



Cisco StrataCom SuperUser Command Reference

Release 8.2.5

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About This Manual xi

- Objectives xi
- Audience xi
- About the Cisco Product Name Change xi
- Organization xi
- Conventions xii

Chapter 1 Super User Commands 1-1

- Introduction 1-1
- General Information 1-1
- Command Help 1-4
- Commands 1-4
- burnfwrev (Burn Firmware Image into Card(s)) 1-6
- clrcderrs (Clear Detailed Card Errors) 1-8
- clrcnf (Clear Configuration Memory) 1-10
- clrfpevt (Clear FastPAD Event Reporting) 1-11
- cnfbmpparm (Configure Priority Bumping Parameters) 1-13
- cnfcdpparm (Configure CDP Card Parameters) 1-15
- cnfcftst (Configure Communication Fail Test Pattern) 1-17
- cnfchsts (Configure Channel Timestamp) 1-22
- cnfclnparm (Configure Circuit Line Parameter) 1-24
- cnfclnstats (Configure Circuit Line Statistics) 1-27
- cnfcmparm (Configure Connection Management Parameters) 1-29
- cnfdlparm (Configure Download Parameters) 1-33
- cnfecparm (Configure Echo Canceller Parameters) 1-36
- cnffpcon (Configure FastPAD Connection Parameters) 1-39
- cnffpdelay (Configure FastPAD Delay) 1-40
- cnffpdpvc (Configure FastPAD PVC) 1-41
- cnffpmap (Configure FastPAD Map Table) 1-42
- cnffpport (Configure FastPAD Port) 1-43
- cnffpsys (Configure FastPAD System Parameters) 1-44
- cnffstparm (Configure ForeSight Node Parameter) 1-45
- cnflnparm (Configure ATM Line Card Parameter) 1-49
- cnflnsigparm (Configure Line Signalling Parameters) 1-51
- cnflnstats (Configure Line Statistics Collection) 1-52

cnfmxbutil (Configure MUXBUS Utilization) 1-54
cnfnodeparm (Configure Node Parameter) 1-56
cnfnwip (Configure Network IP Address) 1-62
cnfportstats (Configure Frame Relay Port Statistics Collection) 1-64
cnfrobparm (Configure Robust Alarms Parameters) 1-67
cnfslotstats (Configure Slot Statistics Collection) 1-69
cnftcpparm (Configure TCP Parameters) 1-71
cnftrkparm (Configure Trunk Parameters) 1-72
cnftrkstats (Configure Trunk Statistics Collection) 1-76
cnfstparm (Configure Card Self Test Parameters) 1-82
cnfuiparm (Configure User Interface Parameters) 1-84
cnfvchparm (Configure Voice Channel Parameter) 1-86
cpyfpmmap (Copy FastPAD Map Table) 1-89
dchst (Display Channel Status) 1-90
diagbus (Diagnose Failed Bus) 1-92
drtop (Display Route Op Table) 1-93
dspasich (Display ASI Channel Routing Entry) 1-94
dsbpmst (Display Priority Bumping Statistics) 1-95
dsfbuses (Display Bus Status) 1-97
dspcderrs (Display Card Errors) 1-98
dspcftst (Display Comm. Fail Test Pattern) 1-99
dspchan (Display Channel Configuration) 1-100
dspchstatcnf (Display Statistics Enabled For A Channel) 1-102
dspchstathist (Display Statistics History For A Channel) 1-103
dspclnstatcnf (Display Circuit Line Statistics Configuration) 1-105
dspclnstathist (Display Statistics History For A Circuit Line) 1-106
dspcnf (Display Configuration Save/Restore Status) 1-107
dspdnld (Display Download) 1-108
dspdul (Display Data Channel Utilization) 1-110
dspecparm (Display Echo Canceller Parameters) 1-112
dspfpdsc (Display FastPAD Card Descriptor) 1-114
dspfwrev (Display Firmware Revision) 1-115
dsplnstatcnf (Display Statistics Enabled for a Line) 1-117
dsplnstathist (Display Statistics Data for a Line) 1-118

dsplnmcons (Display Packet Line Connection Counts)	1-119
dspportstatcnf (Display Statistics Enabled For A FR Port)	1-120
dspportstathist (Display Statistics History For A FR Port)	1-121
dsprevs (Display Revisions)	1-123
dsprobst (Display Robust Statistics)	1-125
dsprrst (Display Reroute Statistics)	1-126
dspsig (Display Signalling)	1-128
dspslot (Display Slot)	1-129
dspsstatmem (Display Statistics Memory Use)	1-131
dsptcparm (Display TCP Parameters)	1-132
dsprkcons (Display Trunk Connection Counts)	1-133
dsprkmcns (Display Trunk Connection Counts by Master Node)	1-134
dsprkstatcnf (Display Statistics Enabled For A Trunk)	1-135
dsprkstathist (Display Statistics History for a Trunk)	1-137
dsputl (Display Utilization)	1-139
forcerev (Force Revision)	1-141
getfwrev (Get Firmware Revision)	1-143
loadcnf (Load Configuration)	1-144
loadrev (Load Revision)	1-145
prtderrs (Print Card Errors)	1-146
rrtcon (Reroute Connection)	1-147
rststats (Reset Statistics Collection Time)	1-148
runcnf (Run Configuration)	1-149
runrev (Run Revision)	1-150
savecnf (Save Configuration)	1-151
setfpevt (Set FastPAD Event Reporting)	1-153
tststats (Test Statistics)	1-154

- Figure 1-1** burnfwrev—Burn Firmware Revision into Card 1-7
- Figure 1-2** clrcderrs—Clear Card Errors (before confirmation) 1-8
- Figure 1-3** clrcderrs—Clear Card Errors (after confirmation) 1-9
- Figure 1-4** Clrcnf—Clear Node Configuration 1-10
- Figure 1-5** Clrfpevt—Clear FastPAD Event Reporting 1-11
- Figure 1-6** cnfadcom—Configure Access Device Communication Parameters 1-12
- Figure 1-7** cnfbmpparm—Configure Priority Bumping Parameter Values 1-13
- Figure 1-8** cnfcftst—Configure Communication Fail Test Pattern 1-18
- Figure 1-9** cnfcfln—Configure Circuit Line Alarm Integration Times 1-24
- Figure 1-10** cnfcflnsigparm—Configure Circuit Line Signalling Parameters 1-25
- Figure 1-11** cnfcflnstats—Configure Circuit Line Statistics (T1 Line) 1-28
- Figure 1-12** cnfcmparm—Configure Connection Management Parameters 1-30
- Figure 1-13** cnfdiagparm—Configure Diagnostic Test Parameters 1-32
- Figure 1-14** cnfdlparm—Configure Download Parameters 1-35
- Figure 1-15** cnfecparm—Configure Echo Canceller Parameters 1-37
- Figure 1-16** cnffpcom—Configure FastPAD Communication Parameters 1-38
- Figure 1-17** cnffpcon—Configure FastPAD Connection Parameters 1-39
- Figure 1-18** cnffpdelay—Configure FastPAD Delay 1-40
- Figure 1-19** cnffpdpvc—Configure FastPAD PVC 1-41
- Figure 1-20** cnffpmap—Configure FastPAD Map Table 1-42
- Figure 1-21** cnffpport—Configure FastPAD Port Parameters 1-43
- Figure 1-22** cnffpsys—Configure System Parameters 1-44
- Figure 1-23** cnffstparm—Configure ForeSight Parameters 1-45
- Figure 1-24** cnflan—Configure LAN Parameters 1-48
- Figure 1-25** cnflnparm—Configure ATM Line Card Parameters 1-49
- Figure 1-26** cnflnsigparm—Configure Line Signalling Parameters 1-51
- Figure 1-27** cnflnstats—Configure Line Statistics 1-53
- Figure 1-28** cnfmxbutil—Configure MUXBUS Utilization 1-55
- Figure 1-29** cnfnodeparm—Configure Node Parameters (BPX) 1-61
- Figure 1-30** cnfnwip—Configure Network IP Address 1-63
- Figure 1-31** cnfportstats—Configure Port Statistics (Screen 1) 1-65
- Figure 1-32** cnfportstats—Configure Port Statistics (Screen 2) 1-66
- Figure 1-33** cnfrobparm—Configure Robust Alarm Parameters 1-68
- Figure 1-34** cnfslotstats—Configure Slot Statistics Parameters 1-70

Figure 1-35	Configure TCP Parameters	1-71
Figure 1-36	cnftrkparm for an IPX	1-73
Figure 1-37	cnftrkparm for a BPX Trunk	1-74
Figure 1-38	cnftrkparm for a Virtual Trunk	1-75
Figure 1-39	cnftrkstats—Configure T1 Trunk Statistics	1-77
Figure 1-40	cnftrkstats—Configure ATM Trunk Statistics (Screen 1)	1-78
Figure 1-41	cnftrkstats—Configure ATM Trunk Statistics (Screen 2)	1-78
Figure 1-42	cnftrkstats—Configure ATM Trunk Statistics (Screen 3)	1-79
Figure 1-43	cnftrkstats—Configure ATM Trunk Statistics (Screen 4)	1-79
Figure 1-44	cnftrkstats—Configure ATM Trunk Statistics (Screen 5)	1-80
Figure 1-45	cnftrkstats—Configure ATM Trunk Statistics (Screen 6)	1-80
Figure 1-46	cnftrkstats—Configure ATM Trunk Statistics (Screen 7)	1-81
Figure 1-47	cnftstparm—Configure Card Self-Test Parameters	1-83
Figure 1-48	cnfuiparm—Configure User Interface Parameters	1-85
Figure 1-49	cpyfpmmap—Configure FastPAD Map Table	1-89
Figure 1-50	dchst—Display Channel Status	1-91
Figure 1-51	drtop—Display Route Op Table	1-93
Figure 1-52	dspasich—Display ASI Channel Routing Entry	1-94
Figure 1-53	dspbmpst—Display Priority Bumping Statistics	1-96
Figure 1-54	dspbuses—Display Bus Status	1-97
Figure 1-55	dspcderrs—Display Card Errors	1-98
Figure 1-56	dspcftst—Display Comm. Fail Test Pattern	1-99
Figure 1-57	dspchan—Display Channel (CDP card)	1-101
Figure 1-58	dspchstatcnf—Display Channel Statistics Enabled (FR channel)	1-102
Figure 1-59	dspchstathist—Display Channel Statistics History	1-104
Figure 1-60	dspclnstatcnf—Display Circuit Line Statistics Enabled (T1 line)	1-105
Figure 1-61	dspclnstathist—Display Circuit Line Statistics History	1-106
Figure 1-62	dspcnf—Display Configuration Save/Restore Status	1-107
Figure 1-63	dspdnd—Display Download	1-109
Figure 1-64	dspdutl—Display Data Channel Utilization	1-111
Figure 1-65	dspecparm—Display Echo Cancellor Parameters	1-113
Figure 1-66	dspfpdsc—Display FastPAD Card Descriptor	1-114
Figure 1-67	dspfwarev—Display Firmware Revision	1-116
Figure 1-68	dsplnstatcnf—Display Statistics Enabled for a Line	1-117

Figure 1-69	dsplnstathist—Display Statistics Data for a Line	1-118
Figure 1-70	dsplnmcons—Display Packet Line Connection Counts	1-119
Figure 1-71	dspportstatcnf—Display Port Statistics Enabled	1-120
Figure 1-72	dspportstathist—Display Port Statistics History	1-121
Figure 1-73	dsprevs—Display Revisions	1-124
Figure 1-74	dsprobparm—Display Robust Communications Statistics	1-124
Figure 1-75	dsprobst—Display Robust Statistics	1-125
Figure 1-76	dsprrst—Display Reroute Statistics	1-127
Figure 1-77	dspsig—Display Signalling	1-128
Figure 1-78	dspslot—Display Slot	1-129
Figure 1-79	dspsstatmem—Display Statistics Memory Usage	1-131
Figure 1-80	dsptcpparm—Display TCP Parameters	1-132
Figure 1-81	dsprtkcons—Display Trunk Connection Counts	1-133
Figure 1-82	dsprtkmcons—Display Trunk Connection Counts by Master Node	1-134
Figure 1-83	dsprtkstatcnf—Display E3 Trunk Statistics Enabled (Screen 1)	1-135
Figure 1-84	dsprtkstatcnf—Display T1Trunk Statistics Enabled (Screen 2)	1-136
Figure 1-85	dsprtkstathist—Display Trunk Statistics History	1-138
Figure 1-86	dsputl—Display Voice Channel Utilization	1-140
Figure 1-87	forcerev—Force Revision Down a Line	1-142
Figure 1-88	rststats—Reset Statistics Collection Time	1-148
Figure 1-89	setfpevt—Set FastPAD Event Reporting	1-153
Figure 1-90	tststats—Display Test Statistics	1-155

LIST OF TABLES

Table 1-1	Super User Command List	1-2
Table 1-2	Priority Bumping Parameters	1-14
Table 1-3	CDP Card Parameters	1-16
Table 1-4	Channel Statistic Types	1-20
Table 1-5	Circuit Line Signalling Parameters	1-26
Table 1-6	Circuit Line Statistic Types	1-27
Table 1-7	Connection Management Parameters	1-29
Table 1-8	Diagnostic Parameters	1-31
Table 1-9	Configurable Downloading Parameters	1-33
Table 1-10	Echo Canceller Parameters	1-36
Table 1-11	ForeSight Node Parameters	1-46
Table 1-12	Statistic Types for Lines	1-52
Table 1-13	Node Parameters (IPX/IGX Nodes)	1-56
Table 1-14	Node Parameters (BPX Nodes)	1-58
Table 1-15	Frame Relay Port Statistic Types	1-64
Table 1-16	Robust Communications Parameters	1-67
Table 1-17	Slot Errors	1-69
Table 1-18	IPX/IGX Trunk Parameters	1-73
Table 1-19	BPX Trunk Parameters	1-74
Table 1-20	Virtual Trunk Parameters	1-75
Table 1-21	Trunk Statistics Types	1-76
Table 1-22	User Interface Parameters	1-84
Table 1-23	VF Channel Parameters	1-87
Table 1-24	Sample Delay Parameter	1-87
Table 1-25	Injected Noise Levels for Model B	1-87
Table 1-26	Display Channel Status Parameters for CDP or CVM	1-90
Table 1-27	Priority Bumping Statistics	1-95
Table 1-28	Voice Channel Configuration Parameters	1-100
Table 1-29	Echo Canceller Parameters	1-112
Table 1-30	Status of Node Software Revisions	1-123
Table 1-31	Display Reroute Statistics	1-126
Table 1-32	Display Slot Parameters	1-130



About This Manual

This section discusses the objectives, audience, organization, and conventions of the *Cisco WAN Switching SuperUser Command Reference* publication.

Cisco documentation and additional literature are available in a CD-ROM package, which ships with your product. The Documentation CD-ROM, a member of the Cisco Connection Family, is updated monthly. Therefore, it might be more up-to-date than printed documentation. To order additional copies of the Documentation CD-ROM, contact your local sales representative or call customer service. The CD-ROM package is available as a single package or as an annual subscription. You can also access Cisco documentation on the World Wide Web at <http://www.cisco.com>, <http://www-china.cisco.com>, or <http://www-europe.cisco.com>.

Objectives

This publication describes the user privilege level 0 (super-user) commands.

Audience

The Cisco WAN Switching command line interface lets you control the network from a level somewhat below that provided by StrataView Plus. Therefore, this document helps network designers and operators to set up, manage, and troubleshoot networks.

About the Cisco Product Name Change

The Cisco WAN Switching products have new names. The BPX switch is now called the Cisco BPX® 8620 wide area switch, The AXIS shelf is now called the Cisco MGX™ 8220 edge concentrator, Any switch in the IGX switch family (IGX 8, IGX 16 and IGX 32 wide area switches) is now called the Cisco IGX™ 8400 series wide area switch. The IGX 8 switch is now called the Cisco IGX™ 8410 wide area switch. The IGX 16 switch is now called the Cisco IGX™ 8420 wide area switch, and the IGX 32 switch is now called the Cisco IGX™ 8430 wide area switch.

Organization

The major section of this publication is as follows:

- Chapter 1, “Super User Commands.”

Conventions

This publication uses the following conventions to convey instructions and information.

Command descriptions use these conventions:

- Commands and keywords are in **boldface**.
- Arguments for which you supply values are in *italics*.
- Required command arguments are inside angle brackets (< >).
- Optional command arguments are in square brackets ([]).
- Alternative keywords are separated by vertical bars (|).

Examples use these conventions:

- Terminal sessions and information the system displays are in `screen font`.
- Information you enter is in **boldface screen font**.
- Nonprinting characters, such as passwords, are in angle brackets (< >).
- Default responses to system prompts are in square brackets ([]).

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



Timesaver Means *the described action saves time*. You can save time by performing the action described in the paragraph.



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



Warning This warning symbol means *danger*. You are in a situation that could cause bodily injury. Before you work on any equipment, you must be aware of the hazards involved with electrical circuitry and familiar with standard practices for preventing accidents. (To see translated versions of this warning, refer to the *Regulatory Compliance and Safety Information* document that accompanied the product.)

Super User Commands

Introduction

This chapter contains detailed descriptions of the Cisco WAN Switching software Release 8.2.5 super user commands. The Cisco WAN Switching super user command descriptions appear in alphabetical order. Access to these commands requires user-privilege level 0 (zero).



Caution Use of these commands should be restricted to Cisco personnel and other qualified users, such as System Administrators. Do not distribute this information to casual users because improper use of some super user commands may lead to system malfunction or complete failure.

General Information

Note Access to the super user commands (privilege level 0) requires a different login and password than access to commands with privilege levels 1 through 6.

Because the privilege level for all super user commands is 0, the privilege level does not appear in the command definition.

Table 1-1 lists the Cisco WAN Switching level 0 (super user) commands in alphabetical order. The table also lists the nodes on which each command is available and whether you can include the command in a job. To access these commands, type in **SuperUser** at the login prompt. Enter the super user password and the password prompt. To exit a command at any point, press the Delete key.

The screen examples in this chapter are based on a network containing an IPX, IGX, or BPX or any combination of these nodes. For detailed descriptions of commands requiring a user-privilege level in the range 1–6, refer to the *Cisco WAN Switching Command Reference*.

General Information

Table 1-1 Super User Command List

Command	Description	Job	IPX	IGX	BPX
burnfwrev	Burn Firmware Revision	Yes	X	X	X
clrcderrs	Clear Detailed Card Errors Log	Yes	X	X	X
clrcnf	Clear Configuration Memory	No	X	X	X
clrfpevt	Clear FastPAD Event Reporting	No	X	X	
cnfcdpparm	Configure CDP Card Parameters	No	X	X	
cnfcftst	Configure Communications Fail Test Pattern	No	X	X	X
cnfchstas	Configure Channel Statistics Collection	Yes	X	X	X
cnfchsts	Configure Channel Timestamp	Yes	X	X	X
cnfclnparm	Configure Circuit Line Parameters	No	X	X	
cnfclnsigparm	Configure Circuit Line Signalling Parameters	No	X	X	
cnfclnstats	Configure Circuit Line Statistics Collection	Yes	X	X	
cnfcmparm	Configure Connection Management Parameters	Yes	X	X	X
cnfdiagparm	Configure Diagnostic Test Parameters	No	X	X	X
cnfdlparm	Configure Download Parameters	No	X	X	X
cnfecparm	Configure Echo Cancellor Parameters	Yes	X	X	
cnffpcom	Configure FastPAD Communication Parameter	Yes	X	X	
cnffpcon	Configure FastPAD Connection Parameters	Yes	X	X	
cnffpddelay	Configure FastPad Sc/Mc Parameters	No	X	X	
cnffpdpvc	Configure FastPad bc/bc pvc Parameters	No	X	X	
cnffpmap	Configure FastPAD Map Table	Yes	X	X	
cnffpport	Configure FastPAD Port Parameters	No	X	X	
cnffpsys	Configure FastPAD System Parameters	No	X	X	
cnffstparm	Configure Frame Relay ForeSight Node Parameters	No	X	X	X
cnflan	Configure LAN	No	X	X	X
cnflnparm	Configure ATM Line Parameters	No			X
cnflnsigparm	Configure Line Signalling Parameters	No	X	X	
cnflnstats	Configure Line Statistics Collection	Yes	X	X	X
cnfmxbutil	Configure MUXBUS Utilization	No	X	X	
cnfnodeparm	Configure Node Parameters	No	X	X	X
cnfnwip	Configure Network IP Address	No	X	X	X
cnfportstats	Configure FR Port Statistics Collection	Yes	X	X	
cnfrobparm	Configure Robust Alarms Parameters	No	X	X	X
cnfslotstats	Configure Slot Statistics Collection	Yes			X
cnftcpparm	Configure TCP Parameters	Yes	X	X	X
cnftlparm	Configure Trunk-based Loading Parameters	No	X	X	X
cnftrkparm	Configure Trunk Parameters	No	X	X	X
cnftrkstats	Configure Trunk Statistics Collection	Yes	X	X	X

Table 1-1 Super User Command List (Continued)

Command	Description	Job	IPX	IGX	BPX
cnfststparm	Configure Card Self Test Parameters	Yes	X	X	X
cnfuiparm	Configure User Interface Parameters	No	X	X	X
cnfvmchparm	Configure UVM Channel Parameters	X		X	
cnfvchparm	Configure Voice Channel Parameters	Yes	X	X	
cpyfpmmap	Copy FastPAD Map Table	Yes	X	X	
dchst	Display CDP Channel Status	No	X	X	
diagbus	Diagnose Failed Bus	No	X	X	
drtop	Display Route Op Table	No	X	X	X
dspasich	Display ASI Channel Routing Entry	No			X
dspbuses	Display Bus Status	No	X	X	X
dspcederrs	Display Card Errors	No	X	X	X
dspcftst	Display Communications Fail Test Pattern	No	X	X	X
dspchan	Display Channel Configuration	No	X	X	
dspchstatcnf	Display Statistics Enabled for a Channel	No	X	X	
dspchstathist	Display Statistics Data for a Channel	No	X	X	
dspclnstatcnf	Display Statistics Enabled for a Circuit Line	No	X	X	
dspclnsthathist	Display Statistics History for a Circuit Line	No	X	X	X
dspcnf	Display Config. Save/Restore Status	No	X	X	X
dspdnl	Display Download	No	X	X	X
dspdutl	Display Data Channel Utilization	No	X	X	
dspcparm	Display Echo Canceller Parameters	No	X	X	
dspfpdsc	Display FastPAD Card Descriptor Parameters	No	X	X	
dspfwrrev	Display Firmware Revision	No	X	X	X
dsplnstatcnf	Display Statistics Enabled for a Line	No	X	X	X
dsplnsthathist	Display Statistics Data for a Line	No	X	X	X
dspplnmecons	Display Packet Line Connection Counts	No	X	X	
dspportstatcnf	Display Statistics Enabled for a FR Port	No	X	X	
dspportsthathist	Display Statistics Hist for a FR Port	No	X	X	
dsprevs	Display Revisions	No	X	X	X
dsprobst	Display Robust Statistics	No	X	X	X
dsprrst	Display Reroute Statistics	No	X	X	X
dspsig	Display Signalling	No	X	X	
dspslot	Display Slot	No	X	X	X
dspslotstatcnf	Display Statistics Enabled for a Slot	No	X	X	X
dspslotsthathist	Display Statistics Hist for a Slot	No	X	X	X
dspstatmem	Display Statistics Memory Use	No	X	X	X
dsptcpparm	Display TCP Parameters	No	X	X	X
dsptrkcons	Display Trunk Connection Counts	No	X	X	X

Table 1-1 Super User Command List (Continued)

Command	Description	Job	IPX	IGX	BPX
dsprkmcons	Display Trunk Connection Counts by Master Node	No	X	X	X
dsprkstatcnf	Display Statistics Enabled for a Trunk	No	X	X	X
dsprksthist	Display Statistics History for a Trunk	No	X	X	X
dsputl	Display Voice Connection Utilization	No	X	X	
forcerev	Force Revision	No	X	X	X
getfwrev	Get Firmware Revision	Yes	X	X	X
loadcnf	Load Configuration	Yes	X	X	X
loadrev	Load Revision	No	X	X	X
prtcderes	Print Card Errors	Yes	X	X	X
rrtcon	Reroute Connection	Yes	X	X	X
rststats	Reset Statistics Collection Time	Yes	X	X	X
runcnf	Run Configuration	No	X	X	X
runrev	Run Revision	No	X	X	X
savecnf	Save Configuration	Yes	X	X	
setfpevt	Set FastPAD Events	No	X	X	
tststats	Test Statistics	No	X	X	X

Command Help

The StrataView Plus (SV+) workstation provides on-line help for all IPX/IGX/BPX commands. On-line help can be accessed through the StrataView Plus FrameViewer icon. On-line help provides an abbreviated version of the information in this document, including the command function, syntax, and attributes. Hypertext links allow you to navigate through the various commands.

Commands

The pages in the remainder of this chapter contain the description of the super user commands in alphabetical order. Whenever applicable, the command description includes a description of the options and at least one example of a typical screen display for the command.

Note Due to space considerations, some screens show “SV+” in place of StrataView Plus, the trademarked name of this Cisco product.

This manual is valid only for Release 8.2.5 or later system software. Commands that apply to older cards used with older software or that have been replaced by newer cards are not represented here. Refer to the *Rel. 6.2 IPX SuperUser Commands User Guide* for commands that operate on the older cards or their newer replacements.

Note Beginning with Release 7.0, you can substitute a trunk-related command for a corresponding packet line command. For example, you can use the **dsprkcon** command in place of **dsplncon**.

All commands that work on an IPX also work on an IGX.

burnfwrev (Burn Firmware Image into Card(s))

The **burnfwrev** command burns a new firmware image into a specific card.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

dspfwrev, getfwrev

Syntax

burnfwrev <image name> <slot number>

<image name> specifies the name of the firmware image to burn. Image names are generally in all capital letters and are case-sensitive when being entered.

<slot number> specifies the shelf slot where the card to burn is located. Specifying slot 0 will burn all cards of the appropriate type at the local node.

Function

This command is used to burn (load) a firmware image into the memory of a specific IPX/IGX/BPX card. Before using this command, the firmware image must have already been loaded into controller card's memory by the **getfwrev** command. A few seconds after issuing this command, the system displays a screen similar to Figure 1-1. A few moments later, the burn address column will start to indicate the addresses that are being "burned". When finished, the status will change to "Complete".

After all cards at a node have been updated with this command, issue a **getfwrev 0.0** node name command. This command will clear the firmware image from the controller card's buffer area, allowing the buffer to be used for other purposes. Use the **dspfwrev** command to display the firmware image status on the controller card at any other time after the burn has been completed.

At the super user level (0), this command can only be used to change the revision level of a card's firmware. If the firmware revision results in a new model number for the card, only a user with the Cisco privilege level will be able to burn the firmware image.

Figure 1-1 burnfwrev—Burn Firmware Revision into Card

gamma TRM SuperUser Rev: 8.2.5 Aug. 17 1996 14:28 PDT

Firmware Size Status
F.D.A 256 K Burning into slot 19 (6 lives)

File	Address	Length	CRC	Burn Address
0	800000	10	E986E939	
1	800800	410	22996DDA	
2	801000	2D40	B212147F	
3	805E60	480	85CB29EA	
4	80A630	70	57A938AE	
5	80A6B0	20	4B9E8DDC	
6	810000	10000	338E45F6	
7	820000	4400	95990113	
8	835000	1810	875771B2	
9	8368A0	15D0	4C597B97	

This Command: burnfwrev

Continue?

clrcderrs (Clear Detailed Card Errors)

The **clrcderrs** command clears the history of card failures (errors) associated with the specified slot.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

dspcderrs, prtderrs

Syntax

clrcderrs <slot number | *>

<slot number | *> specifies the slot number to clear. A "*" can be entered to clear all cards.

Function

This command clears the history of card failures associated with the specified slot. When you enter this command system responds with Slot Number or *. After you enter the command, the system asks you to confirm that it is OK to clear this data.

For example, to clear the data from the FRM card in slot 3, enter the command illustrated in Figure 1-3. This screen also illustrates the card's stored data.

Figure 1-2 clrcderrs—Clear Card Errors (before confirmation)

```
pubsigx1            TN      SuperUser            IGX 32      8.2.5            Jan. 5 1997 18:48 GMT

FRM in Slot 3    : 172240 Rev ESJ      Failures Cleared: Date/Time Not Set
-----
Records Cleared: Date/Time Not Set
Self Test            Threshold Counter: 0            Threshold Limit: 300
Total Pass: 495            Total Fail: 0            Total Abort: 2
First Pass: Date/Time Not Set      Last Pass: May 29 1996 19:36:48 GMT
First Fail:                            Last Fail:

Background Test    Threshold Counter: 0            Threshold Limit: 300
Total Pass: 29849            Total Fail: 0            Total Abort: 0
First Pass: Date/Time Not Set      Last Pass: Jan. 5 1997 18:46:34 GMT
First Fail:                            Last Fail:

Hardware Error      Total Events: 0            Threshold Counter: 0
First Event:                            Last Event:

This Command: clrcderrs 3

OK to clear (y/n)?
```

After replying 'y' (yes) to the confirmation prompt, the screen appears as in Figure 1-3.

Figure 1-3 clrcderrs—Clear Card Errors (after confirmation)

```

pubsigx1      TN      SuperUser      IGX 32      8.2.5      Jan. 5 1997 18:55 GMT

FRM in Slot 3 : 172240 Rev ESJ      Failures Cleared: Date/Time Not Set
-----
Self Test      Threshold Counter: 0      Threshold Limit: 300
Total Pass: 0      Total Fail: 0      Total Abort: 0
First Pass:      Last Pass:
First Fail:      Last Fail:

Background Test      Threshold Counter: 0      Threshold Limit: 300
Total Pass: 0      Total Fail: 0      Total Abort: 0
First Pass:      Last Pass:
First Fail:      Last Fail:

Hardware Error      Total Events: 0      Threshold Counter: 0
First Event:      Last Event:

Last Command: clrcderrs 3

Next Command:

```

clrcnf (Clear Configuration Memory)

The **clrcnf** command clears the configuration memory at the current node and resets the node.

Attributes

Jobs: No Log: No Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

loadcnf, runcnf, savecnf

Syntax

clrcnf

Function

The **clrcnf** command erases most network configuration data. This configuration data includes connections, trunks, circuit lines, and so on, for the local node. You may need to use the **clrcnf** command when you upgrade the network with a new software release or when you move a node. Before the command executes, a warning and a confirmation prompt. Figure 1-4 illustrates a typical screen.

This command should be used only on a node that has not yet been placed in service or when the network configuration has been previously saved so it can be quickly reloaded. The configuration can be saved in one of several ways:

- On a StrataView Plus (SV+) terminal using the **savecnf** command. The node is then reloaded using the **loadcnf** command.
- On a standby controller card. Before entering the **clrcnf** command, remove the standby controller from its slot. The configuration data will be maintained in BRAM even though the power has been removed from the card.



Caution Use the **clrcnf** command with great care. It is best not to use it unless specifically instructed to do so by Cisco TRT as it can make the node unreachable to the network.

Figure 1-4 **Clrcnf—Clear Node Configuration**

```
*** Warning: ***  
This command clears the configuration memory and resets the Node.
```

```
This Command: clrcnf  
  
Are you sure (y/n)?
```

clrfpevt (Clear FastPAD Event Reporting)

The **clrfpevt** command disables the reporting of FastPAD events.

Attributes

Jobs: No Log: Lock: Node Type: IPX, IGX

Associated Commands

setfpevt

Syntax

clrfpevt <FastPAD name> | <slot.port>

Function

Figure 1-5 **Clrfpevt—Clear FastPAD Event Reporting**

cnfadcom (Configure Access Device Communication Parameter)

The **cnfadcom** command configures communication parameters for the concentrated link between an access device and an FTC or FTM.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

None

Syntax

cnfadcom <slot.port> | <name> <trans timer> <alive timer> <retry count>

- <slot.port> specifies the slot.port of the card to which the access device connects.
- <name> specifies the name of the access device that connects to the port.
- <trans timer> specifies the transmission timer.
- <alive timer> specifies the keep alive timer value.
- <retry count> specifies the retry count value.

Function

The **cnfadcom** command configures the access device communication parameters. When you enter **cnfadcom**, the system begins requesting parameters as in the following example:

Figure 1-6 cnfadcom—Configure Access Device Communication Parameters

```
sw25                      TN      SuperUser                      IPX 8                      8.2.5      Apr. 3 1997      14:17 GM
```

```
This Command: cnfadcom 4.2
```

```
Enter transmission timer:
```

cnfbmparm (Configure Priority Bumping Parameters)

The **cnfbmparm** command configures the parameters for the optional priority bumping feature.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

dspbmpst

Syntax

cnfbmparm <index> <value>

<index> specifies the index number of the parameter to change. Priority bumping parameters are listed in Table 1-2.

<value> specifies the value for the parameter.

Function

This command enables the optional priority bumping feature and sets its various parameters. Network-wide values should only be changed when all nodes are reachable. This command should be used carefully as the resolution of conflicting values when networks are joined can cause difficulties. Table 1-2 lists the various parameters of the priority bumping feature. Figure 1-7 illustrates a typical screen.

Figure 1-7 cnfbmparm—Configure Priority Bumping Parameter Values

```
sw83      TN      SuperUser      IPX 16      8.2.5      June 1 1996  15:15 PST

                        System-Wide Priority Bumping Parameters

 1 Enable Priority Bumping ..... No
 2 Enable bumping to preferred routes ..... No
 3 Bump the lowest COS conns first ..... Yes
 4 Lowest COS that may bump other connections ..... 15
 5 Highest COS that may be bumped by other connections ..... 0
 6 Maximum number of candidates per pass ..... 10
 7 Number of connections processed before pausing ..... 2000
 8 Time between idle processing (sec) ..... 60
 9 Time to next COS processing (sec) ..... 45
10 Time to lock routing COS (sec) ..... 20
11 Time to kickoff routing (sec) ..... 15
12 Time between failed candidate retries (min) ..... 10

Last Command: cnfbmparm

Priority Bumping control is not available
Next Command:
```

Table 1-2 Priority Bumping Parameters

Index	Parameter	Value	Description
1	Enable Priority Bumping	Y N	Enable bumping of lower COS connections on a network-wide basis.
2	Enable bumping to preferred routes	Y N	Enable bumping to move routed connections to their preferred routes by bumping lower COS connections.
3	Bump lowest COS connections	Y N	The lowest COS connections will be bumped to fit the candidate. No = find the shortest path or preferred route.
4	Lowest COS that can be bumped	COS	The lowest COS of connections that are allowed to bump other connections. (The highest COS is 0.)
5	Highest COS that can be bumped	COS	The highest COS of connections that may be bumped by higher COS connections.
6	Maximum number of candidates	number	The maximum number of connections that may be evaluated at once to bump lower COS connections. This configures the CPU impact of bumping.
7	Number of connections before pausing	number	The number of connections processed by bumping before allowing lower priority processing. This configures the CPU impact of bumping.
8	Time between idle processing	sec	If there are no candidates for priority bumping, how often to “wake up” this routine to see if it can reroute a connection to its preferred route.
9	Time to next COS processing	sec	Amount of time to wait until the next COS is processed.
10	Time to lock routing COS	sec	Amount of time bumping locks the routing for a particular COS.
11	Time to kickoff routing	sec	Amount of time before routing kicks itself off to route the candidates after locking the COS.
12	Time between failed candidates	min	Amount of time before bumping will retry a candidate that failed to find a route via bumping.

cnfcdpparm (Configure CDP Card Parameters)

The **cnfcdpparm** command configures parameters for the CVM or CDP.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

cnfchts, dchst, cnfecparm

Syntax

cnfcdpparm <parameter number> <new value>

<parameter number> Specifies the number of the parameter to change. (See Table 1-3.)

<new value> Specifies the new value for the parameter.

Function

The **cnfcdpparm** command lets you configure CDP or CVM parameters for Voice Activity Detection (VAD), Modem Detection (MDM), debug parameters, and In/Out of Frame (I Frm and O Frm) Thresholds for DS0A-type T1 applications. See the **cnfcln** description for information on assigning % Fast Modem on a per-channel basis. Table 1-3 lists the **cnfcdpparm** parameters. All CDPs or CVMs in the node are dynamically reconfigured according to the new parameters. Debug Parameters do not get sent to the cards. When you enter the command, the system prompts for a parameter number.



Caution Consult Cisco Customer Engineering before you change any of these parameters.

Example 1

```
sw83          TN   SuperUser          IPX 16      8.2.5      June 1 1996  15:21 PST

 1  VAD High Pwr Thrsh      [3160] (H)  15  MDM Pkt Header          [  6] (D)
 2  VAD Mid Pwr Thrsh      [ 40] (H)  16  Null Timing Pkt Header [  4] (D)
 3  VAD Low Pwr Thrsh     [ 40] (H)  17  Debug Parm A           [  0] (H)
 4  VAD Stationary Coef.   [ 30] (H)  18  Debug Parm B           [  0] (H)
 5  VAD ZCR High Frq Thrsh [ 50] (H)  19  I Frm 2.4 Thrsh (msecs) [ 500] (D)
 6  VAD ZCR Low Frq Thrsh [ 15] (H)  20  O Frm 2.4 Thrsh (msecs) [ 500] (D)
 7  VAD Hangover Time     [ 42] (H)  21  I Frm 4.8 Thrsh (msecs) [ 500] (D)
 8  MDM Low Pwr Thrsh     [3160] (H)  22  O Frm 4.8 Thrsh (msecs) [ 500] (D)
 9  MDM Stationary Coef.   [ 14] (H)  23  I Frm 9.6 Thrsh (msecs) [ 500] (D)
10  MDM ZCR High Frq Thrsh [ 5A] (H)  24  O Frm 9.6 Thrsh (msecs) [ 500] (D)
11  MDM ZCR Low Frq Thrsh [ 56] (H)
12  MDM Detect Failure Cnt [  4] (H)
13  MDM Detect Window Min. [ 39] (H)
14  MDM Detect Silence Max. [ 20] (H)
```

This Command: cnfcdpparm

Which parameter do you wish to change:

Table 1-3 CDP Card Parameters

No.	Parameter	Description	Default *
1	VAD High Power Threshold	Power level for Voice Activity Detect high-range threshold.	3160 (H)
2	VAD Mid Power Threshold	Power level for Voice Activity Detect mid-range threshold.	40 (H)
3	VAD Low Power Threshold	Power level for Voice Activity Detect low-range threshold.	40 (H)
4	VAD Stationary Coefficient	Indicates how rapidly the power level is changing to not be detected as voice.	30 (H)
5	VAD ZCR (zero crossing) High Freq Threshold	High frequency zero-crossing threshold for Voice Activity Detect.	50 (H)
6	VAD ZCR (zero crossing) Low Freq Threshold	Low frequency zero-crossing threshold for Voice Activity Detect.	15 (H)
7	VAD Hangover Time	Silent interval after speech during which cells/packets are still sent.	42 (H)
8	MDM Low Power Threshold	Power level for Modem Detect high-range threshold.	3160 (H)
9	MDM Stationary Coefficient	Indicates how rapidly the power level is changing to not be detected as modem.	14 (H)
10	MDM ZCR High Freq Threshold	Defines upper frequency value for 2100 Hz. tone used in V.25 modem detection.	5A (H)
11	MDM ZCR Low Freq Threshold	Defines lower frequency value for 2100 Hz. tone used in V.25 modem detection.	56 (H)
12	MDM Detect Failure Count	Defines no. of failures above which fast modem is not declared.	4 (H))
13	MDM Detect Window Min.	No. of 5.25 ms. windows used in the modem tests.	39 (H)
14	MDM Detect Silence Max.	Amount of time a channel stays in a modem detected state. Value X 84 ms. Default = 1008 ms.	C (H)
15	MDM Pkt Header	Changes packet type from voice to non-timestamped for modems.	6 (D)
16	Null Timing Pkt Header	Gives first few voice packets higher priority to decrease delay for talk spurts.	4 (D)
17	Debug Parameter A	Engineering debug tools.	0 (H)
18	Debug Parameter B	Engineering debug tools.	0 (H)
19	I Frm 2.4 Threshold(msecs)	Determines threshold for inframe for DS0 2.4 Kbps overhead data channel.	500 (D)
20	O Frm 2.4 Threshold (msecs)	Determines threshold for out of frame for DS0 2.4 Kbps overhead data channel.	500 (D)
21	I Frm 4.8 Threshold (msecs)	Same as 19 for DS0 4.8 Kbps channel.	500 (D)
22	O Frm 4.8 Threshold(msecs)	Same as 20 for DS0 4.8 Kbps channel.	500 (D)
23	I Frm 9.6 Threshold(msecs)	Same as 19 for DS0 9.6 Kbps channel.	500 (D)
24	O Frm 9.6 Threshold (msecs)	Same as 20 for DS0 9.6 Kbps channel.	500 (D)

* Enter value in either decimal (D) or hexadecimal (H).

cnfcftst (Configure Communication Fail Test Pattern)

The **cnfcftst** command changes the configuration of the test pattern used for communication failure testing.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

dspcftst

Syntax

cnfcftst

Function

The communication fail test pattern is used to periodically test for failure of nodes to communicate with each other. This test pattern is also used to recover from communication fail conditions. A communication fail is defined as a loss of controller communication over one or more trunks to a particular node. A communication fail differs from a communication break condition in that the node may be reachable over other paths. The communication fail test is used to test the failed trunk for proper controller traffic.

This command allows the user to configure the communication fail test pattern byte by byte. It defaults to a pattern of four bytes of ones followed by four bytes of zeros. Varying the length of the test pattern makes the communications test more or less rigorous. Changing the characters determines the pattern sensitivity for strings of less than 14 bytes.

The **dspcftst** command displays the current communication test pattern. The parameters used for declaring and clearing communication fails are set by the **cnfnodeparm** command. Figure 1-8 illustrates a typical screen.

Figure 1-8 cnfcftst—Configure Communication Fail Test Pattern

```
pubsigx1      TN      SuperUser      IGX 32      8.2.5      Feb 24 1997 21:17 GMT

Comm Fail Test Pattern

==> Byte 0: FF      Byte 12: 00      Byte 24: FF      Byte 36: 00      Byte 48: FF
      Byte 1: FF      Byte 13: 00      Byte 25: FF      Byte 37: 00      Byte 49: FF
      Byte 2: FF      Byte 14: 00      Byte 26: FF      Byte 38: 00      Byte 50: FF
      Byte 3: FF      Byte 15: 00      Byte 27: FF      Byte 39: 00      Byte 51: FF
      Byte 4: 00      Byte 16: FF      Byte 28: 00      Byte 40: FF      Byte 52: 00
      Byte 5: 00      Byte 17: FF      Byte 29: 00      Byte 41: FF      Byte 53: 00
      Byte 6: 00      Byte 18: FF      Byte 30: 00      Byte 42: FF      Byte 54: 00
      Byte 7: 00      Byte 19: FF      Byte 31: 00      Byte 43: FF      Byte 55: 00
      Byte 8: FF      Byte 20: 00      Byte 32: FF      Byte 44: 00      Byte 56: FF
      Byte 9: FF      Byte 21: 00      Byte 33: FF      Byte 45: 00      Byte 57: FF
      Byte 10: FF      Byte 22: 00      Byte 34: FF      Byte 46: 00      Byte 58: FF
      Byte 11: FF      Byte 23: 00      Byte 35: FF      Byte 47: 00      Byte 59: FF

This Command: cnfcftst

Enter Byte 0:
```

cnfchstats (Configure Channel Statistics Collection)

The **cnfchstats** command enables statistics collection for various channel parameters.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: BPX, IGX, IPX

Associated Commands

dspchstatcnf

Syntax

cnfchstats <channel> <stat> <interval> <e | d> [<samples> <size> <peaks>] [nodename]

<channel>	specifies the channel (connection) to configure.
<stat>	specifies the type of statistic to enable/disable. (See Table 1-4).
<interval>	specifies the time interval of each sample (1–255 minutes).
<e d>	enables/disables a statistic. 'E' to enable; 'D' to disable a statistic.
[samples]	specifies the number of sample to collect (1–255).
[size]	specifies the number of bytes per data sample (1, 2 or 4).
[peaks]	enables/disables the collection of one minute peaks. 'Y' to enable: 'N' to disable.
[nodename]	specifies the name of the node to which the StrataView terminal is connected.

Function

This command enables statistics collecting for channel parameters. It is a debug tool and not necessary for everyday use.

Table 1-4 lists the statistics by type. Not all statistic types are available for all connections. Only valid statistics are displayed for the user to select from; the others appear in gray. If you are unsure of the size parameter to specify, select four bytes per sample.

The **dspchstatcnf** command displays the channel statistics configuration. Statistics are collected by and displayed on the StrataView Plus (SV+) workstation. StrataView Plus allows statistics collection to be customized. A StrataView Plus-enabled channel statistic may be disabled by specifying the optional node name of the workstation as the last parameter on the command line.

Table 1-4 Channel Statistic Types

Statistic Type	Statistic
1	Frames Received
2	Receive Frames Discarded
3	Frames Transmitted
4	Transmit Frames Discarded
5	Packets Received
6	Receive Packets Discarded
7	Packets Transmitted
8	Projected Packets Transmitted
9	Supervisory Packets Transmitted
10	Bytes Received
11	Receive Bytes Discarded
12	Bytes Transmitted
13	Transmit Bytes Discarded
14	Seconds V.25 Modem On
15	Seconds DSI Enabled
16	Seconds Off-Hook
17	Seconds In Service
18	Frames Transmitted with FECN
19	Frames Transmitted with BECN
20	Supervisory Packets Received
21	Minutes Congested
22	DE Frames Received
23	DE Frames Transmitted
24	DE Frames Dropped
25	DE Bytes Received
26	Frames Received in Excess of CIR
27	Bytes Received in Excess of CIR
28	Frames Transmitted in Excess of CIR
29	Bytes Transmitted in Excess of CIR
32	Rx Frames Discarded—Deroute/Down
33	Rx Bytes Discarded—Deroute/Down
34	Rx Frames Discarded—VC Queue Overflow
35	Rx Bytes Discarded—VC Queue Overflow
36	Tx Frames Discarded—Queue Overflow
37	Tx Bytes Discarded—Queue Overflow
38	Tx Frames Discarded—Ingress CRC
39	Tx Bytes Discarded—Ingress CRC

Statistic Type	Statistic
40	Tx Frames Discarded—Trunk Discard
41	Tx Bytes Discarded—Trunk Discard
42	TX Frames During Ingress LMI Fail
43	TX Bytes During Ingress LMI Fail

cnfchts (Configure Channel Timestamp)

The **cnfchts** command configures a pre-aging parameter for data channels. Applicable cards are the SDP, LPD, LDM, and HDM. Applicable traffic is time-stamped data.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

cnfcdpparm

Syntax

cnfchts <channel(s)> <pre-age>

<channel(s)> Specifies the data channel.

<pre-age> Specifies a value in 250-microsecond increments to go in the age field in the header of a time-stamped.

Function

This command configures the pre-age parameter for data channels. The pre-age parameter specifies the initial age of a time-stamped packet. With a non-zero pre-age, the packet has less time to wait at the destination before it reaches the Max Time Stamped Packet Age and is taken out of the ingress queue. (Data channels with the greater pre-age value are processed sooner.) However, if the pre-age value is too high because of queuing delays in the network, packets could be discarded because they appear too old at the destination.

Enter a value for Pre-Age that is a multiple of 250 microseconds. (If not a multiple of 250 microseconds, the system rounds the value down to the nearest multiple of 250 microseconds.) The default value is 0. Acceptable values are in the range 0 to the Max Time Stamped Packet Age (set by the **cnfsysparm** command). After you finish entering this command, the screen as in the example. After you change a timestamp, the connection should be rerouted or restarted for the new value to take effect.

Note You can see the value for Pre-Age in the screen display for the **dspchcnf** command. If **dspchcnf** is entered at a user-privilege level below super user level, the Pre-Age parameter does not appear in the **dspchcnf** output.

Example

```
pubsipx1      TN      SuperUser      IPX 16      8.2.00      Jan. 14 1997 03:50 GMT

      Maximum EIA      %      DFM Pattern      DFM      PreAge
Channels      Update Rate      Util      Length      Status      (usec)
3.1           2           100      8           Enabled      1000
3.2-4        2           100      8           Enabled      0
```

Last Command: cnfchts 3.1 1000

Next Command:

cnfclnparm (Configure Circuit Line Parameter)

The **cnfclnparm** command configures the alarm integration time for circuit lines originating on a UVM, CDP or CVM and for T1/E1 frame relay circuits originating on an FRP, FRM, or UFM.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

cnfclnsigparm, dchst

Syntax

cnfclnparm <line>

<line> specifies the circuit line to configure.

Function

This command configures the circuit line alarm integration times for RED and YELLOW circuit line alarms. These integration times are specified in milliseconds and should be set to correspond to the local carrier's alarm integration times. Carrier integration times are typically 800 to 1500 ms. for RED Alarm and 1500 to 3000 ms. for YELLOW Alarm. The allowable range for these parameters are 60 to 3932100 ms. When you enter this command system responds with the screen in Figure 1-9.

Figure 1-9 cnfcln—Configure Circuit Line Alarm Integration Times

```
Dl.gamma              TRM              SuperUser              Rev: 8.2.5      Jan. 14 1997 14:27 PDT

CLN 11 Parameters
 1 Red Alarm - In/Out [ 1000 / 2000] (Dec)
 2 Yel Alarm - In/Out [ 1000 / 2000] (Dec)
```

This Command: cnfclnparm 11

Which parameter do you wish to change:

cnfclnsigparm (Configure Circuit Line Signaling Parameters)

The **cnfclnsigparm** command configures signalling parameters for a UVM, CVM or CDP.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

cnfclnparm, dspsig

Syntax

cnfclnsigparm <parameter number> <parameter value>

<parameter number> specifies the parameter number of the signalling parameter to change.
(See Table 1-5).

<parameter value> specifies the new value to enter.

Function

The **cnfclnsigparm** command configures any of the UVM, CVM or CDP circuit line signalling parameters associated with the node. See Table 1-5 for the parameters and their values.

When you enter this command system as follows, the system responds with the display as shown in Figure 1-10.

Figure 1-10 cnfclnsigparm—Configure Circuit Line Signalling Parameters

```
sw83                  TN      SuperUser                  IPX 16      8.2.      Feb. 1 1997      15:26 PST

1   CDP & CIP Heartbeat                                  [ 2] (sec)
2   CDP & CIP Sig. Polling Rate                        [ 10] (sec)
3   CDP & CIP Default Inband Sig Delay                [ 96] (msec)
4   CDP & CIP Default Inband Playout Delay [ 200] (msec)
5   CDP & CIP Default Pulse Sig Delay                [ 96] (msec)
6   CDP & CIP Default Pulse Playout Delay [ 200] (msec)
7   CIP Number of Packet Slices                        [ 1]
8   CDP & CIP Packet Rate                                [ 200] (pkt/sec)
9   CDP & CIP Condition CCS Lines?                    [ NO]
10   CIP Default Inband Min. Wink                     [ 140] (msec)
11   CIP Default Pulse Min. Wink                      [ 140] (msec)
```

This Command: cnfclnsigparm

Which parameter do you wish to change:

Table 1-5 Circuit Line Signalling Parameters

No.	Parameter	Description	Range
1	Heartbeat	The current state of the signalling is periodically transmitted to the far end even if no signalling transitions are detected. This interval is determined by the value of "heartbeat."	2–30 sec.
2	Signal Polling Rate	How often the control card polls the UVM/CDP/CVM for the status of the signalling. This parameter is used to update displays and statistics.	2–60 sec.
3	Default Inband Signal Delay	The transmit buffer timer value set after a valid signalling transition for inband signalling arrives. After timeout, a signalling packet is sent.	30–96 msec.
4	Default Inband Payout Delay	The receive buffer timer that "ages" an incoming, time-stamped packet. When the age of the packet reaches the timestamp value, it moves on to depacketization and then to the user-equipment. This parameter is used to even out the delay between signalling packets and voice packets.	0–200 msec.
5	Default Pulse Signal Delay	Same as number 3 but applied to pulse signalling.	30–96 msec.
6	Default Pulse Payout Delay	Same as number 4 but applied to pulse signalling.	100–200 msec.
8	Packet Rate	Reserves trunk bandwidth for carrying UVM/CDP/CVM signalling.	0–1000 packets/sec.
9	Condition CCS Lines	If you specify "yes" for this parameter, the card applies signalling conditioning during an alarm to all channels on E1 circuit lines marked for Common Channel Signalling to notify PBX of a line failure.	YES or NO
10	Inband Min. Wink	Same as 6 for inband signalling.	120–300 msec.
11	Pulse Min. Wink	For UVM/CVM/CDP connections only, this parameter controls both wink and inter-digit intervals for signalling that arrives over the NPC or NPM signaling channel from a far end UVM/CVM/CDP.	120–300 msec.

cnfclnstats (Configure Circuit Line Statistics)

The **cnfclnstats** command configures parameters for circuit line statistics collection.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

dspchstats

Syntax

cnfclnstats <line> <stat> <interval> <e|d> [<samples> <size> <peaks>] [nodename]

- <line> specifies the circuit line to configure.
- <stat> specifies the type of statistic to enable/disable.
- <interval> specifies the time interval of each sample (1 - 255 minutes).
- <e|d> enables/disables a statistic. 'E' to enable; 'D' to disable.
- [samples] specifies the number of samples to collect (1 - 255).
- [size] specifies the number of bytes per data sample (1, 2 or 4).
- [peaks] enables/disables the collection of ten second peaks. 'Y' to enable; 'N' disable.

Function

The **cnfclnstats** command configures circuit line statistics. This command lets you customize statistics collection on each circuit line. It primarily applies to debugging and not standard network operation. Table 1-6 lists the statistics by type. Figure 1-11 illustrates the display.

Not all statistic types are available for all lines. Valid statistics appear in full brightness while unavailable types appear in half brightness.

Table 1-6 Circuit Line Statistic Types

Statistic Type	Statistic	Line Type
1	Bipolar Violations	E1 and T1
2	Frame Slips	E1 and T1
3	Out of Frames	E1 and T1
4	Loss of Signal	E1 and T1
5	Frame Bit Errors	E1 only
6	CRC Errors	E1 only
7	Out of Multi-Frames	E1 only
8	All Ones in Timeslot 16	E1 only

Note Bipolar violations are not generally accumulated on E1 trunk and circuit lines. They are accumulated only on E1 lines connected to E1 frame relay ports.

Figure 1-11 illustrates the screens displayed after entering **cnfclnstats**.

Figure 1-11 cnfclnstats—Configure Circuit Line Statistics (T1 Line)

```
D2.ipx5          SV+   SuperUser          IPX 16          8.2.5   Jan. 14 1997  13:28 PDT

Line Statistic Types

1) Bipolar Violations
2) Frames Slips
3) Out of Frames
4) Losses of Signal

This Command: cnfclnstats 10

Statistic Type:
```

cnfcmparm (Configure Connection Management Parameters)

The **cnfcmparm** command configures various connection management parameters for the node.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

dsprst

Syntax

cnfcmparm <parameter number> <value>

<parameter number> specifies the number of the parameter to change. See Table 1-7.

<value> specifies the new parameter value to enter.

Function

This command configures parameters that affect Adaptive Voice, Rerouting, and Courtesy Up/Down. These parameters are used only at the local node. Table 1-7 lists the parameters, their descriptions, and their default values.

Table 1-7 Connection Management Parameters

No.	Parameter	Description	Range	Default
1	Normalization Interval	The number of minutes between attempts to disable VAD on groups of voice connections.	1–10 minutes	2
2	Max Number To Normalize	The maximum number of connections per group if the switch attempts to disable VAD on groups of connections.	1–50 connections	5 connections
3	Normalization Logging	Enables or disables the logging of changes to a connection's normalization status.	y=yes n=no	No
4	Settling Interval	The number of minutes after a trunk failure during which no normalization attempts are made.	1–10 minutes	4 minutes
5	Minimum Open Space	The minimum number of packets per second of open space required to consider a trunk capable of supporting a normalized connection. Increasing this parameter causes all connections to enter the protect mode.	0–8000 packets per second (pps)	1000 pps
6	Normalization Priority	Determines whether the system uses a connection's Class Of Service or its projected load to determine normalization priority. Changing this parameter causes all connections to enter the protect mode.	COS or Load (c/l)	1 (Load)
7	Load Sample Period	The number of minutes of projected load for determining normalization priority if the normalization priority is set to "Load."	1–10 minutes	4 minutes
8	Maximum Routing Bundle	The maximum number of connections that can be routed as a bundle. Larger values result in faster rerouting. Smaller values provide better load balancing.	1–29	24

cnfcmparm (Configure Connection Management Parameters)

No.	Parameter	Description	Range	Default
9	Reroute Timer	The number of seconds since the last reroute to wait before attempting another reroute of the same connection.	0–900 seconds	300 seconds
10	Timer Reset on Line Fail	Indicates if the reroute timer should be reset on reroutes where the new route has a line failure.	y=yes n=no	y
11	Max Down/Up Per Pass	Number of connections downed/upped per pass.	1–255	50
12	Down/Up Timer	Number of msec to wait between down/up passes.	1000–65535 msec	30000 msec
13	Maximum Route Errors per Cycle	Number of failed attempts that the owner of a connection makes when adding a connection to the calculated route before the owner declares a failed connection. After a connection is failed on an IPX or IGX node, you must use the rrtcon command to route the connection. On a BPX node, further system action may occur before the connection is failed. See index items 14 and 15.	0–65535 failures	250
14	Routing pause timer	Specifies a time period for the switch to wait before it routes the next group of connections when the switch is routing groups of connections. (Note that these are not <i>grouped</i> connections.)	0–65535 msec	0
15	Max. messages sent per update	The maximum number of failure messages sent out per update. The purpose of this limit is to prevent the switch that is sending the messages from becoming overloaded with message transmission.	1–223 decimal	10
16	Send SVC urgent msgs	Applies to only IPX nodes for Release 8.4 and works in conjunction with Voice Network Switching (VNS). Enables the node to transmit an urgent message when you remove an SVC.	y=yes n=no	y
17	Max SVC Retry	Applies to only IPX nodes for Release 8.4 and works in conjunction with Voice Network Switching (VNS). Maximum number of failed routing attempts before the switch declares the SVC a failed connection.	0–30 decimal	0

Figure 1-12 shows the screen after you finish using **cnfcmparm**.

Figure 1-12 cnfcmparm—Configure Connection Management Parameters

```
pubsigx1      TN      SuperUser      IGX 32      8.2.5      Sep. 15 1997 13:08 PDT

 1 Normalization Interval [ 2] (D)  16 Send SVC urgent msg [ Yes]
 2 Max Number To Normalize [ 5] (D)  17 Max SVC Retry [ 0] (D)
 3 Normalization Logging [ No]
 4 Settling Interval [ 4] (D)
 5 Minimum Open Space [ 1000] (D)
 6 Normalization Priority [ Load]
 7 Load Sample Period [ 4] (D)
 8 Maximum Routing Bundle [ 24] (D)
 9 Reroute Timer [ 0] (secs)
10 Reset Timer on Line Fail [ Yes]
11 Max Down/Up Per Pass [ 50] (D)
12 Down/Up Timer [30000] (msecs)
13 Max Route Errors to Fail [ 200] (D)
14 Routing pause timer [ 0] (msecs)
15 Max msgs sent per update [ 10] (D)

This Command: cnfcmparm

Enter parameter index:
```

cnfdiagparm (Configure Diagnostic Test Parameter)

The **cnfdiagparm** command sets various diagnostic test parameters for the nodes.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

cnftstparm

Syntax

cnfdiagparm

Function

This command sets several parameters that affect the three IPX/IGX/BPX automatic diagnostic tests. Use this command to set test parameters on the internal system clock. Table 1-8 lists the parameters, their descriptions, and their default values.

Table 1-8 Diagnostic Parameters

No.	Parameter *	Description	Default *
1	VDP Test Frequency	Interval between VDP background tests (in seconds).	50
2	LDP tstport delay	Seconds delayed before test data is sent.	10
3	System clock drift (8.192 Mhz)	Range of allowable drift of system clock.	±480
4	UEC-B's PLL railing (8.192 Mhz)	Range of UEC-B's phase lock loop rail.	± 2720
5	NPC's PLL Min. (8.192 Mhz)	Lower limit of NPC's PLL.	- 92000
6	NPC's PLL Max. (8.192 Mhz)	Upper limit of NPC's PLL.	+ 508000
7	Clock Test Window	Number of samples that make up a window.	10
8	Clock Test Max Error in Window	Errors within window before fault isolation.	4
9	Clock Test Isolation Window	Window size during fault isolation.	10
10	Clock Fault Max. Error in Window	Errors allowed during fault isolation.	3
11	Clock Test Frequency	Interval between clock tests.	200 ms.
12	Clock Test Switch Delay	Delay clock testing after any clock transfers to allow settling.	3000 ms.
13	Card Reset Threshold		255
14	Card Reset Increment		0

* Clock Test parameters—Frequencies are in Hz, offset from 8.192 MHz

When you enter this command, the system responds with the screen illustrated in Figure 1-13.

Figure 1-13 cnfdiagparm—Configure Diagnostic Test Parameters

```
D2.att7      SV      SuperUser      IPX 16      8.2.5      Jan. 13 1997 00:21 GMT

1. Vdp Test Frequency (seconds)      [50]
2. LDP tstport delay                  [10]
3. System clock drift (8.192 MHz) +- [480]
4. UEC-B's PLL railing (8.192 MHz) +- [2720]
5. NPC's PLL minimum (8.192 MHz)    - [92000]
6. NPC's PLL maximum (8.192 Mhz)    + [508000]
7. Clock Test Window                  [10]
8. Clock Test Max Error in Window     [4]
9. Clock Fault Isolation Window       [10]
10. Clock Fault Max Error in Window   [3]
11. Clock Test Frequency (msec)       [200]
12. Clock Test Switch Delay (msec)    [3000]
13. Card Reset Threshold               [255]
14. Card Reset Increment               [0]
```

This Command: cnfdiagparm

Enter index of value to be changed:

cnfdlparm (Configure Download Parameters)

The **cnfdlparm** command sets various software and firmware downloader parameters.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

dspdnl

Syntax

cnfdlparm (see Table 1-9 for parameter descriptions)

Function

This command sets parameters that affect the SW/FW download protocol. It is primarily a debug command. It is included only for the possibility that some future software or firmware revision may need to be adjusted for optimizing the downloading process.



Caution Downloader parameters should not be changed except under specific direction from the WANBU TRT. Contact the WANBU TRT through Customer Engineering.

Parameters

Table 1-9 Configurable Downloading Parameters

No.	Parameter	Description	Range	Default
1	Rmt Blk Freq	For downloads to a remote node, <i>Rmt Blk Freq</i> is the time between blocks.	1-9999999 msecs	100 msecs
2	Rmt Blk Size	For downloads to a remote node, <i>Rmt Blk Size</i> is the number of bytes in each block.	1-7C0 hex	400 hex
3	Lcl Blk Freq	For downloads to the other processor in the same (local) node, <i>Lcl Blk Freq</i> is the time (in msecs) between blocks.	1-9999999 msecs	100 msecs
4	Lcl Blk Size	For downloads to the other processor in the same (local) node, <i>Lcl Blk Size</i> is the number of bytes in each block.	1-7C0 hex	400 hex
5	Image Req Freq	The time between requests for a description of an image. When a node seeks a new software image from other nodes, it first sends requests for a full <i>description</i> of the image residing on a node to determine if that node has the correct image. The requesting node sends its request one node at a time. <i>Image Req Freq</i> is the time between the last request and the request to another node. (This parameter is not a frequency but rather a time period.)	1-9999999 msecs	10000 msecs

cnfdlparm (Configure Download Parameters)

6	Dnld Req Freq	After a node seeking a new software image has found a node with the correct image, it requests a download of the image. If the node with the correct image is not available to send the image, the requesting node waits a period of time before it again requests the image. <i>Dnld Req Freq</i> is the period of time the requesting node waits before it again requests the image. (This parameter is not a frequency but rather a time period.)	1-9999999 msecs	10000 msecs
7	Session Timeout	The time a receiving node waits for a block transfer to resume. If a block transfer stops after downloading begins, the <i>Session Timeout</i> is the time the receiving node waits to resume before it gives up and requests the download again.	1-9999999 msecs	30000 msecs
8	Request Hop Limit	Limit on the number of hops the local node can go to request a download. (The number of hops is the number of trunks that are crossed for one node to communicate with another node.) <i>Request Hop Limit=1</i> means the request can go to only an immediate neighbor.	1-9999999	1
9	Crc Throttle Freq	The number of CRC calculations per second. <i>Crc Throttle Freq</i> lets you reduce the number of calculations so the node does not use processor time for CRC calculations.	1-9999999	5000
10	Crc Block Size	Number of bytes that a CRC calculation covers. The default is intentionally the same as <i>Rmt Blk Size</i> and <i>Lcl Blk Size</i> .	1-7C0 hex bytes	400 hex
11	Rev Change Wait	The time to wait before the node actually loads the software for loadrev or runrev execution.	0-99999 msecs	0
12	CCs Switch Wait	A wait period before the node actually switches control cards during switchcc execution. During normal operation, you should have no reason to increase <i>CCs Switch Wait</i> .	1-9999999 msecs	1000 msecs
13	Lcl Response TO	On a local node, a processor that is downloading to another processor must receive an acknowledgment from the receiving processor for each block that arrived correctly. If the sending processor does not receive an acknowledgment by the time <i>Lcl Response TO</i> has elapsed, the downloading processor sends the block again.	1-9999999 msecs	5000
14	Rmt Response TO	When one node downloads to another node, the sending node must receive an acknowledgment for each block correctly received. If the sending node receives no acknowledgment by the time <i>Rmt Response TO</i> has elapsed, the sending node sends the block again.	1-9999999 msecs	30000
15	FW Dnld Block TO	The wait period that a controller card waits for an acknowledgment from a receiving card that it correctly received a block.	1-9999999 msecs	50 msecs

16	FW Dnld Msgs/Block	Number of Cbus messages per CRC block CRC check on the payload of the FW download msg	1-9999999 msecs	4
17	Flash Write TO	During flash memory programming, <i>Flash Write TO</i> is the time to wait for an acknowledgment that a write cycle finished.	1-9999999 msecs	16000 msecs
18	Flash Erase TO	During a flash memory erasure, <i>Flash Erase TO</i> is the time to wait for an acknowledgment that the erase cycle finished.	1-9999999 msecs	100
19	Erase Verify TO	Second (or “true”) verification of the erasure. The <i>Erase Verify TO</i> parameter is useful only if write/erase performance characteristics of a flash memory device change.	1-9999999 msecs	16000 msecs
20	Standby Flash TO	(call WANBU TRT through Customer Engineering)	1-9999999 msecs	
21	Lcl Flash Init TO	(call WANBU TRT through Customer Engineering)	1-9999999 msecs	
22	Flsh Write Blk Sz	Number of bytes per write cycle	1-10000 hex	10000 hex
23	Flsh Verify Blk Sz	Second (or “true”) verification of the block write. The <i>Flsh Verify Blk Sz</i> parameter is useful only if performance characteristics of a flash memory device change.	1-10000 hex	10000 hex
24	Chips Per Write/Erase		1, 2, or 4	1

When you enter this command the system responds with the screen illustrated in Figure 1-14.

Figure 1-14 cnfdlparm—Configure Download Parameters

```
pubsbpx1      VT      SuperUser      BPX 15      8.2.5  May  24 1997 23:18 GMT

 1 Rmt Blk Freq (msec)      [  100]      16 FW Dnld Msgs/Block(dec) [    4]
 2 Rmt Blk Size (hex)      [   400]      17 Flash Write TO(msec)   [ 16000]
 3 Lcl Blk Freq (msec)     [   100]      18 Flash Erase TO(msec)  [   100]
 4 Lcl Blk Size (hex)     [   400]      19 Erase Verify TO(msec) [ 16000]
 5 Image Req Freq (msec)  [ 10000]      20 Standby Flash TO(sec) [   300]
 6 Dnld Req Freq (msec)   [ 10000]      21 Lcl Flash Init TO(msec) [  1000]
 7 Session Timeout (msec) [ 30000]      22 Flsh Write Blk Sz (hex) [ 10000]
 8 Request Hop Limit (dec) [    1]         23 Flsh Verfy Blk Sz (hex) [   400]
 9 Crc Throttle Freq (dec) [  5000]      24 Chips Per Write/Erase [    1]
10 Crc Block Size (hex)   [   400]
11 Rev Change Wait(dec)  [    0]
12 CCs Switch Wait(dec)  [  1000]
13 Lcl Response TO(msec) [  5000]
14 Rmt Response TO(msec) [ 20000]
15 FW Dnld Block TO(msec) [    50]
```

This Command: cnfdlparm

Which parameter do you wish to change:

cnfecparm (Configure Echo Canceller Parameters)

The **cnfecparm** command configures the integrated echo canceller (IEC) parameters for a voice line.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

cnfchec, dspecparm

Syntax

cnfecparm <slot> <parameter number> <parameter value>

- <line> specifies the circuit line to configure.
- <parameter number> specifies the number of the parameter to change. (See Table 1-10).
- <parameter value> specifies the new value to enter for the parameter.

Function

The **cnfecparm** command configures the UVM, CVM or CDP integrated echo canceller (IEC). It configures IEC parameters associated with all voice channels for the specified line. Setting these parameters allows you to optimize the IEC performance. Table 1-10 lists the parameters that **cnfecparm** can specify. The **dspecparm** command description lists the default echo cancelling parameters and provides a sample display. Also, refer to the **cnfchec** command in the *Cisco WAN Switching Command Reference* for configuring per-channel parameters.

Table 1-10 Echo Canceller Parameters

Index	Parameter	Description	Options
1	Echo Return Loss High:	Maximum ERL required for echo canceller to converge on speech (value X 0.1 dB).	0–99 dB
2	Echo Return Loss Low:	Minimum ERL required for echo canceller to converge on speech (value X 0.1 dB).	0–99 dB
3	Tone Disabler Type	Selection of protocol to enable tone disabler.	G.164, G.165
4	Non-Linear Processing	Selects type of post-canceller signal.	Center Clipper, Multiplying
5	NLP Threshold	Threshold below which non-linear processing is enabled (value X 0.1 dB).	0–99 dB
6	Noise Injection	Determines if noise is injected when NLP is active.	Enable, Disable
7	Voice Template	Selection of template to use; normal voice levels or high voice levels.	USA—normal UK—high-level

When you enter this command, the system responds with the screen illustrated in Figure 1-15.

Figure 1-15 cnfecparm—Configure Echo Cancellor Parameters

```
sw83          TN      SuperUser      IPX 16      8.2.5      Feb. 1 1997  15:35 PST

IEC Line 7 Parameters
1 CDP IEC Echo Return Loss High (.1 dBs) [          60] (D)
2 CDP IEC Echo Return Loss Low  (.1 dBs) [          30] (D)
3 CDP IEC Tone Disabler Type     [          G.164]
4 CDP IEC Non-Linear Processing  [Center Clipper]
5 CDP IEC Non-Linear Processing Threshold [          18] (D)
6 CDP IEC Noise Injection        [          Enabled]
7 CDP IEC Voice Template         [          USA]
```

This Command: cnfecparm 7

Which parameter do you wish to change:

cnffpcom (Configure FastPAD Communication Parameter)

The **cnffpcom** command configures the FastPAD communication parameters.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

None

Syntax

cnffpcom <slot.port> | <name> <trans timer> <alive timer> <retry count>

<slot.port> specifies the slot.port of the card to which the FastPAD is connected.

<name> specifies the name of the FastPAD connected to the port.

<trans timer> specifies the transmission timer.

<alive timer> specifies the keep alive timer value.

<retry count> specifies the retry count value.

Function

This command configures the FastPAD communication parameters. When you enter this command, the system responds with the following:

Figure 1-16 cnffpcom—Configure FastPAD Communication Parameters

```
cc7                      VT    SuperUser            IPX 32      8.2.5            Jan. 30 1997 10:05 PST
```

```
Last Command: cnffpcom 31.2 2 2 3
```

```
Next Command:
```

cnffpcon (Configure FastPAD Connection Parameters)

The **cnffpcon** command configures the FastPAD connection parameters.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

addcon, dspcon, dncon, upcon

Syntax

cnffpcon <connection> [fr_bw]

<connection> specifies the connection whose parameters to configure.

[fr_bw] specifies the frame relay bandwidth parameters for the connection.

Function

This command configures connection parameters. When you enter this command, the system responds with as in Figure 1-17.

Figure 1-17 cnffpcon—Configure FastPAD Connection Parameters

```

cc7          VT      SuperUser      IPX 32      8.2.5      Jan. 30 1997 10:10 PST

Conn: 31.2.B.1  cal2          9.1.B.1    9.6
      MIR      CIR      VC Q Depth  PIR      Cmax     ECN QThresh  QIR      FST
11.6/11.6 11.6/11.6 2048/2048 11.6/11.6 10/10    1024/1024 11.6/11.6 n
% Util: 100/100
Owner: LOCAL Restriction: NONE COS: 0          Status: New Conn
Group: NONE Priority: N/A TestRTD: 0 msec

Path: cc7      19-- 6.2cc1      6.3-- 2.2ca13    1.3-- 13ca12
Pref: Not Configured

cc7          FTC: OK          cal2          FTC: OK
            FTI: OK          FTI: OK
            FastPAD: OK      FastPAD: OK

This Command: cnffpcon 31.2.B.1 cal2 9.1.B.1

Enter FRP parameters (mir/oe_mir * ...):

```

cnffpddelay (Configure FastPAD Delay)

The **cnffpddelay** command configures thresholds for severe congestion (Sc) and mild congestion (Mc) on the FastPAD.

Attributes

Jobs: No Log: Lock: Node Type: IPX, IGX

Associated Commands

Syntax

cnffpddelay <slot.port.subslot.subport><Sc><Mc>

<slot.port.subslot.subport> specifies the FTC port and subport connected to the FastPAD for configuring the Sc and Mc.

<Sc> severe congestion

<Mc> mild congestion

Function

Figure 1-18 cnffpddelay—Configure FastPAD Delay

```
pubsigx1      TN      SuperUser      IGX 32      8.2.5      Jan. 20 1997 14:07 GMT

Port:      8.1.7.2[FAILED ]      Configured Clock:      256.0 Kbps
Rcv Clocking:      EXTERNAL      Measured Clock:      N/A
Xmt Clocking:      EXTERNAL
Data Coding:      NRZ
Interface:      V.35

Signalling Protocol      STRATA LMI      Interface Control Template
T391 Link Intg Timer      10
T392 Polling Verif Timer      15      Lead      State
N391 Full Status Poll Cycle      6      CTS      ON
N392 Error Threshold      3      DSR      ON
Monitored Events Count      4      DCD      ON

Severe Congestion (Sc) 64000 (512000)
Mild Congestion (Mc) 57600 (460800)

This Command: cnffpddelay 8.1.7.2

Sc[64000]:
```


cnffdpvc (Configure FastPAD PVC)

The **cnffdpvc** command configures the FastPAD bc/bc PVC parameters.

Attributes

Jobs: No Log: Lock: Node Type: IPX, IGX

Associated Commands

Syntax

```
cnffdpvc <slot.port.subslot.subport.dlci><bc><bc>
```

<slot.port.subslot.subport.dlci> specifies the FTC or FTM port, subport, and DLCI of the FastPAD.

<bc>

<bc>

Function

Figure 1-19 **cnffdpvc—Configure FastPAD PVC**

cnffpmap (Configure FastPAD Map Table)

The **cnffpmap** command configures the FastPAD map table.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

cpyfpmmap

Syntax

cnffpmap <slot.port>

<slot.port> specifies the FTC or FTM port connected to the FastPAD.

Function

This command configures FastPAD map table. The map table contains the dialing plan for the FastPAD. When you enter this command, the system responds with the following:

Figure 1-20 cnffpmap—Configure FastPAD Map Table

```
cc7                      VT      SuperUser                      IPX 32      8.2.5                      Jan. 30 1997 10:14 PST

Index #    DLCI Slot    Index #    DLCI Slot    Index #    DLCI Slot    Jump:
[000] 9915 0991 05    [014] FFFF 1023 15    [028] FFFF 1023 15
[001] 0182 0018 02    [015] FFFF 1023 15    [029] FFFF 1023 15
[002] 0528 0052 08    [016] FFFF 1023 15    [030] FFFF 1023 15
[003] 0186 0018 06    [017] FFFF 1023 15    [031] FFFF 1023 15
[004] 0188 0018 08    [018] FFFF 1023 15    [032] FFFF 1023 15
[005] 0524 0052 04    [019] FFFF 1023 15    [033] FFFF 1023 15
[006] 0526 0052 06    [020] FFFF 1023 15    [034] FFFF 1023 15
[007] 0528 0052 08    [021] FFFF 1023 15    [035] FFFF 1023 15
[008] 0528 1023 09    [022] FFFF 1023 15    [036] FFFF 1023 15
[009] FFFF 1023 15    [023] FFFF 1023 15    [037] FFFF 1023 15
[010] FFFF 1023 15    [024] FFFF 1023 15    [038] FFFF 1023 15
[011] FFFF 1023 15    [025] FFFF 1023 15    [039] FFFF 1023 15
[012] FFFF 1023 15    [026] FFFF 1023 15    [040] FFFF 1023 15
[013] FFFF 1023 15    [027] FFFF 1023 15    [041] FFFF 1023 15
```

This Command: cnffpmap 31.2

Next Command:

cnffpport (Configure FastPAD Port)

The **cnffpport** command configures the FastPAD port parameters.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

dspftcport, dnftcport, upftcport

Syntax

cnffpport <slot.port.subslot.subport> <parameter number> <parameter value>

<slot.port.subslot.subport> specifies the port.

<parameter number> specifies the number of the parameter to change.

<parameter value> specifies the new value to enter.

Function

This command configures port parameters for the FastPAD port. When you enter this command, the system responds as in the screen example.

Figure 1-21 cnffpport—Configure FastPAD Port Parameters

```

cc7              VT   SuperUser      IPX 32      8.2.5      Jan. 30 1997 10:16 PST

                        FastPad Port Configuration
                        Index: 0x0000 Location: 0x30E84C40
Port in Use   : 01   Port Type    : 02   Conn Exist   : 01
Phy Port Code : 00   Port Code    : 00   Abs Rate     : 07

                        Data Parameters
[01] Mode           : 00 [02] Baud Rate      : 06 [03] Underrun Fill : 7E
[04] Clock Stop FC : 00 [05] Transmit Clock: 00 [06] Local CTS      : 01
[07] Local CTS Dly : 00 [08] Local DSR      : 01 [09] Local DCD      : 01
[10] Hunt Group Mem: 01 [11] Dest Switch Nm: 01 [12] Dest Port Nm  : 03
[13] Dest Slot/Chnl: 00 [14] Call Timer     : 05 [15] Enable Channel: 01
[16] Initiate Calls: 01 [17] Allocate BW   : 00 [18] Inframe Fill: 00
[19] DPLL Mode     : 00 [20] Set DE on Data: 00 [21] Async In Timer: 05
[22] Checksum      : 00 [23] Sync Pattern  : 0000

This Command: cnffpport 31.2.B.1

Enter parameter number to change (DEL to quit):

```

Enter the parameter number to make a change.

cnffpsys (Configure FastPAD System Parameters)

The **cnffpsys** command configures the FastPAD system parameters.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

dspftcport, dnftcport, upftcport

Syntax

cnffport <slot.port> <parameter number> <parameter value>

- <slot.port> specifies the port.
- <parameter number> specifies the number of the parameter to change.
- <parameter value> specifies the new value to enter.

Function

This command configures system parameters for the FastPAD port. When you enter this command, the system responds with the following:

Figure 1-22 cnffpsys—Configure System Parameters

```

cc7          VT   SuperUser      IPX 32      8.2.5      Jan. 30 1997 10:17 PST

                                FastPad Configuration
                                Index: 0x0000 Location: 0x30E9D0B2
FPD in Use   : 01   Conn State   : 01   FPD Name    : cc7FP
Alarm Status : 00   Switched Conn : 01   FPD Index   : 05
IPX Slot Nm  : 1F   FTC Port Nm  : 01   Link Int    : 01
Link Rate    : 0C   Card Dsc Index: 00   Avail SwVoice : 00
Sfail/Nack   : 00/00 TmOut/OutOfSeq: 00/00 Unknown/Q len : 00/00

                                System Parameters
[04] Ring Freq    : 00 [05] Spd Dial Digit: 04 [06] Country Code : 0100
[07] Line Mgmt Ptcl: 02 [08] Local Swtch Nm: 0C [09] Local Port Nm : 51
[10] Inquire Poll : 05 [11] Full Stat Poll: 05 [12] Min Frame Size: 22
[13] Max Frame Size: 43 [14] Jitter Buf Sz : 00 [15] User Lockout : 01

                                Link Parameters
[16] Clock        : 00 [17] Rate          : 0C [18] Bandwidth      : 8000
[19] Data Card Slot: FF [20] Data Card Chnl: 00 [21] Bundled DLCI  : 1000

This Command: cnffpsys 31.2

Enter parameter number to change (DEL to quit)
  
```

Enter the parameter number to make a change.

cnffstparm (Configure ForeSight Node Parameter)

The **cnffstparm** command configures the ForeSight parameters for frame relay ports.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

cnffrcon

Syntax

cnffstparm

No line or port number need be entered.

Function

This command configures the ForeSight parameters for frame relay ports. This command only has an effect if the frame relay ForeSight option is enabled. The parameter values set by this command apply to all frame relay connections enabled with ForeSight. Therefore, these parameters must be configured on each node in the network that has ForeSight connections. Table 1-11 lists the parameters. The **cnffrcon** command enables ForeSight on a connection.

When you enter this command system responds with the screen illustrated in Figure 1-23.

Figure 1-23 cnffstparm—Configure ForeSight Parameters

```
sw83          TN      SuperUser      IPX 16      8.2.5      Feb. 1 1997  15:41 PST

1  FRP/FTC Increase Rate  [  10] (%)
2  FRP/FTC Decrease Rate [  87] (%)
3  FRP Fast Decrease Rate [  50] (%)
4  RTD Measurement Time  [   5] (secs)
5  Default RTD           [ 100] (msecs)
6  Minimum RTD           [   40] (msecs)
7  Maximum RTD           [ 250] (msecs)
8  FECN for congested mins [  50] (%)
9  QIR Time-out          [  10] (secs)
10 Max TstDelay Retries  [   2] (dec)
```

This Command: cnffstparm

Enter parameter index:

Table 1-11 ForeSight Node Parameters

No.	Parameter	Description	Default
1	FRP Increase Rate	If free bandwidth is available, the rate at which FRP increases transmission (as a percentage of MIR).	10%
2	FRP Decrease Rate	If free bandwidth becomes unavailable, the rate at which FRP decreases transmission (as a percentage of current rate).	87%
3	FRP Fast Decrease Rate	If a cell is dropped or the TxQ is full, the rate at which FRP decreases transmission (as a percentage of current rate).	50%
4	RTD Measurement Time	The polling interval for measuring round-trip delay on each frame relay PVC.	5 sec.
5	Default RTD	The default RTD the connection uses before RTD is measured.	100 ms.
6	Minimum RTD	Min. value used for RTD in FR calculation regardless of measured RTD.	40 ms.
7	Maximum RTD	Max. value used for RTD in FR calculation regardless of measured RTD.	250 ms.
8	FECN for congested mins	When this % of packets received have the EFCN bit set, a congested minutes field in the dsprport command is indicated.	50%
9	QIR Time-out	Interval after which if PVC is idle, will reset the allowable transmit rate to QIR.	10 secs.

cnflan (Configure LAN)

Configures node communication parameters.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

upln, dnln, cnfln

Syntax

cnflan <IP_Address> <IP_Subnet_Mask> <Maximum LAN Transmit Unit> <TCP Service Port>

<IPAdd>	Specifies the Internet address of the node used in the TCP/IP protocol.
<IP subnet mask>	Specifies a 32-bit mask that contains information about the bit lengths of the subnet ID and host ID address fields. The format of this field uses 1s for the subnet ID field and 0s for the host ID address field as defined in the TCP/IP protocol. The default value (in decimal notation) is 255 255 255.0. This mask denotes both subnet ID and host ID fields as 8-bit fields.
<Max. LAN Transmit Unit>	BPX only: typical amount is 1500 bytes.
<TCPServicePort>	Specifies the node's service point used by the transmission control protocol (TCP).
<GatewayIPAddr>	Specifies the Internet gateway address.

Function

This command configures node communication parameters, so the node can communicate with a StrataView Plus terminal over an Ethernet LAN using TCP/IP protocol. The parameters all contain address information about the Ethernet TCP/IP network that connects the StrataView Plus station to an IPX, IGX, or BPX. The values must conform to those of the network. The network administrator can supply the parameters.

Figure 1-24 cnflan—Configure LAN Parameters

```
beta          TRM   YourID:1      IPX 32  8.2.5      Jan. 15 1997 14:44 MST

Active IP Address:          192.0.0.0
IP Subnet Mask:            255.255.255.0
TCP Service Port:         5120
Default Gateway IP Address:  None

Maximum LAN Transmit Unit:  1500
Ethernet Address:          00.E0.07.00.00.00

LAN is not available on the PCC

Last Command: cnflan

Next Command:
```


cnflnparm (Configure ATM Line Card Parameter)

The **cnflnparm** command configures several parameters for ATM lines originating on the BPX.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: BPX

Associated Commands

upln, dnln, cnfln

Syntax

cnflnparm <slot.port> <option 1 – 4>

<slot.port> specifies the line to configure in the format slot.port for the ASI-0 card.

<option 1 – 4> specifies the parameter to configure.

Function

This command configures the circuit line alarm integration times for RED and YELLOW circuit line alarms. These integration times are specified in milliseconds and should be set to correspond to the local carrier's alarm integration times. Carrier integration times are typically 800 ms. to 1500 ms for RED Alarm and 1500 to 3000 milliseconds for YELLOW Alarm. The allowable range for these parameters are 60 to 3932100 milliseconds.

You can also set the queue depth for the two queues associated with the ASI-0 card, the constant bit rate (CBR) queue and the Variable Bit Rate (VBR) queue. The queue depths may be increased to 16,000 bytes per queue.

When you enter this command system responds with the screen in Figure 1-25. This command is quite similar to the Configure Circuit Line command.

Figure 1-25 cnflnparm—Configure ATM Line Card Parameters

```
sw83                      TN      SuperUser                      IPX 16      8.2.5      Feb. 1 1997 15:45 PST

CLN 7 Parameters
 1 Red Alarm - In/Out [ 1000 / 2000] (Dec)
 2 Yel Alarm - In/Out [ 1000 / 2000] (Dec)
```

This Command: cnflnparm 7

cnflnparm (Configure ATM Line Card Parameter)

Which parameter do you wish to change:

cnflnstats (Configure Line Statistics Collection)

The **cnflnstats** command lets you configure statistics collection for a line.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

dsplnstatcnf, dsplnstatthist

Syntax

cnflnstats <line> <stat> <interval> <e | d> [<samples> <size> <peaks>]

- <line> specifies the port to configure.
- <stat> specifies the type of statistic to enable/disable.
- <interval> specifies the time interval of each sample (1 - 255 minutes).
- <e|d> enables/disables a statistic. 'E' to enable; 'D' to disable.
- [samples] specifies the number of samples to collect (1 - 255).
- [size] specifies the number of bytes per data sample (1, 2 or 4).
- [peaks] enables the collection of one minute peaks. 'Y' to enable; 'N' to disable.

Function

The **cnflnstats** command lets you customize statistical collection for a line. This command is primarily a debug tool. Table 1-12 lists the statistics by type. Not all statistic types are available for all lines. Only valid statistics are displayed for you to select. The others appear in gray.

Table 1-12 Statistic Types for Lines

Statistic Type	Statistic	Line Type
1	Bipolar Violations	E1 and T1
2	Frame Slips	E1 and T1
3	Out of Frames	E1 and T1
4	Loss of Signal	E1 and T1
5	Frame Bit Errors	E1 only
6	CRC Errors	E1 only
7	Out of Multi-Frames	E1 only
8	All Ones in Timeslot 16	E1 only

Note Bipolar violations are not generally accumulated on E1 trunk and circuit lines. They are accumulated only on E1 lines connected to E1 frame relay ports.

Figure 1-27 illustrates the screens displayed after entering **cnflnstats**.

Figure 1-27 cnflnstats—Configure Line Statistics

```
cc2          LAN  SuperUser      IPX 32      8.2.5      Jan. 30 1997 11:20 PST
```

```
Line Statistic Types
```

- 1) Bipolar Violations
- 2) Frames Slips
- 3) Out of Frames
- 4) Losses of Signal
- 5) Frames Bit Errors
- 6) CRC Errors
- 7) Out of Multi-Frames
- 8) All Ones in Timeslot 16

```
Last Command: cnflnstats 15 6 255 e
```

```
Next Command:
```

cnfmxbutil (Configure MUXBUS Utilization)

The **cnfmxbutil** command configures the IPX MUXBUS utilization factor for each FRP.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

none

Syntax

cnfmxbutil <slot number> <percentage>

<slot number> specifies the slot number of the associated FRP card.

<percentage> specifies the percent of MUXBUS bandwidth to allocate.

Function

This command configures the MUXBUS utilization factor. A certain amount of MUXBUS bandwidth is allocated by system software for each FRP in an IPX node. Since the maximum data rate for an FRP is 2 Mbps, this is also the maximum amount of MUXBUS bandwidth reserved for the FRP.

In many applications, each of the four FRP ports is configured for a large number of 56 or 64 Kbps connections. System software adds up the bandwidth required for all the connections, multiplies by 121% to reserve extra bandwidth for overhead, then subtracts this amount from the total available MUXBUS bandwidth.

However, statistical full utilization is not often required on ports with a large number of connections and the MUXBUS bandwidth reserved may be reduced further. In nodes equipped with a T3 or E3 ATMT card, much of the MUXBUS bandwidth may be assigned to the ATM trunk and the remaining MUXBUS bandwidth may need to be allocated carefully.

Prior to release 7.1, the MUXBUS utilization factor was configurable only on a per-node basis using the **cnfnodparm** command. All FRPs had to be configured the same. This command permits assigning the utilization factor for each FRP in the node on a slot by slot basis.

See Figure 1-28 for a sample screen. N/A is displayed for all slots not equipped with an FRP. Once the slot is selected, the system displays the message "Enter Utilization Factor". The allowable range is from 1 to 250% with a default of 121%. The extra 21% for the default is used to cover the overhead involved in encapsulating the frame relay frame in the FastPacket or ATM cell.

Figure 1-28 cnfmxbutil—Configure MUXBUS Utilization

```
gamma      SV+      SuperUser  IPX32      Rev:  8.2.5      Jan. 14 1997  14:27 PDT

Slot  1: N/A      Slot  9: N/A      Slot 17: 121%     Slot 25: N/A
Slot  2: N/A      Slot 10: N/A     Slot 18: 121%     Slot 26: N/A
Slot  3: N/A      Slot 11: N/A     Slot 19: N/A      Slot 27: N/A
Slot  4: N/A      Slot 12: N/A     Slot 20: N/A      Slot 28: N/A
Slot  5: N/A      Slot 13: N/A     Slot 21: N/A      Slot 29: N/A
Slot  6: N/A      Slot 14: N/A     Slot 22: N/A      Slot 30: N/A
Slot  7: N/A      Slot 15: N/A     Slot 23: N/A      Slot 31: N/A
Slot  8: N/A      Slot 16: N/A     Slot 24: N/A      Slot 32: N/A
```

This Command: cnfmxbutil

Enter Slot:

cnfnodeparm (Configure Node Parameter)

The **cnfnodeparm** command sets various general, non-related parameters for the various nodes.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

none

Syntax

cnfnodeparm

Function

This command allows changing some of the node-wide system parameters as listed in Table 1-13 and Table 1-14. The defaults for these parameters are selected by Cisco to operate under normal network conditions. With few exceptions, they should not be changed except under direction of Cisco TRT. See Figure 1-29 for a sample screen.

Table 1-13 Node Parameters (IPX/IGX Nodes)

Index	Parameter	Description	Default *
1	Update Initial Delay (sec.)	Specifies a factor for generating a delay before conditional updates are transmitted to the network after a controller card switch-over. The <i>Update Initial Delay</i> is multiplied by the number of nodes in the network.	5000 (D)
2	Update Per-Node Delay (ms.)	Specifies the delay between transmission of conditional updates to the nodes.	30000 (D)
3	Comm. Break Test Delay (ms.)	Normal interval between tests for communication break on any node.	30000 (D)
4	Comm. Break Test Offset	Factor between number of communication test failures and test successes to declare a node in communication break condition.	10 (D)
5	Network Timeout Period	Number of milliseconds to wait for a response to a communication test transmission before declaring a failure. The maximum is four failures.	1700 (D)
6	Network Inter-p Period	In inter-domain connections, <i>Network Inter-p Period</i> is the number of milliseconds to wait for a response to a communication test transmission before declaring a failure. The maximum is four failures	4000 (D)
7	Network Sliding Window Size	Controls the number of control card messages that the node can simultaneously transmit to the network. This parameter defines the number of no acknowledgments outstanding on a controller before NACKS is declared.	1 (D)

* Enter value in either decimal (D) or hexadecimal (H).

Index	Parameter	Description	Default *
8	Number of Normal Timeouts	For intra-domain connections: <i>Number of Normal Timeouts</i> is the maximum number of normal network re-transmissions before the node signals a communication break.	7 (D)
9	Number of Inter-p Timeouts	For inter-domain connections: <i>Number of Inter-p Timeouts</i> is the maximum number of normal network re-transmissions before the node signals a communication break.	3 (D)
10	Number of Satellite Timeouts	Maximum number of satellite network re-transmissions before the node signals a communication break.	6 (D)
11	Number of Blind Timeouts	Maximum number of communication fail timeouts and re-transmissions before the node declares a communication failure (CF). One successful acknowledgment clears CF.	4 (D)
12	Number of CB Msg Timeouts	Number of communication break timeouts and re-transmissions before the node declares a communication break condition (CB). One successful acknowledgment clears the CB condition.	2 (D)
13	Comm. Fail Interval (ms.)	Minimum time allocated for communication fail testing of all trunks terminating on the local node.	10,000 (D)
14	Comm. Fail Multiplier	Number of Comm. Fail Intervals to skip for good lines.	3 (D)
15	Temperature Threshold (° C.)	Temperature in the enclosure that causes an over-temperature alarm to go to the controller card.	50 (D)
16	NPC Redundancy Configured	A “y” indicates a redundant controller card is required. The absence of a redundant controller card generates an alarm.	Y
17	MT3	OBSOLETE	
18	Network Packet TX Rate	Rate for transmitting control card packets to the network. The range is a series of discreet values: 100 200 333 500 1000 1100 1200 1333 1500 2000. The units of measure are packets per second (pps). The purpose of this parameter is to prevent the control card from flooding the trunk with packets.	500 pps
19	Statistics Memory (x 10 KB)	Specifies the amount of controller memory to allocate for statistics collection.	76 (D)
20	Standby Update Timer	Specifies how often to send update messages to standby controller	10 (D)
21	Stby Updts Per Pass	Number of messages that can be sent to standby NPC for each update interval.	30 (D)
22	Gateway ID Timer	An inter-domain rerouting timer. How often to look for junction nodes for new route.	30 (D)
23	GLCON Alloc Timer	Another inter-domain rerouting timer controlling gateway LCON function.	30 (D)
24	Comm Fail Delay	Number of milliseconds to wait to start detecting communication failures after a controller switch-over.	60 (D)
25	Nw. Hdlr Timer (msec)	Network handler timer determines how long to wait to send messages to or receive messages from a remote node.	50 (D)
26	CBUS Delay	Specifies the minimum number of milliseconds the NPC or NPM must wait before it places the next command on the CBUS.	20 (D)

* Enter value in either decimal (D) or hexadecimal (H).

cnfnodeparm (Configure Node Parameter)

Index	Parameter	Description	Default *
27	SNMP	Enables maintenance logging of global SNMP messages. These SNMP events are not errors but any GET, SET, and so on. Output goes to a printer connected to the node's auxiliary port or a terminal server (accessible via telnet). Without a connected output device, the parameter is meaningless.	y=yes
28	TFTP Grant Delay	The number of seconds the node waits before re-sending a TFTP request after a TFTP error has occurred. This field is display-only: you set the value in StrataView Plus.	1
29	TFTTP ACK Timeout	The number of seconds the node waits for an acknowledgment of a TFTP request before it declares the request as timed out. This field is display-only: you set the value in StrataView Plus.	10
30	TFTP Write retries	The number of times the node retries a TFTP operation (not just writes) after a failed attempt. This field is display-only: you set the value in StrataView Plus.	3
31	FRP/FRM Link Status Alarm	Determines whether a signaling failure on an FRP or FRM port causes a major alarm. This parameter applies to any port configured as an NNI.	y=yes
32	Job Lock Timeout	The range is 1–1000 seconds. The default of 0 disables this parameter.	0
33	Max Nib Xmit Msgs	Maximum number of memory blocks available for messages that are awaiting transmission. Under normal conditions, this parameter should remain the default.	3000
34	Max stby update Q size	Maximum number of update messages that can reside in queues awaiting transmission to the standby processor. Only rare circumstances could provide a reason to change this parameter, so do not change it without first consulting the WANBU TRT.	5000

* Enter value in either decimal (D) or hexadecimal (H).

Table 1-14 Node Parameters (BPX Nodes)

Index	Parameter	Description	Default *
1	Update Initial Delay (sec.)	This delay, multiplied times the number of nodes in the network, is the delay before conditional updates are transmitted to the network after a BCC switchover.	5000 seconds
2	Update Per-Node Delay (ms.)	Delay between transmission of conditional updates to nodes.	30000 msecs
3	Comm. Break Test Delay (ms.)	Interval between tests for communication breaks on any node.	30000 msecs
4	Comm. Break Test Offset	Factor between number of comm. test failures and successful tests to declare a node in comm. break condition.	10 (D)
5	Network Timeout Period	The time a node waits for a response to a communication test transmission before it declares a failure. Four failures allowed.	1700 (D)
6	Network Inter-p Period	The time a node waits for a response to a communication test transmission on inter-domain connections before it declares a failure. The maximum number failures is four.	4000 (D)
7	NW Sliding Window Size	Controls the number of BCC messages that can be transmitted simultaneously. Defines # of no acknowledgments outstanding on controller before NACKS declared.	1 (D)

* Enter value in either decimal (D) or hexadecimal (H).

Index	Parameter	Description	Default *
8	Num. Normal Timeouts	Number of normal network re-transmissions allowed before issuing a comm. break condition (for intra-domain connections).	7 (D)
9	Num. Inter-p Timeouts	Number of normal network re-transmissions allowed before issuing a comm. break condition (for inter-domain connections).	3 (D)
10	Num. Satellite Timeouts	Number of satellite network re-transmissions allowed before issuing a comm. break.	6 (D)
11	Number of Blind Timeouts	Number of comm. fail timeouts and re-transmissions before declaring comm. fail. One successful acknowledgment clears CF.	4 (D)
12	Number of CB Msg Timeouts	Number of comm. break timeouts and re-transmissions before declaring a comm. break (CB) condition. One successful acknowledgment clears CB.	2 (D)
13	Comm. Fail Interval (ms.)	Minimum time allocated for communication fail testing of all trunks terminating on this node.	10,000 (D)
14	Comm. Fail Multiplier	Number of Comm. Fail Intervals to skip for good lines.	3 (D)
15	BCC Redundancy Configured	Yes indicates a redundant controller card is required or an alarm will be generated.	Y
16	Stats Memory (x 10 KB)	The amount of controller memory to allocate to statistics collection.	76 (D)
17	Standby Update Timer	Determines how often to send update messages to standby controller	10 (D)
18	Stby Updts Per Pass	Number of messages that can be sent to standby NPC for each update interval.	30 (D)
19	Gateway ID Timer	An inter-domain rerouting timer. How often to look for junction nodes for new route.	30 (D)
20	GLCON Alloc Timer	Another inter-domain rerouting timer controlling gateway LCON function.	30 (D)
21	Comm Fail Delay	Timer to determine how soon after controller switchover to start detecting comm. fail.	60 (D)
22	Nw. Hdlr Timer (msec)	Network handler timer determines how long to wait to send messages to or receive messages from a remote node.	50 (D)
23	SAR BCC Transmit Rate	Transmit data rate for BCC traffic to standby BCC (Kbps).	560 (D)
24	SAR High Transmit Rate	Transmit data rate for BCC traffic to other BCC nodes (Kbps).	280 (D)
25	SAR Low Transmit Rate	Transmit data rate for BCC traffic to ICC nodes (Kbps).	56 (D)
26	SAR VRAM Cngestn Limit	BCC traffic receive queue congestion threshold that will cause cell discards.	7680 (D)
27	SAR VRAM Cell Discard	BCC traffic receive queue discard amount in cells.	256 (D)
28	ASM Card Cnfged	Yes indicates an Alarm/Status Monitor card is required or an alarm will be generated.	Y
29	TFTP Grant Delay (sec)	The number of seconds the node waits before re-sending a TFTP request after a TFTP error has occurred. This field is display-only: you set the value in StrataView Plus.	1
30	TFTP ACK Timeout (sec)	The number of seconds the node waits for an acknowledgment of a TFTP request before it declares the request as timed out. This field is display-only: you set the value in StrataView Plus.	10

* Enter value in either decimal (D) or hexadecimal (H).

cnfnodeparm (Configure Node Parameter)

Index	Parameter	Description	Default *
31	TFTP Write Retries	The number of times the node retries a TFTP operation (not just writes) after a failed attempt. This field is display-only: you set the value in StrataView Plus.	3
32	SNMP Event logging	Enables maintenance logging of global SNMP messages. These SNMP events are not errors but any GET, SET, and so on. Output goes to a printer connected to the node's auxiliary port or a terminal server (accessible via telnet). Without a connected output device, the parameter is meaningless.	y=yes
33	Job Lock Timeout	The range is 1–1000 seconds. The default of 0 disables this parameter.	0
34	Max XmtMemBlks per NIB	Maximum number of memory blocks available for messages that are awaiting transmission. Under normal conditions, this parameter should remain the default.	3000
35	Max Stby Update Q Sz	Maximum number of update messages that can reside in queues awaiting transmission to the standby processor. Only rare circumstances could provide a reason to change this parameter, so do not change it without first consulting the WANBU TRT.	5000

* Enter value in either decimal (D) or hexadecimal (H).

Figure 1-29 cnfnodeparm—Configure Node Parameters (BPX)

```

sw81          TN      SuperUser      BPX 15      8.2.5      Feb. 1 1997  15:30 PST

1  Update Initial Delay [ 5000] (D)  16 Stats Memory (x 10KB) [ 61] (D)
2  Update Per-Node Delay [30000] (D)  17 Standby Update Timer [ 10] (D)
3  Comm-Break Test Delay [30000] (D)  18 Nw Pkt Tx Rate (pps) [ 500] (D)
4  Comm-Break Test Offset [ 10] (D)  19 Gateway ID Timer [ 30] (D)
5  Network Timeout Period [ 1700] (D)  20 GLCON Alloc Timer [ 30] (D)
6  Network Inter-p Period [ 4000] (D)  21 Comm Fail Delay [ 60] (D)
7  NW Sliding Window Size [ 1] (D)  22 Nw Hdlr Timer (msec) [ 50] (D)
8  Num Normal Timeouts [ 7] (D)  23 SAR CC Transmit Rate [ 560] (D)
9  Num Inter-p Timeouts [ 3] (D)  24 SAR High Transmit Rate [ 280] (D)
10 Num Satellite Timeouts [ 6] (D)  25 SAR Low Transmit Rate [ 56] (D)
11 Num Blind Timeouts [ 4] (D)  26 SAR VRAM Cngestn Limit [ 7680] (D)
12 Num CB Msg Timeouts [ 2] (D)  27 SAR VRAM Cell Discard [ 256] (D)
13 Comm Fail Interval [10000] (D)  28 ASM Card Cnfged [ Y] (Y/N)
14 Comm Fail Multiplier [ 3] (D)  29 TFTP Grant Delay (sec) [ 1] (D)
15 CC Redundancy Cnfged [ Y] (Y/N)  30 TFTP ACK Timeout (sec) [ 1] (D)

```

This Command: cnfnodeparm

Continue?

```

sw81          TN      SuperUser      BPX 15      8.2.5      Feb. 1 1997  15:32 PST

31 TFTP Write Retries [ 3] (D)
32 SNMP Event logging [ Y] (Y/N)
33 Job Lock Timeout [ 60] (D)
34 Max Nib Xmit Msgs [ 1000] (D)
35 Max Stby Update Q Sz [ 5000] (D)

```

Last Command: cnfnodeparm

Enter parameter index:

cnfnwip (Configure Network IP Address)

The **cnfnwip** command configures an IP address and subnet mask for the node.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

none

Syntax

cnfnwip <IPAddr> <IPSubnetMask>

<IPAddr> IP address of the node: the format is *nnn.nnn.nnn.nnn*, where *nnn* can be 1–255

<IPSubnetMask> subnet mask: the format is *nnn.nnn.nnn.nnn*

An example of this command is:

```
cnfnwip 199.35.96.217 255.255.255.0
```

where 199.35.96.217 is the IP address, and 255.255.255.0 is the subnet mask.

Function

The network IP address and subnet mask support statistics collection for StrataView Plus. The **cnfnwip** command defines the IP address the system uses to pass messages between StrataView Plus and the node. The Statistics Master process in StrataView Plus collects statistics. The Statistics Manager requests and receives statistics using TFTP Get and Put messages. These TFTP messages pass between the node and the Statistics Master using IP Relay. (See the **cnfstatmast** description for details on setting the Statistics Master address.)

Figure 1-30 cnfnwip—Configure Network IP Address

```
axiom      TN      Bootzilla      IGX 32      8.2.5      Jan. 5 1997 18:25 GMT

Active Network IP Address:      169.134.90.106
Active Network IP Subnet Mask:  255.255.255.0
```

```
Last Command: cnfnwip 169.134.90.106 255.255.255.0
```

```
Next Command:
```

cnfportstats (Configure Frame Relay Port Statistics Collection)

The **cnfportstats** command configures parameters for frame relay ports.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

none

Syntax

cnfportstats <port> <stat> <interval> <e|d> [<samples> <size> <peaks>]

- <port> specifies the port to configure.
- <stat> specifies the type of statistic to enable/disable.
- <interval> specifies the time interval of each sample (1 - 255 minutes).
- <e|d> enables/disables a statistic. 'E' to enable; 'D' to disable.
- [samples] specifies the number of samples to collect (1 - 255).
- [size] specifies the number of bytes per data sample (1, 2 or 4).
- [peaks] enables the collection of one minute peaks. 'Y' to enable; 'N' to disable.

Function

The **cnfportstats** command configures frame relay port parameters. Primarily, it is for debugging. Table 1-15 lists the configurable statistics. Not all statistic types are apply to all ports. Refer to Figure 1-31 and Figure 1-32 for examples.

Figure 1-32 shows that the selected statistic is 33—transmitted bytes while the ingress LMI is showing a failed condition. After the port number and statistic number (33) on the command line, the remaining parameters are the interval, enable for this statistic, number of samples.

Table 1-15 Frame Relay Port Statistic Types

Type	Statistic
1–4	Total frames and bytes transmitted and received.
5– 6	Frames transmitted with FECN and BECN set.
7–10	Frames received with problems: CRC errors, invalid format, frame alignment errors, wrong length frames.
11	Number of direct memory access (DMA) overruns on a frame relay port that are probably due to excessive user-data input.
12–17	LMI counts on UNI ports. These include status inquiries, status transmit and update requests, invalid inquiries, and LMI link timeouts.

Type	Statistic
18	Frames received with DLCIs in error.
19	Frames dropped with DE bit set.
20–24	LMI counts on NNI ports: status inquiries, status receive and update requests, LMI link timeouts, keepalive sequence errors.
25–26	Frame and byte count totals for Consolidated Link Layer Message (CLLM) frames that transmit ForeSight messages.

Figure 1-31 cnfportstats—Configure Port Statistics (Screen 1)

```
pubsigx1      TN      SuperUser      IGX 32      8.2.5      Jan. 5 1997 17:21 GMT
```

```
Port Statistic Types
```

- | | |
|-----------------------------------|---|
| 1) Frames Received | 14) LMI UNI Status Update Count |
| 2) Frames Transmitted | 15) LMI Invalid Status Enquiries |
| 3) Bytes Received | 16) LMI UNI Link Timeout Errors |
| 4) Bytes Transmitted | 17) LMI UNI Keepalive Sequence Errors |
| 5) Frames Transmitted with FECN | 18) Receive Frames Undefined DLCI Count |
| 6) Frames Transmitted with BECN | 19) DE Frames Dropped |
| 7) Receive Frame CRC Errors | 20) LMI NNI Status Enquiries |
| 8) Invalid Format Receive Frames | 21) LMI NNI Status Receive Count |
| 9) Receive Frame Alignment Errors | 22) LMI NNI Status Update Count |
| 10) Illegal Length Receive Frames | 23) LMI NNI Link Timeout Errors |
| 11) Number of DMA Overruns | 24) LMI NNI Keepalive Sequence Errors |
| 12) LMI UNI Status Enquiries | 25) CLLM Frames Transmitted |
| 13) LMI UNI Status Transmit Count | 26) CLLM Bytes Transmitted |

```
This Command: cnfportstats 3.1
```

```
Continue?
```

Figure 1-32 cnfportstats—Configure Port Statistics (Screen 2)

```
pubsigx1      TN      SuperUser      IGX 32      8.2.5      Jan. 5 1997 17:24 GMT
```

```
Port Statistic Types
```

- 27) CLLM Frames Received
- 28) CLLM Bytes Received
- 29) CLLM Failures
- 30) Tx Frames Discarded - Queue Overflow
- 31) Tx Bytes Discarded - Queue Overflow
- 32) Tx Frames while Ingress LMI Failure
- 33) Tx Bytes while Ingress LMI Failure

```
Last Command: cnfportstats 3.1 33 2 e 2 4 y
```

```
Next Command:
```

cnfrobparm (Configure Robust Alarms Parameters)

The **cnfrobparm** command sets parameters associated with the Robust Alarms feature.

Attributes

Jobs: No Log: No Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

Syntax

cnfrobparm <index> <value>

<index> specifies the parameter to configure.

<value> specifies new value to be entered for the parameter.

Function

This command sets Robust Alarms parameters. Robust Alarms is a protocol for node to NMS communications. When a node has statistics or alarm information to be sent to the NMS, it requires a response from the NMS as a confirmation of database update. Table 1-16 lists the parameters. Figure 1-33 illustrates the command.

Table 1-16 Robust Communications Parameters

No.	Parameter	Description	Default
1	Robust State walk-up timer (ms.)	This state machine comes to life once a second (default). If this timer is increased, it operates less often and places less of a load on the node processor.	10 ms.
2	Robust update timer (sec)	Once a message has been sent to the NMS, another one will not be sent before this timer expires.	10 sec.
3	Robust acknowledgment timeout (sec.)	An acknowledgment must be returned by the NMS within this time period or it is assumed the communications link is down.	600 sec.
4	Robust acknowledgment reset timeout (sec.)	When the link has gone down, then is repaired, the next message will be sent after this timeout. Provides a settling time for the link.	60 sec.

Figure 1-33 cnfrobparm—Configure Robust Alarm Parameters

Dl.a34 TRM SuperUser IPX 16 8.2.5 Jan. 14 1997 15:02 PDT

Robust Parameters

- 1 Robust State wakeup timer (sec)10
- 2 Robust update timer (sec)10
- 3 Robust acknowledge timeout (sec)600
- 4 Robust acknowledge reset timeout (sec)60

This Command: cnfrobparm

Which parameter do you wish to change:

cnfslotstats (Configure Slot Statistics Collection)

The **cnfslotstats** command configures the collection of statistics for the selected node slot.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: BPX

Associated Commands

dspsloterrs

Syntax

cnfslotstats <slot number>

<slot number> specifies the shelf and slot.

Function

This command sets the collection interval for each of the BPX node slot statistics. The default is for no statistics to be collected. The collection interval range is 1 minute to 255 minutes (4-1/4 hrs).

Table 1-17 lists the nine statistics associated with each slot in the BPX. Figure 1-34 illustrates the command screen. This command is primarily a troubleshooting tool for use when hardware errors are experienced that may not be detected by the individual card self-test routines. An associated display command (**dspsloterrs**) is available for all users.

Table 1-17 Slot Errors

Error	Description
Standby Bus Errors	Indicates a background test over the standby bus produced an error.
Rx Invalid Port Errors	Indicates port number was out of the range 1–3.
Polling Bus A Errors	Parity error occurred on this polling bus.
Polling Bus B Errors	Parity error occurred on this polling bus.
Bad Grant Errors	Error indicates arbiter did not issue a grant to send data before a timeout.
Tx BIP-16 Errors	Data frame transmitted had a checksum error.
Rx BIP-16 Errors	Data frame received with a checksum error.
SIU Phase Errors	Serial Interface Unit on the card did not detect the frame synch properly.
Bframe Errors	Errors detected in the BPX frame on the StrataBus or in a memory operation.

You must enter the statistic type (1–9) to set the collection interval. When the command is entered, the system responds with the prompt:

“Collection Interval (1–255 minutes): __

Figure 1-34 cnfslotstats—Configure Slot Statistics Parameters

```
sw81          TN      SuperUser      BPX 15      8.2.5      Feb. 1 1997  15:42 PST

Card Statistics Types

1) Standby PRBS Errors
2) Rx Invalid Port Errs
3) PollA Parity Errors
4) PollB Parity Errors
5) Bad Grant Errors
6) Tx Bip 16 Errors
7) Rx Bip 16 Errors
8) Bframe parity Errors
9) SIU phase Errors
10) Rx FIFO Sync Errors
11) Poll Clk Errors
12) CK 192 Errors

This Command: cnfslotstats 8
```

cnftcpparm (Configure TCP Parameters)

The **cnftcpparm** command configures the TCP network IP throttle parameter.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

dsptcpparm

Syntax

cnftcpparm <network ip throttle>

<network ip throttle> specifies the number of times that the BCC card polls the LAN for attention requests.

Function

This command configures the amount of number of times each second that the BCC card will check the IP addressees for attention requests. Figure 1-35 illustrates the system response when the command is issued:

Figure 1-35 Configure TCP Parameters

```
Sw81            TN      SuperUser      BPX 15      8.2.5      Feb. 1 1997   15:46 PST
NWIP Bandwidth Throttle (Kbytes/sec): 32
```

This Command: cnftcpparm

Enter NWIP Bandwidth Throttle (Kbytes/sec):

cnftrkparm (Configure Trunk Parameters)

The **cnftrkparm** command sets trunk parameters for the following front cards:

- ALM/A
- ALM/B
- AIT
- BTM
- NTC
- NTM
- BNI

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

dsprkstat, dsprkstatcnf

Syntax

cnftrkparm <trk number> <parm index> <parm value>

<trk number> specifies the trunk to configure (can be a virtual trunk on a BNI).

<parm index> specifies the parameter to change.

<parm value> specifies the value of the parameter.

Function

Use **cnftrkparm** to optimize a network for particular traffic mixes. The **cnftrkparm** command configures any of the trunk-specific parameters associated with a trunk card. It applies to either a FastPacket trunk (“packet line”) or an ATM trunk. For ATM trunks, **cnftrkparm** applies to both physical and virtual trunks. Spacer queues indicated for the CLP and EFCN thresholds pertain to AIT and BTM cards.

When the system receives this command and trunk number, it displays the configurable parameters with an index number for each. The parameters vary with the trunk type, as the subsequent figures and tables show. Table 1-18, Table 1-19, and Table 1-20 list the parameters for trunks carrying FastPackets and ATM cells, respectively. Figure 1-36, Figure 1-37, and Figure 1-38 show the response when you specify a FastPacket line or trunk.

This command is also used to reconfigure trunk queue depths to meet the CEPT requirement of a maximum end-to-end delay of 10 ms. To reconfigure a trunk queue depth, enter the following:

cnftrkparm <trk number> <parm index> <parm value>

Where: <trk number> specifies the trunk to be configured.
 <parm index> is 2 (which corresponds to the NTS queue).
 <parm value> is 7 (which is the maximum allowable queue depth).

Figure 1-36 cnftrkparm for an IPX

```

sw83          TN      SuperUser      IPX 16      8.2.5      Feb. 23 1997 15:58 PST

PLN 13 Parameters:
 1 Yel Alm-In/Out (D) [ 600/ 600]      18 Red Alm-In/Out (D) [ 2500/ 15000]
 2 Rx Max Age - Voice (D) [ N/A]      19 Tx Max Age - Voice (D) [ 20]
 3 Rx EFCN - BdataB (D) [ N/A]      20 Tx EFCN - BdataB (D) [ 30]
 4 Gateway Efficiency (D) [ N/A]
 5 EFCN - Rx Space (D) [ N/A]      Tx Age Step2 (D)      Tx Age Step (D)
 6 Low CLP - Rx_Space (%) [ N/A]      21 BDataA [ 128]      23 BDataA [ 128]
 7 High CLP - Rx_Space (%) [ N/A]      22 BDataB [ 128]      24 BDataB [ 128]
Rx High CLP (%)      Rx Low CLP (%)      Tx High CLP (%)      Tx Low CLP (%)
 8 BDataA [ N/A]      10 BDataA [ N/A]      25 BDataA [ 100]      27 BDataA [ 100]
 9 BDataB [ N/A]      11 BdataB [ N/A]      26 BDataB [ 75]      28 BDataB [ 25]
Receive Queue Depth (D)      Transmit Queue Depth (D)
12 Voice [ N/A]      15 BDataA [ N/A]      29 Voice [ 22]      32 BDataA [ 301]
13 Non TS [ N/A]      16 BDataB [ N/A]      30 Non TS [ 114]      33 BDataB [ 301]
14 TS [ N/A]      17 HighPri[ N/A]      31 TS [2616]      34 HighPri[ 100]

Last Command: cnftrkparm 13

Next Command:

```

Table 1-18 IPX/IGX Trunk Parameters

Index	Parameter	Description
1, 18	Yel/Red Alarm In/Out	These are the assert and clear times in msec for yellow and red trunk alarms for input or output.
2, 19	Rx/Tx Max. Age: - Voice	This is the maximum time (in 125 μsec units) a voice packet can be aged in the queue before it is discarded.
3, 20	Rx/Tx EFCN - BdataB	Packets/cells received from the trunk carrying ForeSight frame relay above this threshold will have their EFCN bit set. Set for both transmit and receive queues.
4	Gateway Efficiency	This a factor that determines how many FastPackets from an AIP source will be delivered to the payload of an ATM cell. Ranges from 1.0 to 3.0.
5	EFCN - Rx Space	Same as 3, 20 except that EFCN - Rx Space (5) sets the threshold in the RX spacer queues in the AIT (IPX) or BTM or ALM/B (IGX). Rx space queues face towards the node.
6, 7	Low-High CLP-Rx Space	Same as 8, 9 except this threshold is for setting CLP in receive spacer queues for data to send to the local node.
8, 9	Rx High CLP (Bdata A/BdataB)	Frame relay cells/packets received from trunk with CLP bit set above this high threshold will be dropped and will continue to be dropped until the low threshold is crossed. Separate queues for ForeSight and non-ForeSight data. Given in terms of % of queue depth.
10, 11	Rx Low CLP (Bdata A/BdataB)	Same as for 8, 9 except sets low threshold.
25, 26	Tx High CLP	Same as 8, 9 except this is threshold for setting CLP in transmit queues for data to be output to the next link.
27, 28	Tx Low CLP	Same as for 25, 26 except sets low threshold.

Figure 1-38 cnftrkparm for a Virtual Trunk

```

sw97          TN      SuperUser      BPX 15      8.2.5      Jan. 9 1997  10:11 GMT

TRK 1.1.1 Parameters
 8 Red Alm - I/O (Dec) [ 2500 / 10000]
 9 Yel Alm - I/O (Dec) [ 2500 / 10000]
15 Q Depth - CBR      [ 2678] (Dec)
18 Low CLP - CBR      [ 100] (%)
19 High CLP - CBR     [ 100] (%)
    
```

This Command: cnftrkparm 1.1.1

Which parameter do you wish to change:

Table 1-20 Virtual Trunk Parameters

Index	Parameter	Description
8	Red Alarm	
9	Yellow Alarm	
15	Q Depth	
18	Low CLP	
19	High CLP	

cnftrkstats (Configure Trunk Statistics Collection)

The **cnftrkstats** command configures the statistics collection for a trunk.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

dsprkstatcnf, dsprkstathist

Syntax

cnftrkstats <line> <stat> <interval> <e|d> [<samples> <size> <peaks>]

- <line> specifies the trunk to configure.
- <stat> specifies the type of statistic to enable/disable.
- <interval> specifies the time interval of each sample (1–255 minutes).
- <e|d> enables/disables a statistic. 'E' to enable; 'D' to disable.
- [samples] specifies the number of samples to collect (1–255).
- [size] specifies the number of bytes per data sample (1, 2 or 4).
- [peaks] enables/disables collection of ten second peaks. 'Y' enables; 'N' disables.

Function

The **cnftrkstats** command is primarily a debug command. It configures the collection of statistics for a physical or virtual trunk. After displaying all statistic types for the trunk, the system prompts for “statistic type.” Enter the index number associated with the statistic.

Not all types of statistics are available for all lines. Unavailable selections appear in half-tone or with dashed lines in the value field. Table 1-21 lists the types of statistics that are configurable for FastPacket T1 trunks and ATM T3 trunks. The subsequent figures show the screens associated with T1 packet trunks and T3 ATM trunks.

Table 1-21 Trunk Statistics Types

Categories of Statistics Types	Categories of Statistics Types
Line faults	Line errors and errored seconds
Frame Slips and Loss	Path errors
Transmit packets dropped	Cell framing errors
Packets transmitted for various packet types	EFCN packets transmitted to bus
Packets dropped for various packet types	Queue Service Engine (QSE) cells transmitted

Categories of Statistics Types	Categories of Statistics Types
Bursty data CLP packets and cells dropped	Spacer packets transmitted and dropped for each of the 16 queues.
Errored seconds	The number of seconds in which errors occurred.

Figure 1-39 is the only screen for T1 trunks.

Figure 1-39 cnftrkstats—Configure T1 Trunk Statistics

```

sw83          TN   SuperUser      IPX 16      8.2.5      Feb. 1 1997  14:42 PST

Line Statistic Types
 1) Bipolar Violations          18) Voice Packets Transmitted
 3) Out of Frames               19) TS Packets Transmitted
 4) Losses of Signal            20) NTS Packets Transmitted
 5) Frames Bit Errors           21) CC Packets Transmitted
 6) CRC Errors                  22) BDA Packets Transmitted
 9) Packet Out of Frames        23) BDB Packets Transmitted
10) Packet CRC Errors           24) Total Packets Transmitted
12) Tx Voice Packets Dropped    25) BDA CLP Packets Dropped
13) Tx TS Packets Dropped       26) BDB CLP Packets Dropped
14) Tx NTS Packets Dropped      27) BDA EFCN Pkts Transmitted
15) Tx CC Packets Dropped       28) BDB EFCN Pkts Transmitted
16) Tx BDA Packets Dropped      149) Bdata A CLP Packets Tx to Line
17) Tx BDB Packets Dropped      150) Bdata B CLP Packets Tx to Line

Last Command: cnftrkstats 13

Next Command:

```

The following screens, shown in Figure 1-40 through Figure 1-46, pertain to an ATM trunk (AIT card) on an IPX. Other trunk types and cards have other parameters. To see the list of these, enter the command and continue from page to page without entering an index number.

Figure 1-40 cnftrkstats—Configure ATM Trunk Statistics (Screen 1)

```
sw83          TN      SuperUser      IPX 16      8.2.5      Feb. 1 1997  14:45 PST

Line Statistic Types
 3) Out of Frames                22) BDA Packets Transmitted
 4) Losses of Signal            23) BDB Packets Transmitted
10) Packet CRC Errors           24) Total Packets Transmitted
12) Tx Voice Packets Dropped    25) BDA CLP Packets Dropped
13) Tx TS Packets Dropped       26) BDB CLP Packets Dropped
14) Tx NTS Packets Dropped      27) BDA EFCN Pkts Transmitted
15) Tx CC Packets Dropped       28) BDB EFCN Pkts Transmitted
16) Tx BDA Packets Dropped      29) Line Code Violations
17) Tx BDB Packets Dropped      30) Line Errored Seconds
18) Voice Packets Transmitted    31) Line Severely Err Secs
19) TS Packets Transmitted       32) Line Parity Errors
20) NTS Packets Transmitted      33) Errored Seconds - Line
21) CC Packets Transmitted       34) Severely Err Secs - Line

This Command: cnftrkstats 11

Continue?
```

Figure 1-41 cnftrkstats—Configure ATM Trunk Statistics (Screen 2)

```
sw83          TN      SuperUser      IPX 16      8.2.5      Feb. 1 1997  14:46 PST

Line Statistic Types
35) Path Parity Errors           48) Tx Voice Cells Drpd
36) Errored Secs - Path          49) Tx TimeStamped Cells Drpd
37) Severely Err Secs - Path     50) Tx NTS Cells Dropped
38) Severely Err Frame Secs     51) Tx Hi-Pri Cells Drpd
39) AIS Signal Seconds           52) Tx BData A Cells Drpd
40) Unavail. Seconds            53) Tx BData B Cells Drpd
41) BIP-8 Code Violations       54) Voice Cells Tx to line
42) Cell Framing Errored Seconds 55) TimeStamped Cells Tx to ln
43) Cell Framing Sev. Err Secs. 56) NTS Cells Tx to line
44) Cell Framing Sec. Err Frame Secs 57) Hi-Pri Cells Tx to line
45) Cell Framing Unavail. Secs.  58) BData A Cells Tx to line
46) ATM Cell Header HEC Errs     59) BData B Cells Tx to line
47) Pkts. Rx from Muxbus        60) Half Full cells Tx to ln

This Command: cnftrkstats 11

Continue?
```

Figure 1-42 cnftrkstats—Configure ATM Trunk Statistics (Screen 3)

```

sw83          TN      SuperUser      IPX 16      8.2.5      Feb. 1 1997  14:47 PST

Line Statistic Types
61) Full cells Tx to ln
62) Total Cells Tx to line
63) Tx Bdata A CLP Cells Drpd
64) Tx Bdata B CLP Cells Drpd
65) Bdata A EFCN Cells Tx ln
66) Bdata B EFCN Cells Tx ln
67) Half Full Cells Rx from ln
68) Full Cells Rx from line
69) Total Cells Rx from line
70) Total pkts Rx from line
71) Rx Voice Pkts Dropped
72) Rx TS Pkts Dropped
73) Rx NTS Pkts Dropped
74) Rx Hi-pri Pkts Dropped
75) Rx BDA Pkts Dropped
76) Rx BDB Pkts Dropped
77) Voice pkts Tx to Muxbus
78) TS pkts Tx to Muxbus
79) NTS pkts Tx to Muxbus
80) Hi-pri pkts Tx to Muxbus
81) Bdata A pkts Tx to Muxbus
82) Bdata B pkts Tx to Muxbus
83) Rx Bdata A CLP pkts drpd
84) Rx Bdata B CLP pkts drpd
85) Bdata A EFCN Pkts Tx muxbus
86) Bdata B EFCN Pkts Tx muxbus

This Command: cnftrkstats 11

Continue?

```

Figure 1-43 cnftrkstats—Configure ATM Trunk Statistics (Screen 4)

```

sw83          TN      SuperUser      IPX 16      8.2.5      Feb. 1 1997  14:48 PST

Line Statistic Types
87) Total Pkts Tx to muxbus
88) Rx voice cells drpd
89) Rx TimeStamped Cells drpd
90) Rx NTS Cells dropped
91) Rx Hi-pri Cells dropped
92) Rx Bdata A Cells dropped
93) Rx Bdata B Cells dropped
94) Rx Bdata A CLP cells drpd
95) Rx Bdata B CLP cells drpd
96) Rx Spacer CLP Pkts drpd
97) Spacer EFCN Pkts Tx to Muxbus
98) Frame Sync Errors
99) Rx Spacer 1 Pkts dropped
100) Rx Spacer 2 Pkts dropped
101) Rx Spacer 3 Pkts dropped
102) Rx Spacer 4 Pkts dropped
103) Rx Spacer 5 Pkts dropped
104) Rx Spacer 6 Pkts dropped
105) Rx Spacer 7 Pkts dropped
106) Rx Spacer 8 Pkts dropped
107) Rx Spacer 9 Pkts dropped
108) Rx Spacer 10 Pkts dropped
109) Rx Spacer 11 Pkts dropped
110) Rx Spacer 12 Pkts dropped
111) Rx Spacer 13 Pkts dropped
112) Rx Spacer 14 Pkts dropped

This Command: cnftrkstats 11

```

Figure 1-44 cnftrkstats—Configure ATM Trunk Statistics (Screen 5)

```
sw83          TN      SuperUser      IPX 16      8.2.5      Feb. 1 1997  14:49 PST

Line Statistic Types
113) Rx Spacer 15 Pkts dropped          126) Spacer 10 Pkts Tx to Muxbus
114) Rx Spacer 16 Pkts dropped          127) Spacer 11 Pkts Tx to Muxbus
115) Rx Spacer Pkts drpd                128) Spacer 12 Pkts Tx to Muxbus
116) Spacer 0 Pkts Tx to Muxbus         129) Spacer 13 Pkts Tx to Muxbus
117) Spacer 1 Pkts Tx to Muxbus         130) Spacer 14 Pkts Tx to Muxbus
118) Spacer 2 Pkts Tx to Muxbus         131) Spacer 15 Pkts Tx to Muxbus
119) Spacer 3 Pkts Tx to Muxbus         132) Spacer 16 Pkts Tx to Muxbus
120) Spacer 4 Pkts Tx to Muxbus         133) Rx Voice QSE Cells Tx
121) Spacer 5 Pkts Tx to Muxbus         134) Rx Time Stamped QSE Cells Tx
122) Spacer 6 Pkts Tx to Muxbus         135) Rx NTS QSE Cells Tx
123) Spacer 7 Pkts Tx to Muxbus         136) Rx Hi Priority QSE Cells Tx
124) Spacer 8 Pkts Tx to Muxbus         137) Rx Bdata A QSE Cells Tx
125) Spacer 9 Pkts Tx to Muxbus         138) Rx Bdata B QSE Cells Tx

This Command: cnftrkstats 11
```

Figure 1-45 cnftrkstats—Configure ATM Trunk Statistics (Screen 6)

```
sw83          TN      SuperUser      IPX 16      8.2.5      Feb. 1 1997  15:02 PST

Line Statistic Types
139) Rx Bdata A EFCN QSE Cells Tx      152) Cell Framing Yel Transitions
140) Rx Bdata B EFCN QSE Cells Tx      153) AIS Transition Count
141) FEBE Counts                        161) CGW Packets Rx From IPX Net
142) FERR Counts (M or F bit)           162) CGW Cells Tx to Line
143) Cell Framing FEBE Err Secs         163) CGW Frms Relayed to Line
144) Cell Framing FEBE Sev. Err. Secs.  164) CGW Aborted Frames Tx to Line
145) Cell Framing FEBE Counts           165) CGW Dscd Pkts From Abted Frms
146) Cell Framing FE Counts             166) CGW 0-Lngth Frms Rx from Line
147) ATM CRC Errored Seconds            167) CGW Packets Tx to IPX Net
148) ATM CRC Severely Err. Secs.        168) CGW Cells Rx from Line
149) Bdata A CLP Packets Tx to Line     169) CGW Frms Relayed from Line
150) Bdata B CLP Packets Tx to Line     170) CGW Aborted Frms Rx From Line
151) Yellow Alarm Transition Count       171) CGW Dscd Cells From Abted Frms

This Command: cnftrkstats 11
```


Figure 1-46 cnftrkstats—Configure ATM Trunk Statistics (Screen 7)

```
sw83          TN      SuperUser      IPX 16      8.2.5      Feb. 1 1997  14:51 PST

Line Statistic Types
172) CGW Bd CRC32 Frms Rx from Line      185) OAM Valid OAM Cells Rx
173) CGW Bd Lngth Frms Rx from Line      186) OAM Loopback Cells Rx
174) CGW Bd CRC16 Frms Rx from IPX       187) OAM AIS Cells Rx
175) CGW Bd Length Frms Rx from IPX      188) OAM FERF Cells Rx
176) CGW 0-Length Frms Rx from IPX       189) OAM RTD Cells Rx
177) OAM Valid OAM Cells Tx              190) OAM RA Cells Rx
178) OAM Loopback Cells Tx               191) OAM Invalid OAM Cells Rx
179) OAM AIS Cells Tx                    192) OAM CC Cells Rx
180) OAM FERF Cells Tx
181) OAM RTD Cells Tx
182) OAM RA Cells Tx
183) OAM Invalid Supv Packets Rx
184) OAM CC Cells Tx

This Command: cnftrkstats 11
```

cnftstparm (Configure Card Self Test Parameters)

The **cnftstparm** command sets parameters for the internal diagnostic self tests that can be performed for each card type in the node.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

cnfdiagparm, dspcderrs, prtderrs, tststats

Syntax

cnftstparm <top> <freq> <s_e> <s_inc> <s_thr> <s_to> <b_e> <b_inc> <b_thr>

- <tp> specifies the card type.
- <freq> specifies the time between the finish of one test and the start of the next (in seconds).
- <s_e> enables/disables the card self test. 'E' to enable; 'D' to disable.
- <s_inc> specifies the threshold counter increment for self test failures.
- <s_thr> specifies the failure threshold for self tests.
- <s_to> specifies time to wait for a self test response (in seconds).
- <b_e> enables/disables the card background test. 'E' to enable; 'D' to disable.
- <b_inc> specifies the threshold counter increment for background test failures.
- <b_thr> specifies the failure threshold for background tests.

Function

This command sets internal diagnostic, self-test parameters. Upon command entry, the system displays a two-page screen illustrating each of the various card types equipped in the node along with their self test parameters. Each card has two tests: a diagnostic self-test and a background test. The self-test affects the normal operation of the card. The background test can execute while the card is carrying traffic.

The following is a list of the configurable test parameters for each card type:

- Frequency For Test Execution (sec)
- Enable/Disable Self Test (e or d)
- Self Test Failure Increment
- Self Test Failure Threshold
- Timeout For Self Test (sec)
- Enable/Disable Background Test (e or d)

- Background Test Failure Increment
- Background Test Failure Threshold

After **cnftstparm** is entered, Figure 1-47 shows the first page of the display.

Figure 1-47 cnftstparm—Configure Card Self-Test Parameters

```

sw88          TN      SuperUser      IPX 8      8.2.5      Jan. 9 1997 14:32 GMT

Card Test  - - - - - Self Test - - - - -  - - Background Test - - -
Type Freq  Enable      Inc  Thresh  Timeout  EnableIncThresh
-----
NPC    90  Enabled      100   300    60      N/A          100300
PSM   300  Enabled      100   300    31      N/A100300
SDP   300  Enabled      100   300    80      Enabled100300
LDP   300  Enabled      100   300    80      Enabled100300
NTC   300  Enabled      100   300    31      N/A100300
FRP   300  Enabled      100   300    80      Enabled100300
CDP   300  Enabled      100   300    300     N/A100300

Last Command: cnftstparm

Next Command:
    
```

To see the second screen, enter “y” at the Continue prompt.

cnfuiparm (Configure User Interface Parameters)

The **cnfuiparm** command sets various control terminal user interface parameters.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

cnfnodeparm

Syntax

cnfuiparm <parameter number> <value>

<parameter number> specifies the index number of the parameter to set. (See Table 1-22).

<value> specifies the new parameter value to enter.

Function

This command sets user interface parameters for the control terminal. These parameters can be changed at the local node only. It may be necessary to change these parameters in special circumstances, e.g. when a continuous screen is to be observed for a long time or modem password protection makes logging in a difficult procedure. Table 1-22 lists the user interface parameters. Figure 1-48 illustrates the associated display.

Table 1-22 User Interface Parameters

No.	Parameter	Description	Default *
1	Logout Time	Idle time before a local user is logged out (0 = never).	20 min.
2	VT Logout Time	Idle time before a Virtual Terminal user is logged out.	4 min.
3	Prompt Time	Idle time before a parameter prompt times out.	2 min.
4	Command Time	Idle time before a continuous command times out.	3 min.
5	UID Privilege Level	Privilege level of User ID allowed to use control terminal. Default is 6, the lowest level user.	6
6	Input Char Echo	If enabled, characters are echoed as they are typed.	enabled
7	Screen Update Time	The time between screen updates.	2 secs.

Figure 1-48 cnfuiparm—Configure User Interface Parameters

```
sw83 TN      SuperUser      IPX 16      8.2.5      Feb. 1 1997 17:01 PST
```

1. Logout Time No Timeout
2. VT Logout Time 4 minutes
3. Prompt Time 60 seconds
4. Command Time 3 minutes
5. UID Privilege Level ... 6
6. Input Character Echo .. Enabled
7. Screen Update Time 2 seconds

This Command: cnfuiparm

Enter parameter index:

cnfvchparm (Configure Voice Channel Parameter)

The **cnfvchparm** command modifies CDP or CVM voice channel parameters.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

cnfcdpparm, dspchan

Syntax

cnfvchparm <channel(s)> <parameters>

- | | |
|------------|--|
| channel(s) | Specifies the voice channel number(s) to configure. |
| parameters | Specifies values for the voice parameters (Table 1-23 lists parameters). |

Function

The **cnfvchparm** command specifies voice card parameters for:

- Voice Activity Detection (VAD)
- Background noise injection
- VF channel loss
- Echo suppression
- Modem detection

Table 1-23 lists the voice parameters you can specify with **cnfvchparm**. Table 1-24 lists some calculated examples for a *sample delay* for VAD and non-VAD connections.

Different versions of firmware for the CDP and CVM present different ways of specifying the level of background noise you can select to cover awkward periods of silence at the ends of voice connections. For cards with Model A firmware, you specify the actual level in dBm (decibel) or dBmC0. For Model A cards, you can specify the noise levels with a granularity of 0.1 dBm or dBmC0. For cards with Model B firmware, you enter a number that maps to a noise level. Table 1-25 lists the numbers that correspond to the levels of injected background noise for Model B firmware.

The screen displays in Example 1 and Example 2 illustrate **cnfvchparm** applied to a Model A CDP and a Model B CDP, respectively. The display for Model A cards shows the decibel level of the injected noise. The display for the Model B shows the number that corresponds to a decibel (or dBmC0) level of background noise.

After you enter **cnfvchparm**, the system displays “Enter channel(s).” After you enter the parameters, the system requests confirmation by displaying “Reconfigure active CDP channels? (y/n).”

Without the **cnfvchparm** command, the other ways to re-configure channels are:

- By switching cards
- By deleting then re-adding connections

Table 1-23 VF Channel Parameters

Parameter	Description	Default *
Sample delay for VAD connections	Adds processing to speech information to prevent front-end clipping due to speech detector latency. Incremental units are 125 μ secs. See Table 1-24 for samples.	A8 (H)
Sample delay for non-VAD connections	Same for non-VAD circuits.	01 (H)
Background Noise	Sets the level of background noise that the far-end voice card adds to the connection while it is receiving no voice packets. For Model A firmware, you specify the levels in actual decibels in 0.1 dB increments. For Model B firmware, see Table 1-25 for levels.	2 (H)
High Pass Filter mode	Enables/disables high-pass filter to assist in VAD and modem detect.	enabled
Floating Priority mode	When enabled, sets higher priority for modem detection on "c" and "v" channels. Effectively changes the trunk queue for the channel.	enabled
V.25 modem detect mode	Enables/disables V.25 modem-detect mode. The default is enabled with "detect-64K," which specifies that a 2100 Hz tone indicates the presence of V.25-type modem. The options with V.25 modem detect are "disable," "32" for 32K upgrade, and "64" for 64K upgrade. Enter "32" for fax transmission at 32 Kbps FAX Optimized ADPCM. Use the default "64" for fax transmission at 64 kbps PCM.	enabled
32K	Automatically upgrade line to 32 Kbps ADPCM when a 32K modem is detected.	disabled
64K	Automatically upgrade line to 64 Kbps clear channel PCM when a high speed modem is detected.	enabled

Table 1-24 Sample Delay Parameter

Delay for VAD and Non-VAD	Delay
01	0.125 msec.
50	10 msec.
A8	21 msec.

Table 1-25 Injected Noise Levels for Model B

Parameter 3	Injected Noise Level
00	Dynamically set noise level to match the noise detected at the other end. Requires Model B firmware on the CDP or CVM.
0	0 dBmC0 or -90 dBm
1	18 dBmC0 or -70 dBm
2	21 dBmC0 or -67 dBm
3	23 dBmC0 or -65 dBm
4	25 dBmC0 or -63 dBm
5	27 dBmC0 or -61 dBm
6	30 dBmC0 or -58 dBm
7	49 dBmC0 or -39 dBm

Example 1 cnfvchparm for Model A

```

sw110          TN      SuperUser      IGX 16      8.2.5  Dec. 6 1996  17:43 PDT

CDP Models All          None          All
UVM Models All          None          All
Sample Delay Bkgnd      Echo Suppression V.25 Xmit
From 14.1 VAD Non-VAD Noise HPF Float Function Loss Detect Delay
14.1-15 A8 01 67 ON ON ON ON ON 64K 5
14.17-24 A8 01 67 ON ON ON ON ON 64K 5
    
```

This Command: cnfvchparm 14.1-6 A8 1 67 e e e e

V.25 Modem detect, 'd' - disable, '32' - 32K upgrade, '64' - 64K upgrade:

Example 2 cnfvchparm for Model B

```

sw83 TN      SuperUser      IPX 16      8.2.5      June 1 1996  17:01 PST
CDP Models All          None          All
Sample Delay Bkgnd      Echo Suppression V.25 Xmit
From 11.1 VAD Non-VAD Noise HPF Float Function Loss Detect Delay
11.1-15 A8 01 2 ON ON ON ON ON ON 5
11.17-31 A8 01 2 ON ON ON ON ON ON 5
    
```

This Command: cnfvchparm

Next Command:

cpyfmap (Copy FastPAD Map Table)

The **cpyfmap** command copies the FastPAD map table from one FastPAD port to another.

Attributes

Jobs: No Log: No Lock: Yes Node Type: IPX, IGX

Associated Commands

cnffpmap

Syntax

cpyfmap <source slot.port> <nodename> <destination slot.port>

<source slot.port> specifies the FTC port to copy from.

<nodename> specifies the nodename.

<destination slot.port> specifies the FTC port to copy to.

Function

This command copies a FastPAD map table from one FastPAD port to another FastPAD port. When you enter this command, the system responds as shown in Figure 1-49.

Figure 1-49 cpyfmap—Configure FastPAD Map Table

```
cc7                            VT SuperUser            IPX 32      8.2.5            Jan. 30 1997 10:05 PST
```

```
Last Command: 31.2 cc5 31.1
```

```
Next Command:
```

dchst (Display Channel Status)

The **dchst** command displays CDP or CVM card parameters.

Attributes

Jobs: No Log: No Lock: Yes Node Type: IPX, IGX

Associated Commands

cnfcdpparm

Syntax

dchst <channel> [interval]

<channel(s)> specifies the voice channel number(s) to configure.

<interval> specifies the refresh time for the data (1–60 sec.)

Function

This command displays state information for a CDP or CVM channel used for a specific connection. The interval parameter specifies the refresh time for the data. It defaults to 5 seconds. The Transmit and Receive dBm0 for both CDP or CVM indicate the input (towards the circuit line) and output power (from the circuit line) levels for the channel. Modem state indicates whether modem-detect is on or off.

Table 1-26 lists the parameters for the CDP or CVM card. Figure 1-50 illustrates the system display for a CDP or CVM.

Table 1-26 Display Channel Status Parameters for CDP or CVM

Register	Byte	Parameter	Description
0	high	zcr total	Zero Crossing Total
	low	signal state mem	Signal State Memory
1	high	hpf z1 hi - hi	High-Pass Filter
	low	hpf z1 hi - lo	High-Pass Filter
2	high	sam - hi	Encoded Voice Sample
	low	sam - lo	Encoded Voice Sample
3	high	vad state-hi	Voice Activity Detector state
	low	vad state-lo	Voice Activity Detector state
4	high	sil cnt	Silent Count
	low	mad signal state	Modem Activity Detector Signal State
5	high	mad wnd cnt	Modem Activity Detector Wnd. Count
	low	mad fail cnt	Modem Activity Detector Fail Count
6	high	mad state-hi	Modem Activity Detector state
	low	mad state-lo	Modem Activity Detector state

Figure 1-50 dchst—Display Channel Status

```
alpha          TRM          SuperUser      Rev: 8.2.5    Jan. 14 1997 16:30 PST

CDP state display for channel 11.1                               Snapshot

Transmit dBm0:
Receive dBm0:

Register 0 =
Register 1 =
Register 2 =
Register 3 =
Register 4 =
Register 5 =
Register 6 =

Last Command: dchst 11.1

Next Command:
```

diagbus (Diagnose Failed Bus)

The **diagbus** command is used to diagnose a failed IPX MUXBUS.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

none

Syntax

diagbus

Function

This command runs detailed diagnostics to isolate Muxbus problems to a failed card or bus. It is used when a minor alarm is indicated and displaying the alarm (dspalms) screen indicates the message “bus needs diagnosis”.

This command can only be run locally with a terminal connected directly to the CONTROL port or remotely from a modem connection. It can not be executed through a VT (virtual terminal) command or when the node's CONTROL port is configured for StrataView mode.



Caution This command may cause a major disruption in service on all lines and connections and should only be run at a time when this can be tolerated.

Performing this test can result in a major disruption in the operation of the node. It should not be performed except as a last resort. To fully isolate the failure may require manual removal of cards, including controller cards etc. For this reason, the command may not be executed over a Virtual Terminal connection.

If the test is successful, and no problems found, the system displays:

Both buses are OK

Otherwise, the system displays various messages to the operator for additional steps to perform in isolating the problem. These messages depend on the results of the diagnostics testing.

drtop (Display Route Op Table)

The **drtop** command displays the routing table from the local node to each connected remote node.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX, BPX

Associated Commands

dsprkcons

Syntax

drtop

Function

This command displays the routing table from the local node to each remote node to which it is connected. It shows how NPC/B.C. traffic is routed to other nodes in the network. Use this command to find which trunks are used to send control cells/packets to other nodes.

The display includes remote node name, number of hops to the remote node, the trunk(s) used, and number of satellite hops if any, and the number of unused DS0s (open space) if any on the route. Figure 1-51 illustrates the display.

Figure 1-51 drtop—Display Route Op Table

```
pubsipx2      VT      SuperUser      IPX 32      8.2.5      Feb. 2 1997 02:27 GMT

Node Number  Node Name      Hops To  Via Trk  SAT Hops  No HP Hops  Open Space
1            D1.pubsbpx1    2        6        0         0         0         3
2            D1.pubsigx1    3        6        0         0         0         3
3            D1.pubsipx2    0        0        0         0         0         0
5            D1.pubsipx1    1        6        0         0         0        24
7            D1.pubsipx3    2        6        0         0         0        24
```

Last Command: drtop

Next Command:

dspasich (Display ASI Channel Routing Entry)

The **dspasich** command displays the ATM channel routing entries for an ASI card.

Attributes

Jobs: No Log: No Lock: Yes Node Type: BPX

Associated Commands

None

Syntax

dspasich <line> <channel>

<line> specifies the line in the format *slot.port*.

<channel> specifies the channel in the format *vpi.vci*.

Function

This command displays the routing entries for an ASI card shown in Figure 1-52.

Figure 1-52 dspasich—Display ASI Channel Routing Entry

```
pubsbsp1            VT    SuperUser            BPX 15        8.2.5            May 24 1997 21:09 GMT
ASI Channel Configuration Query & Display

Slot.port.lcn:5.1.1
Status:            Added            BF hdr: 4145 9002 8012 0501 8640 0000 2DEB
[00] BF tp:        4            [11] VCI:    00000064 [22] UPC CDV: 0            [33] FST up: 0
[01] Pri SDA:     5            [12] Con tp: VC        [23] UPC CIR: 500        [34] FST dn: 0
[02] Dst Prt:     1            [13] Rmt tp: ASI       [24] UPC CBS: 1000      [35] FST fdn: 0
[03] Dst lcn:     2            [14] Srv tp: VBR       [25] UPC IBS: 0        [36] FST rmx: 0
[04] BCF tp:      0            [15] Gen AIS: N        [26] UPC MFS: 200      [37] Q max:64000
[05] Qbin#:      12           [16] Mcst:    0            [27] CLP enb: Y        [38] EFCSI: 100
[06] BF VPI:     64           [17] Mc grp: 1        [28] FST enb: N        [39] CLP hi: 100
[07] BF VCI:      0           [18] & msk: 0000000F [29] FST MIR: 500      [40] CLP lo: 100
[08] Pl Cls:      0           [19] | msk: 06400640 [30] FST PIR: 500      [41] BCM:    N
[09] Rmt lp:      N           [20] Prt QBN: 2       [31] FST QIR: 500      [42] Inhibit:N
[10] VPI:        00000064 [21] UPC GCR: 0       [32] QIR TO: 0        [43] UPC enb:Y

Last Command: dspasich 5.1 1 N

Next Command:
```

dspbmpst (Display Priority Bumping Statistics)

The **dspbmpst** command displays the priority bumping statistics at the local node if the priority bumping feature is enabled.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX

Associated Commands

cnfbmpparm

Syntax

dspbmpst [clear]

[clear] specifies an optional entry that clears all bumping statistics counters.

Function

This command displays statistics on the IPX optional priority bumping feature. This is primarily a debugging tool for the priority bumping feature. Included are counts on bump requests, successful bumps, and bumps in progress. Table 1-27 describes the statistics and Figure 1-53 illustrates a typical display. Adding “clear” to the command clears the bumping statistics counters. The **cnfbmpparm** command can be used to change these parameters.

Table 1-27 Priority Bumping Statistics

Statistic	Description
PROCESSING:	Process statistics monitor the periodic priority bumping routine that occurs approximately once a minute.
Attempts	No. of times the priority bumping routine was initiated.
Successes	No. of times the priority bumping routine was successfully completed.
Idles, waits, fails, aborts, errors, and timeouts	No. of times the priority bumping routine was not completed for these various reasons.
SUCCESSFUL STATS	Statistics for priority bumping routines that were successfully completed.
Max/Avg. Time	The time it took to complete the priority bumping routine. The maximum is the longest routine over the measuring interval.
Max/Avg. Candidates	Candidates are the failed higher level COS connections that need to be rerouted.
Max/Avg. Removed	Calculated number of connections network-wide that would have to be removed to fit the failed connections onto a new route. This is just a calculated number.

dspbmpst (Display Priority Bumping Statistics)

Statistic	Description
Max/Avg. Bumped	Number of lower COS connections network-wide that were actually removed (bumped) to provide the bandwidth needed for failed connections.
Max/Avg. Bumps per Node	No. of bumped connections for any one particular node.
Rx BUMP REQUESTS	Received bump request statistics.
Number of requests	No. of bump requests received by this node. from other nodes.
Max/Avg Bumps/req:	Maximum and average number of bumps requested network-wide.

Figure 1-53 dspbmpst—Display Priority Bumping Statistics

```

pubsipx2      VT      SuperUser      IPX 32      8.2.5      Feb. 2 1997  02:31 GMT

Priority Bumping Statistics

PROCESSING          SUCCESSFUL STATS          Rx BUMP REQUESTS
Attempts:           0      Max time :           0.00      Num requests:           0
Successes:          0      Avg time  :           0.00      Max bumps/req:           0
Idles:              0      Max cands:           0          Avg bumps/req:           0
Waits:              0      Avg cands:           0
Fails:              0      Max rmvd  :           0
Aborts:             0      Avg rmvd  :           0
Errors:             0      Max bumps:           0
Timeouts:           0      Avg bumps:           0
                   Max bumps/nd:           0
                   Avg bumps/nd:           0

Last Command: dspbmpst

Next Command:

```


dspcderrs (Display Card Errors)

The **dspcderrs** command displays detailed card failure information resulting from card diagnostics testing at the local node.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX, BPX

Associated Commands

clrcderrs, prtcderrs

Syntax

dspcderrs [<slot>]

[<slot>] specifies the shelf slot in the local node.

Function

This command displays a history of card failures associated with a specified slot. If no argument is specified, a summary is displayed, indicating which slots have failures recorded against them. The command displays the results of the self tests and background tests as well as the total hardware errors.

To clear the card error counters, use the **clrcderrs** command. To obtain a hard copy of the report, use the **prtcderrs** command. Figure 1-55 illustrates the command display.

Figure 1-55 dspcderrs—Display Card Errors

```
sw83            TN    SuperUser            IPX 16    8.2.5            Feb. 1 1997 17:56 PST

AIT in Slot 11 : 176767 Rev AEF    Failures Cleared: Jan. 19 1997 11:25:29 PST
----- Records Cleared: Jan. 20 1997 13:14:03 PST
Self Test            Threshold Counter: 0            Threshold Limit: 300
Total Pass: 0            Total Fail: 0            Total Abort: 0
First Pass:                            Last Pass:
First Fail:                            Last Fail:

Hardware Error    Total Events: 0            Threshold Counter: 0
First Event:                            Last Event:

Last Command: dspcderrs 11

Next Command:
```

dspcftst (Display Comm. Fail Test Pattern)

The **dspcftst** command displays the test pattern used for the communications fail test.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX, BPX

Associated Commands

cnfcftst

Syntax

dspcftst

Function

This command displays the test pattern used to test the controller communication path to a node that does not respond to normal controller traffic. The test pattern defaults to an alternating 8-byte sequence of 00 and FF. Refer to **cnfcftst** command for other patterns and how to reconfigure this pattern. Figure 1-56 illustrates the command display.

Figure 1-56 dspcftst—Display Comm. Fail Test Pattern

```
sw83                    TN      SuperUser                    IPX 16      8.2.5                    Feb. 1 1997 17:57 PST
```

```
Comm Fail Test Pattern.
```

```

Byte 0: FF      Byte 12: 00      Byte 24: FF      Byte 36: 00      Byte 48: FF
Byte 1: FF      Byte 13: 00      Byte 25: FF      Byte 37: 00      Byte 49: FF
Byte 2: FF      Byte 14: 00      Byte 26: FF      Byte 38: 00      Byte 50: FF
Byte 3: FF      Byte 15: 00      Byte 27: FF      Byte 39: 00      Byte 51: FF
Byte 4: 00      Byte 16: FF      Byte 28: 00      Byte 40: FF      Byte 52: 00
Byte 5: 00      Byte 17: FF      Byte 29: 00      Byte 41: FF      Byte 53: 00
Byte 6: 00      Byte 18: FF      Byte 30: 00      Byte 42: FF      Byte 54: 00
Byte 7: 00      Byte 19: FF      Byte 31: 00      Byte 43: FF      Byte 55: 00
Byte 8: FF      Byte 20: 00      Byte 32: FF      Byte 44: 00      Byte 56: FF
Byte 9: FF      Byte 21: 00      Byte 33: FF      Byte 45: 00      Byte 57: FF
Byte 10: FF      Byte 22: 00      Byte 34: FF      Byte 46: 00      Byte 58: FF
Byte 11: FF      Byte 23: 00      Byte 35: FF      Byte 47: 00      Byte 59: FF
```

```
Last Command: dspcftst
```

```
Next Command:
```

dspchan (Display Channel Configuration)

The **dspchan** command displays the configuration of various IPX or IGX voice channels.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX

Associated Commands

cnfcdpparm

Syntax

dspchan <channel>

<channel> specifies the voice channel connection to display.

Function

This command displays the configuration of IPX or IGX voice channels. It is primarily a debug command and allows inspection of the data structure defining a channel. Parameters for voice and signalling processing on a CDP or CVM voice channel are displayed by this command. Table 1-28 lists the parameters. Many of these parameters are also displayed elsewhere. Figure 1-57 illustrates the command display.

Table 1-28 Voice Channel Configuration Parameters

Parameter	Parameter	Parameter	Parameter
VC Index	Dial Type	TX Sig	iec converg.
In Loss	TX A-D bit	RX Sig	Hi Pass F
Out Loss	RX A-D bit	Clr Chn	es loss
Chan Type	Signalling	Sig Rate	Fmodem
Sig. Intg	Echo supr	PLY MSBhx	ADV
Xmt. dlay	Wink Puls	PLY LSBhx	Cond ID
Smpl dlay	TX A-D Qual	In use	iec erl lvl
Bk noise	RX A-D Qual	DPU	iec Hregs.
DSI smple	TX Code	iec cancel	iec tone dsbl
Chan Util	RX Code	iec nlp	adpcm flag
Onhk A-D			

Figure 1-57 dspchan—Display Channel (CDP card)

```
sw83          TN      SuperUser      IPX 16      8.2.5      Feb. 1 1997  18:06 PST
```

```
Channel Data Base for CDP card 7 chan. 000000 at address 30BF29EC
```

VC Index	-1	Onhk C	4
In Loss	0	Onhk D	4
Out Loss	0	Dial Type	0
Chan Type	1	TX A bit	1
Sig. Intg	96	TX B bit	1
Xmt. dlay	5	TX C bit	0
Smpl dlay	1	TX D bit	1
Bk noise	67	RX A bit	1
DSI smple	168	RX B bit	1
Chan Util	40	RX C bit	0
Onhk A	3	RX D bit	1
Onhk B	3	Signalling	TSP MODE

```
This Command: dspchan 7.1
```

```
Continue?
```

```
sw83          TN      SuperUser      IPX 16      8.2.5      Feb. 1 1997  18:07 PST
```

```
Channel Data Base for CDP card 7 chan. 000000 at address 30BF29EC
```

Echo supr	1	TX A Qual	3
Hi Pass F	1	TX B Qual	3
Float	1	TX C Qual	3
es loss	1	TX D Qual	3
Fmodem	64	RX A Qual	3
ADV	1	RX B Qual	3
Cond ID	0	RX C Qual	3
Wink Puls	20	RX D Qual	3

END OF UNI CNFG

```
This Command: dspchan 7.1
```

```
Continue?
```

```
sw83          TN      SuperUser      IPX 16      8.2.      Feb. 1 1997  18:07 PST
```

```
Channel Data Base for CDP card 7 chan. 000000 at address 30BF29EC
```

TX CODE	3	iec cancel	0
RX CODE	3	iec nlp	1
TX SIG	0	iec converg.	1
RX SIG	0	iec erl lvl	1
CLR CHN	0	iec Hregs.	1
SIG RATE	0	iec tone dsbl	1
PLY MSBhx	1	adpcm flag	0
PLY LSBhx	90		
In use	0		
DPU	-		

```
Last Command: dspchan 7.1
```

```
Next Command:
```


dspchstathist (Display Statistics History For A Channel)

The **dspchstathist** command displays a history of statistics configured as enabled for a selected channel.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

cnfchstats, dspchstatcnf

Syntax

dspchstathist <channel>

<channel> specifies the channel.

Function

This command displays a history of the enabled statistics for a selected channel. It is intended for debugging problems with statistics gathering. It displays the data for the last five occurrences of the channel statistic. The channel statistic is selected from the list displayed when this command is first entered.

Use the **dspchstatcnf** to display the statistics enabled on the selected channel. Record the statistics types enabled, the collection interval, and owner; you will need this information to obtain the statistics history. Use **cnfchstats** to enable a statistic if it is not already enabled. Figure 1-59 illustrates a display for channel 6.1 packets transmitted (1 second interval) history.

Note You may have to enter owner "auto" in all capital letters.

Figure 1-59 dspchstathist—Display Channel Statistics History

gamma TRM SuperUser Rev: 8.2.5 Jan. 14 1997 13:53 PDT

Packets Transmitted on Channel 6.1
Interval: 1 Minute(s), Data Size: 4 Byte(s), NO Peaks, Owner: Automatic

0	-	1699
-1	-	1698
-2	-	1698
-3	-	1699
-4	-	1698
-5	-	1698
-6	-	1698
-7	-	1699
-8	-	1697
-9	-	1699

Last Command: dspchstathist 6.1 7 1 AUTO

Next Command:

dspclnstatcnf (Display Circuit Line Statistics Configuration)

The **dspclnstatcnf** command displays statistics configured as enabled for a selected circuit line.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

cnfclnstats

Syntax

dspclnstatcnf <line>

<line> Specifies the circuit line in the format *slot* or *slot.line*. If the card has only one line, you can enter just the slot.

Function

This command displays the circuit line statistics as enabled by the **cnfclnstats** command, by StrataView Plus, or by IPX or IGX features. See Figure 1-60 for an example display.

The Owner column shows what set the statistic. If the owner is “Automatic,” the statistic was derived from the features. If the node name appears under Owner, the statistic came from StrataView Plus. If “User” is under Owner, the source of the statistic was the **cnfchstats** command.

Figure 1-60 dspclnstatcnf—Display Circuit Line Statistics Enabled (T1 line)

```

sw83                  TN      SuperUser                  IPX 16      8.2.5                  Feb. 1 1997      18:14 PST

Statistics Enabled on Circuit Line 7

Statistic                                  Samples      Interval      Size      Peaks      Owner
-----
Frames Slips                                  60                  0                  4      NONE      IPX
Out of Frames                                  60                  0                  4      NONE      IPX
Losses of Signal                                  60                  0                  4      NONE      IPX
Frames Bit Errors                                  60                  0                  4      NONE      IPX
CRC Errors                                      60                  0                  4      NONE      IPX
Out of Multi-Frames                                  60                  0                  4      NONE      IPX
All Ones in Timeslot 16                                  60                  0                  4      NONE      IPX

Last Command: dspclnstatcnf 7

Next Command:

```

dspclnsthathist (Display Statistics History For A Circuit Line)

The **dspclnsthathist** command displays a history of statistics enabled for a circuit line.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

cnfclnstats, dspclnsthathist

Syntax

dspclnsthathist <circuit line>

<circuit line> specifies the circuit line in the format *slot.line*. If the card set supports only one line, you can enter just the slot number

Function

This command displays the last five occurrences of the circuit line statistic. The circuit line statistic is selected from the list displayed when you first enter this command. Use the **dspclnsthathist** to display the statistics enabled for the selected channel. Use **cnfclnstats** to enable a statistic.

Figure 1-61 illustrates a display for T1 circuit line 14 bipolar violations (60 second interval) history.

Note You may have to enter owner "auto" in all capital letters.

Figure 1-61 **dspclnsthathist—Display Circuit Line Statistics History**

```
gamma                    TRM                    SuperUser                    Rev: 8.2.5      Jan. 14 1997 14:00 PDT

Bipolar Violations on Circuit Line 14
Interval: 60 Minute(s), Data Size: 4 Byte(s), 10 S Peaks, Owner: Automatic

 0 -                    0(0)
-1 -                    0(0)
-2 -                    0(0)
-3 -                    0(0)
-4 -                    0(0)

Last Command: dspclnsthathist 14 1 60 AUTO

Next Command:
```

dspcnf (Display Configuration Save/Restore Status)

The **dspcnf** command displays the status for the configuration save/restore processes on all nodes in the network.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX, BPX

Associated Commands

savecnf, loadcnf, runcnf

Syntax

dspcnf

Function

This command displays the status for the configuration save/restore process. The display lists the various nodes, the backup ID name of the saved configuration, the time and date saved, and the StrataView + terminal it is saved on. See Figure 1-62 for an example.

If the status displays “Reserved for Firmware” a firmware image is being maintained in memory after being loaded. Use the **getfwrev 0.0** command to clear the firmware image. Likewise, if a configuration image is displayed, clear the old configuration image using **savecnf clear** or **loadcnf clear**.

Figure 1-62 dspcnf—Display Configuration Save/Restore Status

```

sw83            TN    SuperUser            IPX 16        8.2.5        Feb. 24 1997 18:21 PST

Node    Backup ID Revision Date/Time (GMT)    Status
-----
sw78    mark    8.2.12    02/22/97 16:36:26 Unreachable
sw81    mark    8.2.12    02/22/97 16:36:26 Unreachable
sw84    mark    8.2.ay    02/22/97 16:36:26 Save on SV+ at sw78 complete
sw79    mark    8.2.1b    02/22/97 16:36:26 Save on SV+ at sw78 complete
sw86    mark    8.2.12    02/22/97 16:36:26 Unreachable
sw83    mark    8.2.1b    02/22/97 16:36:26 Save on SV+ at sw78 complete

```

Last Command: dspcnf

Next Command:

dspdnlld (Display Download)

The **dspdnlld** command displays the status of a download to a nodes.

Attributes

Jobs: No Log: Yes Lock: No Node Type: IPX, IGX, BPX

Associated Commands

loadrev, getfwrev

Syntax

dspdnlld

Function

This command displays the status of any software or firmware download operation from StrataView Plus to the node controller card. You should be connected to the node being downloaded either directly or via virtual terminal connection. The display download command shows:

- download destination—node currently being downloaded.
- download type—destination of the downloaded image, standby RAM or active or standby ROM, or firmware.
- download source—where the image to be downloaded is currently stored, StrataView or StrataView Plus, standby controller, active or standby controller, or remote node.
- download image—where the image is located, ROM or RAM.

This command can be used to check how far along the download has progressed. Figure 1-63 illustrates the command screen. Blocks of data already downloaded appear highlighted; the remaining blocks are appear dim. If there was no download initiated when this command was entered, the blocks of data will appear as all zeros.

Figure 1-63 dspdnld—Display Download

```
sw83                    TN      SuperUser            IPX 16      8.2.5            Feb. 1 1997 18:23 PST

dl_dest: Active CC                            dl_source: Active CC
dl_type: None                                 dl_image: ROM            (NPC)

30010800 30020800 30030800 30040800 30050800 30060800 30070800 30080800
30090800 300A0800 300B0800 300C0800 300D0800 300E0800 300F0800 30100800
30110800 30120800 30130800 30140800 30150800 30160800 30170800 30180800
30190800 301A0800 301B0800 301C0800 301D0800 301E0800 301F0800 30200800
30210800 30220800 30230800 30240800 30250800 30260800 30270800 30280800
30290800 302A0800 302B0800 302C0800 302D0800 302E0800 302E3E7C
```

Last Command: dspdnld

Next Command:

dspdutl (Display Data Channel Utilization)

The **dspdutl** command displays the percentage utilization for data connections.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX

Associated Commands

dsputil

Syntax

dspdutl <start bslot> [clear]

<start bslot> specifies the slot where the data card is located.

[clear] specifies that all data channel utilization buffers should be cleared after the display.

Function

This command displays the percentage utilization for the data connections starting at the back slot (bslot) number specified. All data connections for the node are displayed (maximum of 32).

The percentage is calculated by dividing the number of packets transmitted over the total number of packets allocated to the specified channel. Only transmit packet rates are used. If percentage utilization exceeds configured utilization the channel appears in reverse video.

Figure 1-64 illustrates a display where there is very low utilization (2%) on three of the four ports and no utilization of the fourth port. The clear option clears all slots. Use **dspdutl** to display utilization for voice channels.

Figure 1-64 dspdutl—Display Data Channel Utilization

```
sw150          TN    SuperUser      IGX 16    8.2.5    Feb. 1 1997  20:07 GMT

Percentage utilization      Last Cleared: Date/Time Not Set      Snapshot
From
Slot 1  2  3  4  5  6  7  8    Slot 1  2  3  4  5  6  7  8
13     6 99 99
```

Last Command: dspdutl 13

Next Command:

dspecparm (Display Echo Cancellor Parameters)

The **dspecparm** command displays statistics configured as enabled for a selected CDP echo canceller.

Attributes

Jobs: No Log: Yes Lock: No Node Type: IPX, IGX

Associated Commands

cnfecparm

Syntax

dspecparm <line>

<line> specifies the circuit line to display.

Function

This command displays the Integrated Echo Cancellor card parameters associated with the specified circuit line. These parameters are set using the **cnfecparm** command. Table 1-29 lists the parameter options. Figure 1-65 illustrates a typical display.

Table 1-29 Echo Cancellor Parameters

Number	Parameter	Description
1	Echo Return Loss High	Maximum ERL required for echo canceller to be enabled.
2	Echo Return Loss Low	Minimum ERL required for echo canceller to be enabled.
3	Tone Disabler Type	Selection of protocol to enable tone disabler.
4	Non-Linear Processing	Selects type of post-canceller signal.
5	NLP Threshold	Threshold to enable non-linear processing.
6	Noise Injection	Determines if noise will be injected when NLP is active.
7	Voice Template	Selection of echo canceller template to use.

Figure 1-65 dspecparm—Display Echo Cancellation Parameters

```
sw83          TN      SuperUser      IPX 16      8.2.      Feb. 1 1997 18:34 PST
```

```
IEC Line 7 Parameters
```

```
1 CDP IEC Echo Return Loss High (.1 dBs) [          60] (D)
2 CDP IEC Echo Return Loss Low  (.1 dBs) [          30] (D)
3 CDP IEC Tone Disabler Type      [          G.164]
4 CDP IEC Non-Linear Processing    [Center Clipper]
5 CDP IEC Non-Linear Processing Threshold [          18] (D)
6 CDP IEC Noise Injection          [          Enabled]
7 CDP IEC Voice Template           [          USA]
```

```
Last Command: dspecparm 7
```

```
Next Command:
```

dspfpdsc (Display FastPAD Card Descriptor)

The **dspfpdsc** command displays FastPAD card descriptor information.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX, BPX

Associated Commands

dspfp, dspfps

Syntax

dspfpdsc <slot.port.subslot>

Function

This command displays FastPAD card descriptor information including:

- Card in use
- Card state
- FastPAD configuration index
- FastPAD port index

Figure 1-66 illustrates the system response.

Figure 1-66 dspfpdsc—Display FastPAD Card Descriptor

```
cc7          VT      SuperUser      IPX 32      8.2.5      Jan. 30 1997 11:08 PST

                FastPad Card Descriptor Configuration

Card in Use   : 01      Card State    : 03      FPD CNFG indx : 00

                Port Index Array

                FastPad Port Indx
                0   1   2   3   4   5   6   7   8   9   A   B
0000 0001 0002 0003 0004 0005 0006 FFFF FFFF FFFF FFFF FFFF

Last Command: dspfpdsc 31.2.B

Next Command:
```

dspfwrev (Display Firmware Revision)

The **dspfwrev** command displays the status of card firmware revision image loaded in the controller card's RAM.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX, BPX

Associated Commands

getfwrev, burnfwrev

Syntax

dspfwrev

Function

This command displays the revision level and an indication of the length of the firmware in the controller card. It may require two screens to display all the parameters. Figure 1-67 illustrates the screen display. This command can be used during firmware download to get an idea of how far along the downloading process has progressed. The blocks already downloaded appear normal. Blocks that are yet to be downloaded appear shaded.

If no **getfwrev** command was issued, nothing displays. If “Configuration image present” displayed, use the **loadcnf clear** command to clear this status.

Figure 1-67 dspfwrev—Display Firmware Revision

```

gamma                TRM                SuperUser          Rev:  8.2.5   Jan. 14 1997  14:28 PDT

Firmware             Size                Status
F.D.A                256 K              Complete

File                 Address            Length             CRC                Burn Address
File                 Address            Length             CRC                Burn Address
1                    800800            410               22996DDA
1                    800800            410               22996DDA
3                    805E60            480               85CB29EA
4                    80A630            70                57A938AE
4                    80A630            70                57A938AE
6                    810000            10000            338E45F6
7                    820000            4400             95990113
8                    835000            1810             875771B2
9                    8368A0            15D0             4C597B97
    
```

This Command: dspfwrev

Continue?

```

gamma                TRM                SuperUser          Rev:  8.2.5   Jan. 14 1997  14:29 PDT

Firmware             Size                Status
F.D.A                256 K              Complete

File                 Address            Length             CRC                Burn Address
10                   838000            20F0              0F4898D2
11                   83A100            1E20              175F4B39
12                   83C000            2FC0              F39B0302
13                   83F000            1B0               E755FE4E
14                   83FFFE            2                 A1F4726D
    
```

Last Command: dspfwrev

Next Command:

dsplnstatcnf (Display Statistics Enabled for a Line)

The **dsplnstatcnf** command displays statistics configured as enabled for a selected line.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

cnflnstats

Syntax

dsplnstatcnf <line>

<line> specifies the line.

Function

This command displays the line statistics as enabled by the **cnflnstats** command, by StrataView Plus, or by node features. Figure 1-68 illustrates an example display.

The Owner column identifies who or what set the statistic. If the Owner column shows “Automatic”, the node’s features set the statistic. If the node name appears under Owner, StrataView Plus set the statistic. If the user name appears under Owner, the **cnfchstats** command executed from the command line interface set the statistic.

Figure 1-68 dsplnstatcnf—Display Statistics Enabled for a Line

```
cc2                      LAN   SuperUser                      IPX 32                      8.2.5                      Jan. 30 1997 11:38 PST
```

```
Statistics Enabled on Circuit Line 15
```

Statistic	Samples	Interval	Size	Peaks	Owner
Bipolar Violations	60	0	4	NONE	IPX
Frames Slips	60	0	4	NONE	IPX
Out of Frames	60	0	4	NONE	IPX
Losses of Signal	60	0	4	NONE	IPX
Frames Bit Errors	60	0	4	NONE	IPX
CRC Errors	60	0	4	NONE	IPX
Out of Multi-Frames	60	0	4	NONE	IPX
All Ones in Timeslot 16	60	0	4	NONE	IPX

```
Last Command: dsplnstatcnf 15
```

```
Next Command:
```

dsplnsthathist (Display Statistics Data for a Line)

The **dsplnsthathist** command displays a history of statistics configured as enabled for a selected line.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

cnfnstats, dsplnsthathist

Syntax

dsplnsthathist <line>

<line> specifies the line.

Function

This command displays the last five occurrences of the line statistic. The line statistic is selected from the list displayed when this command is first entered. Use the **dsplnsthathist** to display the statistics enabled on the selected channel. Use **cnfnstats** to enable a statistic.

Figure 1-69 illustrates an example display.

Note You may have to enter owner “auto” in all capital letters.

Figure 1-69 dsplnsthathist—Display Statistics Data for a Line

```
cc2                      LAN   SuperUser                      IPX 32                      8.2.5                      Jan. 30 1997 11:40 PST

Command history

12: cnftcparm
11: cnftcpparm 32
10: cnfnwip 192.38.38.2
9: cnfnwip 192.38.38.2 255.255.255.0
8: help cnft
7: dspasich
6: dspasich
5: dspasich
4: dspbuses
3: dsplnsthathist 15
2: dsplnsthathist 15 5 40
1: dsplnsthathist 15 5 40 IPX

Last Command: dsplnsthathist 15 5 40 IPX

Next Command:
```

dspplnmcons (Display Packet Line Connection Counts)

The **dspplnmcons** command displays the number of packet line connections by master node.

Attributes

Jobs: No Log: Lock: Node Type: IPX, IGX

Associated Commands

Syntax

dspplnmcons <line number> [l | j]

<line number> specifies the line number for gathering the connection count

l refers to local connections

j refers to junction

Function

Figure 1-70 dspplnmcons—Display Packet Line Connection Counts

```
TN      SuperUser      IPX 16      8.2.5      Jan. 25 1997 18:31 PST

Connection Counts For PLN 11

Mst Node    Conns      Mst Node    Conns      Mst Node    Conns      Mst Node    Conns
sw81        48          sw83        400        sw84        48          sw79        500
sw86        100
```

Last Command: dspplnmcons 11

dsportstatcnf (Display Statistics Enabled For A FR Port)

The **dsportstatcnf** command displays statistics configured as enabled for a selected frame relay port.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX

Associated Commands

cnfportstats

Syntax

dsplnstatcnf <port>

<port> specifies the port. Do NOT enter the DLCI for frame relay ports.

Function

This command displays the enabling of frame relay port statistics. These are the statistics set by the **cnfportstats** command, by StrataView Plus, or by node features. See Figure 1-71 for an example.

The owner column shows what set the statistic. If “Automatic”, it is set by features, if node name it was is set by StrataView Plus, if user it was set with the **cnfportstats** command.

Figure 1-71 dsportstatcnf—Display Port Statistics Enabled

```

gamma                      SV+                      YourID                      Rev: 8.2.5      Jan. 14 1997 13:47 PDT

Statistics Enabled on Port 8.1

Statistic                      Samples      Interval      Size      Peaks      Owner
-----
Frames Received                      5              60              4              1 M      beta
Frames Received                      5              60              4              1 M      beta
Bytes Received                      5              60              4              1 M      beta

Last Command: dsportstatcnf 8.1
    
```


dspportstathist (Display Statistics History For A FR Port)

The **dspportstathist** command displays a history of statistics configured as enabled for a selected port.

Attributes

Jobs: No Log: Yes Lock: Yes Type: IPX, IGX

Associated Commands

cnfportstats, dspportstatcnf

Syntax

dspportstathist <port>

<port> specifies the port.

Function

This command displays the data for the last five occurrences of the port statistic. The port statistic is selected from the list displayed when this command is first entered. Use the **dspportstatcnf** command to display the statistics enabled on the selected port. Use the **cnfportstats** command to enable a statistic.

Figure 1-72 illustrates a display for FR port 8.2 DE Frames Dropped (1 second interval) history.

Note You may have to enter owner “auto” or “user” in all capital letters.

Figure 1-72 dspportstathist—Display Port Statistics History

```
D.1 gamma            TRM            SuperUser            Rev: 8.2.5 Jan. 14 1997 14:15 PDT
```

```
DE Frames Dropped on Port 8.2
Interval: 1 Minute(s), Data Size: 4 Byte(s), NO Peaks, Owner: IPX User
```

```
0 -            0
-1 -           0
-2 -           0
-3 -           0
```

```
Last Command: dspportstathist 8.2 19 1 USER
```

```
Next Command:
```


dsprevs (Display Revisions)

The **dsprevs** command displays the system software revision loaded and running on all nodes in the network.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX, BPX

Associated Commands

runrev, loadrev, forcerev

Syntax

dsprevs

Function

This command displays the configuration and status of the primary and secondary software revisions for all nodes in the network. The primary revision is the software that is running the node. The secondary revision is the software that is available in memory but not being run. Table 1-30 lists the various status messages. Figure 1-73 illustrates a typical display.

Table 1-30 Status of Node Software Revisions

Status	Description
unavailable	The revision is currently unavailable for the node displayed. The revision has not propagated to the node yet.
available	The node has located the specified revision but has not yet downloaded it.
partial	The revision was only partially downloaded. Indicates the download was temporarily interrupted.
downloading	The revision is in the process of being downloaded. Blocks of data are being transferred.
loaded	The revision has completed downloading but is not ready for running.
upgrading	The controller card is being upgraded by the current revision. This process generally occurs immediately follows the downloading.
upgraded	The upgrade procedure has been completed.
running	The primary revision is currently being used to run the node.

Figure 1-73 dsprevs—Display Revisions

```
sw83          TN      SuperUser      IPX 16      8.2.5      Feb. 1 1997 19:03 PST

NodeName      ----- Primary -----      ----- Secondary -----
              Status      Revision      Status      Revision
sw78          Running      8.2.12
sw81          Running      8.2.12
sw84          Running      8.2.ay
sw79          Running      8.2.1f
sw86          Running      8.2.12
sw83          Running      8.2.1f
```

Last Command: dsprevs

Next Command:

Figure 1-74 dsprobparm—Display Robust Communications Statistics

```
Dl.jea      TRM      SuperUser      BPX 15      8.2.5      Jan. 14 1997 12:20 PDT

Robust Communications Statistics since : Date/Time Not Set

Updts msg xmit:      0
Updts msg ackd:      0
Updts ack tout:      0
LCBs freed:          0
Updts ack reset:      0
```

Last Command: dsprobparm

Next Command:

dsprobst (Display Robust Statistics)

The **dsprobst** command displays the statistics associated with the Robust Alarms feature.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX, BPX

Associated Commands

cnfrobparm

Syntax

dsprobst [clear]

[clear] specifies that the statistics buffers should be cleared after the display.

Function

This command displays the statistics associated with the Robust Alarms messages between the node and StrataView Plus NMS. The optional clear field clears the statistics buffers. Figure 1-75 illustrates a sample display screen.

Figure 1-75 dsprobst—Display Robust Statistics

```
cc2                      LAN   SuperUser                      IPX 32      8.2.5   Jan. 30 1997 11:40 PST

Command history
12: cnftcparm
11: cnftcpparm 32
10: cnfnwip 192.38.38.2
9: cnfnwip 192.38.38.2 255.255.255.0
8: help cnft
7: dspasich
6: dspasich
5: dspasich
4: dspbuses
3: dsplnstatcnf 15
2: dsplnstat hist 15 5 40
1: dsplnstat hist 15 5 40 IPX

Last Command: dsplnstat hist 15 5 40 IPX

Statistic not enabled for specified object
Next Command:
```

dsprorst (Display Reroute Statistics)

The **dsprorst** command displays the connection rerouting statistics for the network.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX, BPX

Associated Commands

rttcon, drtop

Syntax

dsprorst [-j] [clear]

[-j] specifies.

[clear] specifies that the reroute statistics buffers should be cleared after the display.

Function

This command displays the statistics related to connection rerouting resulting from failed trunks. These statistics may be useful in determining the performance of the reroute algorithm. Use the clear option to clear the counters before accumulating the statistics. Table 1-31 lists the applicable reroute statistics. Figure 1-76 illustrates a typical display.

Table 1-31 Display Reroute Statistics

Statistic	Description
Number of Completed Routes	This is the total number of connections routed since the NPC rebuilt.
Number of Failed Routes	This is the number of attempted reroutes that failed for any reason.
Number of Collisions	When a reroute is in progress, the initiating node locks all nodes on the route until the rerouting process is complete. If another node attempts to reroute through one of the locked nodes, a collision is reported and the second node must retry after a delay.
Max. # of Consec. Collisions	Is the count of consecutive collisions as defined above.
Max/Avg Secs To Select Route	Time taken within the initiating node to select a new route.
Max/Avg Secs To Perform Route	Time taken to contact and lock the nodes on the new route and perform the rerouting process.
Avg Secs to Route a Conn:	Time to perform a reroute divided by the average number of connections in a bundle.
% of Collisions/Rrt Attempt	Another statistic derived from the number of collisions and the number of reroute attempts.
Max Secs To NOT find Route	Similar to “max secs to select a route” except that the algorithm finished and no route was found.
Number of Routes not found	Number of routes not found in the rerouting process. This parameter updates periodically as a heartbeat to check for activity.

Statistic	Description
# of Rrts with rrt_req_bit set	A measure of the connections awaiting rerouting. When rrt_req bit is set, indicates a reroute is not totally successful or trunk deletions or loading additions mean connections must be rerouted. Cleared by rerouting the connection.
Address of Forced Rrt Counts	A NPC memory address for database information.
Max routes checked in search	Maximum no. of PLNs examined in any one search for a new route.
Max good rts checked in search	Maximum no. of possible routes found before the search was terminated. Should be 1.
# our lns rmvd from under us	Measure the number of changes to topology and loading that occurred while rerouting was in progress.
# lines rmvd out from under us	Same as above.

Figure 1-76 dsprrst—Display Reroute Statistics

```

sw91          TN      SuperUser      IPX 8      8.2.5      Feb. 1 1997  20:56 GMT

      Connection Routing Statistics LOC_DOMAIN
Number of Completed Routes:      0  Blocked by other st machines:      273
Number of Failed Routes:        0  Timeouts waiting for ACK/NACK:      0
Number of Collisions:           0  Number of Routes Not found:        0
Max # of Consec Collisions:     0  # of Rrts with rrt_req bit set:     0
Max Secs To Select Route:       0.000  Address of Forced Rrt Counts: 30CDC386
Max Secs To Perform Route:     0.000  Max routes checked in search:      0
Max Bundle Size Routed:        0  Max good rts checked in search:    0
Avg Secs To Select Route:       0.000  # nibs rmvd out from under us:     118
Avg Secs To Perform Route      0.000  # our lns rmvd from under us:      0
Avg Secs To Route a Conn:       0.000  # lns rmvd from under us:          66
Avg Bundle Size Routed:        0  Number of conid conflicts:         0
% of Collisions/Rrt Attempt:   0%  Number of LCON deroutes:          0
Max Secs To NOT find Route:     0.005  Number of NW_LCON deroutes:        0
Times conns deletd while rtnng: 0  Number of GLCON lcl deroutes:     0

Last Command: dsprrst

Next Command:

```

dspsig (Display Signalling)

The **dspsig** command displays the current signalling state received at the node from the specified voice channel.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX

Associated Commands

cnfclnsigparm, cnfrcvsig

Syntax

dspsig <start_channel>

<start_channel> the first voice channel to be monitored.

Function

This command displays the current signalling state received at the node from the specified voice channel. The status of the transmit and receive A and B signalling bits (for DS1 trunks) or A, B, C and D signalling bits (for E1 trunks) are displayed as a 0 or 1. The status of the bits (0 or 1) depends on the signalling type utilized on the connection displayed. The transmit direction of transmission is towards the remote node; the receive direction is towards the local circuit line.

The **dspsig** command can be used to verify the connection signalling type. Figure 1-77 illustrates a typical screen. If you compare the A/B bit states on-hook and off-hook with those shown in the **dspschcnf** command, you will note that the node passes signalling straight through. The signalling definition is only important for monitoring the on-hook/off-hook state and setting conditioning patterns.

Figure 1-77 dspsig—Display Signalling

```
sw83                    TN    SuperUser            IPX 16      8.2.5            Feb. 1 1997 19:25 PST
```


	Signalling Information								
From	TXAbit	TXBbit	TXCbit	TXDbit	RXAbit	RXBbit	RXCbit	RXDbit	no_serv
7.1-15	1	1	0	1	1	1	0	1	
7.17-31	1	1	0	1	1	1	0	1	

Last Command: dspsig 7.1

Next Command:

dspslot (Display Slot)

The **dspslot** command displays system information associated with a specific card slot in the node.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX, BPX

Associated Commands

none

Syntax

dspslot <slot number>

<slot number> specifies the shelf slot number.

Function

This command displays system information associated with a specific card slot in the node. It is used for debugging card failures. When a card failure is reported to Cisco TRT, the TRT records the parameters for the associated slot displayed using the **dspslot** command.

The information displayed by the **dspslot** command is unique to the card slot in the shelf and is used primarily by the controller card to supervise background system tasks. Table 1-32 lists the slot parameters displayed. Figure 1-78 illustrates a typical display.

Use this command for more information on failed cards. Print and return to Cisco with faulty cards for better diagnosis of the failure.

Figure 1-78 dspslot—Display Slot

```

sw83            TN        SuperUser        IPX 16        8.2.5        Feb. 1 1997 19:27 PST

Card Data Base for FRP card in slot 6 at address 30BD820C

Logical Card        6                    Test in Prog        0
Verify DB Flag     0                    Slft Res Abort     0
Info Ptr            30B88C2C            Slft Abort         0
Last Event         TEST_FREE            Last Test           BKGD_TEST
Fail Inter         0                    FRP Test Fail      0
Selftest Fail      0                    FRP Test Fail I    0
Selftest Inter     0                    FRP Port Test Fail 0
Selftest Timeout   0                    FRP Port Capacity  31
Con Test Fail      0                    FRP Line Capable   1
Red LED Flag       0                    FRP V35 Capable    0
Restart Reason     Not maintained       FRP X21 Capable    0
Selftest Results                    FRP NNI/CLLM Cap   1
                                         FRP CGW/ATFR Cap   1

Last Command: dspslot 6

Next Command:

```

Table 1-32 Display Slot Parameters

Item	Parameter	Description
1	Logical Card	This is a number representing a particular card type.
2	Verify DB Flag	Verify database flag. Concerned with database and memory.
3	Info Ptr	Information pointer. Concerned with database and memory.
4	Last Event	This is the previous state of the card known to the NPC.
5	Fail Inter	Indicates intermittent card failure.
6	Selftest Fail	Indicates self-test fail condition.
7	Selftest Inter	Indicates intermittent self-test failure.
8	Selftest Timeout	Self-test routine timed out before completing.
9	Con Test Fail	Indicates failure of the test con command.
10	Red LED Flag	Indicates front panel FAIL LED on.
11	Restart Reason	Reason for last card reset.
12	Selftest Results	Results of last self-test for card.
13	Test in Prog	Indicates card test is in progress.
14	Slft Res Abort	Not used.
15	Slft Abort	Not used.
16	Card Stats Up	A "1" indicates statistics are being collected on this card.
17	Sib Pointer	Pointer to database concerning statistics.
18	Summary stats	Pointer to database concerning statistics.
19	Detailed stats	Pointer to database concerning statistics.
20	Bus Mastership	For BCC, this indicates whether this is the slave BCC. For other cards, this is not used.
21	Last Test	Last test performed on card in this slot.

dspstatmem (Display Statistics Memory Use)

The **dspstatmem** command displays memory usage for statistics collection.

Attributes

Jobs: No Log: Yes Lock: No Node Type: IPX, IGX, BPX

Associated Commands

none

Syntax

dspstatmem

Function

This command displays memory usage for statistics collection. It is intended for debugging statistics collection problems, not everyday use. The command shows the amount of controller card memory allocated by the user to statistics display (defaults to 650 Kbytes).

The memory occupied by USER is used for user-enabled statistics. Figure 1-79 illustrates an example screen. The memory occupied by USER figure is that used by the StrataView Plus user. Memory occupied by AUTO is that used by node features.

Figure 1-79 dspstatmem—Display Statistics Memory Usage

```
sw83                    TN      SuperUser                    IPX 16      8.2.5                    Feb. 1 1997 19:29 PST
```

```
User Configured Statistics Memory (In bytes) = 624640
```

```
Memory Occupied by USER (In bytes) = 0
```

```
Memory Occupied by AUTO (In bytes) = 21584
```

```
Last Command: dspstatmem
```

```
Next Command:
```

dsptcpparm (Display TCP Parameters)

The **dsptcpparm** command displays the TCP bandwidth throttle parameter.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX, BPX

Associated Commands

cnftcpparm

Syntax

dsptcpparm

Function

This command displays the TCP bandwidth throttle parameter. The following illustrates an example display.

Figure 1-80 dsptcpparm—Display TCP Parameters

```
cc2                    LAN   SuperUser            IPX 32    8.2.5            Jan. 30 1997 11:42 PST  
  
NWIP Bandwidth Throttle (Kbytes/sec): 32
```

Last Command: dsptcpparm

Next Command

dsptkcons (Display Trunk Connection Counts)

The **dsptkcons** command displays the number of connections routed over the specified trunk. This command applies to physical and virtual trunks.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX, BPX

Associated Commands

dsptkrmcons, dspplnmcons

Syntax

dsptkcons <line number>

<line number> trunk number.

Function

This command displays the total number of connections being carried by the specified trunk. The connections are summed for each terminating node in the network and lists the connection count for the transmit direction (out of the node).

This command is useful in determining the source of dropped packets in cases where the specified trunk is oversubscribed. Use the **dsptrks** command to list the trunks that originate at each node. Next, use the **dsptkcons** to determine the number of connections (the more connections per trunk the greater the possibility of over-subscription). Then use the **dsprts** command to identify any through nodes (where the trunk is not terminated). Finally, look at the utilization factor for each of these lines using the **dsputl** and **dsputl** commands. Figure 1-81 illustrates the **dsptkcons** command display.

Figure 1-81 dsptkcons—Display Trunk Connection Counts

```
batman            TN    SuperUser            BPX 15    8.2.5            Jan. 9 1997 15:57 GMT
```

```
Connection Counts For TRK 5.1
```

Src Node	Conns	Src Node	Conns	Src Node	Conns	Src Node	Conns
batman	1765						

```
Last Command: dsptkcons 5.1
```

```
Next Command:
```

dsprkmcons (Display Trunk Connection Counts by Master Node)

The **dsprkmcons** command displays the number of connections routed over the specified trunk (BNI) by the master node.

Attributes

Jobs: No Log: Lock: Node Type: IPX, IGX, BPX

Associated Commands

dsprkcons

Syntax

dsprkmcons <line number>

<line number> specified trunk number. Note that in a BPX, the line number must include a port number.

Function

This command displays the total number of connections being carried by the specified trunk. Rather than showing the remote end of the connection, the display lists the connection and the node that owns that connections.

This command is useful in determining the source of dropped packets in cases where the specified trunk is oversubscribed. First, use the **dsprkmcons** command to list the trunks that originate at each node (the more connections per trunk, the greater the possibility of over-subscription). Next, use the **dsprts** command to identify any through-nodes (on which the trunk is not terminated). Finally, look at the utilization for each of these lines by using the **dsputl** and **dsputl** commands. Figure 1-82 illustrates the **dsprkmcons** command display.

Figure 1-82 dsprkmcons—Display Trunk Connection Counts by Master Node

```
sw81            TN    SuperUser            BPX 15    8.2.5    Jan. 26 1997 13:16 PST

Connection Counts For TRK 6.1

Mst Node  Conns    Mst Node  Conns    Mst Node  Conns    Mst Node  Conns
sw86       26
```

Last Command: dsprkmcons 6.1

Next Command:

dsprkstatcnf (Display Statistics Enabled For A Trunk)

The **dsprkstatcnf** command displays the enabled statistics on either a physical or virtual trunk.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

cnftrkstats

Syntax

dsprkstatcnf <line>

<line> specifies the trunk: *line* can have the form *slot*, *slot.port*, or *slot.port.vtrk*. The format depends on whether the trunk card has only one or more physical ports and whether the trunk is a virtual trunk.

Function

This command displays the statistics configured as enabled for a selected trunk. It is intended for debugging statistics collection problems. It displays the trunk statistics set by the **cnftrkstats** command, by StrataView Plus, or by node features. Figure 1-83 illustrates an example display for an ATM trunk.

The owner column shows what set the statistic. If “Automatic”, it is set by features, if node name it was is set by StrataView Plus, if user it was set with the **cnftrkstats** command. The display may take up to four screens to display completely depending on statistics displayed.

Figure 1-83 dsprkstatcnf—Display E3 Trunk Statistics Enabled (Screen 1)

```
sw86                    TN      SuperUser                    BPX 15      8.2.5                    Feb. 1 1997    20:24 PDT
```

```
Statistics Enabled on Trunk 6.2
```

Statistic	Samples	Interval	Size	Peaks	Owner
3) Out of Frames	60	0	4	NONE	BPX
4) Loss of Signal	60	0	4	NONE	BPX
29) Line Code Violation	60	0	4	NONE	BPX
41) BIP-8 Errors	60	0	4	NONE	BPX
46) HCS Errors	60	0	4	NONE	BPX
48) Tx Voice Overflow Drpd Cells	60	0	4	NONE	BPX
49) Tx TS Overflow Drpd Cells	60	0	4	NONE	BPX
50) Tx NTS Overflow Drpd Cells	60	0	4	NONE	BPX
51) Tx Hi-Pri Overflow Drpd Cells	60	0	4	NONE	BPX
52) Tx BData A Overflow Drpd Cells	60	0	4	NONE	BPX
53) Tx BData B Overflow Drpd Cells	60	0	4	NONE	BPX

```
This Command: dsprkstatcnf 6.2
```

```
Continue?
```

Figure 1-84 dsprkstatcnf—Display T1Trunk Statistics Enabled (Screen 2)

sw86 TN SuperUser BPX 15 8.2.5 Feb. 1 1997 20:26 PDT

Statistics Enabled on Trunk 6.2

Statistic	Samples	Interval	Size	Peaks	Owner
167) Tx CBR Overflow Drpd Cells	60	0	4	NONE	BPX
168) Tx VBR Overflow Drpd Cells	60	0	4	NONE	BPX
169) Tx ABR Overflow Drpd Cells	60	0	4	NONE	BPX

Last Command: dsprkstatcnf 6.2

Next Command:

dsprksthathist (Display Statistics History for a Trunk)

The **dsprksthathist** command displays a history of configured statistics for a physical or virtual trunk.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

cnfrkstats, dsprkstatcnf

Syntax

dsprksthathist <trunk>

<trunk> specifies the trunk.

Function

The **dsprksthathist** command is a statistics debugging command. It displays the data for the last five occurrences of the selected statistic. The available trunk statistics appear on screen upon entry of the **dsprksthathist** command. (The **cnfrkstats** command enables individual statistics. The **dsprkstatcnf** command displays the enabled statistics for a trunk.) Figure 1-85 displays a statistic history for virtual trunk 1.1.1. The statistic is TX ABR Overflow Dropped Cells. This is statistic number 169, which execution of **dsprkstatcnf** shows as enabled for this trunk. (If a *disabled* statistic is selected, a message stating this appears above the command line prompt.) The entered bucket interval is 0 minutes, which means that only the preceding 60 seconds worth of gathered data for number 169 appears.

Note Enter the owner in all capital letters. You may have to enter owner "auto" in all capital letters.

Figure 1-85 dsprksthathist—Display Trunk Statistics History

sw97 TN SuperUser BPX 15 8.2.5 Jan. 9 1997 12:42 GMT

Tx ABR Overflow Drpd Cells on Trunk 1.1.1
Interval: 10 Second(s), Data Size: 4 Byte(s), NO Peaks, Owner: IPX

0	-	0	-11	-	0
-1	-	0	-12	-	0
-2	-	0	-13	-	0
-3	-	0	-14	-	0
-4	-	0	-15	-	0
-5	-	0	-16	-	0
-6	-	0	-17	-	0
-7	-	0	-18	-	0
-8	-	0	-19	-	0
-9	-	0	-20	-	0
-10	-	0	-21	-	0

This Command: dsprksthathist 1.1.1 169 0 BPX

Continue?

dsputl (Display Utilization)

The **dsputl** command displays the utilization factor for all voice connections on a specified circuit line.

Attributes

Jobs: No Log: No Lock: Yes Node Type: IPX, IGX

Associated Commands

dspdutl

Syntax

dsputl <bslot> [clear]

<bslot> specifies the shelf back slot number of the circuit line.

[clear] Directs the controller card to clear the utilization counters after being displayed.

Function

This command displays the actual percentage utilization for all voice connections on a single circuit line specified by the back slot (bslot) number. The percentage is calculated by dividing the number of packets transmitted over the total number of packets allocated to the specified channel. Only transmit packet rates are used. If percentage of actual utilization exceeds the configured utilization the channel appears in reverse video.

Figure 1-86 illustrates a typical display. In this example, the connections from 11.1 to 11.11 use VAD and the connections from 11.12 to 11.17 do not. The connections using VAD do not use any network bandwidth (0 utilization) until the connection is used. The other connections utilize the full bandwidth (100% utilization) even though they may be idle.

Use the **dspdutl** command to display utilization for data channels.

Figure 1-86 dsputl—Display Voice Channel Utilization

```
gamma          TRM          SuperUser          Rev:  8.2.5   Jan. 14 1997  16:36 PDT

Percentage utilization          Last Cleared: Date/Time Not Set          Snapshot

CLN   1  2  3  4  5  6  7  8  9 10 11 12 13 14 15

11    0  0  0  0  0  0  0  0  0  0  0  0  0 99 99 99

CLN   16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

11          99

Last Command: dsputl 11

Next Command:
```

forcerev (Force Revision)

The **forcerev** command forces a software revision to be sent down a trunk to a remote node.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

dsprevs, loadrev

Syntax

forcerev <line number> <primary/secondary> <revision>

<line number> specifies the trunk number used to send the revision.

<primary/secondary> specifies which revision is to be sent.

<revision> specifies the software revision to be forced down the line.

Function

This command sends a change revision message blindly down the specified trunk from the local node to the remote node. This allows primary revisions to be changed regardless of communication breaks and unreachable nodes. Usage of this command should only be necessary if a problem results in inconsistent revisions throughout a network.

Figure 1-87 illustrates an example screen. If the local node does not have the SW revision specified, the system will display “Unavailable X.X” as indicated. Use the **getfwrev** command to load the desired software revision into the node. Use the **dsprevs** command to display the revisions available on each node in the network.



Caution Use this command only when requested by Cisco and under Cisco supervision.

Figure 1-87 forcerev—Force Revision Down a Line

```
alpha          TRM          SuperUser      Rev:  8.2.5   Jan. 14 1997  13:42 PDT

                ----- Primary -----          ----- Secondary -----
NodeName       Status      Revision      Status      Revision
NodeName       Status      Revision      Status      Revision
gamma         Running    8.2.5
```

Last Command: forcerev 10 s 7.2

Next Command:

IPX SU/0049_

getfwrev (Get Firmware Revision)

The **getfwrev** command gets and loads a firmware image from StrataView, StrataView Plus, or a remote node into the specified node(s).

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

burnfwrev, dspfwrev, dspdnld

Syntax

getfwrev <image name> <nodename>

<image name> specifies the name assigned to the firmware revision. Image names are generally in all capital letters and are case-sensitive when being entered.

<nodename> specifies the node on which to load the revision.

Function

This command gets and loads a firmware revision image into the specified node's NPC or NPM memory. This firmware image can then be downloaded to specific interface cards within the node with the **burnfwrev** command. The firmware image must be already loaded into the StrataView or StrataView + terminal before using this command.

When the command is first entered, the status is temporarily “Unavailable” while the node attempts to locate the source of the firmware image. Once the download begins, a list of all of the files that make up the image is displayed and as the downloading progresses, the address of the file is updated.

- **getfwrev a.b.cd ***—loads firmware revision a.b.cd at all reachable nodes
- **getfwrev a.b.cd nodename**—loads firmware revision a.b.cd at one node only (nodename specifies the node).
- **getfwrev 0.0.**—clears a firmware revision image from control card memory. Should be issued after every firmware download to clear the control card memory.



Caution This command is not to be confused with **loadrev**. It loads system software, not firmware.

loadcnf (Load Configuration)

The **loadcnf** command loads a configuration image from StrataView Plus to a node.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX, BPX, IPX/AF

Associated Commands

dspcnf, runcnf, savecnf

Syntax

loadcnf <backup_id | clear> <node_name> <source_SV_node>

- <backup_id > specifies the name of the backup configuration file to be loaded. Configuration names are case-sensitive.
- <clear> specifies that the control card buffer area used for loading a configuration be cleared.
- <node name> specifies the target node where the backup configuration file is to be loaded.
- <source_SV_node> specifies the node connected to the StrataView Plus where the configuration file *backup_id* resides.

Function

This command causes a saved network configuration file to be downloaded from StrataView Plus to one node or all nodes. (See **savecnf**.) The configuration image downloaded is temporarily stored in a buffer area in a node's controller card memory. The process runs in the background and may take several minutes if the configuration file is large. Although loaded, the configuration is not yet restored. The configuration is restored to the controller card's BRAM memory using the **runcnf** command.

After loading and restoring a network configuration, the control card buffer area used for this purpose should be cleared so it is available for other downloading processes, such as that of firmware. To clear the buffer area, execute **loadcnf** with the *clear* parameter specified instead of *backup_id*. Specify the buffer of an individual node with *node_name* or all nodes with *. For the purpose of clearing the buffer area, do not specify the *source_SV_node* parameter.

To execute this command on an IPX/AF interface shelf, telnet to the shelf or use a control terminal attached to the shelf.

loadrev (Load Revision)

The **loadrev** command loads a secondary system software revision image from StrataView or StrataView Plus into a node.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

runrev, dsprevs

Syntax

loadrev <revision> <nodename/*>

<revision > specifies the revision level of the system software file to be loaded.
 <nodename> specifies the target node where the secondary revision is to be loaded.
 <*> is a shorthand notation used to specify all nodes in the network.

Function

This command loads the secondary revision system software for the specified nodes. The secondary revision system software is the code that is loaded onto a controller card but is not being run. Use the **runrev** command after loading of a revision is complete to make the secondary revision the primary revision. The previous primary revision then becomes the secondary.

Examples of this command:

- **loadrev a.b.cd ***—loads revision a.b.cd at all reachable nodes.
- **loadrev a.b.cd nodename**—loads revision a.b.cd at nodename only
- **loadrev 0.0.**—clears a software revision image from controller memory. This command should be issued after every software download to clear the controller memory.

After entering the command, system responds with: “Enter Rev Number:” The **dsprevs** command is used to observe the software revisions that are currently loaded into the controller memory. The **dsdnld** command is used to display a running picture of the status of the download procedure once it has commenced.



Caution This command is not to be confused with **getfwrev**. It loads firmware, not system software.

prtcerrors (Print Card Errors)

The **prtcerrors** command prints out detailed card failure information.

Attributes

Jobs: Yes Log: No Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

clrcerrors, dspcerrors

Syntax

prtcerrors [<slot>]

<slot > specifies the shelf slot where the selected card is installed.

Function

Prints a history of card failures associated with a specified slot on the network printer. If no argument is specified, a summary is printed, indicating the slots that have failures recorded against them. Refer to **dspcerrors** command for an example of a typical card error record that might be printed.

rrtcon (Reroute Connection)

The **rrtcon** command is used to manually reroute one or more connections.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

drtop

Syntax

rrtcon <group | channel(s) | *>

<group | channel(s) | *> specifies a group, a channel, or a range of channels to be rerouted. A '*' specifies all locally owned groups and connections.

Function

This command forces a group, channel or range of channels to be rerouted. If a free-routing connection is rerouted by the system for whatever reason, it will not automatically return to its original route when the trouble clears. This may leave the connection on a path that is not the most direct or cost effective.

This command can be used to force a reroute that will likely put the connection back to its original route if available. Over time, many routes may need to be rerouted back to their original paths. In this case, use the "*" to reroute all connections.

To use this command you must first vt to the node that owns the connection (local node). If not at the local node, the system displays "This node is not owner of the connection(s)".

There is no provision for specifying a route. The node determines the connection route according to the same rules that are used when adding a new connection. If there is no network bandwidth available to reroute the connection, the connection will be marked as failed.



Caution Entering this command on a connection that is in service should be done with some discretion as the reroute will interrupt service for as long as it takes to reroute the connection.

rststats (Reset Statistics Collection Time)

The **rststats** command resets the statistics collection time for the **tststats** command.

Attributes

Jobs: Yes Log: No Lock: Yes Node Type: IPX, IGX

Associated Commands

tststats

Syntax

rststats

Function

This command resets the collection time for the **tststats** command. The **tststats** command displays a test statistics summary. Before there will be any meaningful statistics, the **tstcon** command must be performed on one or more network connections. Refer to the *Cisco WAN Switching Command Reference* for information on the **tstcon** command. Figure 1-88 illustrates the system response.

Figure 1-88 **rststats—Reset Statistics Collection Time**

```
alpha32            LAN   SuperUser            IPX 32      8.2.5            Jan. 30 1997 13:35 PST

Command history

12:
11:
10:
9:
8:
7:
6:
5:
4:
3:
2:
1: rststats

This Command: rststats

Warning: This command clears all statistics
Continue?
```

runcnf (Run Configuration)

The **runcnf** command restores a network configuration image at one or all nodes.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX, BPX, IPX/AF

Associated Commands

savecnf, loadcnf, clrcnf

Syntax

```
runcnf <backup_id> <node_name>
```

<backup_id> specifies the name of the configuration image loaded from StrataView Plus. Configuration names are case-sensitive.

<node_name> specifies the node name to receive the configuration. An asterisk (*) specifies all nodes.

Function

This command restores the specified configuration to the controller card's BRAM memory and overwrites the current configuration. Once restored, the specified node (or all nodes) rebuilds with the restored configuration image. To execute this command on an IPX/AF interface shelf, telnet to the shelf or use a control terminal attached to the shelf.

This command is usually run after a previous configuration has been lost. If doubts exist about the state of the configuration at other nodes in the network, load the configuration into all nodes by specifying "*" for the node name. The new configuration must have previously been loaded into the controller buffer area with the **loadcnf** command.



Caution All network nodes must be run with the same configuration.

The system may display two warnings in response to the **runcnf** command:

A. When single node specified:

- Warning—node_name not reachable. Continue? Y/N.
- Warning—node_name does not have the specified configuration. Continue? Y/N.

B. When all nodes specified:

- Warning—all nodes not reachable. Continue? Y/N.
- Warning—all nodes do not have the specified configuration. Continue? Y/N.

If a single node is not reachable, responding with a "Y" does not affect the operation of the network. If node(s) do not all have the specified configuration or all are unreachable, it is not recommended that you continue until after the problem is resolved.

runrev (Run Revision)

The **runrev** command runs a specific revision of the system software revision at a node.

Attributes

Jobs: No Log: Yes Lock: Yes Node Type: IPX, IGX, BPX

Associated Commands

dsprevs, loadrev

Syntax

runrev <revision> <nodename/*>

<backup_id> specifies the name of configuration image loaded from StrataView Plus. Image names are generally in all capital letters and are case-sensitive when being entered.

<node_name> specifies the node name to rebuild with a new configuration.

'*' is a shorthand notation used to specify all nodes in the network.

Function

This command sets the primary revision for the specified nodes. The primary software revision is the one that is actively controlling node operation. A non-active secondary revision that does not match the primary revision may also be loaded in the controller. To set the primary software revision, enter:

- **runrev a.b.cd ***—to run revision a.b.cd at all reachable nodes.

or

- **runrev a.b.cd nodename**—to run revision a.b.cd at a single node (nodename) only.

After entering the command, system responds with “Enter Rev Number”. Use the **dsprevs** command to determine which rev(s), primary and secondary, are available on the node. The **runrev** command will be ignored if the required revision is not present on the node.

You may need to load the new revision onto the StrataView Plus terminal and then use **loadrev** command to download the new software image into the standby controller before you issue the **runrev** command. If you enter a revision number that does not exist at the node, the system displays the message

“Warning—the node does not have the specified revision. Continue? Y/N”



Caution All network nodes must be run with the same software revision or abnormal network operation will be experienced.

If you respond “no”, the system takes you back to the main StrataView Plus prompt and you have an opportunity to change the rev. number and make a second attempt to run the corrected revision.

savecnf (Save Configuration)

The **savecnf** command saves a configuration image on a StrataView Plus workstation disk.

Attributes

Jobs: Yes Log: Yes Lock: Yes Node Type: IPX, IGX, BPX, IPX/AF

Associated Commands

loadcnf, runcnf, clrcnf

Syntax

```
savecnf <backup_id | clear> <node_name> <dest_SV_node> [<dest_SV_ip>]
```

<backup_id>	specifies the name of a configuration to be saved on StrataView Plus. The Backup ID must be 1–8 alphanumeric characters with the first character being alphabetic. Configuration names are case-sensitive.
<clear>	specifies that the buffer area should be cleared.
<node_name>	specifies the node name to save configuration on. '*' may be specified to indicate all nodes.
<dest_SV_node>	specifies the node name where StrataView Plus is connected and that is to receive the specified backup_id.
<dest_SV_IP>	for IPX/AF interface shelves only, this optional specification is the IP address of the StrataView Plus that is to receive the configuration image.

Function

The **savecnf** command has two possible applications. It saves all the configurations for the nodes in a routing network, or it saves the configuration of one IPX/AF interface shelf to a specific StrataView Plus workstation. Once saved, the configuration may be restored to BRAM using the **loadcnf** and **runcnf** commands. The **savecnf** command should be executed in the following situations:

- After making any configuration changes in a network
- Before upgrading to a new system software release

Execution on a Routing Node

In a routing network, **savecnf** saves a configuration image for one node or all routing nodes (*node_name* = *) on the StrataView Plus workstation specified by *dest_SV_node*.

Execution on an IPX/AF Interface Shelf

To execute **savecnf** on an IPX/AF, either telnet to the shelf or use a control terminal attached to it: **savecnf** saves a configuration image of only this IPX/AF. The image is stored on the workstation with the IP address in the parameter *dest_SV_ip*. (In a routing network, *dest_SV_ip* is not necessary.) Note that *node_name* and *dest_SV_node* must *both* be the name of the IPX/AF. The IP address of the destination StrataView Plus workstation uniquely identifies where to store the configuration image.

setfpevt (Set FastPAD Event Reporting)

The **setfpevt** command enables the reporting of FastPAD events.

Attributes

Jobs: No Log: Lock: Node Type: IPX, IGX

Associated Commands

clrfpevt

Syntax

setfpevt <slot,port>

<slot,port> specifies the slot and port of the FastPAD.

Function

Figure 1-89 illustrates a typical test statistics display.

Figure 1-89 **setfpevt—Set FastPAD Event Reporting**

tststats (Test Statistics)

The **tststats** command displays a summary of the test statistics that result from performing a **tstcon** command on various network connections.

Attributes

Jobs: No Log: No Lock: No Node Type: IPX, IGX, BPX

Associated Commands

tstcon

Syntax

tststats [clear]

[clear] specifies that the test statistics buffers be cleared.

Function

Before **tststats** displays any meaningful statistics, the **tstcon** command must run on one or more network connections. Refer to the *Cisco WAN Switching Command Reference* for information on the **tstcon** command. The following are displayed for voice, data, and frame relay connections.

- Tests Completed, Passed, Failed, and Aborted.
- Failure data per failed connection (applies only to voice connections).
- Slot.channel—indicates which connection has failed.
- Good reads—indicates number of good reads on the test failure.
- Bad reads—indicates number of bad reads on the test failure.

Figure 1-90 illustrates a typical test statistics display.

Figure 1-90 **tststats—Display Test Statistics**

sw150 TN SuperUser IGX 16 8.2.5 Feb. 1 1997 21:54 GMT

Connection Test results since: Date/Time Not Set

Type	Total	Passed	Failed	Aborted
Voice	0	0	0	0
Data	0	0	0	0
Fr Relay	0	0	0	0

Last Command: tststats

Next Command: