-service, you must have enough bandwidth.

## Examples

In the following example, CID 100 on LCN 131 is configured as in-service:

```
nodename.1.12.VISM8.a > cnfcidis 131 100
```

```
nodename.1.12.VISM8.a >
```

To show the administrative state of the CID, enter the **dspcid** command.

## Related Commands

Command	Description
<b>cnfcidoos</b>	Configures the CID as out-of-service.
<b>dspcid</b>	Displays the configuration data of an AAL2 CID on the card.

# cnfcidoos

To configure a channel ID (CID) as out-of-service, use the **cnfcidoos** command.

```
cnfcidoos <LCN> <cid_number> [<maxcid>]
```

Syntax Description	LCN	Logical channel number of the connection. Range is 131–510.
	<i>cid_number</i>	Number of the CID you want to take out-of-service. Range is 8–255.
	<i>maxcid</i>	(Optional) Maximum number of CIDs to configure as out-of-service in bulk mode.

**Command Modes** AAL2 trunking, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** This command is applicable only to the VISM-PR card.  
An out-of-service state means that the CID(s) are disabled and not operationally active.

**Examples** In the following example, CID 8 on LCN 131 is configured for out-of-service:

```
nodename.1.12.VISM8.a > cnfcidoos 131 8
```

```
nodename.1.12.VISM8.a >
```

To show the administrative state of the CID, enter the **dspcid** command.

Related Commands	Command	Description
	<b>cnfcidis</b>	Configures the CID as in-service.
	<b>dspcid</b>	Displays the configuration data of an AAL2 CID on the card.

# cnfco1timer

To configure the bearer continuity test CO1 timer value, use the **cnfco1timer** command.

CO1 is a tone of 2010 Hz. The tone can be requested by the Media Gateway Controller (MGC) or signaled on command by the MGC. The tone is applied for the specified period of time during a continuity test.

**cnfco1timer** *timeout*

## Syntax Description

<i>timeout</i>	Timeout value in the range 0–60 seconds. Default timeout is 3 seconds. A value of 0 indicates the time-out period is infinite.
----------------	--

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL2 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the bearer continuity test CO1 timer expires at 3 seconds:

```
nodename.1.12.VISM8.a > cnfco1timer 3
```

```
nodename.1.12.VISM8.a >
```

To display the CO1 timer that you configured, use the **dspco1timer** command.

## Related Commands

Command	Description
<b>dspco1timer</b>	Displays the bearer continuity test CO1 timer value.
<b>dspvismparam</b>	Displays the current VISM/VISM-PR card configuration.

# cnfco2timer

To configure the bearer continuity test CO2 timer value, use the **cnfco2timer** command.

CO2 is a tone of 1780 Hz. The tone can be requested by the Media Gateway Controller (MGC) or signaled on command by the MGC. The tone is applied for the specified period of time during a continuity test.

**cnfco2timer** <timeout>

## Syntax Description

<i>timeout</i>	Timeout value in the range 0–60 seconds. Default timeout is 3 seconds. A value of zero indicates the time-out period is infinite.
----------------	---

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL2 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the bearer continuity test CO2 timer expires at 3 seconds:

```
nodename.1.12.VISM8.a > cnfco2timer 3
```

```
nodename.1.12.VISM8.a >
```

To display the CO2 timer that you configured, use the **dspco2timer** command.

## Related Commands

Command	Description
<b>dspco2timer</b>	Displays the bearer continuity test CO2 timer value.
<b>dspvismparam</b>	Displays the current VISM/VISM-PR card configuration.

# cnfco4timer

To configure the bearer continuity test CO4 timer value, use the **cnfco4timer** command.

```
cnfco4timer <timeout>
```

<b>Syntax Description</b>	<i>timeout</i> Timeout value (defined in milliseconds). Range is 50–10000 ms. Default is 1000 ms.
---------------------------	---

<b>Command Modes</b>	VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL2 SVC
----------------------	---

<b>Usage Guidelines</b>	A timer is started when a CO4 or xRBK message is sent. If a CO4 message is not received before the timeout expires, a VISM-initiated DLCX message is sent to the call agent.
-------------------------	--

<b>Examples</b>	In the following example, the bearer continuity test CO4 timer expires at 10000 ms:
-----------------	---

```
nodename.1.12.VISM8.a > cnfco4timer 10000
```

```
nodename.1.12.VISM8.a >
```

To display the CO4 timer that you configured, use the **dspco4timer** command.

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>dspco4timer</b>	Displays the bearer continuity test CO4 timer value.
	<b>dspvismparam</b>	Displays the current VISM/VISM-PR card configuration.

# cnfcodecjtrdelay

To configure the jitter delay mode and initial delay value for a specified codec, use the **cnfcodecjtrdelay** command.

```
cnfcodecjtrdelay <codecType> <jitter_mode> <jitter_initdelay>
```

Syntax Description	
<i>codecType</i>	Type of coding/decoding to be performed on the data stream. Values are <ul style="list-style-type: none"> <li>• 1 = G.711u</li> <li>• 2 = G.711a</li> <li>• 3 = G.726-32K</li> <li>• 4 = G.729a</li> <li>• 5 = G.729ab</li> <li>• 6 = Clear channel (VAD and ECAN must be off)</li> <li>• 7 = G.726-16K</li> <li>• 8 = G.726-24K</li> <li>• 9 = G.726-40K</li> <li>• 11 = G.723.1-H</li> <li>• 12 = G.723.1-AH</li> <li>• 13 = G.723.1-L</li> <li>• 14 = G.723.1-AL</li> <li>• 15 = Lossless (VAD and ECAN must be off)</li> </ul>
<i>jitter_mode</i>	Jitter delay mode. It can be one of the following values: <ul style="list-style-type: none"> <li>• 1 = Fixed. We recommend fixed mode if latency jitter is constant.</li> <li>• 2 = Adaptive. We recommend adaptive mode if latency jitter is variable.</li> </ul>
<i>jitter_initdelay</i>	Initial jitter delay (defined in milliseconds). Ranges are <ul style="list-style-type: none"> <li>• For codec templates 1, 3, 4, and 5, 0–100 in increments of 10.</li> <li>• For codec template 2, 0–100 in increments of 5.</li> <li>• For Lossless codec, range is 0–50.</li> </ul>

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Configure the *jitter\_initdelay* argument to 20 ms when you are using DSP firmware Versions 3.4 and 3.6. The G.723.1 codecs are supported for VISM-PR cards and are not supported for VISM cards.



---

**Examples**

In the following example, the codec G.726-24K is configured with an adaptable jitter mode and an initial jitter delay of 55 ms:

```
nodename.1.12.VISM8.a > cnfcodecjtrdelay 8 2 55
```

```
nodename.1.12.VISM8.a >
```

To display the jitter delay modes and initial delays that you configured, use the **dsptimecodejtrdelays** command.

---

**Related Commands**

Command	Description
<b>dsptimecodejtrdelays</b>	Displays the configured codec jitter delay mode and associated jitter initial delay.

---

# cnfcodecneg

To configure the priority order of the codec negotiation option, use the **cnfcodecneg** command.

```
cnfcodecneg <codecNegOpt>
```

Syntax Description	<i>codecNegOpt</i>	The codec list priority scheme. Values are
		<ul style="list-style-type: none"> <li>• 1 = Local connection option (LCO) list, remote Session Description Protocol (SDP) data list, local MIB</li> <li>• 2 = LCO list, local MIB, remote SDP data list</li> <li>• 3 = Remote SDP data list, LCO list, local MIB</li> <li>• 4 = Remote SDP data list, local MIB, LCO list</li> <li>• 5 = Local MIB, LCO list, remote SDP data list</li> <li>• 6 = Local MIB, remote SDP data list, LCO list</li> </ul>

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, and VoIP and AAL1 SVC

**Usage Guidelines** Codec lists include the following:

- Call agent-provided list in an LCO
- Remote gateway-provided list in the SDP data
- Local MIB-provided list

**Examples** In the following example, the LCO list is the first priority, SDP data list is second, and the list from the local MIB is third:

```
nodename.1.12.VISM8.a > cnfcodecneg 1
```

```
nodename.1.12.VISM8.a >
```

To display the priority order that you configured, use the **dspscodecneg** command.

Related Commands	Command	Description
	<b>dspscodecneg</b>	Displays the codec negotiation option.

# cnfcodecparams

To configure codec parameters—codec packetization period, preference, Internet Assigned Numbers Authority (IANA) registered codec type and xGCP codec string—for AAL1 and IP calls, use the **cnfcodecparams** command.

```
cnfcodecparams <codecType> <pktPeriod> [codecPreference] <codecString>
                <ianaCodecNum>|
```

Syntax Description	
<i>codecType</i>	Type of coding/decoding to be performed on the data stream. Values are <ul style="list-style-type: none"> <li>• 1 = G.711u</li> <li>• 2 = G.711a</li> <li>• 3 = G.726-32K</li> <li>• 4 = G.729a</li> <li>• 5 = G.729ab</li> <li>• 6 = Clear channel (VAD must be off)</li> <li>• 7 = G.726-16K</li> <li>• 8 = G.726-24K</li> <li>• 9 = G.726-40K</li> <li>• 11 = G.723.1-H</li> <li>• 12 = G.723.1a-H</li> <li>• 13 = G.723.1-L</li> <li>• 14 = G.723.1a-L</li> <li>• 15 = Lossless (VAD must be off)</li> </ul>
<i>pktPeriod</i>	Packetization period (defined in milliseconds). Values are <ul style="list-style-type: none"> <li>• 10 (default for all codecs except G.723)</li> <li>• 20</li> <li>• 30 (default for G.723)</li> <li>• 40</li> <li>• 60</li> </ul>
<i>codecPreference</i>	(Optional) Preference level of the codec you identified with the <i>codecType</i> argument value. Values are <ul style="list-style-type: none"> <li>• 0 = Ignore preference</li> </ul> <p><b>Note</b> A preference value of 0 results in the codec being excluded from the list of supported codecs during codec negotiation through xGCP.</p> <ul style="list-style-type: none"> <li>• Range of 1 (highest) to 13 (lowest)</li> </ul>
<i>codecString</i>	(Optional) The xGCP codec string. Range is 1–20 ASCII characters.
<i>ianaCodecNum</i>	(Optional) IANA registered codec type. Range is 0–96.

---

**Command Modes**

VoIP switching/VoIP trunking, AAL1 switching, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

---

**Usage Guidelines**

The packetization period parameter is required, but the remaining parameters are optional. The parameters of any codec can be configured, regardless of whether the current codec template supports that codec.

If you are using template 2, the G.726 and G.729 codec types are ignored and replaced with clear channel.

The G.723.1 codecs are supported for VISM-PR cards and are not supported for VISM cards.

---

**Examples**

In the following example, the codec with identification number 3 is configured with a packetization period of 20 ms. The command also assigns the highest priority to the codec, indicates that it is not IANA registered, and shows that it is represented by the string geeseven.

```
nodename.1.12.VISM8.a > cnfcodecparams 3 20 1 geeseven 0
```

```
nodename.1.12.VISM8.a >
```

---

**Related Commands**

There are no related commands.

# cnfcodectmpl

To assign a codec template to an entire VISM card, use the **cnfcodectmpl** command.

```
cnfcodectmpl <template_number>
```

Syntax Description	<i>template_number</i>
	<p>Template number assigned to the current VISM card. Values are</p> <ul style="list-style-type: none"> <li>1 = G.711u, G.711a, G.726-16K, G.726-24K, G.726-32K, G.726-40K, G.729a, and G.729ab codecs, and clear channel</li> </ul> <p><b>Note</b> Template 1 is limited to 145 DS0s for VISM and 248 DS0s for VISM-PR.</p> <ul style="list-style-type: none"> <li>2 = G.711u and G.711a uncompressed codecs, and clear channel</li> <li>3 = G.711u, G.711a, G.726-16K, G.726-24K, G.726-32K, G.726-40K, G.729a, and G.729ab codecs, and clear channel</li> </ul> <p><b>Note</b> Codec template number 3 is template 1 with T.38 support added. Template 3 is limited to 120 DS0s for VISM and 248 DS0s for VISM-PR.</p> <ul style="list-style-type: none"> <li>4 = G.711u, G.711a, G.726-16K, G.726-24K, G.726-32K, G.726-40K, G.729a, G.729ab, G.723.1-H, G.723.1a-H, G.723.1-L, G.723.1a-L codecs, and clear channel</li> </ul> <p><b>Note</b> Template 4 supports a maximum of 144 channels for VISM-PR.</p> <ul style="list-style-type: none"> <li>5 = G.711u, G.711a, G.726-16K, G.726-24K, G.726-32K, G.726-40K, G.729a, and G.729ab and Lossless codecs</li> </ul> <p><b>Note</b> Template 5 supports a maximum of 192 DS0s for VISM-PR-T1 and 248 DS0s for VISM-PR-E1.</p>

Command Modes	
	VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

Usage Guidelines	
	<p>The following list describes the maximum number of channels supported by the different templates:</p> <ul style="list-style-type: none"> <li>• Template 1 <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2 <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> </ul>

- Template 3
  - 1–120 for VISM
  - 1–192 for VISM-PR T1
  - 1–248 for VISM-PR E1
- Template 4
  - 1–64 for VISM
  - 1–144 for VISM-PR
- Template 5
  - 1–192 for VISM-PR T1
  - 1–248 for VISM-PR E1

Templates define allowable voice encoding types.

This command is not allowed if CIDs are present.

The G.723.1 codecs are supported for VISM-PR cards and are not supported for VISM cards.

### Examples

In the following example, the template number 1 is assigned to the current VISM card:

```
nodename.1.12.VISM8.a > cnfcodectmpl 1
The card will be reset, do you want to proceed (Yes/No)? Y
nodename.1.12.VISM8.a >
```

### Related Commands

Command	Description
<b>dspecodectmpls</b>	Displays all entries in the VISM card's codec template table.

# cnfcompsize

To configure the compressed packet size, use the **cnfcompsize** command.

```
cnfcompsize <packetSize>
```

<b>Syntax Description</b>	<i>packetSize</i> Compressed packet size. Values are 80 and 160 bytes.
---------------------------	--

<b>Command Modes</b>	AAL1 switching and VoIP and AAL1 SVC
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<b>Usage Guidelines</b>	Follow standard CLI procedures when using this command.
-------------------------	---

<b>Examples</b>	In the following example, the compressed packet size is set at 80 bytes:
-----------------	--

```
nodename.1.12.VISM8.a > cnfcompsize 80
```

```
nodename.1.12.VISM8.a >
```

To display the compressed packet size that you configured, use the **dspcarddsp** command.

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>dspcarddsp</b>	Displays all current card-level parameters for ECAN and voice compression DSPs.

# cnfcompvad

To enable or disable voice activity detection (VAD) on a T1 or E1 line, use the **cnfcompvad** command.

**cnfcompvad** <line\_number> <voiceDetection>

<b>Syntax Description</b>	<i>line_number</i>	Number of the line on which to configure VAD. Range is 1–8.
	<i>voiceDetection</i>	Value you can use to disable or enable VAD. <ul style="list-style-type: none"> <li>• 1 = Disable</li> <li>• 2 = Enable</li> </ul>

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures when using this command.

**Examples** In the following example, line number 3 does not have VAD enabled:

```
nodename.1.12.VISM8.a > cnfcompvad 3 1
```

```
nodename.1.12.VISM8.a >
```

**Related Commands** There are no related commands.



# cnfcon

To configure a connection between a VISM card and an MGX 8000 Series platform PXM card, use the **cnfcon** command.

```
cnfcon <LCN> <PCR> <service_type> [|<SCR_ingress> <MBS_ingress> <priority> <prefrte>
<direct>|
```

Syntax	Description
<i>LCN</i>	Logical channel number of the connection. Range is 131–510.
<i>PCR</i>	Peak cell rate (PCR) measured in cells per second. Ranges are <ul style="list-style-type: none"> <li>• 1–400 = Signaling PVCs in AAL2 trunking mode</li> <li>• 1–20000 = AAL5 control PVC</li> <li>• 1–50000 = T1 AAL2 bearer PVCs</li> <li>• 1–60000 = E1 AAL2 bearer PVCs</li> <li>• 1–96000 = AAL5 bearer PVC</li> </ul> <p><b>Note</b> If the <i>service_type</i> argument value is a variable bit rate (VBR), the <i>PCR</i> argument value must be 15 or greater.</p>
<i>service_type</i>	Service type. Values are <ul style="list-style-type: none"> <li>• 1 = Constant bit rate (CBR)</li> <li>• 2 = Variable bit rate real time—rt-VBR</li> <li>• 3 = Variable bit rate non-real time—nrt-VBR</li> <li>• 4 = rt-VBR3</li> <li>• 5 = rt-VBR2</li> <li>• 6 = nrt-VBR</li> <li>• 7 = nrt-VBR</li> </ul> <p><b>Note</b> For VISM-PR to RPM-PR connections, use values 4–7.</p>
<i>SCR_ingress</i>	(Optional) Sustainable cell rate (SCR). Range is from 15 to the value you configured for the <i>PCR</i> argument. <p><b>Note</b> This argument value is required if the <i>service_type</i> argument value is in the range 2–7.</p>
<i>MBS_ingress</i>	(Optional) Maximum burst size (MBS). Maximum number of cells transmitted at the peak cell rate. Range is from 1 cell to 10 times the value you configured for the <i>SCR_ingress</i> argument. <p><b>Note</b> This argument value is required if the <i>service_type</i> argument value is in the range 2–7.</p>
<i>priority</i>	(Optional) Route priority is the priority number assigned to the PVC during configuration of the connection. <p>Range is 1–15. Default is 8.</p> <p>A value of 1 indicates highest priority, and a value of 15 indicates the lowest priority.</p> <p><b>Note</b> This parameter is applicable only to VISM-PR cards.</p>

<code> prefrte </code>	<p>(Optional) Unique identifier of the preferred route with which this connection is associated.</p> <p>Range is 0–65535. Default is 0.</p> <p>When the specified route identifier is 0, the connection is not associated with a preferred route. This parameter is not applicable to the slave end of an SPVC connection.</p> <p><b>Note</b> This parameter is applicable only to VISM-PR cards.</p>
<code> direct </code>	<p>(Optional) Parameter you can use to specify whether or not the associated preferred route is the only route that the connection is permitted to take.</p> <ul style="list-style-type: none"> <li>• 1 = Yes—The connection is not allowed to take an alternate route. This option is not applicable when a preferred route is not specified.</li> <li>• 2 = No (default)—The connection is allowed to try another route if the preferred route is unavailable.</li> </ul> <p>If the directed preferred route is unavailable, the connection fails.</p> <p><b>Note</b> This parameter is applicable only to VISM-PR cards.</p>

**Command Modes**

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines**

Follow standard CLI procedures when using this command.

**Examples**

In the following example, an LCN 160 connection is configured as CBR, with a peak cell rate of 20000 cps, a sustained cell rate of 5000 cps, and a maximum burst rate of 10000 cps:

```
nodename.1.27.VISM8.a > cnfcon 160 20000 1 5000 10000
```

```
nodename.1.27.VISM8.a >
```

To display the configurations, use the **dspon** and **dspscons** commands.

**Related Commands**

Command	Description
<b>addcon</b>	Adds a PVC connection between a VISM card and any SM or PXM card.
<b>delcon</b>	Deletes a PVC connection between a VISM card and an MGX 8000 Series platform PXM card.
<b>dspon</b>	Displays connection configurations.
<b>dspscons</b>	Displays configuration data for all of the connections.
<b>dspsvismparam</b>	Displays the current VISM card configuration.

# cnfconbwtoggle

To change the bandwidth usage either to a minimum usage mode or to the original PVC bandwidth configuration, use the **cnfconbwtoggle** command.

```
cnfconbwtoggle <LCN> <USER_BW_OPTIONS>
```

Syntax Description	LCN	Logical channel number of the connection. Range is 131–510.
	USER_BW_OPTIONS	Bandwidth toggle options: <ul style="list-style-type: none"> <li>• 1 = BW Revert—Revert to the original PVC bandwidth configuration.</li> <li>• 2 = BW Minimum—Use the minimum bandwidth for the PVC.</li> </ul>

**Command Modes** AAL2 trunking, switched AAL2 SVC, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** This command is applicable only to the VISM-PR card.

**Examples** In the following example, LCN 131 is configured for the minimum bandwidth:

```
nodename.1.12.VISM8.a > cnfconbwtoggle 131 2
```

```
nodename.1.12.VISM8.a >
```

To display the current bandwidth values, use the **dspcon** command.

Related Commands	Command	Description
	dspcon	Displays the parameters for a specified channel.

# cnfconcac

To configure connection admission control (CAC) on a previously added connection, use the **cnfconcac** command.

```
cnfconcac <LCN> <mastership>
```

## Syntax Description

<i>LCN</i>	Logical channel number (LCN) of the connection. Range is 131–510.
<i>mastership</i>	Connection type. Values are <ul style="list-style-type: none"> <li>• 1 = Master (default)</li> <li>• 2 = Slave</li> </ul>

## Command Modes

AAL2 trunking, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Before using this command, enable CAC at the card level by executing the **cnfcac** command. If the permanent virtual circuit (PVC) has been configured as master, CAC functionality is applied to the master end of the PVC only.

## Examples

In the following example, the CAC is configured at the master end of LCN 131:

```
nodename.1.12.VISM8.a > cnfconcac 131 1
nodename.1.12.VISM8.a >
```

To display the CAC information, use the **dsponcac** command.

## Related Commands

Command	Description
<b>cnfcac</b>	Enables or disables the CAC feature on a VISM card.
<b>dsponcac</b>	Displays CAC configuration data for a connection.

# cnfconcacparams

To configure connection admission control (CAC) features on a permanent virtual circuit (PVC), use the **cnfconcacparams** command.

**cnfconcacparams** <LCN> <VADTolerance> <VADDutyCycle>

Syntax Description	
<i>LCN</i>	Logical channel number (LCN) of the connection. Range is 131–510.
<i>VADTolerance</i>	<p>VAD tolerance—The expression for VAD over-subscription drop ratio where: tolerance = 10000 x over-subscription drop ratio (expressed as a percentage). A typical value for VAD tolerance is 10. Some examples of VAD tolerance are</p> <ul style="list-style-type: none"> <li>• 10000 (tolerance) = 1% (over-subscription drop ratio)</li> <li>• 100 = 0.01%</li> <li>• 10 = 0.001%</li> <li>• 1 = 0.0001%</li> </ul> <p>Range is 0–10000. Default is 100.</p>
<i>VADDutyCycle</i>	<p>VAD duty cycle—The ratio of speech and holdover duration to total duration expressed as a percentage. Holdover is the period between the point when silence begins and the point when silence suppression is turned on. In VISM, the holdover time is 250 ms.</p> <p>A typical value for this parameter is 61, which means that 61% of the time is taken by speech and holdover. Range is 1–99. Default is 61.</p>

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures when using this command.

**Examples** In the following example, VAD is configured on LCN 150 with a VAD tolerance of 10 and a VAD duty cycle of 61:

```
nodename.1.12.VISM8.a > cnfconcacparams 150 10 61
```

```
nodename.1.12.VISM8.a >
```

To display the CAC parameters, use the **dsponcac** command.

Related Commands	Command	Description
	<b>cnfconcac</b>	Enables or disables the CAC feature on a VISM/VISM-PR card.
	<b>dsponcac</b>	Displays CAC configuration data for a connection.

# cnfconprotect

To configure protection on a permanent virtual circuit (PVC), use the **cnfconprotect** command.

```
cnfconprotect <LCN> <protection> <lock_state> <fallback_LCN>
```

Syntax Description	LCN	Primary logical channel number of the connection (PVC). Range is 131–510.
	<i>protection</i>	Value you can use to enable or disable PVC protection. <ul style="list-style-type: none"> <li>• 1 = Protected</li> <li>• 2 = Unprotected</li> </ul>
	<i>lock_state</i>	PVC lock state. Values are <ul style="list-style-type: none"> <li>• 1 = Unlock</li> <li>• 2 = Lock</li> </ul>
	<i>fallback_LCN</i>	Secondary (fallback) logical channel number of the connection (PVC). Range is 131–510.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Before using this command, add the primary and secondary PVCs by executing the **addcon** command. Ensure that both channels have the same peak cell rate (PCR) argument value.

Protect the primary channel using the **cnfconprotect** command and configure the secondary (fallback) LCN.

The primary channel can be locked, so that it is inoperative and forces a switchover to the secondary channel. If the primary channel is locked and the secondary channel fails, the connection fails.

If the primary PVC is protected, automatic switchover to a specified secondary PVC occurs if a primary PVC fails.

A protected channel cannot be deleted. To delete the channel, use the **cnfconprotect** command to make the primary channel unprotected, delete the secondary channel, and then delete the primary channel.

**Examples** In the following example, LCN 132 is protected and unlocked, and LCN 217 is the secondary (fallback) LCN:

```
nodename.1.12.VISM8.a > cnfconprotect 132 1 1 217
```

```
nodename.1.12.VISM8.a >
```

**Related Commands** There are no related commands.

# cnfconvbdpol

To configure the voiceband data (VBD) policies for fax/modem upspeed connection admission control (CAC) failure, use the **cnfconvbdpol** command.

Use this command for fax/modem carrier loss for calls that are added to a particular IP or AAL2 LCN.

```
cnfconvbdpol <LCN> <CarrierLossPol> <CACRejPol>
```

## Syntax Description

<i>LCN</i>	Logical channel number (LCN) of the connection. Range is 131–510.
<i>CarrierLossPol</i>	Carrier loss policy. Values are <ul style="list-style-type: none"> <li>• 1 = Revert to the previous codec</li> <li>• 2 = Maintain the upspeed codec</li> <li>• 3 = Unspecified (default)</li> </ul>
<i>CACRejPol</i>	CAC rejection policy. Values are <ul style="list-style-type: none"> <li>• 1 = Delete the connection</li> <li>• 2 = Maintain the connection</li> <li>• 3 = Unspecified (default)</li> </ul>

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

If you select 3 (unspecified) for the *CarrierLossPol* or *CACRejPol* argument values, the card level defaults are used.

## Examples

In the following example, LCN 131 is configured with a carrier loss policy of 1 (if carrier is lost, the LCN reverts to the previous codec) and a CAC rejection policy of 2 (the LCN connection is maintained):

```
nodename.1.12.VISM8.a > cnfconvbdpol 131 1 2
```

```
nodename.1.12.VISM8.a >
```

To display the CAC information, use the **dsponcac** command.

## Related Commands

Command	Description
<b>dsponcac</b>	Displays CAC configuration data for a connection.

# cnfconvcci

To associate a virtual circuit connection identifier (VCCI) and a remote address with an LCN, use the **cnfconvcci** command.

```
cnfconvcci <lcn> <vcci> <farend_addr_type> |<farend_addr>|
```

## Syntax Description

<i>lcn</i>	Logical channel number of the connection. Range is 131–510.
<i>vcci</i>	VCCI number. Range is 0–65535.
<i>farend_addr_type</i>	Address type of the VCCI. Values are <ul style="list-style-type: none"> <li>• 1 = Not applicable</li> </ul> <p><b>Note</b> This address type disassociates a VCCI, a far-end address type, and a far end address from an LCN.</p> <ul style="list-style-type: none"> <li>• 2 = NSAP (20-byte hexadecimal address)</li> <li>• 3 = E.164 (1- to 15-byte decimal address)</li> <li>• 4 = Gateway ID (1- to 64-byte ASCII character address)</li> <li>• 5 = Unspecified</li> </ul>
<i> farend_addr </i>	(Optional) Far-end IP address. This argument is optional if the <i>farend_addr_type</i> value is 1 or 5.  This argument is mandatory if the <i>farend_addr_type</i> value is 2, 3, or 4. <ul style="list-style-type: none"> <li>• E.164 farend address—Numeric value. Range is 1–15 characters, each with a value of 0–9.</li> <li>• GW ID farend address—ASCII value. Range is 1–64 characters.</li> <li>• NSAP farend address—Value is 20 bytes binary. In hex this address equates to 40 hexadecimal (0–9, A–F) characters to be typed in.</li> </ul>

## Command Modes

Switched AAL2 PVC

## Usage Guidelines

The VCCI number does not need to be unique for the not applicable (1) address type, and the far-end address is not used.

The combination of VCCI number and far-end address must be unique for the following address types:

- NSAP (2)
- E.164 (3)
- Gateway ID (4)

The VCCI number must be unique for the unspecified (5) address type, even though the far-end address is not used.



---

**Examples**

In the following example, LCN 133 is associated with a VCCI of 133 with an NSAP address:

```
nodename.1.12.VISM8.a > cnfconvcci 131 133 2
```

```
nodename.1.12.VISM8.a >
```

To display the VCCI values, use the **dspvccis** command.

---

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>dspcon</b>	Displays the parameters for a specified LCN.
<b>dspvccis</b>	Displays the associated values for the LCN, VCCI, address type, and address.

---

# cnfdef tos

To configure the type of service (ToS) parameters for both control and bearer IP packets, use the **cnfdef tos** command.

```
cnfdef tos <control_precedence> <control_tos> |<bearer_precedence> <bearer_tos>|
```

## Syntax Description

<i>control_precedence</i>	Control precedence. Range is 0–7. Default is 3.
<i>control_tos</i>	Control ToS (conforms to RFC 1349). Values are <ul style="list-style-type: none"> <li>• 0 = default</li> <li>• 1</li> <li>• 2</li> <li>• 4</li> <li>• 8</li> </ul>
<i>bearer_precedence</i>	(Optional) Bearer precedence (conforms to RFC 791). Range is 0–7. Default is 5.
<i>bearer_tos</i>	(Optional) Bearer ToS. Values are <ul style="list-style-type: none"> <li>• 0 = Default</li> <li>• 1</li> <li>• 2</li> <li>• 4</li> <li>• 8</li> </ul>

## Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

The ToS bearer parameters—configured with the *bearer\_precedence* and *bearer\_tos* arguments—are used during call setup in cases where the parameters are not supplied by the call agent. If you do not use this command, the card level default values are applied.

## Examples

In the following example shows, bearer IP packets are configured with a control precedence of 3 and a control ToS of 2. The control IP packets are configured with a bearer precedence of 2 and a bearer ToS of 4:

```
nodename.1.12.VISM8.a > cnfdef tos 3 2 2 4
```

```
nodename.1.12.VISM8.a >
```

## Related Commands

There are no related commands.

# cnfdistimers

To specify the wait delay times (initial, minimum, and maximum) for the disconnected procedure (Restart in Progress), use the **cnfdistimers** command.

```
cnfdistimers <TdInit> <TdMin> <TdMax>
```

## Syntax Description

<i>TdInit</i>	Initial disconnect wait delay time (defined in seconds). Range is 1–100 sec.
<i>TdMin</i>	Minimum disconnect wait delay time (defined in seconds). Range is 0–100 sec.
<i>TdMax</i>	Maximum disconnect wait delay time (defined in seconds). Range is 1–5000 sec.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

Before you can use this command, execute the **cnfmgcpprotocol** command and select the disconnect type method for Restart in Progress.

## Examples

In the following example, an initial disconnect waiting time of 30 seconds, a minimum disconnect waiting time of 0 seconds, and a maximum disconnect waiting time of 120 seconds are being configured for the current VISM card:

```
nodename.1.12.VISM8.a > cnfdistimers 30 0 120
nodename.1.12.VISM8.a >
```

To display the disconnect times, use the **dspdistimers** command.

## Related Commands

Command	Description
<b>addmgcpprotocol</b>	Associates a call agent redundancy group with a gateway control protocol.
<b>cnfmgcpprotocol</b>	Configures call agent group protocol data.
<b>cnfxgcppeer</b>	Configures the UDP port number used to send gateway-initiated messages to the call agent.
<b>delmgcpprotocol</b>	Deletes an MGCP from a specified call agent redundancy group.
<b>dspdistimers</b>	Displays the disconnect wait delay times.

# cnfdn

To configure the resolution type of a specified domain, use the **cnfdn** command.

```
cnfdn <mg_domain_num> <Resolution_Type>
```

## Syntax Description

<i>mg_domain_num</i>	Domain number used to identify the domain. Range is 1–11.
<i>Resolution_Type</i>	Resolution type to configure for the specified domain name. Values are <ul style="list-style-type: none"> <li>• 1 = Internal only. You must statistically provision all IP addresses on the VISM card for the domain name. The VISM card does not resolve the domain name using an external domain name server (DNS).</li> <li>• 2 = External only. The VISM card attempts to resolve the domain name using an external DNS. Statistically configured IP addresses for this domain name are not used.</li> <li>• 3 = Internal first. The VISM card attempts to resolve the domain name using an external DNS. The VISM card uses the statistically provisioned IP addresses for this domain name before using IP addresses from external resolution.</li> <li>• 4 = External first. The VISM card attempts to resolve the domain name using an external DNS. The VISM card uses IP addresses from external resolution before using the statistically provisioned IP addresses.</li> </ul>

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the domain represented by domain number 2 is configured for the external-only resolution type:

```
nodename.1.12.VISM8.a > cnfdn 2 2
```

```
nodename.1.12.VISM8.a >
```

To display configuration data of the domain names, use the **dsdns** command.

## Related Commands

Command	Description
<b>adddn</b>	Adds a domain name (call agent name) and optionally configures the resolution type of the domain name.
<b>adddnip</b>	Adds the IP addresses for a domain name that you added by using the <b>adddn</b> command.
<b>cnfdnssrvr</b>	Designates a DNS.
<b>deldn</b>	Deletes a domain name.

<b>Command</b>	<b>Description</b>
<b>deldnip</b>	Deletes a statistically provisioned IP address of a domain name.
<b>dsdnallips</b>	Displays all statistically provisioned IP addresses and externally resolved IP addresses for all domain names configured on the current VISM card.
<b>dsdnips</b>	Displays all statistically provisioned and externally resolved IP addresses configured for a specified domain name.
<b>dsdns</b>	Displays the configuration data of all domain names of a call agent.
<b>dsdnssrvr</b>	Displays the domain name of the configured DNS of the current VISM card.

# cnfdnssrvr

To specify a device that is designated as a domain name server (DNS), use the **cnfdnssrvr** command.

**cnfdnssrvr** <*extDnsSrvrDn*>

## Syntax Description

*extDnsSrvrDn* Domain name of the device which you want to designate, or remove, as a DNS. Values are

- A text string in the range 1–64 alphanumeric characters.
- NULL—removes the configured DNS from VISM.

**Note** NULL is case sensitive.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

You must configure the *Resolution\_Type* for internal-only resolution using the **adddn** command. Provision at least one IP address for the domain name using the **adddnip** command.

## Examples

In the following example, the main domain is configured as the DNS:

```
nodename.1.12.VISM8.a > cnfdnssrvr main
```

```
nodename.1.12.VISM8.a >
```

## Related Commands

Command	Description
<b>adddn</b>	Adds a domain name (call agent name) and optionally configures the resolution type of the domain name.
<b>adddnip</b>	Adds the IP addresses for a domain name that you added by using the <b>adddn</b> command.
<b>cnfdn</b>	Configures the resolution type of a specified domain.
<b>deldn</b>	Deletes a domain name.
<b>deldnip</b>	Deletes a statistically provisioned IP address of a domain name.
<b>dspdnallips</b>	Displays all statistically provisioned IP addresses and externally resolved IP addresses for all domain names configured on the current VISM card.
<b>dspdnips</b>	Displays all statistically provisioned and externally resolved IP addresses configured for a specified domain name.
<b>dspdns</b>	Displays the configuration data of all domain names of a call agent.
<b>dspdnssrvr</b>	Displays the domain name of the configured DNS of the current VISM/VISM-PR card.

# cnfds0execdiag

To configure testing on an individual endpoint, use the **cnfds0execdiag** command.

```
cnfds0execdiag <line_number> <ds0_number> <execdiag>
```

Syntax Description	Parameter	Description
	<i>line_number</i>	Number of the line. Range is 1–8.
	<i>ds0_number</i>	DS0 number. <ul style="list-style-type: none"> <li>• 1–24 = T1 lines</li> <li>• 1–31 = E1 lines</li> </ul>
	<i>execdiag</i>	Value you can use to enable testing on a DS0. <ul style="list-style-type: none"> <li>• 1 = Enable</li> <li>• 2 = Disable</li> </ul>

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, testing is enabled on DS0 1 on line 1.

```
nodename.1.12.VISM8.a > cnfds0execdiag 1 1 1
```

```
nodename.1.12.VISM8.a
```

Related Commands	Command	Description
	<b>dspds0execdiag</b>	Verifies that testing is enabled on a channel.

# cnfds0gain

To configure the adjustable gain for a specified DS0, use the **cnfds0gain** command.

```
cnfds0gain <line_number> <ds0_number> <input_gain> <output_attenuation>
```

Syntax Description	Parameter	Description
	<i>line_number</i>	Number of the line of the DS0 where you want to configure the adjustable gain. Range is 1–8.
	<i>ds0_number</i>	DS0 number on which to configure adjustable gain. Ranges are <ul style="list-style-type: none"> <li>• 1–24 = T1 lines</li> <li>• 1–31 = E1 lines</li> </ul>
	<i>input_gain</i>	Input gain (defined in decibels). Range is –60 to 14 in increments of 10.
	<i>output_attenuation</i>	Output attenuation (defined in decibels). Range is 0 to 14 in increments of 10.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the VISM card line number 2, DS0 number 13, is configured with a –10-dB input gain value and a 60-dB output attenuation value:

```
nodename.1.12.VISM8.a > cnfds0gain 2 13 -10 60
```

```
nodename.1.12.VISM8.a >
```

Related Commands	Command	Description
	<b>cnfgain</b>	Configures the adjustable gain for a VISM/VISM-PR card.
	<b>cnflngain</b>	Configures the adjustable gain for all DS0s on a specified VISM/VISM-PR card line.
	<b>dspds0gain</b>	Displays the adjustable gain values for a specified DS0.
	<b>dspgain</b>	Displays the adjustable gain for a specified VISM/VISM-PR card.
	<b>dsplngain</b>	Displays the adjustable gain for a specified VISM/VISM-PR line.



# cnfds0localcas

To configure a local channel-associated signaling (CAS) 4-bit pattern for a T1 line and DS0, use the **cnfds0localcas** command.

```
cnfds0localcas <line_number> <ds0_number> <cas_value> <cas_bit_pattern>
```

## Syntax Description

<i>line_number</i>	Number of the T1 line on which you want to configure a local CAS bit pattern. Range is 1–8.
<i>ds0_number</i>	Number of DS0 on which you want to configure a local CAS bit pattern. Range is 1–24 for T1 lines.
<i>cas_value</i>	Value you can use to enable or disable the local CAS pattern that is indicated by the <i>cas_bit_pattern</i> argument. Values are <ul style="list-style-type: none"> <li>• 1 = Enable</li> <li>• 2 = Disable</li> </ul>
<i>cas_bit_pattern</i>	The local 4-bit pattern used to specify a number in the range from 1 (default) to 15. The value indicates, in binary, the values of the A, B, C, and D signaling bits. <p><b>Note</b> If local CAS is enabled, this argument is mandatory.</p>

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

If a DS0 is configured for local CAS, the framer forces the CAS bits to a value defined by the *cas\_bit\_pattern* argument in this command.

This command is not allowed if any of the following conditions are present:

- The line signaling type is CAS.
- The line is not enabled.
- The DS0 is in a remote loop state.



### Note

This command is applicable only to T1 lines.

## Examples

In the following example, T1 line 2, DS0 number 12 is configured with a local 4-bit pattern represented by a value of 3 (0011 in binary):

```
nodename.1.12.VISM8.a > cnfds0localcas 2 12 1 3
```

```
nodename.1.12.VISM8.a >
```

**Related Commands**

<b>Command</b>	<b>Description</b>
<code>dsps0localcasstatus</code>	Displays the currently configured local CAS status for a line and DS0.

# cnfds0loop

To configure a loopback type for a specified line and DS0, use the **cnfds0loop** command.

```
cnfds0loop <line_number> <ds0_number> <lineloopback_type>
```

<b>Syntax Description</b>	<i>line_number</i>	Number of the line of the channel to be configured for a loopback type. Range is 1–8.
	<i>ds0_number</i>	DS0 number of the channel to be configured for a loopback type. Ranges are <ul style="list-style-type: none"> <li>• 1–24 for T1 lines</li> <li>• 1–31 for E1 lines (No signaling and CCS)</li> <li>• 1–15 and 17–31 for E1 lines (CAS)</li> </ul> For VISM E1 cards, 16 is preallocated as the channel-associated signaling (CAS) channel. <p><b>Note</b> If the application requires CAS, issue the <b>cnflnsig</b> command before adding the endpoints.</p>
	<i>lineloopback_type</i>	Type of loopback to be used on the channel. Values are <ul style="list-style-type: none"> <li>• 1 = No loopback</li> <li>• 2 = Remote loopback</li> <li>• 3 = Local loopback</li> </ul>

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the loopback type of line 2, DS0 12 is configured as remote:

```
nodename.1.12.VISM8.a > cnfds0loop 2 12 2
```

```
nodename.1.12.VISM8.a >
```

**Related Commands** There are no related commands.

# cnfds0musicthreshold

To configure the music on-hold threshold for a specified DS0, use the **cnfds0musicthreshold** command.

```
cnfds0musicthreshold <line_number> <ds0_number> <mthreshold>
```

Syntax Description	line_number	Number of the line where you want to configure the music on-hold threshold. Range is 1–8.
	ds0_number	Number of the DS0 for which you want to configure the music on-hold threshold. Ranges are <ul style="list-style-type: none"> <li>• 1–24 = T1 lines</li> <li>• 1–31 = E1 lines</li> </ul>
	mthreshold	Music on-hold threshold (defined in decibels). Range is –70 to –30 dB.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the line number 2 with DS0 number 30 is configured with a –45 dB music on-hold threshold value:

```
nodename.1.12.VISM8.a > cnfds0musicthreshold 2 30 -45
```

```
nodename.1.12.VISM8.a >
```

Related Commands	Command	Description
	<b>cnflnmusicthreshold</b>	Configures the music on-hold threshold for all DS0s on a specified line.
	<b>cnfmusicthreshold</b>	Configures the music on-hold threshold for the current VISM/VISM-PR card.
	<b>dspds0musicthreshold</b>	Displays the music on-hold threshold for a specified DS0.
	<b>dsplnmusicthreshold</b>	Displays the music on-hold threshold for the DS0s on a specified line.
	<b>dspmusicthreshold</b>	Displays the music on-hold threshold for the current VISM/VISM-PR card.

# cnfds0sidpacket

To enable or disable the generation of the silence insertion descriptor (SID) packet when silence suppression is in active mode on the DS0, use the **cnfds0sidpacket** command.

```
cnfds0sidpacket <line_number> <ds0_number> <sidpacket>
```

Syntax Description		
<i>line_number</i>		Number of the line. Range is 1–8.
<i>ds0_number</i>		DS0 number. <ul style="list-style-type: none"> <li>• 1–24 = T1 lines</li> <li>• 1–31 = E1 lines</li> </ul>
<i>sidpacket</i>		Value you can use to enable the SID packet. <ul style="list-style-type: none"> <li>• 1 = Enable (default)</li> <li>• 2 = Disable</li> </ul>

**Command Modes** VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the SID is enabled on DS0 1 on line 1:

```
nodename.1.12.VISM8.a > cnfds0sidpacket 1 1 1
```

```
nodename.1.12.VISM8.a >
```

Related Commands	Command	Description
	<b>dspds0sidpacket</b>	Shows whether or not the SID packet is enabled on the DS0.

# cnfdspheartbeattimer

To configure the DSP to send a heartbeat message within a given period of time, use the **cnfdspheartbeattimer** command.

**cnfdspheartbeattimer** <*Heart\_beat\_interval*>

<b>Syntax Description</b>	<i>Heart_beat_interval</i> Timeout value. Values are 0 and 100–65535. Default is 0, indicating that the heartbeat timer is disabled.				
<b>Command Modes</b>	VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking				
<b>Usage Guidelines</b>	Follow standard CLI procedures for this command.				
<b>Examples</b>	<p>In the following example, the heartbeat interval is being set as 0 (disabled):</p> <pre>nodename.1.12.VISM8.a &gt; <b>cnfdspheartbeattimer 0</b></pre> <pre>nodename.1.12.VISM8.a &gt;</pre>				
<b>Related Commands</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Command</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td><b>dspheartbeattimer</b></td> <td>Displays the heartbeat status of the VISM/VISM-PR card.</td> </tr> </tbody> </table>	Command	Description	<b>dspheartbeattimer</b>	Displays the heartbeat status of the VISM/VISM-PR card.
Command	Description				
<b>dspheartbeattimer</b>	Displays the heartbeat status of the VISM/VISM-PR card.				

# cnfdynamicpayload

To enable or disable the dynamic payload on the current VISM card, use the **cnfdynamicpayload** command.

**cnfdynamicpayload** *dynamic\_payload*

## Syntax Description

<i>dynamic_payload</i>	Value you can use to enable or disable dynamic payload on the current VISM card.
	<ul style="list-style-type: none"> <li>1 = Enable</li> <li>2 = Disable</li> </ul>

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

When dynamic payload is enabled, the Session Description Protocol (SDP) payload type is negotiated in the range from 96 to 127 during codec negotiation.

The payload type specified in the **addrtpcon**, **cnfrtpcon**, or **cnfvbdcodesc** command is passed to the digital signal processor (DSP) to modify the static payload types. When dynamic payload is disabled, the DSP uses the static payload type values for the codec.

## Examples

In the following example, the dynamic payload feature is configured on the current VISM/VISM-PR card:

```
nodename.1.12.VISM8.a > cnfdynamicpayload 1
```

```
nodename.1.12.VISM8.a >
```

## Related Commands

Command	Description
<b>addrtpcon</b>	Adds a static RTP VoIP trunking connection.
<b>cnfrtpcon</b>	Modifies an existing static RTP VoIP trunking connection.
<b>cnfvbdcodesc</b>	Configures the VBD upspeed codec.
<b>dspdynamicepayload</b>	Displays the card level configuration of dynamic payload on the current VISM/VISM-PR card.
<b>dsprtpcon</b>	Displays the configuration data of a specific static RTP VoIP trunking connection.
<b>dspvbdcodesc</b>	Displays the upspeed codec used for VBD.

# cnfecanenable

To enable or disable echo cancellation (ECAN) on a line, use the **cnfecanenable** command.

**cnfecanenable** *<lineNum>* *<ECANEnable>*

Syntax Description	
<i>lineNum</i>	Number of the line on which you want to enable or disable echo cancellation. Range is 1–8.
<i>ECANEnable</i>	Value you can use to enable or disable echo cancellation. <ul style="list-style-type: none"> <li>• 1 = Disable</li> <li>• 2 = Enable</li> </ul>

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, echo cancellation is enabled on line 2 of the current VISM card:

```
nodename.1.12.VISM8.a > cnfecanenable 2 2
```

```
nodename.1.12.VISM8.a >
```

Related Commands	Command	Description
	<b>cnfecanrec</b>	Configures the residual echo control for DSPs on a VISM/VISM-PR card that is used for ECAN.
	<b>cnfecantail</b>	Configures the maximum tail length for DSPs on a VISM/VISM-PR card that is used for ECAN.
	<b>dsplndsp</b>	Displays the DSP information for a line.



# cnfecanrec

To configure residual echo control for digital signal processors (DSPs) on a VISM/VISM-PR line that is used for echo cancellation, use the **cnfecanrec** command.

```
cnfecanrec <lineNum> <residualEchoControl>
```

## Syntax Description

<i>lineNum</i>	Number of the line to configure with residual echo control. Range is 1–8.
<i>residualEchoControl</i>	Residual echo control for a VISM/VISM-PR line. Values are <ul style="list-style-type: none"> <li>• 1 = Cancel only</li> <li>• 2 = Suppress residual echo control</li> <li>• 4 = Comfort noise</li> </ul>

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

This command applies to DSPs processing data on a specified line.

## Examples

In the following example, line 1 of the current VISM card is configured with comfort noise residual echo control:

```
nodename.1.12.VISM8.a > cnfecanrec 1 4
```

```
nodename.1.12.VISM8.a >
```

## Related Commands

Command	Description
<b>cnfecanenable</b>	Enables or disables ECAN on a specified VISM/VISM-PR line.
<b>cnfecantail</b>	Configures the maximum tail length for DSPs on a VISM/VISM-PR card that is used for echo cancellation.
<b>dsplndsp</b>	Displays the DSP information for a specified VISM/VISM-PR line.

# cnfecantail

To configure the maximum tail length for digital signal processors (DSPs) on a VISM/VISM-PR card that is used for echo cancellation (ECAN), use the **cnfecantail** command.

**cnfecantail** <lineNum> <maximumTail>

Syntax Description	lineNum	Number of the line to configure maximum echo cancellation tail length. Range is 1–8.
	maximumTail	Maximum tail length (defined in milliseconds). Values are <ul style="list-style-type: none"> <li>• 24</li> <li>• 32 (default)</li> <li>• 48</li> <li>• 64</li> <li>• 80</li> <li>• 96</li> <li>• 112</li> <li>• 128</li> </ul>

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** This command applies to DSPs processing data on a specified line.

**Examples** In the following example, line 3 of the current VISM card is configured with a maximum ECAN tail length of 96 ms:

```
nodename.1.12.VISM8.a > cnfecantail 3 96
```

```
nodename.1.12.VISM8.a >
```

Related Commands	Command	Description
	<b>cnfecanenable</b>	Enables or disables ECAN on a specified VISM/VISM-PR line.
	<b>cnfecanrec</b>	Configures the residual echo control for DSPs on a VISM/VISM-PR card that is used for ECAN.
	<b>dsplndsp</b>	Displays the DSP information for a specified VISM/VISM-PR line.

# cnfendptcadence

To configure cadence (digit tone) times for an endpoint, use the **cnfendptcadence** command.

```
cnfendptcadence <endptNum> <cadon> <cadoff>
```

Syntax Description	
<i>endptNum</i>	Endpoint number. Ranges are <ul style="list-style-type: none"> <li>• Template 1               <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2               <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3               <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4               <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5               <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>
<i>cadon</i>	Length of time (defined in milliseconds) a digit tone is generated. Range is 2–9999. Default is 75.
<i>cadoff</i>	Length of time (defined in milliseconds) silence is maintained between digit tones. Range is 0–9999. Default is 75.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

---

**Examples**

In the following example, endpoint 20 is configured with 100-ms digit tone generation time and 100-ms silence time between generated tones:

```
nodename.1.12.VISM8.a > cnfendptcadence 20 100 100
```

```
nodename.1.12.VISM8.a >
```

---

**Related Commands**

There are no related commands.

# cnfendptdntsend

To include the endpoint domain name and to set the maximum datagram size of the audit endpoint response, use the **cnfendptdntsend** command.

```
cnfendptdntsend <dn_enable> <datagram_size>
```

## Syntax Description

<i>dn_enable</i>	Value you can use to include the endpoint name. <ul style="list-style-type: none"> <li>1 = Enable</li> <li>2 = Disable</li> </ul>
<i>datagram_size</i>	Maximum datagram size. Range is 0–20000.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the response to the audit endpoint includes the endpoint name. The maximum datagram size is set at 4095.

```
nodename.1.12.VISM8.a > cnfendptdntsend 1 4095
nodename.1.12.VISM8.a >
```

## Related Commands

Command	Description
<b>dspendptdntsend</b>	Displays the naming format and maximum datagram size of the audit endpoint response.

# cnferl

To configure a digital signal processor (DSP) return echo loss value, use the **cnferl** command.

```
cnferl <DB_loss>
```

<b>Syntax Description</b>	<p><i>DB_loss</i> Echo return loss to be applied by echo cancellation DSPs. Values are</p> <ul style="list-style-type: none"> <li>• 1 = 0 dB</li> <li>• 2 = -3 dB</li> <li>• 3 = -6 dB (default)</li> <li>• 4 = -10 dB</li> </ul>
<b>Command Modes</b>	VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking
<b>Usage Guidelines</b>	Follow standard CLI procedures when using this command.
<b>Examples</b>	<p>In the following example, a -6 dB echo return loss value is configured for the echo cancellation DSP:</p> <pre>nodename.1.12.VISM8.a &gt; <b>cnferl 3</b></pre> <pre>nodename.1.12.VISM8.a &gt;</pre>
<b>Related Commands</b>	There are no related commands.

# cnfexecdiag

To configure all channel level testing, use the **cnfexecdiag** command.

**cnfexecdiag** <execdiag>

<b>Syntax Description</b>	<i>execdiag</i>	Value you can use to enable channel level testing. <ul style="list-style-type: none"> <li>• 1 = Enable</li> <li>• 2 = Disable</li> </ul>
---------------------------	-----------------	--

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, all channel level testing is enabled:

```
nodename.1.12.VISM8.a > cnfexecdiag 1
```

```
nodename.1.12.VISM8.a >
```

To display whether or not channel level testing is enabled on a line, use the **dspexecdiag** command.

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>dspexecdiag</b>	Displays all channel level parameters on the card.

# cnffaxrelay

To enable ATM fax relay on a line of the VISM-PR card, use the **cnffaxrelay** command.

```
cnffaxrelay <line_number> <faxrelay>
```

## Syntax Description

<i>line_number</i>	Number of the line in the range 1–8.
<i>faxrelay</i>	Flag to disable or enable fax relay on the line. <ul style="list-style-type: none"> <li>• 1 = Disable</li> <li>• 2 = Enable</li> </ul>

## Command Modes

AAL2 trunking, switched AAL2 SVC, switched AAL2 PVC, VoIP trunking/AAL2 trunking

## Usage Guidelines

This command is applicable only to the VISM-PR card.

## Examples

In the following example, fax relay is enabled on line 1:

```
nodename.1.28.VISM8.a > cnffaxrelay 1 2
```

```
nodename.1.28.VISM8.a >
```

To display whether or not fax relay is enabled on the line, use the **dspfaxrelay** command.

## Related Commands

Command	Description
<b>cnffaxrelayparams</b>	Configures ATM fax relay parameters.
<b>cnffaxrelaytimeout</b>	Configures the ATM fax relay acknowledgment timeout.
<b>dspfaxrelay</b>	Displays whether or not fax relay is enabled on a line.
<b>dspfaxrelayparams</b>	Displays the ATM fax relay parameters.
<b>dspfaxrelays</b>	Displays whether or not ATM fax relay is enabled on all of the lines.
<b>dspfaxrelaytimeout</b>	Displays the ATM fax relay acknowledgment timeout value for a line.
<b>dspfaxrelaytimeouts</b>	Displays the fax acknowledgment timeout values for all of the lines.



# cnffaxrelayparams

To configure ATM fax relay parameters on the VISM-PR card, use the **cnffaxrelayparams** command.

```
cnffaxrelayparams <line_number> <Max_Xmit_Rate> | <NSF_Override>
<NSF_Country_Code> <NSF_Vendor_Code> <T30_ECM>|
```

Syntax Description	
<i>line_number</i>	Line number in the range 1–8.
<i>Max_Xmit_Rate</i>	Maximum fax transmission rate. <ul style="list-style-type: none"> <li>• 1 = 2400 bps</li> <li>• 2 = 4800 bps</li> <li>• 3 = 7200 bps</li> <li>• 4 = 9600 bps</li> <li>• 5 = 12000 bps</li> <li>• 6 = 14400 bps (default)</li> </ul>
<i> NSF_Override </i>	(Optional) Parameter to enable the gateway to override the nonstandard facilities (NSF) code in the following T.30 signals: <ul style="list-style-type: none"> <li>• NSF</li> <li>• Nonstandard facilities command (NSC)</li> <li>• Nonstandard facilities setup (NSS)</li> </ul> Values are <ul style="list-style-type: none"> <li>• 1 = Enabled (default)</li> <li>• 2 = Disabled</li> </ul> The NSF code is overridden to prevent the group 3 fax machines from synchronizing with each other on the basis of a protocol other than the ITU T-series recommendations. <p>If this proprietary synchronization is prevented, the group 3 fax machines synchronize to the standard T-series protocol. This action is necessary if the fax relay capability of the media gateway is limited to the T-series recommendations.</p>
<i> NSF_Country_Code </i>	(Optional) Country code in the NSF code identifies the country where the group 3 fax equipment with nonstandard capabilities is manufactured. <p>Value range is 0–65535.</p>

<i>INSF_Vendor_Code</i>	(Optional) Vendor code. This code is also called the terminal provider code. It identifies the manufacturer of the group 3 fax equipment with nonstandard capabilities.  Value range is 0–65535.
<i>T30_ECM</i>	(Optional) Parameter you use to enable and disable T.30 ECM.  T.30 ECM is a feature that improves image quality and page compression capabilities through a reliable image data transmission protocol. If fax calls are failing due to high packet loss, then disabling T.30 ECM might improve the successful transmission rate. <ul style="list-style-type: none"> <li>• 1 = Enabled (default)</li> <li>• 2 = Disabled</li> </ul>

**Command Modes**

AAL2 trunking, switched AAL2 SVC, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines**

This command is applicable only to the VISM-PR card.

Unless the optional parameters are configured, they automatically set to the default values.

**Examples**

In the following example, the maximum fax transmission rate of 14400 bps is being configured on line 1:

```
nodename.1.28.VISM8.a > cnffaxrelayparams 1 6
```

```
nodename.1.28.VISM8.a >
```

To display the fax relay parameters you configured, use the **dspfaxrelayparams** command.

**Related Commands**

Command	Description
<b>cnffaxrelay</b>	Configures ATM fax relay on a line.
<b>cnffaxrelaytimeout</b>	Configures the ATM fax relay acknowledgment timeout.
<b>dspfaxrelay</b>	Displays whether or not fax relay is enabled on a line.
<b>dspfaxrelayparams</b>	Displays the ATM fax relay parameters.
<b>dspfaxrelays</b>	Displays whether or not ATM fax relay is enabled on all of the lines.
<b>dspfaxrelaytimeout</b>	Displays the ATM fax relay acknowledgment timeout value for a line.
<b>dspfaxrelaytimeouts</b>	Displays the fax acknowledgment timeout values for all of the lines.

# cnffaxrelaytimeout

To configure the fax relay acknowledgment timeout on the VISM-PR card, use the **cnffaxrelaytimeout** command.

```
cnffaxrelaytimeout <line_number> <Ack_Timer>
```

Syntax Description	<i>line_number</i>	Number of the line in the range 1–8.
	<i>Ack_Timer</i>	Acknowledgment timer specifies the amount of time the near-end fax waits for a response from the far-end fax. Range is 250–10000 ms in multiples of 250.

**Command Modes** AAL2 trunking, switched AAL2 SVC, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** This command is applicable only to the VISM-PR card.

**Examples** In the following example, the acknowledgment timeout is being configured as 1000 ms on line 1:

```
nodename.1.28.VISM8.a > cnffaxrelaytimeout 1 1000
```

```
nodename.1.28.VISM8.a >
```

To display the fax acknowledgment timeout you configured, use the **dspfaxrelaytimeout** command.

Related Commands	Command	Description
	<b>cnffaxrelay</b>	Enables or disables fax relay on a line.
	<b>cnffaxrelayparams</b>	Configures ATM fax relay parameters.
	<b>dspfaxrelay</b>	Displays whether or not fax relay is enabled on a line.
	<b>dspfaxrelayparams</b>	Displays the ATM fax relay parameters.
	<b>dspfaxrelays</b>	Displays whether or not ATM fax relay is enabled on all of the lines.
	<b>dspfaxrelaytimeout</b>	Displays the ATM fax relay acknowledgment timeout value for a line.
	<b>dspfaxrelaytimeouts</b>	Displays the fax acknowledgment timeout values for all of the lines.

# cnfgain

To configure the adjustable gain for a VISM/VISM-PR card, use the **cnfgain** command.

```
cnfgain <input_gain> <output_attenuation>
```

## Syntax Description

<i>input_gain</i>	Input gain (defined in decibels). Range is from -6 to 14.
<i>output_attenuation</i>	Output attenuation (defined in decibels). Range is 0 -14.

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

This command allows you to configure the gain for an entire VISM/VISM-PR card. The values you configure with this command are permanent and remain on the VISM/VISM-PR card after any resets.

## Examples

In the following example, the current VISM/VISM-PR card is configured with a -6-dB input gain value and a 6-dB output attenuation value:

```
nodename.1.27.VISM8.a > cnfgain -6 6
WARNING: Skipping unused E1 CAS ds0 16 on line 2

nodename.1.27.VISM8.a >
```

To display the gain on the card, use the **dspgain** command.

## Related Commands

Command	Description
<b>cnfds0gain</b>	Configures the adjustable gain for a specified DS0.
<b>cnflngain</b>	Configures the adjustable gain for all DS0s on a specified VISM card line.
<b>dspds0gain</b>	Displays the adjustable gain values for a specified DS0.
<b>dspgain</b>	Displays the adjustable gain for a specified VISM card.
<b>dsplngain</b>	Displays the adjustable gain for all DS0s on a specified VISM card line.

# cnfgwis

To configure an out-of-service VISM/VISM-PR card to the in-service state, use the **cnfgwis** command.

**cnfgwis**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** This command causes an Restart in Progress (RSIP) notification to be sent to the call agent.

**Examples** In the following example shows, the current VISM card is configured to the in-service state:

```
nodename.1.9.VISM8.s> cnfgwis
```

The VISM card prompt terminates with an *a*, indicating the in-service state.

```
nodename.1.9.VISM8.a>
```

## Related Commands

Command	Description
<b>cnfgwoos</b>	Configures an in-service VISM/VISM-PR card to the out-of-service state.
<b>dspgwstate</b>	Displays the current user-configured service state of the gateway.

# cnfgwoos

To configure an in-service VISM/VISM-PR card to the out-of-service state, use the **cnfgwoos** command.

**cnfgwoos** <*shutdown\_method*>

## Syntax Description

<i>shutdown_method</i>	Method of reaching the out-of-service state. Values are <ul style="list-style-type: none"> <li>• 2 = Forceful. Existing connections are deleted and the VISM/VISM-PR card transitions to the Command_Out_Of_Service state. New connection requests are rejected.</li> <li>• 3 = Graceful. Existing connections are not released and allowed to terminate naturally. Immediately after this command is executed, the VISM/VISM-PR card transitions to the Pending_Out_Of_Service state. New connection requests are rejected. The VISM/VISM-PR card transitions to the Command_Out_Of_Service state only when all ongoing connections are deleted by the call agent.</li> </ul>
------------------------	--

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

Associated call agents are notified of VISM card state changes with an Restart in Progress (RSIP) notification.

## Examples

In the following example shows, the current VISM card is placed in the out-of-service state forcefully:

```
nodename.1.9.VISM8.a> cnfgwoos 2
```

The VISM card prompt terminates with an *s*, indicating the out-of-service (standby) state.

```
nodename.1.9.VISM8.s
```

## Related Commands

Command	Description
<b>cnfgwis</b>	Configures an out-of-service VISM card to the in-service state.
<b>dspgwstate</b>	Displays the current user-configured service state of the gateway.

# cnfjtrmode

To configure the jitter algorithm with a fixed or adaptive buffer, use the **cnfjtrmode** command.

```
cnfjtrmode <jtr_mode>
```

<b>Syntax Description</b>	<p><i>jtr_mode</i> Jitter delay mode. Values are</p> <ul style="list-style-type: none"> <li>• 1 = Fixed. Use the fixed mode if latency jitter is constant, such as with the AAL2 trunking application.</li> <li>• 2 = Adaptive. Use the adaptive mode if latency jitter is variable, such as with the VOIP application.</li> </ul>								
<b>Command Modes</b>	VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking								
<b>Usage Guidelines</b>	Changing the <i>jtr_mode</i> argument value does not affect any existing CIDs. The value is sent to the DSPs only when CIDs are open.								
<b>Examples</b>	<p>In the following example, the jitter delay mode is set to adaptive:</p> <pre>nodename.1.9.VISM8.a&gt; cnfjtrmode 2</pre> <pre>nodename.1.9.VISM8.a&gt;</pre> <p>To display the jitter delay mode, use the <b>dspcarddsp</b> command.</p>								
<b>Related Commands</b>	<table border="1"> <thead> <tr> <th>Command</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td><b>cnfjtrmode</b></td> <td>Configures the jitter buffer size.</td> </tr> <tr> <td><b>dspcarddsp</b></td> <td>Displays all current card-level parameters for ECAN and voice compression DSPs.</td> </tr> <tr> <td><b>dspcodecjtrdelays</b></td> <td>Displays the configured codec jitter delay mode and associated jitter initial delay.</td> </tr> </tbody> </table>	Command	Description	<b>cnfjtrmode</b>	Configures the jitter buffer size.	<b>dspcarddsp</b>	Displays all current card-level parameters for ECAN and voice compression DSPs.	<b>dspcodecjtrdelays</b>	Displays the configured codec jitter delay mode and associated jitter initial delay.
Command	Description								
<b>cnfjtrmode</b>	Configures the jitter buffer size.								
<b>dspcarddsp</b>	Displays all current card-level parameters for ECAN and voice compression DSPs.								
<b>dspcodecjtrdelays</b>	Displays the configured codec jitter delay mode and associated jitter initial delay.								

# cnflapdretrans

To configure a maximum number of frame retransmissions for a previously added Link Access Protocol D Channel (LAPD), use the **cnflapdretrans** command.

```
cnflapdretrans <line_number> <ds0_number> <N200>
```

## Syntax Description

<i>line_number</i>	Line number of the D channel to be configured. Range is 1–8.
<i>ds0_number</i>	DS0 number that was specified in the <b>addlapd</b> command. Ranges are <ul style="list-style-type: none"> <li>• 1–24 = T1 lines</li> <li>• 1–31 = E1 lines</li> </ul>
<i>N200</i>	Maximum number of frame retransmissions. Range is 1–10. Default is 3.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, line 2 with DS0 1 is configured with a maximum number of 3 frame retransmission attempts:

```
nodename.1.27.VISM8.a > cnflapdretrans 2 1 3
```

```
nodename.1.27.VISM8.a >
```

To display the number of retransmission attempts, use the **dsplapd** command.

## Related Commands

Command	Description
<b>cnflapdtimer</b>	Configures two LAPD timers for a previously added LAPD.
<b>cnflapdtype</b>	Configures the various types of LAPD stacks for a previously added LAPD.
<b>cnflapdwinsize</b>	Configures the maximum number of outstanding (unacknowledged) I-frames.
<b>dsplapd</b>	Displays information about an LAPD.



# cnflapdtimer

To configure two LAPD timers for a previously added Link Access Protocol D Channel (LAPD), use the **cnflapdtimer** command.

```
cnflapdtimer <line_number> <ds0_number> <timer_T200> <timer_T203>
```

Syntax Description	
<i>line_number</i>	Line number of the D channel to be configured. Range is 1–8.
<i>ds0_number</i>	DS0 number that was specified in the <b>addlapd</b> command. Ranges are <ul style="list-style-type: none"> <li>• 1–24 = T1 lines</li> <li>• 1–31 = E1 lines</li> </ul>
<i>timer_T200</i>	T200 timer. Time (defined in milliseconds) between consecutive frame transmission initiations. Ranges are <ul style="list-style-type: none"> <li>• 1000–1023000 for PRI, in increments of 50. Default is 1000.</li> <li>• 100–350 for GR-303, in increments of 50. Default is 150.</li> </ul> <p><b>Note</b> This value must be less than the value you specify for the <i>timer_T203</i> argument.</p>
<i>timer_T203</i>	T203 timer. Maximum time (defined in milliseconds) allowed without a frame being exchanged. Ranges are <ul style="list-style-type: none"> <li>• 1000–1023000 for PRI, in increments of 1000. Default is 10000.</li> <li>• 10000–300000 for GR-303, in increments of 10000. Default is 30000.</li> </ul> <p><b>Note</b> This value must be greater than the value you specify for the <i>timer_T200</i> argument.</p>

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI command procedures.

**Examples** In the following example, line 2 with DS0 12 is configured with 10000 ms between consecutive frame transmission initiations (timer T200) and with 20000 ms as the maximum time allowed without a frame being exchanged (timer T203):

```
nodename.1.9.VISM8.a> cnflapdtimer 2 12 10000 20000
nodename.1.9.VISM8.a>
```

To display the LAPD timers, use the **dsplapd** command.

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>cnflapdretrans</b>	Configures a maximum number of frame retransmissions for a previously added LAPD.
<b>cnflapdtype</b>	Configures the various types of LAPD stacks for a previously added LAPD.
<b>cnflapdwinsize</b>	Configures a maximum allowed number of outstanding (unacknowledged) I-frames on a previously added LAPD.
<b>dsplapd</b>	Displays information about an LAPD.

# cnflapdtrunkpvc

To assign the permanent virtual circuit (PVC) trunk type that carries Link Access Protocol D Channel (LAPD) messages for the current VISM/VISM-PR card, use the **cnflapdtrunkpvc** command.

**cnflapdtrunkpvc** <Lapd\_Trunk\_PVC\_Type>

## Syntax Description

*Lapd\_Trunk\_PVC\_Type* LAPD trunk PVC type. Values are

- 1 = Control
- 2 = Bearer (default)

## Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the current VISM card is assigned the control PVC trunk type to carry LAPD messages:

```
nodename.1.9.VISM8.a> cnflapdtrunkpvc 1
```

```
nodename.1.9.VISM8.a>
```

To show the LAPD trunk carrier type, use the **dsplapdtrunkpvc** command.

## Related Commands

Command	Description
<b>addlapdtrunk</b>	Adds an LAPD trunk to a specific VISM/VISM-PR line.
<b>addrtpton</b>	Adds a static RTP VoIP trunking connection.
<b>addrudpton</b>	Adds an ISDN PRI backhaul RUDP session for an LAPD trunk connection.
<b>clrtpcnt</b>	Clears the RTP counters (statistics) for a specific static RTP connection.
<b>cnflntrunkcond</b>	Enables or disables line conditioning on a VISM/VISM-PR line if a network alarm is encountered.
<b>cnfrtpton</b>	Modifies an existing static RTP VoIP trunking connection.
<b>cnfrudptonrmtip</b>	Modifies the remote IP address of VISM/VISM-PR used in the ISDN PRI backhaul RUDP trunk for a specified session.
<b>dellapdtrunk</b>	Deletes an LAPD configured line.
<b>delrtpton</b>	Deletes a static RTP VoIP trunking connection.
<b>delrudpton</b>	Deletes an ISDN PRI backhaul RUDP session that is associated with an LAPD.
<b>dsplapd</b>	Displays data about an LAPD.
<b>dsplapdtrunkpvc</b>	Displays the assigned PVC trunk type that carries LAPD trunk messages for the current VISM/VISM-PR card.
<b>dsplapdtrunks</b>	Displays the configuration data of all LAPD trunks.

Command	Description
<b>dsrtpcnt</b>	Displays the bearer counters (statistics) for a specific RTP VoIP trunking connection.
<b>dsrtpcon</b>	Displays the configuration data of a specified static RTP VoIP trunking connection.
<b>dsrtpcons</b>	Displays the configuration data of all static RTP VoIP trunking connections.
<b>dsrudprtrunk</b>	Displays the configuration data of a specified ISDN PRI backhaul RUDP session.
<b>dsrudprtrunks</b>	Displays the configuration data of all ISDN PRI backhaul RUDP sessions.

# cnflapdtype

To configure the various types of Link Access Protocol D Channel (LAPD) stacks for a previously added LAPD, use the **cnflapdtype** command.

```
cnflapdtype <line_number> <ds0_number> <lapd_type>
```

## Syntax Description

<i>line_number</i>	Line number of the D channel to be configured. Range is 1 to 8.
<i>ds0_number</i>	DS0 number that was specified in the <b>addlapd</b> command. Ranges are <ul style="list-style-type: none"> <li>• 1–24 = T1 lines</li> <li>• 1–31 = E1 lines</li> </ul>
<i>lapd_type</i>	Type of LAPD stack to be configured on the specified line and DS0. Values are <ul style="list-style-type: none"> <li>• 1 = CCITT</li> <li>• 3 = ATT5ESSPRA</li> <li>• 4 = ATT4ESS</li> <li>• 6 = NTDMS100PRA</li> <li>• 7 = VN2 or 3</li> <li>• 8 = INSNet</li> <li>• 9 = TR6MFC</li> <li>• 10 = TR6PBX</li> <li>• 12 = AUSP</li> <li>• 13 = NIL</li> <li>• 14 = SSETSI</li> <li>• 15 = BC303TMC</li> <li>• 16 = BC303CSC</li> <li>• 17 = NTDMS250</li> <li>• 18 = Bellcore</li> <li>• 19 = NI2 (default)</li> </ul>

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, line 2 with DS0 12 is configured with the AUSP LAPD stack type:

```
nodename.1.9.VISM8.a> cnflapdtype 2 12 12
```

```
nodename.1.9.VISM8.a>
```

To display the LAPD type, use the **dsplapd** command.

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>cnflapdretrans</b>	Configures a maximum number of frame retransmissions for a previously added LAPD.
<b>cnflapdtimer</b>	Configures two LAPD timers for a previously added LAPD.
<b>cnflapdwinsize</b>	Configures a maximum number of outstanding (unacknowledged) I-frames for a previously added LAPD.
<b>dsplapd</b>	Displays information about an LAPD.

# cnflapdwinsize

To configure a maximum number of outstanding (unacknowledged) I-frames, use the **cnflapdwinsize** command.

```
cnflapdwinsize <line_number> <ds0_number> <window_size>
```

## Syntax Description

<i>line_number</i>	Line number of the D channel to be configured. Range is 1–8.
<i>ds0_number</i>	DS0 number that was specified in the <b>addlapd</b> command. Ranges are <ul style="list-style-type: none"> <li>• 1–24 = T1 lines</li> <li>• 1–31 = E1 lines</li> </ul>
<i>window_size</i>	Maximum number of outstanding (unacknowledged) I-frames that can be accumulated before an acknowledgment is sent. Range is 1–127. Default is 7.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example shows, line 2 with DS0 12 is configured with an LAPD window size of 10. A maximum of 10 I-frames can be accumulated before an acknowledgment is sent:

```
nodename.1.9.VISM8.a> cnflapdwinsize 2 12 10
```

```
nodename.1.9.VISM8.a>
```

To display the LAPD window size, use the **dsplapd** command.

## Related Commands

Command	Description
<b>cnflapdretrans</b>	Configures a maximum number of frame retransmissions for a previously added LAPD.
<b>cnflapdtimer</b>	Configures two LAPD timers for a previously added LAPD.
<b>cnflapdtype</b>	Configures the various types of LAPD stacks for a previously added LAPD.
<b>dsplapd</b>	Displays information about an LAPD.

# cnflinesabyte

To configure the SA bytes on a line, use the **cnflinesabyte** command in any of the operating modes.

The SA-byte is used to insert SA-bits (bits SA4–SA8) into a time slot. The SA-bits are additional spare bits that can be used for synchronization.

```
cnflinesabyte <line_number> <sa_byte> <sa_value>
```

## Syntax Description

<i>line_number</i>	Number of the line in the range 1–8.
<i>sa_byte</i>	Type of SA-byte. <ul style="list-style-type: none"> <li>• 1 = SA4-byte</li> <li>• 2 = SA5-byte</li> <li>• 3 = SA6-byte</li> <li>• 4 = SA7-byte</li> <li>• 5 = SA8-byte</li> </ul> <p>Where SA4–SA8 bits are not used, configure the <i>sa_byte</i> to 1 on links crossing an international border.</p>
<i>sa_value</i>	SA value. Range is 0–255.

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, SA buffers on line 1 are configured.

```
nodename.1.20.VISM8.a > cnflinesabyte 1 3 0
```

```
nodename.1.20.VISM8.a >
```

## Related Commands

Command	Description
<b>dsplinesabyte</b>	Displays the transmit and receive SA buffers.



# cnfln

To configure characteristics for a VISM/VISM-PR line, use the **cnfln** command.

```
cnfln <line_number> <line_code> <line_len> <clk_src> <line_type> <loop_detection>
|<circuit_identifier>|
```

Syntax Description	
<i>line_number</i>	Number of the line with which to configure characteristics. Range is 1–8.
<i>line_code</i>	Line coding method. Values are <ul style="list-style-type: none"> <li>• 2 = Bipolar 8-zero substitution (B8ZS) for T1</li> <li>• 3 = High-density bipolar 3 (HDB3) for E1</li> <li>• 4 = Alternate mark inversion (AMI) for T1 or E1</li> </ul>
<i>line_len</i>	Line length. Values are <ul style="list-style-type: none"> <li>• 8 = For E1 cards with an SMB back card</li> <li>• 9 = For E1 cards with an RJ-48 back card</li> <li>• 10 = 0–131 feet for T1</li> <li>• 11 = 131–262 feet for T1</li> <li>• 12 = 262–393 feet for T1</li> <li>• 13 = 393–524 feet for T1</li> <li>• 14 = 524–655 feet for T1</li> <li>• 15 = More than 655 feet for T1</li> </ul>
<i>clk_src</i>	Clock source. Values are <ul style="list-style-type: none"> <li>• 1 = Loop clock. The loop clock source is from the line specified by the <i>line_number</i> argument. The local clock source is from the MGX 8000 Series platform.</li> <li>• 2 = Local clock. The local clock source is from the MGX 8000 Series platform.</li> </ul> <p><b>Note</b> For clocking guidelines, see Chapter 3, “VISM/VISM-PR Clocking.”</p>
<i>line_type</i>	Line type. Values are <ul style="list-style-type: none"> <li>• 1 = DSx1ESF</li> <li>• 2 = DSx1D4</li> <li>• 3 = E1</li> <li>• 4 = E1CRC</li> <li>• 5 = E1MF</li> <li>• 6 = E1MFCRC</li> <li>• 7 = E1 Clear</li> <li>• 8 = E1Q50</li> <li>• 9 = E1Q50CRC</li> </ul>

---

<i>loop_detection</i>	Loopback code detection. Values are <ul style="list-style-type: none"> <li>• 1 = Disabled</li> <li>• 2 = Enabled (not applicable to E1 lines.)</li> </ul>
<i>circuit_identifier</i>	(Optional) Name of the circuit in ASCII format. Range is 1–64 characters.

---

**Command Modes**

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines**

Before using the **cnfln** command, you must use the **addln** command to add the line indicated by the *line\_number* argument.

Include all argument values when using the **cnfln** command; however, the *line\_number* and *clk\_src* arguments are the only relevant arguments for configuring the clocking source on your VISM/VISM-PR cards.

**Examples**

In the following example, line 2 is configured with HDB3 coding, SMB E1 back card line length, loop clocking, E1 line type, and with loopback detection disabled:

```
nodename.1.20.VISM8.a > cnfln 2 3 8 1 3 1
```

```
nodename.1.20.VISM8.a >
```

To show the line configurations, use the **dspln** command.

**Related Commands**


---

Command	Description
<b>addln</b>	Adds a T1 or E1 line to a VISM/VISM-PR card.
<b>delln</b>	Deletes a DS1 line on a VISM/VISM-PR card.
<b>dspln</b>	Displays the characteristics of a specified VISM/VISM-PR line.

---

# cnflncompanding

To configure companding law on a line, use the **cnflncompanding** command.

```
cnflncompanding <line_number> <companding>
```

Syntax Description	
<i>line_number</i>	Number of the line for which you want to configure the companding law. Range is 1–8.
<i>companding</i>	Companding law type. <ul style="list-style-type: none"> <li>• 1 = U-Law (same as Mu Law)</li> <li>• 2 = A-Law</li> </ul>

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** This command is applicable only to VISM-PR cards. For the companding law to change, reset the VISM-PR card.

**Examples** In the following example, line 1 is configured for Mu law.

```
nodename.1.27.VISM8.a > cnflncompanding 1 1
nodename.1.27.VISM8.a >
```

To view the companding law on a line, use the **dsplncompanding** command.

Related Commands	Command	Description
	<b>dsplncompanding</b>	Displays companding law on a line.

# cnflndigitorder

To assign the order in which automatic number identification (ANI) digits and dialed number identification service (DNIS) digits are dialed during an outgoing Feature Group D (FGD) call on the endpoints of a specified VISM/VISM-PR line, use the **cnflndigitorder** command.

ANI digits represent the caller's number.

DNIS digits represent the called number.

```
cnflndigitorder <line_number> <line_digit_order>
```

## Syntax Description

<i>line_number</i>	Number of the line to configure dialed digit order. Range is 1–8.
<i>line_digit_order</i>	ANI and DNIS digit order. Values are <ul style="list-style-type: none"> <li>• 1 = ANI digits followed by DNIS digits</li> <li>• 2 = DNIS digits followed by ANI digits</li> </ul>

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

The ANI and DNIS digits are sent as part of the MGCP setup message.

## Examples

In the following example shows, line number 7 is assigned a digit order of DNIS digits first, followed by ANI digits, for digits dialed during an outgoing FGD call:

```
nodename.1.27.VISM8.a > cnflndigitorder 7 2
```

```
nodename.1.27.VISM8.a >
```

To display the line digit order, use the **dsplndigitorder** command.

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>cnfcasflashtime</b>	Configures the minimum and maximum CAS on-hook time periods for incoming flash hooks on a specified endpoint.
	<b>cnfcasglareattrib</b>	Configures the direction of CAS calls and the glare policy for a specified endpoint.
	<b>cnfcaspackage</b>	Configures MGCP packages to observe persistent CAS events in the context of incoming and outgoing CAS calls on a specified endpoint.
	<b>delxgcppersistevt</b>	Deletes a persistent xGCP event.
	<b>dspcasglareattrib</b>	Displays the direction of CAS calls and the glare policy for a specified endpoint.
	<b>dspcaspackage</b>	Displays the MGCP packages configured to observe persistent CAS events in the context of incoming and outgoing CAS calls on a specified endpoint.
	<b>dspcastimers</b>	Displays the currently configured CAS timers for a specified endpoint.
	<b>dsplndigitorder</b>	Displays the order in which ANI digits and DNIS digits are dialed during an outgoing FGD call on the endpoints of a specified VISM/VISM-PR line.

# cnflnexecdiag

To configure channel level testing on an individual line, use the **cnflnexecdiag** command.

```
cnflnexecdiag <line_number> <execdiag>
```

## Syntax Description

<i>line_number</i>	Number of the line in the range 1–8.
<i>execdiag</i>	Value you can use to enable channel level testing on the line. <ul style="list-style-type: none"> <li>• 1 = Enable</li> <li>• 2 = Disable</li> </ul>

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In following example, channel level testing is enabled on line 1:

```
nodename.1.27.VISM8.a > cnflnexecdiag 1 1
```

```
nodename.1.27.VISM8.a >
```

To display the channel level testing, use the **dsplnexecdiag** command.

## Related Commands

Command	Description
<b>dsplnexecdiag</b>	Displays the channel level testing status of an individual line.

# cnflngain

To configure the adjustable gain for all DS0s on a specified VISM/VISM-PR line, use the **cnflngain** command.

```
cnflngain <line_number> <input_gain> <output_attenuation>
```

## Syntax Description

<i>line_number</i>	Number of the line for which you want to configure the adjustable gain. Range is 1–8.
<i>input_gain</i>	Input gain (defined in decibels). Range is from –6 to 14.
<i>output_attenuation</i>	Output attenuation (defined in decibels). Range is 0–14.

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the VISM card line number 2 is configured with a –6-dB input gain and a 6-dB output attenuation:

```
nodename.1.27.VISM8.a > cnflngain 2 -6 6
```

```
nodename.1.27.VISM8.a >
```

To display the line gain you configured, use the **dsplngain** command.

## Related Commands

Command	Description
<b>cnfds0gain</b>	Configures the adjustable gain for a specified DS0.
<b>cnfgain</b>	Configures the adjustable gain for a VISM card.
<b>dspds0gain</b>	Displays the adjustable gain values for a specified DS0.
<b>dspgain</b>	Displays the adjustable gain for a specified VISM card.
<b>dsplngain</b>	Displays the adjustable gain for all DS0s on a specified VISM/VISM-PR line.

# cnflnis

To configure an out-of-service VISM/VISM-PR line to the in-service state, use the **cnflnis** command.

```
cnflnis <line_number>
```

---

## Syntax Description

*line\_number* Number of the line you want to bring to the in-service state. Range is 1–8.

---



---

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

---

## Usage Guidelines

The configured in-service state is not maintained after a VISM/VISM-PR card reboot. If you reboot a VISM/VISM-PR card previously configured to the in-service state with this command, use this command again to configure the associated lines back to the in-service state.

---

## Examples

In the following example, line 2 is configured as the in-service state:

```
nodename.1.27.VISM8.a > cnflnis 2
```

```
nodename.1.27.VISM8.a >
```

To display the service state of a line, use the **dsplnstate** command.

---

## Related Commands

Command	Description
<b>cnflnoos</b>	Configures an in-service VISM/VISM-PR line to the out-of-service state.
<b>dspgwstate</b>	Displays the current user-configured service state of the gateway.
<b>dsplnstate</b>	Displays the service state of a VISM/VISM-PR line with respect to the xGCP protocol.

---



# cnflnmusicthreshold

To configure the music on-hold threshold for all DS0s on a specified line, use the **cnflnmusicthreshold** command.

**cnflnmusicthreshold** *<line\_number>* *<mthreshold>*

## Syntax Description

<i>line_number</i>	Number of the line for which you want to configure the music on-hold threshold. Range is 1–8.
<i>mthreshold</i>	Music on-hold threshold (defined in decibels). Range is –70 to –30.

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the DS0s on line number 3 are configured with –45-dB music on-hold threshold:

```
nodename.1.27.VISM8.a > cnflnmusicthreshold 3 -45
```

```
nodename.1.27.VISM8.a >
```

To display the line music threshold you configured, use the **dsplnmusicthreshold** command.

## Related Commands

Command	Description
<b>cnfds0musicthreshold</b>	Configures the music on-hold threshold for a specified DS0.
<b>cnfmusicthreshold</b>	Configures the music on-hold threshold for the current VISM/VISM-PR card.
<b>dspds0musicthreshold</b>	Displays the music on-hold threshold for a specified DS0.
<b>dsplnmusicthreshold</b>	Displays the music on-hold threshold for the DS0s on a specified line.
<b>dspmusicthreshold</b>	Displays the music on-hold threshold for the current VISM/VISM-PR card.

# cnflnoos

To configure an in-service VISM/VISM-PR line to the out-of-service state, use the **cnflnoos** command.

```
cnflnoos <line_number> <shutdown_method>
```

## Syntax Description

<i>line_number</i>	Number of the line you want to bring to the out-of-service state. Range is 1–8.
<i>shutdown_method</i>	VISM card's method of reaching the out-of-service state. Values are <ul style="list-style-type: none"> <li>2 = Forceful. Existing connections are deleted and the VISM card transitions to the Command_Out_Of_Service state. New connection requests are rejected.</li> <li>3 = Graceful. Existing connections are not released and are allowed to terminate naturally. Immediately after this command is executed, the VISM card transitions to the Pending_Out_Of_Service state. New connection requests are rejected. The VISM card transitions to the Command_Out_Of_Service state only when all ongoing connections are deleted by the call agent.</li> </ul>

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

The configured in-service state is not maintained after a VISM/VISM-PR card reboot. If you reboot a VISM/VISM-PR card that you previously configured to the out-of-service state with this command, use this command again to configure the associated lines back to the out-of-service state.

## Examples

In the following example, line 3 is configured to the out-of-service state gracefully:

```
nodename.1.27.VISM8.a > cnflnoos 3 3
```

```
nodename.1.27.VISM8.a >
```

## Related Commands

Command	Description
<b>cnflnis</b>	Configures an out-of-service VISM/VISM-PR line to the in-service state.
<b>dspgwstate</b>	Displays the current user-configured service state of the gateway.
<b>dsplnstate</b>	Displays the service state of a VISM/VISM-PR line with respect to the xGCP protocol.

# cnflnringback

To configure the ring-back tone method for a specified line on the current VISM/VISM-PR card, use the **cnflnringback** command.

```
cnflnringback <line_number> <ring_back_method>
```

## Syntax Description

<i>line_number</i>	Number of the line for which you want to configure the ring-back method. Range is 1–8.
<i>ring_back_method</i>	Ring-back tone method. Values are <ul style="list-style-type: none"> <li>1 = Proxy (Default) The VISM/VISM-PR card sends the appropriate packet—Named Signaling Event (NSE), Network Transmission Element (NTE), or AAL2 type 3—for the ring-back tone to the originating VISM/VISM-PR card, which generates the ring-back tone toward the TDM network.</li> <li>2 = Inband The VISM/VISM-PR card generates the inband ring-back tone toward the originating VISM/VISM-PR card over the packet network, and the originating VISM/VISM-PR card plays the ring-back tone.</li> </ul>

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

The ring-back method is used when a call agent requests the terminating VISM/VISM-PR to play the ring-back tone remotely (toward the packet network).

## Examples

In the following example, the current VISM card line 4 is configured with the inband ring-back tone method:

```
nodename.1.27.VISM8.a > cnflnringback 4 2
nodename.1.27.VISM8.a >
```

To display the ring-back tone you configured on the line, use the **dsplnringback** command.

## Related Commands

Command	Description
<b>addtoneplan</b>	Adds a tone plan to the current VISM/VISM-PR card.
<b>cnflntoneplan</b>	Assigns a tone plan to a specified VISM/VISM-PR line.
<b>cnflntonetimout</b>	Modifies the timeout periods of all call progress tones supported by VISM/VISM-PR on a specified VISM/VISM-PR card line.
<b>dellntoneplan</b>	Deletes the tone plan configuration of a specified VISM/VISM-PR line.
<b>deltoneplan</b>	Deletes a previously added tone plan from the current VISM/VISM-PR card.

<b>Command</b>	<b>Description</b>
<b>dsplnringback</b>	Displays the ring-back tone method for a specified line on the current VISM/VISM-PR card.
<b>dsplntoneplan</b>	Displays the tone plan configuration of a specified VISM/VISM-PR line.
<b>dsplntonetimeout</b>	Displays the configured timeout periods for all call progress tones of a specified VISM/VISM-PR line.
<b>dsptonebuiltinplans</b>	Displays all preconfigured (built-in) tone plans on the current VISM/VISM-PR card.
<b>dsptoneplan</b>	Displays the tone configuration of a specified tone plan—either a preconfigured (built-in) or user-added tone plan.
<b>dsptoneplans</b>	Displays the tone configuration of all tone plans—either preconfigured (built-in) or user-added tone plans.
<b>dsptoneprovplans</b>	Displays all user-added (provisional) tone plans.
<b>dsptoneregionplans</b>	Displays a list of all tone plans for the countries and regions whose name partially or completely matches the name you supply.

# cnflnsidpacket

To enable or disable the generation of the silence insertion descriptor (SID) packet when silence suppression is in active mode on the line, use the **cnflnsidpacket** command.

**cnflnsidpacket** <line\_number> <sidpacket>

Syntax Description	line_number	Number of the line in the range 1–8.
	sidpacket	Value you can use to enable the SID packet. <ul style="list-style-type: none"> <li>• 1 = Enable (default)</li> <li>• 2 = Disable</li> </ul>

**Command Modes** VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the SID packet is enabled on line 1.

```
nodename.1.27.VISM8.a > cnflnsidpacket 1 1
```

```
nodename.1.27.VISM8.a >
```

Related Commands	Command	Description
	dsplnsidpacket	Shows the line and DS0 of which the SID packet is enabled.

# cnflnsig

To configure the signaling mode for a VISM/VISM-PR line, use the **cnflnsig** command.

```
cnflnsig <line_number> <signaling_type>
```

Syntax Description	
<i>line_number</i>	Number of the line you want to bring to the out-of-service state. Range is 1–8.
<i>signaling_type</i>	Signaling type of the line. Values are <ul style="list-style-type: none"> <li>• 1 = Channel-associated signaling (CAS)</li> <li>• 2 = Common channel signaling (CCS)</li> <li>• 3 = No signaling</li> </ul>

Command Modes	VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking
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Usage Guidelines	<p>Confirm your entry when using this command to ensure that the signaling type is not changed while endpoints are configured for the line indicated by the <i>line_number</i> argument.</p> <p>This command is not allowed when CIDs or CCS channels are present.</p> <p>Configure the line type as either E1MF or E1MFCRC for E1 lines. Otherwise, this command is invalid.</p>
------------------	---

**Examples** In the following example, line 3 is configured for CCS:

```
nodename.1.27.VISM8.a > cnflnsig 3 2

nodename.1.27.VISM8.a >
```

Related Commands	Command	Description
	<b>dspln</b>	Displays the characteristics of a VISM/VISM-PR line.

# cnflntoneplan

To assign a built-in or provisional tone plan to a specified VISM/VISM-PR line, use the **cnflntoneplan** command.

```
cnflntoneplan <line_number> <tone_plan_region> <tone_plan_version>
```

## Syntax Description

<i>line_number</i>	Number of the line for which you want to assign a tone plan. Range is 1–8.
<i>tone_plan_region</i>	Tone plan country or region which you want to assign to a VISM card line. You can use 1–64 alphanumeric characters and underscores ( _ ). This field is case sensitive.
<i>tone_plan_version</i>	Version number of the tone plan you want to assign to a VISM card line. Range is 1–65535.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

If you are assigning a provisional tone plan to a VISM card line, you must use the **addtoneplan** command before you use the **cnflntoneplan** command. The **cnflntoneplan** command allows you to assign a new tone plan (overwrite a previous configuration) to a VISM/VISM-PR line.

## Examples

In the following example, VISM card line 2 is assigned the tone plan identified by tone plan region `sing_3` and tone plan version 2:

```
nodename.1.27.VISM8.a > cnflntoneplan 2 sing_3 2
```

```
nodename.1.27.VISM8.a >
```

To display the tone plan you assigned to the line, use the **dsplntoneplan** command.

## Related Commands

Command	Description
<b>addtoneplan</b>	Adds a tone plan to the current VISM card.
<b>cnflnringback</b>	Configures the ring-back tone method for a specified line on the current VISM card.
<b>cnflntonetimout</b>	Modifies the timeout periods of all call progress tones supported by VISM on a specified VISM card line.
<b>dellntoneplan</b>	Deletes the tone plan configuration of a specified VISM card line.
<b>deltoneplan</b>	Deletes a previously added tone plan from the current VISM card.
<b>dsplnringback</b>	Displays the ring-back tone type for a specified line on the current VISM card.
<b>dsplntoneplan</b>	Displays the tone plan configuration of a specified VISM card line.
<b>dsplntonetimout</b>	Displays the configured timeout periods for all call progress tones of a specified VISM card line.

Command	Description
<b>dsptonebuiltinplans</b>	Displays all preconfigured (built-in) tone plans on the current VISM card.
<b>dsptoneplan</b>	Displays the tone configuration of a specified tone plan—either a preconfigured (built-in) or a user-added tone plan.
<b>dsptoneplans</b>	Displays the tone configuration of all tone plans—preconfigured (built-in) and user-added tone plans.
<b>dsptoneprovplans</b>	Displays all user-added (provisional) tone plans.
<b>dsptoneregionplans</b>	Displays a list of all tone plans for the countries and regions whose name partially or completely matches the name you supply.



# cnflntonetimeout

To modify the timeout periods of call progress tones supported by VISM/VISM-PR on a specified line, use the **cnflntonetimeout** command.

```
cnflntonetimeout <line_number> <ring_remRBack_TO> <local_RBack_TO> <busy_tone_TO>
<reorder_tone_TO> <dial_tone_TO> <stutter_dial_tone_TO> <offhook_tone_TO>
```

## Syntax Description

<i>line_number</i>	Number of the line for which you want to modify tone timeout periods. Range is 1–8.
<i>ring_remRBack_TO</i>	Remote ring-back tone timeout period (defined in seconds). Range is 0–3600. Default is 180.
<i>local_RBack_TO</i>	Local ring-back tone timeout period (defined in seconds). Range is 0–3600. Default is 180.
<i>busy_tone_TO</i>	Busy tone timeout period (defined in seconds). Range is 0–3600. Default is 30.
<i>reorder_tone_TO</i>	Reorder tone timeout period (defined in seconds). Range is 0–3600. Default is 30.
<i>dial_tone_TO</i>	Dial tone timeout period (defined in seconds). Range is 0–3600. Default is 16.
<i>stutter_dial_tone_TO</i>	Stutter dial tone timeout period (defined in seconds). Range is 0–3600. Default is 16.
<i>offhook_tone_TO</i>	Off-hook tone timeout period (defined in seconds). Range is 0–3600. Default is 5.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

You can configure the timeout periods of the following tones:

- Ring-back
- Busy
- Reorder (also known as the fastbusy or the network congestion tone)
- Dial
- Stutter dial
- Offhook alert



### Note

A tone timeout argument value set to 0 indicates an infinite timeout. The tone plays indefinitely unless it is stopped by an event.

**Examples**

In the following example, VISM card line number 7 is configured with a 200-second remote ring-back tone timeout period, a 180-second local ring-back tone timeout period, a 210-second busy tone timeout period, a 400-second reorder tone timeout period, a 1000-second dial tone timeout period, a 2000-second stutter dial tone timeout period, and a 500-second offhook tone timeout period:

```
nodename.1.27.VISM8.a > cnflntonettimeout 7 200 180 210 400 1000 2000 500
```

```
nodename.1.27.VISM8.a >
```

To display the timeout periods you configured on the line, use the **dsplntonettimeout** command.

**Related Commands**

Command	Description
<b>addtoneplan</b>	Adds a tone plan to the current VISM card.
<b>cnflnringback</b>	Configures the ring-back tone method for a specified line on the current VISM card.
<b>cnflntoneplan</b>	Assigns a tone plan to a specified VISM card line.
<b>dellntoneplan</b>	Deletes the tone plan configuration of a specified VISM card line.
<b>deltoneplan</b>	Deletes a previously added tone plan from the current VISM card.
<b>dsplnringback</b>	Displays the ring-back tone type for a specified line on the current VISM card.
<b>dsplntoneplan</b>	Displays the tone plan configuration of a specified VISM card line.
<b>dsplntonettimeout</b>	Displays the configured timeout periods for all call progress tones of a specified VISM card line.
<b>dsptonebuiltinplans</b>	Displays all preconfigured (built-in) tone plans on the current VISM card.
<b>dsptoneplan</b>	Displays the tone configuration of a specified tone plan—either a preconfigured (built-in) or user-added tone plan.
<b>dsptoneplans</b>	Displays the tone configuration of all tone plans—preconfigured (built-in) and user-added tone plans.
<b>dsptoneprovplans</b>	Displays all user-added (provisional) tone plans.
<b>dsptoneregionplans</b>	Displays a list of all tone plans for the countries and regions whose name partially or completely matches the name you supply.

# cnflntrunkcond

To enable or disable trunk conditioning on a VISM/VISM-PR line if a network alarm is encountered, use the **cnflntrunkcond** command.

```
cnflntrunkcond <line_number> <trunkCondType> [bearer_code]
```

## Syntax Description

<i>line_number</i>	Number of the line for which you want to enable or disable line conditioning. Range is 1–8.
<i>trunkCondType</i>	Line trunk conditioning status. Values are <ul style="list-style-type: none"> <li>1 = Enable. VISM performs trunk conditioning on each affected DS0 if an alarm occurs on the ATM side.</li> <li>2 = Disable. VISM sends an alarm indication signal (AIS), blue alarm, or remote alarm indication (RAI) to the line if an alarm occurs on the ATM side.</li> </ul>
<i>bearer_code</i>	(Optional) Bearer code sent on a bearer channel in remote alarm. Range is 0–255. <ul style="list-style-type: none"> <li>For VISM-PR T1, default is 127.</li> <li>For VISM-PR E1, default is 255.</li> </ul> <p>This parameter can be specified only when the <i>trunkCondType</i> parameter is set to Enable for a line.</p>

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Trunk conditioning consists of sending 0x7f (for T1 lines) or 0xff (for E1 lines) on the affected DS0s. For T1, the idle code pattern is transmitted for 2 to 5 seconds, followed by the seized code pattern, as specified in the **cnfcascode** command.

This command is not allowed if endpoints or common channel signaling (CCS) channels are enabled on the line.



### Note

Trunk conditioning is not supported on the VISM E1 card.

## Examples

In the following example, line 1 is configured with line conditioning if an AAL2 alarm is encountered, and the bearer code is set to 255.

```
nodename.1.12.VISM8.a > cnflntrunkcond 1 1 255
```

```
nodename.1.12.VISM8.a >
```

Use the **dspln** command to view trunk conditioning information.

## Related Commands

Command	Description
<b>addlapdtrunk</b>	Adds an LAPD trunk to a specific VISM card line.
<b>addrtpcon</b>	Adds a static RTP VoIP trunking connection.
<b>addrudptrunk</b>	Adds an ISDN PRI backhaul RUDP session for an LAPD trunk connection.
<b>clrtpcnt</b>	Clears the RTP counters (statistics) for a specific static RTP connection.
<b>cnflapdtrunkpvc</b>	Assigns the PVC trunk type that carries LAPD messages for the current VISM card.
<b>cnfrtpcon</b>	Modifies an existing static RTP VoIP trunking connection.
<b>cnfrudptrunkrmtip</b>	Modifies the remote VISM IP address used in the ISDN PRI backhaul RUDP trunk for a specified session.
<b>dellapdtrunk</b>	Deletes an LAPD configured line.
<b>delrtpcon</b>	Deletes a static RTP VoIP trunking connection.
<b>delrudptrunk</b>	Deletes an ISDN PRI backhaul RUDP session that is associated with an LAPD.
<b>dsplapd</b>	Displays data about an LAPD.
<b>dsplapdtrunkpvc</b>	Displays the assigned PVC trunk type that carries LAPD trunk messages for the current VISM card.
<b>dsplapdtrunks</b>	Displays the configuration data of all LAPD trunks.
<b>dspln</b>	Displays the configuration data of a line.
<b>dsprtpcnt</b>	Displays the bearer counters (statistics) for a specific RTP VoIP trunking connection.
<b>dsprtpcon</b>	Displays the configuration data of a specific static RTP VoIP trunking connection.
<b>dsprtpcons</b>	Displays the configuration data of all static RTP VoIP trunking connections.
<b>dsprudptrunk</b>	Displays the configuration data of a specified ISDN PRI backhaul RUDP session.
<b>dsprudptrunks</b>	Displays the configuration data of all ISDN PRI backhaul RUDP sessions.

# cnlnv110

To enable or disable V.110 detection, use the **cnflnv110** command.

```
cnflnv110 <line_number> <v110_flag>
```

Syntax Description	line_number	Number of the line on which you want to enable or disable V.110. Range is 1–8.
	v110_flag	Value you can use to enable or disable V.110 on the line. <ul style="list-style-type: none"> <li>• 1 = Enable</li> <li>• 2 = Disable (default)</li> </ul>

**Command Modes** AAL2 trunking, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** This command is applicable only to VISM-PR cards.

**Examples** In the following example, V.110 detection is enabled on line 1.

```
nodename.1.28.VISM8.a > cnflnv110 1 1
```

```
nodename.1.28.VISM8.a >
```

Use the **dspln** command to verify that V.110 is enabled.

Related Commands	Command	Description
	<b>dspln</b>	Displays the characteristics of a specified line.

# cnflongdurationtimer

To configure the long duration timer, use the **cnflongdurationtimer** command.

The long duration is the elapsed time, in hours, that indicates a connection has been established for a given period of time.

**cnflongdurationtimer** <timeout>

## Syntax Description

<i>timeout</i>	Long duration time period in the range 0–24 hours. The default time is 1 hour.
----------------	--

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the long duration timer is configured to 1 hour:

```
nodename.1.12.VISM8.a > cnflongdurationtimer 1
```

```
nodename.1.12.VISM8.a >
```

## Related Commands

Command	Description
<b>dsplongdurationtimer</b>	Displays the long duration timer values.

# cnfmaxconfnum

To configure the maximum number of concurrent three-way conferences that the VISM/VISM-PR card can support, use the **cnfmaxconfnum** command.

**cnfmaxconfnum** <num>

<b>Syntax Description</b>	<i>num</i>	Maximum number of conferences that the card can support. Range is 0–50. Default is 0.
---------------------------	------------	---

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** This command is not supported.

**Examples** In the following example, the VISM/VISM-PR card does not support three-way conferences:

```
nodename.1.12.VISM8.a > cnfmaxconfnum 0
```

```
nodename.1.12.VISM8.a >
```

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>dspmaxconfnum</b>	Displays the maximum number of three-way conferences.

# cnfmgcgrpentry

To modify the priority level of a call agent within a call agent redundancy group, use the **cnfmgcgrpentry** command.

```
cnfmgcgrpentry <Red_Group_Num> <mgcRedGrpMgcNum> <mgcRedGrpPref>
```

## Syntax Description

<i>Red_Group_Num</i>	Call agent redundancy group number. Range is 1–8.
<i>mgcRedGrpMgcNum</i>	Call agent identification number. Range is 1–8.
<i>mgcRedGrpPref</i>	Call agent priority value. Range is 1 (highest) to 8 (lowest).

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.

Before using this command, use the **addmgc** command to add an MGC.

## Examples

In the following example shows, the call agent redundancy group number 1 with call agent number 2, is configured with a priority level of 4:

```
nodename.1.12.VISM8.a > cnfmgcgrpentry 1 2 4
nodename.1.12.VISM8.a >
```

To display the call agent redundancy groups, use the **dspmgcgrps** command.



Related Commands	Command	Description
	<b>addmgcgrpentry</b>	Configures call agents as part of an MGC redundancy group and assigns a priority value for a call agent.
	<b>addmgcgrpprotocol</b>	Associates a call agent redundancy group with a gateway control protocol.
	<b>cnfmgcgrpparam</b>	Modifies the notification policy of a state change and the priority level of a call agent redundancy group.
	<b>cnfsrcppeer</b>	Configures the SRCP parameters when SRCP is the selected protocol for communication between the VISM card and call agent.
	<b>cnfsrcppeergrpparam</b>	Modifies the SRCP heartbeat interval and maximum UDP size for a specified call agent redundancy group.
	<b>delmgcgrpentry</b>	Deletes a call agent from a call agent redundancy group.
	<b>delmgcgrpprotocol</b>	Deletes an MGCP from a specified call agent redundancy group.
	<b>dspmgcgrpparams</b>	Displays all configured call agent redundancy group parameters.
	<b>dspmgcgrpprotocols</b>	Displays all configured call agent redundancy group protocols.
	<b>dspmgcgrps</b>	Displays all configured call agent redundancy groups.
	<b>dspsrcppeergrpparams</b>	Displays the SRCP parameters for all call agent redundancy groups that have SRCP added.

# cnfmgcgrpparam

To modify a call agent redundancy group state change notification policy and priority level, use the **cnfmgcgrpparam** command.

```
cnfmgcgrpparam <Red_Group_Num> <mgcRedGrpStateChgNtfy> |<mgcRedGrpPriority>|
```

## Syntax Description

<i>Red_Group_Num</i>	Call agent redundancy group number. Range is 1–8.
<i>mgcRedGrpStateChgNtfy</i>	State change notification. This parameter determines if messages, such as Restart in Progresses (RSIPs), are sent to notify the call agent of a VISM card state change. <ul style="list-style-type: none"> <li>1 = Enable (default)</li> <li>2 = Disable</li> </ul>
<i>mgcRedGrpPriority</i>	(Optional) Call agent priority value. It can be one of the following: <ul style="list-style-type: none"> <li>0 = No gateway-initiated requests or commands are sent and so no priority needs to be specified.</li> <li>1 (highest) to 8 (lowest). Default is 1.</li> </ul>

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.

Before using this command, use the **addmgc** command to add an MGC. Use the **addmgcgrpentry** command to add an MGC group.

## Examples

In the following example shows, call agent redundancy group number 1 is associated with the call agent and is assigned a priority level of 5:

```
nodename.1.12.VISM8.a > cnfmgcgrpparam 1 1 5
```

```
nodename.1.12.VISM8.a >
```

To display the redundancy group parameters, use the **dspmgcgrpparams** command.

## Related Commands

Command	Description
<b>addmgcgrpprotocol</b>	Associates a call agent redundancy group with a gateway control protocol.
<b>cnfmgcgrpentry</b>	Modifies the priority level of a call agent within a call agent redundancy group.
<b>cnfsrcpeer</b>	Configures the SRCP parameters when SRCP is the selected protocol for communication between the VISM card and call agent.

Command	Description
<b>cnfsrcppeergrpparam</b>	Modifies the SRCP heartbeat interval and maximum UDP size for a specified call agent redundancy group.
<b>delmgcgrpentry</b>	Deletes a call agent from a call agent redundancy group.
<b>delmgcgrpprotocol</b>	Deletes an MGCP from a specified call agent redundancy group.
<b>dspmgcgrpparams</b>	Displays all configured call agent redundancy group parameters.
<b>dspmgcgrpprotocols</b>	Displays all configured call agent redundancy group protocols.
<b>dspmgcgrps</b>	Displays all configured call agent redundancy groups.
<b>dspsrcppeergrpparams</b>	Displays the SRCP parameters for all call agent redundancy groups that have SRCP added.

# cnfmgcgrpprotocol

To configure a call agent redundancy group protocol for a previously configured redundancy group, use the **cnfmgcgrpprotocol** command.

```
cnfmgcgrpprotocol <Red_Group_Num> <protocol_number> [Qrntn_Persist] <Qrntn_Def>
  <Sign_OnOff> <Prov_Resp> <RspAck_Attr> <Disc_Proc> <Cancel_Graceful>|
```

Syntax	Description
<i>Red_Group_Num</i>	Call agent redundancy group number. Range is 1–8.
<i>protocol_number</i>	Protocol number. Values are <ul style="list-style-type: none"> <li>• 1 = MGCP 0.1</li> <li>• 2 = SGCP 1.1+</li> <li>• 3 = SRCP 1.0.2</li> <li>• 4 = SGCP 1.5</li> <li>• 5 = MGCP 1.0</li> <li>• 6 = TGCP 1.0</li> </ul>
[ <i>Qrntn_Persist</i> ]	(Optional) Value you can use to set the quarantine handling method for persistent events. <ul style="list-style-type: none"> <li>• 1 = Quarantine persistent events (default)</li> <li>• 2 = Do not quarantine persistent events</li> </ul>
[ <i>Qrntn_Def</i> ]	(Optional) Value you can use to set the default quarantine event handling method for each protocol. <ul style="list-style-type: none"> <li>• 1 = Step, process (default for MGCP 1.0 and TGCP 1.0)</li> <li>• 2 = Step, discard (default for MGCP 0.1, SGCP 1.1+, SRCP 1.0.2, and SGCP 1.5)</li> <li>• 3 = Loop, process</li> <li>• 4 = Loop, discard</li> </ul> <p><b>Note</b> Step means that one notification command is generated per notification request. Loop means that multiple notification commands are generated per notification request.</p>
[ <i>Sign_OnOff</i> ]	(Optional) Value you can use to set how the events are deleted. <ul style="list-style-type: none"> <li>• 1 = Delete events from the previous list that are not present in the current list. (default for MGCP 0.1, SGCP 1.1+, SRCP 1.0.2, and SGCP 1.5)</li> <li>• 2 = Delete and event from the previous list only if the event is present in the current list with a hyphen (-) as the parameter. (default for MGCP 1.0 and TGCP 1.0)</li> </ul>
[ <i>Prov_Resp</i> ]	(Optional) Value you can use to enable or disable the sending of a provisional response. <ul style="list-style-type: none"> <li>• 1 = Send (default for MGCP 1.0 and TGCP 1.0)</li> <li>• 2 = Do not send (default for MGCP 0.1, SGCP 1.1+, SRCP 1.0.2, and SGCP 1.5)</li> </ul>

<code> RespAck_Attr </code>	(Optional) Value you can use to enable or disable sending a response acknowledgment. <ul style="list-style-type: none"> <li>• 1 = Send (default for MGCP 1.0 and TGCP 1.0)</li> <li>• 2 = Do not send (default for MGCP 0.1, SGCP 1.1+, SRCP 1.0.2, and SGCP 1.5)</li> </ul>
<code> Disc_Proc </code>	(Optional) Value you can use to enable or disable the disconnect method, which indicates that the endpoint has become disconnected and is now trying to establish connectivity. <ul style="list-style-type: none"> <li>• 1 = Enable (default for MGCP 1.0 and TGCP 1.0)</li> <li>• 2 = Disable (default for MGCP 0.1, SGCP 1.1+, SRCP 1.0.2, and SGCP 1.5)</li> </ul>
<code> Cancel_Graceful </code>	(Optional) Value you can use to enable or disable VISM canceling a previously issued graceful restart command. <ul style="list-style-type: none"> <li>• 1 = Send (default for MGCP 1.0 and TGCP 1.0)</li> <li>• 2 = Do not send (default for MGCP 0.1, SGCP 1.1+, SRCP 1.0.2, and SGCP 1.5)</li> </ul>

**Command Modes**

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines**

Use this command to change the protocol for a redundancy group that has previously been assigned a protocol with the **addmgcrpprotocol** command.

**Examples**

In the following example, redundancy group number 7 is assigned the SRCP 1.0.2 protocol. The command also quarantines persistent events with the loop and process handling method. All optional arguments are enabled.

```
nodename.1.12.VISM8.a > cnfmgcrpprotocol 7 3 1 3 1 1 1 1 1
nodename.1.12.VISM8.a >
```

To display the MGC group protocols, use the **dspmgcgrpprotocols** command.

**Related Commands**

Command	Description
<b>addmgcrpprotocol</b>	Associates a call agent redundancy group with a gateway control protocol.
<b>cnfdiscrim</b>	Configures wait delay timers for the disconnected procedure.
<b>cnfxgcppeer</b>	Configures the UDP port number used to send gateway-initiated messages to the call agent.
<b>delmgcrpprotocol</b>	Deletes an MGCP from a specified call agent redundancy group.
<b>dspdiscrim</b>	Displays the disconnect wait delay times.
<b>dspmgcgrpprotocols</b>	Displays all configured call agent redundancy group protocols.

# cnfmidcalltimers

To configure the midcall dual tone multifrequency (DTMF) feature partial and critical timers for a specified VISM/VISM-PR line, use the **cnfmidcalltimers** command.

```
cnfmidcalltimers <line_number> <DTMF_Partial_Timer> <DTMF_Critical_Timer>
```

## Syntax Description

<i>line_number</i>	Number of the line for which you want to configure midcall DTMF timers. Range is 1–8.
<i>DTMF_Partial_Timer</i>	Partial digit timer for midcall DTMF digit reporting (defined in seconds). Range is 10–10000. Default is 16.
<i>DTMF_Critical_Timer</i>	Critical digit timer for midcall DTMF digit reporting (defined in seconds). Range is 0–10000. Default is 4.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

Use this command for CAS and non-CAS endpoints when you want to use midcall DTMF digit reporting.

When you use this command, the partial digit timer starts when the first digit is entered, and it restarts when each new digit is entered until a digit map match or mismatch occurs.

When you use a digit map, the critical digit timer starts when the last digit is received—when no more digits are required for a digit map match. When the time expires, the digit map match is assumed to be complete. When you are not using a digit map, the critical digit timer starts immediately (and not restarted) and is canceled as soon as a digit is entered.

## Examples

In the following example shows, the current VISM card line number 3 is configured with a 20-second partial digit timer and a 4-second critical digit timer for midcall DTMF digit reporting:

```
nodename.1.12.VISM8.a > cnfmidcalltimers 3 20 4
```

```
nodename.1.12.VISM8.a >
```

## Related Commands

Command	Description
<b>dspmidcalltimers</b>	Displays the configured partial and critical timer values for midcall DTMF digit reporting.

# cnfmusicthreshold

To configure the music on-hold threshold value for the current VISM/VISM-PR card, use the **cnfmusicthreshold** command.

**cnfmusicthreshold** <*mthreshold*>

## Syntax Description

<i>mthreshold</i>	Music on-hold threshold (defined in decibels). It can be in the range from -70 to -30 dB.
-------------------	---

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

This command allows you to adjust the threshold level detected by DSPs to interpret TDM side silence or voice.

## Examples

In the following example, the current VISM card is configured with a -45-dB music on-hold threshold value:

```
nodename.1.12.VISM8.a > cnfmusicthreshold -45
```

```
nodename.1.12.VISM8.a >
```

To display the music on-hold threshold you configured, use the **dspmusicthreshold** command.

## Related Commands

Command	Description
<b>cnfds0musicthreshold</b>	Configures the music on-hold threshold for a specified DS0.
<b>cnflnmusicthreshold</b>	Configures the music on-hold threshold for all DS0s on a specified line.
<b>dspds0musicthreshold</b>	Displays the music on-hold threshold for a specified DS0.
<b>dsplnmusicthreshold</b>	Displays the music on-hold threshold values for the DS0s on a specified line.
<b>dspmusicthreshold</b>	Displays the music on-hold threshold values for the current VISM card.

# cnfnwcot

To configure a VISM/VISM-PR card for a gateway-initiated network continuity test, use the **cnfnwcot** command.

**cnfnwcot** *<nwCotEnable>*

## Syntax Description

<i>nwCotEnable</i>	Value you can use to enable or disable the VISM/VISM-PR-initiated CO3 network continuity test.
	<ul style="list-style-type: none"> <li>1 = On</li> <li>2 = Off (default)</li> </ul>

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

This command configures VISM/VISM-PR for gateway-initiated network continuity testing. When the test is enabled, and after VISM/VISM-PR receives the remote Session Description Protocol (SDP) information, VISM/VISM-PR sends a Named Signaling Event (NSE) or an AAL2 type 3 packet (CO3) toward the network.

If the other gateway does not respond with an NSE/Type 3 packet (CO4), the connection is deleted. VISM/VISM-PR interprets that the gateway-initiated DLCX, with a reason code of “Network cont. failed,” is sent to the call agent.

## Examples

In the following example, a VISM card is configured for a gateway-initiated network continuity test:

```
nodename.1.12.VISM8.a > cnfnwcot 1

nodename.1.12.VISM8.a >
```

To display the status of the gateway-initiated network continuity test, use the **dspnwcot** command.

## Related Commands

Command	Description
<b>cnfco4timer</b>	Configures the bearer continuity test CO4 timer value.
<b>dsppo4timer</b>	Displays the bearer continuity test CO4 timer value.
<b>dspnwcot</b>	Displays the status—enabled or disabled—of the gateway initiated network continuity test configuration for VISM.
<b>dspvismparam</b>	Displays the current VISM/VISM-PR card configuration.



# cnfoamloopcnt

To configure the threshold for the number of consecutive Operation, Administration, and Maintenance (OAM) end-to-end loopback response cells that must be lost before a PVC is put into alarm due to an OAM end-to-end loopback failure, use the **cnfoamloopcnt** command.

**cnfoamloopcnt** <count>

<b>Syntax Description</b>	<i>count</i>	Number of consecutive OAM loopback response cells that must be lost before a PVC is put into alarm. Range is 1–60. Default is 5.
<b>Command Modes</b>	VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking	
<b>Usage Guidelines</b>	Follow standard CLI procedures for this command.	
<b>Examples</b>	<p>In the following example, the OAM loop count is configured to 60.</p> <pre>nodename.1.12.VISM8.a &gt; <b>cnfoamloopcnt 60</b></pre> <pre>nodename.1.12.VISM8.a &gt;</pre>	
<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>dsfoamloopcnt</b>	Displays the number of OAM loopback cells that are counted before an OAM loopback failure causes the PVC to go into alarm.

# cnfoamparams

To configure the transmitted and received permanent virtual circuit (PVC) Operation, Administration, and Maintenance (OAM) cell parameters, use the **cnfoamparams** command.

```
cnfoamparams <oam_cell_gap> <retry_cnt> <recover_cnt>
```

Syntax Description		
<i>oam_cell_gap</i>		Intercell gap—The time between cells (defined in milliseconds). Range is 10–5000 ms. Default is 500 ms.
<i>retry_cnt</i>		Number of cells that must pass unacknowledged before a PVC failure is declared. Range is 1–20. Default is 3.
<i>recover_cnt</i>		Recovery indication cell count—The number of cells that must be received before a PVC is considered recovered from a failure. Range is 1–20. Default is 5.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the transmitted and received OAM parameters are configured with a 20-ms intercell gap, a 3-cell retry count, and a 5-cell recovery indication cell count:

```
nodename.1.12.VISM8.a > cnfoamparams 20 3 5
```

```
nodename.1.12.VISM8.a >
```

Related Commands	Command	Description
	<b>dsfoamparams</b>	Displays the transmitted and received PVC OAM cell parameters.

# cnfplayouttimestamp

To enable or disable the playout timestamp, use the **cnfplayouttimestamp** command.

**cnfplayouttimestamp** <codecType> <timestamp> <jitter\_initdelay>

Syntax Description		
	<i>codecType</i>	Type of coding/decoding to be performed on the data stream. <ul style="list-style-type: none"> <li>• 1 = G.711u</li> <li>• 2 = G.711a</li> <li>• 3 = G.726-32K</li> <li>• 4 = G.729a</li> <li>• 5 = G.729ab</li> <li>• 6 = Clear channel (VAD must be off)</li> <li>• 7 = G.726-16K</li> <li>• 8 = G.726-24K</li> <li>• 9 = G.726-40K</li> <li>• 11 = G.723.1-H</li> <li>• 13 = G.723.1-L</li> <li>• 14 = G.723.1a-L</li> <li>• 15 = Lossless (VAD must be off)</li> </ul>
	<i>timestamp</i>	Value you can use to enable playout timestamp. <ul style="list-style-type: none"> <li>• 1 = disable</li> <li>• 2 = enable</li> </ul>
	<i>jitter_initdelay</i>	Initial jitter delay (defined in milliseconds). Ranges are <ul style="list-style-type: none"> <li>• For codec templates 1, 3, 4, and 5: 0–100 in increments of 10</li> <li>• For codec template 2: 0–100 in increments of 5</li> <li>• For Lossless codec: 0–50</li> </ul>

**Command Modes** VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

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**Examples**

In the following example, the G.729a codec is enabled for playout timestamp with a jitter delay of 20 ms.

```
nodename.1.12.VISM8.a > cnfplayouttimestamp 4 2 20
```

```
nodename.1.12.VISM8.a >
```

---

**Related Commands**

There are no related commands.

# cnfnpncon

To set priority routing for a specified connection, use the **cnfnpncon** command.

```
cnfnpncon <LCN> <route_priority>
```

<b>Syntax Description</b>	<i>LCN</i> Logical channel number (LCN) for which you want to set priority routing. Range is 131–510.				
	<i>route_priority</i> Priority of the route. Range is 1–15 with 1 being the highest. Default is 8.				
<b>Command Modes</b>	VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking				
<b>Usage Guidelines</b>	The Private Network-to-Network Interface (PNNI) routing priority feature requires you to use a PXM1E or PXM45 in your MGX 8000 Series switch chassis.				
<b>Examples</b>	<p>In the following example, the lowest priority routing is set for connection 145:</p> <pre>nodename.1.12.VISM8.a &gt; <b>cnfnpncon 145 15</b></pre> <pre>nodename.1.12.VISM8.a &gt;</pre>				
<b>Related Commands</b>	<table border="1"> <thead> <tr> <th>Command</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td><b>dspscon</b></td> <td>Displays the parameters for a specified channel.</td> </tr> </tbody> </table>	Command	Description	<b>dspscon</b>	Displays the parameters for a specified channel.
Command	Description				
<b>dspscon</b>	Displays the parameters for a specified channel.				

# cnfprofelemvbd

To configure the voiceband data (VBD) profile element for a profile, use the **cnfprofelemvbd** command.

```
cnfprofelemvbd <profileType> <profileNumber> <codecType> <pktPeriod>
```

---

## Syntax Description

<i>profileType</i>	Profile type to be used for the channel identifier (CID). <ul style="list-style-type: none"> <li>• 1 = International Telecommunication Union (ITU) I.366.2</li> <li>• 3 = Custom</li> </ul>
<i>profileNumber</i>	Number of the profile. <ul style="list-style-type: none"> <li>• 1 = ITU profile</li> <li>• 2 = ITU profile</li> <li>• 3 = ITU profile</li> <li>• 7 = ITU profile</li> <li>• 8 = ITU profile</li> <li>• 12 = ITU profile</li> <li>• 100 = Custom profile</li> <li>• 101 = Custom profile</li> <li>• 110 = Custom profile</li> <li>• 200 = Custom profile</li> <li>• 201 = Custom profile</li> <li>• 210 = Custom profile</li> </ul>

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<i>codecType</i>	Type of coding/decoding to be performed on the data stream. <ul style="list-style-type: none"> <li>• 1 = G.711u</li> <li>• 2 = G.711a</li> <li>• 3 = G.726-32k</li> <li>• 6 = Clear channel (VAD must be off)</li> <li>• 7 = G.726-16k</li> <li>• 8 = G.726-24k</li> <li>• 9 = G.726-40k</li> <li>• 11 = G.723.1-H</li> <li>• 13 = G.723.1-L</li> <li>• 14 = G.723.1a-L</li> <li>• 15 = Lossless (VAD must be off)</li> </ul>
<i>pktPeriod</i>	Voiceband data packetization period (defined in milliseconds). <ul style="list-style-type: none"> <li>• 5</li> <li>• 10</li> <li>• 20</li> <li>• 30</li> <li>• 40</li> </ul>

**Command Modes**

AAL2 trunking, switched AAL2 SVC, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines**

Use the **dspaal2profile** command to identify valid combinations of codec type, packetization period, and silence insertion descriptor.

The G.723.1 codecs are supported for VISM-PR cards and are not supported for VISM cards.

**Examples**

In the following example, the ITU profile type, profile number 1 is configured with G.711a codec type and a 5-ms packetization period:

```
nodename.1.27.VISM8.a > cnfprofelemvbd 1 1 2 5
```

```
nodename.1.27.VISM8.a >
```

Use the **dspprotparams** to view your configurations.

**Related Commands**

Command	Description
<b>cnfprofelemvoice</b>	Configures the voice profile element for a profile.
<b>dspaal2profile</b>	Displays AAL2 profile type and profile number data.
<b>dspprotparams</b>	Displays the profile elements and the preferences for all profiles.

# cnfprofelemvoice

To configure the profile voice element, use the **cnfprofelemvoice** command.

```
cnfprofelemvoice <profileType> <profileNumber> <voice_codec_type> <pktPeriod> <sid>
```

## Syntax Description

<i>profileType</i>	Profile type to be used for the CID. <ul style="list-style-type: none"> <li>• 1 = International Telecommunication Union (ITU) I.366.2</li> <li>• 3 = Custom</li> </ul>
<i>profileNumber</i>	Number of the profile. <ul style="list-style-type: none"> <li>• 1 = ITU profile</li> <li>• 2 = ITU profile</li> <li>• 3 = ITU profile</li> <li>• 7 = ITU profile</li> <li>• 8 = ITU profile</li> <li>• 12 = ITU profile</li> <li>• 100 = Custom profile</li> <li>• 101 = Custom profile</li> <li>• 110 = Custom profile</li> <li>• 200 = Custom profile</li> <li>• 201 = Custom profile</li> <li>• 210 = Custom profile</li> </ul>
<i>voice_codec_type</i>	Type of coding/decoding to be performed on the data stream. <ul style="list-style-type: none"> <li>• 1 = G.711u</li> <li>• 2 = G.711a</li> <li>• 3 = G.726-32k</li> <li>• 4 = G.729a</li> <li>• 5 = G.729ab</li> <li>• 6 = Clear channel (VAD must be off)</li> <li>• 7 = G.726-16k</li> <li>• 8 = G.726-24k</li> <li>• 9 = G.726-40k</li> <li>• 11 = G.723.1-H</li> <li>• 12 = G.723.1a-H</li> <li>• 13 = G.723.1-L</li> <li>• 14 = G.723.1a-L</li> <li>• 15 = Lossless (VAD must be off)</li> </ul>



<i>pktPeriod</i>	Voice packetization period (defined in milliseconds). <ul style="list-style-type: none"> <li>• 5</li> <li>• 10</li> <li>• 20</li> <li>• 30</li> <li>• 40</li> </ul>
<i>sid</i>	Silence insertion descriptor (SID). <ul style="list-style-type: none"> <li>• 1 = VAD off</li> <li>• 2 = VAD on</li> <li>• 3 = SID generic</li> <li>• 4 = SID 729</li> <li>• 5 = SID 723</li> </ul>

**Command Modes**

AAL2 trunking, switched AAL2 SVC, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines**

Use the **dspaal2profile** command to identify valid combinations of codec type, packetization period, and SID.

The G.723.1 codecs are supported for VISM-PR cards and are not supported for VISM cards.

**Examples**

In the following example, the ITU profile type on profile number 1 is configured with the G.711a codec type, a packetization period of 5 ms, and VAD enabled:

```
nodename.1.27.VISM8.a > cnfprofelemvoice 1 1 2 5 2
```

```
nodename.1.27.VISM8.a >
```

Use the **dspprotparams** to view your configurations.

**Related Commands**

Command	Description
<b>cnfprofelemvbd</b>	Configures the VBD profile element for a profile.
<b>dspaal2profile</b>	Displays information about a specified AAL2 profile type and profile number.
<b>dspprotparams</b>	Displays the profile elements and preferences for all profiles.

# cnfprofneg

To configure the codec profile list priority order, use the **cnfprofneg** command.

**cnfprofneg** <*profileNegotiationOption*>

Syntax Description	<i>profileNegotiationOption</i>	Codec list priority scheme. Values are
		<ul style="list-style-type: none"> <li>• 1 = Local connection option (LCO) list, remote Session Descriptor Protocol (SDP) data list, local MIB</li> <li>• 2 = LCO list, local MIB, remote SDP data list</li> <li>• 3 = Remote SDP data list, LCO list, local MIB</li> <li>• 4 = Remote SDP data list, local MIB, LCO list</li> <li>• 5 = Local MIB, LCO list, remote SDP data list</li> <li>• 6 = Local MIB, remote SDP data list, LCO list</li> </ul>

**Command Modes** Switched AAL2 SVC and Switched AAL2 PVC

**Usage Guidelines** This command determines which list you can use to ascertain the relative profile preferences.

**Examples** In the following example, the codec list priority order is LCO list first, remote SDP data list second, and local MIB last:

```
nodename.1.27.VISM8.a > cnfprofneg 1
```

```
nodename.1.27.VISM8.a >
```

Use the **dspvismparam** to list the profile negotiation priority.

Related Commands	Command	Description
	<b>dspvismparam</b>	Displays the current VISM card configuration.

# cnfprofparams

To configure a profile preference for a channel, use the **cnfprofparams** command.

```
cnfprofparams <profileType> <profileNumber> <profilePreference>
```

<b>Syntax Description</b>	<i>profileType</i>	Profile type to be used for the channel. <ul style="list-style-type: none"> <li>• 1 = International Telecommunication Union (ITU) I.366.2</li> <li>• 3 = Custom</li> </ul>
	<i>profileNumber</i>	Number of the profile. <ul style="list-style-type: none"> <li>• 1 = ITU profile</li> <li>• 2 = ITU profile</li> <li>• 3 = ITU profile</li> <li>• 7 = ITU profile</li> <li>• 8 = ITU profile</li> <li>• 12 = ITU profile</li> <li>• 100 = Custom profile</li> <li>• 101 = Custom profile</li> <li>• 110 = Custom profile</li> <li>• 200 = Custom profile</li> <li>• 200 = Custom profile</li> <li>• 201 = Custom profile</li> <li>• 210 = Custom profile</li> </ul>
	<i>profilePreference</i>	Profile preference. It can be one of the following values: <ul style="list-style-type: none"> <li>• 0 = No preference; exclude the profile from xGCP profile negotiation.</li> <li>• 1–11, where 1 is the highest preference (default) and 11 is the lowest preference.</li> </ul>

**Command Modes** AAL2 trunking, switched AAL2 SVC, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

---

**Examples**

In the following example, the ITU profile type, profile number 1 is configured with the midrange preference level of 4:

```
nodename.1.27.VISM8.a > cnfprofparams 1 1 4
```

```
nodename.1.27.VISM8.a >
```

Use the **dspprofparams** command to view the profile parameters.

---

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>dspprofparams</b>	Displays the profile elements and preferences for all profiles.

---

# cnfrsvp

To enable or disable Resource Reservation Protocol (RSVP) for a specified connection, use the **cnfrsvp** command.

```
cnfrsvp <LCN> <rsvp_status>
```

Syntax Description	LCN	Logical channel number on which you want to enable or disable RSVP. Range is 131–510.
	rsvp_status	Value you can use to enable or disable RSVP. <ul style="list-style-type: none"> <li>• 1 = Enable</li> <li>• 2 = Disable</li> </ul>

**Command Modes** VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, RSVP is enabled for LCN 146:

```
nodename.1.27.VISM8.a > cnfrsvp 146 1
```

```
nodename.1.27.VISM8.a >
```

Use the **dsprsvpif** command to display the RSVP status.

Related Commands	Command	Description
	cnfrsvprefreshmiss	Configures the number of times VISM waits for a missed RSVP minimum refresh message for a specified connection.
	dsprsvpif	Displays the RSVP status of a specified connection.
	dsprsvpreq	Displays the data associated with a specified RSVP request.
	dsprsvpreqs	Displays all RSVP requests on the current VISM card.
	dsprsvpresv	Displays all data associated with an RSVP bandwidth reservation.
	dsprsvpresvs	Displays all incoming RSVP reservations on the current VISM card.
	dsprsvpsender	Displays all data associated with a specified RSVP path state.
	dsprsvpsenders	Displays all RSVP path states.

# cnfrsvprefreshmiss

To configure the number of times VISM/VISM-PR waits for a missed Resource Reservation Protocol (RSVP) minimum refresh message—a path or reservation message—for a specified connection, use the **cnfrsvprefreshmiss** command.

```
cnfrsvprefreshmiss <LCN> <rsvp_miss_count>
```

Syntax Description	LCN	Logical channel number (LCN). Range is 131–510.
	<i>rsvp_miss_count</i>	Successive number of refresh message wait times that VISM allows before deleting the soft-state for the connection. Range is 1–65536. Default is 4.

**Command Modes** VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** VISM expects refresh messages at regular intervals. The messages are passed to VISM from the Routing Processor Module (RPM).

If no refresh messages are sent to the VISM, VISM deletes the soft-state for the corresponding connection. However, you can use the **cnfrsvprefreshmiss** command to extend the wait time by configuring the number of wait times VISM allows before tearing down a connection.

**Examples** In the following example, LCN 142 is configured to wait for 7 refresh time frames before allowing a connection to be torn down:

```
nodename.1.27.VISM8.a > cnfrsvprefreshmiss 142 7
nodename.1.27.VISM8.a >
```

Related Commands	Command	Description
	<b>cnfrsvvp</b>	Configures RSVP for a specified connection.
	<b>dsprsvpif</b>	Displays the RSVP status of a specified connection.
	<b>dsprsvpreq</b>	Displays the data associated with a specified RSVP request.
	<b>dsprsvpreqs</b>	Displays all RSVP requests on the current VISM card.
	<b>dsprsvpresv</b>	Displays all data associated with an RSVP bandwidth reservation.
	<b>dsprsvpresvs</b>	Displays all incoming RSVP reservations on the current VISM card.
	<b>dsprsvpsender</b>	Displays all data associated with a specified RSVP path state.
	<b>dsprsvpsenders</b>	Displays all RSVP path states.

# cnfrtcprepint

To configure the Real Time Control Protocol (RTCP) report interval for a VISM card, use the **cnfrtcprepint** command.

```
cnfrtcprepint <report_interval> [<recv_multiplr>]
```

Syntax Description	
<i>report_interval</i>	Interval (defined in milliseconds) between consecutive RTCP report packets sent to peer VoIP endpoints. Range is 500–15000 ms in increments of 10 ms. Default is 5000.
<i>recv_multiplr</i>	(Optional) Interval multiplier for the <i>report_interval</i> argument. Use this argument if you need to configure the report-interval value higher than the maximum (15000 ms). Range is 1–10. Default is 3.  <b>Note</b> If <i>report_interval</i> = 1500 and <i>recv_multiplr</i> = 3, then $1000 * 3 = 4500$ . So the interval time between RTCP report packets sent to peer VoIP endpoints is configured as 4500 ms.

**Command Modes** VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the RTCP report packet interval is configured at 1000 ms:

```
nodename.1.27.VISM8.a > cnfrtcprepint 1000
```

```
nodename.1.27.VISM8.a >
```

Use the **dspvismparam** command to display the RTCP report interval you configured.

Related Commands	Command	Description
	<b>dspvismparam</b>	Displays current VISM card configuration.

# cnfrtpcon

To modify an existing static Real-Time Transport Protocol (RTP) VoIP trunking connection, use the **cnfrtpcon** command.

```
cnfrtpcon <rtp_conn_index> <voice_codec_type> <conn_mode> [<voice_packet_period>
  <bearer_prec> <bearer_tos> <VAD_OnOff> <VAD_Timer> <ecan> <CAS_transport>
  <DTMF_Transport> <ICS> <payload>]
```

## Syntax Description

<i>rtp_conn_index</i>	Number of the connection to be modified in the range 1–248.
<i>voice_codec_type</i>	Type of coding/decoding to be performed on the data stream. Values are <ul style="list-style-type: none"> <li>• 1 = G.711u</li> <li>• 2 = G.711a</li> <li>• 3 = G.726-32K</li> <li>• 4 = G.729a</li> <li>• 5 = G.729ab</li> <li>• 6 = Clear channel (VAD must be off)</li> <li>• 7 = G.726-16k</li> <li>• 8 = G.726-24k</li> <li>• 9 = G.726-40k</li> <li>• 11 = G.723.1-H</li> <li>• 12 = G.723.1a-H</li> <li>• 13 = G.723.1-L</li> <li>• 14 = G.723.1a-L</li> <li>• 15 = Lossless (VAD must be off)</li> </ul>
<i>conn_mode</i>	Connection mode. It can be one of the following values: <ul style="list-style-type: none"> <li>• 1 = VISM sends packets.</li> <li>• 2 = VISM receives packets.</li> <li>• 3 = VISM sends and receives packets (default).</li> <li>• 4 = Inactive. VISM does not send or receive packets.</li> </ul>



<code> voice_packet_period </code>	(Optional) Packetization period (defined in milliseconds). Values are <ul style="list-style-type: none"> <li>• 10 ms</li> <li>• 20 ms</li> <li>• 30 ms</li> <li>• 40 ms</li> <li>• 60 ms</li> </ul> <p>The following defaults apply to the specific codecs:</p> <ul style="list-style-type: none"> <li>• 10, 20 = G.711u, G.711a, Clear Channel, and Lossless</li> <li>• 30, 60 = G.723</li> <li>• 10, 20, 30, 40 = Codecs other than those listed above</li> </ul>
<code> bearer_prec </code>	(Optional) Bearer precedence in the range 0–7. Default is 5.
<code> bearer_tos </code>	(Optional) Bearer type of service (ToS). Values are <ul style="list-style-type: none"> <li>• 0 (default)</li> <li>• 1</li> <li>• 2</li> <li>• 4</li> <li>• 8</li> </ul>
<code> VAD_OnOff </code>	(Optional) Flag you can use to enable or disable voice activity detection (VAD). Values are <ul style="list-style-type: none"> <li>• 1 = On</li> <li>• 2 = Off (default)</li> </ul>
<code> VAD_Timer </code>	(Optional) VAD holdover timer (defined in milliseconds) in the range 250 ms–65535 ms.
<code> ecan </code>	(Optional) Flag you can use to enable or disable echo cancellation (ECAN). Values are <ul style="list-style-type: none"> <li>• 1 = Enable (default)</li> <li>• 2 = Disable</li> </ul>
<code> CAS_transport </code>	(Optional) Flag you can use to enable or disable CAS transportation. Values are <ul style="list-style-type: none"> <li>• 1 = On (default)</li> <li>• 2 = Off</li> </ul>
<code> DTMF_Transport </code>	(Optional) Flag you can use to enable or disable DTMF tone transportation. Values are <ul style="list-style-type: none"> <li>• 1 = On (default)</li> <li>• 2 = Off</li> </ul> <p><b>Note</b> The <code>DTMF_Transport</code> argument must be set to 1 (on) when the <code>voice_codec_type</code> is configured for codecs other than G.711 and G.726.</p>

<code>/ICSI</code>	(Optional) Flag you can use to enable or disable idle channel suppression for the CID. Values are <ul style="list-style-type: none"> <li>• 1 = Enable</li> <li>• 2 = Disable (default)</li> </ul>
<code>/payload</code>	(Optional) Payload type. Range is 0–255. Default is 256. <p><b>Note</b> If you do not use the <i>payload</i> argument to assign the payload type, the dynamic payload is set to the static value of the DSP codec type.</p>

**Command Modes**

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines**

The G.723.1 codecs are supported for VISM-PR cards and are not supported for VISM cards.

**Examples**

In the following example, the RTP trunking connection 26 is configured (modified) with G.726/32 codec type. VISM is also configured to send and receive packets and has a 20-ms packetization period, a bearer precedence of 3, a bearer ToS of 1, with VAD enabled, and a 400-ms VAD holdover timer. The ECAN, CAS transport, DTMF tone transport, idle channel suppression for CID, and the 255 payload type are also configured:

```
nodename.1.27.VISM8.a > cnfrtpcon 26 3 3 20 3 1 1 400 1 1 1 1 255
```

```
nodename.1.27.VISM8.a >
```

Use the **dsprtpcon** command to display the RTP VoIP trunking configurations you configured.

**Related Commands**

Command	Description
<b>addlapdtrunk</b>	Adds an LAPD trunk to a specific VISM card line.
<b>addrtpcon</b>	Adds a static RTP VoIP trunking connection.
<b>addrudptrunk</b>	Adds an ISDN PRI backhaul RUDP session for an LAPD trunk connection.
<b>clrtrtpcnt</b>	Clears the RTP counters (statistics) for a specific static RTP connection.
<b>cnfdynamicpayload</b>	Enables or disables the dynamic payload on the current VISM card.
<b>cnflapdtrunkpvc</b>	Assigns the PVC trunk type that carries LAPD messages for the current VISM card.
<b>cnflntrunkcond</b>	Enables or disables line conditioning on a VISM card line.
<b>cnfrudptrunkrmtip</b>	Modifies the remote VISM IP address used in the ISDN PRI backhaul RUDP trunk for a specified session.
<b>dellapdtrunk</b>	Deletes an LAPD configured line.
<b>delrtpcon</b>	Deletes a static RTP VoIP trunking connection.
<b>delrudptrunk</b>	Deletes an ISDN PRI backhaul RUDP session that is associated with an LAPD.
<b>dsdynamicpayload</b>	Displays the card level configuration of dynamic payload on the current VISM card.
<b>dsplapd</b>	Displays data about an LAPD.

Command	Description
<b>dsplapdtrunkpvc</b>	Displays the assigned PVC trunk type that carries LAPD trunk messages for the current VISM card.
<b>dsplapdtrunks</b>	Displays the configuration data of all LAPD trunks.
<b>dsprtptent</b>	Displays the bearer counters (statistics) for a specific RTP VoIP trunking connection.
<b>dsprtptcon</b>	Displays the configuration data of a specific static RTP VoIP trunking connection.
<b>dsprtptconnstat</b>	Displays the RTP connection statistics for a specified endpoint.
<b>dsprtptcons</b>	Displays the configuration data of all static RTP VoIP trunking connections.
<b>dsprudp trunk</b>	Displays the configuration data of a specified ISDN PRI backhaul RUDP session.
<b>dsprudp trunks</b>	Displays the configuration data of all ISDN PRI backhaul RUDP sessions.

# cnfrtprxtimer

To enable or disable the receipt of Real-Time Transport Protocol (RTP) messages on a VISM card, use the **cnfrtprxtimer** command.

**cnfrtprxtimer** <*rx\_timer*>

---

## Syntax Description

<i>rx_timer</i>	Value you can use to enable or disable the receipt of RTP messages.
	<ul style="list-style-type: none"> <li>• 1 = Disable</li> <li>• 2 = Enable</li> </ul>

---



---

## Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

---

## Usage Guidelines

If you enable the receipt of RTP messages (*rx\_timer* = 2) and no RTP messages are received on a particular connection for 5 seconds, the gateway initiates a connection deletion. You cannot modify the 5-second time limit.

---

## Examples

In the following example, the receipt of RTP messages is enabled for the current VISM card:

```
nodename.1.27.VISM8.a > cnfrtprxtimer 2
```

```
nodename.1.27.VISM8.a >
```

Use the **dspvismparam** command to display the status of the RTP receive timer.

---

## Related Commands

Command	Description
<b>dspvismparam</b>	Displays current VISM card configuration.

---

# cnfrudptrunkrmtip

To modify the remote IP address of a VISM card used in the ISDN PRI backhaul Reliable User Datagram Protocol (RUDP) trunk for a specified session, use the **cnfrudptrunkrmtip** command.

```
cnfrudptrunkrmtip <session_number> <Remote_Gw_IP>
```

## Syntax Description

<i>session_number</i>	ISDN PRI backhaul RUDP session. Range is 1–64.
<i>Remote_Gw_IP</i>	IP address of the remote VISM card in dotted decimal format (nnn.nnn.nnn.nnn).

## Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the remote IP address, 209.165.200.224, of the VISM card used in RUDP is modified to session number 22:

```
nodename.1.27.VISM8.a > cnfrudptrunkrmtip 22 209.165.200.224
Session will be torn down and set up again, do you want to proceed (Yes/No)? y
nodename.1.27.VISM8.a >
```

Use the **dsprudptrunks** command to display the remote IP address you entered.

## Related Commands

Command	Description
<b>addlapdtrunk</b>	Adds an LAPD trunk to a specific VISM card line.
<b>addrtpton</b>	Adds a static RTP VoIP trunking connection.
<b>addrudptrunk</b>	Adds an ISDN PRI backhaul RUDP session for an LAPD trunk connection.
<b>clrrtpent</b>	Clears the RTP counters (statistics) for a specific static RTP connection.
<b>cnflntrunkcond</b>	Enables or disables line conditioning on a VISM card line.
<b>cnfrtpton</b>	Modifies an existing static RTP VoIP trunking connection.
<b>dellapdtrunk</b>	Deletes an LAPD configured line.
<b>delrtpton</b>	Deletes a static RTP VoIP trunking connection.
<b>delrudptrunk</b>	Deletes an ISDN PRI backhaul RUDP session that is associated with an LAPD.
<b>dsplapd</b>	Displays data about an LAPD.
<b>dsplapdtrunkpvc</b>	Displays the assigned PVC trunk type that carries LAPD trunk messages for the current VISM card.
<b>dsplapdtrunks</b>	Displays the configuration data of all LAPD trunks.
<b>dsprtpton</b>	Displays the bearer counters (statistics) for a specific RTP VoIP trunking connection.

<b>Command</b>	<b>Description</b>
<b>dsprtcon</b>	Displays the configuration data of a specific static RTP VoIP trunking connection.
<b>dsprtcons</b>	Displays the configuration data of all static RTP VoIP trunking connections.
<b>dsprudprunk</b>	Displays the configuration data of a specified ISDN PRI backhaul RUDP session.
<b>dsprudprunks</b>	Displays the configuration data of all ISDN PRI backhaul RUDP sessions.

# cnfseqtonedet

To change the default settings of a sequential tone, enter the **cnfseqtonedet** command.

```
cnfseqtonedet <numfreq> <eventid> <tonedur> <tonegap> <durdev> <maxgap> <gapdev>
<freqdev> |<maxpwr> <minpwr>| <freq1>, |<freq2>, <freq3>... <freq10>|
```

## Syntax Description

<i>numfreq</i>	Number of the frequency. Range is 1–10.
<i>eventid</i>	Event ID. Range is 0–255.
<i>tonedur</i>	Duration of the tone. Range is 1–65534 ms in units of 10 ms.
<i>tonegap</i>	Amount of time between the different frequencies of the sequential tone. Range is 1–65534 ms in units of 10 ms.
<i>durdev</i>	Deviation in the durations of the sequential tone frequencies. Range is 1–4095 ms in units of 10 ms.
<i>maxgap</i>	Maximum time between the different frequencies of the sequential tone. Range is 1–4095 ms in units of 10 ms.
<i>gapdev</i>	Deviation in the interfrequency time duration. Range is 1–4095 ms in units of 10 ms.
<i>freqdev</i>	Deviation in the duration of the sequential tone frequencies. Range is 1–1000 Hz.
<i>maxpwr</i>	(Optional) Maximum power level of the sequential tone. Range is absolute values of 0 to –40 dB.
<i>minpwr</i>	(Optional) Minimum power level of the sequential tone. Range is 0 to –40 dB.
<i>freq1</i>	(Optional: <i>freq2</i> , <i>freq3</i> ... <i>freq10</i> ) Different frequencies that make up the sequential tone. Range is 280–3800 Hz.  For example, the special information tone is made up of three frequencies. The first three frequencies ( <i>freq1</i> – <i>freq3</i> ) have valid values. The other frequencies ( <i>freq4</i> – <i>freq10</i> ) have default values of 280 Hz.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.



### Note

This command is applicable only to the VISM-PR card.

---

**Examples**

In the following example, a sequential tone is configured with values different from the defaults.:

```
nodename.1.27.VISM8.a > cnfseqtonedet 3 74 330 10 20 150 200 40 3 40 950 1400 1800 280 280  
280 280 280 280 280
```

```
nodename.1.27.VISM8.a >
```

Use the **dspseqtonedet** command to display the sequential tone values you entered.

---

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>dspseqtonedet</b>	Displays values of a sequential tone.

---



# cnfsesack

To configure the timeout period before the VISM sends an acknowledgment, and the maximum number of acknowledgments that can be accumulated, use the **cnfsesack** command.

```
cnfsesack <session_num> <acknowledgment_timeout> <acknowledgment>
```

## Syntax Description

<i>session_num</i>	Session number in the range 1–64.
<i>acknowledgment_timeout</i>	Timeout period (defined in milliseconds) for sending an acknowledgment. Range is 100–65535 ms. Default is 300 ms.
<i>acknowledgment</i>	Maximum number of acknowledgments that can be accumulated before an acknowledgment is sent. Range is 0–255. Default is 3.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

## Usage Guidelines

Use this command for a previously added PRI backhaul session.

## Examples

In the following example, session 2 is configured with an acknowledgment period of 500 ms and a maximum number of accumulated acknowledgments of 10:

```
nodename.1.27.VISM8.a > cnfsesack 2 500 10
Session will be torn down and set up again, do you want to proceed (Yes/No)? y

nodename.1.27.VISM8.a >
```

Use the **dspes** command to display the acknowledgment timeout period.

## Related Commands

Command	Description
<b>cnfsesmaxreset</b>	Configures the maximum number of resets that a VISM card performs before a connection is reset.
<b>cnfsesmaxseg</b>	Configures the maximum segment size, in octets, that can be received by a VISM card after a synchronize message is sent.
<b>cnfsesmaxwindow</b>	Configures the maximum number of segments (window) that can be sent before an acknowledgment is received.
<b>cnfsesnullsegmtout</b>	Configures the idle time before a null segment is sent.

<b>Command</b>	<b>Description</b>
<b>cnfsesoutofseq</b>	Configures the maximum number of out-of-sequence packets that can be accumulated before an EACK packet is sent.
<b>cnfsesport</b>	Configures the port numbers of a previously added PRI backhaul session.
<b>cnfsesretrans</b>	Configures the timeout period for unacknowledged packets and the number of retransmissions.
<b>cnfsesstatetmout</b>	Configures the number of milliseconds that VISM waits for a transfer state before executing an auto reset.
<b>cnfsessyncatmps</b>	Configures the maximum number of call agent synchronization attempts.
<b>dspses</b>	Displays the configuration data of a PRI backhaul session.

# cnfsesmaxreset

To configure the maximum number of resets that a VISM card performs before a connection is reset, use the **cnfsesmaxreset** command.

```
cnfsesmaxreset <session_number> <resets>
```

## Syntax Description

<i>session_number</i>	Session number in the range 1–64.
<i>resets</i>	Maximum number of resets that the VISM card performs before a connection is reset. Range is 0–255. Default is 5.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

## Usage Guidelines

Use this command for a previously added PRI backhaul session.

## Examples

In the following example, 25 is set as the maximum number of resets configured for session number 2:

```
nodename.1.27.VISM8.a > cnfsesmaxreset 2 25
Session will be torn down and set up again, do you want to proceed (Yes/No)? y
```

Use the **dspses** command to display the maximum number of resets that you configured.

## Related Commands

Command	Description
<b>cnfsesack</b>	Configures the timeout period before an acknowledgment is sent and the maximum number of acknowledgments that can be accumulated.
<b>cnfsesmaxseg</b>	Configures the maximum segment size, in octets, that can be received by a VISM card after a synchronize message is sent.
<b>cnfsesmaxwindow</b>	Configures the maximum number of segments (window) that can be sent before an acknowledgment is received.
<b>cnfsesnullsegtmout</b>	Configures the idle time before a null segment is sent.
<b>cnfsesoutofseq</b>	Configures the maximum number of out-of-sequence packets that can be accumulated before an EACK packet is sent.
<b>cnfsesport</b>	Configures the port numbers of a previously added PRI backhaul session.
<b>cnfsesretrans</b>	Configures the timeout period for unacknowledged packets and the number of retransmissions.
<b>cnfsesstatetmout</b>	Configures the number of milliseconds that VISM waits for a transfer state before executing an auto reset.
<b>cnfsessyncatmps</b>	Configures the maximum number of call agent synchronization attempts.
<b>dspses</b>	Displays the configuration data of a PRI backhaul session.

# cnfsesmaxseg

To configure the maximum segment size, in octets, that can be received by a VISM card after a synchronize message is sent, use the **cnfsesmaxseg** command.

```
cnfsesmaxseg <session_number> <segment_size>
```

## Syntax Description

<i>session_number</i>	Session number in the range 1–64.
<i>segment_size</i>	Maximum segment size, in octets, that can be received by a VISM card after a synchronize message is sent. Range is 30–65535. Default is 384.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

## Usage Guidelines

Use this command for a previously added PRI backhaul session.

## Examples

In the following example, a maximum 1000-octet segment size is configured for session number 2:

```
nodename.1.27.VISM8.a > cnfsesmaxseg 2 1000
```

```
nodename.1.27.VISM8.a >
```

Use the **dspes** command to display the maximum segment size that you configured.

## Related Commands

Command	Description
<b>cnfsesack</b>	Configures the timeout period before an acknowledgment is sent and the maximum number of acknowledgments that can be accumulated.
<b>cnfsesmaxreset</b>	Configures the maximum number of resets that a VISM card performs before a connection is reset.
<b>cnfsesmaxwindow</b>	Configures the maximum number of segments (window) that can be sent before receiving an acknowledgment.
<b>cnfsesnullsegtmout</b>	Configures the idle time before sending a null segment.
<b>cnfsesoutofseq</b>	Configures the maximum number of out-of-sequence packets that can be accumulated before sending an EACK packet.
<b>cnfsesport</b>	Configures the port numbers of a previously added PRI backhaul session.
<b>cnfsesretrans</b>	Configures the timeout period for unacknowledged packets and the number of retransmissions.
<b>cnfsesstatetmout</b>	Configures the number of milliseconds that VISM waits for a transfer state before executing an auto reset.
<b>cnfsessyncatmps</b>	Configures the maximum number of call agent synchronization attempts.
<b>dspes</b>	Displays the configuration data of a PRI backhaul session.

# cnfsesmaxwindow

To configure the maximum number of segments (the window) that can be sent before an acknowledgment is received, use the **cnfsesmaxwindow** command.

```
cnfsesmaxwindow <session_number> <window_size>
```

## Syntax Description

<i>session_number</i>	Session number in the range 1–64.
<i>window_size</i>	Maximum number of segments that can be sent before an acknowledgment is received. Range is 1–64. Default is 32.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

## Usage Guidelines

Use this command for a previously added PRI backhaul session.

## Examples

In the following example, a maximum number of 32 segments can be sent for session number 2 before an acknowledgment is received:

```
nodename.1.27.VISM8.a > cnfsesmaxwindow 2 32
```

```
nodename.1.27.VISM8.a >
```

Use the **dspes** command to display the maximum segment size that you configured.

## Related Commands

Command	Description
<b>cnfsesack</b>	Configures the timeout period before an acknowledgment is sent and the maximum number of acknowledgments that can be accumulated.
<b>cnfsesmaxreset</b>	Configures the maximum number of resets that a VISM card performs before a connection is reset.
<b>cnfsesmaxseg</b>	Configures the maximum segment size, in octets, that can be received by a VISM card after a synchronize message is sent.
<b>cnfsesnullsegmtout</b>	Configures the idle time before a null segment is sent.
<b>cnfsesoutofseq</b>	Configures the maximum number of out-of-sequence packets that can be accumulated before an EACK packet is sent.
<b>cnfsesport</b>	Configures the port numbers of a previously added PRI backhaul session.
<b>cnfsesretrans</b>	Configures the timeout period for unacknowledged packets and the number of retransmissions.
<b>cnfsesstatetmout</b>	Configures the number of milliseconds that VISM waits for a transfer state before executing an auto reset.
<b>cnfsessyncatmps</b>	Configures the maximum number of call agent synchronization attempts.
<b>dspes</b>	Displays the configuration data of a PRI backhaul session.

# cnfsesnullsegtmout

To configure the period, in milliseconds, of idle time allowed before a null segment is sent, use the **cnfsesnullsegtmout** command.

```
cnfsesnullsegtmout <session_number> <timeout>
```

## Syntax Description

<i>session_number</i>	Session number in the range 1–64.
<i>timeout</i>	Period (defined in milliseconds) of idle time allowed before a null segment is sent. Range is 0–65535 ms. Default is 2000 ms.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

## Usage Guidelines

Use this command for a previously added PRI backhaul session.

## Examples

In the following example, the idle timeout period is configured at 1000 ms for session number 2:

```
nodename.1.27.VISM8.a > cnfsesnullsegtmout 2 1000
Session will be torn down and set up again, do you want to proceed (Yes/No)? y
```

Use the **dspes** command to display the idle timeout period that you configured.

## Related Commands

Command	Description
<b>cnfsesack</b>	Configures the timeout period before an acknowledgment is sent and the maximum number of acknowledgments that can be accumulated.
<b>cnfsesmaxreset</b>	Configures the maximum number of resets that a VISM card performs before a connection is reset.
<b>cnfsesmaxseg</b>	Configures the maximum segment size, in octets, that can be received by a VISM card after a synchronize message is sent.
<b>cnfsesoutofseq</b>	Configures the maximum number of out-of-sequence packets that can be accumulated before an EACK packet is sent.
<b>cnfsesport</b>	Configures the port numbers of a previously added PRI backhaul session.
<b>cnfsesretrans</b>	Configures the timeout period for unacknowledged packets and the number of retransmissions.
<b>cnfsesstatetmout</b>	Configures the number of milliseconds that VISM waits for a transfer state before executing an auto reset.
<b>cnfsessyncatmps</b>	Configures the maximum number of call agent synchronization attempts.
<b>dspes</b>	Displays the configuration data of a PRI backhaul session.

# cnfsesoutofseq

To configure the maximum number of out-of-sequence packets that can be accumulated before an EACK packet is sent, use the **cnfsesoutofseq** command.

```
cnfsesoutofseq <session_number> <packets>
```

## Syntax Description

<i>session_number</i>	Session number in the range 1–64.
<i>packets</i>	Maximum number of out-of-sequence packets that can be accumulated before an EACK packet is transmitted. Range is 0–255. Default is 4. <b>Note</b> If you specify 0, an EACK message is sent immediately upon receiving an out-of-sequence packet.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

## Usage Guidelines

Use this command for a previously added PRI backhaul session.

## Examples

In the following example, a maximum of 10 out-of-sequence packets can be accumulated before an EACK packet is transmitted for session number 2:

```
nodename.1.27.VISM8.a > cnfsesoutofseq 2 10
Session will be torn down and set up again, do you want to proceed (Yes/No)? y
```

Use the **dspses** command to display the out-of-sequence packets that you configured.

## Related Commands

Command	Description
<b>cnfsesack</b>	Configures the timeout period before an acknowledgment is sent and the maximum number of acknowledgments that can be accumulated.
<b>cnfsesmaxreset</b>	Configures the maximum number of resets that a VISM card performs before a connection is reset.
<b>cnfsesmaxseg</b>	Configures the maximum segment size, in octets, that can be received by a VISM card after a synchronize message is sent.
<b>cnfsesnullsegtmout</b>	Configures the idle time before a null segment is sent.
<b>cnfsesport</b>	Configures the port numbers of a previously added PRI backhaul session.
<b>cnfsesretrans</b>	Configures the timeout period for unacknowledged packets and the number of retransmissions.
<b>cnfsesstatetmout</b>	Configures the number of milliseconds that VISM waits for a transfer state before executing an auto reset.
<b>cnfsessyncatmps</b>	Configures the maximum number of call agent synchronization attempts.
<b>dspses</b>	Displays the configuration data of a PRI backhaul session.

# cnfsesport

To configure the port numbers of a previously added PRI backhaul session, use the **cnfsesport** command.

```
cnfsesport <session_number> <local_port> <remote_port>
```

## Syntax Description

<i>session_number</i>	Session number in the range 1–64.
<i>local_port</i>	Local port number. This value is the VISM port number used for the session. Range is 1124–49151.
<i>remote_port</i>	Remote port number. This value is the call agent port number used for the session. Range is 1124–65535.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, session number 4 is configured with local (VISM) port number 1200 and remote (call agent) port number 1204:

```
nodename.1.27.VISM8.a > cnfsesport 4 1200 1204
Session will be torn down and set up again, do you want to proceed (Yes/No)? y

nodename.1.27.VISM8.a >
```

Use the **dspses** command to display the local and remote port numbers that you configured.

## Related Commands

Command	Description
<b>cnfsesack</b>	Configures the timeout period before an acknowledgment is sent and the maximum number of acknowledgments that can be accumulated.
<b>cnfsesmaxreset</b>	Configures the maximum number of resets that a VISM card performs before a connection is reset.
<b>cnfsesmaxseg</b>	Configures the maximum segment size, in octets, that can be received by a VISM card after a synchronize message is sent.
<b>cnfsesnullsegmtout</b>	Configures the idle time before a null segment is sent.
<b>cnfsesoutofseq</b>	Configures the maximum number of out-of-sequence packets that can be accumulated before an EACK packet is sent.
<b>cnfsesretrans</b>	Configures the timeout period for unacknowledged packets and the number of retransmissions.
<b>cnfsesstatetmout</b>	Configures the number of milliseconds that VISM waits for a transfer state before executing an auto reset.
<b>cnfsessyncatmps</b>	Configures the maximum number of call agent synchronization attempts.
<b>dspses</b>	Displays the configuration data of a PRI backhaul session.



# cnfsesretrans

To configure the timeout period for unacknowledged packets and number of retransmissions, use the **cnfsesretrans** command.

```
cnfsesretrans <session_number> <retransmit_timeout> <max_retransmits>
```

## Syntax Description

<i>session_number</i>	Session number in the range 1–64.
<i>retransmit_timeout</i>	Timeout period (defined in milliseconds) for sending an acknowledgment. Range is 100–65535 ms. Default is 600 ms.
<i>max_retransmits</i>	Maximum number of retransmissions. Range is 0–255. Default is 3.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

## Usage Guidelines

Use this command for a previously added PRI backhaul session.

When the maximum number of retransmissions have been made and there is still no acknowledgment, the session is considered failed.

## Examples

In the following example, session number 2 is configured with a timeout period for unacknowledged packets of 1000 ms and a maximum number of retransmission attempts of 20:

```
nodename.1.27.VISM8.a > cnfsesretrans 2 1000 20  
Session will be torn down and set up again, do you want to proceed (Yes/No)? y
```

Use the **dspes** command to display the retransmit configurations that you configured.

## Related Commands

Command	Description
<b>cnfsesack</b>	Configures the timeout period before an acknowledgment is sent and the maximum number of acknowledgments that can be accumulated.
<b>cnfsesmaxreset</b>	Configures the maximum number of resets that a VISM card performs before a connection is reset.
<b>cnfsesmaxseg</b>	Configures the maximum segment size, in octets, that can be received by a VISM card after a synchronize message is sent.
<b>cnfsesnullsegmtout</b>	Configures the idle time before a null segment is sent.
<b>cnfsesoutofseq</b>	Configures the maximum number of out-of-sequence packets that can be accumulated before an EACK packet is sent.
<b>cnfsesport</b>	Configures the port numbers of a previously added PRI backhaul session.
<b>cnfsesstatetmout</b>	Configures the number of milliseconds that VISM waits for a transfer state before executing an auto reset.
<b>cnfsessyncatmps</b>	Configures the maximum number of call agent synchronization attempts.
<b>dspes</b>	Displays the configuration data of a PRI backhaul session.

# cnfsesstatetmout

To configure the number of milliseconds that VISM waits for a transfer state to begin before executing an auto reset, use the **cnfsesstatetmout** command.

```
cnfsesstatetmout <session_number> <timeout>
```

## Syntax Description

<i>session_number</i>	Session number in the range 1–64.
<i>timeout</i>	Transfer state timeout. The maximum number of milliseconds that VISM waits for a transfer state before executing an auto reset. Range is 0–65535. Default is 2000.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

## Usage Guidelines

Use this command for a previously added PRI backhaul session.

## Examples

In the following example, session number 2 is configured with a 500-ms transfer state timeout:

```
nodename.1.27.VISM8.a > cnfsesstatetmout 2 500  
Session will be torn down and set up again, do you want to proceed (Yes/No)? y
```

Use the **dspses** command to display the transfer state timeout configurations that you configured.

## Related Commands

Command	Description
<b>cnfsesack</b>	Configures the timeout period before an acknowledgment is sent and the maximum number of acknowledgments that can be accumulated.
<b>cnfsesmaxreset</b>	Configures the maximum number of resets that a VISM card performs before a connection is reset.
<b>cnfsesmaxseg</b>	Configures the maximum segment size, in octets, that can be received by a VISM card after a synchronize message is sent.
<b>cnfsesoutofseq</b>	Configures the maximum number of out-of-sequence packets that can be accumulated before an EACK packet is sent.
<b>cnfsesport</b>	Configures the port numbers of a previously added PRI backhaul session.
<b>cnfsesretrans</b>	Configures the timeout period for unacknowledged packets and the number of retransmissions.
<b>cnfsessyncatmps</b>	Configures the maximum number of call agent synchronization attempts.
<b>dspses</b>	Displays the configuration data of a PRI backhaul session.

# cnfsessyncatmps

To configure the maximum number of attempts the VISM card makes to synchronize with the call agent, use the **cnfsessyncatmps** command.

```
cnfsessyncatmps <session_number> <sync_attempts>
```

## Syntax Description

<i>session_number</i>	Session number in the range 1–64.
<i>sync_attempts</i>	Maximum number of attempts that the VISM card makes to synchronize VISM with the call agent. Range is 1–32. Default is 5.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

## Usage Guidelines

Use this command for a previously added PRI backhaul session.

## Examples

In the following example, session number 2 is configured with a maximum of 5 synchronization attempts with the call agent:

```
nodename.1.27.VISM8.a > cnfsessyncatmps 2 5
```

```
nodename.1.27.VISM8.a >
```

Use the **dspses** command to display the maximum number of synchronization attempts that you are allowing.

## Related Commands

Command	Description
<b>cnfsesack</b>	Configures the timeout period before an acknowledgment is sent and the maximum number of acknowledgments that can be accumulated.
<b>cnfsesmaxreset</b>	Configures the maximum number of resets that a VISM card performs before a connection is reset.
<b>cnfsesmaxseg</b>	Configures the maximum segment size, in octets, that can be received by a VISM card after a synchronize message is sent.
<b>cnfsesoutofseq</b>	Configures the maximum number of out-of-sequence packets that can be accumulated before an EACK packet is sent.
<b>cnfsesport</b>	Configures the port numbers of a previously added PRI backhaul session.
<b>cnfsesretrans</b>	Configures the timeout period for unacknowledged packets and the number of retransmissions.
<b>cnfsesstatetmout</b>	Configures the number of milliseconds that VISM waits for a transfer state before executing an auto reset.
<b>dspses</b>	Displays the configuration data of a PRI backhaul session.

# cnfsidpacket

To enable or disable the generation of the silence insertion descriptor (SID) packet when silence suppression is in active mode on all of the lines, use the **cnfsidpacket** command.

**cnfsidpacket** <*sidpacket*>

## Syntax Description

<i>sidpacket</i>	Value you can use to enable or disable the SID packet.
	<ul style="list-style-type: none"> <li>1 = Enable (default)</li> <li>2 = Disable</li> </ul>

## Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, generation of the SID packet is enabled.

```
nodename.1.27.VISM8.a > cnfsidpacket 1
```

```
nodename.1.27.VISM8.a >
```

Use the **dspsidpacket** command to find out if SID is enabled on a line.

## Related Commands

Command	Description
<b>dspsidpacket</b>	Shows whether or not SID is enabled for each line.

# cnfsplmodemtonedsbl

To disable the detection of 1580/980 tones, use the **cnfsplmodemtonedsbl** command.

```
cnfsplmodemtonedsbl <tone_id>
```

<b>Syntax Description</b>	<i>tone_id</i>	Value you can use is 1 for 1560/980 Hz tone.
---------------------------	----------------	--

**Command Modes** VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the 1560/980 Hz modem tone detection is disabled.

```
sol-mgx2.1.19.VISM8.a > cnfsplmodemtonedsbl 1
```

```
sol-mgx2.1.19.VISM8.a >
```

Use the **dspsplmodemtone** command to confirm that the 1560/980 tone cannot be detected.

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>cnfsplmodemtoneenbl</b>	Enables the detection of 1560/980 Hz tones.
	<b>dspsplmodemtone</b>	Shows whether or not the 1560/980 Hz tone can be detected.

# cnfsplmodemtoneenbl

To enable the detection of 1580/980 tones, use the **cnfsplmodemtoneenbl** command.

```
cnfsplmodemtoneenbl <tone_id>
```

## Syntax Description

<i>tone_id</i>	Value you can use is 1 for 1560/980 Hz tone.
----------------	--

## Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the 1560/980 Hz modem tone detection is enabled.

```
s01-mgx2.1.19.VISM8.a > cnfsplmodemtoneenbl 1
```

```
s01-mgx2.1.19.VISM8.a >
```

Use the **dspsplmodemtone** command to confirm that the 1560/980 Hz tone can be detected.

## Related Commands

Command	Description
<b>cnfsplmodemtonedsbl</b>	Disables the detection of 1560/980 Hz tones.
<b>dspsplmodemtone</b>	Shows whether or not the 1560/980 Hz tone can be detected.

# cnfsrcppeer

To configure the port for the call agent configured with the Simple Resource Control Protocol (SRCP) when SRCP is the selected protocol for communication between the VISM card and the call agent, use the **cnfsrcppeer** command.

```
cnfsrcppeer <peerId> <port>
```

## Syntax Description

<i>peerId</i>	Peer (call agent) identification number. Range is 1–8.
<i>port</i>	User Datagram Protocol (UDP) port number. Range is 1025–65535.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

If you do not use this command, the default MGCP/SGCP port number, 2428, is used for the *port* argument value.

## Examples

In the following example, peer identification number 2 is configured with UDP port number 1160:

```
nodename.1.27.VISM8.a > cnfsrcppeer 2 1160
nodename.1.27.VISM8.a >
```

## Related Commands

Command	Description
<b>addmgcgrpentry</b>	Configures call agents as part of an MGC redundancy group and assigns a priority value for a call agent.
<b>addmgcgrpprotocol</b>	Associates a call agent redundancy group with a gateway control protocol.
<b>cnfmgcgrpentry</b>	Modifies the priority level of a call agent within a call agent redundancy group.
<b>cnfmgcgrpparam</b>	Modifies the notification policy of a state change and the priority level of a call agent redundancy group.
<b>cnfsrcppeergrpparam</b>	Modifies the SRCP heartbeat interval and maximum UDP size for a specified call agent redundancy group.
<b>delmgcgrpentry</b>	Deletes a call agent from a call agent redundancy group.
<b>delmgcgrpprotocol</b>	Deletes an MGCP from a specified call agent redundancy group.
<b>dspmgcgrpparams</b>	Displays all configured call agent redundancy group parameters.
<b>dspmgcgrpprotocols</b>	Displays all configured call agent redundancy group protocols.
<b>dspmgcgrps</b>	Displays all configured call agent redundancy groups.
<b>dspsrcppeergrpparams</b>	Displays the SRCP parameters for all call agent redundancy groups that have SRCP added.

# cnfsrcppeergrpparam

To modify the Simple Resource Control Protocol (SRCP) heartbeat interval and maximum User Datagram Protocol (UDP) size for a specified call agent redundancy group, use the **cnfsrcppeergrpparam** command.

```
cnfsrcppeergrpparam <Red_Group_Num> <Heart_beat_interval> <max_pdu>
```

Syntax Description	Parameter	Description
	<i>Red_Group_Num</i>	Number of the call agent redundancy group whose heart beat interval and maximum UDP size you want to modify. Range is 1–8.
	<i>Heart_beat_interval</i>	Interval between heartbeats (defined in milliseconds). Values are <ul style="list-style-type: none"> <li>• 0</li> <li>• Range 100–65535</li> </ul>
	<i>max_pdu</i>	Maximum allowable UDP size (measured in bytes). Range is 4095–65535 bytes.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, call agent redundancy group number 3 is configured with a 250-ms SRCP heartbeat interval and a 50000-byte maximum UDP size:

```
nodename.1.27.VISM8.a > cnfsrcppeergrpparam 3 250 50000
```

```
nodename.1.27.VISM8.a >
```

Related Commands	Command	Description
	<b>addmgcgrpentry</b>	Configures call agents as part of an MGC redundancy group and assigns a priority value for a call agent.
	<b>addmgcgrpprotocol</b>	Associates a call agent redundancy group with a gateway control protocol.
	<b>cnfmgcgrpentry</b>	Modifies the priority level of a call agent within a call agent redundancy group.
	<b>cnfmgcgrpparam</b>	Modifies the notification policy of a state change and the priority level of a call agent redundancy group.
	<b>cnfsrcpeer</b>	Configures the SRCP parameters when SRCP is the selected protocol for communication between the VISM card and call agent.



<b>Command</b>	<b>Description</b>
<b>delmgcgrpentry</b>	Deletes a call agent from a call agent redundancy group.
<b>delmgcgrpprotocol</b>	Deletes an MGCP from a specified call agent redundancy group.
<b>dspmgcgrpparams</b>	Displays all configured call agent redundancy group parameters.
<b>dspmgcgrpprotocols</b>	Displays all configured call agent redundancy group protocols.
<b>dspmgcgrps</b>	Displays all configured call agent redundancy groups.
<b>dspsrcppeergrpparams</b>	Displays the SRCP parameters for all call agent redundancy groups that have SRCP added.

# cnfsrcpretry

To configure the VISM card level Simple Resource Control Protocol (SRCP) retry count, minimum timeout, and maximum timeout, use the **cnfsrcpretry** command.

```
cnfsrcpretry <minTimeout> <retryCount> <maxTimeout>
```

Syntax Description		
	<i>minTimeout</i>	Minimum SRCP timeout (defined in milliseconds). Range is 1–10000. Default is 500.
	<i>retryCount</i>	Maximum number of SRCP retries. Range is 0–10. Default is 3.
	<i>maxTimeout</i>	Maximum SRCP timeout (defined in milliseconds). Range is 1– 10000. Default is 500.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** If you assign a value to the *maxTimeout* argument, VISM increases the timeout value between the minimum and maximum timeouts. If you do not assign a maximum timeout, the *maxTimeout* argument value is set equal to the *minTimeout* argument value, which disables the exponential back-off.

**Examples** In the following example, the VISM card is configured with a 100-ms minimum SRCP timeout period, a maximum of 5 SRCP retry attempts, and a 1000-ms maximum SRCP timeout period:

```
nodename.1.27.VISM8.a > cnfsrcpretry 100 5 1000
```

```
nodename.1.27.VISM8.a >
```

Related Commands	Command	Description
	<b>dspsrcpretry</b>	Displays the VISM card level SRCP retry parameters—retry count, minimum timeout, and maximum timeout.

# cnfssrcenable

To configure more than one synchronization source (SSRC) per RTP session, use the **cnfssrcenable** command.

**cnfssrcenable** <ssrc\_check>

## Syntax Description

<i>ssrc_check</i>	Value you can use to allow more than one SSRC per RTP session.
	<ul style="list-style-type: none"> <li>• 1 = Enable</li> <li>• 2 = Disable</li> </ul>

## Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

For video conferencing, we recommend that you have one SSRC per RTP session. For other applications such as music-on-hold, you can have a new SSRC.

## Examples

In the following example, more than one SSRC per RTP session is allowed:

```
nodename.1.28.VISM8.a > cnfssrcenable 1
```

```
nodename.1.28.VISM8.a >
```

To display whether VISM/VISM-PR is configured to allow more than one SSRC per RTP session, use the **dspssrcenable** command.

## Related Commands

Command	Description
<b>dspssrcenable</b>	Displays whether more than one SSRC stream is allowed.

## cnfsvcaal2cid

To configure the AAL2 channel ID (CID) value used in a single AAL2 switched virtual circuit (SVC), use the **cnfsvcaal2cid** command.

```
cnfsvcaal2cid <cid_number>
```

---

### Syntax Description

<i>cid_number</i>	Channel ID number. Range is 8–255. Default value is 100.
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### Command Modes

Switched AAL2 SVC

---

### Usage Guidelines

Follow standard CLI procedures for this command.

---

### Examples

In the following example, the single AAL2 SVC CID is configured for the recommended value of 100:

```
nodename.1.27.VISM8.a > cnfsvcaal2cid 100
```

```
nodename.1.27.VISM8.a >
```

---

### Related Commands

Command	Description
<b>dpsvcaal2cid</b>	Displays the current configured AAL2 SVC CID number.

---

# cnfsvcqosparam

To configure ATM quality of service (QoS) parameters, use the **cnfsvcqosparam** command.

```
cnfsvcqosparam <cdv> <ctd> <clr>
```

Syntax Description	cdv	End-to-end cell delay variation (CDV) used in voice SVC establishment. Default and upper limit is 20000 microseconds. Range is 500–20000.
	ctd	End-to-end maximum cell transfer delay (CTD) used in voice SVC establishment. Default and upper limit is 150000 microseconds. Range is 20000–150000.
	clr	Maximum cell loss ratio (CLR) used in voice SVC establishment. Default and upper limit are each 8. For example, CLR value of 8 = $10^{-8}$ . Range is 4–8.

**Command Modes** AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures when using this command.

**Examples** In the following example, the default QoS parameters are set: CDV is 20000 microseconds; CTD is 150000 microseconds; CLR is 8.

```
nodename.1.27.VISM8.a > cnfsvcqosparam 20000 150000 8
nodename.1.27.VISM8.a >
```

Related Commands	Command	Description
	<b>dspsvcqosparam</b>	Shows the ATM QoS parameters.

# cnfsvctrfscalingfactor

To configure the traffic scaling factor for voice service, use the **cnfsvctrfscalingfactor** command.

**cnfsvctrfscalingfactor** <traffic-scaling-factor>

Syntax Description	traffic-scaling-factor	Factor used in computing bandwidth for the establishment of voice ATM service. Range is 50–200.
--------------------	------------------------	---

**Command Modes** Switched AAL2 SVC

**Usage Guidelines** Follow standard CLI procedures when using this command.

**Examples** In the following example, the bandwidth factor is set to 50:

```
nodename.1.27.VISM8.a > cnfsvctrfscalingfactor 50
```

```
nodename.1.27.VISM8.a >
```

Related Commands	Command	Description
	<b>dpsvctrfscalingfactor</b>	Shows the SVC traffic scaling factor.

# cnft38fxlco

To set the fax handling instructions for a specified line, use the **cnft38fxlco** command.

```
cnft38fxlco <line_number> <Fx_LCO>
```

Syntax Description	<i>line_number</i>	Line number in the range 1–8.
	<i>Fx_LCO</i>	Local connection option (LCO) fax preamble response. Values are <ul style="list-style-type: none"> <li>• 1 = VISM-controlled T.38 then fax pass through. Upon detecting a fax preamble, VISM first attempts to complete a fax relay on the connection. If the fax relay is unsuccessful due to a lack of local resources, T.38 connection admission control (CAC) failure, or the remote side did not acknowledge the 200 named signaling event (NSE), VISM follows the procedure for fax pass-through. If fax relay is successful, the connection is returned to voice mode when the fax end-of-transfer occurs.</li> <li>• 2 = VISM-controlled T.38 only. Upon detecting a fax preamble, VISM attempts to complete a fax relay on the connection. If fax relay is unsuccessful, the connection is returned to voice mode. If the fax relay is successful, the connection is returned to voice mode when the fax end of transfer occurs.</li> <li>• 3 = Pass-through then VISM-controlled T.38. Upon detecting a fax preamble, VISM first attempts the procedure for fax pass-through. If fax pass-through is unsuccessful due to a lack of local resources or an upspeed CAC failure, VISM attempts the fax relay procedure. If both fax pass-through and fax relay fail, the connection is returned to voice mode. If either fax pass-through or fax relay is successful, the connection is returned to voice mode when the fax end-of-transfer occurs.</li> <li>• 4 = Pass-through only. Upon detecting a fax preamble, VISM attempts the fax pass-through procedure.</li> <li>• 5 = Off.</li> </ul>

**Command Modes** VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the fax preamble response is configured for line number 4. The choice is first the fax pass-through and then VISM-controlled T.38:

```
nodename.1.27.VISM8.a > cnft38fxlco 4 3
```

```
nodename.1.27.VISM8.a >
```

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>cnfcodectmpl</b>	Assigns a codec template to an entire VISM card.
<b>cnft38nsetimeout</b>	Configures a specified line with a length of time in which to wait for a remote acknowledgment of the offer to switch to fax transfer mode.
<b>cnft38params</b>	Configures the T.38 fax transfer parameters for a specified line.
<b>dspcodectmpls</b>	Displays all entries in the codec template table.
<b>dspt38fxlco</b>	Displays the fax-handling instructions configured for a specified line.
<b>dspt38fxlcos</b>	Displays the fax-handling instructions for all lines on the current VISM card.
<b>dspt38nsetimeout</b>	Displays a specified configured line that has a length of time in which to wait for a remote acknowledgment of the offer to switch to fax transfer mode.
<b>dspt38nsetimeouts</b>	Displays all configured lines that have a length of time in which to wait for a remote acknowledgment of the offer to switch to fax transfer mode.
<b>dspt38params</b>	Displays the T.38 fax transfer parameters for a specified line.



# cnft38nsetimeout

To configure a specified line with a length of time in which to wait for a remote acknowledgment of the offer to switch to fax transfer mode, use the **cnft38nsetimeout** command.

**cnft38nsetimeout** *<line\_number>* *<NSE\_Ack\_Timer>*

Syntax Description	<i>line_number</i>	Line number in the range 1–8.
	<i>NSE_Ack_Timer</i>	Named signaling event (NSE) acknowledgment timeout value (defined in milliseconds). Range is 250–10000 ms, in increments of 250 ms.

**Command Modes** VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, line number 2 is configured with an NSE acknowledgment timeout value of 600 ms:

```
nodename.1.27.VISM8.a > cnft38nsetimeout 2 600
```

```
nodename.1.27.VISM8.a >
```

Related Commands	Command	Description
	<b>cnfcodecmpl</b>	Assigns a codec template to an entire VISM card.
	<b>cnft38fxlco</b>	Configures the fax-handling instructions for a specified line.
	<b>cnft38params</b>	Configures the T.38 fax transfer parameters for a specified line.
	<b>dspscodecmpls</b>	Displays all entries in the codec template table.
	<b>dspt38fxlco</b>	Displays the fax-handling instructions configured for a specified line.
	<b>dspt38fxlcos</b>	Displays the fax-handling instructions for all lines on the current VISM card.
	<b>dspt38nsetimeout</b>	Displays a specified configured line that has a length of time in which to wait for a remote acknowledgment of the offer to switch to fax transfer mode.
	<b>dspt38nsetimeouts</b>	Displays all configured lines that have a length of time in which to wait for a remote acknowledgment of the offer to switch to fax transfer mode.
	<b>dspt38params</b>	Displays the T.38 fax transfer parameters for a specified line.

# cnft38params

To configure the T.38 fax transfer parameters for a specified line, use the **cnft38params** command.

```
cnft38params <line_number> <Max_Xmit_Rate> [|<Data_Pkt_size> <LS_Data_Redundancy>
<HS_Data_Redundancy> <TCF_Method> <NSF_Override> <NSF_Country_Code>
<NSF_Vendor_Code> <T30_ECM>|
```

Syntax Description	
<i>line_number</i>	Line number in the range 1–8.
<i>Max_Xmit_Rate</i>	Maximum fax transmission rate (defined in bits per second). Values are <ul style="list-style-type: none"> <li>• 1 = 2400 bps</li> <li>• 2 = 4800 bps</li> <li>• 3 = 7200 bps</li> <li>• 4 = 9600 bps</li> <li>• 5 = 12000 bps</li> <li>• 6 = 14400 bps (default)</li> </ul>
<i> Data_Pkt_size </i>	(Optional) Primary high-speed data packet size. Values are <ul style="list-style-type: none"> <li>• 10</li> <li>• 20</li> <li>• 30</li> </ul> <p><b>Note</b> We recommend that you select 30 for this argument value; 14400-bps fax transfer with a high-speed data packet size higher than 30 ms may fail.</p>
<i> LS_Data_Redundancy </i>	(Optional) Extent of the Internet fax protocol (IFP) packet transmission redundancy for the low-speed control data exchanged during the first phase of a T.38 fax relay connection. Range is 0–5. Default is 5. <p>The <i>LS_Data_Redundancy</i> argument has two different meanings. The meaning that applies depends on the value of the <i>T30_ECM</i> argument:</p> <ul style="list-style-type: none"> <li>• If the <i>T30_ECM</i> argument is 1, the <i>LS_Data_Redundancy</i> argument represents the maximum number of forward error correction (FEC) messages within a User Datagram Protocol (UDP) Transport Layer (TL) (UDPTL) packet carrying low-speed data.</li> <li>• If the <i>T30_ECM</i> argument is 2, the <i>LS_Data_Redundancy</i> argument represents the maximum number of prior IFP packets within a UDPTL packet carrying low-speed data, but does not include the primary IFP packet.</li> </ul>
<i> HS_Data_Redundancy </i>	(Optional) Extent of the IFP packet transmission redundancy for the high-speed control and image data exchanged following the initial low-speed phase of a T.38 fax relay connection. Range is 0–2. Default is 0.

<code> TCF_Method </code>	<p>(Optional) Training check field (TCF) verification method for UDP based fax transport. Values are</p> <ul style="list-style-type: none"> <li>• 1 = Local—For TCP-based fax transport or UDP-based fax transport. The local TCF method means that the media gateways are actively involved in the training and data rate management procedure, including the generation of the TCF signal. Data rate management is performed by one of the media gateways on the basis of local results, which are forwarded over the IP network by the other media gateway. The data rate management gateway generates the TCF training signal toward its group 3 fax terminal.</li> <li>• 2 = Network—For UDP-based fax transport. The network TCF method means that the data rate management is performed end-to-end between the group 3 fax terminals. The TCF training signal is passed by the IP network.</li> </ul>
<code> NSF_Override </code>	<p>(Optional) VISM nonstandard facilities (NSF) code override of NSF. This value includes nonstandard facilities command (NSC) and nonstandard facilities setup (NSS) T.30 signals.</p> <p>Values are</p> <ul style="list-style-type: none"> <li>• 1 = Enabled (default) If you enable NSF override, the group 3 fax machines are prevented from synchronizing with each other on the basis of a protocol other than the ITU-T recommendations.</li> <li>• 2 = Disabled If you disable NSF override, the group 3 fax machines synchronize with each other on the basis of the standard T-series protocol.</li> </ul>
<code> NSF_Country_Code </code>	<p>(Optional) Country code in the NFS which identifies the country where the NFS fax equipment was manufactured. The code is expressed in 1 byte. Refer to <i>ITU T.38</i> for a complete description. Range is 0–65535. Default is 181.</p>
<code> NSF_Vendor_Code </code>	<p>(Optional) Vendor code of the NFS fax equipment manufacturer, expressed as 2 bytes. Range is 0–65535. Default is 18.</p>
<code> T30_ECM </code>	<p>(Optional) Forward error correction scheme for UDP-based fax transport. Values are</p> <ul style="list-style-type: none"> <li>• 1 = Enabled (default)</li> <li>• 2 = Disabled</li> </ul>

**Command Modes**

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines**

Follow standard CLI procedures for this command.

**Examples**

In the following example, the T.38 fax transfer parameters for a line number 2 are configured. Values are a maximum fax transmission rate of 7200 bps, a primary high-speed data packet size of 20 ms, a low-speed packet transmission redundancy of 3, a high-speed packet transmission redundancy of 0, the network TCF verification method, NFS code VISM override enabled, a country code of 500, a vendor code of 4000, and UDP error correction enabled.

```
nodename.1.27.VISM8.a > cnft38params 2 3 20 3 0 2 1 500 4000 1
nodename.1.27.VISM8.a >
```

**Related Commands**

Command	Description
<b>cnfcodectmpl</b>	Assigns a codec template to an entire VISM card.
<b>cnft38fxlco</b>	Configures the fax-handling instructions for a specified line.
<b>cnft38nsetimeout</b>	Configures a specified line with a length of time in which to wait for a remote acknowledgment of the offer to switch to fax transfer mode.
<b>dspcodectmpls</b>	Displays all entries in the codec template table.
<b>dspt38fxlco</b>	Displays the fax-handling instructions configured for a specified line.
<b>dspt38fxlcos</b>	Displays the fax-handling instructions for all lines on the current VISM card.
<b>dspt38nsetimeout</b>	Displays a specified configured line that has a length of time in which to wait for a remote acknowledgment of the offer to switch to fax transfer mode.
<b>dspt38nsetimeouts</b>	Displays all configured lines that have a length of time in which to wait for a remote acknowledgment of the offer to switch to fax transfer mode.
<b>dspt38params</b>	Displays the T.38 fax transfer parameters for a specified line.

# cnftftpdn

To select the TFTP domain name, use the **cnftftpdn** command.

```
cnftftpdn <domain_name>
```

---

**Syntax Description**

*domain\_name* The TFTP domain name, a text string of 1–64 alphanumeric characters.  
To unconfigure the TFTP domain, set *domain\_name* to TFTPDOMAIN.

---

---

**Command Modes**

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

---

**Usage Guidelines**

The domain name must have been added to the MGC table by means of the **adddn** command. When selected as a TFTP server, the domain name of the server cannot be used as the call agent domain name.

---

**Examples**

In the following example, the configured TFTP domain name is south:

```
nodename.1.27.VISM8.a > cnftftpdn south
```

```
nodename.1.27.VISM8.a >
```

---

**Related Commands**

There are no related commands.

# cnftranscotmode

To configure the continuity test (COT) tone that VISM applies toward the TDM side, use the **cnftranscotmode** command. This command changes the COT mode to be in reverse.

**cnftranscotmode** <*transcotmode*>

## Syntax Description

<i>transcotmode</i>	Continuity test tone.
	<ul style="list-style-type: none"> <li>• 1 = VISM responds with 2010 Hz.</li> <li>• 2 = VISM responds with 1780 Hz (default).</li> </ul>

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the COT tone is configured at 1780 Hz (the default). This tone disables the reverse transponder COT.

```
nodename.1.27.VISM8.a > cnftranscotmode 2
```

```
nodename.1.27.VISM8.a >
```

## Related Commands

Command	Description
<b>dsptanscotmode</b>	Displays whether or not the reverse transponder COT is enabled.

# cnftrapfilterfeature

To enable or disable the trap filtering feature on the VISM-PR card, use the **cnftrapfilterfeature** command.

**cnftrapfilterfeature** <trapFiltertingEn>

## Syntax Description

<i>trapFiltertingEn</i>	Value you can use to enable or disable trap filtering.
	<ul style="list-style-type: none"> <li>1 = Enable</li> <li>2 = Disable</li> </ul>

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

This command is applicable only to the VISM-PR card.

## Examples

In the following example, the trap filtering feature is enabled:

```
nodename.1.28.VISM8.a > cnftrapfilterfeature 1
nodename.1.28.VISM8.a
```

## Related Commands

Command	Description
<b>addtrapfilter</b>	Adds a trap to the filter list.
<b>cnftrapfiltertimer</b>	Configures the trap filter timer.
<b>delalltrapfilters</b>	Deletes all the traps in the filter list.
<b>deltrapfilter</b>	Deletes a trap from the filter list.
<b>dspalltrapfilters</b>	Displays all configured trap filters.
<b>dspttrapfilter</b>	Displays the current trap filter configurations.
<b>dspttraphelp</b>	Displays all traps or traps per group.

# cnftrapfiltertimer

To configure the timer for a particular trap or a set of traps on the VISM-PR card, use the **cnftrapfiltertimer** command.

```
cnftrapfiltertimer <trapFilterTimer> |<trapNumber> <trapNumber> <trapNumber>
<trapNumber> <trapNumber>|
```

Syntax	Description
<i>trapFilterTimer</i>	Trap filter timer. Range is 0–65536 minutes. A value of 0 indicates forever.
<i>trapNumber</i>	Trap number. Range is 50650–50799. Use the optional arguments to configure the timer for more than one trap.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** This command is applicable only to the VISM-PR card.

**Examples** In the following example, channel trap TRAP\_VISM\_CHAN\_ADDED and card trap TRAP\_AVAIL\_FREE\_DS0\_LOW are configured with a filter timer of 15 minutes:

```
nodename.1.28.VISM8.a > cnftrapfiltertimer 15 50755 50650
nodename.1.28.VISM8.a >
```

To display the filter configurations, use the **dsptrapfilter** command.

Related Commands	Command	Description
	<b>addtrapfilter</b>	Adds a trap to the filter list.
	<b>cnftrapfilterfeature</b>	Enables or disables the trap filtering feature.
	<b>delalltrapfilters</b>	Deletes all the traps in the filter list.
	<b>deltrapfilter</b>	Deletes a trap from the filter list.
	<b>dspalltrapfilters</b>	Displays all configured trap filters.
	<b>dsptrapfilter</b>	Displays the current trap filter configurations.
	<b>dsptrophelp</b>	Displays all traps or traps per group.



# cnftrfaggclip

To enable aggregate traffic clipping, use the **cnftrfaggclip** command. When traffic clipping is enabled, the VISM/VISM-PR card can discard cells which are exceeding the card aggregate bandwidth.

**cnftrfaggclip** <aggregate-traffic-clipping>

---

<b>Syntax Description</b>	<i>aggregate-traffic-clipping</i> Value you can use to enable aggregate traffic clipping on the VISM card. <ul style="list-style-type: none"><li>• 1 = Disable</li><li>• 2 = Enable</li></ul>
---------------------------	---

---

---

<b>Command Modes</b>	AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC
----------------------	--

---

<b>Usage Guidelines</b>	Follow standard CLI procedures when using this command.
-------------------------	---

---

<b>Examples</b>	In the following example, aggregate traffic clipping is enabled:
-----------------	--

```
nodename.1.27.VISM8.a > cnftrfaggclip 2
```

If aggregate traffic clipping is already enabled and you enter the command, the following message appears:

```
Card aggregate traffic clipping is already Enabled.
```

---

<b>Related Commands</b>	There are no related commands.
-------------------------	--------------------------------

# cnfvbdcodes

To configure voiceband data (VBD) upspeed codec on the VISM card, use the **cnfvbdcodes** command.

```
cnfvbdcodes <upspeedCodec> |<payload>|
```

## Syntax Description

<i>upspeedCodec</i>	Upspeed codec. Values are <ul style="list-style-type: none"> <li>• 1 = G.711u (default for T1)</li> <li>• 2 = G.711a (default for E1)</li> <li>• 3 = G.726-32K</li> <li>• 4 = Clear channel</li> <li>• 5 = G.723.1-H (valid for template number 4 only)</li> <li>• 6 = G.723.1-L (valid for template number 4 only)</li> <li>• 7 = G.726-16K</li> <li>• 8 = G.726-24k</li> <li>• 9 = G.726-40K</li> </ul>
<i> payload </i>	(Optional) Payload type. This entry provides a mechanism for the codec to upspeed. Range is 0–255. Default is 256.

## Command Modes

VoIP switching/VoIP trunking and VoIP and AAL1 SVC.

## Usage Guidelines

VISM uses the configured codec even if, for example, the configured codec is G.726-32k and VISM is preconfigured with G.711.

If you configure clear channel, VISM does support a mixed system clock—VISM cannot be originated at a T1 line and terminated at an E1 line, or originated at an E1 line and terminated at a T1 line.

When VISM is configured with clear channel, the codec is not used in the fax/modem upspeed session because VISM cannot detect any tones using clear channel.

In AAL2 modes the VISM obtains the upspeed codec from the AAL2 profile table. AAL1 modes do not support compression and therefore do not require upspeed.

The G.723.1 codecs are supported for VISM-PR cards only.



## Note

We recommend that you not use *upspeedCodec* argument values 5 or 6 with this command.

## Examples

In the following example, the VBD upspeed codec is configured as G.711u and assigned the 255 payload type:

```
nodename.1.27.VISM8.a > cnfvbdcodes 1 255
```

```
nodename.1.27.VISM8.a >
```

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>addrtpcon</b>	Adds a static RTP VoIP trunking connection.
<b>cnfdynamicpayload</b>	Enables or disables the dynamic payload on the current VISM card.
<b>cnfrtpcon</b>	Modifies an existing static RTP VoIP trunking connection.
<b>dspdynamicpayload</b>	Displays the card level configuration of dynamic payload on the current VISM card.
<b>dsprtpcon</b>	Displays the configuration data of a specific static RTP VoIP trunking connection.
<b>dspvbdcodec</b>	Displays the upspeed codec used for voiceband data (VBD).

# cnfvbmarconi

To configure voiceband data (VBD) upspeed upon detection of dual tone, use the **cnfvbmarconi** command. The pair of dual tones detected are 2130 Hz and 2750 Hz.

The upspeed codec used is specified by the **dspvbdcodec** command.

**cnfvbmarconi** *<enableflag>*

## Syntax Description

<i>enableflag</i>	Value you can use to enable the detection of the dual tones.
	<ul style="list-style-type: none"> <li>• 1 = Enable</li> <li>• 2 = Disable</li> </ul>

## Command Modes

VoIP switching/VoIP trunking, AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, VBD upspeed is configured upon detection of a dual tone:

```
nodename.1.27.VISM8.a > cnfvbmarconi 1
```

```
nodename.1.27.VISM8.a >
```

## Related Commands

Command	Description
<b>dspvbdmarconi</b>	Displays whether or not VBD upspeed is configured upon detection of a dual tone.

# cnfvbdpol

To configure VISM card level voiceband data (VBD) policies for fax/modem carrier loss and fax/modem upspeed connection admission control (CAC) failure, use the **cnfvbdpol** command.

```
cnfvbdpol <sysCarrLossPol> <sysCacRejPol>
```

## Syntax Description

<i>sysCarrLossPol</i>	Carrier loss policy. Values are <ul style="list-style-type: none"> <li>• 1 = Revert to the previous codec</li> <li>• 2 = Maintain the upspeed codec</li> </ul>
<i>sysCacRejPol</i>	CAC rejection policy. Values are <ul style="list-style-type: none"> <li>• 1 = Delete the connection</li> <li>• 2 = Maintain the connection</li> </ul>

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the current VISM card is configured to revert to the previous codec for fax/modem carrier loss events and maintain the connection during upspeed CAC failure events:

```
nodename.1.27.VISM8.a > cnfvbdpol 1 2
```

```
nodename.1.27.VISM8.a >
```

## Related Commands

Command	Description
<b>dspvbdpol</b>	Displays the current VISM card level policies for fax/modem upspeed CAC failure and fax/modem carrier loss for call events.

# cnfvismdn

To configure the current VISM card domain name, use the **cnfvismdn** command.

**cnfvismdn** <domain\_name>

## Syntax Description

<i>domain_name</i>	Current VISM card domain name, which is a text string of 1–64 alphanumeric characters. The default is cisco.com.
--------------------	--

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC

## Usage Guidelines

Ensure that you configure the same domain name for the virtual switch controller (VSC) as you do for the VISM card.

The domain name you configure is used when you create an endpoint identification number for each endpoint on a VISM card. The endpoint identification number is used in the addressing of SGCP/MGCP commands to a specific endpoint.

If this command is not used, the default domain name is used.

## Examples

In the following example, the current VISM card is configured with the domain name north:

```
nodename.1.27.VISM8.a > cnfvismdn north
```

```
nodename.1.27.VISM8.a >
```

## Related Commands

Command	Description
<b>cnfvismip</b>	Configures the current VISM card IP address.
<b>dspvismdn</b>	Displays the domain name of the current VISM card.

# cnfvismip

To configure the current VISM card control IP address and subnet mask, and optionally, the bearer IP address and subnet mask, use the **cnfvismip** command.

```
cnfvismip <vismIpAddr> <netMask> [<vismBearerIpAddr> <bearerNetMask>]
```

## Syntax Description

<i>vismIpAddr</i>	Control IP address, in dotted decimal format (nnn.nnn.nnn.nnn), of the current VISM card.
<i>netMask</i>	Control local network subnet mask, in dotted decimal format (nnn.nnn.nnn.nnn). The recommended value is <b>255.255.255.248</b> .
<i> vismBearerIpAddr </i>	(Optional) Bearer IP address, in dotted decimal format (nnn.nnn.nnn.nnn).
<i> bearerNetMask </i>	(Optional) Bearer IP subnet mask, in dotted decimal format (nnn.nnn.nnn.nnn).

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

You must configure the control IP address with this command before adding endpoints.

The VISM card control IP address is used to communicate with the VSC and as an identification for VoIP endpoints.

The configured VISM card IP address and subnet mask values are stored on the MGX 8000 Series platform PXM card hard disk and retrieved for subsequent configuration commands.

If you do not specify a bearer IP address and subnet mask, the control IP address and subnet mask are used as both control and bearer.

## Examples

In the following, the current VISM card is configured with control IP address 209.165.200.224 and subnet mask 255.255.255.248:

```
nodename.1.27.VISM8.a > cnfvismip 209.165.200.224 255.255.255.248
```

```
nodename.1.27.VISM8.a >
```

## Related Commands

Command	Description
<b>dspvismip</b>	Displays the current VISM card IP address.

# cnfvismmode

To configure the initial operating mode for a VISM card, use the **cnfvismmode** command.

**cnfvismmode** <mode\_number>

---

## Syntax Description

*mode\_number* VISM card operating mode. Values are

- 1 = VoIP switching/VoIP trunking
  - 2 = AAL2 trunking
  - 3 = AAL1 switching
  - 7 = Switched ATM AAL2 SVC
  - 8 = Switched ATM AAL2 PVC
  - 9 = VoIP and AAL1 SVC
  - 10 = VoIP trunking/AAL2 trunking
- 

---

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

---

## Usage Guidelines

Before using this command, delete all connections, ports, and resource partitions (if any). Existing configurations on a VISM card are cleared when you use this command.

---

## Examples

In the following example, the current VISM card is configured for the VoIP switching/VoIP trunking operating mode:

```
nodename.1.27.VISM8.a > cnfvismmode 1
```

```
nodename.1.27.VISM8.a >
```

---

## Related Commands

There are no related commands.



# cnfvoiptimerparam

To configure the holdover time for voice activity detection (VAD) before VISM activates silence compression, use the **cnfvoiptimerparam** command.

**cnfvoiptimerparam** <Vad\_Timer>

<b>Syntax Description</b>	<i>Vad_Timer</i>	VAD holdover timer (defined in milliseconds). Range is 250–65535 ms. Default is 250 ms.
---------------------------	------------------	---

**Command Modes** VoIP switching/VoIP trunking and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the VAD holdover timer is configured for 360 ms:

```
nodename.1.27.VISM8.a > cnfvoiptimerparam 360
```

```
nodename.1.27.VISM8.a >
```

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>cnfvoiptransparams</b>	Configures the VoIP transportation parameters.
	<b>dspvoipparams</b>	Displays the VoIP switching/trunking operating mode parameters.

# cnfvoiptransparams

To configure the VoIP transportation parameters, for example dual-tone multifrequency (DTMF) and channel-associated signaling (CAS) bits transportation, use the **cnfvoiptransparams** command.

You can optionally configure the event negotiation policy and silence insertion descriptor (SID) payload type.

```
cnfvoiptransparams <DtmfRelay> <CasBits> [<EventNego> <EventNegoPolicy>
<SIDPayloadType>]
```

## Syntax Description

<i>DtmfRelay</i>	Value you can use to enable or disable DTMF tone transportation. <ul style="list-style-type: none"> <li>1 = On (default)</li> <li>2 = Off</li> </ul> <p><b>Note</b> The <i>DtmfRelay</i> argument value must be set to 1 (on) when you are using codecs other than G.711 and G.726.</p>
<i>CasBits</i>	Value you can use to enable or disable CAS transportation. <ul style="list-style-type: none"> <li>1 = On</li> <li>2 = Off (default)</li> </ul>
<i> EventNego </i>	(Optional) Value you can use to indicate whether or not VISM should negotiate how to send events. <ul style="list-style-type: none"> <li>1 = On (default). Attempt to negotiate how to send events.</li> <li>2 = Off. Do not attempt to negotiate how to send events.</li> </ul>
<i> EventNegoPolicy </i>	(Optional) Event negotiation policy. Values are <ul style="list-style-type: none"> <li>1 = None (call agent driven).</li> <li>2 = Proprietary (default). This value supports event s that are driven by the call agent and that are proprietary.</li> <li>3 = All. This value supports events that are driven by the call agent and all event codecs specified by VISM.</li> </ul>
<i> SIDPayloadType </i>	(Optional) SID payload type. Range is 0–255. Default is 13.

## Command Modes

VoIP switching/VoIP trunking and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.

---

**Examples**

In the following example, DTMF and CAS bit transportation are enabled:

```
nodename.1.27.VISM8.a > cnfvoiptransparams 1 1
```

```
nodename.1.27.VISM8.a >
```

---

**Related Commands**

Command	Description
<b>cnfvoiptimerparam</b>	Configures the holdover time for VAD before silence compression is activated.
<b>dspvoipparams</b>	Displays the VoIP switching/trunking operating mode parameters.

---

# cnfxgcpbt

To configure a default bearer type, if one is not specified by the call agent or by the xGCP local connection options, for the current VISM card, use the **cnfxgcpbt** command.

```
cnfxgcpbt <networkType> <vcType> [<connType>]
```

## Syntax Description

<i>networkType</i>	Network type. Values are <ul style="list-style-type: none"> <li>• 1 = IP</li> <li>• 2 = ATM</li> </ul>
<i>vcType</i>	Virtual circuit type. Values are <ul style="list-style-type: none"> <li>• 1 = Permanent virtual circuit (PVC)</li> <li>• 2 = Switched virtual circuit (SVC)</li> </ul>
[ <i>connType</i> ]	(Optional) Connection type. Values are <ul style="list-style-type: none"> <li>• 1 = ATM Adaptation Layer Type 1 (AAL1)</li> <li>• 2 = ATM Adaptation Layer Type 2 (AAL2)</li> <li>• 3 = Not applicable</li> </ul> <p><b>Note</b> You must select 3 (not applicable) if you selected a <i>networkType</i> argument value of 1 (IP).</p>

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

If the default bearer types (network, VC, or connection) are specified as part of the local connection options, those types take precedence over the types specified in this command.

## Examples

In the following example, the current VISM card is configured for the IP network type and for PVC:

```
nodename.1.27.VISM8.a > cnfxgcpbt 1 1 3
```

```
nodename.1.27.VISM8.a >
```

## Related Commands

Command	Description
<b>dspxgcpbt</b>	Displays the default network, VC, and connection types configured for the current VISM card.

# cnfxgcpinteropsdpost

To enable or disable the Session Descriptor Protocol (SDP) OST interoperability in the call control protocol, use the **cnfxgcpinteropsdpost** command.

**cnfxgcpinteropsdpost** <*sdpostFlag*>

<b>Syntax Description</b>	<i>sdpostFlag</i>	Value you can use to enable or disable SDP OST interoperability. <ul style="list-style-type: none"> <li>• 1 = Enable (default)</li> <li>• 2 = Disable</li> </ul>
---------------------------	-------------------	--

<b>Command Modes</b>	VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC
----------------------	---

<b>Usage Guidelines</b>	<p>When a CRCX or MDCX command is received from the call agent, VISM can respond by building SDP OST (O =, S =, and T = lines).</p> <p>If a peer gateway does not support SDP OST, this command can be used to prevent VISM from building SDP OST lines.</p>
-------------------------	--

<b>Examples</b>	In the following example, SDP OST interoperability is disabled:
-----------------	---

```
nodename.1.27.VISM8.a > cnfxgcpinteropsdpost 2
nodename.1.27.VISM8.a >
```

<b>Related Commands</b>	<table border="1"> <thead> <tr> <th>Command</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td><b>dspxgcpinterops</b></td> <td>Displays the SDP OST interoperability feature configuration.</td> </tr> </tbody> </table>	Command	Description	<b>dspxgcpinterops</b>	Displays the SDP OST interoperability feature configuration.
Command	Description				
<b>dspxgcpinterops</b>	Displays the SDP OST interoperability feature configuration.				

# cnfxgcpmwd

To configure the maximum waiting delay (MWD) value used for sending a Restart in Progress (RSIP) message to the call agent, use the **cnfxgcpmwd** command.

**cnfxgcpmwd** *<timeout value>*

---

## Syntax Description

<i>timeout value</i>	Maximum waiting delay time (defined in milliseconds) for sending an RSIP message to the call agent. Range is 0–600000 ms. Default is 10000 ms.
----------------------	--

---



---

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

---

## Usage Guidelines

Use this command to limit the number of RSIP messages sent to the call agent when an MGX 8000 Series platform configured with multiple VISM cards is started or reset. Each VISM card waits a random amount of time (up to the maximum specified by this command) before sending an RSIP message.

---

## Examples

In the following example, the maximum waiting delay time for sending RSIP messages to the call agent is 300 ms:

```
nodename.1.27.VISM8.a > cnfxgcpmwd 300
```

```
nodename.1.27.VISM8.a >
```

---

## Related Commands

Command	Description
<b>dspxgpcnf</b>	Displays previously configured SGCP/MGCP timeout and retry count values.

---

# cnfxgcppeer

To configure the User Datagram Protocol (UDP) port number used in the sending of gateway-initiated messages to the call agent, use the **cnfxgcppeer** command.

```
cnfxgcppeer <mgcNumber> <protocolNumber> <UDP_port>
```

Syntax Description		
<i>mgcNumber</i>	A number by which the call agent is identified in the range 1–8.	
<i>protocolNumber</i>	Protocol number. It can be one of the following values:	
	<ul style="list-style-type: none"> <li>• 1 = MGCP 0.1</li> <li>• 2 = SGCP 1.1+</li> <li>• 4 = SGCP 1.5</li> <li>• 5 = MGCP 1.0</li> <li>• 6 = TGCP 1.0</li> </ul>	
<i>UDP_port</i>	UDP port number in the range 1025–65535. Default is 2427.	

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the call agent 1 is configured with protocol number 3 and remote UDP port number 1168:

```
nodename.1.27.VISM8.a > cnfxgcppeer 1 3 1168
```

```
nodename.1.27.VISM8.a >
```

Related Commands	Command	Description
	<b>cnfdisctimers</b>	Configures wait delay timers for the disconnected procedure.
	<b>cnfmggrpprotocol</b>	Configures call agent group protocol data.
	<b>dspdisctimers</b>	Displays the disconnect wait delay times.
	<b>dspxgcppeers</b>	Displays all UDP peer ports used by SGCP and MGCP.

# cnfxgcpretry

To configure VISM minimum and maximum request timeouts and retransmission attempts for communication with the associated call agent, use the **cnfxgcpretry** command.

```
cnfxgcpretry <minTimeout> <retryCount> <maxTimeout>
```

## Syntax Description

<i>minTimeout</i>	Minimum time (defined in milliseconds) that VISM waits for an acknowledgment message from the call agent. Range is 1–100000 ms. Default is 500 ms.
<i>retryCount</i>	Number of times that a call agent retransmits an unacknowledged message before determining that VISM is unreachable. Range is 1–10. Default is 3.
<i>maxTimeout</i>	Maximum time (defined in milliseconds) that VISM waits for an acknowledgment message from the call agent. Range is 0–100000 ms.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

If you indicate a value for the *maxTimeout* argument, VISM exponentially increases the timeout value between the minimum and maximum timeouts. If a maximum value is not specified, the *maxTimeout* value is set equal to the *minTimeout* value, which disables the exponential backoff.

## Examples

In the following example, VISM is set to wait for a minimum time of 1000 ms and a maximum time of 2000 ms for an acknowledgment message from the call agent. Three call agent retransmission attempts must occur before VISM is determined to be unreachable.

```
nodename.1.27.VISM8.a > cnfxgcpretry 1000 3 2000
```

```
nodename.1.27.VISM8.a >
```

## Related Commands

Command	Description
<b>dspxgpcnf</b>	Displays previously configured SGCP and MGCP timeout and retransmission attempt values.
<b>dspxgcpretry</b>	Displays the current xGCP retransmission attempt, minimum timeout, and maximum timeout values.



# delalltrapfilters

To delete all of the traps in the trap filter list on the VISM-PR card, use the **delalltrapfilters** command.

## **delalltrapfilters**

**Syntax Description** This command has no arguments.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** This command is applicable only to the VISM-PR card.

**Examples** In the following example, all of the traps in the trap filter list are deleted:

```
nodename.1.28.VISM8.a > delalltrapfilters
```

```
nodename.1.28.VISM8.a >
```

To ensure that the trap filters are deleted on the VISM-PR card, use the **dspalltrapfilters** command.

## **Related Commands**

<b>Command</b>	<b>Description</b>
<b>addtrapfilter</b>	Adds a trap to the filter list.
<b>cnftrapfilterfeature</b>	Enables or disables the trap filtering feature.
<b>cnftrapfiltertimer</b>	Configures the trap filter timer.
<b>deltrapfilter</b>	Deletes a trap from the filter list.
<b>dspalltrapfilters</b>	Displays all configured trap filters.
<b>dsptrapfilter</b>	Displays the current trap filter configurations.
<b>dsptraphelp</b>	Displays all traps or traps per group.

# delannalldynamic

To delete all announcement files and their associated codec types from the temporary announcement files saved in the VISM card, use the **delannalldynamic** command.

## delannalldynamic

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** This command does not report an error if no announcement files are found.

**Examples** In the following example, all announcement files and their associated codec types are deleted from the temporary announcement files currently saved in the VISM card:

```
nodename.1.5.VISM8.a > delannalldynamic
```

```
nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>addannpermanent</b>	Configures an announcement server file and associated codec type as permanent.
<b>cnfannagetime</b>	Configures the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache.
<b>cnfanndn</b>	Designates an announcement file server domain name.
<b>cnfannpathprefix</b>	Designates the main prefix directory TFTP path you can use for retrieving announcement files from the announcement file server.
<b>cnfannprefcodec</b>	Configures the codec type used for announcements played on unconnected TDM endpoints.
<b>cnfannreqtimeout</b>	Configures the time for announcements to play after the VISM receives the announcement signal (request) from the call agent.
<b>delanndynamic</b>	Deletes an announcement file from the list of files currently saved.
<b>delannpermanent</b>	Deletes a permanent announcement file and its associated codec type from the announcement file server.
<b>dspannagetime</b>	Displays the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache.
<b>dspanncache</b>	Displays all available temporary announcement file names and associated age times before the cache is refreshed from the announcement file server.
<b>dspanncontrols</b>	Displays a summary list of all provisionable announcement file variables, including variables associated with all announcement file CLI commands.
<b>dspanndn</b>	Displays the announcement file server domain name.

<b>Command</b>	<b>Description</b>
<b>dspannpathprefix</b>	Displays the main prefix directory path that the VISM uses for retrieving announcement files from the announcement file server.
<b>dspannpermanents</b>	Displays all available permanent announcement files with their associated codec types and identifying index numbers.
<b>dspannprefcodec</b>	Displays the codec type used for announcements played on unconnected TDM endpoints.
<b>dspannreqtimeout</b>	Displays the expiration time for announcements to play before being aborted.

# delanndynamic

To delete an announcement file and associated codec type from the temporary announcement files currently saved on the VISM card, use the **delanndynamic** command.

**delanndynamic** <ann\_file> <ann\_codec>

## Syntax Description

<i>ann_file</i>	Name of the announcement file. Range is 1–64 alphanumeric characters, including the following symbols: period (.), forward slash (/), underscore (_), and hyphen (-).
<i>ann_codec</i>	Type of coding/decoding to be performed on the data stream. Values are <ul style="list-style-type: none"> <li>• 1 = G.711u</li> <li>• 2 = G.711a</li> <li>• 3 = G.726-32K</li> <li>• 4 = G.729a</li> <li>• 5 = G.729ab</li> <li>• 6 = Not used</li> <li>• 7 = G.726-16K</li> <li>• 8 = G.726-24K</li> <li>• 9 = G.726-40K</li> <li>• 10 = Not used</li> <li>• 11 = G.723-H</li> <li>• 12 = G.723a-H</li> <li>• 13 = G.723.1-L</li> <li>• 14 = G.723.1a-L</li> </ul>

## Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

This command does not report an error if the file identified by the *ann\_file* argument is not found. The G.723.1 codecs are supported for VISM-PR cards but not supported for VISM cards.

## Examples

In the following example, the zero1 announcement file and its associated codec type of G.726-40K are deleted from the temporary announcement files currently saved in the VISM card:

```
nodename.1.5.VISM8.a > delanndynamic zero1 9
```

```
nodename.1.5.VISM8.a >
```

Related Commands	Command	Description
	<b>addannpermanent</b>	Configures an announcement server file and associated codec type as permanent.
	<b>cnfannagetime</b>	Configures the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache.
	<b>cnfannndn</b>	Designates an announcement file server domain name.
	<b>cnfannpathprefix</b>	Designates the main prefix directory TFTP path you can use for retrieving announcement files from the announcement file server.
	<b>cnfannprefcodec</b>	Configures the codec type used for announcements played on unconnected TDM endpoints.
	<b>cnfannreqtimeout</b>	Configures the time for announcements to play after the VISM receives the announcement signal (request) from the call agent.
	<b>delannalldynamic</b>	Deletes all announcement files from the list of files currently saved.
	<b>delannpermanent</b>	Deletes a permanent announcement file and its associated codec type from the announcement file server.
	<b>dspannagetime</b>	Displays the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache.
	<b>dspanncache</b>	Displays all available temporary announcement file names and associated age times before the cache is refreshed from the announcement file server.
	<b>dspanncontrols</b>	Displays a summary list of all provisionable announcement file variables, including variables associated with all announcement file CLI commands.
	<b>dspanndn</b>	Displays the announcement file server domain name.
	<b>dspannpathprefix</b>	Displays the main prefix directory path that the VISM uses for retrieving announcement files from the announcement file server.
	<b>dspannpermanents</b>	Displays all available permanent announcement files with their associated codec types and identifying index numbers.
	<b>dspannprefcodec</b>	Displays the codec type used for announcements played on unconnected TDM endpoints.
	<b>dspannreqtimeout</b>	Displays the expiration time for announcements to play before being aborted.

# delannpermanent

To delete a permanent announcement file and its associated codec type from the announcement file server, use the **delannpermanent** command.

**delannpermanent** <ann\_index>

## Syntax Description

<i>ann_index</i>	Permanent announcement server file identification index number. Range is 1–125.
------------------	---

## Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Use the **dspannpermanents** command to display a list of available permanent announcement server file names.

## Examples

In the following example, the permanent announcement server file and its associated codec type, identified by the announcement server file identification index number 19, are deleted from the announcement file server:

```
nodename.1.5.VISM8.a > delannpermanent 19
```

```
nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>addannpermanent</b>	Configures an announcement server file and associated codec type as permanent.
<b>cnfannagetime</b>	Configures the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache.
<b>cnfanndn</b>	Designates an announcement file server domain name.
<b>cnfannpathprefix</b>	Designates the main prefix directory TFTP path you can use for retrieving announcement files from the announcement file server.
<b>cnfannprefcodec</b>	Configures the codec type used for announcements played on unconnected TDM endpoints.
<b>cnfannreqtimeout</b>	Configures the time for announcements to play after the VISM receives the announcement signal (request) from the call agent.
<b>delannalldynamic</b>	Deletes all announcement files from the list of files currently saved.
<b>delanndynamic</b>	Deletes an announcement file from the list of files currently saved.
<b>dspannagetime</b>	Displays the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache.
<b>dspanncache</b>	Displays all available temporary announcement file names and associated age times before the cache is refreshed from the announcement file server.
<b>dspanncontrols</b>	Displays a summary list of all provisionable announcement file variables, including variables associated with all announcement file CLI commands.

<b>Command</b>	<b>Description</b>
<b>dspanndn</b>	Displays the announcement file server domain name.
<b>dspannpathprefix</b>	Displays the main prefix directory path that the VISM uses for retrieving announcement files from the announcement file server.
<b>dspannpermanents</b>	Displays all available permanent announcement files with their associated codec types and identifying index numbers.
<b>dspannprefcodec</b>	Displays the codec type used for announcements played on unconnected TDM endpoints.

# delcastransendpt

To delete a channel-associated signaling (CAS) mapping table that is associated with an endpoint, use the **delcastransendpt** command.

```
delcastransendpt <endpt_number> |<endpts_num>|
```

## Syntax Description

<i>endpt_number</i>	Number of the endpoint for which you want to apply the mapping table.	<ul style="list-style-type: none"> <li>• Template 4               <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5               <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>
<i>endpts_num</i>	(Optional) The last endpoint in a consecutive range of endpoints.	<ul style="list-style-type: none"> <li>• Template 4               <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5               <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>

## Command Modes

AAL2 trunking, switched AAL2 SVC, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

This command is applicable only to the VISM-PR card.



**Examples**

In the following example, the CAS mapping table is deleted from endpoint 1:

```
nodename.1.5.VISM8.a > delcastransendpt 1
```

```
nodename.1.5.VISM8.a >
```

To verify that the table is deleted from the endpoint, use the **dspecastransendpts** command.

**Related Commands**

Command	Description
<b>addcastranstbl</b>	Creates a CAS mapping table.
<b>cnfcastransendpt</b>	Downloads the CAS mapping table to the signaling channel.
<b>delcastranstbl</b>	Deletes an existing CAS mapping table.
<b>dspecastransendpts</b>	Displays all endpoints and their associated CAS mapping table names.
<b>dspecastranstbl</b>	Displays the CAS mapping table configurations.
<b>dspecastranstblendpts</b>	Displays all endpoints that are associated with a CAS mapping table.
<b>dspecastranstbls</b>	Displays the list of the CAS mapping tables.

# delcastranstbl

To delete an existing channel-associated signaling (CAS) mapping table, use the **delcastranstbl** command.

**delcastranstbl** <table\_name>

## Syntax Description

<i>table_name</i>	Name of the table you want to delete. Range is 1–64 characters.
-------------------	---

## Command Modes

AAL2 trunking, switched AAL2 SVC, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

This command is applicable only to the VISM-PR card.

## Examples

In the following example, the T1andE1trans table is deleted:

```
nodename.1.5.VISM8.a > delcastranstbl T1andE1trans
```

```
nodename.1.5.VISM8.a >
```

To verify that the table is deleted, use the **dsPCAstranstbls** command.

## Related Commands

Command	Description
<b>addcastranstbl</b>	Creates a CAS mapping table.
<b>cnfcastransendpt</b>	Downloads the CAS mapping table to the signaling channel.
<b>delcastransendpt</b>	Deletes a CAS mapping table that is associated with an endpoint.
<b>dsPCAstransendpts</b>	Displays all endpoints and their associated CAS mapping table names.
<b>dsPCAstranstbl</b>	Displays the CAS mapping table configurations.
<b>dsPCAstranstblendpts</b>	Displays all endpoints that are associated with a CAS mapping table.
<b>dsPCAstranstbls</b>	Displays the list of the CAS mapping tables.

# delcasvar

To delete a channel-associated signaling (CAS) variant, use the **delcasvar** command.

**delcasvar** <*variant\_name*>

## Syntax Description

<i>variant_name</i>	Name of the CAS variant you want to delete. Range is a text string of 1–64 alphanumeric characters.
---------------------	---

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the CAS variant identified by the name var1 is deleted:

```
nodename.1.5.VISM8.a > delcasvar var1
```

```
nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>addcasvar</b>	Adds a CAS variant to a VISM card.
<b>cnfcasvar</b>	Configures the CAS variant timing parameters.
<b>dspcasvar</b>	Displays information about CAS variants for a given variant name.

# delccs

To delete the association between a common channel signaling (CCS) DS0 channel and the corresponding virtual channel, use the **delccs** command.

```
delccs <line_number> <ds0_number>
```

---

## Syntax Description

<i>line_number</i>	Line number in the range 1–8.
<i>ds0_number</i>	DS0 number of the channel. Ranges are <ul style="list-style-type: none"> <li>• 1–24 = T1 lines</li> <li>• 1–31 = E1 lines</li> </ul>

---



---

## Command Modes

AAL2 trunking, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

---

## Usage Guidelines

The original association is configured with the **addccs** command.

---

## Examples

In the following example, the CCS channel on line 2, DS0 12 is deleted:

```
nodename.1.5.VISM8.a > delccs 2 12
```

```
nodename.1.5.VISM8.a >
```

---

## Related Commands

There are no related commands.

# delcid

To delete the association between an endpoint and an LCN/CID pair, use the **delcid** command.

```
delcid <LCN> <cidNum>
```

Syntax Description	LCN	Description
	LCN	Logical channel number of the LCN/CID pair. Range is 131–510.
	cidNum	Channel identification number of the LCN/CID pair. Range is 8–255.

**Command Modes** AAL2 trunking, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the endpoint association for LCN 140 and CID 12 is deleted:

```
nodename.1.5.VISM8.a > delcid 140 12
```

```
nodename.1.5.VISM8.a >
```

Related Commands	Command	Description
	<b>addcid</b>	Adds an AAL2 CID on a VISM card.
	<b>dspcid</b>	Displays the data of an AAL2 CID on a VISM card.
	<b>dspcidcps</b>	Displays the CPS for a connection.
	<b>dspcids</b>	Displays all the AAL2 CIDs for a specified LCN on a VISM card.
	<b>dsplncidcps</b>	Displays CPS usage per CID for all of the CIDs on a particular line.

# delcon

To delete a PVC between a VISM card and an MGX 8000 Series shelf PXM card, use the **delcon** command.

**delcon** <LCN>

---

## Syntax Description

*LCN* Logical channel number of the PVC to be deleted. Range is 131–510.

---



---

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

---

## Usage Guidelines

You cannot delete a connection if it is protected or if CIDs are present.

---

## Examples

In the following example, the PVC connection for LCN 140 is deleted:

```
nodename.1.5.VISM8.a > delcon 140
```

---

## Related Commands

Command	Description
<b>addcon</b>	Adds a PVC connection between a VISM card and any SM or PXM card.

---

# delconloop

To delete a local loopback state on a connection to the cellbus, use the **delconloop** command.

**delconloop** <LCN>

<b>Syntax Description</b>	<i>LCN</i>	Logical channel number of the connection from which you want to delete the local loopback state. Range is 131–510.
<b>Command Modes</b>	VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking	
<b>Usage Guidelines</b>	Follow standard CLI procedures for this command.	
<b>Examples</b>	<p>In the following example, the local loopback state is deleted from LCN 140:</p> <pre>nodename.1.5.VISM8.a &gt; delconloop 140</pre> <pre>nodename.1.5.VISM8.a &gt;</pre>	
<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>addconloop</b>	Sets a cellbus connection to the local loopback state.

# deldn

To delete a domain name, use the **deldn** command.

```
deldn <mg_domain_num>
```

## Syntax Description

<i>mg_domain_num</i>	Domain name number. Range is 1–11.
----------------------	------------------------------------

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

Deletion is not allowed if the domain name you want to delete is the last entry in the domain table and if the domain name exists in the list of call agents that VISM maintains. To see the list of call agents that VISM maintains, use the **dspmgcs** command.

You must manually delete all statistically provisioned IP addresses for the domain name before you can delete the domain name.

Do not delete a domain name if it is used as one of the following:

- Media Gateway Controller (MGC)
- Trivial File Transfer Protocol (TFTP) server
- Domain name server (DNS)
- Announcement server

## Examples

In the following example, the domain name represented by domain name number 11 is deleted:

```
nodename.1.5.VISM8.a > deldn 11
```

```
nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>adddn</b>	Adds a domain name (call agent name) and optionally configures the resolution type of the domain name.
<b>adddnip</b>	Adds the IP addresses for a domain name that you added by using the <b>adddn</b> command.
<b>cnfdn</b>	Configures the resolution type of a specified domain.
<b>cnfdnssrvr</b>	Designates a DNS.



<b>Command</b>	<b>Description</b>
<b>deldnip</b>	Deletes a statistically provisioned IP address of a domain name.
<b>dsdnallips</b>	Displays all statistically provisioned IP addresses and externally resolved IP addresses for all domain names configured on the current VISM card.
<b>dsdnips</b>	Displays all statistically provisioned and externally resolved IP addresses configured for a specified domain name.
<b>dsdnns</b>	Displays the configuration data of all domain names of a call agent.
<b>dsdnnsrvr</b>	Displays the domain name of the configured DNS of the current VISM card.

# deldnip

To delete a statistically provisioned IP address of a domain name, use the **deldnip** command.

**deldnip** <Resolution\_Index>

## Syntax Description

<i>Resolution_Index</i>	Resolution number of the domain name. It can be in the range from 1 to 88.
-------------------------	--

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

You cannot delete IP addresses that use external resolution of the domain name. You should not delete the last IP address of a given domain name if it is used as one of the following:

- Media Gateway Controller (MGC)
- Trivial File Transfer Protocol (TFTP) server
- Domain name server (DNS)
- Announcement server

## Examples

In the following example, the IP address associated with the resolution number 46 is deleted from a domain name:

```
nodename.1.5.VISM8.a > deldnip 46
```

```
nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>adddn</b>	Adds a domain name (call agent name) and optionally configures the resolution type of the domain name.
<b>adddnip</b>	Adds the IP addresses for a domain name that you added by using the <b>adddn</b> command.
<b>cnfdn</b>	Configures the resolution type of a specified domain.
<b>cnfdnssrvr</b>	Designates a DNS.
<b>deldn</b>	Deletes a domain name.
<b>dspdnallips</b>	Displays all statistically provisioned IP addresses and externally resolved IP addresses for all domain names configured on the current VISM card.
<b>dspdnips</b>	Displays all statistically provisioned and externally resolved IP addresses configured for a specified domain name.
<b>dspdns</b>	Displays the configuration data of all domain names of a call agent.
<b>dspdnssrvr</b>	Displays the domain name of the configured DNS of the current VISM card.

# deldualtonedet

To remove a dual-frequency tone, use the **deldualtonedet** command.

**deldualtonedet** <*vismConfigToneDetectNum*>

## Syntax Description

<i>vismConfigToneDetectNum</i>	Dual-tone ID. Range is 1–10.
--------------------------------	------------------------------

## Command Modes

VoIP switching/VoIP trunking

## Usage Guidelines

Follow standard CLI procedures for this command.



### Note

This command is applicable only to the VISM-PR card.

## Examples

In the following example, the dual-frequency tone 1 is deleted.

```
nodename.1.5.VISM8.a > deldualtonedet 1
```

```
nodename.1.5.VISM8.a >
```

For more information on dual tone default values, see the “Default Values” section on page 9-102.

## Related Commands

Command	Description
<b>adddualtonedet</b>	Adds a dual-frequency tone.
<b>dspdualtonedet</b>	Displays a dual-tone configuration.

# delendpt

To delete a specified endpoint on a VISM card line, use the **delendpt** command.

**delendpt** <endpt\_num>

Syntax Description	endpt_num	Number of the endpoint to be deleted. Ranges are
		<ul style="list-style-type: none"> <li>• Template 1               <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2               <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3               <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4               <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5               <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** An endpoint cannot be deleted if CIDs are present.  
This command results in a graceful transition to out of service and a Restart in Progress (RSIP) to be sent to each associated call agent indicating the endpoint out-of-service state.

**Examples** In the following example, endpoint number 120 is deleted:

```
nodename.1.5.VISM8.a > delendpt 120
```

```
nodename.1.5.VISM8.a >
```

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>addendpt</b>	Adds an endpoint on a VISM card.
<b>dspendpt</b>	Displays data about a specified endpoint on a VISM card.
<b>dspendpts</b>	Displays information about all endpoints on a VISM card.

# delendptloop

To take an endpoint out of the loopback condition, use the **delendptloop** command.

**delendptloop** <endpt\_num>

Syntax Description	endpt_num	Description
		Number of the endpoint which is to be deleted. Ranges are <ul style="list-style-type: none"> <li>• Template 1               <ul style="list-style-type: none"> <li>- 1–145 for VISM</li> <li>- 1–192 for VISM-PR T1</li> <li>- 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2               <ul style="list-style-type: none"> <li>- 1–192 for T1</li> <li>- 1–248 for E1</li> </ul> </li> <li>• Template 3               <ul style="list-style-type: none"> <li>- 1–120 for VISM</li> <li>- 1–192 for VISM-PR T1</li> <li>- 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4               <ul style="list-style-type: none"> <li>- 1–64 for VISM</li> <li>- 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5               <ul style="list-style-type: none"> <li>- 1–192 for VISM-PR T1</li> <li>- 1–248 for VISM-PR E1</li> </ul> </li> </ul>

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the loopback state is deleted from endpoint number 120:

```
nodename.1.5.VISM8.a > delendptloop 120
```

```
nodename.1.5.VISM8.a >
```

Related Commands	Command	Description
	<b>addendptloop</b>	Places an endpoint in the loopback condition in the TDM direction.

# delendpts

To delete a range of consecutive endpoints on a VISM card, use the **delendpts** command.

**delendpts** <endpt\_num> <endpts\_num>

## Syntax Description

<i>endpt_num</i>	<p>Beginning endpoint number of a range of consecutive endpoints. Ranges are</p> <ul style="list-style-type: none"> <li>• Template 1           <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2           <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3           <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4           <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5           <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>
<i>endpts_num</i>	<p>The quantity of endpoints deleted. Ranges are</p> <ul style="list-style-type: none"> <li>• Template 1           <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2           <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3           <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4           <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5           <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines**

This command results in a graceful transition to the out-of-service state for each deleted endpoint. It also causes an RSIP to be sent to each associated call agent indicating the out-of-service state of the endpoints.

If the specified range of endpoints to be deleted contains gaps, the gaps are not counted. For example, if the current endpoints are 3, 4, 7, 8, 9, 10, 11, and 12 and the command specifies a start at 4 and a number of 5, the endpoints deleted are 4, 7, 8, 9, and 10.

**Examples**

In the following example, 10 endpoints are deleted, starting with endpoint number 120:

```
nodename.1.5.VISM8.a > delendpts 120 10
```

```
nodename.1.5.VISM8.a >
```

**Related Commands**

Command	Description
<b>addendpt</b>	Adds an endpoint on a VISM card.
<b>dspendpt</b>	Displays data about a specified endpoint on a VISM card.
<b>dspendpts</b>	Displays data about all endpoints on a VISM card.



# dellapd

To delete a Link Access Protocol D Channel (LAPD), use the **dellapd** command.

```
dellapd <line_number> <ds0_number>
```

## Syntax Description

<i>line_number</i>	Line number of the channel from which to delete an LAPD. Range is 1–8.
<i>ds0_number</i>	DS0 number of the channel from which an LAPD is to be deleted. Ranges are <ul style="list-style-type: none"> <li>• 1–24 = T1 lines</li> <li>• 1–31 = E1 lines</li> </ul>

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the D channel for line number 2, DS0 number 14 is deleted:

```
nodename.1.5.VISM8.a > dellapd 2 14
```

```
nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>addlapd</b>	Adds an LAPD from a specified DS0 to a VISM card.
<b>dsplapd</b>	Displays data about an LAPD.
<b>dsplapds</b>	Displays data about all LAPDs.

# dellapdtrunk

To delete a line configured with Link Access Protocol D Channel (LAPD), use the **dellapdtrunk** command.

**dellapdtrunk** <Line\_Num>

## Syntax Description

<i>Line_Num</i>	Line number to delete. Range is 1–8.
-----------------	--------------------------------------

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

You must use the **dellapd** command to delete the corresponding LAPD channel before you can delete the LAPD trunk.

## Examples

In the following example, the LAPD configured line, line number 7, is deleted:

```
nodename.1.5.VISM8.a > dellapdtrunk 7
```

```
nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>addlapdtrunk</b>	Adds an LAPD trunk to a specific VISM card line.
<b>addrtpcon</b>	Adds a static RTP VoIP trunking connection.
<b>addrudptrunk</b>	Adds an ISDN PRI backhaul RUDP session for an LAPD trunk connection.
<b>clrtpcnt</b>	Clears the RTP counters (statistics) for a specific static RTP connection.
<b>cnflapdtrunkpvc</b>	Assigns the PVC trunk type that carries LAPD messages for the current VISM card.
<b>cnflntrunkcond</b>	Enables or disables line conditioning on a VISM card line.
<b>cnfrtpcon</b>	Modifies an existing static RTP VoIP trunking connection.
<b>cnfrudptrunkrmtip</b>	Modifies the remote VISM IP address used in the ISDN PRI backhaul RUDP trunk for a specified session.
<b>delrtpcon</b>	Deletes a static RTP VoIP trunking connection.
<b>delrudptrunk</b>	Deletes an ISDN PRI backhaul RUDP session that is associated with an LAPD.

<b>Command</b>	<b>Description</b>
<b>dsplapd</b>	Displays data about an LAPD.
<b>dsplapdtrunkpvc</b>	Displays the assigned PVC trunk type that carries LAPD trunk messages for the current VISM card.
<b>dsplapdtrunks</b>	Displays the configuration data of all LAPD trunks.
<b>dsrtpent</b>	Displays the bearer counters (statistics) for a specific RTP VoIP trunking connection.
<b>dsrtpcon</b>	Displays the configuration data of a specific static RTP VoIP trunking connection.
<b>dsrtpcons</b>	Displays the configuration data of all static RTP VoIP trunking connections.
<b>dsprudp trunk</b>	Displays the configuration data of a specified ISDN PRI backhaul RUDP session.
<b>dsprudp trunks</b>	Displays the configuration data of all ISDN PRI backhaul RUDP sessions.

# delln

To delete a DS1 line on a VISM card, use the **delln** command.

```
delln <line_number>
```

---

<b>Syntax Description</b>	<i>line_number</i> Physical line number in the range 1–8.
---------------------------	---

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<b>Command Modes</b>	VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking
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<b>Usage Guidelines</b>	You must delete endpoints and CCS channels from the line before you delete the line.
-------------------------	--

---



---

<b>Examples</b>	In the following example, line number 4 is deleted:
-----------------	---

```
nodename.1.5.VISM8.a > delln 4
```

```
nodename.1.5.VISM8.a >
```

---

<b>Related Commands</b>	<table border="1"> <thead> <tr> <th>Command</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td><b>addln</b></td> <td>Adds a T1 or E1 line to a VISM card.</td> </tr> <tr> <td><b>cnfln</b></td> <td>Configures characteristics for a VISM card line.</td> </tr> <tr> <td><b>dspln</b></td> <td>Displays the characteristics of a specified VISM card line.</td> </tr> <tr> <td><b>dsplns</b></td> <td>Displays the characteristics for all lines on a VISM card.</td> </tr> </tbody> </table>	Command	Description	<b>addln</b>	Adds a T1 or E1 line to a VISM card.	<b>cnfln</b>	Configures characteristics for a VISM card line.	<b>dspln</b>	Displays the characteristics of a specified VISM card line.	<b>dsplns</b>	Displays the characteristics for all lines on a VISM card.
Command	Description										
<b>addln</b>	Adds a T1 or E1 line to a VISM card.										
<b>cnfln</b>	Configures characteristics for a VISM card line.										
<b>dspln</b>	Displays the characteristics of a specified VISM card line.										
<b>dsplns</b>	Displays the characteristics for all lines on a VISM card.										

---

# delInloop

To delete the T1 or E1 local line loopback state for a VISM card, use the **delInloop** command.

**delInloop** <line\_number>

## Syntax Description

*line\_number* Number of the line on the VISM card for which the local loop is to be deleted. Range is 1–8.

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the local loopback for line 6 is deleted:

```
nodename.1.5.VISM8.a > delInloop 6
```

```
nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
dspln	Displays the data configured on a specified line.

# delIntoneplan

To delete a built-in or provisional tone plan configuration from a specified VISM card line, use the **delIntoneplan** command.

```
delIntoneplan <line_number>
```

## Syntax Description

<i>line_number</i>	Number of the line for which you want to delete the configured tone plan. Range is 1–8.
--------------------	---

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the tone plan configuration for line number 5 is deleted:

```
nodename.1.5.VISM8.a > delIntoneplan 5
```

```
nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>addtoneplan</b>	Adds a tone plan to the current VISM card.
<b>cnflnringback</b>	Configures the ring-back tone method for a specified line on the current VISM card.
<b>cnflntoneplan</b>	Assigns a tone plan to a specified VISM card line.
<b>cnflntonetimeout</b>	Modifies the timeout periods of all call progress tones supported by VISM on a specified VISM card line.
<b>deltoneplan</b>	Deletes a previously added tone plan from the current VISM card.
<b>dsplnringback</b>	Displays the ring-back tone type for a specified line on the current VISM card.
<b>dsplntoneplan</b>	Displays the tone plan configuration of a specified VISM card line.
<b>dsplntonetimeout</b>	Displays the configured timeout periods for all call progress tones of a specified VISM card line.
<b>dsptonebuiltinplans</b>	Displays all preconfigured (built-in) tone plans on the current VISM card.
<b>dsptoneplan</b>	Displays the tone configuration of a specified tone plan—either a preconfigured (built-in) or user-added tone plan.
<b>dsptoneplans</b>	Displays the tone configuration of all tone plans—either preconfigured (built-in) or user-added tone plans.
<b>dsptoneprovplans</b>	Displays all user-added (provisional) tone plans.
<b>dsptoneregionplans</b>	Displays a list of all tone plans for the countries and regions whose name partially or completely matches the name you supply.

# delmgc

To delete a call agent from a VISM card's list of configured call agents, use the **delmgc** command.

**delmgc** <mgcNum>

## Syntax Description

<i>mgcNum</i>	Number by which the call agent is identified, as displayed by the <b>dspmgs</b> command. Range is 1–8.
---------------	--

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the call agent identified by the number 3 is deleted:

```
nodename.1.5.VISM8.a > delmgc 3
```

```
nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>cnfmgcgrpparam</b>	Modifies the notification policy of a state change and the priority level of a call agent redundancy group.
<b>dspmgs</b>	Displays configuration data on all configured call agents.

# delmgcgrpentry

To delete a call agent from a call agent redundancy group, use the **delmgcgrpentry** command.

```
delmgcgrpentry <Red_Group_Num> <mgcRedGrpMgcNum>
```

Syntax Description	Parameter	Description
	<i>Red_Group_Num</i>	Call agent redundancy group number. Range is 1–8.
	<i>mgcRedGrpMgcNum</i>	Number of the call agent in the redundancy group. Range is 1–8.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** The last call agent within a call agent redundancy group cannot be deleted if there are protocols associated with the call agent redundancy group.

A call agent redundancy group is deleted when the last call agent has been deleted from a group.

Use the **dspmgcgrpparams** command to verify your configuration.

**Examples** In the following example, the call agent number 2 is deleted from call agent redundancy group number 1:

```
nodename.1.5.VISM8.a > delmgcgrpentry 1 2
```

```
nodename.1.5.VISM8.a >
```

Related Commands	Command	Description
	<b>addmgcgrpentry</b>	Configures call agents as part of an MGC redundancy group and assigns a priority value for a call agent.
	<b>addmgcgrpprotocol</b>	Associates a call agent redundancy group with a gateway control protocol.
	<b>cnfmgcgrpentry</b>	Modifies the priority level of a call agent within a call agent redundancy group.
	<b>cnfmgcgrpparam</b>	Modifies the notification policy of a state change and the priority level of a call agent redundancy group.
	<b>cnfsrcppeer</b>	Configures the SRCP parameters when SRCP is the selected protocol for communication between the VISM card and call agent.
	<b>cnfsrcppeergpparam</b>	Modifies the SRCP heartbeat interval and maximum UDP size for a specified call agent redundancy group.
	<b>delmgcgrpprotocol</b>	Deletes an MGCP from a specified call agent redundancy group.
	<b>dspmgcgrpparams</b>	Displays all configured call agent redundancy group parameters.
	<b>dspmgcgrpprotocols</b>	Displays all configured call agent redundancy group protocols.
	<b>dspmgcgrps</b>	Displays all configured call agent redundancy groups.
	<b>dpsrcppeergpparams</b>	Displays the SRCP parameters for all call agent redundancy groups that have SRCP added.



# delmgcgrpprotocol

To delete a Media Gateway Control Protocol (MGCP) from a specified call agent redundancy group, use the **delmgcgrpprotocol** command.

```
delmgcgrpprotocol <Red_Group_Num> <protocol_number>
```

## Syntax Description

<i>Red_Group_Num</i>	Number of the call agent redundancy group from which you want to delete an MGCP. Range is 1–8.
<i>protocol_number</i>	Protocol number. Values are <ul style="list-style-type: none"> <li>• 1 = MGCP 0.1</li> <li>• 2 = SGCP 1.1+</li> <li>• 3 = SRCP 1.0.2</li> <li>• 4 = SGCP 1.5</li> <li>• 5 = MGCP 1.0</li> <li>• 6 = TGCP 1.0</li> </ul> <p>You can use 7 and 8, as displayed by the <b>dspmgcgrpprotocols</b> command.</p>

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, protocol number 2 is deleted from call agent redundancy group number 3:

```
nodename.1.5.VISM8.a > delmgcgrpprotocol 3 2
nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>addmgcgrppentry</b>	Configures call agents as part of an MGC redundancy group and assigns a priority value for a call agent.
<b>addmgcgrpprotocol</b>	Associates a call agent redundancy group with a gateway control protocol.
<b>cnfdisc timers</b>	Configures wait delay timers for the disconnected procedure.
<b>cnfmgcgrppentry</b>	Modifies the priority level of a call agent within a call agent redundancy group.
<b>cnfmgcgrpparam</b>	Modifies the notification policy of a state change and the priority level of a call agent redundancy group.
<b>cnfmgcgrpprotocol</b>	Configures call agent group protocol data.
<b>cnfsrccpeer</b>	Configures the SRCP parameters when SRCP is the selected protocol for communication between the VISM card and call agent.

<b>Command</b>	<b>Description</b>
<b>cnfsrccppeergrpparam</b>	Modifies the SRCP heartbeat interval and maximum UDP size for a specified call agent redundancy group.
<b>delmgcgrpentry</b>	Deletes a call agent from a call agent redundancy group.
<b>dspdisctimers</b>	Displays the disconnect wait delay times.
<b>dspmgcgrpparams</b>	Displays all configured call agent redundancy group parameters.
<b>dspmgcgrpprotocols</b>	Displays all configured call agent redundancy group protocols.
<b>dspmgcgrps</b>	Displays all configured call agent redundancy groups.
<b>dpsrccppeergrpparams</b>	Displays the SRCP parameters for all call agent redundancy groups that have SRCP added.

# delport

To delete the VISM port on the packet network side, use the **delport** command.

## delport

### Syntax Description

This command has no arguments or keywords.

### Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

### Usage Guidelines

You should execute this command before you remove the VISM card.



#### Caution

If you remove a VISM card with a port that has not been deleted, subsequent cards inserted into the same slot might not operate correctly. You should delete the resource partition and all PVCs before deleting the port.

When you use this command, the entries with the following port numbers are deleted:

- Entry 1 is deleted from a PXM1 card.
- Entry 255 is deleted from a PXM1E or a PXM45 card.

### Examples

In the following example, the VISM port on the packet network side is deleted:

```
nodename.1.5.VISM8.a > delport
```

```
nodename.1.5.VISM8.a >
```

### Related Commands

Command	Description
<b>dspport</b>	Displays data about the virtual port that was created using the <b>addport</b> command.

# delrsprtn

To delete a resource partition which was created by the **addrsptrtn** command, use the **delrsprtn** command.

## **delrsprtn**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the current resource partition is deleted:

```
nodename.1.5.VISM8.a > delrsprtn
```

```
nodename.1.5.VISM8.a >
```

## **Related Commands**

<b>Command</b>	<b>Description</b>
<b>addrsptrtn</b>	Adds a resource partition for a virtual port.
<b>dspsrcppeers</b>	Displays the peer configuration data for all known SRCP peers (call agents).

# delrtpon

To delete a static Real-Time Transport Protocol (RTP) VoIP trunking connection, use the **delrtpon** command.

```
delrtpon <rtp_conn_index>
```

## Syntax Description

<i>rtp_conn_index</i>	Connection identification number. Range is 1–248.
-----------------------	---

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the static RTP connection number 200 is deleted:

```
nodename.1.5.VISM8.a > delrtpon 200
```

```
nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>addlapdtrunk</b>	Adds an LAPD trunk to a specific VISM card line.
<b>addrtpcon</b>	Adds a static RTP VoIP trunking connection.
<b>addrudptrunk</b>	Adds an ISDN PRI backhaul RUDP session for an LAPD trunk connection.
<b>clrtpcnt</b>	Clears the RTP counters (statistics) for a specific static RTP connection.
<b>cnflapdtrunkpvc</b>	Assigns the PVC trunk type that carries LAPD messages for the current VISM card.
<b>cnflntrunkcond</b>	Enables or disables line conditioning on a VISM card line.
<b>cnfrtpcon</b>	Modifies an existing static RTP VoIP trunking connection.
<b>cnfrudptrunkrmtip</b>	Modifies the remote VISM IP address used in the ISDN PRI backhaul RUDP trunk for a specified session.
<b>dellapdtrunk</b>	Deletes an LAPD configured line.
<b>delrudptrunk</b>	Deletes an ISDN PRI backhaul RUDP session that is associated with an LAPD.
<b>dsplapd</b>	Displays data about an LAPD.
<b>dsplapdtrunkpvc</b>	Displays the assigned PVC trunk type that carries LAPD trunk messages for the current VISM card.
<b>dsplapdtrunks</b>	Displays the configuration data of all LAPD trunks.
<b>dsprtpcnt</b>	Displays the bearer counters (statistics) for a specified RTP VoIP trunking connection.
<b>dsprtpcon</b>	Displays the configuration data of a specified static RTP VoIP trunking connection.

<b>Command</b>	<b>Description</b>
<b>dsprtconnstat</b>	Displays the RTP connection statistics for a specified endpoint.
<b>dsprtcons</b>	Displays the configuration data of all static RTP VoIP trunking connections.
<b>dsprudp trunk</b>	Displays the configuration data of a specified ISDN PRI backhaul RUDP session.
<b>dsprudp trunks</b>	Displays the configuration data of all ISDN PRI backhaul RUDP sessions.

# delrudptrunk

To delete an ISDN PRI backhaul Reliable User Datagram Protocol (RUDP) session that is associated with a Link Access Protocol D Channel (LAPD), use the **delrudptrunk** command.

**delrudptrunk** *<session\_number>*

## Syntax Description

<i>session_number</i>	Session number in the range 1–64.
-----------------------	-----------------------------------

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

You must use the **dellapdtrunk** command to delete the LAPD trunk before you delete the RUDP trunk.

## Examples

In the following example, the ISDN PRI backhaul RUDP session number 51, which is associated with an LAPD, is deleted:

```
nodename.1.5.VISM8.a > delrudptrunk 51
```

```
nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>addlapdtrunk</b>	Adds an LAPD trunk to a specific VISM card line.
<b>addrtpcon</b>	Adds a static RTP VoIP trunking connection.
<b>addrudptrunk</b>	Adds an ISDN PRI backhaul RUDP session for an LAPD trunk connection.
<b>clrtpcnt</b>	Clears the RTP counters (statistics) for a specific static RTP connection.
<b>cnflapdtrunkpvc</b>	Assigns the PVC trunk type that carries LAPD messages for the current VISM card.
<b>cnflntrunkcond</b>	Enables or disables line conditioning on a VISM card line.
<b>cnfrtpcon</b>	Modifies an existing static RTP VoIP trunking connection.
<b>cnfrudptrunkrmtip</b>	Modifies the remote VISM IP address used in the ISDN PRI backhaul RUDP trunk for a specified session.
<b>dellapdtrunk</b>	Deletes an LAPD configured line.
<b>delrtpcon</b>	Deletes a static RTP VoIP trunking connection.
<b>dsplapd</b>	Displays data about an LAPD.
<b>dsplapdtrunkpvc</b>	Displays the assigned PVC trunk type that carries LAPD trunk messages for the current VISM card.
<b>dsplapdtrunks</b>	Displays the configuration data of all LAPD trunks.
<b>dsprtpcnt</b>	Displays the bearer counters (statistics) for a specified RTP VoIP trunking connection.
<b>dsprtpcon</b>	Displays the configuration data of a specified static RTP VoIP trunking connection.

Command	Description
<b>dsprtpcons</b>	Displays the configuration data of all static RTP VoIP trunking connections.
<b>dsprudptrunk</b>	Displays the configuration data of a specified ISDN PRI backhaul RUDP session.
<b>dsprudptrunks</b>	Displays the configuration data of all ISDN PRI backhaul RUDP sessions.



# delses

To delete a PRI backhaul session, use the **delses** command.

```
delses <session_number>
```

---

## Syntax Description

*session\_number* Session number in the range 1–64.

---



---

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

---

## Usage Guidelines

Follow standard CLI procedures for this command.

---

## Examples

In the following example, session number 3 is deleted:

```
nodename.1.5.VISM8.a > delses 3
```

```
nodename.1.5.VISM8.a >
```

---

## Related Commands

Command	Description
<b>adds</b>	Adds a PRI backhaul session between a VISM card and a call agent.
<b>dspses</b>	Displays data about an individual PRI backhaul session.
<b>dspsess</b>	Displays data about all PRI backhaul sessions.

---

# delsesgrp

To delete a PRI backhaul session group, use the **delsesgrp** command.

```
delsesgrp <group_number>
```

## Syntax Description

<i>group_number</i>	Identifying session group number in the range 1–16.
---------------------	---

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

## Usage Guidelines

You must delete all sessions in the session group before you use this command to delete the session group.

## Examples

In the following example, session group number 2 is deleted:

```
nodename.1.5.VISM8.a > delsesgrp 2
```

```
nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>addsesgrp</b>	Adds a PRI backhaul session group between a VISM card and a call agent.
<b>dspsesgrp</b>	Displays data about a PRI backhaul session group.
<b>dspsesgrps</b>	Displays data about all PRI backhaul session groups.

# delseset

To delete a PRI backhaul session set, use the **delseset** command.

**delseset** <set\_number>

## Syntax Description

*set\_number* Session set number. Range is 1–16.

**Note** Currently, only session set number 1 is supported.

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

## Usage Guidelines

You must delete all session groups in the session set before you use this command to delete the session set.

## Examples

In the following example, session set number 1 is deleted:

```
nodename.1.5.VISM8.a > delseset 1
```

```
nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>addsset</b>	Adds a PRI backhaul session set between a VISM card and a call agent.

# deltoneplan

To delete a provisional tone plan from the system, use the **deltoneplan** command.

```
deltoneplan <tone_plan_region> <tone_plan_version>
```

## Syntax Description

<i>tone_plan_region</i>	Country or region for the tone plan which you want to delete from VISM. Range is 1–64 alphanumeric characters. This argument is case sensitive.
<i>tone_plan_version</i>	Version number of the tone plan country or region that you want deleted from VISM. Range is 1–65535.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

If a tone plan is assigned to a VISM line, you cannot delete that tone plan. Use the **dellntoneplan** command to remove a tone plan assignment from a VISM line.

This command does not delete the tone plan file from the TFTP server, which allows you to use the **addtoneplan** command to add the tone plan back into the system, as needed.



### Note

You cannot delete built-in tone plans from the system with this command.

## Examples

In the following example, the tone plan identified by the tone plan region name singapore and tone plan version number 11 is deleted from the current VISM card:

```
nodename.1.5.VISM8.a > deltoneplan singapore 11
```

```
nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>addtoneplan</b>	Adds a tone plan to the current VISM card.
<b>cnflnringback</b>	Configures the ring-back tone method for a specified line on the current VISM card.
<b>cnflntoneplan</b>	Assigns a tone plan to a specified VISM card line.
<b>cnflntonetimeout</b>	Modifies the timeout periods of all call progress tones supported by VISM on a specified VISM card line.
<b>dellntoneplan</b>	Deletes the tone plan configuration of a specified VISM card line.
<b>dsplnringback</b>	Displays the ring-back tone type for a specified line on the current VISM card.
<b>dsplntoneplan</b>	Displays the tone plan configuration of a specified VISM card line.
<b>dsplntonetimeout</b>	Displays the configured timeout periods for all call progress tones of a specified VISM card line.
<b>dsptonebuiltinplans</b>	Displays all preconfigured (built-in) tone plans on the current VISM card.

<b>Command</b>	<b>Description</b>
<b>dsptoneplan</b>	Displays the tone configuration of a specified tone plan—either a preconfigured (built-in) or user-added tone plan.
<b>dsptoneplans</b>	Displays the tone configuration of all tone plans—either preconfigured (built-in) or user-added tone plans.
<b>dsptoneprovplans</b>	Displays all user-added (provisional) tone plans.
<b>dsptoneregionplans</b>	Displays a list of all tone plans for the countries and regions whose name partially or completely matches the name you supply.

# deltrapfilter

To remove traps from the list of traps to be filtered on the VISM-PR card, use the **deltrapfilter** command.

```
deltrapfilter <trapNumber> | <trapNumber> <trapNumber> <trapNumber> <trapNumber>|
```

## Syntax Description

<i>trapNumber</i>	Number of the trap to be removed from the list. Range is 50650–50799.
<i>trapNumber</i>	(Optional) Use these arguments to delete up to four more traps (five in all) from the trap filter list.

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

This command is applicable only to the VISM-PR card.

## Examples

In the following example, channel trap TRAP\_VISM\_CHAN\_ADDED is deleted.

```
nodename.1.28.VISM8.a > deltrapfilter 50755
```

```
nodename.1.28.VISM8.a >
```

To display the trap filters on the VISM-PR card, use the **dspalltrapfilters** command.

## Related Commands

Command	Description
<b>addtrapfilter</b>	Adds a trap to the filter list.
<b>cnftrapfilterfeature</b>	Enables or disables the trap filtering feature.
<b>cnftrapfiltertimer</b>	Configures the trap filter timer.
<b>delalltrapfilters</b>	Deletes all the traps in the filter list.
<b>dspalltrapfilters</b>	Displays all configured trap filters.
<b>dsptrapfilter</b>	Displays the current trap filter configurations.
<b>dsptraphelp</b>	Displays all traps or traps per group.

# delxgcpcon

To delete an xGCP connection specified by the xGCP connection identification number, use the **delxgcpcon** command.

```
delxgcpcon <connId>
```

<b>Syntax Description</b>	<i>connId</i>	Identification number of the connection to be deleted. Value is 4 bytes binary (in hex) up to 8 hexadecimal characters. Range is 0–9, A–F.
---------------------------	---------------	--

<b>Command Modes</b>	VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC
----------------------	---

<b>Usage Guidelines</b>	Follow standard CLI procedures for this command.
-------------------------	--

**Examples** In the following example, the connection represented by the hexadecimal connection identification number b is configured:

```
nodename.1.5.VISM8.a > delxgcpcon b
```

```
nodename.1.5.VISM8.a >
```

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>dspxgcpcon</b>	Displays the attributes associated with a call agent-established connection.
	<b>dspxgcpcons</b>	Displays the xGCP connection ID, endpoint name, and call ID corresponding to each call agent-established connection on the gateway.

# delxgcppersistevt

To delete a persistent xGCP event, use the **delxgcppersistevt** command.

**delxgcppersistevt** <*index*>

<b>Syntax Description</b>	<i>index</i>	Index package event number of the event to be deleted. Range is 1–16.
---------------------------	--------------	---

<b>Command Modes</b>	VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC
----------------------	---

<b>Usage Guidelines</b>	Follow standard CLI procedures for this command.
-------------------------	--

<b>Examples</b>	In the following example, the persistent xGCP event represented by event number 1 is deleted:
-----------------	---

```
nodename.1.5.VISM8.a > delxgcppersistevt 1
nodename.1.5.VISM8.a >
```

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	dspxgcppersistevts	Adds persistent xGCP events.



# dncon

To configure a specified connection as down, preventing traffic from being passed to the specified connection, use the **dncon** command.

**dncon** <LCN>

## Syntax Description

<i>LCN</i>	Logical channel number. Range is 131–510.
------------	---

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

If you use this command and the previous channel state is active (up), a connection down trap is sent.

## Examples

In the following example, connection 188 is configured to be administratively down, with no traffic passed to it:

```
nodename.1.27.VISM8.a > dncon 188
```

```
nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>dscon</b>	Displays the parameters for a specified channel.
<b>upcon</b>	Configures a specified connection up, allowing traffic to be passed to the specified connection.

# dspaal2params

To display AAL2 configuration parameters, use the **dspaal2params** command.

## **dspaal2params**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** AAL2 trunking, switched AAL2 SVC, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Use this command to display the following AAL2 configuration parameters:

- DTMF relay status
- CAS bit transport status
- Type 3 redundancy status
- VAD timer value
- CID fill timer value

**Examples** In the following example, the AAL2 configuration parameters are displayed:

```
nodename.1.5.VISM8.a > dspaal2params

AAL2 DTMF RELAY:           Off
AAL2 CAS BITS TRANSPORT:  Off
AAL2 TYPE3 REDUNDANCY:    On
AAL2 VAD TIMER:           250
AAL2 CID FILL TIMER:      30

nodename.1.5.VISM8.a >
```

## **Related Commands**

<b>Command</b>	<b>Description</b>
<b>cnfaal2timerparams</b>	Configures the holdover time for VAD before silence suppression on an AAL2 PVC is activated.
<b>cnfaal2transparams</b>	Configures the transportation of DTMF and CAS bits to another endpoint and enables or disables the type 3 packet triple redundancy feature.

# dspaal2profile

To display data about a specified AAL2 profile type and profile number, use the **dspaal2profile** command.

**dspaal2profile** <profileType> <profileNumber>

---

## Syntax Description

<i>profileType</i>	Profile type to be used for the CID. <ul style="list-style-type: none"> <li>• 1 = International Telecommunication Union (ITU) I.366.2</li> <li>• 3 = Custom</li> </ul>
<i>profileNumber</i>	Number of the profile. <ul style="list-style-type: none"> <li>• 1 = ITU profile</li> <li>• 2 = ITU profile</li> <li>• 3 = ITU profile</li> <li>• 7 = ITU profile</li> <li>• 8 = ITU profile</li> <li>• 12 = ITU profile</li> <li>• 100 = Custom profile</li> <li>• 101 = Custom profile</li> <li>• 110 = Custom profile</li> <li>• 200 = Custom profile</li> <li>• 201 = Custom profile</li> <li>• 210 = Custom profile</li> </ul>

---

## Command Modes

AAL2 trunking, switched AAL2 SVC, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

The AAL2 profiles correspond to the profile types ITU and ATMF as defined in the ITU-T I.366.2 and ATM forum AF-VTOA-0113 standards.

**Examples**

In the following example, the data for AAL2 profile type 3 and profile number 110 is displayed:

```
nodename.1.5.VISM8.a > dspaal2profile 3 110
  UUI      Packet
Codepoint Length      Codec      SID      M      Packet Seq. No.
          (octets)
          Range      (octets)
0-7       40      PCMU      SIDG     1      5      5
0-7       40      PCMA      SIDG     1      5      5
8-15     40      G726-32  SIDG     2     10      5
8-15     30      G729ab   SID729   3     30      5

nodename.1.5.VISM8.a >
```

**Related Commands**

There are no related commands.

# dspaggsvcbw

To display the configured, used, and available switched virtual circuit (SVC) bandwidth, use the **dspaggsvcbw** command.

## dspaggsvcbw

---

**Syntax Description** This command has no arguments or keywords.

---

**Command Modes** AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

---

**Usage Guidelines** Follow standard CLI procedures when using this command.

---

**Examples** In the following example, the SVC bandwidth is displayed:

```
nodename.1.5.VISM8.a > dspaggsvcbw
```

```
Configured   :      50 cps  
Used         :      0 cps  
Available    :      50 cps
```

```
nodename.1.5.VISM8.a >
```

---

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>cnfaggsvcbw</b>	Sets the SVC bandwidth.

---

# dspaissuppression

To show the alarm indication signal (AIS) propagation settings of each enabled permanent virtual circuit (PVC), use the **dspaissuppression** command.

## dspaissuppression

**Syntax Description** This command has no arguments or keywords.

**Command Modes** AAL2 trunking, switched AAL2 PVC, switched AAL2 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures when using this command.

**Examples** In the following example, the AIS propagation settings for each PVC are displayed:

```
nodename.1.5.VISM8.a > dspaissuppression

ConnId                ChanNum   Status   AIS Delay Time   AIS Delay Left
-----                -
nodename.5.1.0.131    131      DISABLED 30                0

nodename.1.5.VISM8.a >
```

Related Commands	Command	Description
	<b>cnfaissuppression</b>	Enables or disables AIS propagation.

# dspall

To display static configurations, run-time statistics, and real-time dynamic data, use the **dspall** command.

**dspall -config**

**dspall -runtime**

## Syntax Description

<b>-config</b>	Use this identifier to display only the static configurations.
<b>-runtime</b>	Use this identifier to display the static configurations, run-time statistics, and real-time dynamic data.

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

This command displays all of the individual display command data for each operating mode. The display data differs depending on the mode.

For a list of the display commands that are applicable to the **dspall -config** and the **dspall -runtime** commands, see the “Static and Real-Time Configuration Display” section on page 9-69.

## Examples

In the following example, sample static output is displayed through the use of the **dspall -config** command in the VoIP switching/VoIP trunking mode:

```
nodename.1.28.VISM8.a > dspall -config

----- Displaying Card Level Configuration -----
dspcarddsp
-----

IdlePattern:           0x7f or 0xff
IdleDirection:        Both
PacketSize:           80 bytes
DB loss:              sixdb
Jitter buffer mode:   fixed           No
Jitter buffer size:   forty msec
Adaptive Gain Control: off

dspcasendpts
-----
No cas endpoints found

dspcasvars
-----

Empty table.
```

## Related Commands

There are no related commands.

# dspalltrapfilters

To display all of the configured trap filters on the VISM-PR card, use the **dspalltrapfilters** command.

## **dspalltrapfilters**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** This command is applicable only to the VISM-PR card.

**Examples** In the following example, the active trap filters on VISM-PR card 28 are displayed:

```
nodename.1.28.VISM8.a > dspalltrapfilters

Trap Filtering Feature: Enabled
TrapNumber      Filter Time Configured(minutes)  Filter Time Left(minutes)
=====
50680           15                               14
50681           15                               15
50682           15                               14

nodename.1.28.VISM8.a >
```

## **Related Commands**

<b>Command</b>	<b>Description</b>
<b>addtrapfilter</b>	Adds a trap to the filter list.
<b>cnftrapfilterfeature</b>	Enables or disables the trap filtering feature.
<b>cnftrapfiltertimer</b>	Configures the trap filter timer.
<b>delalltrapfilters</b>	Deletes all the traps in the filter list.
<b>deltrapfilter</b>	Deletes a trap from the filter list.
<b>dspttrapfilter</b>	Displays the current trap filter configurations.
<b>dspttraphelp</b>	Displays all traps or traps per group.



# dspalm

To display the alarms associated with a specified line, use the **dspalm** command.

**dspalm -ds1** <LineNum>

Syntax Description	-ds1	The mandatory <i>line-num</i> argument identifier.
	<i>LineNum</i>	Number of the T1 or E1 line for which you want to display alarms. Range is 1–8.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, line 1 alarms are displayed:

```
nodename.1.5.VISM8.a > dspalm -ds1 1

LineNum:1
LineAlarmState: Alarm(s) On --
                XmtRAI
                RcvLOS
LineStatisticalAlarmState: No Statistical Alarms

nodename.1.5.VISM8.a >
```

Related Commands	Command	Description
	<b>clralm</b>	Clears alarms on a specific VISM card line.
	<b>dsalms</b>	Displays all alarms for a selected line type on a VISM card.

# dspalmcnf

To display threshold data for the alarm statistics being collected, use the **dspalmcnf** command.

**dspalmcnf -ds1** <LineNum>

Syntax Description	-ds1	The mandatory <i>line-num</i> argument identifier.
	<i>LineNum</i>	Number of the T1 or E1 line for which you want to display threshold data for the alarm statistics being collected. Range is 1–8.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, threshold data for the line 1 alarm statistics is displayed:

```
nodename.1.5.VISM8.a > dspalmcnf -ds1 1
```

```
LineNum:                1
RedSeverity:             Major
RAISeverity:             Minor
NEAlarmUpCount:         6
NEAlarmDnCount:         1
NEAlarmThreshold:       1500
FEAlarmUpCount:         6
FEAlarmDnCount:         1
FEAlarmThreshold:       1500
StatisticalAlarmSeverity: Minor
lCV15minThreshold:      14
lCV24hrThreshold:       134
lES15minThreshold:      12
lES24hrThreshold:       121
lSES15minThreshold:     10
lSES24hrThreshold:     100
cRC15minThreshold:      14
cRC24hrThreshold:       134
cRCES15minThreshold:    12
cRCES24hrThreshold:     121
cRCSES15minThreshold:   10
cRCSES24hrThreshold:    100
SEFS15minThreshold:     2
SEFS24hrThreshold:     17
AISS15minThreshold:     2
AISS24hrThreshold:     17
UAS15minThreshold:      10
```

```
nodename.1.5.VISM8.a >
```

Related Commands	Command	Description
	cnfalment	Configures the collection of TDM line statistics.
	dspalm	Displays the alarms associated with a specified line.
	dspalms	Displays all alarms for the selected line type on a card.

# dspalmcnt

To display alarm counters and statistics, use the **dspalmcnt** command.

**dspalmcnt -ds1** <LineNum>

Syntax Description	-ds1	The mandatory <i>line-num</i> argument identifier.
	<i>LineNum</i>	Number of the T1 or E1 line for which you want to display alarm counters and statistics. Range is 1–8.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** See the **cnfalmcnt** command description for a list of the TDM line statistics that are collected and then displayed by this command.

**Examples** In the following example, the alarm counters and statistics for line 1 are displayed:

```
nodename.1.5.VISM8.a > dspalmcnt -ds1 1
LineNum:                1
lCVCurrent:              0
lCVLast15minBucket:     0
lCVLast24hrBucket:      0
lESCurrent:              0
lESLast15minBucket:     0
lESLast24hrBucket:      0
lSESCurrent:            0
lSESLast15minBucket:    0
lSESLast24hrBucket:     0
cRCCurrent:              0
cRCLast15minBucket:     0
cRCLast24hrBucket:      0
cRCESCurrent:           0
cRCESLast15minBucket:   0
cRCESLast24hrBucket:    0
cRCSESCurrent:          0
cRCSESLast15minBucket:  0
cRCSESLast24hrBucket:   0
sEFSCurrent:            430
sEFSLast15minBucket:    900
sEFSLast24hrBucket:     11699
aISSCurrent:            0
aISSLast15minBucket:    0
aISSLast24hrBucket:     0
uASCurrent:             430
uASLast15minBucket:     900
uASLast24hrBucket:      11696
percentEFS:             100
RcvLOSCount:            1
RcvOOFCount:            1
RcvRAICount:            0
RcvFECount:             97997379
```

Related Commands	Command	Description
	clralmct	Clears the alarm counters and statistics on a specified VISM card line.
	clralmctns	Clears all alarm counters and statistics on a VISM card.
	dspalmct	Displays the threshold data about the alarm statistics being collected.

# dspalms

To display the alarms for a specified VISM card line type, use the **dspalms** command.

**dspalms** <lineType>

## Syntax Description

<i>lineType</i>	Line type is -ds1 for T1 or E1 lines. The value -ds1 is the only option for this parameter.
-----------------	---

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the alarms for the T1 line type are displayed:

```
nodename.1.5.VISM8.a > dspalms -ds1

Line  AlarmState  StatisticalAlarmState
----  -
5.1   No Alarms      No Statistical Alarms
5.2   No Alarms      No Statistical Alarms
5.3   No Alarms      No Statistical Alarms

nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>dspalm</b>	Displays the alarms associated with a specified line.

# dspannagetime

To display the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache, use the **dspannagetime** command.

## **dspannagetime**

### Syntax Description

This command has no arguments or keywords.

### Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

### Usage Guidelines

Follow standard CLI procedures for this command.

### Examples

In the following example, the age time for nonpermanent announcements is 2 hours. After 2 hours the nonpermanent announcements are refreshed from the announcement file server.

```
nodename.1.5.VISM8.a > dspannagetime
```

```
Announcement Age Time: 120 minutes
```

```
nodename.1.5.VISM8.a >
```

### Related Commands

Command	Description
<b>addannpermanent</b>	Configures an announcement server file and associated codec type as permanent.
<b>cnfannagetime</b>	Configures the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache.
<b>cnfanndn</b>	Designates an announcement file server domain name.
<b>cnfannpathprefix</b>	Designates the main prefix directory TFTP path you can use for retrieving announcement files from the announcement file server.
<b>cnfannprefcodec</b>	Configures the codec type used for announcements played on unconnected TDM endpoints.
<b>cnfannreqtimeout</b>	Configures the time for announcements to play after the VISM receives the announcement signal (request) from the call agent.
<b>delannalldynamic</b>	Deletes all announcement files from the list of files currently saved.
<b>delanndynamic</b>	Deletes an announcement file from the list of files currently saved.
<b>delannpermanent</b>	Deletes a permanent announcement file and its associated codec type from the announcement file server.
<b>dspanncache</b>	Displays all available temporary announcement file names and associated age times before the cache is refreshed from the announcement file server.
<b>dspanncontrols</b>	Displays a summary list of all provisionable announcement file variables, including variables associated with all announcement file CLI commands.
<b>dspanndn</b>	Displays the announcement file server domain name.

Command	Description
<b>dspannpathprefix</b>	Displays the main prefix directory path that the VISM uses for retrieving announcement files from the announcement file server.
<b>dspannpermanents</b>	Displays all available permanent announcement files with their associated codec types and identifying index numbers.
<b>dspannprefcodec</b>	Displays the codec type used for announcements played on unconnected TDM endpoints.



# dspanncache

To display all available temporary announcement file names, and associated age times before the names and times are refreshed from the announcement file server, use the **dspanncache** command.

## dspanncache

### Syntax Description

This command has no arguments or keywords.

### Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

### Usage Guidelines

Follow standard CLI procedures for this command.

### Examples

In the following example, the temporary announcement file names zero and one are each configured with an age time of 1000 minutes:

```
nodename.1.5.VISM8.a > dspanncache

File Name      Codec   Time Till Aged
zero           1       1000
one            2       1000

nodename.1.5.VISM8.a >
```

### Related Commands

Command	Description
<b>addannpermanent</b>	Configures an announcement server file and associated codec type as permanent.
<b>cnfannagetime</b>	Configures the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache.
<b>cnfanndn</b>	Designates an announcement file server domain name.
<b>cnfannpathprefix</b>	Designates the main prefix directory TFTP path you can use for retrieving announcement files from the announcement file server.
<b>cnfannprefcodec</b>	Configures the codec type used for announcements played on unconnected TDM endpoints.
<b>cnfannreqtimeout</b>	Configures the time for announcements to play after the VISM receives the announcement signal (request) from the call agent.
<b>delannalldynamic</b>	Deletes all announcement files from the list of files currently saved.
<b>delanndynamic</b>	Deletes an announcement file from the list of files currently saved.
<b>delannpermanent</b>	Deletes a permanent announcement file and its associated codec type from the announcement file server.
<b>dspannagetime</b>	Displays the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache.
<b>dspanncontrols</b>	Displays a summary list of all provisionable announcement file variables, including variables associated with all announcement file CLI commands.

<b>Command</b>	<b>Description</b>
<b>dspanndn</b>	Displays the announcement file server domain name.
<b>dspannpathprefix</b>	Displays the main prefix directory path that the VISM uses for retrieving announcement files from the announcement file server.
<b>dspannpermanents</b>	Displays all available permanent announcement files with their associated codec types and identifying index numbers.
<b>dspannprefcodec</b>	Displays the codec type used for announcements played on unconnected TDM endpoints.
<b>dspannreqtimeout</b>	Displays the expiration time for announcements to play before being aborted.

# dspanncontrols

To display a summary list of all provisionable announcement file variables, including variables associated with all announcement file CLI commands, use the **dspanncontrols** command.

## dspanncontrols

### Syntax Description

This command has no arguments or keywords.

### Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

### Usage Guidelines

Follow standard CLI procedures for this command.

### Examples

In the following example, a summary list of all provisionable announcement file variables is displayed:

```
nodename.1.5.VISM8.a > dspanncontrols

Announcement Table Size:      125 entries
Announcement File Server:    server1
Announcement Age Time:       10080 minutes
Announcement Preference Codec: G711.a
Announcement Prefix Path:    path1
Announcement Req Timeout:    5 seconds

nodename.1.5.VISM8.a >
```

### Related Commands

Command	Description
<b>addannpermanent</b>	Configures an announcement server file and associated codec type as permanent.
<b>cnfannagetime</b>	Configures the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache.
<b>cnfanndn</b>	Designates an announcement file server domain name.
<b>cnfannpathprefix</b>	Designates the main prefix directory TFTP path you can use for retrieving announcement files from the announcement file server.
<b>cnfannprefcodec</b>	Configures the codec type used for announcements played on unconnected TDM endpoints.
<b>cnfannreqtimeout</b>	Configures the time for announcements to play after the VISM receives the announcement signal (request) from the call agent.
<b>delannalldynamic</b>	Deletes all announcement files from the list of files currently saved.
<b>delanndynamic</b>	Deletes an announcement file from the list of files currently saved.
<b>delannpermanent</b>	Deletes a permanent announcement file and its associated codec type from the announcement file server.
<b>dspannagetime</b>	Displays the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache.

<b>Command</b>	<b>Description</b>
<b>dspanncache</b>	Displays all available temporary announcement file names and associated age times before the cache is refreshed from the announcement file server.
<b>dspanndn</b>	Displays the announcement file server domain name.
<b>dspannpathprefix</b>	Displays the main prefix directory path that the VISM uses for retrieving announcement files from the announcement file server.
<b>dspannpermanents</b>	Displays all available permanent announcement files with their associated codec types and identifying index numbers.
<b>dspannprefcodec</b>	Displays the codec type used for announcements played on unconnected TDM endpoints.
<b>dspannreqtimeout</b>	Displays the expiration time for announcements to play before being aborted.

# dspanndn

To display the announcement file server domain name, use the **dspanndn** command.

**dspanndn**

## Syntax Description

This command has no arguments or keywords.

## Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the name of the announcement file server is displayed:

```
nodename.1.5.VISM8.a > dspanndn
Announcement File Server: announceserver3
nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>addannpermanent</b>	Configures an announcement server file and associated codec type as permanent.
<b>cnfannagetime</b>	Configures the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache.
<b>cnfanndn</b>	Designates an announcement file server domain name.
<b>cnfannpathprefix</b>	Designates the main prefix directory TFTP path you can use for retrieving announcement files from the announcement file server.
<b>cnfannprefcodec</b>	Configures the codec type used for announcements played on unconnected TDM endpoints.
<b>cnfanreqtimeout</b>	Configures the time for announcements to play after the VISM receives the announcement signal (request) from the call agent.
<b>delannalldynamic</b>	Deletes all announcement files from the list of files currently saved.
<b>delanndynamic</b>	Deletes an announcement file from the list of files currently saved.
<b>delannpermanent</b>	Deletes a permanent announcement file and its associated codec type from the announcement file server.
<b>dspannagetime</b>	Displays the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache.
<b>dspanncache</b>	Displays all available temporary announcement file names and associated age times before the cache is refreshed from the announcement file server.
<b>dspanncontrols</b>	Displays a summary list of all provisionable announcement file variables, including variables associated with all announcement file CLI commands.

<b>Command</b>	<b>Description</b>
<b>dspannpathprefix</b>	Displays the main prefix directory path that the VISM uses for retrieving announcement files from the announcement file server.
<b>dspannpermanents</b>	Displays all available permanent announcement files with their associated codec types and identifying index numbers.
<b>dspannprefcodec</b>	Displays the codec type used for announcements played on unconnected TDM endpoints.

# dspannpathprefix

To display the main prefix directory path from which VISM retrieves announcement files from the announcement file server, use the **dspannpathprefix** command.

## **dspannpathprefix**

### Syntax Description

This command has no arguments or keywords.

### Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

### Usage Guidelines

Follow standard CLI procedures for this command.

### Examples

In the following example, a main prefix directory TFTP path is shown to be path4:

```
nodename.1.5.VISM8.a > dspannpathprefix
```

```
Announcement Prefix Path: path4
```

```
nodename.1.5.VISM8.a >
```

### Related Commands

Command	Description
<b>addannpermanent</b>	Configures an announcement server file and associated codec type as permanent.
<b>cnfannagetime</b>	Configures the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache.
<b>cnfanndn</b>	Designates an announcement file server domain name.
<b>cnfannpathprefix</b>	Designates the main prefix directory TFTP path you can use for retrieving announcement files from the announcement file server.
<b>cnfannprefcodec</b>	Configures the codec type used for announcements played on unconnected TDM endpoints.
<b>cnfanreqtimeout</b>	Configures the time for announcements to play after the VISM receives the announcement signal (request) from the call agent.
<b>delannalldynamic</b>	Deletes all announcement files from the list of files currently saved.
<b>delanndynamic</b>	Deletes an announcement file from the list of files currently saved.
<b>delannpermanent</b>	Deletes a permanent announcement file and its associated codec type from the announcement file server.
<b>dspannagetime</b>	Displays the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache.
<b>dspanncache</b>	Displays all available temporary announcement file names and associated age times before the cache is refreshed from the announcement file server.
<b>dspanncontrols</b>	Displays a summary list of all provisionable announcement file variables, including variables associated with all announcement file CLI commands.

<b>Command</b>	<b>Description</b>
<b>dspanndn</b>	Displays the announcement file server domain name.
<b>dspannpermanents</b>	Displays all available permanent announcement files with their associated codec types and identifying index numbers.
<b>dspannprefcodec</b>	Displays the codec type used for announcements played on unconnected TDM endpoints.



# dspannpermanents

To display all available permanent announcement files with their associated codec types and identifying index numbers, use the **dspannpermanents** command.

## dspannpermanents

### Syntax Description

This command has no arguments or keywords.

### Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

### Usage Guidelines

Follow standard CLI procedures for this command.

### Examples

In the following example, the available permanent announcement files with associated codec types and identifying index numbers are displayed:

```
nodename.1.5.VISM8.a > dspannpermanents

Number      Status      File Name      Codec
1           loaded     alllinesbusy.au  G.726-40K

nodename.1.5.VISM8.a >
```

### Related Commands

Command	Description
<b>addannpermanent</b>	Configures an announcement server file and associated codec type as permanent.
<b>cnfannagetime</b>	Configures the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache.
<b>cnfannn</b>	Designates an announcement file server domain name.
<b>cnfannpathprefix</b>	Designates the main prefix directory TFTP path you can use for retrieving announcement files from the announcement file server.
<b>cnfannprefcodec</b>	Configures the codec type used for announcements played on unconnected TDM endpoints.
<b>cnfannreqtimeout</b>	Configures the time for announcements to play after the VISM receives the announcement signal (request) from the call agent.
<b>delannalldynamic</b>	Deletes all announcement files from the list of files currently saved.
<b>delanndynamic</b>	Deletes an announcement file from the list of files currently saved.
<b>delannpermanent</b>	Deletes a permanent announcement file and its associated codec type from the announcement file server.
<b>dspannagetime</b>	Displays the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache.
<b>dspanncache</b>	Displays all available temporary announcement file names and associated age times before the cache is refreshed from the announcement file server.

<b>Command</b>	<b>Description</b>
<b>dspanncontrols</b>	Displays a summary list of all provisionable announcement file variables, including variables associated with all announcement file CLI commands.
<b>dspanndn</b>	Displays the announcement file server domain name.
<b>dspannpathprefix</b>	Displays the main prefix directory path that the VISM uses for retrieving announcement files from the announcement file server.
<b>dspannprefcodec</b>	Displays the codec type used for announcements played on unconnected TDM endpoints.

# dspannprefcodec

To display the codec type used for announcements played on unconnected time-division multiplexing (TDM) endpoints, use the **dspannprefcodec** command.

## dspannprefcodec

### Syntax Description

This command has no arguments or keywords.

### Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

### Usage Guidelines

Follow standard CLI procedures for this command.

### Examples

In the following example, the G.711u codec type is configured for announcements played on unconnected TDM endpoints:

```
nodename.1.5.VISM8.a > dspannprefcodec
```

```
Announcement Preference Codec: G.711u
```

```
nodename.1.5.VISM8.a >
```

### Related Commands

Command	Description
<b>addannpermanent</b>	Configures an announcement server file and associated codec type as permanent.
<b>cnfannagetime</b>	Configures the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache.
<b>cnfanndn</b>	Designates an announcement file server domain name.
<b>cnfannpathprefix</b>	Designates the main prefix directory TFTP path you can use for retrieving announcement files from the announcement file server.
<b>cnfannprefcodec</b>	Configures the codec type used for announcements played on unconnected TDM endpoints.
<b>cnfanreqtimeout</b>	Configures the time for announcements to play after the VISM receives the announcement signal (request) from the call agent.
<b>delannalldynamic</b>	Deletes all announcement files from the list of files currently saved.
<b>delanndynamic</b>	Deletes an announcement file from the list of files currently saved.
<b>delannpermanent</b>	Deletes a permanent announcement file and its associated codec type from the announcement file server.
<b>dspannagetime</b>	Displays the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache.
<b>dspanncache</b>	Displays all available temporary announcement file names and associated age times before the cache is refreshed from the announcement file server.

<b>Command</b>	<b>Description</b>
<b>dspanncontrols</b>	Displays a summary list of all provisionable announcement file variables, including variables associated with all announcement file CLI commands.
<b>dspanndn</b>	Displays the announcement file server domain name.
<b>dspannpathprefix</b>	Displays the main prefix directory path that the VISM uses for retrieving announcement files from the announcement file server.
<b>dspannpermanents</b>	Displays all available permanent announcement files with their associated codec types and identifying index numbers.

# dspannreqtimeout

To display the timeout period for announcements to begin playing before being aborted, use the **dspannreqtimeout** command.

## dspannreqtimeout

### Syntax Description

This command has no arguments or keywords.

### Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

### Usage Guidelines

Follow standard CLI procedures for this command.

### Examples

In the following example, the announcements must begin playing within 12 seconds or they will be aborted:

```
nodename.1.5.VISM8.a > dspannreqtimeout
```

```
Announcement Req Timeout: 12 seconds
```

```
nodename.1.5.VISM8.a >
```

### Related Commands

Command	Description
<b>addannpermanent</b>	Configures an announcement server file and associated codec type as permanent.
<b>cnfannagetime</b>	Configures the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache.
<b>cnfanndn</b>	Designates an announcement file server domain name.
<b>cnfannpathprefix</b>	Designates the main prefix directory TFTP path you can use for retrieving announcement files from the announcement file server.
<b>cnfannprefcodec</b>	Configures the codec type used for announcements played on unconnected TDM endpoints.
<b>cnfanreqtimeout</b>	Configures the time for announcements to play after the VISM receives the announcement signal (request) from the call agent.
<b>delannalldynamic</b>	Deletes all announcement files from the list of files currently saved.
<b>delanndynamic</b>	Deletes an announcement file from the list of files currently saved.
<b>delannpermanent</b>	Deletes a permanent announcement file and its associated codec type from the announcement file server.
<b>dspannagetime</b>	Displays the time that a nonpermanent announcement is to remain valid after it is placed in the VISM announcement cache.
<b>dspanncache</b>	Displays all available temporary announcement file names and associated age times before the cache is refreshed from the announcement file server.

<b>Command</b>	<b>Description</b>
<b>dspanncontrols</b>	Displays a summary list of all provisionable announcement file variables, including variables associated with all announcement file CLI commands.
<b>dspanndn</b>	Displays the announcement file server domain name.
<b>dspannpathprefix</b>	Displays the main prefix directory path that the VISM uses for retrieving announcement files from the announcement file server.
<b>dspannpermanents</b>	Displays all available permanent announcement files with their associated codec types and identifying index numbers.
<b>dspannprefcodec</b>	Displays the codec type used for announcements played on unconnected TDM endpoints.

# dspavgsvctimes

To display the table of switched virtual circuit (SVC) service access point identifier (SAPI) message processing statistic averages, use the **dspavgsvctimes** command.

This command starts a menu-driven interface that enables you to refresh the screen with current counts, refresh the listed counters, or quit.

## dspavgsvctimes

**Syntax Description** This command has no arguments or keywords.

**Command Modes** AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures when using this command.

**Examples** In the following examples, the SVC statistics averages are shown. The average times column always shows the processing times across all SVC call table indices.

This example shows the output from the originating side.

```
nodename.1.5.VISM8.a > dspavgsvctimes
```

Originating End:	curr (ms)	Avg (ms)	n
SETUP_IND-CONNECT	0.0	0.0	186
CONNECT-CONN_ACK_IND	161.0	6.7	186

Terminating End:	curr (ms)	Avg (ms)	n
SETUP-CALL_PROC_IND	0.0	0.0	0
SETUP-CONN_IND	0.0	0.0	0
CALLPROC_CONNECT	0.0	0.0	0
CONN_IND-CONN_ACK	0.0	0.0	0
RELEASE-RELCOM_IND	0.0	0.0	0
RELEASE_IND-RELCOM	0.0	0.0	0

(z)-zero average counts (r)-refresh (q)-quit

Originating End:	curr (ms)	Avg (ms)	n
SETUP_IND-CONNECT	0.0	0.0	186
CONNECT-CONN_ACK_IND	161.0	6.7	186

```
Terminating End:
  SETUP-CALL_PROC_IND      0.0      0.0      0
  SETUP-CONN_IND           0.0      0.0      0
  CALLPROC_CONNECT         0.0      0.0      0
  CONN_IND-CONN_ACK        0.0      0.0      0

  RELEASE-RELCOM_IND       0.0      0.0      0
  RELEASE_IND-RELCOM       0.0      0.0      0
```

(z)-zero average counts (r)-refresh (q)-quitq

This example shows the output from the terminating side.

```
nodename.1.5.VISM8.a > dspavgsvctimes
```

```

      curr(ms) Avg(ms)      n
-----
Originating End:
  SETUP_IND-CONNECT         0.0      0.0      0
  CONNECT-CONN_ACK_IND      0.0      0.0      0
```

```
Terminating End:
  SETUP-CALL_PROC_IND       23225.0 12.8      31
  SETUP-CONN_IND            24838.0 13.3      31
  CALLPROC_CONNECT          1612.0  1.3      31
  CONN_IND-CONN_ACK         0.0      0.0      31

  RELEASE-RELCOM_IND        0.0      0.0      0
  RELEASE_IND-RELCOM        0.0      0.0      0
```

(z)-zero average counts (r)-refresh (q)-quitdspavgsvctimes

```

      curr(ms) Avg(ms)      n
-----
Originating End:
  SETUP_IND-CONNECT         0.0      0.0      0
  CONNECT-CONN_ACK_IND      0.0      0.0      0
```

```
Terminating End:
  SETUP-CALL_PROC_IND       23225.0 12.8      31
  SETUP-CONN_IND            24838.0 13.3      31
  CALLPROC_CONNECT          1612.0  1.3      31
  CONN_IND-CONN_ACK         0.0      0.0      31

  RELEASE-RELCOM_IND        0.0      0.0      0
  RELEASE_IND-RELCOM        0.0      0.0      0
```

(z)-zero average counts (r)-refresh (q)-quitq

## Related Commands

There are no related commands.



# dspcacfailcnts

To display the connection admission control (CAC) failure counters that are set to 0, use the **dspcacfailcnts** command.

## **dspcacfailcnts**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Use this command for debugging purposes—to reset counters and isolate VISM CAC-related failures. Counter values greater than 0 indicate that the gateway is low on resources.

**Examples** In the following example, the CAC failure counters that are set to 0 are displayed:

```
nodename.1.5.VISM8.a > dspcacfailcnts

PVC Addition Failures      :0
SVC Addition Failures     :0
VC CAC Failures for PVCs  :0
PVC Upspeed Failures      :0
SVC Upspeed Failures      :0

nodename.1.5.VISM8.a >
```

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>clrcacfailcnts</b>	Resets the CAC failure counters to 0.

# dspcalea

To display whether the Communications Assistance for Law Enforcement Act (CALEA) is enabled or disabled on the VISM card, use the **dspcalea** command.

**dspcalea**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, CALEA is enabled on the current VISM card:

```
nodename.1.5.VISM8.a > dspcalea
```

```
CALEA: enable
```

```
nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>addcon</b>	Adds a PVC connection between a VISM card and any SM or PXM card.
<b>cnfcalea</b>	Enables or disables the CALEA feature on the current VISM card.
<b>cnfcon</b>	Configures a connection between a VISM card and an MGX 8000 Series platform PXM card.
<b>dspvoipparams</b>	Displays the current VISM card configuration.

# dspcarddsp

To display packet size and gain information, including DB loss and status of adaptive gain control, use the **dspcarddsp** command.

## **dspcarddsp**

---

**Syntax Description** This command has no arguments or keywords.

---

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

---

**Usage Guidelines** Follow standard CLI procedures for this command.

---

**Examples** In the following example, the packet size and gain information for the VISM card in slot 5 are displayed:

```
nodename.1.5.VISM8.a > dspcarddsp

PacketSize:           80 bytes
DB loss:              sixdb
Adaptive Gain Control: off

nodename.1.5.VISM8.a >
```

---

**Related Commands** There are no related commands.

# dspcasendpts

To display data about configured channel-associated signaling (CAS) endpoints, use the **dspcasendpts** command.

## dspcasendpts

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the CAS endpoint configuration data is displayed:

```
nodename.1.5.VISM8.a > dspcasendpts

Endpts0Num CasVarName CasOnTime CasOffTime
-----
 2         2         immd         75         75
 5         5         wink         75         75
10        10         wink         75         75

nodename.1.5.VISM8.a >
```

Related Commands	Command	Description
	<b>dspcasvarendpts</b>	Displays all endpoints associated with a specified CAS variant name.

# dspcasglareattrib

To display the direction of channel-associated signaling (CAS) calls and the glare policy for a specified endpoint, use the **dspcasglareattrib** command.

```
dspcasglareattrib <endpt_num>
```

Syntax Description	<i>endpt_num</i>	Number of the endpoint for which you want to display the CAS glare attributes. Ranges are
		<ul style="list-style-type: none"> <li>• Template 1               <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2               <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3               <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4               <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5               <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the CAS glare attributes for endpoint number 204 are displayed:

```
nodename.1.5.VISM8.a > dspcasglareattrib 204
```

```
Ds0IfIndex:      204
Cas Directionality: incoming
Cas Glare Policy: controlling
```

```
nodename.1.5.VISM8.a >
```

Related Commands	Command	Description
	<b>addxgcppersistevt</b>	Adds persistent xGCP events.
	<b>cnfcasflashtime</b>	Configures the minimum and maximum CAS on-hook time periods for incoming flash hooks on a specified endpoint.
	<b>cnfcasglareattrib</b>	Configures the direction of CAS calls and the glare policy for a specified endpoint.
	<b>cnfcaspackage</b>	Configures MGCP packages to observe persistent CAS events in the context of incoming and outgoing CAS calls on a specified endpoint.
	<b>cnflndigitorder</b>	Assigns the order in which ANI digits and DNIS digits are dialed during an outgoing FGD call on the endpoints of a specified VISM card line.
	<b>delxgcppersistevt</b>	Deletes a persistent xGCP event.
	<b>dspcaspackage</b>	Displays the MGCP packages configured to observe persistent CAS events in the context of incoming and outgoing CAS calls on a specified endpoint.
	<b>dspcastimers</b>	Displays the currently configured CAS timers for a specified endpoint.
	<b>dsplndigitorder</b>	Displays the order in which ANI digits and DNIS digits are dialed during an outgoing FGD call on the endpoints of a specified VISM card line.

# dspcaspackage

To display the Media Gateway Control Protocol (MGCP) packages that are configured in the context of incoming and outgoing CAS calls on a specified endpoint, use the **dspcaspackage** command.

**dspcaspackage** <endpt\_num>

<b>Syntax Description</b>	<p><i>endpt_num</i></p> <p>Number of the endpoint for which you want to display the CAS packages. Ranges are</p> <ul style="list-style-type: none"> <li>• Template 1           <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2           <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3           <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4           <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5           <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>
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**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the MGCP packages for incoming and outgoing calls on endpoint number 49 are displayed:

```
nodename.1.5.VISM8.a > dspcaspackage 49
```

```
DsOfIndex:      49
incoming CAS Pkg: MS
Outgoing CAS Pkg: DT
```

Related Commands	Command	Description
	<b>addxgcppersistevt</b>	Adds persistent xGCP events.
	<b>cnfcasflashtime</b>	Configures the minimum and maximum CAS on-hook time periods for incoming flash hooks on a specified endpoint.
	<b>cnfcasglareattrib</b>	Configures the direction of CAS calls and the glare policy for a specified endpoint.
	<b>cnfcaspackage</b>	Configures MGCP packages to observe persistent CAS events in the context of incoming and outgoing CAS calls on a specified endpoint.
	<b>cnflndigitorder</b>	Assigns the order in which ANI digits and DNIS digits are dialed during an outgoing FGD call on the endpoints of a specified VISM card line.
	<b>delxgcppersistevt</b>	Deletes a persistent xGCP event.
	<b>dspcasglareattrib</b>	Displays the direction of CAS calls and the glare policy for a specified endpoint.
	<b>dspcastimers</b>	Displays the currently configured CAS timers for a specified endpoint.
	<b>dsplndigitorder</b>	Displays the order in which ANI digits and DNIS digits are dialed during an outgoing FGD call on the endpoints of a specified VISM card line.



# dspcasparamsource

To display the currently configured timer source parameters for channel-associated signaling (CAS) of a specified endpoint, use the **dspcasparamsource** command.

**dspcasparamsource** *<endpt\_num>*

Syntax Description	<i>endpt_num</i>	Number of the endpoint for which you want to display the CAS source parameters. Ranges are
		<ul style="list-style-type: none"> <li>• Template 1               <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2               <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3               <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4               <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5               <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

---

**Examples**

In the following example, the CAS parameter source for endpoint number 1 is displayed:

```
nodename.1.5.VISM8.a > dspcasparamsource 1
```

```
Ds0IfIndex:          1  
CasParameterSource: MibValue
```

```
nodename.1.5.VISM8.a >
```

---

**Related Commands**

Command	Description
<b>cnfcasparamsource</b>	Configures an endpoint's CAS-related timer parameters source.

---

# dspcastimers

To display the currently configured channel-associated signaling (CAS) timers for a specified endpoint, use the **dspcastimers** command.

```
dspcastimers <endpt_num>
```

<b>Syntax Description</b>	<i>endpt_num</i>	<p>Number of the endpoint for which you want to display the currently configured CAS timers.</p> <p>Ranges are</p> <ul style="list-style-type: none"> <li>• Template 1           <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2           <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3           <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4           <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5           <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>
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**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples**

In the following example, the currently configured CAS timers for endpoint number 1 are displayed:

```
nodename.1.5.VISM8.a > dspcastimers 1
```

```
Ds0IfIndex:          1
CasOnHookMinMakeTime: 300
CasOffHookMinMakeTime: 20
CasWinkMinMakeTime:  100
CasWinkMaxMakeTime:  1000
CasWinkBreakTime:    20
CasGlareTime:        500
CasGuardTime:        800
CasDialDelayTime:    500
CasFlashMinMakeTime: 300
CasFlashMaxMakeTime: 900
```

```
nodename.1.5.VISM8.a >
```

**Related Commands**

Command	Description
<b>addxgcpersistevt</b>	Adds persistent xGCP events.
<b>cnfcasdialdelay</b>	Configures the VISM wait time (dial delay) for outpulsing digits to the PBX after sending an off-hook event.
<b>cnfcasflashtime</b>	Configures the minimum and maximum CAS on-hook time periods for incoming flash hooks on a specified endpoint.
<b>cnfcasglareattrib</b>	Configures the direction of CAS calls and the glare policy for a specified endpoint.
<b>cnfcasguardtime</b>	Configures the CAS guard time for an endpoint.
<b>cnfcasoffhooktime</b>	Configures a minimum presence time, on an endpoint, for a CAS off-hook pattern to be recognized as an off-hook signal.
<b>cnfcasonhooktime</b>	Configures a minimum presence time, on an endpoint, for a CAS on-hook pattern to be recognized as an on-hook signal.
<b>cnfcaspackage</b>	Configures MGCP packages to observe persistent CAS events in the context of incoming and outgoing CAS calls on a specified endpoint.
<b>dspcasglareattrib</b>	Displays the direction of CAS calls and the glare policy for a specified endpoint.
<b>dspcaspackage</b>	Displays the MGCP packages configured to observe persistent CAS events in the context of incoming and outgoing CAS calls on a specified endpoint.

# dspcastransendpts

To display all endpoints and their associated channel-associated signaling (CAS) mapping table names, use the **dspcastransendpts** command.

## dspcastransendpts

### Syntax Description

There are no arguments associated with this command.

### Command Modes

AAL2 trunking, switched AAL2 SVC, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

### Usage Guidelines

Follow standard CLI procedures for this command

### Examples

In the following example, the endpoints and their associated CAS table names are displayed:

```
nodename.1.5.VISM8.a > dspcastransendpts
```

Endpt	LineNum	Ds0Num	TX to TDM	RX fr TDM	Direction
1	1	1	TlandEltrans	TlandEltrans	bidirectional
2	1	2	EltoTltrans	none	receive

```
nodename.1.5.VISM8.a >
```



### Note

Direction column is in relationship to the AAL2 trunk.

### Related Commands

Command	Description
<b>addcastranstbl</b>	Creates a CAS mapping table.
<b>cnfcastransendpt</b>	Downloads the CAS mapping table to the signaling channel.
<b>delcastranstbl</b>	Deletes an existing CAS mapping table.
<b>delcastransendpt</b>	Deletes a CAS mapping table that is associated with an endpoint.
<b>dspcastranstbl</b>	Displays the CAS mapping table configurations.
<b>dspcastranstblendpts</b>	Displays all endpoints that are associated with a CAS mapping table.
<b>dspcastranstbls</b>	Displays the list of the CAS mapping tables.

# dspcastranstbl

To display the configurations of the channel-associated signaling (CAS) mapping table on the VISM-PR card, use the **dspcastranstbl** command.

**dspcastranstbl** <table\_name>

## Syntax Description

<i>table_name</i>	Name of the CAS mapping table. Range is 1–64 characters.
-------------------	--

## Command Modes

AAL2 trunking, switched AAL2 SVC, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

This command is applicable only to the VISM-PR card.

## Examples

In the following example, the CAS bit mapping configurations in table T1andE1trans is displayed.

```
nodename.1.5.VISM8.a > dspcastranstbl T1andE1trans
```

```
CAS translation name = T1andE1trans
```

```
-----A--B--C--D-----
```

```
0    1  0  0  1
1    1  1  0  0
2    0  0  1  0
3    0  0  1  1
4    0  1  0  0
5    0  1  0  1
6    0  1  1  0
7    0  1  1  1
8    1  0  0  0
9    0  0  0  0
10   1  0  1  0
11   1  0  1  1
12   0  0  0  1
13   1  1  0  1
14   1  1  1  0
15   0  0  0  1
```

```
nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>addcastranstbl</b>	Creates a CAS mapping table.
<b>cnfcastransendpt</b>	Downloads the CAS mapping table to the signaling channel.
<b>delcastranstbl</b>	Deletes an existing CAS mapping table.
<b>delcastransendpt</b>	Deletes a CAS mapping table that is associated with an endpoint.
<b>dspcastransendpts</b>	Displays all endpoints and their associated CAS mapping table names.
<b>dspcastranstblendpts</b>	Displays all endpoints that are associated with a CAS mapping table.
<b>dspcastranstbls</b>	Displays the list of the CAS mapping tables.

# dspcastranstblendpts

To display the endpoints associated with channel-associated signaling (CAS) mapping tables on the VISM-PR card, use the **dspcastranstblendpts** command.

**dspcastranstblendpts** *<table\_name>*

## Syntax Description

<i>table_name</i>	Name of the CAS mapping table. Range is 1–64 characters.
-------------------	--

## Command Modes

AAL2 trunking, switched AAL2 SVC, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

This command is applicable only to the VISM-PR card.

## Examples

In the following example, the endpoints associated with the table T1andE1trans are displayed:

```
nodename.1.5.VISM8.a > dspcastranstblendpts T1andE1trans
```

```
endptNum:      1
```

```
Number of endpoints configured with CAS translation table name:T1andE1trans: 1
```

```
nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>addcastranstbl</b>	Creates a CAS mapping table.
<b>cnfcastransendpt</b>	Downloads the CAS mapping table to the signaling channel.
<b>delcastranstbl</b>	Deletes an existing CAS mapping table.
<b>delcastransendpt</b>	Deletes a CAS mapping table that is associated with an endpoint.
<b>dspcasvar</b>	Displays all endpoints and their associated CAS mapping table names.
<b>dspcastranstbl</b>	Displays the CAS mapping table configurations.
<b>dspcastranstbls</b>	Displays the list of the CAS mapping tables.

# dspcastranstbls

To display the list of the channel-associated signaling (CAS) mapping tables on the VISM-PR card, use the **dspcastranstbls** command.

## **dspcastranstbls**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** AAL2 trunking, switched AAL2 SVC, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** This command is applicable only to the VISM-PR card.

**Examples** In the following example, a sample list of the CAS mapping tables is displayed:

```
nodename.1.5.VISM8.a > dspcastranstbls
```

```
Index  CasTblName
0      E1toT1trans
1      T1andE1trans
```

```
nodename.1.5.VISM8.a >
```

## **Related Commands**

<b>Command</b>	<b>Description</b>
<b>addcastranstbl</b>	Creates a CAS mapping table.
<b>cnfcastransendpt</b>	Downloads the CAS mapping table to the signaling channel.
<b>delcastranstbl</b>	Deletes an existing CAS mapping table.
<b>delcastransendpt</b>	Deletes a CAS mapping table that is associated with an endpoint.
<b>dspecastransendpts</b>	Displays all endpoints and their associated CAS mapping table names.
<b>dspecastranstbl</b>	Displays the CAS mapping table configurations.
<b>dspecastranstblendpts</b>	Displays all endpoints that are associated with a CAS mapping table.



# dspcasvar

To display data about channel-associated signaling (CAS) variants for a given variant name, use the **dspcasvar** command.

**dspcasvar** <variant\_name>

## Syntax Description

*variant\_name* Name of the CAS variant. Range is a text string of 1–64 alphanumeric characters.

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command

## Examples

In the following example, the CAS variant data for the CAS variant identified by the name first is displayed:

```
nodename.1.5.VISM8.a > dspcasvar first

CasVariantName:      first
CasFileName:         wink.dod
Ringing time:        30
Digit method:        DTMF
Partial dial timing: 16
Critical dial timing: 4
Interdigit timeout:  1
CasVariantState:     configured
CasRowStatus:        Add
Country code:        US

nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>addcasvar</b>	Adds a CAS variant to a VISM card.
<b>cnfcasvar</b>	Configures CAS variant and CAS timing parameters for a variant already created with the <b>addcasvar</b> command.
<b>delcasvar</b>	Deletes a CAS variant.

# dspcasvarendpts

To display all endpoints associated with a specified channel-associated signaling (CAS) variant name, use the **dspcasvarendpts** command.

**dspcasvarendpts** *<variant\_name>*

---

## Syntax Description

*variant\_name* Name of the CAS variant. Range is a text string of 1–64 alphanumeric characters.

---



---

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

---

## Usage Guidelines

Follow standard CLI procedures for this command.

---

## Examples

In the following example, no endpoints are associated with the var1 CAS variant:

```
nodename.1.5.VISM8.a > dspcasvarendpts var1
There are no endpoints configured with CAS variant var1

nodename.1.5.VISM8.a >
```

---

## Related Commands

Command	Description
<b>dspcasendpts</b>	Displays data about configured CAS endpoints.

---

# dspcasvars

To display the parameters of all channel-associated signaling (CAS) variants configured on a VISM card, use the **dspcasvars** command.

## dspcasvars

### Syntax Description

This command has no arguments or keywords.

### Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

### Usage Guidelines

This command displays the following data for each CAS variant:

- Variant name
- File name
- Digit method
- Country code

### Examples

In the following example, the parameters of all configured CAS variants are displayed for the current VISM card:

```
nodename.1.5.VISM8.a > dspcasvars

VariantName           FileName           DigitMethod       CountryCode
-----
      first           wink.dod           DTMF              US
      second          ring.dod           DTMF              US

nodename.1.5.VISM8.a >
```

### Related Commands

Command	Description
<b>addcasvar</b>	Adds a CAS variant to a VISM card.
<b>cnfcasvar</b>	Configures CAS variant and CAS timing parameters for a variant already created with the <b>addcasvar</b> command.
<b>delcasvar</b>	Deletes a CAS variant.
<b>dspcasvar</b>	Displays information about CAS variants for a given variant name.

# dspcasxgcps

To display timer parameters for the channel-associated signaling/gateway control protocol (CAS/xGCP) backhaul, use the **dspcasxgcps** command.

## **dspcasxgcps**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the CAS/xGCP backhaul timer parameters are displayed:

```
nodename.1.5.VISM8.a > dspcasxgcps
```

VariantName	FileName	ReXmitTime	InitReXmitTime	Retry
-----	-----	-----	-----	-----
first	wink.dod	500	100	4
second	ring.dod	500	100	4

```
nodename.1.5.VISM8.a >
```

**Related Commands** There are no related commands.

# dspccs

To display the configuration data of a previously added common channel signaling (CCS) channel, use the **dspccs** command.

```
dspccs <line_number> <ds0_number>
```

## Syntax Description

<i>line_number</i>	Number of the line of the previously added CCS channel. Range is 1–8.
<i>ds0_number</i>	DS0 number of the previously added CCS channel. Ranges are <ul style="list-style-type: none"> <li>• 1–24 = T1 lines</li> <li>• 1–31 = E1 lines</li> </ul>

## Command Modes

AAL2 trunking, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the configuration data of the CCS channel identified by line number 1 and DS0 number 10 are displayed:

```
nodename.1.5.VISM8.a > dspccs 1 10

ds0IfIndex:    10
RowStatus:     active
LcnNum:        36
MaxFrameSize: 300

nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>addccs</b>	Adds a CCS channel (D channel) to a VISM card.
<b>delccs</b>	Deletes the association between a CCS (DS0) channel and its corresponding virtual channel.
<b>dspccschans</b>	Displays all CCS configured channels.

# dspccschans

To display all channels that are configured as common channel signaling (CCS) channels, use the **dspccschans** command.

## **dspccschans**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** AAL2 trunking, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, all CCS configured channels are displayed:

```
nodename.1.5.VISM8.a > dspccschans

ds0 If      Row   Lcn   Max Frame
Index      Status  Num   Size
-----
10         active  36    300

nodename.1.5.VISM8.a >
```

## **Related Commands**

<b>Command</b>	<b>Description</b>
<b>addccs</b>	Adds a CCS channel (D channel) to a VISM card.
<b>delccs</b>	Deletes the association between a CCS (DS0) channel and its corresponding virtual channel.
<b>dsppcs</b>	Displays the configuration data of a previously added CCS channel.

# dspccsnt

To display the common channel signaling (CCS) counter values for a specified line and DS0, use the **dspccsnt** command.

```
dspccsnt <line_number> <ds0_number>
```

Syntax Description	<i>line-num</i>	Number of the line for which you want to display the CCS counter values. Range is 1–8.
	<i>ds0-num</i>	Number of the DS0 of which you want to display the CCS counter values. Ranges are <ul style="list-style-type: none"> <li>• 1–24 = T1 lines</li> <li>• 1–31 = E1 lines</li> </ul>

**Command Modes** AAL2 trunking, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the CCS counter values for line number 1, DS0 10 are displayed:

```
nodename.1.5.VISM8.a > dspccsnt 1 10

ds0IfIndex:          10
TxFrameCount:        0
RxFrameCount:        0
RxCRCErrCount:       0
RxBufOverflowCount:  0
TxUnderflowCount:    0
TxAbortCount:        0
RxAbortCount:        0

nodename.1.5.VISM8.a >
```

**Related Commands** There are no related commands.

# dspcctimes

To display the call control Media Gateway Control Protocol (MGCP) message processing statistics, use the **dspcctimes** command.

**dspcctimes** <connIndex>

## Syntax Description

*connIndex* Connection ID. Range is 1–255.

## Command Modes

AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures when using this command.

## Examples

In the following example, the call control MGCP message processing statistics for connection 2 are displayed:

```
nodename.1.5.VISM8.a > dspcctimes 2

connIndex:2
SVC Call Table Index:2
ORIG/TERM :ORIG

      curr(ms)  Avg(ms)      n
-----  -
Originating End:
CRCX - CRCX_ACK    10.0    17.0    62
MDCX - MDCX_ACK     0.0     1.0    62
DLCX - DLCX_ACK           0.0     0
Terminating End:
CRCX - CRCX_ACK     0.0     0.0     0
CRCX - NTFY         0.0     0.0     0
DLCX - DLCX_ACK           0.0     0
Overhead:
DMCI Conn: -1377937124.0  7571466.0    62
DMCI Disc:      0.0      0.0      0

(z)-zero average counts (r)-refresh (q)-quit
```

Terminating End of the call:

```
MGX24.1.11.VISM8.a > dspcctimes 2

connIndex:2
SVC Call Table Index:2
ORIG/TERM :TERM

      curr(ms)  Avg(ms)      n
-----  -
Originating End:
CRCX - CRCX_ACK     0.0     0.0     0
MDCX - MDCX_ACK     0.0     0.0     0
DLCX - DLCX_ACK           0.0     0
```



```
Terminating End:
CRCX - CRCX_ACK      10.0      8.0      62
CRCX - NTFY          120.0    429.0    62
DLCX - DLCX_ACK      0.0      0.0      0

Overhead:
DMCI Conn:      -1377936944.0  7571739.0  62
DMCI Disc:      0.0      0.0      0
(z)-zero average counts (r)-refresh (q)-quit

nodename.1.5.VISM8.a >
```

**Related Commands** There are no related commands.

# dspcd

To display the current VISM card's configuration, status, and hardware and firmware configuration data, use the **dspcd** command.

## dspcd

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** The VISM card configuration data displayed includes serial number and hardware and firmware revision levels.

**Examples** In the following example, the current VISM card configuration data is displayed:

```
nodename.1.5.VISM8.a > dspcd

ModuleSlotNumber:          17
  FunctionModuleState:      Active
  FunctionModuleType:       VISM-8T1
  FunctionModuleSerialNum:  xxxxxxxxxx
  FunctionModuleHWRev:      0.0
  FunctionModuleFWRev:      1.5.0_11Nov01_2
  FunctionModuleResetReason: ?
  LineModuleType:           LM-RJ48-8T1
  LineModuleState:          Present
  mibVersionNumber:         21
  configChangeTypeBitMap:   CardCnfChng, LineCnfChng
  pcb part no - (800 level): 800-xxxxx-xx
  pcb part no - (73 level):  73-xxxxx-xx
  Fab Part no - (28 level):  28-xxxxx-xx
  PCB Revision:             08

Daughter Card Information:
  Daughter Card Serial Number: xxxxxxxxxxxx
  pcb part no - (73 level):    73-xxxxx-xx
  Fab Part no - (28 level):    28-xxxxx-xx
  PCB Revision:               04

nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>dspcds</b>	Displays a list of chassis card types, with associated slot numbers, card status, alarm status, and redundancy status.
<b>version</b>	Displays version-related information for a VISM card.

# dspcds

To display a list of chassis card types, with associated slot numbers, card status, alarm status, and redundancy status, use the **dspcds** command.

## dspcds

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the list of chassis card types, with associated status data, are displayed:

```
nodename.1.5.VISM8.a > dspcds

Slot  CardState  CardType  CardAlarm  Redundancy
----  -
1.1   Empty        VISM-8T1  Clear
1.2   Active       VISM-8T1  Clear
.
.
.
1.32  Active       VISM-8E1  Clear

nodename.1.5.VISM8.a >
```

Related Commands	Command	Description
	<b>dspcd</b>	Displays the current VISM card's configuration, status, and hardware and firmware configuration data.
	<b>version</b>	Displays version-related information for a VISM card.

# dspcid

To display the configuration data of an AAL2 channel identifier (CID) on the current VISM card, use the **dspcid** command.

**dspcid** <LCN> <cid\_number>

## Syntax Description

<i>LCN</i>	Number of the logical channel for the LCN/CID pair. Range is 131–510.
<i>cid_number</i>	Channel identification number of the LCN/CID pair. Range is 8–255.

## Command Modes

AAL2 trunking, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the configurations of the AAL2 CID identified by LCN 131 and CID 101 are displayed:

```
nodename.1.12.VISM8.a > dspcid 131 8
```

```
LCN number : 131
CID number: 8
Endpoint number : 1
CidRowStatus: active
Type3redundancy: enabled
VAD: disabled
VADInitTimer: 250
Profile type: ITU
Profile number: 1
Codec type: G.711u
Cas transport: disabled
DTMF transport: enabled
Ecan on/off: enabled
ICS enable: Disabled
pkt period: 5
Cid state: Failed
Cid Fail Reason: Self
Cid Admin State: OOS
```

## Related Commands

Command	Description
<b>addcid</b>	Adds an AAL2 CID on a VISM card.
<b>delcid</b>	Deletes the association between an endpoint and an LCN/CID pair.
<b>cnfcidis</b>	Configures the CID as in-service.
<b>cnfcidoos</b>	Configures the CID as out-of-service.
<b>dspcidcps</b>	Displays the CPS for a connection.
<b>dspcids</b>	Displays all AAL2 CIDs for a specified LCN on a VISM card.
<b>dspcnidcps</b>	Displays CPS usage per CID for all of the CIDs on a particular line.

# dspcidcps

To display the cell rate, measured in cells per second, for a connection, use the **dspcidcps** command.

**dspcidcps** <LCN>

<b>Syntax Description</b>	<i>LCN</i>	Number of the logical channel for the connection of which you want to display the cell rate in cells per second (cps). Range is 131–510.
---------------------------	------------	--

**Command Modes** AAL2 trunking, Switched AAL2 PVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, sample output for CID 131 is displayed:

```
nodename.1.5.VISM8.a > dspcidcps 131
```

LCN	CID	Endpt	24Hr	Peak	Xmit	24Hr	Peak	Rcv	Current	Xmit	Current	Rcv
Num	Num	Num	cell	Rate	(CPS)	cell	Rate	(CPS)	Cell	Rate	Cell	Rate
---	---	---	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
131	8	1		204					201			

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>addcid</b>	Adds an AAL2 CID on a VISM card.
	<b>delcid</b>	Deletes the association between an endpoint and an LCN/CID pair.
	<b>dspcid</b>	Displays the configuration data of an AAL2 CID on the current VISM card.
	<b>dspcids</b>	Displays all CIDs for an LCN.
	<b>dspcnidcps</b>	Displays CPS usage per CID for all of the CIDs on a particular line.

# dspcids

To display all AAL2 channel identifiers (CIDs) for an LCN on the current VISM card, use the **dspcids** command.

**dspcids** <LCN>

Syntax Description	LCN
	Number of the logical channel of the LCN for which you want to display AAL2 CIDs. Range is 131–510.

**Command Modes** AAL2 trunking, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the AAL2 CIDs are displayed for LCN 132:

```
nodename.1.5.VISM8.a > dspcids 132
```

```
lcn CID Endpt  Cid  Type3      VAD  Prof  Prof  Codec  Cas  DTMF
Num Num  Num  Status Redun VAD  Timer Type  Num   Type   Tran Tran Ecan
--- --- ---  -----
132  9    1  active  ena  ena  250  ITU   1    G.711u  ena  ena  ena
```

Related Commands	Command	Description
	<b>addcid</b>	Adds an AAL2 CID on a VISM card.
	<b>delcid</b>	Deletes the association between an endpoint and an LCN/CID pair.
	<b>dspcid</b>	Displays the configuration data of an AAL2 CID on the current VISM card.
	<b>dspcideps</b>	Displays the CPS for a connection.
	<b>dsplncideps</b>	Displays CPS usage per CID for all of the CIDs on a particular line.

# dspco1timer

To display the bearer continuity test CO1 timer value, use the **dspco1timer** command.

## **dspco1timer**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the bearer continuity test CO1 timer is set at 3 seconds:

```
nodename.1.5.VISM8.a > dspco1timer
```

```
CO1 timer value: 3
```

```
nodename.1.5.VISM8.a >
```

## **Related Commands**

<b>Command</b>	<b>Description</b>
<b>cnfco1timer</b>	Configures the bearer continuity test CO1 timer value.
<b>dspvismparam</b>	Displays the current VISM card configuration.

# dspco2timer

To display the bearer continuity test CO2 timer value, use the **dspco2timer** command.

## **dspco2timer**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the bearer continuity test CO2 timer is set at 60 seconds:

```
nodename.1.5.VISM8.a > dspco2timer
CO2 timer value: 60
nodename.1.5.VISM8.a >
```

## **Related Commands**

<b>Command</b>	<b>Description</b>
<b>dspco2timer</b>	Configures the bearer continuity test CO2 timer value.
<b>dspvismparam</b>	Displays the current VISM card configuration.



# dspco4timer

To display the bearer continuity test CO4 timer value, the **dspco4timer** command.

## **dspco4timer**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the bearer continuity test CO4 timer is set at 1000 ms:

```
nodename.1.5.VISM8.a > dspco4timer
CO4 timer value: 1000
nodename.1.5.VISM8.a >
```

## **Related Commands**

<b>Command</b>	<b>Description</b>
<b>dspco4timer</b>	Configures the bearer continuity test CO4 timer value.
<b>dspvismparam</b>	Displays the current VISM card configuration.

# dspcodecjtrdelays

To display the configured codec jitter delay modes and associated jitter initial delays, use the **dspcodecjtrdelays** command.

## dspcodecjtrdelays

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example shows, the configured codec jitter delay modes and associated jitter initial delays are displayed:

```
nodename.1.5.VISM8.a > dspcodecjtrdelays
```

codecType	delay mode	initial delay
1 - G.711u	fixed	hundred
2 - G.711a	fixed	hundred
3 - G.726-32K	adaptive	sixty
4 - G.729a	adaptive	sixty
5 - G.729ab	adaptive	sixty
6 - clr chan	fixed	hundred
7 - G.726-16K	adaptive	sixty
8 - G.726-24K	adaptive	sixty
9 - G.726-40K	adaptive	sixty
11 - G.723.1-H	adaptive	sixty
12 - G.723.1a-H	adaptive	sixty
13 - G.723.1-L	adaptive	sixty
14 - G.723.1a-L	adaptive	sixty
15 - Lossless	fixed	sixteen

## Related Commands

Command	Description
<b>cnfcodecjtrdelay</b>	Configures the jitter delay mode and initial delay value for a specified codec.

# dspcodecneg

To display the codec negotiation option, use the **dspcodecneg** command.

**dspcodecneg**

---

**Syntax Description** This command has no arguments or keywords.

---

**Command Modes** VoIP switching/VoIP trunking and VoIP and AAL1 SVC

---

**Usage Guidelines** Follow standard CLI procedures for this command.

---

**Examples** In the following example, the codec negotiation option that was configured through the use of the **cnfcodecneg** command is displayed:

```
nodename.1.5.VISM8.a > dspcodecneg

Codec Negotiation Option = 1

nodename.1.5.VISM8.a >
```

---

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>cnfcodecneg</b>	Configures the negotiation option.

---

# dspcodeparams

To display codec parameters, use the **dspcodeparams** command in the VoIP switching/trunking operating mode.

## dspcodeparams

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** The following codec parameters are displayed when you use this command:

- Codec type
- xGCP codec string
- Packetization period
- Preference
- IANA registered codec type



### Note

Because preferences for any codec can be configured regardless of the current template, all codecs displayed by this command might not be available in the current template.

### Examples

In the following example, the codec parameters are displayed:

```
nodename.1.5.VISM8.a > dspcodeparams
```

codecType	codecString	pktPeriod (ms)	Preference	ianaCodecType
1 - G.711u	PCMU	10	7	0
2 - G.711a	PCMA	10	8	8
3 - G.726-32K	G.726-32	10	5	2
4 - G.729a	G729a	10	2	96
5 - G.729ab	G729ab	10	1	96
6 - clr chan	CCD	10	9	96
7 - G.726-16K	G.726-16	10	3	96
8 - G.726-24K	G.726-24	10	4	96
9 - G.726-40K	G.726-40	10	6	96

### Related Commands

Command	Description
<b>cnfcodecmpl</b>	Assigns a codec template to a VISM card.
<b>dspcodecmpls</b>	Displays all entries in the codec template table.

# dspcodectmpls

To display all entries in the codec template table, use the **dspcodectmpls** command.

## dspcodectmpls

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** VISM maintains a table of codec templates; each entry in the table contains the following:

- Codec template number
- Codecs that the template supports
- Maximum number of DS0s that the template supports

**Examples** In the following example, all templates are listed with their supported codecs:

```
nodename.1.5.VISM8.a > dspcodectmpls
```

codecTemplateName	codecSupported	MaxChanCount
1	G.711u, G.711a, G.729a, G.729ab, G.726-32K, CLR-CHAN, G.726-16K, G.726-24K, G.726-40K codecs;	192
2	G.711u and G.711a uncompressed and CLR-CHAN codecs;	192
3	Template#1 with T38 Support: G.711u, G.711a, G.729a, G.729ab, G.726-32K, CLR-CHAN, G.726-16K, G.726-24K, G.726-40K codecs;	192
4	G.711u, G.711a, G.729a, G.729ab, G.726-32K, CLR-CHAN, G.726-16K, G.726-24K, G.726-40K, G.723.1-H, G.723.1a-H, G.723.1-L, G.723.1a-L codecs, T.38 support for VISM-PR;	144
5	G.711u, G.711a, G.729a, G.729ab, G.726-32K, CLR-CHAN, G.726-16K, G.726-24K, G.726-40K, Lossless codecs	192

### Related Commands

Command	Description
<b>cnfcodectmpl</b>	Assigns a codec template to a VISM card.
<b>dspcodeparams</b>	Displays codec parameters.

# dspcon

To display the configuration data of a channel, use the **dspcon** command.

**dspcon** <LCN>

<b>Syntax Description</b>	<i>LCN</i> Number of the logical channel for which configuration data is to be displayed. Range is 131–510.
<b>Command Modes</b>	VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking
<b>Usage Guidelines</b>	Follow standard CLI procedures for this command.
<b>Examples</b>	<p>In the following example, the configuration data for LCN 131 is displayed:</p> <pre> nodename.1.12.VISM8.a &gt; <b>dspcon 131</b> ChanNum: 131 ChanRowStatus: Mod ChanLocalRemoteLpbkState: Disabled ChanTestType: TestOff ChanTestState: Failed ChanRTDresult: 65535 ms ChanPortNum: 255 ChanPvcType: AAL2 ChanConnectionType: PVC ChanLocalVpi: 29 ChanLocalVci: 131 ChanLocalNSAP: 47009181000000000164444b9400000107ebff00 ChanRemoteVpi: 29 ChanRemoteVci: 131 ChanRemoteNSAP: 47009181000000000164444b9400000101180400 ChanMastership: Master ChanVpcFlag: Vcc ChanConnServiceType: CBR ChanRoutingPriority: 8 ChanMaxCost: 2147483647 ChanRestrictTrunkType: No Restriction  Type &lt;CR&gt; to continue, Q&lt;CR&gt; to stop: ChanConnPCR: 50000 ChanConnPercentUtil: 100 ChanPreference: 1 ChanRemotePCR: 50000 ChanRemotePercentUtil: 100 ChanProtection: unprotected ChanActivityState: unknown ChanLockingState: unlock ChanApplication: bearer ChanServiceType: cbr ChanScrIngress: 50000 ChanMbsIngress: 50000 ChanVCCI: 0 </pre>

```

ChanFarEndAddrType: notapplicable
ChanFarEndE164Addr: 0
ChanFarEndGWIDAddr: .
ChanFarEndNSAPAddr: NULL NSAP
ChanAdminStatus: Up
ChanReroute: False
Pref Rte Id : 777
Directed Route: Yes
ChanUserPcrNumber:          User BW Off
ChanUserMinPCRBW:          10
ChanUserMaxPCRBW:          50000
ChanUserMaxScrBW:          0
ChanUserMaxMbsBW:          0
ChanNumNextAvailable: 133

```

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>addcon</b>	Adds a PVC connection between a VISM card and any SM or PXM card.
<b>cnfcon</b>	Configures a connection.
<b>delcon</b>	Deletes a connection (PVC) between a VISM card and a Cisco MGX 8000 Series platform PXM card.
<b>dspscons</b>	Displays channel information for all configured connections on a VISM card.

# dspconcac

To display connection admission control (CAC) configuration data for a connection, use the **dspconcac** command.

**dspconcac** <LCN>

<b>Syntax Description</b>	<i>LCN</i> Number of the logical channel for which CAC configuration data is to be displayed. Range is 131–510.								
<b>Command Modes</b>	VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking								
<b>Usage Guidelines</b>	Follow standard CLI procedures for this command.								
<b>Examples</b>	<p>In the following example, the CAC configuration data for LCN 131 is displayed:</p> <pre>nodename.1.27.VISM8.a &gt; <b>dspconcac 131</b></pre> <pre>LCN                : 131 MasterShip         : Master Vad Tolerance      : 100 Vad Duty Cycle     : 61 Rejection Policy   : 3 Carrier Loss Policy : 3 Accepted Connections : 24 Rejected Connections : 0 Effective Cell Rate : 6000 cps Used Cell Rate     : 3200 cps Available Cell Rate : 2800 cps</pre>								
<b>Related Commands</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Command</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td><b>cnfconcac</b></td> <td>Configures CAC on a previously added connection.</td> </tr> <tr> <td><b>cnfconcacparams</b></td> <td>Configures CAC features on a PVC.</td> </tr> <tr> <td><b>cnfconvbdpol</b></td> <td>Configures VBD policies.</td> </tr> </tbody> </table>	Command	Description	<b>cnfconcac</b>	Configures CAC on a previously added connection.	<b>cnfconcacparams</b>	Configures CAC features on a PVC.	<b>cnfconvbdpol</b>	Configures VBD policies.
Command	Description								
<b>cnfconcac</b>	Configures CAC on a previously added connection.								
<b>cnfconcacparams</b>	Configures CAC features on a PVC.								
<b>cnfconvbdpol</b>	Configures VBD policies.								



# dspconcnt

To display the counters/statistics and connection state, use the **dspconcnt** command.

**dspconcnt** <LCN>

<b>Syntax Description</b>	<i>LCN</i> Number of the logical channel for which counter configuration data is to be displayed. Range is 131–510.						
<b>Command Modes</b>	VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking						
<b>Usage Guidelines</b>	Follow standard CLI procedures for this command.						
<b>Examples</b>	<p>In the following example, the counter configuration data for LCN 131 is displayed:</p> <pre>nodename.1.12.VISM8.a &gt; <b>dspconcnt 131</b>  ChanNum: 131 Chan State: alarm Chan XMT ATM State: Sending FERF OAM Chan RCV ATM State: Receiving AIS OAM Chan Status Bit Map: 0x6 OAM Lpb Lost Cells: 89381 AAL2 HEC Errors: 23540 AAL2 CRC Errors: 0 AAL2 Invalid OSF Cells: 33493675 AAL2 Invalid Parity Cells: 0 AAL2 CPS Packet Xmt: 1532756592 AAL2 CPS Packet Rcv: 1820470968 AAL2 Invalid CID CPS: 0 AAL2 Invalid UII CPS: 0 AAL2 Invalid Len. CPS: 3 AAL5 Invalid CPI: 0 AAL5 oversized SDU PDU: 0 AAL5 Invalid Len. PDU: 0 AAL5 PDU CRC32 Errors: 0 AAL5 Reassembly Timer expired PDU: 0 AIS Successful Suppression Cnt: 30</pre>						
<b>Related Commands</b>	<table border="1"> <thead> <tr> <th>Command</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td><b>addcon</b></td> <td>Adds a PVC connection between a VISM card and any SM or PXM card.</td> </tr> <tr> <td><b>delcon</b></td> <td>Deletes a connection (PVC) between a VISM card and a Cisco MGX 8000 Series platform PXM card.</td> </tr> </tbody> </table>	Command	Description	<b>addcon</b>	Adds a PVC connection between a VISM card and any SM or PXM card.	<b>delcon</b>	Deletes a connection (PVC) between a VISM card and a Cisco MGX 8000 Series platform PXM card.
Command	Description						
<b>addcon</b>	Adds a PVC connection between a VISM card and any SM or PXM card.						
<b>delcon</b>	Deletes a connection (PVC) between a VISM card and a Cisco MGX 8000 Series platform PXM card.						

# dspconferences

To display the currently active three-way conferences, use the **dspconferences** command.

## **dspconferences**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** This command is not supported.

**Examples** In the following example, three-way conferences are not supported on the VISM/VISM-PR card:

```
nodename.1.12.VISM8.a > dspconferences

xGCP Endpoint Name  xGCP Connection ID  xGCP Connection ID
-----
nodename.1.12.VISM8.a >
```

## **Related Commands**

<b>Command</b>	<b>Description</b>
<b>cnfmaxconfnum</b>	Configures the card for three-way conferences.
<b>dspmaxconfnum</b>	Displays the number of three-way conferences

# dspcons

To display channel configuration data for all configured connections on a VISM card, use the **dspcons** command.

## dspcons

### Syntax Description

This command has no arguments or keywords.

### Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

### Usage Guidelines

Follow standard CLI procedures for this command.

### Examples

In the following example, channel configuration data for all connections on the current VISM card are displayed:

```
nodename.1.12.VISM8.a > dspcons
```

ConnId	ChanNum	Status	Preference	Protection	Active	Locking
datamvr2.5.1.0.135	135	Add	1	unprotected	unknown	unlock
datamvr2.5.1.0.136	136	Add	1	unprotected	unknown	unlock

```
ChanNumNextAvailable: 137
```

### Related Commands

Command	Description
<b>addcon</b>	Adds a PVC connection between a VISM card and any SM or PXM card.
<b>cnfcon</b>	Configures a connection between a VISM card and a Cisco MGX 8000 Series platform PXM card.
<b>dspcon</b>	Displays the parameters for a specified channel.

# dspconvbdpol

To display voiceband policies for fax/modem upspeed, connection admission control (CAC) failure, and fax/modem carrier loss for calls added to a particular IP or AAL2 logical channel number (LCN), use the **dspconvbdpol** command.

**dspconvbdpol** <LCN>

## Syntax Description

<i>LCN</i>	Number of the logical channel for which voiceband data is to be displayed. Range is 131–510.
------------	--

VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the voiceband data policies for LCN 131 are displayed:

```
nodename.1.12.VISM8.a > dspconvbdpol 131

LcnNumber:                131
ChanCarrierLossPolicy:    upspeedCodec
ChanCacRejectionPolicy:   delete

nodename.1.12.VISM8.a >
```

## Related Commands

Command	Description
<b>cnfconvbdpol</b>	Configures the policies for fax/modem upspeed CAC failure and fax/modem carrier loss for calls added to a particular IP or AAL2 LCN.

# dspdiags

To display the results of a diagnostic test, use the **dspdiags** command.

## **dspdiags**

---

**Syntax Description** This command has no arguments or keywords.

---

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

---

**Usage Guidelines** Follow standard CLI procedures for this command.

---

**Examples** In the following example, diagnostics are not performed:

```
nodename.1.12.VISM8.a > dspdiags
```

```
-----  
DIAGNOSTICS RESULTS  
-----
```

```
***Diagnostics not performed***
```

---

**Related Commands** There are no related commands.

# dspdisctimers

To display the disconnect wait delay times before the connection is dropped, use the **dspdisctimers** command.

## **dspdisctimers**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the disconnect wait delay times are displayed:

```
nodename.1.12.VISM8.a > dspdisctimers

Initial Waiting Delay: 15secs
Min Waiting Delay:    15 secs
Max Waiting Delay:    600 secs

nodename.1.12.VISM8.a >
```

Related Commands	Command	Description
	<b>addmgcgrpprotocol</b>	Associates a call agent redundancy group with a gateway control protocol.
	<b>cnfdisctimers</b>	Configures wait delay timers for the disconnected procedure.
	<b>cnfmgcgrpprotocol</b>	Configures call agent group protocol data.
	<b>cnfxgcppeer</b>	Configures the UDP port number used to send gateway-initiated messages to the call agent.
	<b>delmgcgrpprotocol</b>	Deletes an MGCP from a specified call agent redundancy group.

# dspdnallips

To display all statistically provisioned IP addresses and externally resolved IP addresses for all domain names configured on the current VISM card, use the **dspdnallips** command.

## dspdnallips

### Syntax Description

This command has no arguments or keywords.

### Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

### Usage Guidelines

Follow standard CLI procedures for this command.

### Examples

In the following example shows, all statistically provisioned IP addresses and externally resolved IP addresses for all domain names configured on the current VISM card are displayed:

```
nodename.1.12.VISM8.a > dspdnallips
```

ResolutionIndex	DomainName	IP	Preference
2	callagent99	nnn.nnn.nnn.nnx	1
45	callagent99	nnn.nnn.nnn.nxn	3
70	callagent99	nnn.nnn.nnn.xnn	4
1	dns	nnn.nnn.nnx.nnn	1

### Related Commands

Command	Description
<b>adddn</b>	Adds a domain name (call agent name) and optionally configures the resolution type of the domain name.
<b>adddnip</b>	Adds the IP addresses for a domain name that you added by using the <b>adddn</b> command.
<b>cnfdn</b>	Configures the resolution type of a specified domain.
<b>cnfdnssrvr</b>	Designates a DNS.
<b>deldn</b>	Deletes a domain name.
<b>deldnip</b>	Deletes a statistically provisioned IP address of a domain name.
<b>dspdnips</b>	Displays all statistically provisioned and externally resolved IP addresses configured for a specified domain name.
<b>dspdns</b>	Displays the configuration data of all domain names of a call agent.
<b>dspdnssrvr</b>	Displays the domain name of the configured DNS of the current VISM card.

# dspdnips

To display all statistically provisioned and externally resolved IP addresses configured for a specified domain name, use the **dspdnips** command.

**dspdnips** <domain\_name>

## Syntax Description

*domain\_name* Call agent name. Range is a text string of 1–64 alphanumeric characters.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, all statistically provisioned and externally resolved IP addresses configured for domain name callagent99 are displayed:

```
nodename.1.12.VISM8.a > dspdnips callagent99
```

ResolutionIndex	DomainName	IP	Preference
2	callagent99	nnn.nnn.nnn.nnx	1
45	callagent99	nnn.nnn.nnn.nxn	3
70	callagent99	nnn.nnn.nnn.xnn	4

## Related Commands

Command	Description
<b>adddn</b>	Adds a domain name (call agent name) and optionally configures the resolution type of the domain name.
<b>adddnip</b>	Adds the IP addresses for a domain name that you added by using the <b>adddn</b> command.
<b>cnfdn</b>	Configures the resolution type of a specified domain.
<b>cnfdnssrvr</b>	Designates a DNS.
<b>deldn</b>	Deletes a domain name.
<b>deldnip</b>	Deletes a statistically provisioned IP address of a domain name.
<b>dspdnallips</b>	Displays all statistically provisioned IP addresses and externally resolved IP addresses for all domain names configured on the current VISM card.
<b>dspdns</b>	Displays the configuration data of all domain names of a call agent.
<b>dspdnssrvr</b>	Displays the domain name of the configured DNS of the current VISM card.



# dspdns

To display the configuration data of all domain names of a call agent, use the **dspdns** command.

## **dspdns**

### Syntax Description

This command has no arguments or keywords.

### Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

### Usage Guidelines

Follow standard CLI procedures for this command.

### Examples

In the following example, the configuration data of the mgc1 domain name are displayed:

```
nodename.1.12.VISM8.a > dspdns
```

DomainNumber	DomainName	IP	State	Preference	Resolution Type
1	mgc1	nn.nn.nn.nn	Active	1	internal only

```
nodename.1.12.VISM8.a >
```

### Related Commands

Command	Description
<b>adddn</b>	Adds a domain name (call agent name) and optionally configures the resolution type of the domain name.
<b>adddnip</b>	Adds the IP addresses for a domain name that you added by using the <b>adddn</b> command.
<b>cnfdn</b>	Configures the resolution type of a specified domain.
<b>cnfdnssrvr</b>	Designates a DNS.
<b>deldn</b>	Deletes a domain name.
<b>deldnip</b>	Deletes a statistically provisioned IP address of a domain name.
<b>dsdpdnallips</b>	Displays all statistically provisioned IP addresses and externally resolved IP addressees for all domain names configured on the current VISM card.
<b>dsdpdnips</b>	Displays all statistically provisioned and externally resolved IP addresses configured for a specified domain name.
<b>dsdpdnssrvr</b>	Displays the domain name of the configured DNS of the current VISM card.

# dspdnssrvr

To display the domain name of the configured domain name server (DNS) of the current VISM card, use the **dspdnssrvr** command.

## dspdnssrvr

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the configured DNS of the current VISM card is callagent99:

```
nodename.1.12.VISM8.a > dspdnssrvr

External DNS Server Domain Name: callagent99

nodename.1.12.VISM8.a >
```

Related Commands	Command	Description
	<b>adddn</b>	Adds a domain name (call agent name) and optionally configures the resolution type of the domain name.
	<b>adddnip</b>	Adds the IP addresses for a domain name that you added by using the <b>adddn</b> command.
	<b>cnfdn</b>	Configures the resolution type of a specified domain.
	<b>cnfdnssrvr</b>	Designates a DNS.
	<b>deldn</b>	Deletes a domain name.
	<b>deldnip</b>	Deletes a statistically provisioned IP address of a domain name.
	<b>dspdnallips</b>	Displays all statistically provisioned IP addresses and externally resolved IP addresses for all domain names configured on the current VISM card.
	<b>dspdnips</b>	Displays all statistically provisioned and externally resolved IP addresses configured for a specified domain name.
	<b>dspdns</b>	Displays the configuration data of all domain names of a call agent.

# dspds0execdiag

To verify that DSP testing is enabled on a channel, use the **dspds0execdiag** command.

**dspds0execdiag** <line\_number> <ds0\_number>

Syntax Description	line_number	Line number. Range is 1–8.
	ds0_number	DS0 number. Ranges are <ul style="list-style-type: none"> <li>• 1–24 = T1 lines</li> <li>• 1–31 = E1 lines</li> </ul>

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the DSP testing is enabled on DS0 1 of line 1:

```
nodename.1.12.VISM8.a > dspds0execdiag 1 1
```

```
LineNo/Ds0No      DSP Exec Status
-----
          1/ 1          Enable
```

```
nodename.1.12.VISM8.a >
```

Related Commands	Command	Description
	cnfds0execdiag	Configures testing on an individual endpoint.

# dspds0gain

To display the adjustable gain values for a specified DS0, use the **dspds0gain** command.

**dspds0gain** <line\_number> <ds0\_number>

Syntax Description	
<i>line_number</i>	Number of the line of the DS0 for which you want to display the adjustable gain. Range is 1–8.
<i>ds0_number</i>	Number of the DS0 for which you want to display the adjustable gain. Ranges are <ul style="list-style-type: none"> <li>• 1–24 = T1 lines</li> <li>• 1–31 = E1 lines</li> </ul>

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example shows, the adjustable gain values for DS0 1 are displayed:

```
nodename.1.12.VISM8.a > dspds0gain 2 1

Line Number      : 2
Ds0 Number       : 1
InputGain        : 0
Output Attenuation: 60

nodename.1.12.VISM8.a >
```

Related Commands	Command	Description
	<b>cnfds0gain</b>	Configures the adjustable gain for a specified DS0.
	<b>cnfgain</b>	Configures the adjustable gain for a VISM card.
	<b>cnflngain</b>	Configures the adjustable gain for all DS0s on a specified VISM card line.
	<b>dspgain</b>	Displays the adjustable gain for a specified VISM card.
	<b>dsplngain</b>	Displays the adjustable gain for a specified VISM card line.

# dspds0localcasstatus

To display the currently configured local channel-associated signaling (CAS) status for a specified line and DS0, use the **dspds0localcasstatus** command.

```
dspds0localcasstatus <line_number> <ds0_number>
```

Syntax Description	
<i>line_number</i>	Line number of the channel for which you want to display the currently configured local CAS status. Range is 1–8.
<i>ds0_number</i>	DS0 number of the channel for which you want to display the currently configured local CAS status. Ranges are <ul style="list-style-type: none"> <li>• 1–24 = T1 lines</li> <li>• 1–31 = E1 lines</li> </ul>

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the currently configured local CAS status for line number 1, DS0 number 1 is displayed:

```
nodename.1.12.VISM8.a > dspds0localcasstatus 1 1

ds1 line number:          1
ds0 number:              1
ds0 If Index:            1
local cas type:          Disabled
local cas 4 bit bit pattern: 0

nodename.1.12.VISM8.a >
```

Related Commands	Command	Description
	<b>cnfds0localcas</b>	Configures a local CAS 4-bit pattern for a T1 line and DS0.

# dspds0loop

To display the loopback type for a specified line and DS0, use the **dspds0loop** command.

```
dspds0loop <line_number> <ds0_number>
```

Syntax Description	line_number	Line number of the channel for which you want to display the loopback type. Range is 1–8.
	ds0_number	DS0 number of the channel for which you want to display the loopback type. Ranges are <ul style="list-style-type: none"> <li>• 1–24 = T1 lines</li> <li>• 1–31 = E1 lines</li> </ul>

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the loopback type for line number 1, DS0 number 1 is displayed:

```
nodename.1.12.VISM8.a > dspds0loop 1 1

ds1 line number:           1
ds0 number:                1
ds0 If Index:              1
loopback value:            noLoop

nodename.1.12.VISM8.a >
```

**Related Commands** There are no related commands.

# dspds0musicthreshold

To display the music on-hold threshold value for a specified DS0, use the **dspds0musicthreshold** command.

```
dspds0musicthreshold <line_number> <ds0_number>
```

## Syntax Description

<i>line_number</i>	Line number of the channel for which you want to display the DS0 music on-hold threshold value. Range is 1–8.
<i>ds0_number</i>	DS0 number for which you want to display the DS0 music on-hold threshold value. Ranges are <ul style="list-style-type: none"> <li>• 1–24 = T1 lines</li> <li>• 1–31 = E1 lines</li> </ul>

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, line number 1, DS0 number 1 displays the –50 dB music on-hold threshold configuration value:

```
nodename.1.12.VISM8.a > dspds0musicthreshold 1 1

Line Number   : 1
Ds0 Number    : 1
MusicThreshold: -50

nodename.1.12.VISM8.a >
```

## Related Commands

Command	Description
<b>cnfds0musicthreshold</b>	Configures the music on-hold threshold for a specified DS0.
<b>cnflnmusicthreshold</b>	Configures the music on-hold threshold for all DS0s on a specified line.
<b>cnfmusicthreshold</b>	Configures the music on-hold threshold value for the current VISM card.
<b>dsplnmusicthreshold</b>	Displays the music on-hold threshold values for the DS0s on a specified line.
<b>dspmusicthreshold</b>	Displays the music on-hold threshold values for the current VISM card.

# dspds0sidpacket

To show whether or not the silence insertion descriptor (SID) packet is enabled on a DS0, use the **dspds0sidpacket** command.

**dspds0sidpacket** *<line\_number>* *<ds0\_number>*

## Syntax Description

<i>line_number</i>	Line number. Range is 1–8.
<i>ds0_number</i>	DS0 number. <ul style="list-style-type: none"> <li>1–24 = T1 lines</li> <li>1–31 = E1 lines</li> </ul>

## Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the SID packet is enabled on DS0 number 1 of line 1:

```
nodename.1.12.VISM8.a > dspds0sidpacket 1 1
```

```
LineNo/Ds0No      Sid Packet
-----
1/ 1              Enable
```

```
nodename.1.12.VISM8.a >
```

## Related Commands

Command	Description
<b>cnfds0sidpacket</b>	Configures the generation of the SID packet.



# dspdualtonedet

To display dual-tone configurations that you added with the **addualtonedet** command, use the **dspdualtonedet** command.

**dspdualtonedet** <tone\_det\_num>

Syntax Description	tone_det_num	Dual tone ID. Range is 1–10.
--------------------	--------------	------------------------------

**Command Modes** VoIP switching/VoIP trunking

**Usage Guidelines** Follow standard CLI procedures for this command.



**Note**

This command is applicable only to the VISM-PR card.

**Examples** In the following example, the default dual-tone configurations values for the ring-back tones:

```
nodename.1.12.VISM8.a > dspdualtonedet 1
```

```
Tone Index:           1
Event Number:         70
Freq1:                460 Hz
Freq2:                0 Hz
OnCadence:            2000 ms
OffCadence:           4000 ms
CadenceMatch:         1
FreqMaxDeviation:    30 Hz
ToneMaxPower:         -3 dB
ToneMinPwr:           -35 dB
TonePwrTwist:         10
FreqMaxDelay:         100 ms
MinOnCadence:         200 ms
MaxOffCadence:        4500 ms
```

For more information on the dual-tone default values, see the “Default Values” section on page 9-102.

Related Commands	Command	Description
	<b>addualtonedet</b>	Adds a dual-frequency tone.
	<b>deldualtonedet</b>	Deletes a dual-frequency tone.

# dspdynamicpayload

To display the card level configuration of dynamic payload on the current VISM card, use the **dspdynamicpayload** command.

## **dspdynamicpayload**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the dynamic payload feature configuration of the current VISM card is displayed:

```
nodename.1.12.VISM8.a > dspdynamicpayload
```

```
Dynamic Payload flag: disable
```

```
nodename.1.12.VISM8.a >
```

## **Related Commands**

<b>Command</b>	<b>Description</b>
<b>addrtpcon</b>	Adds a static RTP VoIP trunking connection.
<b>cnfdynamicpayload</b>	Enables or disables the dynamic payload on the current VISM card.
<b>cnfrtpcon</b>	Modifies an existing static RTP VoIP trunking connection.
<b>cnfvbdcodec</b>	Configures the VBD upspeed codec.
<b>dsprtpcon</b>	Displays the configuration data of a specific static RTP VoIP trunking connection.
<b>dspvbdcodec</b>	Displays the upspeed codec used for VBD.

# dspdpt

To display configuration data of a specified VISM card endpoint, use the **dspdpt** command.

**dspdpt** <endpt\_num>

<b>Syntax Description</b>	<p><i>endpt_num</i> Endpoint number. Ranges are</p> <ul style="list-style-type: none"> <li>• Template 1           <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2           <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3           <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4           <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5           <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>
<b>Command Modes</b>	VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking
<b>Usage Guidelines</b>	Follow standard CLI procedures for this command.

**Examples**

In the following example, the configuration data of endpoint number 120 are displayed:

```
nodename.1.12.VISM8.a > dsendpt 120
```

```
EndptNum:          120
EndptLineNum:      1
EndptName:         T1-1/1@cisco.com
EndptSpeed:        64 kbps
EndptState:        active
EndptChannelMap:   1
EndptEnable:       active
EndptLoopback:     disabled
```

**Note**

The EndptChannelMap value is represented by a hexadecimal number, where each DS0 is a power of 2—EndptChannelMap =  $2^{\text{DS0 number}}$ .

**Related Commands**

Command	Description
<b>addendpt</b>	Adds an endpoint on a VISM card.
<b>delendpt</b>	Deletes a specified endpoint on a VISM card.
<b>dsendpts</b>	Displays information about all endpoints on a VISM card.

# dsendptdnsend

To display the maximum datagram size, use the **dsendptdnsend** command.

## **dsendptdnsend**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the maximum datagram size that you configured using the **cnfendptdnsend** command is displayed:

```
nodename.1.12.VISM8.a > dsendptdnsend

Endpt Domain Send : enable
Datagram Size     : 4095
```

Related Commands	Command	Description
	<b>cnfendptdnsend</b>	Configures the audit endpoint response to include the endpoint domain name and sets the maximum datagram size.

# dsendpts

To display configuration data for all endpoints on a VISM card, use the **dsendpts** command.

## dsendpts

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the configuration data for all endpoints on the current VISM card are displayed:

```
nodename.1.12.VISM8.a > dsendpts
```

```
EndptNum  Ena/Speed
-----  ---  -----
1          act/   64k
2          act/   64k
3          act/   64k
```

## Related Commands

Command	Description
<b>addendpt</b>	Adds an endpoint on a VISM card.
<b>addendpts</b>	Adds multiple consecutive numbers of endpoints to a VISM card.
<b>delendpt</b>	Deletes a specified endpoint on a VISM card.
<b>dsendpt</b>	Displays configuration data about a VISM card endpoint.

# dspexecdiag

To show the testing status on all of the channel levels for a given VISM card, use the **dspexecdiag** command.

## dspexecdiag

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the testing status of all channel levels is displayed:

```
nodename.1.12.VISM8.a > dspexecdiag
```

LineNo/Ds0No	DSP Exec Status
1/ 1	Enable
1/ 2	Enable
1/ 3	Enable
1/ 4	Enable
1/ 5	Enable
1/ 6	Enable
1/ 7	Enable
1/ 8	Enable
1/ 9	Enable
1/10	Enable
1/11	Enable
1/12	Enable
1/13	Enable
1/14	Enable
1/15	Enable
1/16	Enable
1/17	Enable
1/18	Enable
1/19	Enable
1/20	Enable
1/21	Enable
1/22	Enable
1/23	Enable
1/24	Enable
INFO: line ds1 '2' is not enabled	
INFO: line ds1 '3' is not enabled	
INFO: line ds1 '4' is not enabled	
INFO: line ds1 '5' is not enabled	
INFO: line ds1 '6' is not enabled	
INFO: line ds1 '7' is not enabled	
INFO: line ds1 '8' is not enabled	

**dspexecdiag****Related Commands**

<b>Command</b>	<b>Description</b>
<b>cnfexecdiag</b>	Configures all channel level testing.



# dspfaxmodemtrace

To show whether fax/modem trace is on or off, use the **dspfaxmodemtrace** command.

**dspfaxmodemtrace**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the fax/modem trace is off:

```
nodename.1.12.VISM8.a > dspfaxmodemtrace
```

```
Fax/Modem Trace is OFF...
```

**Related Commands**

Command	Description
<b>setfaxmodemtrace</b>	Turns fax/modem trace on or off.

# dspfaxrelay

To find out whether ATM fax relay is enabled on a line of the VISM-PR card, use the **dspfaxrelay** command.

**dspfaxrelay** *<line\_number>*

## Syntax Description

<i>line_number</i>	Line number in the range 1–8.
--------------------	-------------------------------

## Command Modes

AAL2 trunking, switched AAL2 SVC, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

This command is applicable only to the VISM-PR card.

## Examples

In the following example, ATM fax relay is enabled on line 1.

```
nodename.1.18.VISM8.a > dspfaxrelay 1

line_number:          1
faxrelay:             Enabled
```

## Related Commands

Command	Description
<b>cnffaxrelay</b>	Configures ATM fax relay on a line.
<b>cnffaxrelayparams</b>	Configures ATM fax relay parameters.
<b>cnffaxrelaytimeout</b>	Configures the ATM fax relay acknowledgment timeout.
<b>dspfaxrelayparams</b>	Displays the ATM fax relay parameters.
<b>dspfaxrelays</b>	Displays whether or not ATM fax relay is enabled on all of the lines.
<b>dspfaxrelaytimeout</b>	Displays the ATM fax relay acknowledgment timeout value for a line.
<b>dspfaxrelaytimeouts</b>	Displays the fax acknowledgment timeout values for all of the lines.

# dspfaxrelayparams

To display the ATM fax relay parameters on the VISM-PR card, use the **dspfaxrelayparams** command.

**dspfaxrelayparams** <line\_number>

Syntax Description	line_number	Line number in the range 1–8.
--------------------	-------------	-------------------------------

**Command Modes** AAL2 trunking, switched AAL2 SVC, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** This command is applicable only to the VISM-PR card.

**Examples** In the following example, the ATM fax relay settings are displayed for line 1:

```
nodename.1.18.VISM8.a > dspfaxrelayparams 1

line_number:          1
Max_Xmit_Rate:        fx14400bps
NSF_Override:         enabled
NSF_Country_Code:    173
NSF_Vendor_Code:     81
T30_ECM:              enabled
```

Related Commands	Command	Description
	<b>cnffaxrelay</b>	Configures ATM fax relay on a line.
	<b>cnffaxrelayparams</b>	Configures ATM fax relay parameters.
	<b>cnffaxrelaytimeout</b>	Configures the ATM fax relay acknowledgment timeout.
	<b>dspfaxrelay</b>	Displays whether or not ATM fax relay is enabled on a line.
	<b>dspfaxrelays</b>	Displays whether or not ATM fax relay is enabled on all of the lines.
	<b>dspfaxrelaytimeout</b>	Displays the ATM fax relay acknowledgment timeout value for a line.
	<b>dspfaxrelaytimeouts</b>	Displays the fax acknowledgment timeout values for all of the lines.

# dspfaxrelays

To find out whether ATM fax relay is enabled or disabled on all of the lines of the VISM-PR card, use the **dspfaxrelays** command.

## dspfaxrelays

**Syntax Description** This command has no arguments or keywords.

**Command Modes** AAL2 trunking, switched AAL2 SVC, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** This command is applicable only to the VISM-PR card.

**Examples** In the following example, ATM fax relay is enabled on all of the lines of the VISM-PR card:

```
nodename.1.18.VISM8.a > dspfaxrelays
```

```

Line_Number   Fax Relay
-----
1             Enabled
2             Enabled
3             Enabled
4             Enabled
5             Enabled
6             Enabled
7             Enabled
8             Enabled

```

## Related Commands

Command	Description
<b>cnffaxrelay</b>	Configures ATM fax relay on a line.
<b>cnffaxrelayparams</b>	Configures ATM fax relay parameters.
<b>cnffaxrelaytimeout</b>	Configures the ATM fax relay acknowledgment timeout.
<b>dspfaxrelayparams</b>	Displays the ATM fax relay parameters.
<b>dspfaxrelay</b>	Displays whether or not ATM fax relay is enabled on a line.
<b>dspfaxrelaytimeout</b>	Displays the ATM fax relay acknowledgment timeout value for a line.
<b>dspfaxrelaytimeouts</b>	Displays the fax acknowledgment timeout values for all of the lines.

# dspfaxrelaytimeout

To display the fax acknowledgment timeout for a specified line on the VISM-PR card, use the **dspfaxrelaytimeout** command.

**dspfaxrelaytimeout** *<line\_number>*

<b>Syntax Description</b>	<i>line_number</i>	Line number in the range 1–8.
---------------------------	--------------------	-------------------------------

**Command Modes** AAL2 trunking, switched AAL2 SVC, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** This command is applicable only to the VISM-PR card.

**Examples** In the following example, the default fax acknowledgment timeout value is displayed for line 1:

```
nodename.1.18.VISM8.a > dspfaxrelaytimeout 1

line_number:          1
FAX_Ack_Timer:       1000 ms
```

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>cnffaxrelay</b>	Configures ATM fax relay on a line.
	<b>cnffaxrelayparams</b>	Configures ATM fax relay parameters.
	<b>cnffaxrelaytimeout</b>	Configures the ATM fax relay acknowledgment timeout.
	<b>dspfaxrelay</b>	Displays whether or not fax relay is enabled on a line.
	<b>dspfaxrelays</b>	Displays whether or not ATM fax relay is enabled on all of the lines.
	<b>dspfaxrelayparams</b>	Displays the ATM fax relay parameters.
	<b>dspfaxrelaytimeouts</b>	Displays the fax acknowledgment timeout values for all of the lines.

# dspfaxrelaytimeouts

To display the fax acknowledgment timeout values for all of the lines on the VISM-PR card, use the **dspfaxrelaytimeouts** command.

## dspfaxrelaytimeouts

**Syntax Description** This command has no arguments or keywords.

**Command Modes** AAL2 trunking, switched AAL2 SVC, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** This command is applicable only to the VISM-PR card.

**Examples** In the following example, the default fax acknowledgment timeout values for all of the lines on the VISM-PR card are displayed:

```
nodename.1.18.VISM8.a > dspfaxrelaytimeouts
```

```

Line_Number  FAX Ack Timeout (ms)
-----  -
1              1000
2              1000
3              1000
4              1000
5              1000
6              1000
7              1000
8              1000

```

Related Commands	Command	Description
	<b>cnffaxrelay</b>	Configures ATM fax relay on a line.
	<b>cnffaxrelayparams</b>	Configures ATM fax relay parameters.
	<b>cnffaxrelaytimeout</b>	Configures the ATM fax relay acknowledgment timeout.
	<b>dspfaxrelay</b>	Displays whether or not fax relay is enabled on a line.
	<b>dspfaxrelays</b>	Displays whether or not ATM fax relay is enabled on all of the lines.
	<b>dspfaxrelayparams</b>	Displays the ATM fax relay parameters.
	<b>dspfaxrelaytimeout</b>	Displays the ATM fax relay acknowledgment timeout value for a line.

# dspgain

To display the adjustable gain values for a specified VISM card, use the **dspgain** command.

## dspgain

### Syntax Description

This command has no arguments or keywords.

### Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

### Usage Guidelines

Follow standard CLI procedures for this command.

### Examples

In the following example, the adjustable gain values for the current VISM card are displayed:

```
nodename.1.12.VISM8.a > dspgain
```

```
LineNo/Ds0No  InputGain  OutputAttenuation
-----
1/1           0           100
1/2           10          60
```

### Related Commands

Command	Description
<b>cnfds0gain</b>	Configures the adjustable gain for a specified DS0.
<b>cnfgain</b>	Configures the adjustable gain for a VISM card.
<b>cnflngain</b>	Configures the adjustable gain for all DS0s on a specified VISM card line.
<b>dspds0gain</b>	Displays the adjustable gain values for a specified DS0.
<b>dsplngain</b>	Displays the adjustable gain for a specified VISM card line.

# dspgwstate

To display the current user-configured service state of the gateway, use the **dspgwstate** command.

## **dspgwstate**

---

**Syntax Description** This command has no arguments or keywords.

---

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

---

**Usage Guidelines** The following states can be displayed by this command:

- Administrative:
  - In service
  - Command out of service
  - Pending out of service
- Operational:
  - Alarm
  - OK

---

**Examples** In the following example, the user-configured gateway service states—the command out of service administration state and the alarm operational state—are displayed:

```
nodename.1.12.VISM8.a > dspgwstate  
  
Admin State : Command_Out_Of_Service  
Oper. State : Alarm
```

---

**Related Commands** There are no related commands.



# dspheartbeattimer

To display the heartbeat timer value of the VISM card, use the **dspheartbeattimer** command.

## **dspheartbeattimer**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the heartbeat timer value is displayed:

```
nodename.1.12.VISM8.a > dspheartbeattimer

DSP Heartbeat timer value: 0

nodename.1.12.VISM8.a >
```

Related Commands	Command	Description
	<b>cnfdspheartbeattimer</b>	Configures the DSP to send a heartbeat message within a given period of time.

# dsphistorystats

To display the various history statistics, use the **dsphistorystats** command.

```
dsphistorystats <StatsType> <Interval> <InterfaceIndex> [InterfaceIndex2]
```

Syntax Description	
<i>StatsType</i>	Type of history statistics. Values are <ul style="list-style-type: none"> <li>• 1 = PVC</li> <li>• 2 = CID</li> <li>• 3 = Line</li> </ul>
<i>Interval</i>	Interval range is 0–96.  A value of 0 displays the total of all of the intervals for 24 hours. Values 1–96 represent the 15-minute time intervals that make up the previous 24 hours.  See the following examples: <ul style="list-style-type: none"> <li>• 1 = 00:00 to 00:15</li> <li>• 2 = 00:15 to 00:30</li> <li>• 12 = 02:25 to 03:00</li> </ul>
<i>InterfaceIndex</i>	If <i>StatsType</i> is set to 1 (PVC) or 2 (CID), this value is in the range 131–510 for the logical channel number (LCN).  If <i>StatsType</i> is set to 3 (Line), this value is in the range 1–8 for the line number.
<i>[InterfaceIndex2]</i>	This argument is mandatory if <i>StatsType</i> is set to 2 (CID). Range is 8–255 for the CID number.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, Switched AAL2 SVC, Switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** The following statistics are collected for a 24-hour duration with 15-minute intervals:

- Clock slips—VISM/VISM-PR
- ATM Statistics—VISM-PR only
- Cells per second for connection—VISM-PR only

For the descriptions of the statistics, see the “VISM-PR Bulk Statistics Upload to CWM” section on page 9-87.

**Examples**

In the following example, the PVC statistics that are collected from the interval 00:15 to 00:30 are displayed:

```

nodename.1.5.VISM8.a > dsphistorystats 1 2 131

PVC History Statistics: interval = 2, LCN = 131
-----
Valid Flag                               = VALID
Last Reset Uptime Ticks                   = 0
Total ATM Xmt Cells                       = 180902
Total ATM Rcv Cells                       = 0
Avg Per Sec ATM Xmt Cells                 = 201
Avg Per Sec ATM Rcv Cells                 = 0
Peak Per Sec ATM Xmt Cells                = 202
Peak Per Sec ATM Rcv Cells                = 0
Total OAM Xmt End-to-End Lpbk Req Cells   = 900
Total OAM Rcv End-to-End Lpbk Rsp Cells   = 0
Total OAM Xmt Segment Lpbk Cells         = 0
Total OAM Rcv Segment Lpbk Cells         = 0
Total OAM End-to-End Lpbk Lost Cells      = 900
Total Discarded Rcv OAM Cells             = 0
Total AIS Suppress Cnts                   = 0
Total Xmt AIS Cnts                        = 0
Total Rcv AIS Cnts                        = 0
Total Xmt FERF Cnts                       = 0
Total Rcv FERF Cnts                       = 0
Total Xmt AIS Cells                       = 0
Total Rcv AIS Cells                       = 0
Total Xmt FERF Cells                      = 900
Total Rcv FERF Cells                      = 0
Total AAL2 CPS Sent Pkts                  = 0
Total AAL2 CPS Rcvd Pkts                  = 0
Total AAL2 HEC Errors                     = 0
Total AAL2 CRC Errors                     = 0
Total AAL2 Invalid OSF Cells              = 0
Total AAL2 Invalid Parity Cells           = 0
Total AAL2 Invalid Cid Pkts              = 0
Total AAL2 Invalid UUI Pkts              = 0
Total AAL2 Invalid Length Pkts           = 0
Total AAL5 PDU Sent Pkts                  = 0
Total AAL5 PDU Rcvd Pkts                  = 0
Total AAL5 Invalid CPI PDUs               = 0
Total AAL5 Oversized SDU Rcvd PDUs       = 0
Total AAL5 Invalid Length PDUs           = 0
Total AAL5 CRC32 Errored PDUs            = 0
Total AAL5 Reassembly Timer Expiry PDUs  = 0

Last Completed Interval Number is 42

```

**Related Commands**

Command	Description
clrhistorystats	Clears history statistics.

# dsplapd

To display configuration data about a Link Access Protocol D Channel (LAPD), use the **dsplapd** command.

```
dsplapd <line_number> <ds0_number>
```

## Syntax Description

<i>line_number</i>	Line number of the channel for which you want to display the LAPD configuration data. Range is 1–8.
<i>ds0_number</i>	DS0 number of the channel for which you want to display the LAPD configuration data. Ranges are <ul style="list-style-type: none"> <li>• 1–24 = T1 lines</li> <li>• 1–31 = E1 lines</li> </ul>

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the LAPD configuration data is displayed for line number 1, DS0 number 1:

```
nodename.1.12.VISM8.a > dsplapd 1 1

vismRudpSessionStatNum:      1
vismRudpSessionAutoResets:   0
vismRudpSessionRcvdAutoResets: 0
vismRudpSessionRcvdInSeqs:  0
vismRudpSessionRcvdOutSeqs: 0
vismRudpSessionSentPackets:  5
vismRudpSessionRcvdPackets:  0
vismRudpSessionSentBytes:    0
vismRudpSessionRcvdBytes:    0
vismRudpSessionDataSentPkts: 0
vismRudpSessionDataRcvdPkts: 0
vismRudpSessionDiscardPkts:  0
Trunk type:                   Backhaul
```

## Related Commands

Command	Description
<b>addlapd</b>	Adds an LAPD.
<b>addlapdtrunk</b>	Adds an LAPD trunk to a specific VISM card line.
<b>addrtpcon</b>	Adds a static RTP VoIP trunking connection.
<b>addrudptrunk</b>	Adds an ISDN PRI backhaul RUDP session for an LAPD trunk connection.
<b>clrtrtpcnt</b>	Clears the RTP counters (statistics) for a specific static RTP connection.
<b>cnflapdtrunkpvc</b>	Assigns the PVC trunk type that carries LAPD messages for the current VISM card.
<b>cnflntrunkcond</b>	Enables or disables line conditioning on a VISM card line.

<b>Command</b>	<b>Description</b>
<b>cnfrtpcon</b>	Modifies an existing static RTP VoIP trunking connection.
<b>cnfrudptrunkrmtip</b>	Modifies the remote VISM IP address used in the ISDN PRI backhaul RUDP trunk for a specified session.
<b>dellapd</b>	Deletes an LAPD.
<b>dellapdtrunk</b>	Deletes an LAPD configured line.
<b>delrtpcon</b>	Deletes a static RTP VoIP trunking connection.
<b>delrudptrunk</b>	Deletes an ISDN PRI backhaul RUDP session that is associated with an LAPD.
<b>dsplapds</b>	Displays configuration data about all LAPDs.
<b>dsplapdtrunkpvc</b>	Displays the assigned PVC trunk type that carries LAPD trunk messages for the current VISM card.
<b>dsplapdtrunks</b>	Displays the configuration data of all LAPD trunks.
<b>dsprtptent</b>	Displays the bearer counters (statistics) for a specific RTP VoIP trunking connection.
<b>dsprtptcon</b>	Displays the configuration data of a specific static RTP VoIP trunking connection.
<b>dsprtptcons</b>	Displays the configuration data of all static RTP VoIP trunking connections.
<b>dsprudptrunk</b>	Displays the configuration data of a specified ISDN PRI backhaul RUDP session.
<b>dsprudptrunks</b>	Displays the configuration data of all ISDN PRI backhaul RUDP sessions.

# dsplapds

To display configuration data about all Link Access Protocol D Channels (LAPDs) on the VISM card, use the **dsplapds** command.

## dsplapds

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the configuration data for all LAPDs is displayed:

```
nodename.1.12.VISM8.a > dsplapds

Line number   DS0 number   Lapd Application Type
-----
           1             1             PRI

nodename.1.12.VISM8.a >
```

## Related Commands

Command	Description
<b>addlapd</b>	Adds an LAPD.
<b>dellapd</b>	Deletes an LAPD.
<b>dsplapd</b>	Displays configuration data about an LAPD.

# dsplapdstat

To display statistics (counters) about Link Access Protocol D Channel (LAPD) for a specific line and DS0, use the **dsplapdstat** command.

```
dsplapdstat <line_number> <ds0_number>
```

<b>Syntax Description</b>	<i>line_number</i>	Line number of the channel for which you want to display the LAPD statistics. Range is 1–8.
	<i>ds0_number</i>	DS0 number of the channel for which you want to display the LAPD statistics. Ranges are <ul style="list-style-type: none"> <li>• 1–24 = T1 lines</li> <li>• 1–31 = E1 lines</li> </ul>

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the LAPD statistics for line number 1, DS0 number 1 are displayed:

```
nodename.1.12.VISM8.a > dsplapdstat 1 1

vismLapdStatsIndex:          1
vismLapdRxInfoFrames:        0
vismLapdTxFrames:            0
vismLapdRxReadyFrames:       0
vismLapdTxFrames:            0
vismLapdRxNotReadyFrames:    0
vismLapdTxFrames:            0
vismLapdRxSABMFrames:        0
vismLapdTxFrames:            0
vismLapdRxDisconFrames:      0
vismLapdTxFrames:            0
vismLapdRxUAFrames:          0
vismLapdTxFrames:            0
vismLapdRxDiscModeFrames:    0
vismLapdTxFrames:            0
vismLapdRxFrmRejectFrames:   0
vismLapdTxFrames:            0
vismLapdRxExchIdFrames:      0
vismLapdTxFrames:            0
vismLapdRxUnumInfoFrames:    0
vismLapdTxFrames:            0
vismLapdRxRejectFrames:      0
vismLapdTxFrames:            0
vismLapdRxInvalidFrames:     0
```

**Related Commands** There are no related commands.

# dsplapdtrunkpvc

To display the assigned permanent virtual circuit (PVC) trunk type that carries Link Access Protocol D Channel (LAPD) trunk messages for the current VISM card, use the **dsplapdtrunkpvc** command.

## dsplapdtrunkpvc

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the control PVC trunk carries LAPD trunk messages for the current VISM card:

```
nodename.1.12.VISM8.a > dsplapdtrunkpvc

Lapd Trunk PVC Carrier: Control

nodename.1.12.VISM8.a >
```

## Related Commands

Command	Description
<b>addlapdtrunk</b>	Adds an LAPD trunk to a specific VISM card line.
<b>addrtpcon</b>	Adds a static RTP VoIP trunking connection.
<b>addrudptrunk</b>	Adds an ISDN PRI backhaul RUDP session for an LAPD trunk connection.
<b>clrrtpcnt</b>	Clears the RTP counters (statistics) for a specific static RTP connection.
<b>cnflntrunkcond</b>	Enables or disables line conditioning on a VISM card line.
<b>cnfrtpcon</b>	Modifies an existing static RTP VoIP trunking connection.
<b>cnfrudptrunkrmtip</b>	Modifies the remote VISM IP address used in the ISDN PRI backhaul RUDP trunk for a specified session.
<b>dellapdtrunk</b>	Deletes an LAPD configured line.
<b>delrtpcon</b>	Deletes a static RTP VoIP trunking connection.
<b>delrudptrunk</b>	Deletes an ISDN PRI backhaul RUDP session that is associated with an LAPD.



<b>Command</b>	<b>Description</b>
<b>dsplapd</b>	Displays data about an LAPD.
<b>dsplapdtrunks</b>	Displays the configuration data of all LAPD trunks.
<b>dsprtpcnt</b>	Displays the bearer counters (statistics) for a specific RTP VoIP trunking connection.
<b>dsprtpcn</b>	Displays the configuration data of a specific static RTP VoIP trunking connection.
<b>dsprtpcns</b>	Displays the configuration data of all static RTP VoIP trunking connections.
<b>dsprudp trunk</b>	Displays the configuration data of a specified ISDN PRI backhaul RUDP session.
<b>dsprudp trunks</b>	Displays the configuration data of all ISDN PRI backhaul RUDP sessions.

# dsplapdtrunks

To display the data of all Link Access Protocol D Channel (LAPD) configured trunks, use the **dsplapdtrunks** command.

## dsplapdtrunks

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, all LAPD configuration data of the current VISM card trunks are displayed:

```
nodename.1.12.VISM8.a > dsplapdtrunks
```

```
Trunk Num State Session Number
-----
      1      Oos          1
```

```
nodename.1.12.VISM8.a >
```

## Related Commands

Command	Description
<b>addlapdtrunk</b>	Adds an LAPD trunk to a specific VISM card line.
<b>addrtpcon</b>	Adds a static RTP VoIP trunking connection.
<b>addrudptrunk</b>	Adds an ISDN PRI backhaul RUDP session for an LAPD trunk connection.
<b>clrtrtpcnt</b>	Clears the RTP counters (statistics) for a specific static RTP connection.
<b>cnflapdtrunkpvc</b>	Assigns the PVC trunk type that carries LAPD messages for the current VISM card.
<b>cnflntrunkcond</b>	Enables or disables line conditioning on a VISM card line.
<b>cnfrtpcon</b>	Modifies an existing static RTP VoIP trunking connection.
<b>cnfrudptrunkrmtip</b>	Modifies the remote VISM IP address used in the ISDN PRI backhaul RUDP trunk for a specified session.
<b>dellapdtrunk</b>	Deletes an LAPD configured line.
<b>delrtpcon</b>	Deletes a static RTP VoIP trunking connection.
<b>delrudptrunk</b>	Deletes an ISDN PRI backhaul RUDP session that is associated with an LAPD.
<b>dsplapd</b>	Displays data about an LAPD.
<b>dsplapdtrunkpvc</b>	Displays the assigned PVC trunk type that carries LAPD trunk messages for the current VISM card.
<b>dsprtpcnt</b>	Displays the bearer counters (statistics) for a specific RTP VoIP trunking connection.

<b>Command</b>	<b>Description</b>
<b>dsprtcon</b>	Displays the configuration data of a specific static RTP VoIP trunking connection.
<b>dsprtcons</b>	Displays the configuration data of all static RTP VoIP trunking connections.
<b>dsprudp trunk</b>	Displays the configuration data of a specified ISDN PRI backhaul RUDP session.
<b>dsprudp trunks</b>	Displays the configuration data of all ISDN PRI backhaul RUDP sessions.

# dsplinecasbits

To display the currently transmitted and received channel-associated signaling (CAS) bit values for all the endpoints on a VISM card line, use the **dsplinecasbits** command.

**dsplinecasbits** *<line\_number>*

## Syntax Description

*line\_number* Number of the line for which you want to display the CAS bit values. Range is 1–8.

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the currently transmitted and received CAS bits of line number 1 are displayed:

```
nodename.1.12.VISM8.a > dsplinecasbits 1
```

```

DS0      Tx to TDM   Rx fr TDM
-----A-B-C-D-----A-B-C-D
 1       0 0 0 0   0 0 0 0
 2       0 0 0 0   0 0 0 0
 3       0 0 0 0   0 0 0 0
 4       0 0 0 0   0 0 0 0
 5       0 0 0 0   0 0 0 0
 6       0 0 0 0   0 0 0 0
 7       0 0 0 0   0 0 0 0
 8       0 0 0 0   0 0 0 0
 9       0 0 0 0   0 0 0 0
10      0 0 0 0   0 0 0 0
11      0 0 0 0   0 0 0 0
12      0 0 0 0   0 0 0 0
13      0 0 0 0   0 0 0 0
14      0 0 0 0   0 0 0 0
15      0 0 0 0   0 0 0 0
16      0 0 0 0   0 0 0 0
17      0 0 0 0   0 0 0 0
18      0 0 0 0   0 0 0 0
19      0 0 0 0   0 0 0 0
20      0 0 0 0   0 0 0 0
21      0 0 0 0   0 0 0 0
22      0 0 0 0   0 0 0 0
23      0 0 0 0   0 0 0 0
24      0 0 0 0   0 0 0 0

```

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>addendpt</b>	Adds an endpoint on a VISM card.
<b>addendpts</b>	Adds a consecutive number of endpoints to a VISM card.
<b>addln</b>	Adds a T1 or E1 line to a VISM card.
<b>cnfcasendpt</b>	Associates an endpoint with a CAS variant.
<b>cnflnsig</b>	Configures the signaling mode for a VISM card line.

# dsplinesabyte

To display the transmit and receive SA buffers, use the **dsplinesabyte** command.

The SA-byte is used to insert SA-bits (bits SA4–SA8) into a time slot. The SA-bits are spare bits that can be used for synchronization.

**dsplinesabyte** <line\_number>

## Syntax Description

*line\_number* Line number in the range 1–8.

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the SA-bytes of line number 1:

```
nodename.1.20.VISM8.a > dsplinesabyte 1
```

```
Line 1 Transmit SA Buffer Registers
-----
Transmit Sa4-byte Buffer: 255
Transmit Sa5-byte Buffer: 255
Transmit Sa6-byte Buffer: 255
Transmit Sa7-byte Buffer: 255
Transmit Sa8-byte Buffer: 255

Line 1 Receive SA Buffer Registers
-----
Receive Sa4-byte Buffer: 0
Receive Sa5-byte Buffer: 0
Receive Sa6-byte Buffer: 0
Receive Sa7-byte Buffer: 0
Receive Sa8-byte Buffer: 0
```

## Related Commands

Command	Description
<b>cnflinesabyte</b>	Configures SA-bytes on a line.

# dspllccstats

To display lossless compression statistics, use the **dspllccstats** command.

**dspllccstats** *<endpt\_num>*

Syntax Description	<i>endpt_num</i>	Endpoint number for which you want to display the LLCC statistics. Ranges are
		<ul style="list-style-type: none"> <li>• Template 1               <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2               <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3               <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4               <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5               <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>

**Command Modes** AAL2 trunking, Switched AAL2 PVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** This command is applicable only to VISM-PR cards with lossless compression codecs.

**Examples**

In the following example, the output of the **dsp1lccstats** command on endpoint 1 is displayed:

```
nodename.1.19.VISM8.a > dsp1lccstats 1

lossless compression summary:

    current compression ratio                = 98
    average compression ratio since reset    = 107
    max buffer size (ms)                    = 32
    nominal buffer size (ms)                = 1052135
    current buffer size (ms)                = 124
    total input frame count                  = 15694567
    total output frame count                 = 16798761
    encoded tx front-end compressed frame count = 144851
    encoded tx back-end compressed frame count = 0
    encoded tx frame count (no compression) = 16653909
    underflow error count                   = 12428
    overflow error count                    = 0
    decode error count                      = 0
    tx signaling frame count                 = 28473
    rx signaling frame count                 = 0
    rx bad checksum frame count             = 0
    rx good checksum frame count            = 0

nodename.1.19.VISM8.a >
```

**Related Commands**

There are no related commands.



# dspIn

To display the configuration data of a VISM card line, use the **dspIn** command.

**dspIn** <line\_number>

<b>Syntax Description</b>	<i>line_number</i> Number of the line for which you want to display the configuration data. Range is 1–8.
---------------------------	---

<b>Command Modes</b>	VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking
----------------------	---

<b>Usage Guidelines</b>	Follow standard CLI procedures for this command.
-------------------------	--

**Examples** In the following example, the configuration data for line number 1 is displayed:

```
nodename.1.12.VISM8.a > dspIn 1

LineNum:                1
LineConnectorType:      RJ-48
LineEnable:              Modify
LineType:                dsx1ESF
LineCoding:              dsx1B8ZS
LineLength:              0-131 ft
LineXmtClockSource:     LocalTiming
LineLoopbackCommand:    LocalLineLoop
LineSendCode:            NoCode
LineUsedTimeslotsBitMap: 0xffffffff
LineLoopbackCodeDetection: codeDetectDisabled
LineSignalingType:      No Signaling
LineCcsChannels:         0x0
LineTrunkConditioning:  disable
LineBearerBusyCode:     127
CircuitIdentifier:
TxDigitOrder:           aniThenDnis
TonePlanRegion:
TonePlanVersion:        0
RingingTO:              180
RingBackTO:             180

Type <CR> to continue, Q<CR> to stop:

BusyTO:                 30
ReorderTO:              30
DialTO:                 16
StutterDialTO:          16
OffHookAlertTO:         5
RemoteRingbackMethod:   proxy
V110Detection:          enable

LineNumOfValidEntries: 8
```

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>addln</b>	Adds a T1 or E1 line to a VISM card.
<b>cnfln</b>	Configures characteristics for a VISM card line.
<b>delln</b>	Deletes a T1 or E1 line from a VISM card.

# dsplncidcps

To show the cells per second usage per CID for all of the CIDs on a particular line, use the **dsplncidcps** command.

**dsplncidcps** <line\_number>

## Syntax Description

*line\_number* Line number range is 1–8.

## Command Modes

AAL2 trunking, Switched AAL2 PVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the cells per second information is displayed for 1:

```
nodename.1.5.VISM8.a > dsplncidcps 1
```

LCN Num	CID Num	Endpt Num	24Hr cell	Peak Rate(CPS)	Xmit	24Hr cell	Peak Rate(CPS)	Rcv	Current Cell Rate(CPS)	Xmit	Current Cell Rate(CPS)	Rcv
			-----			-----			-----		-----	
131	8	1		219					201			

## Related Commands

Command	Description
<b>addcid</b>	Adds an AAL2 CID on a VISM card.
<b>delcid</b>	Deletes the association between an endpoint and an LCN/CID pair.
<b>dspcid</b>	Displays the configuration data of an AAL2 CID on the current VISM card.
<b>dspcidcps</b>	Displays the CPS for a connection.
<b>dspcids</b>	Displays all CIDs for an LCN.

# dsplncids

To display the channel identification (CID), endpoint, and AAL2 configuration data for a VISM card line, use the **dsplncids** command.

**dsplncids** <line\_number>

## Syntax Description

*line\_number* Number of the line for which you want to display the CID, endpoint, and AAL2 configuration data. Range is 1–8.

## Command Modes

AAL2 trunking, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the CID, endpoint, and AAL2 configuration data for line 2 are displayed:

```
nodename.1.5.VISM8.a > dsplncids 2
```

```
lcn CID Endpt Cid Type3 VAD Prof Prof Codec Cas DTMF
Num Num Num Status Redun VAD Timer Type Num Type Tran Tran Ecan
-----
33 10 2 active ena ena 250 ITU 1 G.711u ena ena ena
```



### Note

If you configure the codec type as clear for the line identified by the *line\_number* argument, the Type3 Redun, Cas Tran, DTMF Tran, and Ecan values are not applicable.

## Related Commands

Command	Description
<b>addcid</b>	Adds an AAL2 CID on a VISM card.

# dspIncompanding

To display the companding law on a line, use the **dspIncompanding** command.

**dspIncompanding** <line\_number>

## Syntax Description

*line\_number* Number of the line for which you want to display the companding law. Range is 1–8.

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the companding law is shown for line 1:

```
PXM1E_SJ.1.27.VISM8.a > dspIncompanding 1
```

Line/Ds0	Companding
-----	-----
1/ 1	U-Law
1/ 2	U-Law
1/ 3	U-Law
1/ 4	U-Law
1/ 5	U-Law
1/ 6	U-Law
1/ 7	U-Law
1/ 8	U-Law
1/ 9	U-Law
1/10	U-Law
1/11	U-Law
1/12	U-Law
1/13	U-Law
1/14	U-Law
1/15	U-Law
1/16	U-Law
1/17	U-Law
1/18	U-Law
1/19	U-Law
1/20	U-Law
1/21	U-Law
1/22	U-Law
1/23	U-Law
1/24	U-Law
1/25	U-Law
1/26	U-Law
1/27	U-Law
1/28	U-Law
1/29	U-Law
1/30	U-Law
1/31	U-Law

■ `dsplncompanding`

---

**Related Commands**

<b>Command</b>	<b>Description</b>
<code>cnflncompanding</code>	Configures companding law on a line.

---

# dsplndigitorder

To display the order in which automatic number identification (ANI) digits—the caller's number—and dialed number identification service (DNIS) digits—the called number—are dialed during an outgoing Feature Group D (FGD) call on the endpoints of a specified VISM card line, use the **dsplndigitorder** command.

**dsplndigitorder** <line\_number>

## Syntax Description

<i>line_number</i>	Number of the line for which you want to display the dialed digit order. Range is 1–8.
--------------------	--

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

The ANI and DNIS digits are sent as part of the MGCP setup message.

## Examples

In the following example, line number 7 is assigned the following digit order during an outgoing FGD call:

```
nodename.1.5.VISM8.a > dsplndigitorder 7
```

```
LineNum          : 1
Dsx1TxDigitOrder: aniThenDnis
```

```
nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>cnfcasflashtime</b>	Configures the minimum and maximum CAS on-hook time periods for incoming flash hooks on a specified endpoint.
<b>cnfcasglareattrib</b>	Configures the direction of CAS calls and the glare policy for a specified endpoint.
<b>cnfcaspackage</b>	Configures MGCP packages to observe persistent CAS events in the context of incoming and outgoing CAS calls on a specified endpoint.
<b>cnflndigitorder</b>	Assigns the order in which ANI digits and DNIS digits are dialed during an outgoing FGD call on the endpoints of a specified VISM card line.
<b>delxgcppersistevt</b>	Deletes a persistent xGCP event.
<b>dspcasglareattrib</b>	Displays the direction of CAS calls and the glare policy for a specified endpoint.
<b>dspcaspackage</b>	Displays the MGCP packages configured to observe persistent CAS events in the context of incoming and outgoing CAS calls on a specified endpoint.
<b>dspcastimers</b>	Displays the currently configured CAS timers for a specified endpoint.

# dsplndsp

To display the digital signal processor (DSP) data for a specified T1 or E1 line, use the **dsplndsp** command.

```
dsplndsp <line_num>
```

## Syntax Description

<i>line_num</i>	Number of the line for which you want to display the DSP data. Range is 1–8.
-----------------	--

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the DSP data for line 1 are displayed:

```
nodename.1.5.VISM8.a > dsplndsp 1

VismLineNum:          1
ECANEnable:           enable
ECANReenable:         ReenableOnModemData
ToneDisable:          G.165
MaximumTail:          32 milliseconds
ResidualEcho:         ComfortNoise
VoiceDetection:       Enable
```

```
nodename.1.5.VISM8.a >
```



### Note

VAD and ECAN apply to the VoIP switching/trunking operating mode only.

## Related Commands

Command	Description
<b>addln</b>	Adds a T1 or E1 line to a VISM card.
<b>delln</b>	Deletes a T1 or E1 line from a VISM card.



# dspInDsx0s

To display the configuration data of all DS0s on a specified T1 or E1 line, use the **dspInDsx0s** command.

**dspInDsx0s** <line\_number>

## Syntax Description

*line\_number* Number of the line for which you want to display all DS0 configuration data. Range is 1–8.

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, all DS0 configuration data for line 1 are displayed:

```
nodename.1.5.VISM8.a > dspInDsx0s 1
```

ds0 Index	If	Robbed Bit Signaling	Idle Code	Seized Code	EndPt Num	If Type	Variant Name
1		True	0	0	1	bearer	
2		True	0	0	2	bearer	
3		True	0	0	3	bearer	
4		True	0	0	4	bearer	
5		True	0	0	5	bearer	
6		False	0	0	-1	-	
7		False	0	0	-1	-	
8		False	0	0	-1	-	
9		False	0	0	-1	-	
10		False	0	0	-1	-	
11		False	0	0	-1	-	
12		False	0	0	-1	-	
13		False	0	0	-1	-	
14		False	0	0	-1	-	
15		False	0	0	-1	-	
16		False	0	0	-1	-	
17		False	0	0	-1	-	
18		False	0	0	-1	-	
19		False	0	0	-1	-	
20		False	0	0	-1	-	
21		False	0	0	-1	-	
22		False	0	0	-1	-	
23		False	0	0	-1	-	
24		False	0	0	-1	-	



### Note

Idle code, seized code, and variant name apply to the VoIP switching/trunking operating mode only.

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>addln</b>	Adds a T1 or E1 line to a VISM card.
<b>delln</b>	Deletes a T1 or E1 line from a VISM card.

# dsplnendptstatus

To display the status of endpoints for a specified T1 or E1 line, use the **dsplnendptstatus** command.

**dsplnendptstatus** *<line\_number>*

<b>Syntax Description</b>	<i>line_number</i> Number of the line for which you want to display the status of endpoints. Range is 1–8.
---------------------------	--

<b>Command Modes</b>	VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking
----------------------	---

<b>Usage Guidelines</b>	Follow standard CLI procedures for this command.
-------------------------	--

**Examples** In the following example, the status for the endpoints on line 1 are displayed:

```
nodename.1.5.VISM8.a > dsplnendptstatus 1

ds0# Endpt#  Codec  VAD  ECAN
-----
1          1      G.711a  ON  ON

nodename.1.5.VISM8.a >
```

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>dspendpts</b>	Displays information about all the endpoints on a VISM card.
	<b>dspln</b>	Displays the characteristics of a VISM card line.

# dsplnexecdiag

To verify that all of the endpoints on the line are enabled for channel level testing, use the **dsplnexecdiag** command.

**dsplnexecdiag** *<line\_number>*

## Syntax Description

<i>line_number</i>	Line number in the range 1–8.
--------------------	-------------------------------

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the channel level testing is enabled for all of the endpoints on line 1:

```
nodename.1.5.VISM8.a > dsplnexecdiag 1
```

LineNo/Ds0No	DSP Exec Status
1/ 1	Enable
1/ 2	Enable
1/ 3	Enable
1/ 4	Enable
1/ 5	Enable
1/ 6	Enable
1/ 7	Enable
1/ 8	Enable
1/ 9	Enable
1/10	Enable
1/11	Enable
1/12	Enable
1/13	Enable
1/14	Enable
1/15	Enable
1/16	Enable
1/17	Enable
1/18	Enable
1/19	Enable
1/20	Enable
1/21	Enable
1/22	Enable
1/23	Enable
1/24	Enable

## Related Commands

Command	Description
<b>cnflnexecdiag</b>	Configures channel level testing on an individual line.

# dsplngain

To display the adjustable gain values for all DS0s on a specified VISM card line, use the **dsplngain** command.

**dsplngain** <line\_number>

## Syntax Description

<i>line_number</i>	Number of the line for which you want to display the adjustable gain values for all DS0s. Range is 1–8.
--------------------	---

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the adjustable gain values for all DS0s on VISM card line 3 are displayed:

```
nodename.1.5.VISM8.a > dsplngain 3

Ds0Num   InputGain   OutputAttenuation
-----
1         0           100
2         10          60

nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>cnflngain</b>	Configures the adjustable gain for all DS0s on a specified VISM card line.

# dsplmusicthreshold

To display the music on-hold threshold values for the DS0s on a specified line, use the **dsplmusicthreshold** command.

**dsplmusicthreshold** *<line\_number>*

<b>Syntax Description</b>	<i>line_number</i>	Number of the line for which you want to display the DS0 music on-hold threshold values. Range is 1–8.
<b>Command Modes</b>	VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking	
<b>Usage Guidelines</b>	Follow standard CLI procedures for this command.	
<b>Examples</b>	<p>In the following example, the DS0s on VISM card line number 3 music on-hold threshold values are displayed:</p> <pre>nodename.1.5.VISM8.a &gt; dsplmusicthreshold 3  Ds0Num  Musicthreshold -----  - 1        -38 2        -40  nodename.1.5.VISM8.a &gt;</pre>	
<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>cnfds0musicthreshold</b>	Configures the music on-hold threshold for a specified DS0.
	<b>cnflnmusicthreshold</b>	Configures the music on-hold threshold for all DS0s on a specified line.
	<b>cnfmusicthreshold</b>	Configures the music on-hold threshold for the current VISM card.
	<b>dspds0musicthreshold</b>	Displays the music on-hold threshold for a specified DS0.
	<b>dspmusicthreshold</b>	Displays the music on-hold threshold for the current VISM card.

# dsplnringback

To display the method that the VISM uses to send ring-back tones for a specified line, use the **dsplnringback** command.

**dsplnringback** <line\_number>

Syntax Description	line_number	Number of the line for which you want to display the method for sending ring-back tones. Range is 1–8.
--------------------	-------------	--

Command Modes	VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC
---------------	---

Usage Guidelines	<p>The ring-back tone method is displayed as one of the following:</p> <ul style="list-style-type: none"> <li>Proxy—VISM sends the appropriate packet (NSE, NTE, or AAL2 type 3) for the ring-back tone to the originating VISM, which sends the ring-back tone toward the TDM network.</li> <li>Inband—VISM generates the inband ring-back tone toward the originating VISM over the packet network and the originating VISM plays the ring-back tone.</li> </ul>
------------------	--

**Examples** In the following example, the current VISM card line 4 ring-back tone method, inband, is displayed:

```
nodename.1.5.VISM8.a > dsplnringback 4

LineNum: 4
DsxlRemoteRingback: inband

nodename.1.5.VISM8.a >
```

Related Commands	Command	Description
	<b>addtoneplan</b>	Adds a tone plan to the current VISM card.
	<b>cnflnringback</b>	Configures the ring-back tone method for a specified line on the current VISM card.
	<b>cnflntoneplan</b>	Assigns a tone plan to a specified VISM card line.
	<b>cnflntonetimeout</b>	Modifies the timeout periods of all call progress tones supported by VISM on a specified VISM card line.
	<b>delntoneplan</b>	Deletes the tone plan configuration of a specified VISM card line.
	<b>deltoneplan</b>	Deletes a previously added tone plan from the current VISM card.

<b>Command</b>	<b>Description</b>
<b>dsplntoneplan</b>	Displays the tone plan configuration of a specified VISM card line.
<b>dsplntonetimout</b>	Displays the configured timeout periods for all call progress tones of a specified VISM card line.
<b>dsptonebuiltinplans</b>	Displays all preconfigured (built-in) tone plans on the current VISM card.
<b>dsptoneplan</b>	Displays the tone configuration of a specified tone plan—either a preconfigured (built-in) or user-added tone plan.
<b>dsptoneplans</b>	Displays the tone configuration of all tone plans—either preconfigured (built-in) or user-added tone plans.
<b>dsptoneprovplans</b>	Displays all user-added (provisional) tone plans.
<b>dsptoneregionplans</b>	Displays a list of all tone plans for the countries and regions whose name partially or completely matches the name you supply.



# dsplns

To display all line configuration data for the current VISM card, use the **dsplns** command.

## dsplns

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the configuration data for all lines on the current VISM card are displayed:

```
nodename.1.5.VISM8.a > dsplns
```

Line	Conn Type	Type	Status/Coding	Length	XmtClock Source	Alarm	Stats Alarm
17.1	RJ-48	dsx1ESF	Ena/dsx1B8ZS	0-131 ft	LocalTim	Yes	No
17.2	RJ-48	dsx1ESF	Ena/dsx1B8ZS	0-131 ft	LocalTim	Yes	No
17.3	RJ-48	dsx1ESF	Dis/dsx1B8ZS	0-131 ft	LocalTim		
17.4	RJ-48	dsx1ESF	Dis/dsx1B8ZS	0-131 ft	LocalTim		
17.5	RJ-48	dsx1ESF	Dis/dsx1B8ZS	0-131 ft	LocalTim		
17.6	RJ-48	dsx1ESF	Dis/dsx1B8ZS	0-131 ft	LocalTim		
17.7	RJ-48	dsx1ESF	Ena/dsx1B8ZS	0-131 ft	LocalTim	No	No
17.8	RJ-48	dsx1ESF	Ena/dsx1B8ZS	0-131 ft	LocalTim	No	No

```
LineNumOfValidEntries: 8
```

## Related Commands

Command	Description
<b>addln</b>	Adds a T1 or E1 line to a VISM card.
<b>cnfln</b>	Configures line characteristics for a specified line.
<b>delln</b>	Deletes a DS1 line from a VISM card.
<b>dspln</b>	Displays the characteristics of a specified line.

# dsplnsidpacket

To display the line and DS0 in which the silence insertion descriptor (SID) packet is enabled, use the **dsplnsidpacket** command.

**dsplnsidpacket** <line\_number>

## Syntax Description

<i>line_number</i>	Line number in the range 1–8.
--------------------	-------------------------------

## Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the SID packet is enabled on line 1:

```
nodename.1.5.VISM8.a > dsplnsidpacket 1
```

LineNo/Ds0No	Sid Packet
1/ 1	Enable
1/ 2	Enable
1/ 3	Enable
1/ 4	Enable
1/ 5	Enable
1/ 6	Enable
1/ 7	Enable
1/ 8	Enable
1/ 9	Enable
1/10	Enable
1/11	Enable
1/12	Enable
1/13	Enable
1/14	Enable
1/15	Enable
1/16	Enable
1/17	Enable
1/18	Enable
1/19	Enable
1/20	Enable
1/21	Enable
1/22	Enable
1/23	Enable
1/24	Enable

## Related Commands

Command	Description
<b>cnflnsidpacket</b>	Enables or disables the SID packet on the line.

# dsplnstate

To display the service state of specified T1 or E1 line with respect to the xGCP protocol, use the **dsplnstate** command.

```
dsplnstate <line_number>
```

## Syntax Description

*line\_number* Line number for which you want to display the service state. Range is 1–8.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

Service states are administrative or operational. Each service state has an actual state and an effective state. The actual states are given in the following list:

- Actual administrative states:
  - In service
  - Pending out of service
  - Command out of service
  - Inactive
  - Invalid state
- Actual operational states:
  - Alarm
  - OK

The effective administrative state is the combination of the states of the gateway and the line.

The effective operational state is the combination of the alarm states of the gateway and the line.

## Examples

In the following example, the service states of line 1 are displayed:

```
nodename.1.5.VISM8.a > dsplnstate 1

Line number : 1, Actual admin. state : Inactive
                  Actual oper. state : OK

Line number : 1, Effective admin. state : Inactive
                  Effective oper. state : OK
```

## Related Commands

Command	Description
<b>dspgwstate</b>	Displays the current user-configured service state of the gateway.

# dsplntoneplan

To display the tone plan configuration of a specified VISM card line, use the **dsplntoneplan** command.

**dsplntoneplan** *<line\_number>*

## Syntax Description

<i>line_number</i>	Number of the line for which you want to display the tone plan configuration. Range is 1–8.
--------------------	---

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the tone plan configuration for the current VISM card line number 8 is displayed:

```
nodename.1.5.VISM8.a > dsplntoneplan 8
```

```
LineNum          :8
Dsx1TonePlanRegion :singapore
Dsx1TonePlanVersion:11
```

## Related Commands

Command	Description
<b>addtoneplan</b>	Adds a tone plan to the current VISM card.
<b>cnflnringback</b>	Configures the ring-back tone method for a specified line on the current VISM card.
<b>cnflntoneplan</b>	Assigns a tone plan to a specified VISM card line.
<b>cnflntonetimout</b>	Modifies the timeout periods of all call progress tones supported by VISM on a specified VISM card line.
<b>dellntoneplan</b>	Deletes the tone plan configuration of a specified VISM card line.
<b>deltoneplan</b>	Deletes a previously added tone plan from the current VISM card.

<b>Command</b>	<b>Description</b>
<b>dsplnringback</b>	Displays the ring-back tone type for a specified line on the current VISM card.
<b>dsplntonetimeout</b>	Displays the configured timeout periods for all call progress tones of a specified VISM card line.
<b>dsptonebuiltinplans</b>	Displays all preconfigured (built-in) tone plans on the current VISM card.
<b>dsptoneplan</b>	Displays the tone configuration of a specified tone plan—either a preconfigured (built-in) or user-added tone plan.
<b>dsptoneplans</b>	Displays the tone configuration of all tone plans—either preconfigured (built-in) or user-added tone plans.
<b>dsptoneprovplans</b>	Displays all user-added (provisional) tone plans.
<b>dsptoneregionplans</b>	Displays a list of all tone plans for the countries and regions whose name partially or completely matches the name you supply.

# dsplntonettimeout

To display the configured timeout periods for all call progress tones of a specified VISM card line, use the **dsplntonettimeout** command.

**dsplntonettimeout** *<line\_number>*

## Syntax Description

<i>line_number</i>	Number of the line for which you want to display the configured timeout periods (defined in seconds) for all call progress tones. Range is 1–8.
--------------------	---

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, all call progress tones for line number 5 are displayed in seconds:

```
nodename.1.5.VISM8.a > dsplntonettimeout 5
```

```
LineNum:          5
Dsx1RingingTO:   200 seconds
Dsx1RingBackTO:  200 seconds
Dsx1BusyTO:      35 seconds
Dsx1ReorderTO:   35 seconds
Dsx1DialTO:      16 seconds
Dsx1StutterDialTO: 16 seconds
Dsx1OffHookAlertTO: 5 seconds
```

## Related Commands

Command	Description
<b>addtoneplan</b>	Adds a tone plan to the current VISM card.
<b>cnflnringback</b>	Configures the ring-back tone method for a specified line on the current VISM card.
<b>cnflntoneplan</b>	Assigns a tone plan to a specified VISM card line.
<b>cnflntonettimeout</b>	Modifies the timeout periods of all call progress tones supported by VISM on a specified VISM card line.
<b>dellntoneplan</b>	Deletes the tone plan configuration of a specified VISM card line.
<b>deltoneplan</b>	Deletes a previously added tone plan from the current VISM card.
<b>dsplnringback</b>	Displays the ring-back tone type for a specified line on the current VISM card.
<b>dsplntoneplan</b>	Displays the tone plan configuration of a specified VISM card line.
<b>dsptonebuiltinplans</b>	Displays all preconfigured (built-in) tone plans on the current VISM card.
<b>dsptoneplan</b>	Displays the tone configuration of a specified tone plan—either a preconfigured (built-in) or user-added tone plan.
<b>dsptoneplans</b>	Displays the tone configuration of all tone plans—either preconfigured (built-in) or user-added tone plans.

<b>Command</b>	<b>Description</b>
<b>dsptoneprovplans</b>	Displays all user-added (provisional) tone plans.
<b>dsptoneregionplans</b>	Displays a list of all tone plans for the countries and regions whose name partially or completely matches the name you supply.

# dsplongdurationtimer

To display the long duration timer value, use the **dsplongdurationtimer** command.

The long duration is the amount of time, in hours, that must elapse for a connection to be considered established.

## **dsplongdurationtimer**

### **Syntax Description**

This command has no arguments or keywords.

### **Command Modes**

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

### **Usage Guidelines**

Follow standard CLI procedures for this command.

### **Examples**

In the following example, the long duration timer value is displayed:

```
nodename.1.5.VISM8.a > dsplongdurationtimer
```

```
Long duration timer value: 1
```

```
nodename.1.5.VISM8.a >
```

### **Related Commands**

<b>Command</b>	<b>Description</b>
<b>cnflongdurationtimer</b>	Configures the long duration timer value.



# dsploops

To display all lines and DS0s that are in the loopback condition, use the **dsploops** command.

## **dsploops**

### Syntax Description

This command has no arguments or keywords.

### Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

### Usage Guidelines

Follow standard CLI procedures for this command.

### Examples

In the following example, the lines and DS0s that are currently in the loopback condition are displayed:

```
nodename.1.5.VISM8.a > dsploops
```

```
Line Loopbacks on this card
```

```
-----
```

```
Line 1: Local Loopback
```

```
ds0 loopbacks on this card
```

```
-----
```

```
Endpoint 1 Loopback Enabled
```

### Related Commands

Command	Description
<b>addconloop</b>	Configures a cellbus connection to local loopback condition on a current card.
<b>addendptloop</b>	Places an endpoint in a loopback condition in the TDM direction.

# dspmaxconfnum

To display the maximum number of three-way conferences on a VISM card, use the **dspmaxconfnum** command.

## **dspmaxconfnum**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the VISM/VISM-PR card does not support three-way conferences:

```
nodename.1.5.VISM8.a > dspmaxconfnum
```

```
Maximum number of conferences: 0
```

Related Commands	Command	Description
	<b>cnfmaxconfnum</b>	Configures the maximum number of three-way conferences.

# dspmaxmgcs

To display the maximum number of Media Gateway Controllers (MGCs) that can be configured on the current card, use the **dspmaxmgcs** command.

## **dspmaxmgcs**

---

**Syntax Description** This command has no arguments or keywords.

---

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

---

**Usage Guidelines** Follow standard CLI procedures for this command.

---

**Examples** In the following example, the maximum number of MGCs that can be configured on the current card is displayed:

```
nodename.1.5.VISM8.a > dspmaxmgcs
```

```
Maximum number of MGCs: 8
```

```
nodename.1.5.VISM8.a >
```

---

**Related Commands** There are no related commands.

# dspmgc

To display the Media Gateway Controller (MGC) name associated with an MGC number, use the **dspmgc** command.

**dspmgc** *<mgcNumber>*

<b>Syntax Description</b>	<i>mgcNumber</i> Number by which the MGC is identified, as displayed by the <b>dspmgcs</b> command. Range is 1–8.
---------------------------	---

<b>Command Modes</b>	VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC
----------------------	---

<b>Usage Guidelines</b>	Follow standard CLI procedures for this command.
-------------------------	--

**Examples**    In the following example shows, the MGC associated with the MGC number 1 is displayed:

```
nodename.1.5.VISM8.a > dspmgc 1

mgcNumber           : 1
mgcName             : mgc1

nodename.1.5.VISM8.a >
```

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>delmgc</b>	Deletes a call agent from a VISM card.
	<b>dspmaxmgcs</b>	Displays the maximum number of MGCs that can be configured on the current card.
	<b>dspmgcs</b>	Displays the configuration data of all configured call agents.

# dspmgcgrpparams

To display all configured Media Gateway Control Protocol (MGCP)—call agent—redundancy group parameters, use the **dspmgcgrpparams** command.

## dspmgcgrpparams

### Syntax Description

This command has no arguments or keywords.

### Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

### Usage Guidelines

Follow standard CLI procedures for this command.

### Examples

In the following example shows, all configured call agent redundancy group parameters are displayed:

```
nodename.1.5.VISM8.a > dspmgcgrpparams
```

```
Mgc Grp Num  Com State  State Chg Notification  Priority
-----
          1    CommLoss           Enabled                1
```

### Related Commands

Command	Description
<b>addmgcgrpentry</b>	Configures call agents as part of an MGC redundancy group and assigns a priority value for a call agent.
<b>addmgcgrpprotocol</b>	Associates a call agent redundancy group with a gateway control protocol.
<b>cnfmgcgrpentry</b>	Modifies the priority level of a call agent within a call agent redundancy group.
<b>cnfmgcgrpparam</b>	Modifies the notification policy of a state change and the priority level of a call agent redundancy group.
<b>cnfsrcppeer</b>	Configures the SRCP parameters when SRCP is the selected protocol for communication between the VISM card and call agent.
<b>cnfsrcppeergrpparam</b>	Modifies the SRCP heartbeat interval and maximum UDP size for a specified call agent redundancy group.
<b>delmgcgrpentry</b>	Deletes a call agent from a call agent redundancy group.
<b>delmgcgrpprotocol</b>	Deletes an MGCP from a specified call agent redundancy group.
<b>dspmgcgrpprotocols</b>	Displays all configured call agent redundancy group protocols.
<b>dspmgcgrps</b>	Displays all configured call agent redundancy groups.
<b>dspsrcppeergrpparams</b>	Displays the SRCP parameters for all call agent redundancy groups that have SRCP added.

# dspmgcgrpprotocols

To display all configured Media Gateway Control Protocol (MGCP)—call agent—redundancy group protocols, use the **dspmgcgrpprotocols** command.

## dspmgcgrpprotocols

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, all configured call agent redundancy group protocols are displayed:

```
nodename.1.5.VISM8.a > dspmgcgrpprotocols
```

MgcGrp Num	Prot Num	Qrntn Persist	Qrntn Def	Sign OnOff	Prov Resp	RspAck Attr	Disc Proc	Cancel Graceful
1	MGCP 0.1	Qrtn	StepDiscard	DelEvtNotPrsnt	NotSend	NotSend	Disable	NotSend
1	MGCP 1.0	Qrtn	StepProcess	DelNegEvt	Send	Send	Enable	Send

## Related Commands

Command	Description
<b>addmgcgrpentry</b>	Configures call agents as part of an MGC redundancy group and assigns a priority value for a call agent.
<b>addmgcgrpprotocol</b>	Associates a call agent redundancy group with a gateway control protocol.
<b>cnfmgcgrpentry</b>	Modifies the priority level of a call agent within a call agent redundancy group.
<b>cnfmgcgrpparam</b>	Modifies the notification policy of a state change and the priority level of a call agent redundancy group.
<b>cnfsrcppeer</b>	Configures the SRCP parameters when SRCP is the selected protocol for communication between the VISM card and call agent.
<b>cnfsrcppeergpparam</b>	Modifies the SRCP heartbeat interval and maximum UDP size for a specified call agent redundancy group.
<b>delmgcgrpentry</b>	Deletes a call agent from a call agent redundancy group.
<b>delmgcgrpprotocol</b>	Deletes an MGCP from a specified call agent redundancy group.
<b>dspmgcgrpparams</b>	Displays all configured call agent redundancy group parameters.
<b>dspmgcgrps</b>	Displays all configured call agent redundancy groups.
<b>dspsrcppeergpparams</b>	Displays the SRCP parameters for all call agent redundancy groups that have SRCP added.

# dspmgcgrps

To display all configured Media Gateway Control Protocol (MGCP)—call agent—redundancy groups, use the **dspmgcgrps** command.

## dspmgcgrps

### Syntax Description

This command has no arguments or keywords.

### Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

### Usage Guidelines

Follow standard CLI procedures for this command.

### Examples

In the following example, all configured call agent redundancy groups are displayed:

```
nodename.1.5.VISM8.a > dspmgcgrps

mgcRedgrpNum  mgcNum  Preference  State
-----
              1         1           Inactive
              1         2           Inactive
```

### Related Commands

Command	Description
<b>addmgcgrpentry</b>	Configures call agents as part of an MGC redundancy group and assigns a priority value for a call agent.
<b>addmgcgrpprotocol</b>	Associates a call agent redundancy group with a gateway control protocol.
<b>cnfmgcgrpentry</b>	Modifies the priority level of a call agent within a call agent redundancy group.
<b>cnfmgcgrpparam</b>	Modifies the notification policy of a state change and the priority level of a call agent redundancy group.
<b>cnfsrcppeer</b>	Configures the SRCP parameters when SRCP is the selected protocol for communication between the VISM card and call agent.
<b>cnfsrcppeergrpparam</b>	Modifies the SRCP heartbeat interval and maximum UDP size for a specified call agent redundancy group.
<b>delmgcgrpentry</b>	Deletes a call agent from a call agent redundancy group.
<b>delmgcgrpprotocol</b>	Deletes an MGCP from a specified call agent redundancy group.
<b>dspmgcgrpparams</b>	Displays all configured call agent redundancy group parameters.
<b>dspmgcgrpprotocols</b>	Displays all configured call agent redundancy group protocols.
<b>dspsrcppeergrpparams</b>	Displays the SRCP parameters for all call agent redundancy groups that have SRCP added.

# dspmgcs

To display the Media Gateway Control (MGC) names of all of the MGCs that are configured on the VISM card, use the **dspmgcs** command.

## **dspmgcs**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the names of the MGCs that are configured on the card are displayed:

```
nodename.1.5.VISM8.a > dspmgcs
```

```
mgcNumber   mgcName
-----
1           mgc1
```

## **Related Commands**

<b>Command</b>	<b>Description</b>
<b>delmgc</b>	Deletes a call agent from a VISM card.
<b>dspmaxmgcs</b>	Displays the maximum number of MGCs that can be configured on the current card.
<b>dspmgc</b>	Displays the configuration data of a specified configured call agent.



# dspmgprotocols

To display Media Gateway Control (MGC) protocols that are supported on the VISM card, use the **dspmgprotocols** command.

## **dspmgprotocols**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the MGC protocols that are supported on the VISM card are displayed:

```
nodename.1.5.VISM8.a > dspmgprotocols
```

Number	mgProtocol
-----	-----
1	MGCP 0.1
2	SGCP 1.1+
3	SRCP 1.0.2
4	SGCP 1.5
5	MGCP 1.0
6	TGCP 1.0

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>delmgcgrpprotocol</b>	Deletes an MGCP from a specified call agent redundancy group.

# dspmidcalltimers

To display the configured partial and critical timer values for midcall dual-tone multifrequency (DTMF) digit reporting, use the **dspmidcalltimers** command.

## dspmidcalltimers

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the configured partial and critical timers for midcall DTMF digit reporting are displayed:

```
nodename.1.5.VISM8.a > dspmidcalltimers

LineNum  DTMF Partial Timer  DTMF Critical Timer
-----  -
1         16                   4
2         20                   4

nodename.1.5.VISM8.a >
```

Related Commands	Command	Description
	<b>cnfmidcalltimers</b>	Configures the midcall DTMF feature partial and critical timers for a specified VISM card line.

# dspmnngcidnt

To display the managed channel identifier (CID) count for a specified endpoint, use the **dspmnngcidnt** command.

**dspmnngcidnt** *<endpt\_num>*

Syntax Description	<i>endpt_num</i>	Endpoint number for which you want to display the managed CID count. Ranges are
		<ul style="list-style-type: none"> <li>• Template 1               <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2               <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3               <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4               <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5               <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>

**Command Modes** AAL2 trunking, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples**

In the following example, the managed CID counts for endpoint number 1 are displayed:

```

nodename.1.5.VISM8.a > dspmngcidnt 1
EndptNum: 1
Lcn: 131
Cid: 11
SentPkts: 0
RcvdPkts: 0
SentOctets: 8
RcvdOctets: 8
LostPkts: 0
Jitter: 0
Latency: 0
Ext AIS Rcvd:      0
Ext RAI Rcvd:     0
Ext Conn AIS Rcvd: 0
Ext Conn RDI Rcvd: 0
Ext AIS Rcvd Cnt: 0
Ext RAI Rcvd Cnt: 0
Ext Conn AIS Rcvd Cnt: 0
Ext Conn RDI Rcvd Cnt: 0
Ext Conn AIS Xmit Cnt: 0
Ext Conn RAI Xmit Cnt: 1
24Hr Peak Xmt Cell Rate (CPS): 204

Type <CR> to continue, Q<CR> to stop:

Current Xmt Cell Rate (CPS): 201
24Hr Peak Rcv Cell Rate (CPS): 0
Current Rcv Cell Rate (CPS): 0

```

**Related Commands**

There are no related commands.

# dspmonecanendpt

To monitor the echo cancellation (ECAN) activity for a specified endpoint, use the **dspmonecanendpt** command.

**dspmonecanendpt** *<endpt\_num>*

Syntax Description	<i>endpt_num</i>	Endpoint number. Ranges are
		<ul style="list-style-type: none"> <li>• Template 1               <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2               <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3               <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4               <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5               <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the ECAN activity for endpoint number 1 is displayed:

```
nodename.1.5.VISM8.a > dspmonecanendpt 1

Send Energy (dBm) = -45, Receive Energy (dBm) = -45
ERL (dB) = 6, ERLE (dB) = 0
Largest Reflector (ms) is 4

nodename.1.5.VISM8.a >
```

■ dspmonecanendpt

---

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>cnfendptcadence</b>	Configures cadence (digit tone) times for an endpoint.

---

# dspmusicthreshold

To display the music on-hold threshold values (defined in decibels) for each DS0 and line of a VISM card, use the **dspmusicthreshold** command.

## dspmusicthreshold

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the current VISM card music on-hold threshold values are displayed:

```
nodename.1.5.VISM8.a > dspmusicthreshold
```

```
LineNo/Ds0No  Musicthreshold
-----
1/1           -38
1/2           -50
```

```
nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>cnfds0musicthreshold</b>	Configures the music on-hold threshold for a specified DS0.
<b>cnflnmusicthreshold</b>	Configures the music on-hold threshold for all DS0s on a specified line.
<b>cnfmusicthreshold</b>	Configures the music on-hold threshold for the current VISM card.
<b>dspds0musicthreshold</b>	Displays the music on-hold threshold for a specified DS0.
<b>dsplnmusicthreshold</b>	Displays the music on-hold threshold for the DS0s on a specified line.

# dspnwcot

To display the whether the gateway-initiated network continuity test is on or off, use the **dspnwcot** command.

## dspnwcot

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, gateway-initiated network continuity test is on:

```
nodename.1.5.VISM8.a > dspnwcot
```

```
GW Initiated Network COT: On
```

```
nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>cnfco4timer</b>	Configures the bearer continuity test CO4 timer value.
<b>cnfnwcot</b>	Configures VISM for a gateway-initiated network continuity test.
<b>dspco4timer</b>	Displays the bearer continuity test CO4 timer value.
<b>dspvismparam</b>	Displays the current VISM card configuration.



# dspoamloopcnt

To display the number of Operation, Administration, and Maintenance (OAM) loopback cells before an OAM loopback failure causes the PVC to go into alarm, use the **dspoamloopcnt** command.

## **dspoamloopcnt**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the OAM loopback count is displayed:

```
nodename.1.5.VISM8.a > dspoamloopcnt
OAM Loopback Cell Timeout Count: 60
nodename.1.5.VISM8.a >
```

Related Commands	Command	Description
	<b>cnfoamloopcnt</b>	Configures the threshold for the number of consecutive OAM end-to-end loopback response cells that must be lost before a PVC is placed into alarm due to a OAM end-to-end loopback failure.

# dsipoamparams

To display the transmitted and received permanent virtual circuit (PVC) Operation, Administration, and Maintenance (OAM) cell parameters, use the **dsipoamparams** command

## dsipoamparams

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the transmitted and received PVC OAM cell parameters are displayed:

```
nodename.1.5.VISM8.a > dsipoamparams

OAM Cell Gap:           500 ms
OAM Cell Retry Count:   3
OAM Cell Recover Count: 5

nodename.1.5.VISM8.a >
```

Related Commands	Command	Description
	cnfoamparams	Configures the transmitted and received PVC OAM cell parameters.

# dspport

To display configuration data about the virtual port that you created with the **addport** command, use the **dspport** command.

## dspport

### Syntax Description

This command has no arguments or keywords.

### Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

### Usage Guidelines

Follow standard CLI procedures for this command.

### Examples

In the following example, the configuration data about the virtual port created with the **addport** command is displayed:

```
nodename.1.5.VISM8.a > dspport

vismPortNum:          1
vismPortRowStatus:    add
vismPortSpeed:        50000
vismPortState:        active

nodename.1.5.VISM8.a >
```

### Related Commands

Command	Description
<b>addport</b>	Adds a virtual port between a VISM and PXM cards.
<b>delpport</b>	Deletes a virtual port between a VISM and PXM cards.

# dspprofparams

To display the profile elements and the preferences for all profiles, use the **dspprofparams** command.

## dspprofparams

**Syntax Description** This command has no arguments or keywords.

**Command Modes** AAL2 trunking, switched AAL2 SVC, switched AAL2 PVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** When you execute this command, the display includes the default voice and voiceband data profile element which correspond to each supported profile.

**Examples** In the following example, the profile elements and preferences for all profiles are displayed:

```

nodename.1.5.VISM8.a > dspprofparams
-----
Profile Type                : ITU
Profile Number              : 1
Profile Preference          : 4
Voice Profile Codec         : G.711u
Voice Profile Packetization-period(ms): five
Voice Profile SID           : VAD on
VBD Profile Codec           : G.711u
VBD Profile Packetization-period (ms) : five
-----
Profile Type                : ITU
Profile Number              : 2
Profile Preference          : 3
Voice Profile Codec         : G.711u
Voice Profile Packetization-period(ms): five
Voice Profile SID           : sidGenric
VBD Profile Codec           : G.711u
VBD Profile Packetization-period (ms) : five
-----
Profile Type                : ITU
Profile Number              : 3
Profile Preference          : 1
Voice Profile Codec         : G.726-32K
Voice Profile Packetization-period(ms): five
Voice Profile SID           : sidGenric
VBD Profile Codec           : G.711u
VBD Profile Packetization-period (ms) : five
-----
Profile Type                : ITU
Profile Number              : 7
Profile Preference          : 2
Voice Profile Codec         : G.729ab
Voice Profile Packetization-period(ms): ten
Voice Profile SID           : sid729
VBD Profile Codec           : G.711u
VBD Profile Packetization-period (ms) : five
-----
Profile Type                : ITU

```

```

Profile Number           : 8
Profile Preference      : 5
Voice Profile Codec     : G.729ab
Voice Profile Packetization-period(ms) : ten
Voice Profile SID       : sid729
VBD Profile Codec       : G.711u
VBD Profile Packetization-period (ms) : five
- - - - -
Profile Type            : Custom
Profile Number         : 100
Profile Preference     : 6
Voice Profile Codec    : G.726-32K
Voice Profile Packetization-period(ms) : ten
Voice Profile SID      : sidGeneric
VBD Profile Codec      : G.711u
VBD Profile Packetization-period (ms) : five
- - - - -
Profile Type            : Custom
Profile Number         : 101
Profile Preference     : 7
Voice Profile Codec    : G.729ab
Voice Profile Packetization-period(ms) : ten
Voice Profile SID      : sid729
VBD Profile Codec      : G.711u
VBD Profile Packetization-period (ms) : five
- - - - -
Profile Type            : Custom
Profile Number         : 110
Profile Preference     : 8
Voice Profile Codec    : G.729ab
Voice Profile Packetization-period(ms) : thirty
Voice Profile SID      : sid729
VBD Profile Codec      : G.711u
VBD Profile Packetization-period (ms) : five

```

**Related Commands**

Command	Description
<b>cnfprofelemvbd</b>	Configures the VBD profile element for a profile.
<b>cnfprofelemvoice</b>	Configures the voice profile element for a profile.
<b>cnfprofparams</b>	Configures a profile preference.

# dsprscrtn

To display configuration data about the resource partition which you created with the **addrscrtn** command, use the **dsprscrtn** command.

## dsprscrtn

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the configuration data about the resource partition created with the **addrscrtn** command is displayed:

```
nodename.1.5.VISM8.a > dsprscrtn
```

```
vismResPartPortNum:      1
vismResPartCtrlrNum:    par
vismResPartRowStatus:   add
vismResPartNumOfLcnAvail: 72
vismResPartLcnLow:      32
vismResPartLcnHigh:     279
vismResPartIngrPctBW:   100
vismResPartEgrPctBW:    100
vismResPartCtrlrID:     2
```

```
nodename.1.5.VISM8.a >
```

Related Commands	Command	Description
	<b>addrscrtn</b>	Adds a resource partition for a virtual port.

# dsprsvpif

To display the Resource Reservation Protocol (RSVP) status of a specified connection, use the **dsprsvpif** command.

```
dsprsvpif <LCN>
```

## Syntax Description

<i>LCN</i>	Logical channel number (LCN) of the connection for which you want to display the RSVP status. Range is 131–510.
------------	---

## Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the RSVP status of LCN 142 is displayed:

```
nodename.1.5.VISM8.a > dsprsvpif 142

Interface:          142
RSVP:               Enable
Refresh Interval:  45 sec
Refresh Multiple:   7

nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>cnfrsvp</b>	Configures RSVP for a specified connection.
<b>cnfrsvpprefreshmiss</b>	Configures the number of times VISM waits for a missed RSVP minimum refresh message for a specified connection.
<b>dsprsvpreq</b>	Displays the data associated with a specified RSVP request.
<b>dsprsvpreqs</b>	Displays all RSVP requests on the current VISM card.
<b>dsprsvpresv</b>	Displays all data associated with an RSVP bandwidth reservation.
<b>dsprsvpresvs</b>	Displays all incoming RSVP reservations on the current VISM card.
<b>dsprsvpsender</b>	Displays all data associated with a specified RSVP path state.

# dsprsvpreq

To display the data associated with a specified Resource Reservation Protocol (RSVP) request, use the **dsprsvpreq** command.

```
dsprsvpreq <session_number> <req_number>
```

## Syntax Description

<i>session_number</i>	RSVP session number. Range is 1–65535.
<i>req_number</i>	RSVP request number. Range is 1–65535.

## Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the data associated with the request identified by RSVP session number 400 and RSVP request number 64521 is displayed:

```
nodename.1.5.VISM8.a > dsprsvpreq 400 64521

rsvpSessionNumber           : 400
rsvpResvFwdNumber           : 64521
rsvpResvFwdType              : IPv4
rsvpResvFwdDestAddr         : 12.12.12.1
rsvpResvFwdSenderAddr       : 11.11.11.1
rsvpResvFwdDestAddrLength   : 32
rsvpResvFwdSenderAddrLength : 32
rsvpResvFwdProtocol         : IP
rsvpResvFwdDestPort         : 49152
rsvpResvFwdPort              : 49152
rsvpResvFwdHopAddr          : 12.12.12.2
rsvpResvFwdInterface        : 182
rsvpResvFwdService           : Guaranteed
rsvpResvFwdTSpecRate        : 96000 bps
rsvpResvFwdTSpecPeakRate    : 96000 bps
rsvpResvFwdTSpecBurst       : 120 bytes
rsvpResvFwdTSpecMinTU       : 120
rsvpResvFwdTSpecMaxTU       : 120
rsvpResvFwdRSpecRate        : 96000 bps
rsvpResvFwdRSpecSlack       : 0 usec
rsvpResvFwdInterval         : 30000 msec
rsvpResvFwdScope             :
rsvpResvFwdShared           : false
rsvpResvFwdExplicit         : true
rsvpResvFwdRSVPHop          : true
rsvpResvFwdLastChange       : 5474
rsvpResvFwdStatus           : active

nodename.1.5.VISM8.a >
```



**Related Commands**

<b>Command</b>	<b>Description</b>
<b>cnfrsvp</b>	Configures RSVP for a specified connection.
<b>cnfrsvpprefreshmiss</b>	Configures the number of times VISM waits for a missed RSVP minimum refresh message for a specified connection.
<b>dsprsvpif</b>	Displays the RSVP status of a specified connection.
<b>dsprsvpreqs</b>	Displays all RSVP requests on the current VISM card.
<b>dsprsvpresv</b>	Displays all data associated with an RSVP bandwidth reservation.
<b>dsprsvpresvs</b>	Displays all incoming RSVP reservations on the current VISM card.
<b>dsprsvpsender</b>	Displays all data associated with a specified RSVP path state.

# dsprsvpreqs

To display all Resource Reservation Protocol (RSVP) requests on the current VISM card, use the **dsprsvpreqs** command.

## dsprsvpreqs

### Syntax Description

This command has no arguments or keywords.

### Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

### Usage Guidelines

A request is a generated outgoing reservation message. Use the **dsprsvpresvs** command to display incoming or locally created reservations.

### Examples

In the following example, the RSVP request on the current VISM card is displayed:

```
nodename.1.5.VISM8.a > dsprsvpreqs
```

Sess	Resv	From	To	Prot	DPort	SPort	Interval	Serv	BPS
0	0	11.11.11.1	12.12.12.1	IP	49152	49152	30000	Guaranteed	96000

```
nodename.1.5.VISM8.a >
```

### Related Commands

Command	Description
<b>cnfrsvp</b>	Configures RSVP for a specified connection.
<b>cnfrsvprefreshmiss</b>	Configures the number of times VISM waits for a missed RSVP minimum refresh message for a specified connection.
<b>dsprsvpif</b>	Displays the RSVP status of a specified connection.
<b>dsprsvpreq</b>	Displays the data associated with a specified RSVP request.
<b>dsprsvpresv</b>	Displays all data associated with an RSVP bandwidth reservation.
<b>dsprsvpresvs</b>	Displays all incoming RSVP-known reservations on the current VISM card.
<b>dsprsvpsender</b>	Displays all data associated with a specified RSVP path state.
<b>dsprsvpsenders</b>	Displays all RSVP-known path states on the current VISM card.

# dsprsvpresv

To display all data associated with a Resource Reservation Protocol (RSVP) bandwidth reservation, use the **dsprsvpresv** command.

```
dsprsvpresv <session_number> <resv_number>
```

## Syntax Description

<i>session_number</i>	RSVP session number. Range is 1–65535.
<i>resv_number</i>	RSVP bandwidth reservation number. Range is 1–65535.

## Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

An RSVP bandwidth reservation is uniquely identified by an RSVP session number and RSVP reservation number combination.

## Examples

In the following example, the data associated with RSVP session number 200 and RSVP bandwidth reservation number 3400 is displayed:

```
nodename.1.5.VISM8.a > dsprsvpresv 200 3400

rsvpSessionNumber      : 200
rsvpResvNumber         : 3400
rsvpResvType           : IPv4
rsvpResvDestAddr       : 12.12.12.1
rsvpResvSenderAddr     : 11.11.11.1
rsvpResvDestAddrLength : 32
rsvpResvSenderAddrLength : 32
rsvpResvProtocol       : IP
rsvpResvDestPort       : 49152
rsvpResvPort           : 49152
rsvpResvHopAddr        : 12.12.12.1
rsvpResvInterface      : 0
rsvpResvService        : Guaranteed
rsvpResvTSpecRate      : 96000 bps
rsvpResvTSpecPeakRate  : 96000 bps
rsvpResvTSpecBurst     : 120 bytes
rsvpResvTSpecMinTU     : 120
rsvpResvTSpecMaxTU     : 120
rsvpResvRSpecRate      : 96000 bps
rsvpResvRSpecSlack     : 0 usec
rsvpResvInterval       : 30000 msec
rsvpResvScope          :
rsvpResvShared         : false
rsvpResvExplicit       : true
rsvpResvRSVPHop        : true
rsvpResvLastChange     : 269040
rsvpResvStatus         : active

nodename.1.5.VISM8.a >
```

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>cnfrsvp</b>	Configures RSVP for a specified connection.
<b>cnfrsvprefreshmiss</b>	Configures the number of times VISM waits for a missed RSVP minimum refresh message for a specified connection.
<b>dsprsvpif</b>	Displays the RSVP status of a specified connection.
<b>dsprsvpreq</b>	Displays the data associated with a specified RSVP request.
<b>dsprsvpreqs</b>	Displays all RSVP requests on the current VISM card.
<b>dsprsvpresvs</b>	Displays all incoming RSVP reservations on the current VISM card.
<b>dsprsvpsender</b>	Displays all data associated with a specified RSVP path state.

# dsprsvpresvs

To display all incoming Resource Reservation Protocol (RSVP) bandwidth reservations on the current VISM card, use the **dsprsvpresvs** command.

## dsprsvpresvs

### Syntax Description

This command has no arguments or keywords.

### Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

### Usage Guidelines

This command displays data for reservations that are incoming or created by application programming interface (API) calls. Use the **dsprsvpreqs** command to display data for outgoing reservations or requests.

### Examples

In the following example, all incoming RSVP-known bandwidth reservations are displayed:

```
nodename.1.5.VISM8.a > dsprsvpresvs
```

Sess	Resv	From	To	Prot	DPort	SPort	Interval	Serv	BPS
0	0	11.11.11.1	12.12.12.1	IP	49152	49152	30000	Guaranteed	96000
0	0	12.12.12.1	11.11.11.1	IP	49152	49152	30000	Guaranteed	96000

```
nodename.1.5.VISM8.a >
```

### Related Commands

Command	Description
<b>cnfrsvp</b>	Configures RSVP for a specified connection.
<b>cnfrsvprefreshmiss</b>	Configures the number of times VISM waits for a missed RSVP minimum refresh message for a specified connection.
<b>dsprsvpif</b>	Displays the RSVP status of a specified connection.
<b>dsprsvpreq</b>	Displays the data associated with a specified RSVP request.
<b>dsprsvpreqs</b>	Displays all RSVP requests on the current VISM card.
<b>dsprsvpresv</b>	Displays all data associated with an RSVP bandwidth reservation.
<b>dsprsvpsender</b>	Displays all data associated with a specified RSVP path state.

# dsprsvsender

To display all data associated with a specified Resource Reservation Protocol (RSVP) path state, use the **dsprsvsender** command.

```
dsprsvsender <session_number> <sender_number>
```

## Syntax Description

<i>session_number</i>	RSVP session number. Range is 1–65535.
<i>sender_number</i>	RSVP sender number. Range is 1–65535.

## Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

The session number and sender number combination uniquely identifies a path state.

## Examples

In the following example, the data associated with the RSVP path state identified by RSVP session number 100 and RSVP sender number 23099 is displayed:

```
nodename.1.5.VISM8.a > dsprsvsender 100 23099

rsvpSessionNumber           : 100
rsvpSenderNumber            : 23099
rsvpSenderType               : IPv4
rsvpSenderDestAddr          : 12.12.12.1
rsvpSenderAddr              : 11.11.11.1
rsvpSenderDestAddrLength    : 32
rsvpSenderAddrLength        : 32
rsvpSenderProtocol          : IP
rsvpSenderDestPort          : 49152
rsvpSenderPort              : 49152
rsvpSenderHopAddr           : 12.12.12.2
rsvpSenderInterface         : 182
rsvpSenderTSpecRate         : 96000 bps
rsvpSenderTSpecPeakRate     : 96000 bps
rsvpSenderTSpecBurst        : 120 bytes
rsvpSenderTSpecMinTU        : 120
rsvpSenderTSpecMaxTU        : 120
rsvpSenderInterval          : 30000 msec
rsvpSenderRSVPHop           : true
rsvpSenderLastChange        : 4726
rsvpSenderAdspecBreak       : false
rsvpSenderAdspecHopCount    : 3
rsvpSenderAdspecPathBw      : -855437984 bps
rsvpSenderAdspecMinLatency  : 0 usec
rsvpSenderAdspecMtu         : 1500 bytes
rsvpSenderAdspecGuaranteedSvc : ?
rsvpSenderAdspecGuaranteedBreak : ?
rsvpSenderAdspecGuaranteedCtot : 0 bytes
rsvpSenderAdspecGuaranteedDtot : 0 usec
rsvpSenderAdspecGuaranteedCsum : 0 bytes
rsvpSenderAdspecGuaranteedDsum : 0 usec
rsvpSenderAdspecGuaranteedHopCount : 0
rsvpSenderAdspecGuaranteedPathBw : 0 bps
rsvpSenderAdspecGuaranteedMinLatency : 0 usec
```

```

rsvpSenderAdspecGuaranteedMtu      : 0 bytes
rsvpSenderAdspecCtrlLoadSvc        : 1
rsvpSenderAdspecCtrlLoadBreak      : false
rsvpSenderAdspecCtrlLoadHopCount   : 0
rsvpSenderAdspecCtrlLoadPathBw     : 0 bps
rsvpSenderAdspecCtrlLoadMinLatency : 0 usec
rsvpSenderAdspecCtrlLoadMtu        : 0 bytes
rsvpSenderStatus                    : active
rsvpSenderTTL                       : 253

```

```
nodename.1.5.VISM8.a >
```

### Related Commands

Command	Description
<b>cnfrsvp</b>	Configures RSVP for a specified connection.
<b>cnfrsvprefreshmiss</b>	Configures the number of times VISM waits for a missed RSVP minimum refresh message for a specified connection.
<b>dsprsvpif</b>	Displays the RSVP status of a specified connection.
<b>dsprsvpreq</b>	Displays the data associated with a specified RSVP request.
<b>dsprsvpreqs</b>	Displays all RSVP requests on the current VISM card.
<b>dsprsvpresv</b>	Displays all data associated with an RSVP bandwidth reservation.
<b>dsprsvpresvs</b>	Displays all incoming RSVP reservations on the current VISM card.
<b>dsprsvpsenders</b>	Displays all RSVP path states on the current VISM card.

# dsprsvpsenders

To display all Resource Reservation Protocol (RSVP) path states on the current VISM card, use the **dsprsvpsenders** command.

## dsprsvpsenders

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, all RSVP path states on the current VISM card are displayed:

```
nodename.1.5.VISM8.a > dsprsvpsenders
```

Session	Sender	From	To	Prot	DPort	SPort	BPS
0	1	11.11.11.1	12.12.12.1	IP	49152	49152	96000
1	0	12.12.12.1	11.11.11.1	IP	49152	49152	96000

```
nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>cnfrsvp</b>	Configures RSVP for a specified connection.
<b>cnfrsvpprefreshmiss</b>	Configures the number of times VISM waits for a missed RSVP minimum refresh message for a specified connection.
<b>dsprsvpif</b>	Displays the RSVP status of a specified connection.
<b>dsprsvpreq</b>	Displays the data associated with a specified RSVP request.
<b>dsprsvpreqs</b>	Displays all RSVP requests on the current VISM card.
<b>dsprsvpresv</b>	Displays all data associated with an RSVP bandwidth reservation.
<b>dsprsvpresvs</b>	Displays all incoming RSVP reservations on the current VISM card.
<b>dsprsvpsender</b>	Displays all data associated with a specified RSVP path state.



# dsrtpcnt

To display the bearer counters of the statistics for a specific Real-Time Transport Protocol (RTP) VoIP trunking connection, use the **dsrtpcnt** command.

```
dsrtpcnt <rtp_conn_index>
```

## Syntax Description

<i>rtp_conn_index</i>	Connection identification number. Range is 1–248.
-----------------------	---

## Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the bearer counters of the statistics for the static RTP connection numbered 132 are displayed:

```
nodename.1.5.VISM8.a > dsrtpcnt 132

Connection Index :132
Packets Sent     :99604
Packets Received :0
Octets Sent      :7966804
Octets Received  :0
Packets Lost     :0

nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>addlapdtrunk</b>	Adds an LAPD trunk to a specific VISM card line.
<b>addrtpcon</b>	Adds a static RTP VoIP trunking connection.
<b>addrudp trunk</b>	Adds an ISDN PRI backhaul RUDP session for an LAPD trunk connection.
<b>clrtpcnt</b>	Clears the RTP counters (statistics) for a specific static RTP connection.
<b>cnflapdtrunkpvc</b>	Assigns the PVC trunk type that carries LAPD messages for the current VISM card.
<b>cnflntrunkcond</b>	Enables or disables line conditioning on a VISM card line.
<b>cnfrtpcon</b>	Modifies an existing static RTP VoIP trunking connection.
<b>cnfrudp trunkrmtip</b>	Modifies the remote VISM IP address used in the ISDN PRI backhaul RUDP trunk for a specified session.
<b>dellapdtrunk</b>	Deletes an LAPD configured line.
<b>delrtpcon</b>	Deletes a static RTP VoIP trunking connection.
<b>delrudp trunk</b>	Deletes an ISDN PRI backhaul RUDP session that is associated with an LAPD.
<b>dsplapd</b>	Displays data about an LAPD.

Command	Description
<b>dsplapdtrunkpvc</b>	Displays the assigned PVC trunk type that carries LAPD trunk messages for the current VISM card.
<b>dsplapdtrunks</b>	Displays the configuration data of all LAPD trunks.
<b>dsrtpcon</b>	Displays the configuration data of a specific static RTP VoIP trunking connection.
<b>dsrtpconnstat</b>	Displays the RTP connection statistics for a specified endpoint.
<b>dsrtpcons</b>	Displays the configuration data of all static RTP VoIP trunking connections.
<b>dsrudptrunk</b>	Displays the configuration data of a specified ISDN PRI backhaul RUDP session.
<b>dsrudptrunks</b>	Displays the configuration data of all ISDN PRI backhaul RUDP sessions.

# dsrtpcon

To display the configuration data of a specified static Real-Time Transport Protocol (RTP) VoIP trunking connection, use the **dsrtpcon** command.

```
dsrtpcon <rtp_conn_index>
```

## Syntax Description

<i>rtp_conn_index</i>	Connection identification number. Range is 1–248.
-----------------------	---

## Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the configuration data for the static RTP connection numbered 106 is displayed:

```
nodename.1.5.VISM8.a > dsrtpcon 106

Connection Index:      1
Endpoint Number:      1
Local RTP Port:        49648
Remote RTP Port:       49648
Remote IP Address:     10.1.30.30
Codec Type:            G.711u
Packetization Period: ten msec
ECAN Status:           Enable
VAD:                   Off
VAD Timer:             250 msec
CAS Transport:         On
DTMF Transport:        On
ICS Enable:            Disable
Bearer TOS:            160
Connection Mode:       GW can send and rcv packets
Conn Alarm State:      Active
Conn Fail Reason:      Not Fail
Payload Type:          256
Associated PVC:         131

nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>addlapdtrunk</b>	Adds an LAPD trunk to a specific VISM card line.
<b>addrtpcon</b>	Adds a static RTP VoIP trunking connection.
<b>addrudptrunk</b>	Adds an ISDN PRI backhaul RUDP session for an LAPD trunk connection.
<b>clrtpcnt</b>	Clears the RTP counters (statistics) for a specific static RTP connection.
<b>cnfdynamicpayload</b>	Enables or disables the dynamic payload on the current VISM card.

<b>Command</b>	<b>Description</b>
<b>cnflapdtrunkpvc</b>	Assigns the PVC trunk type that carries LAPD messages for the current VISM card.
<b>cnflntrunkcond</b>	Enables or disables line conditioning on a VISM card line.
<b>cnfrtpcon</b>	Modifies an existing static RTP VoIP trunking connection.
<b>cnfrudptrunkrmtip</b>	Modifies the remote VISM IP address used in the ISDN PRI backhaul RUDP trunk for a specified session.
<b>dellapdtrunk</b>	Deletes an LAPD configured line.
<b>delrudptrunk</b>	Deletes an ISDN PRI backhaul RUDP session that is associated with an LAPD.
<b>dsdynamicpayload</b>	Displays the card level configuration of dynamic payload on the current VISM card.
<b>dsplapd</b>	Displays data about an LAPD.
<b>dsplapdtrunkpvc</b>	Displays the assigned PVC trunk type that carries LAPD trunk messages for the current VISM card.
<b>dsplapdtrunks</b>	Displays the configuration data of all LAPD trunks.
<b>dsrtpcon</b>	Displays the bearer counters (statistics) for a specific RTP VoIP trunking connection.
<b>dsrtpconnstat</b>	Displays the RTP connection statistics for a specified endpoint.
<b>dsrtpcons</b>	Displays the configuration data of all static RTP VoIP trunking connections.
<b>dsprudptrunk</b>	Displays the configuration data of a specified ISDN PRI backhaul RUDP session.
<b>dsprudptrunks</b>	Displays the configuration data of all ISDN PRI backhaul RUDP sessions.

# dsrtpconnstat

To display the Real-Time Transport Protocol (RTP) connection statistics for a specified endpoint, use the **dsrtpconnstat** command.

**dsrtpconnstat** *<endpt\_num>*

<b>Syntax Description</b>	<i>endpt_num</i>	<p>Endpoint number. Ranges are</p> <ul style="list-style-type: none"> <li>• Template 1           <ul style="list-style-type: none"> <li>– 1–145 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 2           <ul style="list-style-type: none"> <li>– 1–192 for T1</li> <li>– 1–248 for E1</li> </ul> </li> <li>• Template 3           <ul style="list-style-type: none"> <li>– 1–120 for VISM</li> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> <li>• Template 4           <ul style="list-style-type: none"> <li>– 1–64 for VISM</li> <li>– 1–144 for VISM-PR</li> </ul> </li> <li>• Template 5           <ul style="list-style-type: none"> <li>– 1–192 for VISM-PR T1</li> <li>– 1–248 for VISM-PR E1</li> </ul> </li> </ul>
<b>Command Modes</b>	VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking	
<b>Usage Guidelines</b>	Follow standard CLI procedures for this command.	

**Examples**

In the following example, the RTP connection statistics for endpoint 1 are displayed:

```
nodename.1.5.VISM8.a > dsrtpconnstat 202
```

```
Endpoint index = 1
No. of RTP Packets Sent      = 26383402
No. of RTP Packets Received = 26383333
No. of Octets Sent          = 2110672160
No. of Octets Received     = 2110666640
No. of RTP Packets Lost    = 72
Interarrival Jitter      = 0
Latency                 = 125
```

**Related Commands**

Command	Description
<b>addrtpcon</b>	Adds a static RTP VoIP trunking connection.
<b>clrtpcnt</b>	Clears the RTP counters (statistics) for a specific static RTP connection.
<b>cnfrtpcon</b>	Modifies an existing static RTP VoIP trunking connection.
<b>delrtpcon</b>	Deletes a static RTP VoIP trunking connection.
<b>dsrtpcnt</b>	Displays the bearer counters (statistics) for a specific RTP VoIP trunking connection.
<b>dsrtpcon</b>	Displays the configuration data of a specific static RTP VoIP trunking connection.
<b>dsrtpconnstat</b>	Displays the RTP connection statistics for a specified endpoint.

# dsrtpcons

To display the configuration data of all static Real-Time Transport Protocol (RTP) VoIP trunking connections on a VISM card, use the **dsrtpcons** command.

## dsrtpcons

### Syntax Description

This command has no arguments or keywords.

### Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

### Usage Guidelines

Follow standard CLI procedures for this command.

### Examples

In the following example, the configuration data for all static RTP connections is displayed:

```
nodename.1.5.VISM8.a > dsrtpcons
```

Connection Index	Endpoint Number	Local Rtp Port	Remote RTP Port	Remote IP Address	Codec Type	Packetization Period	Alarm State
1	1	49700	49700	209.165.200.224	G711u	ten	Active
2	2	49702	49702	209.165.200.225	G.711u	ten	Active

```
nodename.1.5.VISM8.a >
```

### Related Commands

Command	Description
<b>addlapdtrunk</b>	Adds an LAPD trunk to a specific VISM card line.
<b>addrtpton</b>	Adds a static RTP VoIP trunking connection.
<b>addrudptrunk</b>	Adds an ISDN PRI backhaul RUDP session for an LAPD trunk connection.
<b>clrtpcnt</b>	Clears the RTP counters (statistics) for a specific static RTP connection.
<b>cnflapdtrunkpvc</b>	Assigns the PVC trunk type that carries LAPD messages for the current VISM card.
<b>cnflntrunkcond</b>	Enables or disables line conditioning on a VISM card line.
<b>cnfrtpcon</b>	Modifies an existing static RTP VoIP trunking connection.
<b>cnfrudptrunkrmtip</b>	Modifies the remote VISM IP address used in the ISDN PRI backhaul RUDP trunk for a specified session.
<b>dellapdtrunk</b>	Deletes an LAPD configured line.
<b>delrtpton</b>	Deletes a static RTP VoIP trunking connection.
<b>delrudptrunk</b>	Deletes an ISDN PRI backhaul RUDP session that is associated with an LAPD.
<b>dsplapd</b>	Displays data about an LAPD.
<b>dsplapdtrunkpvc</b>	Displays the assigned PVC trunk type that carries LAPD trunk messages for the current VISM card.
<b>dsplapdtrunks</b>	Displays the configuration data of all LAPD trunks.

<b>Command</b>	<b>Description</b>
<b>dsrtpcnt</b>	Displays the bearer counters (statistics) for a specific RTP VoIP trunking connection.
<b>dsrtpcon</b>	Displays the configuration data of a specific static RTP VoIP trunking connection.
<b>dsrtpconnstat</b>	Displays the RTP connection statistics for a specified endpoint.
<b>dsrudprtrunk</b>	Displays the configuration data of a specified ISDN PRI backhaul RUDP session.
<b>dsrudprtrunks</b>	Displays the configuration data of all ISDN PRI backhaul RUDP sessions.



# dsprudp trunk

To display the configuration data of a specified ISDN PRI backhaul Reliable User Datagram Protocol (RUDP) session, use the **dsprudp trunk** command.

**dsprudp trunk** <session\_number>

## Syntax Description

<i>session_number</i>	Session number in the range 1–64.
-----------------------	-----------------------------------

## Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the configuration data of ISDN PRI backhaul RUDP session number 43 is displayed:

```
nodename.1.5.VISM8.a > dsprudp trunk 43

Session Number      :43
Local Port          :1124
.
.
Trans State Timeout:2000

nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>addlapdtrunk</b>	Adds an LAPD trunk to a specific VISM card line.
<b>addrtpcon</b>	Adds a static RTP VoIP trunking connection.
<b>addrudp trunk</b>	Adds an ISDN PRI backhaul RUDP session for an LAPD trunk connection.
<b>clrtpcnt</b>	Clears the RTP counters (statistics) for a specific static RTP connection.
<b>cnflapdtrunkpvc</b>	Assigns the PVC trunk type that carries LAPD messages for the current VISM card.
<b>cnflntrunkcond</b>	Enables or disables line conditioning on a VISM card line.
<b>cnfrtpcon</b>	Modifies an existing static RTP VoIP trunking connection.
<b>cnfrudp trunkrmtip</b>	Modifies the remote VISM IP address used in the ISDN PRI backhaul RUDP trunk for a specified session.
<b>dellapdtrunk</b>	Deletes an LAPD configured line.
<b>delrtpcon</b>	Deletes a static RTP VoIP trunking connection.
<b>delrudp trunk</b>	Deletes an ISDN PRI backhaul RUDP session that is associated with an LAPD.
<b>dsplapd</b>	Displays data about an LAPD.
<b>dsplapdtrunkpvc</b>	Displays the assigned PVC trunk type that carries LAPD trunk messages for the current VISM card.

<b>Command</b>	<b>Description</b>
<b>dsplapdtrunks</b>	Displays the configuration data of all LAPD trunks.
<b>dsrtpcnt</b>	Displays the bearer counters (statistics) for a specific RTP VoIP trunking connection.
<b>dsrtpcon</b>	Displays the configuration data of a specific static RTP VoIP trunking connection.
<b>dsrtpcons</b>	Displays the configuration data of all static RTP VoIP trunking connections.
<b>dsprudp trunks</b>	Displays the configuration data of all ISDN PRI backhaul RUDP sessions.

# dsprudp trunks

To display the configuration data of all ISDN PRI backhaul Reliable User Datagram Protocol (RUDP) sessions on the VISM card, use the **dsprudp trunks** command.

## dsprudp trunks

### Syntax Description

This command has no arguments or keywords.

### Command Modes

VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

### Usage Guidelines

Follow standard CLI procedures for this command.

### Examples

In the following example, the configuration data of all ISDN PRI backhaul RUDP sessions is displayed:

```
nodename.1.5.VISM8.a > dsprudp trunks
```

Session Number	Local Port	Local IP	Remote IP	Remote Port	Session State
43	1124	209.165.200.224	209.165.200.210	1159	Active

```
nodename.1.5.VISM8.a >
```

### Related Commands

Command	Description
<b>addlapdtrunk</b>	Adds an LAPD trunk to a specific VISM card line.
<b>addrtpcon</b>	Adds a static RTP VoIP trunking connection.
<b>addrudp trunk</b>	Adds an ISDN PRI backhaul RUDP session for an LAPD trunk connection.
<b>clrtrtpcnt</b>	Clears the RTP counters (statistics) for a specific static RTP connection.
<b>cnflapdtrunkpvc</b>	Assigns the PVC trunk type that carries LAPD messages for the current VISM card.
<b>cnflntrunkcond</b>	Enables or disables line conditioning on a VISM card line.
<b>cnfrtpcon</b>	Modifies an existing static RTP VoIP trunking connection.
<b>cnfrudp trunk rmtip</b>	Modifies the remote VISM IP address used in the ISDN PRI backhaul RUDP trunk for a specified session.
<b>dellapdtrunk</b>	Deletes an LAPD configured line.
<b>delrtpcon</b>	Deletes a static RTP VoIP trunking connection.
<b>deludp trunk</b>	Deletes an ISDN PRI backhaul RUDP session that is associated with an LAPD.
<b>dsplapd</b>	Displays data about an LAPD.
<b>dsplapdtrunkpvc</b>	Displays the assigned PVC trunk type that carries LAPD trunk messages for the current VISM card.
<b>dsplapd trunks</b>	Displays the configuration data of all LAPD trunks.
<b>dsprtpcnt</b>	Displays the bearer counters (statistics) for a specific RTP VoIP trunking connection.

Command	Description
<b>dsprtpcon</b>	Displays the configuration data of a specific static RTP VoIP trunking connection.
<b>dsprtpcons</b>	Displays the configuration data of all static RTP VoIP trunking connections.
<b>dsprudp trunk</b>	Displays the configuration data of a specified ISDN PRI backhaul RUDP session.

# dspsarcnt

To display the segmentation and reassembly (SAR) counter values for a specified channel, use the **dspsarcnt** command.

**dspsarcnt** <LCN>

## Syntax Description

<i>LCN</i>	Logical channel number of the connection for which you want to display SAR counter values. Range is 131–510.
------------	--

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the SAR counter values for logical channel number 132 are displayed:

```
nodename.1.5.VISM8.a > dspsarcnt 132

SarShelfNum:      1
SarSlotNum:       17
SarChanNum:       132

                        Tx                Rx
                        -----            -----
Total Cells:      69486                    60243
Total CellsCLP:   0                        0
Total CellsAIS:   0                        0
Total CellsFERF:  0                        0
Total CellsEnd2EndLpBk: 0                0
Total CellsSegmentLpBk: 0                0
RcvCellsDiscOAM: 0                        2151467320

nodename.1.5.VISM8.a >
```

## Related Commands

Command	Description
<b>dspsarcnts</b>	Displays the SAR counter values for a VISM card.

# dspsarcnts

To display the segmentation and reassembly (SAR) counter values for a VISM card, use the **dspsarcnts** command.

## dspsarcnts

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the SAR counter values for the current VISM card are displayed:

```
nodename.1.27.VISM8.a > dspsarcnts
                        SarShelfNum:      1
                        SarSlotNum:       27
                        SarChanNum:       0
                        Tx                Rx
                        -----
Total Cells:           0                0
Total CellsCLP:       0                0
Total CellsAIS:       0                0
Total CellsFERF:      0                0
Total CellsEnd2EndLpBk: 0                0
Total CellsSegmentLpBk: 0                0
RcvCellsDiscoAM:      0                0
```

Type <CR> to continue, Q<CR> to stop:

Related Commands	Command	Description
	<b>dspsarcnt</b>	Displays the SAR counter values for a specified channel.

# dspsarmsgcnt

To display the segmentation and reassembly (SAR) control message counter values for a VISM card, use the **dspsarmsgcnt** command.

## dspsarmsgcnt

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the SAR control message counter values for the current VISM card are displayed:

```
nodename.1.27.VISM8.a > dspsarmsgcnt

RiscXmtCtrlMsg:          83606
RiscRcvCtrlMsg:         83606
SARXmtCtrlMsg:          83445
SARRcvCtrlMsg:          83606
SARCtrlMsgDiscLenErr:    0
SARCtrlMsgDiscCRCErr:    0
SARCtrlMsgDiscUnknownChan: 0
SARCtrlMsgLastUnknownChan: 0

nodename.1.27.VISM8.a >
```

## Related Commands

Command	Description
<b>clrsarmsgcnt</b>	Clears the control message counters from a VISM card.

# dspseqtonedet

To display the configuration data of a sequential tone that is configured through the use of the **cnfseqtonedet** command, use the **dspseqtonedet** command.

## dspseqtonedet

**Syntax Description** This command has no arguments or keywords.

**Command Modes** Switched AAL2 PVC, VoIP switching/VoIP trunking

**Usage Guidelines** Follow standard CLI procedures for this command.



**Note** This command is applicable only to the VISM-PR card.

**Examples** In the following example, the values for a sequential tone that is configured through use of the **cnfseqtonedet** command are displayed:

```
nodename.1.27.VISM8.a > dspseqtonedet
```

```
seqToneNumOfFrequencies      3
seqToneEventID              74
seqToneDurationOfEachTone   330 ms
seqToneGapBetweenEachTone   10 ms
seqToneDurationDeviation    20 ms
seqToneMaximumGapDuration   150 ms
seqToneGapDurationDeviation 200 ms
seqToneFreqDeviation        40 hz
seqTonePowerLevelCeiling    -3 dB
seqTonePowerLevelFloor      -40 dB
seqToneFrequency1           950 hz
seqToneFrequency2           1400 hz
seqToneFrequency3           1800 hz
seqToneFrequency4           280 hz
seqToneFrequency5           280 hz
seqToneFrequency6           280 hz
seqToneFrequency7           280 hz
seqToneFrequency8           280 hz
seqToneFrequency9           280 hz
seqToneFrequency10          280 hz
```

```
nodename.1.27.VISM8.a >
```

### Related Commands

Command	Description
<b>cnfseqtonedet</b>	Changes the default settings of a sequential tone.



# dspsses

To display the configuration data of a Primary Rate Interface (PRI) backhaul session, use the **dspsses** command.

```
dspsses <session_number>
```

## Syntax Description

<i>session_number</i>	Identifying session number in the range 1–64.
-----------------------	---

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the configuration data of PRI backhaul session number 1 is displayed:

```
nodename.1.27.VISM8.a > dspsses 1

vismRudpSessionNum:          1
vismRudpSessionGrpNum:       1
vismRudpSessionPriority:      1
vismRudpSessionState:         Oos
vismRudpSessionCurrSession:   0
vismRudpSessionLocalIp:       xxx.xx.xx.xxx
vismRudpSessionLocalPort:     1124
vismRudpSessionRmtIp:         xxx.xx.xx.xx
vismRudpSessionRmtPort:       1124
vismRudpSessionMaxWindow:     32
vismRudpSessionSyncAttempts:  5
vismRudpSessionMaxSegSize:    384
vismRudpSessionMaxAutoReset:  5
vismRudpSessionRetransTmout:  600
vismRudpSessionMaxRetrans:    3
vismRudpSessionMaxCumAck:     3
vismRudpSessionAckTmout:      300
vismRudpSessionMaxOutOfSeq:   4
vismRudpSessionNullSegTmout:  2000
vismRudpSessionTransStateTmout: 2000

nodename.1.27.VISM8.a >
```

## Related Commands

Command	Description
<b>addses</b>	Adds a PRI backhaul session between a VISM card and a call agent.
<b>cnfsesack</b>	Configures the timeout period before sending an acknowledgment.
<b>cnfsesmaxreset</b>	Configures the maximum number of resets.
<b>delses</b>	Deletes a PRI backhaul session.
<b>dspsses</b>	Displays the configuration data of all PRI backhaul sessions.

# dspesgrp

To display configuration data of a Primary Rate Interface (PRI) backhaul session group, use the **dspesgrp** command.

**dspesgrp** <group\_number>

## Syntax Description

*group\_number* Number of the session group for which you want to display the PRI backhaul configuration data. Range is 1–16.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the PRI backhaul configuration data for session group number 2 is displayed:

```
nodename.1.27.VISM8.a > dspesgrp 2

vismSessionGrpNum:          2
vismSessionGrpSetNum:       1
vismSessionGrpState:        ?
vismSessionGrpCurrSession:  0
vismSessionGrpTotalSessions: 0
vismSessionGrpMgcName:      abc
vismSessionGrpSwitchFails:  0
vismSessionGrpSwitchSucesses: 0

nodename.1.27.VISM8.a >
```

## Related Commands

Command	Description
<b>addesgrp</b>	Adds a PRI backhaul session group between a VISM card and a call agent.
<b>delsesgrp</b>	Deletes a PRI backhaul session group.
<b>dspesgrps</b>	Displays data about all PRI backhaul session groups.

# dspesgrps

To display configuration data about all Primary Rate Interface (PRI) backhaul session groups, use the **dspesgrps** command.

## dspesgrps

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the configuration data of the current PRI backhaul session groups is displayed:

```
nodename.1.27.VISM8.a > dspesgrps
```

GrpNum	SetNum	State	ActiveSes	TotalSes	Mgc	SwitchFail	SwitchSuccess
2	1	?	0	0	abc	0	0
3	1	?	0	0	svc	0	0

```
nodename.1.27.VISM8.a >
```

### Related Commands

Command	Description
<b>addsesgrp</b>	Adds a PRI backhaul session group between a VISM card and a call agent.
<b>delsesgrp</b>	Deletes a PRI backhaul session group.
<b>dspesgrp</b>	Displays configuration data of a PRI backhaul session group.

# dspssess

To display configuration data about all Primary Rate Interface (PRI) backhaul sessions, use the **dspssess** command.

## **dspssess**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the current PRI backhaul sessions are displayed:

```
nodename.1.27.VISM8.a > dspssess
```

SesNo	GrpNo	Priority	State	LocPrt	RmtPrt	LocIp	RmtIp
1	1	1	Oos	9011	9011	10.10.30.99	10.1.3.25
2	1	2	Oos	9012	9012	10.10.30.99	10.1.5.25

```
nodename.1.27.VISM8.a >
```

## **Related Commands**

<b>Command</b>	<b>Description</b>
<b>addses</b>	Adds a PRI backhaul session between a VISM card and a call agent.
<b>delses</b>	Deletes a PRI backhaul session.
<b>dspsses</b>	Displays the configuration data of a PRI backhaul session.

# dspsseset

To display configuration data about a specified Primary Rate Interface (PRI) backhaul session set, use the **dspsseset** command.

**dspsseset** <set\_number>

## Syntax Description

*set\_number* Set number in the range 1–16.

**Note** Only session set number 1 is supported.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the configuration data for PRI backhaul session number 1 is displayed:

```
nodename.1.27.VISM8.a > dspsseset 1
```

```
vismSessionSetNum:          1
vismSessionSetState:        Idle
vismSessionSetTotalGrps:    2
vismSessionSetActiveGrp:    0
vismSessionSetFaultTolerant: FT
vismSessionSetSwitchFails:  0
vismSessionSetSwitchSucesses: 0
```

```
nodename.1.27.VISM8.a >
```

## Related Commands

Command	Description
<b>addseset</b>	Adds a PRI backhaul session set between a VISM card and a call agent.
<b>delseset</b>	Deletes a PRI backhaul session set.

# dspesstat

To display configuration data about Primary Rate Interface (PRI) backhaul session statistics, use the **dspesstat** command.

**dspesstat** <session\_number>

## Syntax Description

*session\_number* Number of the session for which you want to display PRI backhaul session statistics. Range is 1–64.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the statistics with their counters for the PRI backhaul session set number 1 are displayed:

```
nodename.1.27.VISM8.a > dspesstat 1

vismRudpSessionStatNum:          1
vismRudpSessionAutoResets:       0
vismRudpSessionRcvdAutoResets:  0
vismRudpSessionRcvdInSeqs:      0
vismRudpSessionRcvdOutSeqs:     0
vismRudpSessionSentPackets:     5
vismRudpSessionRcvdPackets:     0
vismRudpSessionSentBytes:       0
vismRudpSessionRcvdBytes:       0
vismRudpSessionDataSentPkts:    0
vismRudpSessionDataRcvdPkts:    0
vismRudpSessionDiscardPkts:     0
vismRudpSessionRetransPkts:     0

nodename.1.27.VISM8.a >
```

## Related Commands

Command	Description
<b>addressset</b>	Adds a PRI backhaul session set between a VISM card and a call agent.
<b>delseset</b>	Deletes a PRI backhaul session set.

# dspsidpacket

To show whether or not the silence insertion descriptor (SID) packet is enabled for each line, use the **dspsidpacket** command.

## dspsidpacket

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the SID packet is enabled only on line 1:

```
nodename.1.27.VISM8.a > dspsidpacket
```

LineNo/Ds0No	Sid Packet
1/ 1	Enable
1/ 2	Enable
1/ 3	Enable
1/ 4	Enable
1/ 5	Enable
1/ 6	Enable
1/ 7	Enable
1/ 8	Enable
1/ 9	Enable
1/10	Enable
1/11	Enable
1/12	Enable
1/13	Enable
1/14	Enable
1/15	Enable
1/16	Enable
1/17	Enable
1/18	Enable
1/19	Enable
1/20	Enable
1/21	Enable
1/22	Enable
1/23	Enable
1/24	Enable
INFO: line ds1 '2' is not enabled	
INFO: line ds1 '3' is not enabled	
INFO: line ds1 '4' is not enabled	
INFO: line ds1 '5' is not enabled	
INFO: line ds1 '6' is not enabled	
INFO: line ds1 '7' is not enabled	
INFO: line ds1 '8' is not enabled	

```
nodename.1.27.VISM8.a >
```

---

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>cnfsidpacket</b>	Enables or disables the SID packet on all of the lines.

---



# dspslipcnt

To display the current clock slip counters for a specified VISM card line, use the **dspslipcnt** command.

**dspslipcnt** <line\_number>

<b>Syntax Description</b>	<i>line_number</i> Line number of the DS1 line for which you want to display the current clock slip counters. Range is 1–8.
---------------------------	---

<b>Command Modes</b>	VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking
----------------------	---

<b>Usage Guidelines</b>	Follow standard CLI procedures for this command.
-------------------------	--

**Examples** In the following example, the current clock slip counters for line 3 of the VISM card are displayed:

```
nodename.1.27.VISM8.a > dspslipcnt 3

Line 3 Slip Counters:   Tx Slip   Rx Slip
Uncontrolled Slip:     0         0
Frame Slip:             0         2

nodename.1.27.VISM8.a >
```

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>clrslipcnt</b>	Clears current clock slip counters for a specified VISM card line.

# dsp splmodemtone

To display whether or not 1560/980 Hz modem tones are detected, use the **dsp splmodemtone** command.

**dsp splmodemtone**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, 1560/980 Hz modem tone detection is enabled:

```
nodename.1.28.VISM8.a > dsp splmodemtone
1560/980 Hz Modem Tone Detection : ENABLED
nodename.1.28.VISM8.a >
```

## Related Commands

Command	Description
<b>cnf splmodemtonedsbl</b>	Disables the detection of 1580/980 tones.
<b>cnf splmodemtoneenbl</b>	Enables the detection of 1580/980 tones.

# dspsrcpcnt

To display the Simple Resource Control Protocol (SRCP) message statistics and their counters for a specified call agent, use the **dspsrcpcnt** command.

**dspsrcpcnt** <Ip\_address>

## Syntax Description

<i>Ip_address</i>	IP address, in dotted decimal format (nnn.nnn.nnn.nnn), of the call agent for which you want to display SRCP statistics.
-------------------	--

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the SRCP message statistics and their counters of IP address 209.165.200.224 are displayed:

```
nodename.1.27.VISM8.a > dspsrcpcnt 209.165.200.224
```

Ip	Name	Discarded	Augw/Fail	Auln/Fail	Ntfy/Fail	Rqnt/Fail
2.2.2.2	mgc1	0	0/0	0/0	0/0	0/0

```
nodename.1.27.VISM8.a >
```

## Related Commands

Command	Description
<b>dspsrcpcnts</b>	Displays SRCP message counters (statistics) for all known call agents.
<b>dspsrcppeer</b>	Displays the peer configuration data for a specified SRCP peer (call agent).
<b>dspsrcppeers</b>	Displays the peer configuration data for all known SRCP peers (call agents).
<b>dspsrcpport</b>	Displays the local UDP port number used by the SRCP on VISM.
<b>dspsrcpretry</b>	Displays the card level SRCP retransmission parameters—maximum number of retransmission attempts, minimum timeout, and maximum timeout.

# dspsrcpcnts

To display the Simple Resource Control Protocol (SRCP) message statistics and their counters for all known call agents, use the **dspsrcpcnts** command.

## dspsrcpcnts

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the SRCP message statistics and their counters for all known call agents are displayed:

```
nodename.1.27.VISM8.a > dspsrcpcnts
```

Ip	Name	Discarded	Augw/Fail	Auln/Fail	Ntfy/Fail	Rqnt/Fail
2.2.2.2	mgc1	0	0/0	0/0	0/0	0/0

```
nodename.1.27.VISM8.a >
```

## Related Commands

Command	Description
<b>dspsrcpcnt</b>	Displays the SRCP message counters (statistics) for a specified call agent.
<b>dspsrcppeer</b>	Displays the peer configuration data for a specified SRCP peer (call agent).
<b>dspsrcppeers</b>	Displays the peer configuration data for all known SRCP peers (call agents).
<b>dspsrcpport</b>	Displays the local UDP port number used by the SRCP on VISM.
<b>dspsrcpretry</b>	Displays the card level SRCP retransmission parameters—maximum number of retransmission attempts, minimum timeout, and maximum timeout.

# dspsrcpeer

To display the peer configuration data for a specified Simple Resource Control Protocol (SRCP) peer (call agent), use the **dspsrcpeer** command.

```
dspsrcpeer <peer_id>
```

## Syntax Description

<i>peer_id</i>	Peer (call agent) identification number. Range is 1–8.
----------------	--

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the peer configuration data for the call agent identified by peer number 1 is displayed:

```
nodename.1.27.VISM8.a > dspsrcpeer 1
```

```
Id      PortNumber
----  -
1       1025
```

```
nodename.1.27.VISM8.a >
```

## Related Commands

Command	Description
<b>dspsrcpct</b>	Displays the SRCP message counters (statistics) for a specified call agent.
<b>dspsrcpcts</b>	Displays SRCP message counters (statistics) for all known call agents.
<b>dspsrcpeers</b>	Displays the peer configuration data for all known SRCP peers (call agents).
<b>dspsrcpport</b>	Displays the local UDP port number used by the SRCP on VISM.
<b>dspsrcpretry</b>	Displays the card level SRCP retransmission parameters—maximum number of retransmission attempts, minimum timeout, and maximum timeout.

# dspsrcppeergpparams

To display the Simple Resource Control Protocol (SRCP) parameters for all call agent redundancy groups that have SRCP added, use the **dspsrcppeergpparams** command.

## dspsrcppeergpparams

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the SRCP parameters for all call agent redundancy groups that have SRCP added are displayed:

```
nodename.1.27.VISM8.a > dspsrcppeergpparams

Mgc Grp Num HeartbeatIntv TimeSinceHeartbeat MaxPdu
-----
      1           120           0           4096

nodename.1.27.VISM8.a >
```

## Related Commands

Command	Description
<b>addmgcgrpentry</b>	Configures call agents as part of an MGC redundancy group and assigns a priority value for a call agent.
<b>addmgcgrpprotocol</b>	Associates a call agent redundancy group with a gateway control protocol.
<b>cnfmgcgrpentry</b>	Modifies the priority level of a call agent within a call agent redundancy group.
<b>cnfmgcgrpparam</b>	Modifies the notification policy of a state change and the priority level of a call agent redundancy group.
<b>cnfsrcppeer</b>	Configures the SRCP parameters when SRCP is the selected protocol for communication between the VISM card and call agent.
<b>cnfsrcppeergrpparam</b>	Modifies the SRCP heartbeat interval and maximum UDP size for a specified call agent redundancy group.
<b>delmgcgrpentry</b>	Deletes a call agent from a call agent redundancy group.
<b>delmgcgrpprotocol</b>	Deletes an MGCP from a specified call agent redundancy group.
<b>dspmgcgrpparams</b>	Displays all configured call agent redundancy group parameters.
<b>dspmgcgrpprotocols</b>	Displays all configured call agent redundancy group protocols.
<b>dspmgcgrps</b>	Displays all configured call agent redundancy groups.

# dspsrcpeers

To display the peer configuration data for all known Simple Resource Control Protocol (SRCP) peers (call agents), use the **dspsrcpeers** command.

## dspsrcpeers

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the configuration data for all known SRCP peers (call agents) is displayed:

```
nodename.1.27.VISM8.a > dspsrcpeers
Id   PortNumber
----  -
  1   4000

nodename.1.27.VISM8.a >
```

## Related Commands

Command	Description
<b>dspsrcpct</b>	Displays the SRCP message counters (statistics) for a specified call agent.
<b>dspsrcpcts</b>	Displays SRCP message counters (statistics) for all known call agents.
<b>dspsrcppeer</b>	Displays the peer configuration data for a specified SRCP peer (call agent).
<b>dspsrcpport</b>	Displays the local UDP port number used by the SRCP on VISM.
<b>dspsrcpretry</b>	Displays the card level SRCP retransmission parameters—maximum number of retransmission attempts, minimum timeout, and maximum timeout.

# dspsrcpport

To display the local User Datagram Protocol (UDP) port number used by the Simple Resource Control Protocol (SRCP) on VISM, use the **dspsrcpport** command.

## dspsrcpport

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the local UDP port number used by the SRCP is displayed:

```
nodename.1.27.VISM8.a > dspsrcpport
srcpPortNumber: 2428
nodename.1.27.VISM8.a >
```

## Related Commands

Command	Description
<b>dspsrcpnt</b>	Displays the SRCP message counters (statistics) for a specified call agent.
<b>dspsrcpents</b>	Displays SRCP message counters (statistics) for all known call agents.
<b>dspsrcppeer</b>	Displays the peer configuration data for a specified SRCP peer (call agent).
<b>dspsrcppeers</b>	Displays the peer configuration data for all known SRCP peers (call agents).
<b>dspsrcpretry</b>	Displays the card level SRCP retransmission parameters—maximum number of retransmission attempts, minimum timeout, and maximum timeout.



# dspsrcpretry

To display the VISM card level Simple Resource Control Protocol (SRCP) retransmission parameters—maximum number of retransmission attempts, minimum timeout, and maximum timeout—use the **dspsrcpretry** command.

## dspsrcpretry

### Syntax Description

This command has no arguments or keywords.

### Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

### Usage Guidelines

Follow standard CLI procedures for this command.

### Examples

In the following example, the VISM card level SRCP retransmission parameters are displayed:

```
nodename.1.27.VISM8.a > dspsrcpretry

Min Request Timeout :    500
Retry Count         :     3
Max Request Timeout :    500

nodename.1.27.VISM8.a >
```

### Related Commands

Command	Description
<b>dspsrept</b>	Displays the SRCP message counters (statistics) for a specified call agent.
<b>dspsrepcnts</b>	Displays SRCP message counters (statistics) for all known call agents.
<b>dspsrepppeer</b>	Displays the peer configuration data for a specified SRCP peer (call agent).
<b>dspsrepppeers</b>	Displays the peer configuration data for all known SRCP peers (call agents).
<b>dspsreppport</b>	Displays the local UDP port number used by the SRCP on VISM.

# dspssrcenable

To display whether or not VISM/VISM-PR is configured to allow more than one synchronization source (SSRC) stream per RTP session, use the **dspssrcenable** command.

## **dspssrcenable**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the VISM/VISM-PR card allows more than one SSRC stream per RTP session.

```
nodename.1.28.VISM8.a > dspssrcenable

SSRC check :   enable

nodename.1.28.VISM8.a >
```

## **Related Commands**

<b>Command</b>	<b>Description</b>
<b>cnfssrcenable</b>	Configures the VISM to allow more than one SSRC per RTP session.

# dspstatparms

To display the general status of the statistics upload functionality by means of the VISM-PR CLI, use the **dspstatparms** command.

## **dspstatparms**

---

**Syntax Description** This command has no arguments or keywords.

---

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, Switched AAL2 SVC, Switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

---

**Usage Guidelines** This command is applicable only to VISM-PR cards. For more information regarding the statistics you can collect on the VISM-PR card, see the “VISM-PR Bulk Statistics Upload to CWM” section on page 9-87.

---

**Examples** In the following example, the statistics upload counters for the current VISM-PR card are displayed:

```
nodename.1.28.VISM8.a > dspstatparms

TFTP Retry Count: 1
TFTP ACK time-out (sec): 60
Bucket Interval: 15
File Interval: 15
Peak Enable Flag: Disabled
Object Count: 2 STATS COLLECTION: Enabled
Object Subtype Counts: 2 2 0 0
Total File Memory Used: 8685
Number of File Allocated: 5
Current File Size: 123176
Stat Memory Allocated: 96832
Auto Memory Allocated: 105517
Auto Mem Rgn Size: 5242880

nodename.1.28.VISM8.a >
```

---

**Related Commands** There are no related commands.

# dspsvcaal2cid

To display the current configured AAL2 switched virtual circuit (SVC) channel ID (CID) number, use the **dspsvcaal2cid** command.

## **dspsvcaal2cid**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** Switched AAL2 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the AAL2 SVC CID value you configured using the **cnfsvcaal2cid** command is displayed:

```
nodename.1.28.VISM8.a > dspsvcaal2cid
```

```
The default AAL2 SVC cid value: 100
```

```
nodename.1.28.VISM8.a >
```

Related Commands	Command	Description
	cnfsvcaal2cid	Configures the AAL2 CID value used in a single AAL2 SVC.

# dspvccallstruct

To display all switched virtual circuit (SVC) call table information for the SVC, use the **dspvccallstruct** command.

**dspvccallstruct** <*svcIndex*>

Syntax Description	<i>svcIndex</i>	SVC ID. Range is 1–255.
--------------------	-----------------	-------------------------

Command Modes	AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC
---------------	--

Usage Guidelines	Follow standard CLI procedures when using this command.
------------------	---

Examples	In the following example, the SVC call table information for SVC 121 is displayed:
----------	--

```

nodename.1.28.VISM8.a > dspvccallstruct 121

next free index:0
next active index:0
prev active index:0
ccConnIndex:120
svcIndex:121
svcServiceType:real-time Variable Bit Rate
svcConnType:AAL2
Peak Cell Rate      :201 cps
Sustained Cell Rate :200 cps
Maximum Burst Size  :5 cps
Signalled OR Scaled Sustained Cell Rate :200 cps
PNNI Handle:113
logical channel number:390
setupInd timestamp:-652139922 ms
setupReq timestamp:0 ms
callprocInd timestamp:0 ms
connectInd timestamp:0 ms
connectReq timestamp:-652139922 ms
connectAckInd timestamp:-652139882 ms
connectAckReq timestamp:0 ms
releaseInd timestamp:0 ms
releaseReq timestamp:0 ms
releaseCompInd timestamp:0 ms
releaseCompReq timestamp:0 ms
SVC timer type:SVC_CONNECT_TIMER
previous call state:SVC_CALL_U8_CONNECT_REQ
current call state:SVC_CALL_U10_ACTIVE
call event:SVC_CALL_CONNECT_ACK_IND
resync flag:0
localEecid:121
remoteEecid:0
called address:470091810000000007856e12f0000001070bff15
rel cause:0

nodename.1.28.VISM8.a >

```

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>dspsvccalltable</b>	Displays the SVC call table.
<b>dspsvccalltimers</b>	Displays the timer pending for each call.
<b>dspsvccause</b>	Prints the text description for the cause.
<b>dspsvccnts</b>	Displays the SVC SAPI message processing counts.
<b>dspsvicons</b>	Displays the active SVC connections.
<b>dspsvcgw</b>	Displays the details of the gateway parameters.

# dspvccalltable

To display the switched virtual circuit (SVC) call table, use the **dspvccalltable** command.

## dspvccalltable

**Syntax Description** This command has no arguments or keywords.

**Command Modes** AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures when using this command.

You can scroll forward through the table or quit.

**Examples** In the following example, the call table for the originating end of the call is displayed:

```
nodename.1.28.VISM8.a > dspvccalltable
```

svc Index	ccConn Index	PNNI Hnd	LCN	cur call state	Previous state	svc event
1	1	2	510	SVC_CALL_U10_ACTIVE	SVC_CALL_U8_CONNECT_	SVC_CALL_CONNECT_ACK
2	2	3	509	SVC_CALL_U10_ACTIVE	SVC_CALL_U8_CONNECT_	SVC_CALL_CONNECT_ACK
3	3	4	508	SVC_CALL_U10_ACTIVE	SVC_CALL_U8_CONNECT_	SVC_CALL_CONNECT_ACK
4	4	32	507	SVC_CALL_U10_ACTIVE	SVC_CALL_U8_CONNECT_	SVC_CALL_CONNECT_ACK
5	5	5	506	SVC_CALL_U10_ACTIVE	SVC_CALL_U8_CONNECT_	SVC_CALL_CONNECT_ACK
6	6	6	505	SVC_CALL_U10_ACTIVE	SVC_CALL_U8_CONNECT_	SVC_CALL_CONNECT_ACK
7	7	7	504	SVC_CALL_U10_ACTIVE	SVC_CALL_U8_CONNECT_	SVC_CALL_CONNECT_ACK
8	8	8	503	SVC_CALL_U10_ACTIVE	SVC_CALL_U8_CONNECT_	SVC_CALL_CONNECT_ACK
9	9	9	502	SVC_CALL_U10_ACTIVE	SVC_CALL_U8_CONNECT_	SVC_CALL_CONNECT_ACK
10	10	10	501	SVC_CALL_U10_ACTIVE	SVC_CALL_U8_CONNECT_	SVC_CALL_CONNECT_ACK
11	11	11	500	SVC_CALL_U10_ACTIVE	SVC_CALL_U8_CONNECT_	SVC_CALL_CONNECT_ACK
12	12	12	499	SVC_CALL_U10_ACTIVE	SVC_CALL_U8_CONNECT_	SVC_CALL_CONNECT_ACK
13	13	13	498	SVC_CALL_U10_ACTIVE	SVC_CALL_U8_CONNECT_	SVC_CALL_CONNECT_ACK
14	14	14	497	SVC_CALL_U10_ACTIVE	SVC_CALL_U8_CONNECT_	SVC_CALL_CONNECT_ACK
15	15	15	496	SVC_CALL_U10_ACTIVE	SVC_CALL_U8_CONNECT_	SVC_CALL_CONNECT_ACK
16	16	16	495	SVC_CALL_U10_ACTIVE	SVC_CALL_U8_CONNECT_	SVC_CALL_CONNECT_ACK
17	17	17	494	SVC_CALL_U10_ACTIVE	SVC_CALL_U8_CONNECT_	SVC_CALL_CONNECT_ACK
18	18	18	493	SVC_CALL_U10_ACTIVE	SVC_CALL_U8_CONNECT_	SVC_CALL_CONNECT_ACK

(m)-more (q)-quit

In the following example, the call table for the terminating end of the call is displayed:

```
nodename.1.28.VISM8.a > dspsvccalltable
```

svc Index	ccConn Index	PNNI Hnd	LCN	cur call state	Previous state	svc event
1	1	2	510	SVC_CALL_U10_ACTIVE	SVC_CALL_U3_OUTGOING	SVC_CALL_CONNECT_IND
2	2	3	509	SVC_CALL_U10_ACTIVE	SVC_CALL_U3_OUTGOING	SVC_CALL_CONNECT_IND
3	3	4	508	SVC_CALL_U10_ACTIVE	SVC_CALL_U3_OUTGOING	SVC_CALL_CONNECT_IND
4	4	5	507	SVC_CALL_U10_ACTIVE	SVC_CALL_U3_OUTGOING	SVC_CALL_CONNECT_IND
5	5	6	506	SVC_CALL_U10_ACTIVE	SVC_CALL_U3_OUTGOING	SVC_CALL_CONNECT_IND
6	6	7	505	SVC_CALL_U10_ACTIVE	SVC_CALL_U3_OUTGOING	SVC_CALL_CONNECT_IND
7	7	8	504	SVC_CALL_U10_ACTIVE	SVC_CALL_U3_OUTGOING	SVC_CALL_CONNECT_IND
8	8	9	503	SVC_CALL_U10_ACTIVE	SVC_CALL_U3_OUTGOING	SVC_CALL_CONNECT_IND
9	9	10	502	SVC_CALL_U10_ACTIVE	SVC_CALL_U3_OUTGOING	SVC_CALL_CONNECT_IND
10	10	11	501	SVC_CALL_U10_ACTIVE	SVC_CALL_U3_OUTGOING	SVC_CALL_CONNECT_IND
11	11	12	500	SVC_CALL_U10_ACTIVE	SVC_CALL_U3_OUTGOING	SVC_CALL_CONNECT_IND
12	12	13	499	SVC_CALL_U10_ACTIVE	SVC_CALL_U3_OUTGOING	SVC_CALL_CONNECT_IND
13	13	14	498	SVC_CALL_U10_ACTIVE	SVC_CALL_U3_OUTGOING	SVC_CALL_CONNECT_IND
14	14	15	497	SVC_CALL_U10_ACTIVE	SVC_CALL_U3_OUTGOING	SVC_CALL_CONNECT_IND
15	15	16	496	SVC_CALL_U10_ACTIVE	SVC_CALL_U3_OUTGOING	SVC_CALL_CONNECT_IND
16	16	17	495	SVC_CALL_U10_ACTIVE	SVC_CALL_U3_OUTGOING	SVC_CALL_CONNECT_IND
17	17	18	494	SVC_CALL_U10_ACTIVE	SVC_CALL_U3_OUTGOING	SVC_CALL_CONNECT_IND
18	18	19	493	SVC_CALL_U10_ACTIVE	SVC_CALL_U3_OUTGOING	SVC_CALL_CONNECT_IND

#### Related Commands

Command	Description
<b>dspsvccallstruct</b>	Displays the SVC call table information.
<b>dspsvccalltimers</b>	Displays the timer pending for each call.
<b>dspsvccause</b>	Prints the text description for the cause.
<b>dspsvccnts</b>	Displays the SVC SAPI message processing counts.
<b>dspsvicons</b>	Displays the active SVC connections.
<b>dspsvcgw</b>	Displays the details of the gateway parameters.



# dspsvccalltimers

To display the timer types and current call states for each call, use the **dspsvccalltimers** command.

## dspsvccalltimers

**Syntax Description** This command has no arguments or keywords.

**Command Modes** AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures when using this command.

You can scroll forward through the table or quit.

**Examples** In the following example, the SVC call timers and their current call state are displayed:

```
nodename.1.28.VISM8.a > dspsvccalltimers

svcIndex          Timer Type          current call state
  1                SVC_CALL_PROC_TIMER SVC_CALL_U10_ACTIVE
  2                SVC_CALL_PROC_TIMER SVC_CALL_U10_ACTIVE
  3                SVC_CALL_PROC_TIMER SVC_CALL_U10_ACTIVE
  4                SVC_CALL_PROC_TIMER SVC_CALL_U10_ACTIVE
  5                SVC_CALL_PROC_TIMER SVC_CALL_U10_ACTIVE
  6                SVC_CALL_PROC_TIMER SVC_CALL_U10_ACTIVE
  7                SVC_CALL_PROC_TIMER SVC_CALL_U10_ACTIVE
  8                SVC_CALL_PROC_TIMER SVC_CALL_U10_ACTIVE
  9                SVC_CALL_PROC_TIMER SVC_CALL_U10_ACTIVE
 10                SVC_CALL_PROC_TIMER SVC_CALL_U10_ACTIVE
 11                SVC_CALL_PROC_TIMER SVC_CALL_U10_ACTIVE
 12                SVC_CALL_PROC_TIMER SVC_CALL_U10_ACTIVE
 13                SVC_CALL_PROC_TIMER SVC_CALL_U10_ACTIVE
 14                SVC_CALL_PROC_TIMER SVC_CALL_U10_ACTIVE
 15                SVC_CALL_PROC_TIMER SVC_CALL_U10_ACTIVE
 16                SVC_CALL_PROC_TIMER SVC_CALL_U10_ACTIVE
 17                SVC_CALL_PROC_TIMER SVC_CALL_U10_ACTIVE
 18                SVC_CALL_PROC_TIMER SVC_CALL_U10_ACTIVE

(m) -more      (q) -quit
```

### Related Commands

Command	Description
<b>dspsvccallstruct</b>	Displays the SVC call table information.
<b>dspsvccalltable</b>	Displays the SVC call table.
<b>dspsvccause</b>	Prints the text description for the cause.
<b>dspsvcnts</b>	Displays the SVC SAPI message processing counts.
<b>dspsvccons</b>	Displays the active SVC connections.
<b>dspsvcgw</b>	Displays the details of the gateway parameters.

# dspsvccause

To print the text description for each cause ID, use the **dspsvccause** command.

```
dspsvccause <cause_id>
```

---

## Syntax Description

<i>cause_id</i>	Cause ID. Range is 1–255. A value of 0 prints all of the cause IDs and their meanings.
-----------------	--

---



---

## Command Modes

AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

---

## Usage Guidelines

Follow standard CLI procedures when using this command.

---

## Examples

In the following example, cause IDs and their meanings are displayed:

```
nodename.1.28.VISM8.a > dspsvccause 0

cause 0: Invalid Cause Value
cause 1: Unallocated (unassigned) Number
cause 2: No Route to Specified Transit Network
cause 3: No Route To Destination
cause 10: VPI VCI Unacceptable
cause 16: Normal Nall Nlearing
cause 17: User Busy
cause 18: No User Responding
cause 19: No Answer from User (User Alerted)
cause 21: Call Rejected
cause 22: Number Changed
cause 23: User Rejects All Screened Numbers
cause 27: Destination Out of Order
cause 28: Invalid Number Format, Address Incomplete
cause 29: Facility Rejected
cause 30: Response to Status Enquiry Message
cause 31: Normal, Unspecified
cause 35: Requested VPCI/VCI Not Available

(m)-more    (q)-quit
```



### Note

Although more causes are listed in the full output from the **dspsvccause** command, only the causes in the example above are supported.

---

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>dspsvccallstruct</b>	Displays the SVC call table information.
<b>dspsvccalltable</b>	Displays the SVC call table.
<b>dspsvccalltimers</b>	Displays the SVC call timers.
<b>dspsvccnts</b>	Displays the SVC SAPI message processing counts.
<b>dspsvccns</b>	Displays the active SVC connections.
<b>dspsvcgw</b>	Displays the details of the gateway parameters.

# dpsvcnts

To display the switched virtual circuit (SVC) service access point identifier (SAPI) message processing counts, use the **dpsvcnts** command.

This command starts a menu-driven interface that enables you to refresh the screen with current counts, to zero all counters, and to toggle sequentially through the default, restart/resync, and failure screens.

## dpsvcnts

### Syntax Description

This command has no arguments or keywords.

### Command Modes

AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

### Usage Guidelines

Follow standard CLI procedures when using this command.

### Examples

In the following example, the counts on the originating side are displayed:

```
nodename.1.28.VISM8.a > dpsvcnts

-----
Currently Active Calls: 124
Total Calls:          124

                Received      Last      Transmitted      Last
                Cause         Cause

Outgoing:      CALLPROC    124 NNN      SETUP           124 NNN
                CONNECT     124 NNN      CONN_ACK        124 NNN

Incoming:      SETUP          0  NNN
                CONN_ACK    0  NNN      CONNECT         0  NNN

Common:        REL_COM         0  NNN      RELEASE         0  NNN
                RELEASE     0  NNN      REL_COM         0  NNN

(z)-zero counts (r)-refresh (c)-translate cause code (t)-toggle (q)-quit
cause 0 :Invalid Cause Value

Currently Active Calls: 124
Total Calls:          124      Last      Last
                Received      Cause         Transmitted      Cause
Outgoing:      CALLPROC    24 NNN      SETUP           124 NNN
                CONNECT     124 NNN      CONN_ACK        124 NNN

Incoming:      SETUP          0  NNN
                CONN_ACK    0  NNN      CONNECT         0  NNN

Common:        REL_COM         0  NNN      RELEASE         0  NNN
                RELEASE     0  NNN      REL_COM         0  NNN

(z)-zero counts (r)-refresh (c)-translate cause code (t)-toggle (q)-quit
cause 0 :Invalid Cause Valueq
```

In the following example, the counts on the terminating side are displayed:

```

nodename.1.28.VISM8.a > dspsvcnts

Currently Active Calls: 155
Total Calls:          155          Last
                Received      Cause      Transmitted      Cause
Outgoing:          CALLPROC    0    NNN          SETUP      0    NNN
                  CONNECT      0    NNN          CONN_ACK    0    NNN

Incoming:          SETUP        155   NNN
                  CONN_ACK    155   NNN          CONNECT    155   NNN

Common:            REL_COM      0    NNN          RELEASE    0    NNN
                  RELEASE     0    NNN          REL_COM    0    NNN

(z)-zero counts (r)-refresh (c)-translate cause code (t)-toggle (q)-quit
cause 0 :Invalid Cause Value

Currently Active Calls: 155
Total Calls:          155          Last
                Received      Cause      Transmitted      Cause
Outgoing:          CALLPROC    0    NNN          SETUP      0    NNN
                  CONNECT      0    NNN          CONN_ACK    0    NNN

Incoming:          SETUP        155   NNN
                  CONN_ACK    155   NNN          CONNECT    155   NNN

Common:            REL_COM      0    NNN          RELEASE    0    NNN
                  RELEASE     0    NNN          REL_COM    0    NNN

(z)-zero counts (r)-refresh (c)-translate cause code (t)-toggle (q)-quit

```

### Related Commands

Command	Description
<b>dspsvcallstruct</b>	Displays the SVC call table information.
<b>dspsvcalltable</b>	Displays the SVC call table.
<b>dspsvcalltimers</b>	Displays the SVC call timers.
<b>dspsvccause</b>	Prints the text description for the cause.
<b>dspsvicons</b>	Displays the active SVC connections.
<b>dspsvcgw</b>	Displays the details of the gateway parameters.

# dpsvccons

To display the active switched virtual connections (SVCs) on the VISM card, use the **dpsvccons** command.

## dpsvccons

**Syntax Description** This command has no arguments or keywords.

**Command Modes** AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures when using this command.

**Examples** In the following example, the active SVCs are displayed:

```
nodename.1.28.VISM8.a > dpsvccons
```

```
Current SVCs: 186      Current Active SVCs: 186      Max SVCs: 300
SVC   Channel   Current           MGCP           Destination
Call# Number   State            Conn ID       NSAP
-----
  1    510      SVC_CALL_U10_ACTIVE      1  4700918100000000164444b94000001075bff15
  2    509      SVC_CALL_U10_ACTIVE      2  4700918100000000164444b94000001075bff15
  3    508      SVC_CALL_U10_ACTIVE      3  4700918100000000164444b94000001075bff15
  4    507      SVC_CALL_U10_ACTIVE      4  4700918100000000164444b94000001075bff15
  5    506      SVC_CALL_U10_ACTIVE      5  4700918100000000164444b94000001075bff15
  6    505      SVC_CALL_U10_ACTIVE      6  4700918100000000164444b94000001075bff15
  7    504      SVC_CALL_U10_ACTIVE      7  4700918100000000164444b94000001075bff15
  8    503      SVC_CALL_U10_ACTIVE      8  4700918100000000164444b94000001075bff15
  9    502      SVC_CALL_U10_ACTIVE      9  4700918100000000164444b94000001075bff15
 10    501      SVC_CALL_U10_ACTIVE     10  4700918100000000164444b94000001075bff15
 11    500      SVC_CALL_U10_ACTIVE     11  4700918100000000164444b94000001075bff15
 12    499      SVC_CALL_U10_ACTIVE     12  4700918100000000164444b94000001075bff15
 13    498      SVC_CALL_U10_ACTIVE     13  4700918100000000164444b94000001075bff15
 14    497      SVC_CALL_U10_ACTIVE     14  4700918100000000164444b94000001075bff15
 15    496      SVC_CALL_U10_ACTIVE     15  4700918100000000164444b94000001075bff15
 16    495      SVC_CALL_U10_ACTIVE     16  4700918100000000164444b94000001075bff15
 17    494      SVC_CALL_U10_ACTIVE     17  4700918100000000164444b94000001075bff15
 18    493      SVC_CALL_U10_ACTIVE     18  4700918100000000164444b94000001075bff15
```

```
(m)-more    (q)-quit
```

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>dspsvccallstruct</b>	Displays the SVC call table information.
<b>dspsvccalltable</b>	Displays the SVC call table.
<b>dspsvccalltimers</b>	Displays the SVC call timers.
<b>dspsvccause</b>	Prints the text description for the cause.
<b>dspsvccnts</b>	Displays the SVC SAPI message processing counts.
<b>dspsvcgw</b>	Displays the details of the gateway parameters.

# dspsvcgw

To display the switched virtual circuit (SVC) gateway parameters, use the **dspsvcgw** command.

**dspsvcgw**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures when using this command.

**Examples** In the following example, the gateway parameters are displayed:

```
nodename.1.28.VISM8.a > dspsvcgw

current state: SVC_GW_ACTIVE
previous state:SVC_GW_RESTART_PENDING
current event: SVC_GW_INVALID_EVENT
oper state:SVC_GW_OPER_IS
AESA:47009181000000000164444b9400000107f3ff00
AESA type:
timer type:SVC_INVALID_TIMER
gw timer:1818
SAPI client id:6
gw SAPI handle:0

nodename.1.28.VISM8.a >
```

## Related Commands

Command	Description
<b>dspsvccallstruct</b>	Displays the SVC call table information.
<b>dspsvccalltable</b>	Displays the SVC call table.
<b>dspsvccalltimers</b>	Displays the SVC call timers.
<b>dspsvccause</b>	Prints the text description for a cause.
<b>dspsvccnts</b>	Displays the SVC SAPI message processing counts.
<b>dspsvccons</b>	Displays the active SVCs.



# dspsvcqosparam

To display the ATM quality of service (QoS) parameters, use the **dspsvcqosparam** command.

## **dspsvcqosparam**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures when using this command.

**Examples** In the following example, the ATM QoS parameters for the current VISM card are displayed:

```
nodename.1.28.VISM8.a > dspsvcqosparam

Voice SVC - default Atm Qos parameters
End-to-End Cell Delay Variation = 20000 micro-sec
Maximum Cell Transfer Delay     = 150000 micro-sec
Maximum Cell Loss Ratio         = 8

nodename.1.28.VISM8.a >
```

## **Related Commands**

<b>Command</b>	<b>Description</b>
<b>dspsvcqosparam</b>	Configures ATM QoS parameters.

# dspvctrfscalingfactor

To display the switched virtual circuit (SVC) traffic scaling factor for voice, use the **dspvctrfscalingfactor** command.

## **dspvctrfscalingfactor**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** switched AAL2 SVC

**Usage Guidelines** Follow standard CLI procedures when using this command.

**Examples** In the following example, the SVC traffic scaling factor for the current VISM card is displayed:

```
nodename.1.28.VISM8.a > dspvctrfscalingfactor
SVC Traffic Scaling Factor: 50
nodename.1.28.VISM8.a >
```

## **Related Commands**

<b>Command</b>	<b>Description</b>
<b>cnfvctrfscalingfactor</b>	Configures the traffic scaling factor for voice service.

# dspt38fxlco

To display the fax handling instructions configured for a specified line, use the **dspt38fxlco** command.

**dspt38fxlco** <line\_number>

<b>Syntax Description</b>	<i>line_number</i> Number of the DS1 line for which you want to display T.38 fax handling instructions. Range is 1–8.
---------------------------	---

**Command Modes** VoIP trunking/VoIP switching, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the fax handling instructions configured for line 3 are displayed:

```
nodename.1.28.VISM8.a > dspt38fxlco 3

line_number: 3
FX_LCO: Gateway controlled preferred then pass-through

nodename.1.28.VISM8.a >
```

Related Commands	Command	Description
	<b>cnfcodectmpl</b>	Assigns a codec template to an entire VISM card.
	<b>cnft38fxlco</b>	Configures the fax-handling instructions for a specified line.
	<b>cnft38nsetimeout</b>	Configures a specified line with a length of time in which to wait for a remote acknowledgment of the offer to switch to fax transfer mode.
	<b>cnft38params</b>	Configures the T.38 fax transfer parameters for a specified line.
	<b>dspscodectmpls</b>	Displays all entries in the codec template table.
	<b>dspt38fxlcos</b>	Displays the fax-handling instructions for all lines on the current VISM card.
	<b>dspt38nsetimeout</b>	Displays a specified configured line that has a length of time in which to wait for a remote acknowledgment of the offer to switch to fax transfer mode.
	<b>dspt38nsetimeouts</b>	Displays all configured lines that have a length of time in which to wait for a remote acknowledgment of the offer to switch to fax transfer mode.
	<b>dspt38params</b>	Displays the T.38 fax transfer parameters for a specified line.

# dspt38fxlcos

To display the fax handling instructions for all lines on the current VISM card, use the **dspt38fxlcos** command.

## dspt38fxlcos

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP trunking/VoIP switching, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the fax handling instructions for all lines on the current VISM card are displayed:

```
nodename.1.28.VISM8.a > dspt38fxlcos

Line_Number  Fx LCO
-----
1            Gateway controlled preferred then pass-through
2            Gateway controlled preferred then pass-through
.
.
.
8            Gateway controlled preferred then pass-through

nodename.1.28.VISM8.a >
```

Related Commands	Command	Description
	<b>cnfcodectmpl</b>	Assigns a codec template to an entire VISM card.
	<b>cnft38fxlco</b>	Configures the fax-handling instructions for a specified line.
	<b>cnft38nsetimeout</b>	Configures a specified line with a length of time in which to wait for a remote acknowledgment of the offer to switch to fax transfer mode.
	<b>cnft38params</b>	Configures the T.38 fax transfer parameters for a specified line.
	<b>dspscodectmpls</b>	Displays all entries in the codec template table.
	<b>dspt38fxlco</b>	Displays the fax-handling instructions configured for a specified line.
	<b>dspt38nsetimeout</b>	Displays a specified configured line that has a length of time in which to wait for a remote acknowledgment of the offer to switch to fax transfer mode.
	<b>dspt38nsetimeouts</b>	Displays all configured lines that have a length of time in which to wait for a remote acknowledgment of the offer to switch to fax transfer mode.
	<b>dspt38params</b>	Displays the T.38 fax transfer parameters for a specified line.

# dspt38nsetimeout

To display a specified length of time for a configured line to wait for a remote acknowledgment of an offer to switch to fax transfer mode, use the **dspt38nsetimeout** command.

**dspt38nsetimeout** *<line\_number>*

## Syntax Description

*line\_number* Line number of the channel. Range is 1–8.

## Command Modes

VoIP trunking/VoIP switching, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the length of time in which to wait for a remote acknowledgment of the offer to switch to fax transfer mode is displayed:

```
nodename.1.28.VISM8.a > dspt38nsetimeout 5
```

```
line_number: 5
FX_Nse_Timer: 1000 ms
```

```
nodename.1.28.VISM8.a >
```

## Related Commands

Command	Description
<b>cnfcoctmpl</b>	Assigns a codec template to an entire VISM card.
<b>cnft38fxlco</b>	Configures the fax-handling instructions for a specified line.
<b>cnft38nsetimeout</b>	Configures a specified line with a length of time in which to wait for a remote acknowledgment of the offer to switch to fax transfer mode.
<b>cnft38params</b>	Configures the T.38 fax transfer parameters for a specified line.
<b>dspscoctmpls</b>	Displays all entries in the codec template table.
<b>dspt38fxlco</b>	Displays the fax-handling instructions configured for a specified line.
<b>dspt38fxlcos</b>	Displays the fax-handling instructions for all lines on the current VISM card.
<b>dspt38nsetimeouts</b>	Displays all configured lines that have a length of time in which to wait for a remote acknowledgment of the offer to switch to fax transfer mode.
<b>dspt38params</b>	Displays the T.38 fax transfer parameters for a specified line.

# dspt38nsetimeouts

To display all lines that are configured with the time that the VISM card waits for a remote acknowledgment before switching to fax transfer mode, use the **dspt38nsetimeouts** command.

## dspt38nsetimeouts

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP trunking/VoIP switching, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the length of time that the VISM card waits for a remote acknowledgment for switching to fax transfer mode for all lines on the current card is displayed:

```
nodename.1.28.VISM8.a > dspt38nsetimeouts
```

```
Line_Number  NSE Timeout (ms)
-----
1             1000
2             1000
.
.
.
8             1000
```

```
nodename.1.28.VISM8.a >
```

Related Commands	Command	Description
	<b>cnfcodectmpl</b>	Assigns a codec template to an entire VISM card.
	<b>cnft38fxlco</b>	Configures the fax-handling instructions for a specified line.
	<b>cnft38nsetimeout</b>	Configures a specified line with a length of time in which to wait for a remote acknowledgment of the offer to switch to fax transfer mode.
	<b>cnft38params</b>	Configures the T.38 fax transfer parameters for a specified line.
	<b>dspscodectmpls</b>	Displays all entries in the codec template table.
	<b>dspt38fxlco</b>	Displays the fax-handling instructions configured for a specified line.
	<b>dspt38fxlcoss</b>	Displays the fax-handling instructions for all lines on the current VISM card.
	<b>dspt38nsetimeout</b>	Displays a specified configured line that has a length of time in which to wait for a remote acknowledgment of the offer to switch to fax transfer mode.
	<b>dspt38params</b>	Displays the T.38 fax transfer parameters for a specified line.

# dspt38params

To display the T.38 fax transfer parameters for a specified line, use the **dspt38params** command.

**dspt38params** <line\_number>

<b>Syntax Description</b>	<i>line_number</i> Line number of the DS1 line for which you want to display T.38 fax transfer parameters. Range is 1–8.
---------------------------	--

<b>Command Modes</b>	VoIP trunking/VoIP switching, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking
----------------------	--

<b>Usage Guidelines</b>	Follow standard CLI procedures for this command.
-------------------------	--

**Examples** In the following example, the T.38 fax transfer parameters for line 7 are displayed:

```
nodename.1.28.VISM8.a > dspt38params 7
```

```
line_number:          7
Max_Xmit_Rate:       fx14400bps
Info_Field_Size:     48
Data_Pkt_size:       40 ms
LS_Data_Redundancy:  5
HS_Data_Redundancy:  0
TCF_Method:          localTCF
Error_Correction:    enabled
NSF_Override:        enabled
NSF_Country_Code:    181
NSF_Vendor_Code:     18
```

```
nodename.1.28.VISM8.a >
```

Related Commands	Command	Description
	<b>cnfcodectmpl</b>	Assigns a codec template to an entire VISM card.
	<b>cnft38fxlco</b>	Configures the fax-handling instructions for a specified line.
	<b>cnft38nsetimeout</b>	Configures a specified line with a length of time in which to wait for a remote acknowledgment of the offer to switch to fax transfer mode.
	<b>cnft38params</b>	Configures the T.38 fax transfer parameters for a specified line.
	<b>dspscodectmpls</b>	Displays all entries in the codec template table.
	<b>dspt38fxlco</b>	Displays the fax-handling instructions configured for a specified line.
	<b>dspt38fxlcos</b>	Displays the fax-handling instructions for all lines on the current VISM card.
	<b>dspt38nsetimeout</b>	Displays a specified configured line that has a length of time in which to wait for a remote acknowledgment of the offer to switch to fax transfer mode.
	<b>dspt38nsetimeouts</b>	Displays all configured lines that have a length of time in which to wait for a remote acknowledgment of the offer to switch to fax transfer mode.

# dsptaskinfo

To display data about currently operating tasks on the VISM card, use the **dsptaskinfo** command.

## dsptaskinfo

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the data of the currently operating tasks is displayed:

```
nodename.1.28.VISM8.a > dsptaskinfo

taskName      msgReceived  msgSent      msgSent      lastSent  lastSt lastSt
              Failed      Failed      FailedTask  Failed  Failed
              MsgTyp  Errno
-----
nmimRouter    0             60            0             0         0x0
scm           1240          584           0             0         0x0
pSNMP         0             1             0             0         0x0
cmm           277           258           0             0         0x0
conn_mgr_t    1109790      29            0             0         0x0
tFiled        68           69            0             0         0x0
tSmd          237           313           0             0         0x0
logd          304           1             0             0         0x0
alarm_task    0             29            0             0         0x0
oam           5             1109778       0             0         0x0
bertd         0             1             0             0         0x0

nodename.1.28.VISM8.a >
```

**Related Commands** There are no related commands.



# dsptonebuiltinplans

To display all built-in (preconfigured) tone plans on the current VISM card, use the **dsptonebuiltinplans** command.

## dsptonebuiltinplans

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, all preconfigured tone plans for the current VISM card are displayed:

```
nodename.1.28.VISM8.a > dsptonebuiltinplans
```

Status	Tone Plan Region	Version	Tone Plan File Name
configure	ITU1	1	BUILTIN
configure	NorthAmerica	1	BUILTIN
configure	Argentina	1	BUILTIN
configure	Australia	1	BUILTIN
configure	Austria	1	BUILTIN
configure	Belgium	1	BUILTIN
configure	Brazil	1	BUILTIN
configure	Canada	1	BUILTIN
configure	China	1	BUILTIN
configure	Cyprus	1	BUILTIN
configure	CzechRepublic	1	BUILTIN
configure	Denmark	1	BUILTIN
configure	Finland	1	BUILTIN
configure	France	1	BUILTIN
configure	Germany	1	BUILTIN
configure	Greece	1	BUILTIN
configure	HongKong	1	BUILTIN
configure	Hungary	1	BUILTIN
configure	Iceland	1	BUILTIN
configure	India	1	BUILTIN
configure	Indonesia	1	BUILTIN
configure	Ireland	1	BUILTIN
configure	Israel	1	BUILTIN
configure	Italy	1	BUILTIN
configure	Japan	1	BUILTIN
configure	KoreaRepublic	1	BUILTIN
configure	Luxembourg	1	BUILTIN
configure	Malaysia	1	BUILTIN
configure	Mexico	1	BUILTIN
configure	Netherlands	1	BUILTIN
configure	NewZealand	1	BUILTIN
configure	Norway	1	BUILTIN
configure	Philippines	1	BUILTIN

configure	Poland	1	BUILTIN
configure	Portugal	1	BUILTIN
configure	Russia	1	BUILTIN
configure	Singapore	1	BUILTIN
configure	Slovakia	1	BUILTIN
configure	Slovenia	1	BUILTIN
configure	SouthAfrica	1	BUILTIN
configure	Spain	1	BUILTIN
configure	Sweden	1	BUILTIN
configure	Switzerland	1	BUILTIN
configure	Taiwan	1	BUILTIN
configure	Thailand	1	BUILTIN
configure	Turkey	1	BUILTIN
configure	UnitedKingdom	1	BUILTIN
configure	UnitedStates	1	BUILTIN

Number of Built-In Tone Plans = 48.

nodename.1.28.VISM8.a >

### Related Commands

Command	Description
<b>addtoneplan</b>	Adds a tone plan to the current VISM card.
<b>cnflnringback</b>	Configures the ring-back tone method for a specified line on the current VISM card.
<b>cnflntoneplan</b>	Assigns a tone plan to a specified VISM card line.
<b>cnflntonetimeout</b>	Modifies the timeout periods of all call progress tones supported by VISM on a specified VISM card line.
<b>dellntoneplan</b>	Deletes the tone plan configuration of a specified VISM card line.
<b>deltoneplan</b>	Deletes a previously added tone plan from the current VISM card.
<b>dsplnringback</b>	Displays the ring-back tone type for a specified line on the current VISM card.
<b>dsplntoneplan</b>	Displays the tone plan configuration of a specified VISM card line.
<b>dsplntonetimeout</b>	Displays the configured timeout periods for all call progress tones of a specified VISM card line.
<b>dsptoneplan</b>	Displays the tone configuration of a specified tone plan—either a preconfigured (built-in) or user-added tone plan.
<b>dsptoneplans</b>	Displays the tone configuration of all tone plans—either preconfigured (built-in) or user-added tone plans.
<b>dsptoneprovplans</b>	Displays all user-added (provisional) tone plans.
<b>dsptoneregionplans</b>	Displays a list of all tone plans for the countries and regions whose name partially or completely matches the name you supply.

# dsptoneplan

To display the tone configuration of a specified tone plan—either a built-in (preconfigured) or a provisional tone plan—use the **dsptoneplan** command.

```
dsptoneplan <tone_plan_region> <tone_plan_version>
```

## Syntax Description

<i>tone_plan_region</i>	Country or region for which you want to display the tone configuration. Range is 1–64 alphanumeric characters and can contain underscores ( _ ). This value is case sensitive.
<i>tone_plan_version</i>	Version number of the country or region for which you want to display the tone configuration. Range is 1–65535.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

This command displays amplitudes as a number which corresponds to a dBm value according to the following formula:

$$\text{dBm} = 20 * \log_{10} (\text{peek-to-peek}/46348)$$

This formula equals the amplitude of one frequency. If both frequencies are configured for the same level, add 6 dBm to the results of the formula to obtain the total amplitude.

## Examples

In the following example, the tone configuration for singapore tone plan region, version number 11, is displayed:

```
nodename.1.28.VISM8.a > dsptoneplan UnitedStates 1
```

```
Region Name           : UnitedStates
Version               : 1
Description            : Tone Plan for United States of America (US)
File name             : BUILTIN
```

```
DTMF Amplitude (Low Group) : 16384
DTMF Amplitude (High Group) : 16384
MF R1 Amplitude (Low Group) : 16384
MF R1 Amplitude (High Group) : 16384
```

Name	Defined	No. Freq.	Amp1	Amp2	Timeout (ms)
dial_tone	YES	2	4000	4000	0
stutter_tone	YES	2	4000	4000	0
ring_back_tone	YES	2	4000	4000	0
busy_tone	YES	2	4000	4000	0
fast_busy_tone	YES	2	4000	4000	0
alert_tone	YES	2	4000	4000	0
intercept_tone	YES	2	4000	4000	0
confirmation_tone	YES	2	4000	4000	0
answer_tone	YES	1	4000	0	0
call_waiting_tone	YES	1	4000	0	0

recall_dial_tone	YES	2	4000	4000	0
berge_in_tone	YES	1	4000	0	0
ppc_insuffice_tone	YES	1	4000	0	0
ppc_warn1_tone	YES	1	4000	0	0
ppc_warn2_tone	YES	1	4000	0	0
ppc_warn3_tone	YES	1	4000	0	0
ppc_disc_tone	YES	1	4000	0	0
ppc_redirect_tone	YES	1	4000	0	0
all_tone_off	YES	1	0	0	0
pip_tone	YES	1	4000	0	0
warning_tone	YES	1	4000	0	0
denial_tone	YES	2	4000	4000	0
custom1_tone	NO	-	-	-	-
custom2_tone	NO	-	-	-	-
custom3_tone	NO	-	-	-	-
custom4_tone	NO	-	-	-	-
custom5_tone	NO	-	-	-	-
custom6_tone	NO	-	-	-	-
custom7_tone	NO	-	-	-	-
custom8_tone	NO	-	-	-	-
custom9_tone	NO	-	-	-	-
custom10_tone	NO	-	-	-	-
custom11_tone	NO	-	-	-	-
custom12_tone	NO	-	-	-	-
custom13_tone	NO	-	-	-	-
custom14_tone	NO	-	-	-	-
custom15_tone	NO	-	-	-	-
custom16_tone	NO	-	-	-	-
custom17_tone	NO	-	-	-	-
custom18_tone	NO	-	-	-	-
custom19_tone	NO	-	-	-	-
custom20_tone	NO	-	-	-	-
custom21_tone	NO	-	-	-	-
custom22_tone	NO	-	-	-	-
custom23_tone	NO	-	-	-	-
custom24_tone	NO	-	-	-	-
custom25_tone	NO	-	-	-	-
custom26_tone	NO	-	-	-	-
custom27_tone	NO	-	-	-	-
custom28_tone	NO	-	-	-	-

Name	Cadence 1					Cadence 2				
	Freq1 Hz	Freq2 Hz	OnTm1 ms	OffTm2 ms	Repeat count1	Freq1 Hz	Freq2 Hz	OnTm2 ms	OffTm2 ms	Repeat count2
dial_tone	350	440	65535	0	65535	0	0	0	0	0
stutter_tone	350	440	100	100	1	0	0	0	0	0
ring_back_tone	440	480	2000	4000	1	0	0	0	0	0
busy_tone	480	620	500	500	1	0	0	0	0	0
fast_busy_tone	480	620	250	250	1	0	0	0	0	0
alert_tone	1400	2600	100	100	1	0	0	0	0	0
intercept_tone	440	0	250	0	1	620	0	250	0	1
confirmation_tone	350	440	100	100	1	0	0	0	0	0
answer_tone	440	0	100	100	1	0	0	0	0	0
call_waiting_tone	440	0	300	65535	1	0	0	65535	0	65535
recall_dial_tone	350	440	100	100	3	350	440	65535	0	65535
berge_in_tone	1004	0	65535	0	65535	0	0	0	0	0
ppc_insuffice_tone	480	0	100	100	3	0	0	65535	0	65535
ppc_warn1_tone	480	0	200	65535	1	0	0	65535	0	65535
ppc_warn2_tone	480	0	100	200	2	0	0	65535	0	65535
ppc_warn3_tone	480	0	100	200	3	0	0	65535	0	65535

```

ppc_disc_tone      480      0      400  65535      1      0      0  65535      0  65535
ppc_redirect_tone 480      0      200    200      2      0      0  65535      0  65535
all_tone_off       0      0      0      0      0      0      0      0      0      0
pip_tone           480      0      100    100      4      0      0  65535      0  65535
warning_tone       480      0      100     0      1      0      0  65535      0  65535
denial_tone        480     620   2000     0      1      0      0  65535      0  65535
custom1_tone       -      -      -      -      -      -      -      -      -      -
custom2_tone       -      -      -      -      -      -      -      -      -      -
custom3_tone       -      -      -      -      -      -      -      -      -      -
custom4_tone       -      -      -      -      -      -      -      -      -      -
custom5_tone       -      -      -      -      -      -      -      -      -      -
custom6_tone       -      -      -      -      -      -      -      -      -      -
custom7_tone       -      -      -      -      -      -      -      -      -      -
custom8_tone       -      -      -      -      -      -      -      -      -      -
custom9_tone       -      -      -      -      -      -      -      -      -      -
custom10_tone      -      -      -      -      -      -      -      -      -      -
custom11_tone      -      -      -      -      -      -      -      -      -      -
custom12_tone      -      -      -      -      -      -      -      -      -      -
custom13_tone      -      -      -      -      -      -      -      -      -      -
custom14_tone      -      -      -      -      -      -      -      -      -      -
custom15_tone      -      -      -      -      -      -      -      -      -      -
custom16_tone      -      -      -      -      -      -      -      -      -      -
custom17_tone      -      -      -      -      -      -      -      -      -      -
custom18_tone      -      -      -      -      -      -      -      -      -      -
custom19_tone      -      -      -      -      -      -      -      -      -      -
custom20_tone      -      -      -      -      -      -      -      -      -      -
custom21_tone      -      -      -      -      -      -      -      -      -      -
custom22_tone      -      -      -      -      -      -      -      -      -      -
custom23_tone      -      -      -      -      -      -      -      -      -      -
custom24_tone      -      -      -      -      -      -      -      -      -      -
custom25_tone      -      -      -      -      -      -      -      -      -      -
custom26_tone      -      -      -      -      -      -      -      -      -      -
custom27_tone      -      -      -      -      -      -      -      -      -      -
custom28_tone      -      -      -      -      -      -      -      -      -      -

```

```
nodename.1.28.VISM8.a >
```

### Related Commands

Command	Description
<b>addtoneplan</b>	Adds a tone plan to the current VISM card.
<b>cnflnringback</b>	Configures the ring-back tone method for a specified line on the current VISM card.
<b>cnflntoneplan</b>	Assigns a tone plan to a specified VISM card line.
<b>cnflntonetimeout</b>	Modifies the timeout periods of all call progress tones supported by VISM on a specified VISM card line.
<b>dellntoneplan</b>	Deletes the tone plan configuration of a specified VISM card line.
<b>deltoneplan</b>	Deletes a previously added tone plan from the current VISM card.
<b>dsplnringback</b>	Displays the ring-back tone type for a specified line on the current VISM card.
<b>dsplntoneplan</b>	Displays the tone plan configuration of a specified VISM card line.
<b>dsplntonetimeout</b>	Displays the configured timeout periods for all call progress tones of a specified VISM card line.
<b>dsptonebuiltinplans</b>	Displays all preconfigured (built-in) tone plans on the current VISM card.
<b>dsptoneplans</b>	Displays the tone configuration of all tone plans—either preconfigured (built-in) or user-added tone plans.

Command	Description
<b>dsptoneprovplans</b>	Displays all user-added (provisional) tone plans.
<b>dsptoneregionplans</b>	Displays a list of all tone plans for the countries and regions whose name partially or completely matches the name you supply.

# dsptoneplans

To display the status of all tone plans—either built-in (preconfigured) or provisional tone plans—use the **dsptoneplans** command.

## dsptoneplans

### Syntax Description

This command has no arguments or keywords.

### Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

### Usage Guidelines

This command displays the following status of tone plans:

- **Configure**—For a built-in (preconfigured) tone plan, and a provisional tone plan that is downloaded properly and added to the system
- **Lost File**—For a provisional tone plan that is not downloaded properly or for a tone plan that is not the proper one
- **Reloading**—For a provisional tone plan that is currently downloading

### Examples

In the following example, the status for tone plans is displayed:

```
nodename.1.28.VISM8.a > dsptoneplans

Status      Tone Plan Region  Version  Tone Plan File Name
-----
configure   singapore         11       sing_3
configure   ITU                1        BUILTIN
.
nodename.1.28.VISM8.a >
.
```

### Related Commands

Command	Description
<b>addtoneplan</b>	Adds a tone plan to the current VISM card.
<b>cnflnringback</b>	Configures the ring-back tone method for a specified line on the current VISM card.
<b>cnflntoneplan</b>	Assigns a tone plan to a specified VISM card line.
<b>cnflntonetimeout</b>	Modifies the timeout periods of all call progress tones supported by VISM on a specified VISM card line.
<b>dellntoneplan</b>	Deletes the tone plan configuration of a specified VISM card line.
<b>deltoneplan</b>	Deletes a previously added tone plan from the current VISM card.
<b>dsplnringback</b>	Displays the ring-back tone type for a specified line on the current VISM card.
<b>dsplntoneplan</b>	Displays the tone plan configuration of a specified VISM card line.

Command	Description
<b>dsplntonetimeout</b>	Displays the configured timeout periods for all call progress tones of a specified VISM card line.
<b>dsptonebuiltinplans</b>	Displays all preconfigured (built-in) tone plans on the current VISM card.
<b>dsptoneplan</b>	Displays the tone configuration of a specified tone plan—either a preconfigured (built-in) or user-added tone plan.
<b>dsptoneprovplans</b>	Displays all user-added (provisional) tone plans.
<b>dsptoneregionplans</b>	Displays a list of all tone plans for each country or region whose name partially or completely matches the name you supply.



# dsptoneprovplans

To display all provisional tone plans on the VISM card, use the **dsptoneprovplans** command.

## dsptoneprovplans

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** This command displays the following status of tone plans:

- Configure—Downloaded properly and added to the system
- Lost File—Not downloaded properly or for a tone plan that is not the proper one
- Reloading—Currently downloading

**Examples** In the following example, all provisional tone plans on the VISM card are displayed:

```
nodename.1.28.VISM8.a > dsptoneprovplans

Status      Tone Plan Region  Version  Tone Plan File Name
-----
configure   singapore         11      sing_3
.
.
.

Number of Provisionable Tone Plans = 1.
Number of un-configured Tone Plans = 31.

nodename.1.28.VISM8.a >
```

Related Commands	Command	Description
	<b>addtoneplan</b>	Adds a tone plan to the current VISM card.
	<b>cnflnringback</b>	Configures the ring-back tone method for a specified line on the current VISM card.
	<b>cnflntoneplan</b>	Assigns a tone plan to a specified VISM card line.
	<b>cnflntonetimout</b>	Modifies the timeout periods of all call progress tones supported by VISM on a specified VISM card line.
	<b>dellntoneplan</b>	Deletes the tone plan configuration of a specified VISM card line.
	<b>deltoneplan</b>	Deletes a previously added tone plan from the current VISM card.
	<b>dsplnringback</b>	Displays the ring-back tone type for a specified line on the current VISM card.
	<b>dsplntoneplan</b>	Displays the tone plan configuration of a specified VISM card line.

<b>Command</b>	<b>Description</b>
<b>dsplntonetimeout</b>	Displays the configured timeout periods for all call progress tones of a specified VISM card line.
<b>dsptonebuiltinplans</b>	Displays all preconfigured (built-in) tone plans on the current VISM card.
<b>dsptoneplan</b>	Displays the tone configuration of a specified tone plan—either a preconfigured (built-in) or user-added tone plan.
<b>dsptoneplans</b>	Displays the tone configuration of all tone plans—either preconfigured (built-in) or user-added tone plans.
<b>dsptoneregionplans</b>	Displays a list of all tone plans for the countries and regions whose name partially or completely matches the name you supply.

# dsptoneregionplans

To display a list of all tone plans for each country or region whose name partially or completely matches the name you supply, use the **dsptoneregionplans** command.

**dsptoneregionplans** <tone\_plan\_region>

## Syntax Description

*tone\_plan\_region* Tone plan country or region for which you want to display associated tone plans. Range is 1–64 alphanumeric characters and can contain underscores ( \_ ). This value is case sensitive and must be enclosed in quotation marks.

**Note** You must enter at least a partial *tone\_plan\_region* value.

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, all tone plans associated with the partial tone plan region Uni are displayed:

```
nodename.1.28.VISM8.a > dsptoneregionplans "Uni"

Status      Tone Plan Region  Version  Tone Plan File Name
-----
configure   UnitedKingdom     11       BUILTIN
configure   UnitedStates      11       BUILTIN

Number of Matching Tone Plans = 2.

nodename.1.28.VISM8.a >
```

## Related Commands

Command	Description
<b>addtoneplan</b>	Adds a tone plan to the current VISM card.
<b>cnflnringback</b>	Configures the ring-back tone method for a specified line on the current VISM card.
<b>cnflntoneplan</b>	Assigns a tone plan to a specified VISM card line.
<b>cnflntonetimout</b>	Modifies the timeout periods of all call progress tones supported by VISM on a specified VISM card line.
<b>dellntoneplan</b>	Deletes the tone plan configuration of a specified VISM card line.
<b>deltoneplan</b>	Deletes a previously added tone plan from the current VISM card.
<b>dsplnringback</b>	Displays the ring-back tone type for a specified line on the current VISM card.
<b>dsplntoneplan</b>	Displays the tone plan configuration of a specified VISM card line.
<b>dsplntonetimout</b>	Displays the configured timeout periods for all call progress tones of a specified VISM card line.
<b>dsptonebuiltinplans</b>	Displays all preconfigured (built-in) tone plans on the current VISM card.

<b>Command</b>	<b>Description</b>
<b>dsptoneplan</b>	Displays the tone configuration of a specified tone plan—either a preconfigured (built-in) or user-added tone plan.
<b>dsptoneplans</b>	Displays the tone configuration of all tone plans—either preconfigured (built-in) or user-added tone plans.
<b>dsptoneprovplans</b>	Displays all user-added (provisional) tone plans.

# dsptranscotmode

To display whether or not the reverse transponder continuity test (COT) is enabled, use the **dsptranscotmode** command.

## **dsptranscotmode**

---

**Syntax Description**

This command has no arguments or keywords.

---

**Command Modes**

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

---

**Usage Guidelines**

Follow standard CLI procedures for this command.  
The 1780 Hz tone does not reverse the COT mode.

---

**Examples**

In the following example, the reverse transponder COT status is displayed:

```
nodename.1.28.VISM8.a > dsptranscotmode

REVERSE TRANSPONDER COT : disable

nodename.1.28.VISM8.a >
```

---

**Related Commands**

Command	Description
<b>cnftranscotmode</b>	Configures the COT tone that VISM applies toward the TDM side.

# dsptapfilter

To display the current filter configurations for one trap or a set of traps on the VISM-PR card, use the **dsptapfilter** command.

```
dsptapfilter <trapNumber> [<trapNumber> <trapNumber> <trapNumber> <trapNumber>]
```

## Syntax Description

<i>trapNumber</i>	Trap number. Range is 50650–50799.
<i>[trapNumber]</i>	(Optional) Use the optional arguments to display the filter configurations for up to five traps.

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, Switched AAL2 SVC, Switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

This command is applicable only to VISM-PR cards.

## Examples

In the following example, the filter configurations for the channel trap TRAP\_VISM\_CHAN\_ADDED, number 50755, are displayed:

```
nodename.1.28.VISM8.a > dsptapfilter 50755
```

```
Trap Filtering Feature: Enabled
```

```
TrapNumber      Filter Time Configured(minutes)  Filter Time Left(minutes)
=====
50755           15                               14
```

```
nodename.1.28.VISM8.a >
```

## Related Commands

Command	Description
<b>addtrapfilter</b>	Adds a trap to the filter list.
<b>cnftrapfilterfeature</b>	Enables or disables the trap filtering feature.
<b>cnftrapfiltertimer</b>	Configures the trap filter timer.
<b>delalltrapfilters</b>	Deletes all the traps in the filter list.
<b>deltrapfilter</b>	Deletes a trap from the filter list.
<b>dspalltrapfilters</b>	Displays all configured trap filters.
<b>dsptaphelp</b>	Displays all traps or traps per group.

# dsptraphelp

To display help for one group of traps or for all of the traps on the VISM-PR card, use the **dsptraphelp** command.

**dsptraphelp** <trapHelpOpt>

Syntax Description	trapHelpOpt	Trap group options:
		<ul style="list-style-type: none"> <li>• 1 = All</li> <li>• 2 = Card</li> <li>• 3 = Port</li> <li>• 4 = Channel/Line</li> <li>• 5 = Connection</li> <li>• 6 = CID</li> <li>• 7 = Endpoint</li> <li>• 8 = Media Gateway and Media Gateway Controller</li> <li>• 9 = HDLC</li> <li>• 10 = Tone Plan</li> <li>• 11 = CAC</li> <li>• 12 = CAS</li> <li>• 13 = RTP</li> <li>• 14 = LAPD</li> <li>• 15 = RSVP</li> <li>• 16 = Announcement</li> <li>• 17 = RUDP</li> <li>• 18 = XGCP</li> </ul>

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, Switched AAL2 SVC, Switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** This command can be used to help you obtain trap number information that you need to add trap filters. For the complete list of the traps and trap numbers for each group, see Appendix A, “VISM-PR Traps.” This command is applicable only to VISM-PR cards.

**Examples**

In the following example, the list of traps for the port group (2):

```
nodename.1.28.VISM8.a > dsptrophelp 2

TrapNumber      TrapDescription
=====
50680           TRAP_AVAIL_FREE_DS0_LOW
50681           TRAP_CPU_UTIL_EXCEEDED
50682           TRAP_MEM_UTIL_EXCEEDED
50687           TRAP_CALL_THROTTLE_THRESHOLD_90_PERCENT
50688           TRAP_CALL_THROTTLE_THRESHOLD_EXCEEDED
50689           TRAP_CALL_THROTTLE_THRESHOLD_90_PERCENT_CLEARED
50690           TRAP_CALL_THROTTLE_THRESHOLD_EXCEEDED_CLEARED
50691           TRAP_FILTER_ON
50692           TRAP_FILTER_OFF
50693           TRAP_FILTER_ADDED
50694           TRAP_FILTER_REMOVED
50695           TRAP_FILTER_MODIFIED
50700           TRAP_VISMIP_CHANGED
50743           TRAP_VISM_CODECTEMPLATE_CHG
50744           TRAP_VISM_MODE_CHG
50745           TRAP_VISM_SCALAR_CHANG
50746           TRAP_VISM_TABLE_CHANG
50760           TRAP_VISM_SUBCELL_MUXING_CHANG
50790           TRAP_VISM_FEATURE_CHG
```

**Related Commands**

Command	Description
<b>addtrapfilter</b>	Adds a trap to the filter list.
<b>cnftrapfilterfeature</b>	Enables or disables the trap filtering feature.
<b>cnftrapfiltertimer</b>	Configures the trap filter timer.
<b>delalltrapfilters</b>	Deletes all traps from the filter list.
<b>deltrapfilter</b>	Deletes a trap from the filter list.
<b>dspalltrapfilters</b>	Displays all configured trap filters.
<b>dsptrophelp</b>	Displays the current trap filter configurations.



# dspvbdcodec

To display the upspeed codec used for voiceband data (VBD) and the payload type, use the **dspvbdcodec** command.

## dspvbdcodec

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking and VoIP and AAL1 SVC.

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the upspeed codec used for VBD and the default payload type are displayed:

```
nodename.1.28.VISM8.a > dspvbdcodec
```

```
VBD UpSpeed Codec:   G.711u
Payload Type        : 256
```

```
nodename.1.28.VISM8.a >
```

## Related Commands

Command	Description
<b>addrtpcon</b>	Adds a static RTP VoIP trunking connection.
<b>cnfdynamicpayload</b>	Enables or disables the dynamic payload on the current VISM card.
<b>cnfrtpcon</b>	Modifies an existing static RTP VoIP trunking connection.
<b>cnfvbdcodec</b>	Configures the VBD upspeed codec.
<b>dsdynamicpayload</b>	Displays the card level configuration of dynamic payload on the current VISM card.
<b>dsprtpcon</b>	Displays the configuration data of a specific static RTP VoIP trunking connection.

# dspvbdmarconi

To display whether or not voiceband data (VBD) upspeed is configured upon detection of a dual tone, use the **dspvbdmarconi** command.

## **dspvbdmarconi**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, VBD upspeed is configured upon detection of a dual tone.

```
nodename.1.28.VISM8.a > dspvbdmarconi
Marconi dual tone flag : enable
nodename.1.28.VISM8.a >
```

## **Related Commands**

<b>Command</b>	<b>Description</b>
<b>cnfvbdmarconi</b>	Configures VBD upspeed upon detection of dual tone.

# dspvbdpol

To display the VISM card level voiceband data (VBD) policies for failure of fax/modem upspeed connection admission control (CAC) and fax/modem carrier loss for calls, use the **dspvbdpol** command.

## dspvbdpol

### Syntax Description

This command has no arguments or keywords.

### Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

### Usage Guidelines

Follow standard CLI procedures for this command.

### Examples

In the following example, the VISM card level VBD policies are displayed:

```
nodename.1.28.VISM8.a > dspvbdpol

Carrier Loss Policy:      upspeedCodec
CAC Rejection Policy:    maintain

nodename.1.28.VISM8.a >
```

### Related Commands

Command	Description
<b>cnfvbdpol</b>	Configures VISM card level VBD policies.

# dspvccis

To display the associated values for the LCN, VCCI, address type, and address you configured, use the **dspvccis** command.

## dspvccis

**Syntax Description** This command has no arguments or keywords.

**Command Modes** Switched AAL2 PVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the associated LCN, VCCI, and address you configured using the **cnfconvcci** command are displayed:

```
nodename.1.28.VISM8.a > dspvccis
      Addr
LCN  VCCI  Type   Addr
133  133   NSAP   737076634d47583100000000000000001000100
134  134   NSAP   737076634d47583100000000000000001000100
135  135   NSAP   737076634d47583100000000000000001000100
136  136   NSAP   737076634d47583100000000000000001000100

nodename.1.28.VISM8.a >
```

Related Commands	Command	Description
	<b>cnfconvcci</b>	Associates a VCCI and a remote address with an LCN.

# dspvismdn

To display the domain name of the current VISM card, use the **dspvismdn** command.

**dspvismdn**

---

**Syntax Description** This command has no arguments or keywords.

---

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

---

**Usage Guidelines** Follow standard CLI procedures for this command.

---

**Examples** In the following example, the domain name of the current VISM card is displayed:

```
nodename.1.28.VISM8.a > dspvismdn
DomainName:      cisco.com
nodename.1.28.VISM8.a >
```

---

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>cnfvismdn</b>	Configures the current VISM card domain name.

---

# dspvismip

To display the IP address and subnet mask for the current VISM card, use the **dspvismip** command.

## dspvismip

---

**Syntax Description** This command has no arguments or keywords.

---

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

---

**Usage Guidelines** Follow standard CLI procedures for this command.

---

**Examples** In the following example, the IP address and subnet mask of the current VISM card are displayed:

```
nodename.1.28.VISM8.a > dspvismip

VismIpAddress: 209.165.200.224
NetMask:       255.255.255.255
VismBearerIpAddress: 209.165.200.225
BearerNetMask: 255.255.255.255

nodename.1.28.VISM8.a >
```

---

Related Commands	Command	Description
	<b>cnfvismip</b>	Configures the current VISM card IP address.

---

# dspvismparam

To display VISM card configuration parameters, use the **dspvismparam** command.

## dspvismparam

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the configuration parameters of the current VISM-PR card are displayed:

```
nodename.1.28.VISM8.a > dspvismparam
```

```
VISM mode:                voipSwitching/voipTrunking
VISM features Bit Map:    0x5bc
FunctionModuleType:      VISM-PR-8T1
CAC flag:                 enable
DS0s available:          192
Template number:         3
Percent of functional DSPs: 100
IP address:               64.68.2.1
Subnet mask:              255.255.255.256
Bearer IP address:       0.0.0.0
Bearer Subnet mask:      0.0.0.0
Bearer IP ping:          disable
RTCP report interval:    5000 msec
RTCP receive multiplier: 3
RTP receive timer:       disable
ControlPrecedence/Tos:  0x60
BearerPrecedence/Tos:   0xa0
Aal2 muxing status:      disable
Tftp Server Dn           TFTPDOMAIN
Aggregate Clipping       enable
```

Type <CR> to continue, Q<CR> to stop:

```
Aggregate Svc Bandwidth    0
Codec negotiation option   1
Profile negotiation option 1
VAD Duty Cycle            61
VAD Tolerance              100
VISM Initiated NW COT     Off
VISM CO4 Timer            1000 msec
CALEA flag                 disable
wOAM Loopback CLP Bit     1
Continuity Check Cell     1
SupportdModuleType:       VISM-PR-8T1
VismNSAP:                  4700918100000000001a53337700000107e3ff00
```

**Note**

The DS0s available parameter value is applicable to AAL2 trunking operating mode only. The RTCP report interval, RTP receive timer, ControlPrecedence/Tos, and BearerPrecedence/Tos parameter values are applicable to VoIP switching/trunking operating mode only.

**Related Commands**

Command	Description
<b>addcon</b>	Adds a PVC connection between a VISM card and any SM or PXM card.
<b>cnfcac</b>	Enables or disables the CAC feature on a VISM card.
<b>cnfcalea</b>	Enables or disables the CALEA feature on the current VISM card.
<b>cnfco4timer</b>	Configures the bearer continuity test CO4 timer value.
<b>cnfcodectmpl</b>	Assigns a codec template to an entire VISM card.
<b>cnfcon</b>	Configures a connection between a VISM card and an MGX 8000 Series platform PXM card.
<b>cnfvismip</b>	Configures the current VISM card IP address.
<b>cnfvismmode</b>	Configures the initial operating mode for a VISM card.
<b>dspcalea</b>	Displays the CALEA feature configuration status of the current VISM card.
<b>dspco4timer</b>	Displays the bearer continuity test CO4 timer value.



# dspvoipparams

To display the VoIP switching/trunking operating mode parameters, use the **dspvoipparams** command.

## **dspvoipparams**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking and VoIP and AAL1 SVC

**Usage Guidelines** Values for the following parameters are displayed when you use this command:

- DTMF relay status—Indicates whether the channel-associated (CAS) bits are configured to be relayed to the other endpoint.
- CAS bits transport status—Indicates whether the dual-tone multifrequency (DTMF) tones are configured to be relayed to the other endpoint.
- VAD timer value—Displays the hangover time before silence compression is invoked.
- Event negotiation policy—None, proprietary, or all.
- Silence insertion descriptor (SID) payload type.

## **Examples**

In the following example, the VoIP switching/trunking operating mode parameters are displayed:

```
nodename.1.28.VISM8.a > dspvoipparams

VoIP DTMF RELAY:           Off
VoIP CAS BITS TRANSPORT:  Off
VoIP VAD TIMER:           250
VoIP EVENT NEGOTIATE POL: proprietary
VoIP SID PAYLOAD TYPE:    13

nodename.1.28.VISM8.a >
```

## **Related Commands**

<b>Command</b>	<b>Description</b>
<b>cnfvoiptimerparam</b>	Configures the holdover time for VAD before silence compression is activated.
<b>cnfvoiptransparams</b>	Configures the VoIP transportation parameters.

# dspxcgcpbt

To display the default network type, virtual channel (VC) type, and connection type of the current VISM card, use the **dspxcgcpbt** command.

## dspxcgcpbt

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the default network type, VC type, and connection type of the current VISM card are displayed:

```
nodename.1.28.VISM8.a > dspxcgcpbt
```

```
Network Type:    IP
VC Type:        PVC
Conn Type:      not-applicable
```

```
nodename.1.28.VISM8.a >
```

## Related Commands

Command	Description
<b>cnfxgcpbt</b>	Configures a default bearer type.

# dspxcgpcalls

To display the xGCP call ID, connection ID, and endpoint name for each call agent-established connection on the gateway, use the **dspxcgpcalls** command.

## dspxcgpcalls

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** If more than one xGCP connection ID is associated with the same call ID, each connection ID appears on a separate line in the display.

**Examples** In the following example, the xGCP call IDs, connection IDs, and endpoint names for all call agent-established connections on the gateway are displayed:

```
nodename.1.28.VISM8.a > dspxcgpcalls
xGCP Call ID          xGCP Connection ID  xGCP Endpoint Name
-----
          5898886      358a                vism/T1-2/21
          22263730     368d                vism/T1-2/23
          35040677     338d                vism/T1-1/3
          37233496     3588                vism/T1-1/5
          44147097     358c                vism/T1-2/6
          59925215     3685                vism/T1-2/14
          86098952     3787                vism/T1-1/23
          106425635    3689                vism/T1-1/22
          127810066    348f                vism/T1-1/20
          143146281    3789                vism/T1-1/8
          251336169    3688                vism/T1-1/14
          308712944    338f                vism/T1-2/12
          332811049    3690                vism/T1-1/15
          349719791    348b                vism/T1-1/12
          368644231    3683                vism/T1-1/21
          414134979    3589                vism/T1-1/13
          431808675    348e                vism/T1-2/5
          439592534    3687                vism/T1-1/6
          449708369    338a                vism/T1-1/10
          472992198    368b                vism/T1-1/7
          667869345    3392                vism/T1-2/20
          689149158    3584                vism/T1-2/13
          731314813    368e                vism/T1-2/8
          733047547    3686                vism/T1-2/22
          840095617    368a                vism/T1-2/7
          855162306    338c                vism/T1-1/18
          889601897    368c                vism/T1-2/15
          959868114    3395                vism/T1-1/4
```

**Related Commands** There are no related commands.

# dspngxgpcids

To display the logical channel number (LCN), channel identification number (CID), xGCP connection ID, endpoint name, and call ID corresponding to each call agent-established AAL2 connection on the gateway, use the **dspngxgpcids** command.

## dspngxgpcids

**Syntax Description** This command has no arguments or keywords.

**Command Modes** Switched AAL2 SVC and switched AAL2 PVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the xGCP connection CID configuration data for each call agent-established AAL2 connection on the gateway is displayed:

```
nodename.1.28.VISM8.a > dspngxgpcids
```

LCN	CID	xGCP Connection ID	xGCP Endpoint Name	xGCP Call ID
132	10	27ba	vism/T1-1/2	346350363
132	14	24c2	vism/T1-1/6	219196705
132	15	24c6	vism/T1-1/7	3124232
132	16	24cb	vism/T1-1/8	71993004
132	17	26be	vism/T1-1/9	964845576
132	18	27bc	vism/T1-1/10	40023388
132	21	24bc	vism/T1-1/13	308615846
132	22	24c3	vism/T1-1/14	540211499
132	23	24c8	vism/T1-1/15	887014703
132	24	25c2	vism/T1-1/16	750350805
132	25	26bf	vism/T1-1/17	757994272
132	29	24bf	vism/T1-1/21	407192558
132	30	24c5	vism/T1-1/22	702316810
132	31	24c9	vism/T1-1/23	686445676
132	32	26bc	vism/T1-1/24	366717759
132	33	26c0	vism/T1-2/1	142297238
132	37	24c1	vism/T1-2/5	681759411
132	38	24c4	vism/T1-2/6	439143079
132	39	24c7	vism/T1-2/7	966681180
132	40	25c5	vism/T1-2/8	565100353
132	41	26c1	vism/T1-2/9	273412123
d32	9	26c3	vism/T1-1/1	705499200

```
nodename.1.28.VISM8.a >
```

Related Commands	Command	Description
	<b>delxgcpcon</b>	Deletes an xGCP connection specified by the xGCP connection identification number.
	<b>dspxgcpcon</b>	Displays the attributes associated with a call agent established connection.

Command	Description
<b>dspngxpccons</b>	Displays the xGCP connection ID, endpoint name, and call ID corresponding to each call agent established connection on the gateway.
<b>dspngxpcendpts</b>	Displays the xGCP endpoint names of all endpoints added with the <b>addendpt</b> command, or the SNMP equivalent.

# dspxgpcnf

To display previously configured Simple Gateway Control Protocol (SGCP) or Media Gateway Control Protocol (MGCP) timeout and retransmission count values, use the **dspxgpcnf** command.

## dspxgpcnf

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the SGCP or MGCP timeout and retransmission count values are displayed:

```
nodename.1.28.VISM8.a > dspxgpcnf

MWD timeout :      10000
Request timeout :   500
Retry count:       3

nodename.1.28.VISM8.a >
```

Related Commands	Command	Description
	<b>cnfxgcpmwd</b>	Configures the maximum waiting delay value used for sending an RSIP message to the call agent.
	<b>cnfxgcpretry</b>	Configures VISM minimum and maximum request timeouts and retransmission attempts for communication with the associated call agent.

# dspxcpcnt

To display the Simple Gateway Control Protocol (SGCP) or Media Gateway Control Protocol (MGCP) message statistics for a specified call agent, use the **dspxcpcnt** command.

**dspxcpcnt** *<ip address>*

<b>Syntax Description</b>	<i>ip address</i>	IP address, in dotted decimal format (nnn.nnn.nnn.nnn), of the call agent for which you want to display SGCP or MGCP message statistics.
---------------------------	-------------------	--

<b>Command Modes</b>	VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC
----------------------	---

<b>Usage Guidelines</b>	Follow standard CLI procedures for this command.
-------------------------	--

**Examples** In the following example, the SGCP or MGCP message statistics of the call agent are displayed:

```
nodename.1.28.VISM8.a > dspxcpcnt 209.165.200.204

IP                success msg    fail msg
-----
209.165.200.204  0              4

nodename.1.28.VISM8.a >
```

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>dspxcpcnts</b>	Displays the SGCP/MGCP message statistics for all known call agents.

# dspxcpcnts

To display the Simple Gateway Control Protocol (SGCP) or Media Gateway Control Protocol (MGCP) message statistics for all known call agents, use the **dspxcpcnts** command.

## dspxcpcnts

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the SGCP or MGCP messages statistics for all known call agents are displayed:

```
nodename.1.28.VISM8.a > dspxcpcnts

IP          success msg    fail msg
-----
2.2.2.2          0             4

nodename.1.28.VISM8.a >
```

## Related Commands

Command	Description
<b>dspxcpcnt</b>	Displays the SGCP/MGCP message statistics for a specified call agent.



# dspngxcpcon

To display the attributes associated with a call agent-established connection, use the **dspngxcpcon** command.

**dspngxcpcon** <connId> <DispLevel>

Syntax Description	
<i>connId</i>	Connection identification number. Range is in hexadecimal numbers from (0–9, a–f).
<i>DispLevel</i>	Detailed level of display. Values are <ul style="list-style-type: none"> <li>• 1 = Abbreviated display</li> <li>• 2 = Detailed display</li> </ul>

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the abbreviated level of attributes associated with the call agent identified by the connection identification number 4C5B are displayed:

```
nodename.1.28.VISM8.a > dspngxcpcon 4c5b 1

*****
Attributes of Connection ID: 4c5b
*****
Call ID = C0011
Endpoint Name = vism/T1-1/1
Line Number = 1
Connection ID = 4c5b
Admitted Codec = PCMA
Admitted Pkt. period = 10 ms
Connection Mode = sendrecv
Echo Cancellation = FALSE
Type of Service = 0xa0
Network Type = IP
Remote Address Type = Invalid (0)
Continuity Test = FALSE
Loopback = FALSE
Local RTP Port = 49556
Remote RTP Port = 49544
Remote RTP Port Count = 1
Remote Address = 64.68.18.1
MGC Domain Name = mgc1
MGC IP Address = Unknown
MGC UDP Port = 2427
Port in Notified Entity = FALSE
Protocol Version = MGCP 0.1
Silence Suppression = FALSE
SID = TRUE
VAD Timer = 250 ms
```

```

CAS Type = None
Triple Redundancy = TRUE
DTMF forwarding = FALSE
Local Connection Options (lco string) = L: e:off, s:off, a:PCMA

Remote Session Descriptor (sdp string) =
-----
v=0
o=- C0011 0 IN - -
s=-
c=IN IP4 64.68.18.1
t=0 0
m=audio 49544 RTP/AVP 8
-----

```

In the following example, the detailed level of attributes associated with the call agent identified by the connection identification number 4C5B are displayed:

```
nodename.1.28.VISM8.a > dspxcgcpcon 4c5b 2
```

```

*****
Attributes of Connection ID: 4c5b
*****
Call ID = C0011
Endpoint Name = vism/T1-1/1
Line Number = 1
Connection ID = 4c5b
Admitted Codec = PCMA
Admitted Pkt. period = 10 ms
Connection Mode = sendrecv
Echo Cancellation = FALSE
Type of Service = 0xa0
Network Type = IP
Remote Address Type = Invalid (0)
Continuity Test = FALSE
Loopback = FALSE
Local RTP Port = 49556
Remote RTP Port = 49544
Remote RTP Port Count = 1
Remote Address = 64.68.18.1
MGC Domain Name = mgc1
MGC IP Address = Unknown
MGC UDP Port = 2427
Port in Notified Entity = FALSE
Protocol Version = MGCP 0.1
Silence Suppression = FALSE
SID = TRUE
VAD Timer = 250 ms
CAS Type = None
Triple Redundancy = TRUE
DTMF forwarding = FALSE
Local Connection Options (lco string) = L: e:off, s:off, a:PCMA
Remote Session Descriptor (sdp string) =
-----
v=0
o=- C0011 0 IN - -
s=-
c=IN IP4 64.68.18.1
t=0 0
m=audio 49544 RTP/AVP 8
-----
Timestamp Information:
Display Type = Originating
CRCX Ack (CRCX Ack - CRCX) = 10.00000000 ms

```

```

MDCX Command (MDCX - CRCX)           = 70.000000000 ms
MDCX Ack (MDCX Ack - CRCX)           = 80.000000000 ms
Time since the CRCX was received      = 2016.930000000 sec
(CRCX Command is not shown since it is used as reference)

Codec List: Codec[1]                  = PCMA
Pkt. Period List[1]: Pkt. Period[1]  = 10 ms
Pkt. Period Range[1] - Low           = 10 ms
Pkt. Period Range[1] - High          = 10 ms

LCO Codec List[1]                     = PCMA
LCO Pkt. Period Range - Low           = 0 ms
LCO Pkt. Period Range - High         = 0 ms
TDM Endpoint Connected to DSP Channel = TRUE
DSP Channel Connected to Network Endpoint = TRUE

```

**Related Commands**

Command	Description
<b>delxgcpcon</b>	Deletes an xGCP connection specified by the xGCP connection identification number.
<b>dspxgcpoids</b>	Displays the LCN, CID, xGCP connection ID, endpoint name, and call ID corresponding to each call agent-established AAL2 connection on the gateway.
<b>dspxgcpcons</b>	Displays the xGCP connection identification number, endpoint name, and call identification number corresponding to each call agent-established connection on the gateway.
<b>dspxgcpendpts</b>	Displays the xGCP endpoint names of all endpoints added with the <b>addendpt</b> command, or the SNMP equivalent.

# dspxcgpcns

To display the xGCP connection identification number, endpoint name, and call identification number corresponding to each call agent-established connection on the gateway, use the **dspxcgpcns** command.

## dspxcgpcns

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the xGCP connection identification number, endpoint name, and call identification number of each call agent established connection on the gateway are displayed:

```
nodename.1.28.VISM8.a > dspxcgpcns

xGCP Connection ID  xGCP Endpoint Name  xGCP Call ID
-----
4c5b                vism/T1-1/1          C0011
4c5c                vism/T1-1/2          C0012

nodename.1.28.VISM8.a >
```

## Related Commands

Command	Description
<b>delxcgpcn</b>	Deletes an xGCP connection specified by the xGCP connection identification number.
<b>dspxcgpcids</b>	Displays the LCN, CID, xGCP connection ID, endpoint name, and call ID corresponding to each call agent-established AAL2 connection on the gateway.
<b>dspxcgpendpts</b>	Displays the xGCP endpoint names of all endpoints added with the <b>addendpt</b> command, or the SNMP equivalent.

# dspxcgcpdefpkg

To display the Simple Gateway Control Protocol (SGCP) or Media Gateway Control Protocol (MGCP) default package, use the **dspxcgcpdefpkg** command.

## **dspxcgcpdefpkg**

---

**Syntax Description** This command has no arguments or keywords.

---

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

---

**Usage Guidelines** Follow standard CLI procedures for this command.

---

**Examples** In the following example, the SGCP or MGCP default package is displayed:

```
nodename.1.28.VISM8.a > dspxcgcpdefpkg  
  
Default package : T  
  
nodename.1.28.VISM8.a >
```

---

**Related Commands** There are no related commands.

# dspxcgcpdetailcnt

To display the Simple Gateway Control Protocol (SGCP) or Media Gateway Control Protocol (MGCP) message statistics exchanged between VISM and a specified call agent, use the **dspxcgcpdetailcnt** command.

**dspxcgcpdetailcnt** <Ip\_address>

## Syntax Description

<i>Ip_address</i>	IP address, in dotted decimal format (nnn.nnn.nnn.nnn), of the call agent for which you want to display detailed exchanged message statistics.
-------------------	--

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the SGCP or MGCP details of statistics exchanged between VISM and the call agent identified by the IP address are displayed:

```
nodename.1.28.VISM8.a > dspxcgcpdetailcnt 209.165.200.224
```

```
IP Address           : 209.165.200.224
CRCX Count           : 0
CRCX Fail Count      : 0
MDCX Count           : 0
MDCX Fail Count      : 0
DLCX Received Count  : 0
DLCX Received Fail Count : 0
DLCX Sent Count      : 0
DLCX Sent Fail Count : 0
RQNT Count           : 0
RQNT Fail Count      : 0
Notify Count         : 0
Notify Fail Count     : 0
Audit Endpoint Count : 0
Audit Endpoint Fail Count : 0
Audit Connection Count : 0
Audit Connection Fail Count : 0
RSIP Count            : 4
RSIP Fail Count       : 4
```

```
nodename.1.28.VISM8.a >
```

## Related Commands

Command	Description
<b>dspxcgcpdetailcnts</b>	Displays SGCP or MGCP details of message statistics exchanged between VISM and all known call agents.

# dspxgcpdetailcnts

To display Simple Gateway Control Protocol (SGCP) or Media Gateway Control Protocol (MGCP) message statistics exchanged between VISM and all known call agents, use the **dspxgcpdetailcnts** command.

## dspxgcpdetailcnts

### Syntax Description

This command has no arguments or keywords.

### Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

### Usage Guidelines

Follow standard CLI procedures for this command. The throttle fields in the display are applicable only to VISM-PR cards.

### Examples

In the following example, the SGCP or MGCP details of message statistics exchanged between VISM and all known call agents are displayed:

```
nodename.1.28.VISM8.a > dspxgcpdetailcnts
```

```
IP Address : 10.86.28.56
CRCX Count : 0
CRCX Fail Count : 0
MDCX Count : 0
MDCX Fail Count : 0
DLCX Received Count : 0
DLCX Received Fail Count : 0
DLCX Sent Count : 0
DLCX Sent Fail Count : 0
RQNT Count : 0
RQNT Fail Count : 0
Notify Count : 0
Notify Fail Count : 0
Audit Endpoint Count : 0
Audit Endpoint Fail Count : 0
Audit Connection Count : 0
Audit Connection Fail Count : 0
RSIP Count : 4
RSIP Fail Count : 4
CRCX Throttled Count : 100
CRCX Throttled 24 Hr Count : 100
```

### Related Commands

Command	Description
<b>dspxgcpdetailcnt</b>	Displays SGCP or MGCP details of message statistics exchanged between VISM and a specified call agent.

# dspxcpendpt

To display the attributes associated with an endpoint added through the use of the **addendpt** command, or the SNMP equivalent, use the **dspxcpendpt** command.

**dspxcpendpt** <line\_number> <ds0\_number>

## Syntax Description

<i>line_number</i>	Line number of the endpoint for which you want to display the attributes. Range is 1–8.
<i>ds0_number</i>	DS0 number of the endpoint for which you want to display the attributes. Ranges are <ul style="list-style-type: none"> <li>• 1–24 = T1 lines</li> <li>• 1–31 = E1 lines (no signaling and CCS)</li> <li>• 1–15 and 17–31 = E1 lines (CAS)</li> </ul>

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

An endpoint added with the **addendpt** command is considered an xGCP endpoint, even though a call agent-established connection cannot be associated with the endpoint.

## Examples

In the following example, the statistics for the endpoint identified by line number 1, DS0 number 1 are displayed:

```
nodename.1.28.VISM8.a > dspxcpendpt 1 1

*****
Attributes of Endpoint Name: vism/T1-1/1
*****
Line Number                = 1
Endpoint Number            = 1
Endpoint Name              = vism/T1-1/1
Continuity Test            = FALSE
Echo Cancellation          = FALSE
Protocol Version           = Invalid Protocol
MGC IP Address             = Unknown
MGC UDP Port               = 0
Port in Notified Entity    = FALSE
Request ID                 = 0
Quarantine Handling        =
Requested Event List       =
Signal Event List          =
Accumulated Event List     =
Quarantined Event List    =
Detect Event List          =
Accumulated Dialed String  =
DSP Channel Connected to Network Endpoint = FALSE
Retry Count                = 3
Minimum Retry Timeout      = 500 ms
Maximum Retry Timeout      = 500 ms
```



**Related Commands**

<b>Command</b>	<b>Description</b>
<b>delxgcpcon</b>	Deletes an xGCP connection specified by the xGCP connection identification number.
<b>dspxgpcids</b>	Displays the LCN, CID, xGCP connection ID, endpoint name, and call ID corresponding to each call agent-established AAL2 connection on the gateway.
<b>dspxgcpcon</b>	Displays the attributes associated with a call agent-established connection.
<b>dspxgcpcons</b>	Displays the xGCP connection ID, endpoint name and call ID corresponding to each call agent-established connection on the gateway.

# dspngxcpndptcons

To display the attributes of all connections associated with an endpoint added through the use of the **addendpt** command, or the SNMP equivalent, use the **dspngxcpndptcons** command.

**dspngxcpndptcons** <line\_number> <ds0\_number> <dispLevel>

## Syntax Description

<i>line_number</i>	Line number of the endpoint connections for which you want to display the attributes. Range is 1–8.
<i>ds0_number</i>	DS0 number of the endpoint connections for which you want to display the attributes. Ranges are <ul style="list-style-type: none"> <li>• 1–24 = T1 lines</li> <li>• 1–31 = E1 lines (no signaling and CCS)</li> <li>• 1–15 and 17–31 = E1 lines (CAS)</li> </ul>
<i>dispLevel</i>	Detail level of display. Values are <ul style="list-style-type: none"> <li>• 1 = Abbreviated display</li> <li>• 2 = Detailed display</li> </ul>

## Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the attributes of all connections associated with the endpoint identified by line number 1, DS0 number 1 are displayed:

```
nodename.1.28.VISM8.a > dspngxcpndptcons 1 1 2

*****
Attributes of Connection ID:1
*****
Call ID                               = 634
Endpoint Name                         = vism/T1-1/1
Line Number                           = 1
Connection ID                         = 1
Admitted Codec                        = PCMU
Admitted Pkt. period                  = 10 ms
Connection Mode                       = sendrecv
Echo Cancellation                     = TRUE
Type of Service                       = 0xa0
Network Type                          = IP
Remote Address Type                   = Invalid (0)
Continuity Test                       = FALSE
Loopback                              = FALSE
Local RTP Port                        = 49152
Remote RTP Port                       = 49154
Remote RTP Port Count                 = 1
Remote Address                        = nn.nnn.n.n
```

```

Remote SDP                               = TRUE
MGC Domain Name                          = vsc-1
MGC IP Address                            = Unknown
MGC UDP Port                              = 2427
Port in Notified Entity                   = FALSE
Protocol Version                          = MGCP 0.1
Silence Suppression                       = TRUE
VAD Timer                                  = 250
CAS Forwarding Backhaul                   = 0
Triple Redundancy                         = 1
DTMF forwarding                           = 0
Local Connection Options (lco string)     = L:e:on
Remote Session Descriptor (sdp string)    =
Timestamp Information:
Display Type                               = Terminating
CRCX Ack (CRCX Ack - CRCX)               = 10.000000000 ms
Time since the CRCX was received          = 210.280000000 sec
(CRCX Command is not shown since it is used as reference)

Codec List:Codec[1]                       = PCMU
  Pkt. Period List[1]:Pkt. Period[1]     = 10 ms
  Pkt. Period Range[1] - Low              = 10 ms
  Pkt. Period Range[1] - High             = 10 ms
Codec List:Codec[2]                       = PCMA
  Pkt. Period List[2]:Pkt. Period[1]     = 10 ms
  Pkt. Period Range[2] - Low              = 10 ms
  Pkt. Period Range[2] - High             = 10 ms
Codec List:Codec[3]                       = CCD
  Pkt. Period List[3]:Pkt. Period[1]     = 10 ms
  Pkt. Period Range[3] - Low              = 10 ms
  Pkt. Period Range[3] - High             = 10 ms
LCO Pkt. Period Range - Low               = 0 ms
LCO Pkt. Period Range - High              = 0 ms
TDM Endpoint Connected to DSP Channel     = TRUE
DSP Channel Connected to Network Endpoint = TRUE

```

**Related Commands**

Command	Description
<b>delxgcpcon</b>	Deletes an xGCP connection specified by the xGCP connection identification number.
<b>dspngxgpcids</b>	Displays the LCN, CID, xGCP connection ID, endpoint name, and call ID corresponding to each call agent-established AAL2 connection on the gateway.
<b>dspngxgcpcon</b>	Displays the attributes associated with a call agent-established connection.
<b>dspngxgcpcons</b>	Displays the xGCP connection ID, endpoint name and call ID corresponding to each call agent-established connection on the gateway.
<b>dspngxgpendpt</b>	Displays the xGCP endpoint names corresponding to each endpoint number.
<b>dspngxgpendpts</b>	Displays the xGCP endpoint name corresponding to each endpoint added using the <b>addendpt</b> command or the SNMP equivalent.

# dspngxcpndpts

To display the xGCP endpoint names corresponding to each endpoint which has been added through the use of the **addendpt** command, or the SNMP equivalent, use the **dspngxcpndpts** command.

## dspngxcpndpts

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** The xGCP endpoint name is displayed with this command regardless of whether there are call agent-established connections associated with the endpoint. If there are such connections, the corresponding xGCP connection identification number and call identification number appear on the same line as the endpoint name.

**Examples** In the following example, the endpoint names that correspond to each endpoint are displayed:

```
nodename.1.28.VISM8.a > dspngxcpndpts

xGCP Endpoint Name  xGCP Connection ID  xGCP Call ID
-----
vism/T1-1/1         4c5b                 C0011
vism/T1-1/2         4c5c                 C0012
vism/T1-1/3
vism/T1-1/4
vism/T1-1/5
vism/T1-1/6
vism/T1-1/7
vism/T1-1/8
vism/T1-1/9
vism/T1-1/10
vism/T1-1/11
vism/T1-1/12
vism/T1-1/13
vism/T1-1/14
vism/T1-1/15
vism/T1-1/16
vism/T1-1/17
vism/T1-1/18
vism/T1-1/19
vism/T1-1/20
vism/T1-1/21
vism/T1-1/22
vism/T1-1/23
vism/T1-1/24
```

Related Commands	Command	Description
	<b>dspngxcpndpt</b>	Displays the xGCP endpoint names corresponding to each endpoint number.

# dspxgcperrcnt

To display the Simple Gateway Control Protocol (SGCP) or Media Gateway Control Protocol (MGCP) error counts for both unsupported protocol versions and unrecognized packets, use the **dspxgcperrcnt** command.

## **dspxgcperrcnt**

---

**Syntax Description** This command has no arguments or keywords.

---

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

---

**Usage Guidelines** Follow standard CLI procedures for this command.

---

**Examples** In the following example, the xGCP error counts for unsupported protocol versions and unrecognized packets are displayed:

```
nodename.1.28.VISM8.a > dspxgcperrcnt

Number of msg. for an unsupported protocol version : 0
Number of unrecognized packets : 0

nodename.1.28.VISM8.a >
```

---

**Related Commands** There are no related commands.

# dspxcgcpinterops

To display the status of the Session Description Protocol (SDP) OST interoperability feature, use the **dspxcgcpinterops** command.

## **dspxcgcpinterops**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the SDP OST interoperability status is displayed:

```
nodename.1.28.VISM8.a > dspxcgcpinterops

SDP OST flag: enable

nodename.1.28.VISM8.a >
```

## **Related Commands**

<b>Command</b>	<b>Description</b>
<b>cnfxgcpinteropsdpost</b>	Enables or disables the SDP OST interoperability feature.

# dspngxgcpIncons

To display the DS0s with active xGCP connections, the number of connections for each line, and the number of active calls for each card, use the **dspngxgcpIncons** command.

## dspngxgcpIncons

### Syntax Description

This command has no arguments or keywords.

### Command Modes

VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

### Usage Guidelines

Follow standard CLI procedures for this command.

### Examples

In the following example, the DS0s with active xGCP connections, the number of connections for each line, and the number of active calls for each card are displayed:

```
nodename.1.28.VISM8.a > dspngxgcpIncons

Connections Active Line 1: 0x00bee89e      (15)
Connections Active Line 2: 0x00b5bfc5      (16)
Connections Active Line 3: 0x0015387c      (11)
Connections Active Line 4: 0x00000000      (0)
Connections Active Line 5: 0x00000000      (0)
Connections Active Line 6: 0x00000000      (0)
Connections Active Line 7: 0x00000000      (0)
Connections Active Line 8: 0x00000000      (0)
Total Active Connections: 42
```

```
nodename.1.28.VISM8.a >
```



### Note

The hexadecimal digits indicate the DS0s on which the connections exist. The parenthetical numbers indicate the total number of active DS0s on a line. The last line of the displayed data indicates the total number of active connections.

### Related Commands

Command	Description
<b>delxgcpcon</b>	Deletes an xGCP connection specified by the xGCP connection identification number.
<b>dspngxgcpids</b>	Displays the LCN, CID, xGCP connection ID, endpoint name, and call ID corresponding to each call agent established AAL2 connection on the gateway.
<b>dspngxgcpcon</b>	Displays the attributes associated with a call agent-established connection.
<b>dspngxgcpcons</b>	Displays the xGCP connection ID, endpoint name and call ID corresponding to each call agent-established connection on the gateway.
<b>dspngxgcpndpt</b>	Displays the attributes associated with an endpoint.

Command	Description
<b>dspxcpendptcons</b>	Displays the attributes of all connections associated with an endpoint.
<b>dspxcpendpts</b>	Displays the xGCP endpoint names of all endpoints added with the <b>addendpt</b> command or the SNMP equivalent.



# dspxcpeers

To display all the User Datagram Protocol (UDP) peer ports used by the Simple Gateway Control Protocol (SGCP) or the Media Gateway Control Protocol (MGCP), use the **dspxcpeers** command.

## dspxcpeers

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the UDP ports used by xGCP are displayed:

```
nodename.1.28.VISM8.a > dspxcpeers

mgcNumber      protocolNumber  portNumber
-----
      1              1           2064
      1              2           2427

nodename.1.28.VISM8.a >
```

Related Commands	Command	Description
	<b>cnfxgcppeer</b>	Configures the UDP port number used to send gateway-initiated messages to the call agent.

# dspxcppersistevts

To display all active persistent xGCP events, use the **dspxcppersistevts** command.

## **dspxcppersistevts**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the active persistent xGCP events are displayed:

```
nodename.1.28.VISM8.a > dspxcppersistevts
```

```
1          1/hd
2          1/hu
3          r/co4
```

```
nodename.1.28.VISM8.a >
```

## **Related Commands**

<b>Command</b>	<b>Description</b>
<b>addxcppersistevt</b>	Adds persistent xGCP events.
<b>delxcppersistevt</b>	Deletes a persistent xGCP event.

# dspxcpport

To display the local User Datagram Protocol (UDP) port number used by the Simple Gateway Control Protocol (SGCP) or the Media Gateway Control Protocol (MGCP), use the **dspxcpport** command.

## dspxcpport

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the UDP port number used by SGCP or MGCP is displayed:

```
nodename.1.28.VISM8.a > dspxcpport
xgcpPortNumber: 2427
nodename.1.28.VISM8.a >
```

Related Commands	Command	Description
	cnfxgcppeer	Configures the UDP port number used to send gateway-initiated messages to the call agent.

# dspxcpretry

To display the current xGCP retry parameters—retry (retransmission) count, minimum request timeout value, and maximum request timeout value—use the **dspxcpretry** command.

## dspxcpretry

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, and VoIP and AAL1 SVC

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the current xGCP retransmission parameters are displayed:

```
nodename.1.28.VISM8.a > dspxcpretry

Min Request Timeout :    500
Retry Count         :     3
Max Request Timeout :    500

nodename.1.28.VISM8.a >
```

Related Commands	Command	Description
	<b>cnfxgcpretry</b>	Configures VISM minimum and maximum request timeouts and retransmission attempts for communication with the associated call agent.

# Help

To display, in alphabetical order, all commands associated with the current VISM card, use the **Help** command.

## Help

### Syntax Description

This command has no arguments or keywords.

### Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

### Usage Guidelines

This command is case sensitive.



#### Note

You cannot use this command to obtain details about a specific command.

### Examples

In the following example, all commands associated with the current VISM card are displayed in an alphabetical list.



#### Note

The list displayed in this example is a partial list.

```
nodename.1.28.VISM8.a > Help
```

```
?
addcasvar
addccs
addcid
.
.
.
dspxgcpcpersistevts
dspxgcpcport
dspxgcpretry
Help
.
.
.
tstcon
tstdelay
upcon
version
```

### Related Commands

Command	Description
?	Displays some or all commands associated with the current card.

# memShow

To display the system memory partition blocks and statistics, use the **memShow** command.

## memShow

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the current system memory partition blocks and statistics are displayed:

```
nodename.1.28.VISM8.a > memShow

status   bytes      blocks   avg block  max block
-----  -
current
  free   11598432     240      48326  11556160
  alloc   4071280     12151      335      -
cumulative
  alloc  11297856    147028      76      -

nodename.1.28.VISM8.a >
```

**Related Commands** There are no related commands.

# pinglndsp

To display the digital signal processor (DSP) configuration data and status for all endpoints on a specified line, use the **pinglndsp** command.

**pinglndsp** <line\_num>

## Syntax Description

<i>line_num</i>	Number of the line for whose endpoints you want to display DSP configuration data and status. Range is 1–8.
-----------------	---

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

Follow standard CLI procedures for this command.

## Examples

In the following example, the DSP configuration data and status for the endpoints of the VISM card line 1 are displayed:

```
nodename.1.28.VISM8.a > pinglndsp 1
```

Endpoint	Ds0#	DSP health
1	1	OK
2	2	OK
3	3	OK
4	4	OK
5	5	OK
6	6	OK
7	7	OK
8	8	OK
9	9	OK
10	10	OK
11	11	OK
12	12	OK
13	13	OK
14	14	OK
15	15	OK
16	16	OK
17	17	OK
18	18	OK
19	19	OK

```
nodename.1.28.VISM8.a >
```

## Related Commands

Command	Description
<b>dsplndsp</b>	Displays the DSP information for a specified VISM card line.

# rrtcon

To trigger the rerouting of a connection between two different switches, use the **rrtcon** command.

**rrtcon** *<channel number>*

---

## Syntax Description

*channel number* Logical channel number. Range is 131–510.

---



---

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, VoIP trunking/AAL2 trunking

---

## Usage Guidelines

This command operates only on master endpoints and on connections between two different switches.

---

## Examples

In the following example, rerouting the master endpoint 131 is displayed:

```
nodename.1.28.VISM8.a > rrtcon 131
```

```
nodename.1.28.VISM8.a >
```

---

## Related Commands

There are no related commands.



# setfaxmodemtrace

To enable or disable fax/modem trace, use the **setfaxmodemtrace** command.

**setfaxmodemtrace** <*fax\_modem\_trace*>

<b>Syntax Description</b>	<p><i>fax_modem_trace</i> Value you can use to enable or disable fax modem trace.</p> <ul style="list-style-type: none"> <li>• 0 = Off</li> <li>• 1 = On</li> </ul>				
<b>Command Modes</b>	VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking				
<b>Usage Guidelines</b>	Follow standard CLI procedures for this command.				
<b>Examples</b>	<p>In the following example, fax/modem trace is turned off.</p> <pre>nodename.1.28.VISM8.a &gt; setfaxmodemtrace 1 nodename.1.28.VISM8.a &gt;</pre>				
<b>Related Commands</b>	<table border="1"> <thead> <tr> <th>Command</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>dspfaxmodemtrace</td> <td>Displays whether or not fax/modem trace is turned on.</td> </tr> </tbody> </table>	Command	Description	dspfaxmodemtrace	Displays whether or not fax/modem trace is turned on.
Command	Description				
dspfaxmodemtrace	Displays whether or not fax/modem trace is turned on.				

# svccntsreset

To set all switched virtual circuit (SVC) counters to zero and update the statistics collection start time, use the **svccntsreset** command.

**svccntsreset**

---

**Syntax Description** This command has no arguments or keywords.

---

**Command Modes** AAL1 switching, switched AAL2 SVC, and VoIP and AAL1 SVC

---

**Usage Guidelines** Follow standard CLI procedures when using this command.

---

**Examples** In the following example, the SVC counters are switched to zero.

```
nodename.1.28.VISM8.a > svccntsreset
```

```
nodename.1.28.VISM8.a >
```

---

**Related Commands** There are no related commands.

# tstcon

To test a specified connection, use the **tstcon** command.

```
tstcon <LCN>
```

<b>Syntax Description</b>	<i>LCN</i> Logical channel number of the connection to be tested. Range is 131–510.				
<b>Command Modes</b>	VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking				
<b>Usage Guidelines</b>	Follow standard CLI procedures for this command.				
<b>Examples</b>	<p>In the following example, the connection identified by logical channel number 131 is tested:</p> <pre>nodename.1.28.VISM8.a &gt; <b>tstcon 131</b> test type is..... 1  TestCon in progress.  TestCon Passed.  nodename.1.28.VISM8.a &gt;</pre>				
<b>Related Commands</b>	<table border="1"> <thead> <tr> <th>Command</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td><b>tstdelay</b></td> <td>Tests the delay on a specified connection.</td> </tr> </tbody> </table>	Command	Description	<b>tstdelay</b>	Tests the delay on a specified connection.
Command	Description				
<b>tstdelay</b>	Tests the delay on a specified connection.				

# tstdelay

To test the delay on a specified connection, use the **tstdelay** command.

**tstdelay** <LCN>

<b>Syntax Description</b>	<i>LCN</i>	Logical channel number of the connection where delay is to be tested. Range is 131–510.
---------------------------	------------	---

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the delay for the connection identified by logical channel number 131 is tested:

```
nodename.1.28.VISM8.a > tstdelay 131
test type is..... 2

TestDelay in progress.

TestDelay Passed with 327 us.

nodename.1.28.VISM8.a >
```

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>tstcon</b>	Tests a specified connection.

# upcon

To configure a specified connection up, allowing traffic to be passed to the specified connection, use the **upcon** command.

**upcon** <LCN>

## Syntax Description

<i>LCN</i>	Logical channel number. Range is 131–510.
------------	---

## Command Modes

VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

## Usage Guidelines

When a channel that was down is brought up with the **upcon** command, a vismChanConUp trap is sent.

## Examples

In the following example, connection 189 is configured to be administratively up. Traffic can be passed to it.

```
PXM1E_SJ.1.27.VISM8.a > upcon 189
nodename.1.28.VISM8.a >
```

## Related Commands

Command	Description
<b>dncon</b>	Configures a specified connection down, preventing traffic from being passed to it.
<b>dspcon</b>	Displays the parameters for a specified channel.

# version

To display version-related data—such as firmware version, operating system kernel version, and date of the software build—for the current VISM/VISM-PR card, use the **version** command.

## version

**Syntax Description** This command has no arguments or keywords.

**Command Modes** VoIP switching/VoIP trunking, AAL2 trunking, AAL1 switching, switched AAL2 SVC, switched AAL2 PVC, VoIP and AAL1 SVC, and VoIP trunking/AAL2 trunking

**Usage Guidelines** Follow standard CLI procedures for this command.

**Examples** In the following example, the version-related data for the current VISM card is displayed:

```
nodename.1.28.VISM8.a > version
***** Cisco Systems. MGX VISM Card *****
Firmware Version      = 003.002.000.000 (NO CALEA)
Backup Boot version = VI8_BT_3.1.01
Xilinx Firmware version = 10/ 2/1998
DSPCOM FPGA version   = 3/ 6/2003
DSPM C549 Template 1 FW Details:
  Major Release       = 3
  Minor Release       = 6
  Build number        = 25
DSPM C549 Template 2 FW Details:
  Major Release       = 3
  Minor Release       = 6
  Build number        = 25
DSPM C549 Template 3 FW Details:
  Major Release       = 3
  Minor Release       = 6
  Build number        = 25
DSPM C549 Template 4 FW Details:
  Major Release       = 3
  Minor Release       = 6
  Build number        = 25
DSPM C5421 Template 1, 2, and 3 FW Details:
  Major Release       = 3
  Minor Release       = 6
  Build number        = 25
DSPM C5421 Template 4 FW Details:
  Major Release       = 3
  Minor Release       = 6
  Build number        = 25
DSPM C5421 Template 5 FW Details:
  Major Release       = 3
  Minor Release       = 6
  Build number        = 25
```

```
DSPM C549 E1 ECAN FW Details:
  Major Release   = 9
  Minor Release   = 4
  Build number    = 0
DSPM C549 T1 ECAN FW Details:
  Major Release   = 9
  Minor Release   = 4
  Build number    = 0
DSPM C5421 T1 & E1 ECAN FW Details:
  Major Release   = 9
  Minor Release   = 5
  Build number    = 1
  Made by = swtools
VxWorks (for R5k PDC) version 5.3.1.
Kernel: WIND version 2.5.
Made on Jun 18 2003, 15:41:03.
Boot line:
```

**Note**

---

The display from this command is different from the one that is shown here if you are using CALEA.

---

**Related Commands**

There are no related commands.

■ version





## VISM-PR Traps

---

This section contains a list of the VISM-PR traps that you can use for trap filtering. The **dspttraphelp** command gives you a list of the trap groups.

```
PXM1E_SJ.1.28.VISM8.a > dspttraphelp <trapHelpOpt>
```

Replace the <trapHelpOpt> argument with one of the following values of the trap group:

- 1 = All
- 2 = Card
- 3 = Port
- 4 = Channel/Line
- 5 = Connection
- 6 = CID
- 7 = Endpoint
- 8 = Media Gateway and Media Gateway Controller
- 9 = HDLC
- 10 = Tone Plan
- 11 = CAC
- 12 = CAS
- 13 = RTP
- 14 = LAPD
- 15 = RSVP
- 16 = Announcement
- 17 = RUDP
- 18 = XGCP

## Card Traps

Table A-1 lists the VISM-PR card traps.

**Table A-1** Card Trap Group

Trap Number	Trap Description
50680	TRAP_AVAIL_FREE_DS0_LOW
50681	TRAP_CPU_UTIL_EXCEEDED
50682	TRAP_MEM_UTIL_EXCEEDED
50687	TRAP_CALL_THROTTLE_THRESHOLD_90_PERCENT
50688	TRAP_CALL_THROTTLE_THRESHOLD_EXCEEDED
50689	TRAP_CALL_THROTTLE_THRESHOLD_90_PERCENT_CLEARED
50690	TRAP_CALL_THROTTLE_THRESHOLD_EXCEEDED_CLEARED
50691	TRAP_FILTER_ON
50692	TRAP_FILTER_OFF
50693	TRAP_FILTER_ADDED
50694	TRAP_FILTER_REMOVED
50695	TRAP_FILTER_MODIFIED
50700	TRAP_VISMIP_CHANGED
50743	TRAP_VISM_CODECTEMPLATE_CHG
50744	TRAP_VISM_MODE_CHG
50745	TRAP_VISM_SCALAR_CHANG
50746	TRAP_VISM_TABLE_CHANG
50760	TRAP_VISM_SUBCELL_MUXING_CHANG
50790	TRAP_VISM_FEATURE_CHG

## Port Traps

Table A-2 lists the VISM-PR port traps.

**Table A-2** Port Trap Group

Trap Number	Trap Description
50711	TRAP_VISM_PORT_ADDED
50712	TRAP_VISM_PORT_ACTIVE
50754	TRAP_VISM_PORT_DELETED

## Channel/Line Traps

Table A-3 lists the VISM-PR channel/line traps.

**Table A-3** Channel/Line Trap Group

Trap Number	Trap Description
50678	TRAP_DSP_CHANNEL_FAILED
50679	TRAP_DSP_CHANNEL_ACTIVE
50709	TRAP_VISM_CHAN_ACTIVE
50710	TRAP_VISM_CHAN_DELETE
50714	TRAP_PROT_CHAN_ACTIVE
50715	TRAP_PROT_CHAN_STDBY
50716	TRAP_PROT_CHAN_FAILED
50717	TRAP_PROT_CHAN_LOCKED
50718	TRAP_PROT_CHAN_UNLOCK
50755	TRAP_VISM_CHAN_ADDED
50756	TRAP_VISM_CHAN_FAILED

## Connection Traps

Table A-4 lists the VISM-PR connection traps.

**Table A-4** Connection Trap Group

Trap Number	Trap Description
50709	TRAP_VISM_CHAN_ACTIVE
50710	TRAP_VISM_CHAN_DELETE
50755	TRAP_VISM_CHAN_ADDED
50756	TRAP_VISM_CHAN_FAILED
50757	TRAP_DOWNCON
50758	TRAP_UPCON
50759	TRAP_REROUTE

## CID Traps

Table A-5 lists the VISM-PR channel ID (CID) traps.

**Table A-5**      *CID Trap Group*

Trap Number	Trap Description
50747	TRAP_VISM_CID_ADDED
50748	TRAP_VISM_CID_DELETED
50784	TRAP_CID_ADMIN_STATE_CHANGE
50785	TRAP_VISM_CID_STATE_CHANGED

## Endpoint Traps

Table A-6 lists the VISM-PR endpoint traps.

**Table A-6**      *Endpoint Trap Group*

Trap Number	Trap Description
50727	TRAP_MG_ENDPT_CREATED
50728	TRAP_MG_ENDPT_DELETED
50729	TRAP_MG_ENDPT_ACTIVE
50730	TRAP_MG_ENDPT_FAILED

## Media Gateway Traps

Table A-7 lists the VISM-PR media gateway and media gateway controller (MGC) traps.

**Table A-7**      *Media Gateway Trap Group*

Trap Number	Trap Description
50657	TRAP_MGC_GRP_ENTRY_ADDED
50658	TRAP_MGC_GRP_ENTRY_DELETED
50659	TRAP_MGCGRP_COMMOK
50660	TRAP_MGCGRP_COMMLOSS
50661	TRAP_MGCGRP_PROT_ADDED
50662	TRAP_MGCGRP_PROT_DELETED
50663	TRAP_PEERGRP_HRTBT_LOST
50664	TRAP_PEERGRP_HRTBT_DETECT
50665	TRAP_MGC_ACTIVE_IN_GRP
50666	TRAP_MGC_INACTIVE_IN_GRP
50668	TRAP_MGCGRPPARAM_ENTRY_ADDED

**Table A-7** Media Gateway Trap Group (continued)

Trap Number	Trap Description
50669	TRAP_MGCGRPPARAM_ENTRY_DELETED
50670	TRAP_SRCPEERGRPPARAM_ENTRY_ADDED
50671	TRAP_SRCPEERGRPPARAM_ENTRY_DELETED
50719	TRAP_MG_ADMIN_LOCKED
50720	TRAP_MG_ADMIN_UNLOCK
50721	TRAP_MG_ADMIN_SHUTDOWN
50725	TRAP_MGC_ACTIVE
50726	TRAP_MGC_INACTIVE
50727	TRAP_MG_ENDPT_CREATED
50728	TRAP_MG_ENDPT_DELETED
50729	TRAP_MG_ENDPT_ACTIVE
50730	TRAP_MG_ENDPT_FAILED
50731	TRAP_MGC_ADDED
50732	TRAP_MGC_DELETED
50735	TRAP_MGC_RESO_ADDED
50736	TRAP_MGC_RESO_DELETED
50789	TRAP_MGDOMINNAME_DELETED
50791	TRAP_MGDOMINNAME_ADDED

## HDLC Traps

Table A-8 lists the VISM-PR High-Level Data Link Control (HDLC) traps.

**Table A-8** HDLC Trap Group

Trap Number	Trap Description
50752	TRAP_VISM_HDLC_ADDED
50753	TRAP_VISM_HDLC_DELETED

## Tone Plan Traps

Table A-9 lists the VISM-PR tone plan traps.

**Table A-9**      *Tone Plan Trap Group*

Trap Number	Trap Description
50683	TRAP_CONFIG_TONEDET_ADDED
50684	TRAP_CONFIG_TONEDET_DELETED
50798	TRAP_TONE_PLAN_ADDED
50799	TRAP_TONE_PLAN_DELETED

## CAC Trap

Table A-10 lists the VISM-PR connection admission control (CAC) traps.

**Table A-10**      *CAC Trap Group*

Trap Number	Trap Description
50788	TRAP_VISM_NETWORK_CAC_CONFIG_STATE_CHANGED

## CAS Traps

Table A-11 lists the VISM-PR channel-associated signaling (CAS) traps.

**Table A-11**      *CAS Group*

Trap Number	Trap Description
50685	TRAP_CAS_TRANS_ENTRY_ADDED
50686	TRAP_CAS_TRANS_ENTRY_DELETED
50739	TRAP_CAS_VARIANT_ADDED
50740	TRAP_CAS_VARIANT_DELETED
50741	TRAP_CAS_VARIANT_CONFIGURED
50742	TRAP_CAS_VARIANT_NOTCONFIGURED

## RTP Traps

Table A-12 lists the VISM-PR Real-Time Transfer Protocol (RTP) traps.

**Table A-12** RTP Group

Trap Number	Trap Description
50650	TRAP_RTP_CONN_ADDED
50651	TRAP_RTP_CONN_DELETED
50652	TRAP_RTP_CONN_STATE_CHG

## LAPD Traps

Table A-13 lists the VISM-PR Link Access Protocol D Channel (LAPD) traps.

**Table A-13** LAPD Group

Trap Number	Trap Description
50653	TRAP_LAPD_TRSTATE_IS
50654	TRAP_LAPD_TRSTATE_OOS
50655	TRAP_LAPD_TR_ADDED
50656	TRAP_LAPD_TR_DELETED
50761	TRAP_LAPD_ADD
50762	TRAP_LAPD_DEL
50779	TRAP_LAPD_DLC_ADD
50780	TRAP_LAPD_DLC_DEL
50781	TRAP_LAPD_DLC_UP
50782	TRAP_LAPD_DLC_DOWN

## RSVP Traps

Table A-14 lists the VISM-PR Resource Reservation Protocol (RSVP) traps.

**Table A-14** RSVP Group

Trap Number	Trap Description
50672	RSVP_TRAP_NEW_FLOW
50673	RSVP_TRAP_LOST_FLOW

## Announcement Traps

Table A-15 lists the VISM-PR announcement traps.

**Table A-15**      *Announcement Group*

Trap Number	Trap Description
50674	TRAP_ANN_ADD_STARTED
50675	TRAP_ANN_LOAD_COMPLT
50676	TRAP_ANN_LOAD_FAILED
50677	TRAP_ANN_FILE_DELETD

## RUDP Traps

Table A-16 lists the VISM-PR Reliable User Datagram Protocol (RUDP) traps.

**Table A-16**      *RUDP Group*

Trap Number	Trap Description
50763	TRAP_SESSIONSET_ADD
50764	TRAP_SESSIONSET_DEL
50765	TRAP_SESSIONGRP_ADD
50766	TRAP_SESSIONGRP_DEL
50767	TRAP_RUDPSESSION_ADD
50768	TRAP_RUDPSESSION_DEL
50769	TRAP_RUDPSESSION_OOS
50770	TRAP_RUDPSESSION_IS
50771	TRAP_RUDPSESSION_PRIMARYIS
50772	TRAP_RUDPSESSION_ACTIVE
50773	TRAP_SESSIONGRP_OOS
50774	TRAP_SESSIONGRP_IS
50775	TRAP_SESSIONSET_ACTIVEIS
50777	TRAP_SESSIONSET_STANDBYIS
50778	TRAP_SESSIONSET_FULLIS



# xGCP Traps

Table A-17 lists the VISM-PR Xternal Media Gateway Control Protocols (xGCP) traps.

**Table A-17** xGCP Group

Trap Number	Trap Description
50786	TRAP_PERSISTENT_EVENT_CREATED
50787	TRAP_PERSISTENT_EVENT_DELETED





---

## Symbols

? command 10-70

---

## A

AAL1 SVC, overview 2-13

AAL2 profiles, configuring 6-22

AAL2 SVC 1-17

AAL2 trunking

configuration

CAC 6-11

CAS 6-12

CCS 6-12

CIDs 6-15

endpoints 6-12

mode 6-1

PVCs 6-3 to 6-10

configuring PVCs 6-4

overview 2-13

addannpermanent command 10-71

addcastranstbl command 10-73

addcasvar command 10-75

addccs 6-12

addccs command 10-77

addcid 6-15

addcid command 10-78

addcon 6-4, 7-3, 8-3

addcon command 10-83

addconloop 9-95

addconloop command 10-87

adddn 7-13

adddn command 10-88

addnrip 7-13

addnrip command 10-90

adddualtonedet command 10-92

addendpt 5-5, 6-14, 7-25, 8-16

addendpt command 10-94

addendptloop 9-94

addendptloop command 10-96

addendpts 6-12, 7-24, 8-14

addendpts command 10-97

addlapd 7-22, 8-13

addlapd command 10-100

addlapdtrunk command 10-101

addln command 10-103

addlnloop 9-94

addlnloop command 10-104

addmgc 10-105

addmgcgrpentry 7-14

addmgcgrpentry command 10-106

addmgcgrpprotocol 7-15

addmgcgrpprotocol command 10-108

addport 5-6

addport command 10-111

addrscrptn 5-7

addrscrptn command 10-112

addrtpcon 8-17

addrtpcon command 10-113

addrudprtrunk command 10-117

addses 7-22

addses command 10-119

addsesgrp 7-21

addsesgrp command 10-120

addsesset 7-21

addsesset command 10-121

addtoneplan command **10-122**  
 addtrapfilter command **10-127**  
 addxcppersistevt **7-19**  
 addxcppersistevt command **10-128**  
 AIS propagation  
   configure **9-30 to 9-33**  
   overview **9-29**  
 alarms, propagation  
   *See* AIS propagation  
 announcements **9-51 to 9-54**  
 ATM  
   bandwidth reuse **9-33**  
   features  
     AIS propagation **9-29**  
     bandwidth utilization **9-33 to 9-38**  
     OAM cell parameters **9-38**  
     PNNI **9-38**  
     preferred routes **9-17**  
     priority bumping **9-23**  
   statistics **9-67**  
 ATM fax relay **9-11**

---

## B

back cards  
   E1 types **1-6**  
   installation **4-4**  
   T1 types **1-6**  
 bandwidth utilization  
   ATM reuse **9-33**  
   channel rates **9-37**  
   dynamic PVC **9-34**  
 bearer features  
   ATM fax relay **9-11**  
   CAS **2-4**  
   codecs **9-4**  
   description **2-3**  
   dynamic payload **9-6**  
   fax modem tones **2-4**

  jitter **2-4, 9-9**  
   mid-call DTMF **9-16**  
   T38 fax relay **9-16**  
   VAD **2-3**  
   voice compression **2-3**  
 boot code  
   with PXM1  
     download **4-10**  
     upgrade **4-10**  
   with PXM1E  
     download **4-13**  
     upgrade **4-13**  
   with PXM45  
     download **4-13**  
     upgrade **4-13**  
 built-in tone plans **9-108**  
 bulk distribution **1-12, 5-12**  
 busy tones **9-104**

---

## C

cabling  
   E1 **4-6**  
   RJ-48 **4-5**  
 CAC  
   AAL2 trunking **6-11**  
   VoIP switching **7-10**  
   VoIP trunking **8-10**  
 CALEA **9-47**  
 call agent interface **7-11**  
 call agents **7-12**  
 call control  
   connection model **2-15**  
   description **2-14**  
   features  
     announcements **9-51 to 9-54**  
     CALEA **9-47**  
     call throttling **9-42**  
     external DNS **9-48**

- grooming **9-50**
- MGCP **9-49**
- MGX redundancy **9-48**
- ping, bearer IP **9-41**
- RSVP **9-49**
- two IP addresses **9-40**
- ISDN backhaul **9-54**
- LAPD **9-57**
- TGCP **9-43 to 9-46**
- xGCP **2-16**
- call progress tones
  - configuring
    - dual tones **9-105 to 9-106**
    - sequential tones **9-106 to 9-107**
  - defaults
    - busy tone **9-104**
    - congestion tone **9-104**
    - dual tones **9-102**
    - ring-back tone **9-103**
    - special information tone **9-104**
    - special ring-back tone **9-103**
  - overview **9-102**
  - supported tones (table) **9-102**
- call throttling **9-42**
- card
  - description **1-3**
  - hardware features **1-9**
  - physical characteristics **1-8**
  - types
    - front **1-4**
    - service **1-8**
- CAS
  - AAL2 trunking **6-12**
  - ABCD bits **9-119 to 9-124**
  - description **2-4**
  - idle code **9-96 to 9-100**
  - TDM **9-125 to 9-131**
  - VoIP trunking **8-14**
- cc command **10-130**
- CCS
  - AAL2 trunking **6-12**
  - description **2-8**
  - VoIP switching **7-22**
- channel associated signaling
  - See* CAS
- channel-associated signaling
  - See* CAS
- channel rates **9-37**
- chkflash command **10-131**
- CIDs **6-15**
- CLI
  - log files **5-5**
  - usage **5-4**
- clocking
  - description **3-1**
  - nonrevertive **3-2**
  - PXM1 **3-8**
  - PXM1E **3-12**
  - PXM45 **3-12**
  - revertive **3-2**
  - sources **3-2**
- clralm **5-5**
- clralmnt command **10-133**
- clralmnts command **10-134**
- clralm command **10-132**
- clralms command **10-135**
- clrcacfailentrs command **10-136**
- clrcesent command **10-137**
- clrcesents command **10-138**
- clrhistorystats command **10-139**
- clrmngcidnt command **10-140**
- clrrtpent command **10-142**
- clrsarnt command **10-144**
- clrsarents command **10-145**
- clrsarmsgent command **10-146**
- clrscrn command **10-147**
- clrslipent command **10-148**
- clrtaskinfo command **10-149**

- cnfaal2subcellmuxing 6-2
- cnfaal2subcellmuxing command 10-150
- cnfaal2timerparams 6-10
- cnfaal2timerparams command 10-151
- cnfaal2transparams command 10-152
- cnfadapgain command 10-153
- cnfaggsvcbw command 10-154
- cnfaissuppression command 10-155
- cnfalment command 10-159
- cnfalm command 10-157
- cnfannagetime command 10-162
- cnfanndn command 10-164
- cnfannpathprefix command 10-166
- cnfannprefcodec 10-169
- cnfannreqtimeout command 10-171
- cnfbearerrippingenable command 10-173
- cnfbert 9-94
- cnfcac command 10-174
- cnfcacparams 5-15
- cnfcacparams command 10-175
- cnfcalea command 10-176
- cnfcascode 9-124
- cnfcascode command 10-177
- cnfcasdelaydialtime command 10-179
- cnfcasdialdelay command 10-181
- cnfcasendpt command 10-183
- cnfcasflashtime command 10-185
- cnfcasglareattrib command 10-187
- cnfcasglaretime command 10-189
- cnfcasguardtime command 10-191
- cnfcasoffhooktime command 10-193
- cnfcasonhooktime command 10-195
- cnfcaspackage 10-197
- cnfcasparamsource command 10-201
- cnfcasstartdialtime command 10-203
- cnfcastransendpt command 10-205
- cnfcasvar command 10-207
- cnfcaswinktime command 10-208
- cnfcasxgcp command 10-210
- cnfcidis command 10-211
- cnfcidoos command 10-212
- cnfcclkparms 3-13
- cnfco1timer command 10-213
- cnfco2timer command 10-214
- cnfco4timer command 10-215
- cnfcodecjtrdelay command 10-216
- cnfcodecneg command 10-218
- cnfcodeparams command 10-219
- cnfcodectmpl 5-7
- cnfcodectmpl command 10-221
- cnfcompsize command 10-223
- cnfcompvad command 10-224
- cnfcon 6-6, 7-6, 8-5
- cnfconbwtoggle command 10-227
- cnfconcac command 10-228
- cnfconcacparams 6-11, 7-10, 8-10
- cnfconcacparams command 10-229
- cnfcon command 10-225
- cnfconprotect 7-7, 8-7
- cnfconprotect command 10-230
- cnfconvbdpol command 10-231
- cnfconvcci command 10-232
- cnfdeftos command 10-234
- cnfdisc timers command 10-235
- cnfdn command 10-236
- cnfdnssrvr command 10-238
- cnfds0execdiag command 10-239
- cnfds0gain command 10-240
- cnfds0localcas command 10-241
- cnfds0loop 9-95
- cnfds0loop command 10-243
- cnfds0musicthreshold command 10-244
- cnfds0sidpacket 10-245
- cnfds0sidpacket command 10-245
- cnfdspheartbeattimer command 10-246
- cnfdynamicpayload command 10-247
- cnfecanenable 5-13
- cnfecanenable command 10-248

- cnfecanrec 5-13
- cnfecanrec command 10-249
- cnfecantail 5-13
- cnfecantail command 10-250
- cnfendptcadence command 10-251
- cnfendptdntsend command 10-253
- cnferl command 10-254
- cnfexecdial command 10-255
- cnffaxrelay command 10-256
- cnffaxrelayparams command 10-257
- cnffaxrelaytimeout command 10-259
- cnfgain command 10-260
- cnfgwis 7-29
- cnfgwis command 10-261
- cnfgwoos 7-28
- cnfgwoos command 10-262
- cnfjtrmode 5-16
- cnfjtrmode command 10-263
- cnflapdretrans command 10-264
- cnflapdtimer command 10-265
- cnflapdtrunkpvc command 10-267
- cnflapdtype command 10-269
- cnflapdwinize command 10-271
- cnflinesabyte 10-272
- cnflinesabyte command 10-272
- cnfln 3-3
- cnfln command 10-273
- cnflncompanding command 10-275
- cnflndigitorder command 10-276
- cnflnexecdiag command 10-278
- cnflngain command 10-279
- cnflnis command 10-280
- cnflnmusicthreshold command 10-281
- cnflnoos command 10-282
- cnflnringback command 10-283
- cnflnsidpacket command 10-285
- cnflnsig command 10-286
- cnflntoneplan command 10-287
- cnflntonettimeout command 10-289
- cnflntrunkcond 9-124
- cnflntrunkcond command 10-291
- cnflnv110 10-293
- cnflongdurationtimer command 10-294
- cnfmgcgrpentry command 10-296
- cnfmgcgrpparam 7-14
- cnfmgcgrpparam command 10-298
- cnfmgcgrpprotocol command 10-300
- cnfmidcalltimers command 10-302
- cnfmusicthreshold command 10-303
- cnfnwcot command 10-304
- cnfoamloopcnt command 10-305
- cnfoamparams command 10-306
- cnfplayouttimestamp command 10-307
- cnfpncon command 10-309
- cnfprofelemvbd 6-25
- cnfprofelemvbd command 10-310
- cnfprofelemvoice 6-23
- cnfprofelemvoice command 10-312
- cnfprofneg command 10-314
- cnfprofparams 6-22
- cnfprofparams command 10-315
- cnfrsvp command 10-317
- cnfrsvpprefreshmiss command 10-318
- cnfrtcprepint command 10-319
- cnfrtpcon command 10-320
- cnfrtrpxtimer command 10-324
- cnfrudptrunkrmtip command 10-325
- cnfseqtonedet command 10-327
- cnfsesack 9-54
- cnfsesack command 10-329
- cnfsesmaxreset 9-54
- cnfsesmaxreset command 10-331
- cnfsesmaxseg 9-55
- cnfsesmaxseg command 10-332
- cnfsesmaxwindow 9-55, 10-333
- cnfsesmaxwindow command 10-333
- cnfsesnullsegmtout 9-55
- cnfsesnullsegmtout command 10-334

- cnfsesoutofseq 9-55
- cnfsesoutofseq command 10-335
- cnfsesport 9-55
- cnfsesport command 10-336
- cnfsesretrans 9-56
- cnfsesretrans command 10-337
- cnfsesstatetmout 9-56
- cnfsesstatetmout command 10-338
- cnfsessyncatmps 9-56
- cnfsessyncatmps command 10-339
- cnfsidpacket command 10-340
- cnfsplmodemtonedsbl command 10-341
- cnfsplmodemtoneenbl command 10-342
- cnfsrcppeer 7-20
- cnfsrcppeer command 10-343
- cnfsrcppeergrpparam 7-20
- cnfsrcppeergrpparam command 10-344
- cnfsrcpretry 7-20
- cnfsrcpretry command 10-346
- cnfssrcenable command 10-347
- cnfsvcaal2cid command 10-348
- cnfsvcqosparam command 10-349
- cnfsvctrfscalingfactor command 10-350
- cnft38fxlco command 10-351
- cnft38nsetimeout command 10-353
- cnft38params command 10-354
- cnftftpdn command 10-357
- cnftranscotmode command 10-358
- cnftrapfilterfeature command 10-359
- cnftrapfiltertimer command 10-360
- cnftrfaggclip command 10-361
- cnfvbdcodec command 10-362
- cnfvbdmarconi command 10-364
- cnfvbdpol 5-16
- cnfvbdpol command 10-365
- cnfvismdn 7-12, 8-11
- cnfvismdn command 10-366
- cnfvismip 7-12, 8-11
- cnfvismip command 10-367
- cnfvismmode 6-1, 7-1, 8-1
- cnfvismmode command 10-368
- cnfvoiptimerparam command 10-369
- cnfvoiptransparams command 10-370
- cnfxgcpbt 7-18
- cnfxgcpbt command 10-372
- cnfxgcpinteropsdpost command 10-373
- cnfxgcpmwd 7-18
- cnfxgcpmwd command 10-374
- cnfxgcppeer 7-17
- cnfxgcppeer command 10-375
- cnfxgcpretry 7-18
- cnfxgcpretry command 10-376
- codecs 9-4
  - G.729a 9-5
  - lossless compression 9-5
- command line interface
  - See CLI
- command log file 5-5
- commands
  - ? 10-70
  - addannpermanent 10-71
  - addcastranstbl 10-73
  - addcasvar 10-75
  - addccs 10-77
  - addcid 10-78
  - addcon 10-83
  - addconloop 10-87
  - adddn 10-88
  - adddnip 10-90
  - adddualtonedet 10-92
  - addendpt 10-94
  - addendptloop 10-96
  - addendpts 10-97
  - addlapd 10-100
  - addlapdtrunk 10-101
  - addln 10-103
  - addlnloop 10-104
  - addmgcgrpentry 10-106



- admgcgrpprotocol 10-108
- addport 10-111
- addrscrptn 10-112
- addrtpcon 10-113
- addrudprtrunk 10-117
- addses 10-119
- addsesgrp 10-120
- addsesset 10-121
- addtoneplan 10-122
- addtrapfilter 10-127
- addxgcppersistevt 10-128
- cc 10-130
- chkflash 10-131
- clralm 10-132
- clralment 10-133
- clralments 10-134
- clralms 10-135
- clrcacfailentrs 10-136
- clrcesent 10-137
- clrcesents 10-138
- clrhistorystats 10-139
- clrmngcident 10-140
- clrrtpent 10-142
- clrsarent 10-144
- clrsarents 10-145
- clrsarmsgent 10-146
- clrscrn 10-147
- clrslipent 10-148
- clrtaskinfo 10-149
- cnfaal2subcellmuxing 10-150
- cnfaal2timerparams 10-151
- cnfaal2transparams 10-152
- cnfadapgain 10-153
- cnfaggsvcbw 10-154
- cnfaissuppression 10-155
- cnfalm 10-157
- cnfalment 10-159
- cnfannagetime 10-162
- cnfanndn 10-164
- cnfannpathprefix 10-166
- cnfannreqtimeout 10-171
- cnfbearerippingenable 10-173
- cnfcac 10-174
- cnfcacparams 10-175
- cnfcalea 10-176
- cnfcascode 10-177
- cnfcasdelaydialtime 10-179
- cnfcasdialdelay 10-181
- cnfcasendpt 10-183
- cnfcasflashtime 10-185
- cnfcasglareattrib 10-187
- cnfcasglaretime 10-189
- cnfcasguardtime 10-191
- cnfcasoffhooktime 10-193
- cnfcasonhooktime 10-195
- cnfcasparamsource 10-201
- cnfcasstartdialtime 10-203
- cnfcastransendpt 10-205
- cnfcasvar 10-207
- cnfcaswinktime 10-208
- cnfcasxgcp 10-210
- cnfcidis 10-211
- cnfcidoos 10-212
- cnfcoltimer 10-213
- cnfco2timer 10-214
- cnfco4timer 10-215
- cnfcodecjtrdelay 10-216
- cnfcodecneg 10-218
- cnfcodeparams 10-219
- cnfcodectmpl 10-221
- cnfcompsize 10-223
- cnfcompvad 10-224
- cnfcon 10-225
- cnfconbwtoggle 10-227
- cnfconcac 10-228
- cnfconcacparams 10-229
- cnfconprotect 10-230
- cnfconvbdpol 10-231

- cnfconvcci 10-232
- cnfdeftos 10-234
- cnfdisc timers 10-235
- cnfdn 10-236
- cnfdnssrvr 10-238
- cnfds0execdiag 10-239
- cnfds0gain 10-240
- cnfds0localcas 10-241
- cnfds0loop 10-243
- cnfds0musicthreshold 10-244
- cnfds0sidpacket 10-245
- cnfdspheartbeattimer 10-246
- cnfdynamicpayload 10-247
- cnfecanenable 10-248
- cnfecanrec 10-249
- cnfecantail 10-250
- cnfendptcadence 10-251
- cnfendptdntsend 10-253
- cnferl 10-254
- cnfexecdiag 10-255
- cnffaxrelay 10-256
- cnffaxrelayparams 10-257
- cnffaxrelaytimeout 10-259
- cnfgain 10-260
- cnfgwis 10-261
- cnfgwoos 10-262
- cnfjtrmode 10-263
- cnflapdretrans 10-264
- cnflapdtimer 10-265
- cnflapdtrunkpvc 10-267
- cnflapdtype 10-269
- cnflapdwin size 10-271
- cnflinesabyte 10-272
- cnfln 10-273
- cnflncompanding 10-275
- cnflndigitorder 10-276
- cnflnexecdiag 10-278
- cnflngain 10-279
- cnflnis 10-280
- cnflnmusicthreshold 10-281
- cnflnoos 10-282
- cnflnringback 10-283
- cnflnsidpacket 10-285
- cnflnsig 10-286
- cnflntoneplan 10-287
- cnflntonetimeout 10-289
- cnflntrunkcond 10-291
- cnflnv110 10-293
- cnflongdurationtimer 10-294
- cnfmgcgrpentry 10-296
- cnfmgcgrpparam 10-298
- cnfmgcgrpprotocol 10-300
- cnfmidcalltimers 10-302
- cnfmusicthreshold 10-303
- cnfnwcot 10-304
- cnfoamloopcnt 10-305
- cnfoamparams 10-306
- cnfplayouttimestamp 10-307
- cnfpncon 10-309
- cnfprofelemvbd 10-310
- cnfprofelemvoice 10-312
- cnfprofneg 10-314
- cnfprofparams 10-315
- cnfrsvp 10-317
- cnfrsvprefreshmiss 10-318
- cnfrtcprepint 10-319
- cnfrtpcon 10-320
- cnfrtrpxtimer 10-324
- cnfrudptrunkrmtip 10-325
- cnfseqtonedet 10-327
- cnfsesack 10-329
- cnfsesmaxreset 10-331
- cnfsesmaxseg 10-332
- cnfsesmaxwindow 10-333
- cnfsesnullsegtmout 10-334
- cnfsesoutofseq 10-335
- cnfsesport 10-336
- cnfsesretrans 10-337

- cnfsesstatetmout **10-338**
- cnfsessyncatmps **10-339**
- cnfsidpacket **10-340**
- cnfsplmodemtonedsbl **10-341**
- cnfsplmodemtoneenbl **10-342**
- cnfsrcppeer **10-343**
- cnfsrcppeergpparam **10-344**
- cnfsrcpretry **10-346**
- cnfssrcenable **10-347**
- cnfsvcaal2cid **10-348**
- cnfsvcqosparam **10-349**
- cnfsvctrfscalingfactor **10-350**
- cnft38fxlco **10-351**
- cnft38nsetimeout **10-353**
- cnft38params **10-354**
- cnftftpdn **10-357**
- cnftranscotmode **10-358**
- cnftrapfilterfeature **10-359**
- cnftrapfiltertimer **10-360**
- cnftrfaggclip **10-361**
- cnfvbdcodec **10-362**
- cnfvbdmarconi **10-364**
- cnfvbdpol **10-365**
- cnfvismdn **10-366**
- cnfvismip **10-367**
- cnfvismmode **10-368**
- cnfvoiptimerparam **10-369**
- cnfvoiptransparams **10-370**
- cnfxgcpbt **10-372**
- cnfxgcpinteropsdpost **10-373**
- cnfxgcpmwd **10-374**
- cnfxgcppeer **10-375**
- cnfxgcpretry **10-376**
- delalltrapfilters **10-377**
- delannalldynamic **10-378**
- delannndynamic **10-380**
- delannpermanent **10-382**
- delcastransendpt **10-384**
- delcastranstbl **10-386**
- delcasvar **10-387**
- delccs **10-388**
- delcid **10-389**
- delcon **10-390**
- delconloop **10-391**
- deldn **10-392**
- deldnip **10-394**
- deldualtoneidet **10-395**
- delendpt **10-396**
- delendptloop **10-398**
- delendpts **10-399**
- dellapd **10-401**
- dellapdtrunk **10-402**
- delln **10-404**
- dellnloop **10-405**
- dellntoneplan **10-406**
- delmgc **10-407**
- delmgcgrpentry **10-408**
- delmgcgrpprotocol **10-409**
- delport **10-411**
- delrscrtn **10-412**
- delrtpecon **10-413**
- delrudptrunk **10-415**
- delses **10-417**
- delsesgrp **10-418**
- delseset **10-419**
- deltoneplan **10-420**
- deltrapfilter **10-422**
- delxgcpcon **10-423**
- delxgcppersistevt **10-424**
- dncon **10-425**
- dspaal2params **10-426**
- dspaal2profile **10-427**
- dspaggsvcbw **10-429**
- dspaissuppression **10-430**
- dspall **10-431**
- dspalltrapfilters **10-432**
- dspalm **10-433**
- dspalmcnf **10-434**

- dspalment 10-436
- dspalms 10-438
- dspannagetime 10-439
- dspanncache 10-441
- dspanncontrols 10-443
- dspanndn 10-445
- dspannpathprefix 10-447
- dspannpermanents 10-449
- dspannprefcodec 10-451
- dspannreqtimeout 10-453
- dspavgsvctimes 10-455
- dspcacfailcntrs 10-457
- dspcalea 10-458
- dspcarddsp 10-459
- dspcasendpts 10-460
- dspcasglareattrib 10-461
- dspcaspackage 10-463
- dspcasparamsource 10-465
- dspcastimers 10-467
- dspcastransendpts 10-469
- dspcastranstbl 10-470
- dspcastranstblendpts 10-471
- dspcastranstbls 10-472
- dspcasvar 10-473
- dspcasvarendpts 10-474
- dspcasvars 10-475
- dspcasxgcps 10-476
- dspccs 10-477
- dspccschans 10-478
- dspccsent 10-479
- dspcctimes 10-480
- dspcd 10-482
- dspcds 10-483
- dspcid 10-484
- dspcidcps 10-485
- dspcids 10-486
- dspco1timer 10-487
- dspco2timer 10-488
- dspco4timer 10-489
- dspcodecjtrdelays 10-490
- dspcodecneg 10-491
- dspcodecparams 10-492
- dspcodectmpls 10-493
- dspcon 10-494
- dspconcac 10-496
- dspconcent 10-497
- dspcons 10-499
- dspconvbdpol 10-500
- dspdiags 10-501
- dspdisctimers 10-502
- dspdnallips 10-503
- dspdnips 10-504
- dspdns 10-505
- dspdnssrvr 10-506
- dspds0execdiag 10-507
- dspds0gain 10-508
- dspds0localcasstatus 10-509
- dspds0loop 10-510
- dspds0musicthreshold 10-511
- dspds0sidpacket 10-512
- dspdualtonedet 10-513
- dspdynamicepayload 10-514
- dspendpt 10-515
- dspendptdnsend 10-517
- dspendpts 10-518
- dspexecdiag 10-519
- dspfaxmodemtrace 10-521
- dspfaxrelay 10-522
- dspfaxrelayparams 10-523
- dspfaxrelays 10-524
- dspfaxrelaytimeout 10-525
- dspfaxrelaytimeouts 10-526
- dspgain 10-527
- dspgwstate 10-528
- dspheartbeattimer 10-529
- dsphistorystats 10-530
- dsplapd 10-532
- dsplapds 10-534

- dsplapdstat 10-535
- dsplapdrunkpvc 10-536
- dsplapdrunks 10-538
- dsplinecasbits 10-540
- dsplinesabyte 10-542
- dspllcstats 10-543
- dspln 10-545
- dsplncidcps 10-547
- dsplncids 10-548
- dsplncompanding 10-549
- dsplndigitorder 10-551
- dsplndsp 10-552
- dsplndsxs 10-553
- dsplnendptstatus 10-555
- dsplnexecdiag 10-556
- dsplngain 10-557
- dsplnmusicthreshold 10-558
- dsplnringback 10-559
- dsplns 10-561
- dsplnsidpacket 10-562
- dsplnstate 10-563
- dsplntoneplan 10-564
- dsplntonetimeout 10-566
- dsplongdurationtimer 10-568
- dsploops 10-569
- dspmmaxgcs 10-571
- dspmgc 10-572
- dspmgcgrpparams 10-573
- dspmgcgrpprotocols 10-574
- dspmgcgrps 10-575
- dspmgs 10-576
- dspmprotocols 10-577
- dspmcalltimers 10-578
- dspmngcident 10-579
- dspmonecanendpt 10-581
- dspmusicthreshold 10-583
- dspnwcot 10-584
- dsपोamloopcnt 10-585
- dsपोamparams 10-586
- dsport 10-587
- dspprofparams 10-588
- dsprscprt 10-590
- dsprsvpif 10-591
- dsprsvpreq 10-592
- dsprsvpreqs 10-594
- dsprsvpresv 10-595
- dsprsvpresvs 10-597
- dsprsvsender 10-598
- dsprsvsenders 10-600
- dsprtpcnt 10-601
- dsprtpcn 10-603
- dsprtpcnstat 10-605
- dsprtpcns 10-607
- dsprudp trunk 10-609
- dsprudp trunks 10-611
- dspsarent 10-613
- dspsarents 10-614
- dspsarmsgcnt 10-615
- dspsseqtonedet 10-616
- dspses 10-617
- dspsesgrp 10-618
- dspsesgrps 10-619
- dspsess 10-620
- dspsesset 10-621
- dspsesstat 10-622
- dspsidpacket 10-623
- dspslipcnt 10-625
- dspsplmodemtone 10-626
- dspsrcpcnt 10-627
- dspsrcpcnts 10-628
- dspsrcppeer 10-629
- dspsrcppeergrpparams 10-630
- dspsrcppeers 10-631
- dspsrcpport 10-632
- dspsrcpretry 10-633
- dspsrcenable 10-634
- dspsstatparms 10-635
- dspsvcaal2cid 10-636

- dspsvccallstruct 10-637
- dspsvccalltable 10-639
- dspsvccalltimers 10-641
- dspsvccause 10-642
- dspsvccnts 10-644
- dspsvccons 10-646
- dspsvcgw 10-648
- dspsvcqosparam 10-649
- dspsvctrfscalingfactor 10-650
- dspt38fxlco 10-651
- dspt38fxlcos 10-652
- dspt38nsetimeout 10-653
- dspt38nsetimeouts 10-654
- dspt38params 10-655
- dsptaskinfo 10-656
- dsptonebuiltinplans 10-657
- dsptoneplan 10-659
- dsptoneplans 10-663
- dsptoneprovplans 10-665
- dsptoneregionplans 10-667
- dspttranscotmode 10-669
- dspttrapfilter 10-670
- dspttraphelp 10-671
- dspsvbdcodec 10-673
- dspsvbdmarconi 10-674
- dspsvbdpol 10-675
- dspsvccis 10-676
- dspsvismdn 10-677
- dspsvismip 10-678
- dspsvismparam 10-679
- dspsvoipparams 10-681
- dspxgcpbt 10-682
- dspxgpcalls 10-683
- dspxgpcids 10-684
- dspxgpcnf 10-686
- dspxgpcnt 10-687
- dspxgpcnts 10-688
- dspxgpccon 10-689
- dspxgpccons 10-692
- dspxgcpdefpkg 10-693
- dspxgcpdetailcnt 10-694
- dspxgcpdetailcnts 10-695
- dspxgcpdpt 10-696
- dspxgcpdptcons 10-698
- dspxgcpdpts 10-700
- dspxgcperrcnt 10-701
- dspxgcpinterops 10-702
- dspxgcpIncons 10-703
- dspxgcppeers 10-705
- dspxgcppersistevts 10-706
- dspxgcpport 10-707
- dspxgcpretry 10-708
- Help 10-709
- memShow 10-710
- pingIndsp 10-711
- rrtcon 10-712
- setfaxmodemtrace 10-713
- svccntsreset 10-714
- tstcon 10-715
- tstdelay 10-716
- upcon 10-717
- version 10-718
- companding law 9-118 to 9-119
- compression, lossless 9-5
- compression, voice 2-3
- conditioning, trunk 9-124
- congestion tones 9-104
- connecting cables 4-5
- connection admission control
  - See CAC
- connections
  - call control 2-15, 2-16
  - RTP
    - statistics 9-93
    - VoIP trunking 8-17
    - VISM to PXM 5-1
- connectors, RJ-48 4-5
- counters 9-94

**D**

- delalltrapfilters command **10-377**
- delannalldynamic command **10-378**
- delanndynamic command **10-380**
- delannpermanent command **10-382**
- delcastransendpt command **10-384**
- delcastranstbl command **10-386**
- delcasvar command **10-387**
- delccs command **10-388**
- delcid command **10-389**
- delcon command **10-390**
- delconloop **9-95**
- delconloop command **10-391**
- deldn command **10-392**
- deldnip command **10-394**
- deldualtonedet command **10-395**
- delendpt command **10-396**
- delendptloop command **10-398**
- delendpts command **10-399**
- dellapd command **10-401**
- dellapdtrunk command **10-402**
- delln command **10-404**
- dellnloop **9-94**
- dellnloop command **10-405**
- dellntoneplan command **10-406**
- delmgc command **10-407**
- delmgcgrpentry command **10-408**
- delmgcgrpprotocol command **10-409**
- delport command **10-411**
- delrscprtn command **10-412**
- delrtppcon command **10-413**
- delrudptrunk command **10-415**
- delses command **10-417**
- delsesgrp command **10-418**
- delseset command **10-419**
- deltoneplan command **10-420**
- deltrapfilter command **10-422**
- delxgcpcon command **10-423**
- delxgcppersistevt command **10-424**
- diagnostics
  - channel alarm **9-94**
  - clock slips **9-94**
  - DSP
    - enable **9-60 to 9-62**
    - heartbeat timer **9-62**
    - overview **9-60**
    - testing **9-60 to 9-62**
  - filtering traps **9-83 to 9-87**
  - looping **9-94 to 9-95**
  - real-time **9-69 to 9-83**
  - static **9-69 to 9-83**
  - statistics
    - ATM **9-67**
    - bulk **9-87 to 9-93**
    - CPS **9-68**
    - history **9-62 to 9-67**
    - RTP connections **9-93**
- digital signaling processor
  - See* DSP
- dncon command **10-425**
- DNS **9-48**
- domain names
  - VoIP switching **7-12**
  - VoIP trunking **8-11**
- downgrades **4-15**
- DSP
  - diagnostics
    - enabling **9-60 to 9-62**
    - heartbeat timer **9-62**
    - overview **9-60**
  - features
    - ATM fax relay **9-11**
    - codecs **9-4**
    - dynamic payload **9-6**
    - jitter **9-9**
    - mid-call DTMF **9-16**
    - T38 fax relay **9-16**

- testing 9-60 to 9-62
- dspaal2params command 10-426
- dspaal2profile command 10-427
- dspaggsvcbw command 10-429
- dspaissuppression command 10-430
- dspall command 10-431
- dspall -config 9-69 to 9-83
- dspall -runtime 9-69 to 9-83
- dspalltrapfilters command 10-432
- dspalmenf command 10-434
- dspalment command 10-436
- dspalm command 10-433
- dspalms command 10-438
- dspannagetime command 10-439
- dspanncache command 10-441
- dspanncontrols command 10-443
- dspanndn command 10-445
- dspannpathprefix command 10-447
- dspannpermanents command 10-449
- dspannprefcodec command 10-451
- dspannreqtimeout command 10-453
- dspavgsvctimes command 10-455
- dspcaefailcntrs command 10-457
- dspcalea command 10-458
- dspcarddsp command 10-459
- dspcasendpts command 10-460
- dspcasglareattrib command 10-461
- dspcaspackage command 10-463
- dspcasparamsource command 10-465
- dspcastimers command 10-467
- dspcastransendpts command 10-469
- dspcastranstbl command 10-470
- dspcastranstblendpts command 10-471
- dspcastranstbls command 10-472
- dspcasvar command 10-473
- dspcasvarendpts command 10-474
- dspcasvars command 10-475
- dspcasxgcps command 10-476
- dspccschans command 10-478
- dspccsent command 10-479
- dspccs command 10-477
- dspcctimes command 10-480
- dspcd command 10-482
- dspcds 5-3
- dspcds command 10-483
- dspcid command 10-484
- dspcidcps command 10-485
- dspcids command 10-486
- dspclparms 3-13
- dspclksres 3-14
- dspco1timer command 10-487
- dspco2timer command 10-488
- dspco4timer command 10-489
- dspcodejtrdelays command 10-490
- dspcodecneg command 10-491
- dspcodecparams command 10-492
- dspcodectmpls command 10-493
- dspconcac command 10-496
- dspconcnt command 10-497
- dspcon command 10-494
- dspcons command 10-499
- dspconvbdpol command 10-500
- dspdiags command 10-501
- dspdistributors command 10-502
- dspdnlips command 10-503
- dspdnlps command 10-504
- dspdns command 10-505
- dspdnlssvr command 10-506
- dspds0execdiag command 10-507
- dspds0gain command 10-508
- dspds0localcasstatus command 10-509
- dspds0loop command 10-510
- dspds0musicthreshold command 10-511
- dspds0sidpacket command 10-512
- dspdualtonedet command 10-513
- dspdynamicpayload command 10-514
- dspendpt command 10-515
- dspendptdnsend command 10-517



- dspendpts command 10-518
- dspexecdiag 10-519
- dspexecdiag command 10-519
- dspfaxmodemtrace 10-521
- dspfaxmodemtrace command 10-521
- dspfaxrelay command 10-522
- dspfaxrelayparams command 10-523
- dspfaxrelays command 10-524
- dspfaxrelaytimeout command 10-525
- dspfaxrelaytimeouts command 10-526
- dspgain command 10-527
- dspgwstate command 10-528
- dspheartbeattimer command 10-529
- dsphistorystats command 10-530
- dsplapd command 10-532
- dsplapds command 10-534
- dsplapdstat command 10-535
- dsplapdtrunkpvc command 10-536
- dsplapdtrunks command 10-538
- dsplinecasbits command 10-540
- dsplinesabyte 10-542
- dsplinesabyte command 10-542
- dspllcstats command 10-543
- dsplncidcps command 10-547
- dsplncids command 10-548
- dspln command 10-545
- dsplncompanding command 10-549
- dsplndigitorder command 10-551
- dsplndsp command 10-552
- dsplndsx0s command 10-553
- dsplnendptstatus command 10-555
- dsplnexecdial command 10-556
- dsplngain command 10-557
- dsplnmusicthreshold command 10-558
- dsplnringback command 10-559
- dsplns command 10-561
- dsplnsidpacket command 10-562
- dsplnstate command 10-563
- dsplntoneplan command 10-564
- dsplntonetimout command 10-566
- dsplongdurationtimer command 10-568
- dsploops command 10-569
- dspmaxmgcs command 10-571
- dspmgc command 10-572
- dspmgcgrpparams command 10-573
- dspmgcgrpprotocols command 10-574
- dspmgcgrps command 10-575
- dspmgs command 10-576
- dspmgsprotocols command 10-577
- dspmidsalltimers command 10-578
- dspmngcidcnt command 10-579
- dspmonecanendpt command 10-581
- dspmusicthreshold command 10-583
- dspnwcot command 10-584
- dspoamloopcnt command 10-585
- dspoamparams command 10-586
- dspport command 10-587
- dspprofparams command 10-588
- dsprscrptn command 10-590
- dsprsvpif command 10-591
- dsprsvpreq command 10-592
- dsprsvpreqs command 10-594
- dsprsvpresv command 10-595
- dsprsvpresvs command 10-597
- dsprsvpsender command 10-598
- dsprsvpsenders command 10-600
- dsprtpcnt command 10-601
- dsprtpcn command 10-603
- dsprtpcnstat command 10-605
- dsprtpecons command 10-607
- dsprudp trunk command 10-609
- dsprudp trunks command 10-611
- dsparent command 10-613
- dsparents command 10-614
- dsparmsgcnt command 10-615
- dspseqtonedet command 10-616
- dspses command 10-617
- dspsesgrp command 10-618

- dspsesgrps command 10-619
- dspsess command 10-620
- dspseset command 10-621
- dspsesstat command 10-622
- dspsidpacket command 10-623
- dspslipcnt command 10-625
- dspsplmodemtone command 10-626
- dspsrcpct command 10-627
- dspsrcpcts command 10-628
- dspsrcppeer command 10-629
- dspsrcppeergrpparams command 10-630
- dspsrcppeers command 10-631
- dspsrcpport command 10-632
- dspsrcpretry command 10-633
- dspsrcenable command 10-634
- dspsstatparms command 10-635
- dspsvcaal2cid command 10-636
- dspsvccallstruct command 10-637
- dspsvccalltable command 10-639
- dspsvccalltimers command 10-641
- dspsvccause command 10-642
- dspsvccnts command 10-644
- dspsvcecons command 10-646
- dspsvcgw command 10-648
- dspsvcqosparam command 10-649
- dspsvctrfscalingfactor command 10-650
- dspt38fxlco command 10-651
- dspt38fxlcos command 10-652
- dspt38nsetimeout command 10-653
- dspt38nsetimeouts command 10-654
- dspt38params command 10-655
- dsptaskinfo command 10-656
- dsptonebuiltinplans command 10-657
- dsptoneplan command 10-659
- dsptoneplans command 10-663
- dsptoneprovplans command 10-665
- dsptoneregionplans command 10-667
- dsptranscotmode command 10-669
- dsptrapfilter command 10-670
- dsptraphelp command 10-671
- dspsvbdcodec command 10-673
- dspsvbdmarconi command 10-674
- dspsvbdpol command 10-675
- dspsvccis command 10-676
- dspsvismdn command 10-677
- dspsvismip command 10-678
- dspsvismparam 6-2, 7-2, 8-2
- dspsvismparam command 10-679
- dspsvoipparams command 10-681
- dspxgcpbt command 10-682
- dspxgcpcalls command 10-683
- dspxgcpcls command 10-684
- dspxgcpclf command 10-686
- dspxgcpent command 10-687
- dspxgcpents command 10-688
- dspxgcpcon command 10-689
- dspxgcpcons command 10-692
- dspxgcpdefpkg command 10-693
- dspxgcpdetailcnt command 10-694
- dspxgcpdetailcnts command 10-695
- dspxgcpdpt command 10-696
- dspxgcpdptcons command 10-698
- dspxgcpdpts command 10-700
- dspxgcperrcnt command 10-701
- dspxgcpinterops command 10-702
- dspxgcpincons command 10-703
- dspxgcppeers command 10-705
- dspxgcppersistevts command 10-706
- dspxgcpport command 10-707
- dspxgcpretry command 10-708
- DTMF 9-16
- dual tones
  - adding 9-105
  - defaults 9-102
  - deleting 9-106
- dynamic, PVC
  - bandwidth 9-34
  - payload 9-6

---

**E**

E1 lines, configuring 5-9

ECAN

*See* echo cancellation

echo cancellation 5-13

endpoints

AAL2 trunking 6-12

VoIP switching 7-24

VoIP trunking 8-14

exec diag

enable 9-60 to 9-62

overview 9-60

---

**F**

fax modem tones 2-4

features, 3.3 1-1

firmware, upgrades

with PXM1 4-11

with PXM1E 4-14

with PXM45 4-14

front cards

installation 4-4

overview 1-4

functions

ATM

AAL1 SVC 2-13

AAL2 trunking 2-13

switched AAL2 PVC 2-12

VoIP 2-10

bearer processing

CAS 2-4

description 2-3

fax modem tones 2-4

VAD 2-3

voice compression 2-3

call control

connection model 2-15

description 2-14

xGCP 2-16

description 2-1

jitter 2-4

signaling

call processing 2-7

CAS 2-6

CCS 2-8

description 2-5

TDM 2-2

---

**G**

G.729a 9-5

gateways

configuration 7-17

placing in service 7-28

placing out of service 7-28

grooming 9-50

---

**H**

hardware

description

VISM 4-2

VISM-PR 4-2

features 1-9

installation

back cards 4-4

front cards 4-4

upgrades 4-16

Help command 10-709

---

**I**

initial configurations

allocating resources 5-6

bulk distribution 5-12

CAC **5-13, 5-14**  
 E1 lines **5-9**  
 echo cancellation **5-13**  
 jitter **5-16**  
 log in **5-2**  
 log out **5-4**  
 PXM connections **5-1**  
 T1 lines **5-9**  
 in-service state **2-17**  
 installing  
   back card **4-4**  
   front card **4-4**  
   overview **4-2**  
 IP addresses  
   bearer, adding **9-41**  
   ping, configuring **9-41**  
   VoIP switching **7-12**  
   VoIP trunking **8-11**  
 ISDN PRI backhaul  
   advanced configurations **9-54**  
   configurations **7-21**  
 IS state **2-17**

---

## J

jitter **2-4, 5-16, 9-9**

---

## L

LAPD **9-57**  
 lines, configuring  
   E1 **5-9**  
   T1 **5-9**  
 logging in **5-2**  
 logging out **5-4**  
 looping  
   connections **9-94 to 9-95**  
   lines **9-94 to 9-95**

lossless compression **9-5**

---

## M

memShow command **10-710**  
 MGCP  
   commands **2-16**  
   features **9-49**  
 MGCs **9-48**  
 MGX 8230 **4-3**  
 MGX 8250 **4-2**  
 MGX 8830 **4-3**  
 MGX 8850 **4-2**  
 mode configuration  
   AAL2 trunking **6-1**  
   VoIP switching **7-1**  
   VoIP trunking **8-1**

---

## N

nonrevertive clocking **3-2**

---

## O

OOS state **2-17**  
 operating modes  
   AAL1 SVC **1-17**  
   AAL2 SVC **1-17**  
   AAL2 trunking **1-16**  
   description **1-13**  
   switched AAL2 PVC **1-14**  
   VoIP switching **1-14**  
   VoIP trunking **1-16**  
 out-of-service state  
   *See* OOS state

**P**

- pingIndsp command **10-711**
- power **4-7**
- preferred routes
  - configuration **9-18**
  - description **9-17**
  - prerequisites **9-18**
- priority bumping
  - configuration **9-23**
  - description **9-23**
- PVC configuration
  - AAL2 trunking **6-3 to 6-10**
  - VoIP switching **7-3**
  - VoIP trunking **8-3**
- PVC features
  - See* ATM
- PXM1E **3-12**
- PXM45 **3-12**
- PXMs
  - connecting to **5-1**
  - logging in **5-2**
  - logging out **5-4**

**R**

- redundancy **1-11, 1-11 to 1-13**
- removing
  - back cards **4-7**
  - front cards **4-6**
- resources, allocating **5-6**
- Restart In Progress
  - See* RSIP
- revertive clocking **3-2**
- ring-back tones **9-103**
- rrtcon command **10-712**
- RSIP **2-17**
- RSVP **9-49**
- RTP connections **8-17**

- RUDP links **2-9**

**S**

- sequential tones **9-106**
- service states **2-17**
- service types **1-8**
- sessions, RUDP **2-9**
- setfaxmodemtrace command **10-713**
- SGCP **2-15**
- signaling
  - call processing **2-7**
  - CAS **2-6**
  - CCS processing **2-8**
  - description **2-5**
- silence suppression
  - See* VAD
- special information tones **9-104**
- special ring-back tones **9-103**
- statistics
  - ATM **9-67**
  - bulk **9-87 to 9-93**
  - CPS **9-68**
  - history **9-62 to 9-67**
- svcctxreset command **10-714**
- switched AAL2 PVC **1-14, 2-12**

**T**

- T1 lines, configuring **5-9**
- T38 fax relay **9-16**
- TDM
  - CAS **9-125 to 9-131**
  - CAS bit mapping **9-119 to 9-124**
  - companding law **9-118 to 9-119**
  - conditioning, trunk **9-124**
  - description **2-2**
  - tones, call progress **9-102 to 9-107**

tones, wireless **9-107 to 9-117**

TGCP **9-43 to 9-46**

tone detection

- fax **2-4**
- modem **2-4**

tone plans

- built-in **9-100**
- wireless
  - adding **9-112 to 9-117**
  - built-in **9-108**
  - defining **9-109 to 9-112**

transmit direction **4-6**

traps, VISM-PR

- announcement **A-8**
- CAC **A-6**
- card **A-2**
- CAS **A-6**
- channel/line **A-3**
- CID **A-4**
- connection **A-3**
- endpoint **A-4**
- filtering **9-83 to 9-87**
- HDLC **A-5**
- LAPD **A-7**
- MG **A-4**
- port **A-2**
- RSVP **A-7**
- RTP **A-7**
- RUDP **A-8**
- tone plan **A-6**
- xGCP **A-9**

Trunking Gateway Control Protocol

- See* TGCP

tstcon command **10-715**

tstdelay command **10-716**

---

## U

upcon command **10-717**

upgrades

- boot code
  - download, with PXM1 **4-10**
  - download, with PXM1E **4-13**
  - download, with PXM45 **4-13**
  - upgrade, with PXM1 **4-10**
  - upgrade, with PXM1E **4-13**
  - upgrade, with PXM45 **4-13**
- domain names **4-8**
- firmware
  - upgrade, with PXM1E **4-14**
  - upgrade, with PXM45 **4-14**
  - with PXM1 **4-11**
- hardware **4-16**
- prerequisites **4-8**

---

## V

VAD **2-3**

version command **10-718**

voice activity detection

- See* VAD

voice compression **2-3**

VoIP switching

- CAC **7-10**
- call agents **7-12**
- CCS **7-22**
- configuring PVCs **7-3**
- description **1-14**
- domain names **7-12**
- endpoints **7-24**
- gateway in service **7-28**
- gateway out of service **7-28**
- gateway port **7-17**
- IP addresses **7-12**
- ISDN PRI backhaul **7-21**
- mode **7-1**
- PVCs **7-3**

VoIP trunking

CAC **8-10**  
CAS **8-14**  
configuring PVCs **8-3**  
description **1-16**  
domain names **8-11**  
endpoints **8-14**  
IP addresses **8-11**  
mode **8-1**  
overview **8-1**  
PVCs **8-3**  
RTP connections **8-17**

---

## **W**

wireless tones  
adding **9-112 to 9-117**  
file definition **9-109 to 9-112**  
list **9-108**  
overview **9-107**

---

## **X**

xGCP **2-16**