

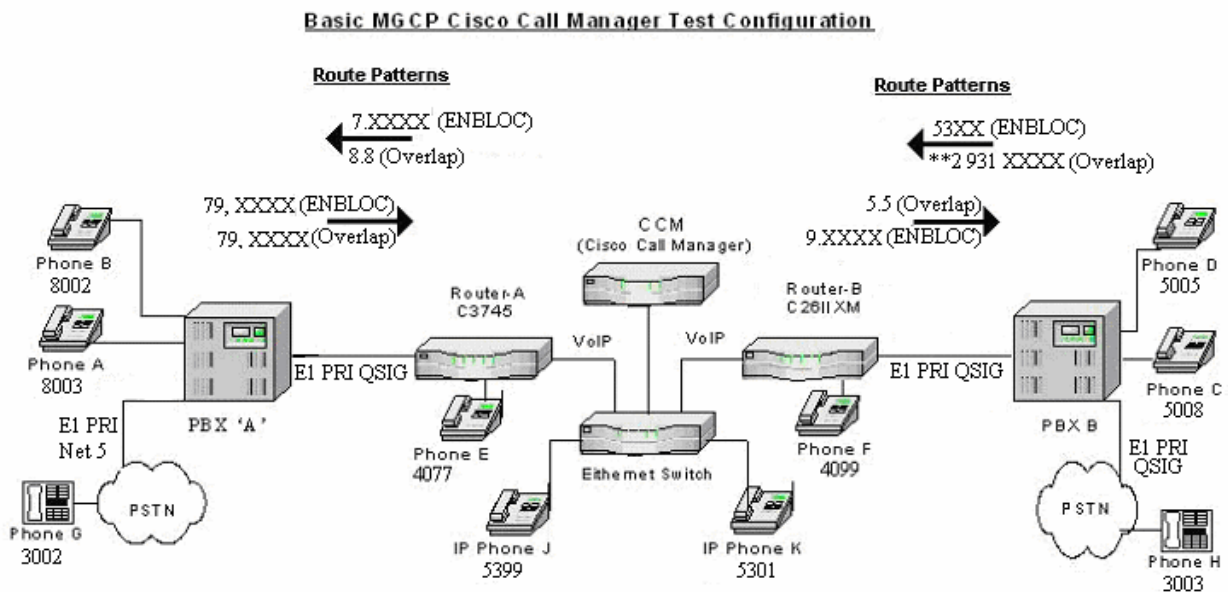
Cisco CallManager 4.01-PBX Interoperability: Mitel Access 3300+ to a Cisco 2611XM Gateway using NM-HDV2-E1 PRI QSIG with MGCP

Introduction

- This application note contains the test results of Mitel Access 3300+ PBX interoperability testing via digital trunk (E1 PRI QSIG) interfaces under test to a Cisco C2611XM Voice Router via NM-HDV2-T1/E1 Voice Interface Modules.
- This application note is directed toward testing interoperability of the NM-HDV2-T1/E1 Voice Interface Module with a Mitel Access 3300+ PBX.
- The application note is for Connectivity/Interoperability testing of the selected PBX connected via the NM-HDV2-T1/E1 Voice Interface Modules to a Cisco C2611XM Voice Router. The Cisco C2611XM Voice Router under test is connected via Ethernet to an Ethernet switch which also has a Cisco CallManager and IP Phones in the Network Topology.
- Figure 1 is representative of the configuration used for testing. The diagram shows the test set-up for a Cisco Voice Router connected through an Ethernet switch and controlled via MGCP by a Cisco Call Manager.

Network Topology

Figure 1. Network Topology or Test Setup





Limitations

- It was found in a prior test that the correct position of J7 on the NM-HDV2-T1/E1 Voice Interface Modules was critical to establish Layer 1 connectivity. Looking into the NM-HDV2-T1/E1 Voice Interface Modules in the direction of insertion into the Cisco C3745 Voice Router, the jumper should be placed to connect the left and middle pins.
- When calling a station controlled by MGCP (J, K, E, or F), the Called Name/Number were not displayed because Cisco CallManager 4.01 does not support it. It was **not** sent in the ALERTING message from Cisco CallManager.
- When calling directly from an MGCP controlled phone (J, K, E, or F) to a Mitel Access 3300+ extension (C), the Called Number was not displayed because Cisco CallManager 4.01 does not support it. It was, however sent in the ALERTING message from the Mitel Access 3300+ PBX.
- When calling from a Mitel Access 3300+ extension to a remote station (A, C, or K) the Connected Name/Number was passed by Cisco CallManager 4.01 to the Mitel Access 3300+ PBX, but the PBX did not display it on the originating station. This property (not processing name/number in CONNECT or associated FACILITY message) is thought to be inherent to the Mitel Access 3300+ PBX.
- When calling from a remote extension (A, E, J, or K) to a Mitel Access 3300+ extension (C), the Connected Name/Number was not passed by the Mitel Access 3300+ PBX. This property is thought to be inherent to the Mitel Access 3300+ PB.
- ENBLOC calls A to C, C to A, A to F, E to C, G to H, and H to G were accomplished by a call transfer.
- When calling (ENBLOC) from a Siemens HiCom 330E extension (A) to a Mitel Access 3300+ PBX via Cisco CallManager in the SETUP message. However, a transfer was used to accomplish the call and the call and the wrong name was displayed on the Mitel Access 3300+ extension although the SETUP message was properly formatted.
- When calling (Overlap mode) from a Siemens HiCom 330E extension (A) to a Mitel Access 3300+ extension (C), the Called Name/Number was passed from the Mitel Access 3300+ PBX to Cisco CallManager in the ALERTING message, and then from Cisco CallManager to the Siemens HiCom 330E PBX in a FACILITY message. However, the name/number was not displayed on the originating Siemens HiCom 330E PBX station. The same is true for Calling Name in ENBLOC mode.
- When calling from a Mitel Access 3300+ extension (C) to a Siemens HiCom 330E extension (A), the Called Name was passed from the Siemens HiCom 330E PBX to Cisco CallManager via ALERTING messages, and from Cisco CallManager to the Mitel Access 3300+ PBX via FACILITY messages. However, the name was not displayed on the originating Mitel Access 3300+ PBX station. This property is thought to be inherent to the Mitel Access 3300+ PBX.
- When calling (Overlap mode) from a Siemens HiCom 330E extension (A) to a Mitel Access 3300+ extension (C), the Calling Name was passed from Siemens HiCom 330E PBX to Cisco CallManager to Mitel Access 3300+ PBX via SETUP message, but Mitel Access 3300+ PBX did not display it on destination.
- When calling (Overlap mode) from a Mitel Access 3300+ extension (C) to a Siemens HiCom 330E extension (A), the Called Number was **not** passed by the Siemens HiCom 330E PBX.

System Components

Hardware Requirements

- Cisco C2611XM Voice Router including NM-HDV2-1T1/E1 Voice Interface Modules
- Mitel Access 3300+ PBX

Software Requirements

- Cisco CallManager release 4.01
- Mitel Access 3300+ PBX software revision 4.1.6.7
- Cisco IOS C2611XM Voice Router: Cisco IOS Software, C2600 Software (C2600-ADVENTERPRISEK9-M), Version 12.3(7)T, Release Software (fc1)



Configuration

Configuration Menus and Commands

Configuring the Mitel Access 3300+ PBX

Terminal Screenshot for IMAT PRI Link Characteristics

My Documents User's Guide

My Computer

My Network Places

Recycle Bin

Internet Explorer

Microsoft Outlook

Cisco E-Support

Cisco IPTV Viewer

Supplemental Guide

IMAT - PRI Card / Universal NSU

File Config Maintenance Help

PRI Link Characteristics

PRI link number*: Link 2 Protocol Type: QSIG Protocol Variant: ISO

Physical Type: E1/CEPT Characteristics

Network-side / Qsig master

Enbloc only

Disable Fake Answer Supervisor

Qsig Channel Numbering

Comment:

Test Call Number:

Update Close Help NFAS Setup AGC Setup R2 Setup L3 Timer Setup

Editing PRI-card link characteristics... Offline

E1/CEPT Characteristics

CRC4: Disable Enable

ADI: Disable Enable

Update Close Help

De-select this box for Overlap.



Terminal Screenshot for Digital Link Assignments

The screenshot displays the Cisco Mitel Networks 3300 ICP System Administration web interface. The top navigation bar includes 'Data Refresh', 'Help', and 'Exit' buttons. An alarm status indicator shows a 'Major' issue on 2004-Sep-13 at 13:22:16. The left sidebar shows a tree view of system configuration options, with 'Digital Link Assignments' selected under the 'Digital Trunks' folder. The main content area displays a table of digital link assignments with the following data:

Controller Module	Port	Unit	Shelf	Slot	Link	Interface Type	Digital Link Descriptor	Comment
1	2	7	1	1	1	UNIVERSAL E1	13	QSIG trunk GR.
1	2	7	1	1	2	UNIVERSAL E1	13	E-1 QSIG trunk gr.
2	1	8	1	1	1	UNIVERSAL T1	10	pri_ni1
2	1	8	1	1	2	UNIVERSAL T1	10	pri_ni1

The interface also includes a 'Selection:' dropdown menu set to 'System Configuration', a 'Change' button, and a 'Page 1 of 1' indicator. The bottom of the window shows the Windows taskbar with the Start button and several open applications.



Terminal Screenshot for Trunk Service Assignment

Alarm Status: Major 2004-Sep-13 13:27:16

Cisco - System Message:

Selection: System Administration

System Administration

- User Authorization Profiles
- System Options
- Automatic Route Selection (ARS)
 - Trunk Service Assignment**
 - Trunk Group Assignment
- Class of Restriction Group Assignm
- System Account Code Definition (Op
- Independent Account Code Definitio
- Default Account Code Definition (Opt
- Call Progress Tone Detection Plan A
- Digit Modification Assignment
- Maximum Dialed Digits
- Route Assignment
- Route List Assignment (Optional)
- Day and Time Zone Assignment (Op
- Route Plan Assignment (Optional)
- ARS Digits Dialed Assignment
- ARS Leading Digits Assignment
- Interconnect Restriction
- Node Identity Assignment

Automatic Call Distribution (ACD)

24	No	1	1	300	1	
25	No	1	1	300	1	
26	No	13	1	300	1	
27	No	13	1	300	1	
28	No	1	1	300	1	

Change Change Page Change All Clear

Trunk Service Assignment

Trunk Service Number: 27
Release Link Trunk: No
Class of Service: 13
Class of Restriction: 1
Baud Rate: 300
Intercept Number: 1
Non-dial In Trunks Answer Point - Day:
Non-dial In Trunks Answer Point - Night 1:
Non-dial In Trunks Answer Point - Night 2:
Dial In Trunks Incoming Digit Modification - Absorb: 0
Dial In Trunks Incoming Digit Modification - Insert:
Trunk Label:

MITEL 3300 ICP
About System Administration

Start | 4 Procomm Plus C... | Mitel Networks@ 33... | Cisco - Mitel Netw... | C:\Documents and S... | untitled - Paint | 1:49 PM



Terminal Screenshot for Digital Trunk Assignments

Alarm Status: Major 2004-Sep-13 13:27:16

Cisco - System Message:

Selection: System Configuration

- System Configuration
 - System Capacity
 - Units/Modules
 - Trunks
 - Class of Service Options As
 - Analog Trunks
 - Digital Trunks
 - DPNSS
 - E1/CEPT
 - Link Descriptor Assig
 - Digital Link Assignme
 - MSDN-DPNSS-DASS
 - Trunk Service Assignr
 - Digital Trunk Assignrr
 - Network Synchronizat
 - ISDN-PRI
 - T1/D4
 - IP Networking/XNET
 - Direct Trunk Select
 - Automatic Route Selection (
 - Devices
 - Music On Hold

Change Clear

Previous Page 4 of 11 Next Go to: value: Go

Cabinet	Shelf	Slot	Circuit	Card Type	Trunk Number
7	1	1	31	UNIVERSAL E1	931
7	1	1	32	UNIVERSAL E1	932
7	1	1	33	UNIVERSAL E1	933
7	1	1	34	UNIVERSAL E1	934
7	1	1	35	UNIVERSAL E1	935
7	1	1	36	UNIVERSAL E1	936
7	1	1	37	UNIVERSAL E1	937
7	1	1	38	UNIVERSAL E1	938
7	1	1	39	UNIVERSAL E1	939
7	1	1	40	UNIVERSAL E1	940

Digital Trunk Assignment

Cabinet: 7
Shelf: 1
Slot: 1
Circuit: 31
Card Type: UNIVERSAL E1
Trunk Number: 931
Trunk Service Number: 27
DTS Service Number:
Circuit Descriptor Number: 27
Interconnect Number: 1

MITEL 3300 ICP
About System Administration

Start | 4 Procomm Plus C... | Mitel Networks@ 33... | Cisco - Mitel Netw... | My Documents | untitled - Paint | 1:45 PM



Terminal Screenshot for Link Descriptor Assignments

Alarm Status: Major 2004-Sep-13 13:22:16

Cisco - System Message:

Selection: System Configuration

Number	Type	BER - Maintenance Limit, 10 ⁻ⁿ	BER - Service Limit, 10 ⁻ⁿ	Yes/No
12	B	5	5	Yes
13	A	5	5	Yes

Link Descriptor Assignment

Number: 13
Address for Message Control: A
BER - Maintenance Limit, 10⁻ⁿ: 5
BER - Service Limit, 10⁻ⁿ: 5
Data Call Alternate Digit Inversion: Yes
Framing Losses in 24 hrs - Maintenance Limit: 255
Framing Losses in 24 hrs - Service Limit: 9000
Integrated Digital Access: ISDN NODE
Vendor Inter-working Type (Philips SOPHO): No
Satellite Link Delay: No
Slip Rate - Maintenance Limit (slips/24hr.): 5000
Slip Rate - Service Limit (slips/24hr.): 7000
Alarm Debounce Timer - Service Limit (millisec.): 500
Voice Encoding: ADI
Data Encoding: Nil
QSIG Private Network Access: No
Digital Link Fault Delay Timer (sec.): 240
Termination Mode: NT

T1 Only:
B8ZS Zero Code Suppression: Yes
Operation Mode: DSX-1
CSU Tx Line Build-Out (dB):
DSX-1 Line Length (Ft.): 0-133
Extended Super Frame: Yes
Inverted D channel (DPNSS only): No

E1 Only:
CRC-4 Enabled: No
E1 Line Length (Ft.): 0-133
E1 Impedance (Ohms): 120



Terminal Screenshot for Automatic Route Selection (ARS) Digits Dialed Assignment

The screenshot shows the Cisco 3300 ICP web interface in Microsoft Internet Explorer. The top navigation bar includes "File", "Edit", "View", "Favorites", "Tools", and "Help". The main content area is titled "Cisco - System Message:" and displays an "Alarm Status: Major 2004-Sep-13 13:27:16". Below this, there is a "Selection:" dropdown menu set to "System Administration". A tree view on the left shows the navigation structure, with "ARS Digits Dialed Assignm" selected. The main content area displays a table titled "ARS Digits Dialed Assignment" with the following data:

Digits Dialed	Number of Digits to Follow	Termination Type	Termination Number
11	2	Route	3
30	2	Route	3
40	2	Route	6
42	2	Route	3
469258	4	Route	13
49	2	Route	13
53	2	Route	13
550	1	Route	3
560	Unknown	Route	3
7	Unknown	Route	3
77711	2	Route	3
80	Unknown	Route	2
90	Unknown	Route	3
950484	4	Route	3

The interface also includes a "Data Refresh" button, "Help", and "Exit" buttons. The bottom of the page features the MITEL 3300 ICP logo and the text "About System Administration". The Windows taskbar at the bottom shows the Start button and several open applications, including "4 Procomm Plus C...", "Mitel Networks@ 33...", "Cisco - Mitel Netw...", "C:\Documents and S...", and "untitled - Paint". The system clock shows "1:51 PM".



Terminal Screenshot for Class of Restriction (COR) Assignments

The screenshot shows the Cisco 3300 ICP web interface in Microsoft Internet Explorer. The browser title is "Cisco - Mitel Networks® 3300 Integrated Communications Platform (ICP) - Microsoft Internet Explorer". The page displays an "Alarm Status" of "Major" on "2004-Sep-13 13:27:16". Below this is a "Cisco - System Message:" section. The main content area is titled "Class of Restriction Group Assignment" and shows a table with 20 rows. The first row is highlighted in blue. The table has two columns: "Number" and "Classes Of Restriction For Group". The "Number" column contains integers from 1 to 20. The "Classes Of Restriction For Group" column is currently empty. The interface includes a navigation pane on the left with a tree view of system administration options, and a top navigation bar with buttons for "Change", "Change Page", "Change All", and "Clear". The bottom of the page features the MITEL 3300 ICP logo and the text "About System Administration". The Windows taskbar at the bottom shows the Start button and several open applications, including "4 Procomm Plus C...", "Mitel Networks® 33...", "Cisco - Mitel Netw...", "C:\Documents and S...", and "untitled - Paint". The system clock shows "1:53 PM".

Alarm Status: Major 2004-Sep-13 13:27:16

Cisco - System Message:

Selection: System Administration

System Administration

- User Authorization Profiles
- System Options
 - Automatic Route Selection (AR)
 - Trunk Service Assignment
 - Trunk Group Assignment
 - Class of Restriction Group Assignment
 - System Account Code Definition
 - Independent Account Code
 - Default Account Code Definition
 - Call Progress Tone Detection
 - Digit Modification Assignment
 - Maximum Dialed Digits
 - Route Assignment
 - Route List Assignment (Optional)
 - Day and Time Zone Assignment
 - Route Plan Assignment (Optional)
 - ARS Digits Dialed Assignment
 - ARS Leading Digits Assignment
 - Interconnect Restriction
 - Node Identity Assignment
 - Automatic Call Distribution (ACD)

Change Change Page Change All Clear

Previous Page 1 of 4 Next Go to: value: Go

Number	Classes Of Restriction For Group
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

MITEL 3300 ICP
About System Administration

Start 4 Procomm Plus C... Mitel Networks® 33... Cisco - Mitel Netw... C:\Documents and S... untitled - Paint 1:53 PM



Terminal Screenshot for Digit Modification Assignments

The screenshot shows the Cisco Mitel Networks 3300 ICP administration interface. The top navigation bar includes "Data Refresh", "Help", and "Exit" buttons. The "Alarm Status" is "Major" as of 2004-Sep-13 13:27:16. The "Cisco - System Message:" section is empty. The "Selection:" dropdown is set to "System Administration".

The left sidebar shows a tree view of system administration options, with "Digit Modification Assignments" selected. The main content area displays a table of digit modification assignments. The table has columns for "Digit Modification Number", "Number of Digits to Absorb", "Digits to be Inserted", and "Final Tone Plan/Information Marker". The table is currently on "Page 1 of 18".

Digit Modification Number	Number of Digits to Absorb	Digits to be Inserted	Final Tone Plan/Information Marker
1	0		
2	2		
3	0		
4	0		
5	1	0	
6	0	1	
7	0		
8	0		
9	0		
10	0		
11	0		
12	0		
13	0		
14	0		
15	0		

The bottom of the interface features the MITEL 3300 ICP logo and the text "About System Administration". The Windows taskbar at the bottom shows the Start button, several open applications, and the system clock at 1:52 PM.



Terminal Screenshot for Route Assignments

Cisco - Mitel Networks® 3300 Integrated Communications Platform (ICP) - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Alarm Status: Major 2004-Sep-13 13:27:16

Data Refresh Help Exit

Cisco - System Message:

Selection:
System Administration

- System Administration
 - User Authorization Profiles
 - System Options
 - Automatic Route Selection (AR)
 - Trunk Service Assignment
 - Trunk Group Assignment
 - Class of Restriction Group
 - System Account Code Defin
 - Independent Account Code
 - Default Account Code Defin
 - Call Progress Tone Detecti
 - Digit Modification Assignme
 - Maximum Dialed Digits
 - Route Assignment
 - Route List Assignment (Opt
 - Day and Time Zone Assignm
 - Route Plan Assignment (Op
 - ARS Digits Dialed Assignm
 - ARS Leading Digits Assign
 - Interconnect Restriction
 - Node Identity Assignment
 - Automatic Call Distribution (AC

Change Change Page Change All Clear

Previous Page 1 of 14 Next Go to: value: Go

Route Number	Trunk Group Number	COR Group Number	Digit Modification Number	Digits Before Outpulsing	XNET Trunk Group Number	Route Type	Compression
1	1	1	1				Off
2	2	1	5				Off
3	3	1	1				Off
4		1	1				Off
5		1	1				Off
6	2	1	6				Off
7		1	1				Off
8		1	1				Off
9		1	1				Off
10		1	1				Off
11		1	1				Off
12		1	1				Off
13	13	1	1				Off
14	14	1	2				Off
15		1	1				Off

MITEL 3300 ICP
About System Administration

Start 4 Procomm Plus Conne... Mitel Networks® 3300 In... Cisco - Mitel Network... C:\Documents and Sett... 1:50 PM



Terminal Screenshot for Class of Service (CoS) Options Assignments

The screenshot shows the Cisco 3300 ICP web interface in Microsoft Internet Explorer. The top navigation bar includes "Data Refresh", "Help", and "Exit" buttons. An "Alarm Status" indicator shows a "Major" alarm on 2004-Sep-16 at 16:00:06. The "Cisco - System Message:" section is currently empty. The "Selection:" dropdown is set to "System Configuration". The left-hand navigation tree is expanded to "Class of Service Options Assignment". The main content area features a "Class of Service Options Assignment Search:" section with a search form: "Find a field named: Class Of Service Number that has a value of: [input] Search". Below the search form are "Change" and "Copy" buttons. A table titled "Class of Service Options Assignment" is displayed with the following data:

Class Of Service Number	Comment
11	CO LS Trunks
12	T1 Trunks
13	E1 Trunks
14	
15	

The bottom of the interface displays the MITEL 3300 ICP logo and "About System Administration" link. The Windows taskbar at the bottom shows the Start button, several "Procomm Pl..." instances, a "C:\Docume..." folder, and the active "Cisco - Mit..." window. The system clock shows 3:58 PM.



Terminal Screenshot for Display Called/Calling Number Selection

The screenshot displays the Cisco Mitel Networks 3300 ICP web interface. The main window shows the 'Class of Service Options Assignment Search' dialog box. The dialog box contains a list of options with radio buttons for 'No' and 'Yes'. Two options are circled in red: 'Display ANI/ISDN Calling Number Only' and 'Display ANI/DNIS/ISDN Calling/Called Number', both with the 'Yes' option selected. The background shows the system configuration tree and a search bar.

Option	No	Yes
Calling Name Display - Internal - ONS:	<input type="radio"/>	<input checked="" type="radio"/>
Calling Number Display - Internal - ONS:	<input type="radio"/>	<input checked="" type="radio"/>
Campan Tone Security:	<input checked="" type="radio"/>	<input type="radio"/>
Check COR after PSTN Dial Tone:	<input type="radio"/>	<input checked="" type="radio"/>
Clear All Features Remote:	<input checked="" type="radio"/>	<input type="radio"/>
Conference Call:	<input type="radio"/>	<input checked="" type="radio"/>
COV/ONS/E&M Voice Mail Port:	<input checked="" type="radio"/>	<input type="radio"/>
DASS II OLI/TLI Provided:	<input checked="" type="radio"/>	<input type="radio"/>
Dialled Night Service:	<input type="radio"/>	<input checked="" type="radio"/>
Disable Send Message:	<input checked="" type="radio"/>	<input type="radio"/>
Display ANI/ISDN Calling Number Only:	<input type="radio"/>	<input checked="" type="radio"/>
Display ANI/DNIS/ISDN Calling/Called Number:	<input type="radio"/>	<input checked="" type="radio"/>
Display Caller ID on multical/keylines:	<input type="radio"/>	<input checked="" type="radio"/>
Display DNIS/Called Number Before Digit Modification:	<input checked="" type="radio"/>	<input type="radio"/>
Display Dialed Digits during Outgoing Calls:	<input type="radio"/>	<input checked="" type="radio"/>
Display Held Call ID on Transfer:	<input type="radio"/>	<input checked="" type="radio"/>
Do Not Disturb:	<input type="radio"/>	<input checked="" type="radio"/>
Do Not Disturb - Access to Remote Phones:	<input type="radio"/>	<input checked="" type="radio"/>
Do Not Disturb Permanent:	<input checked="" type="radio"/>	<input type="radio"/>
Emergency Call Notification - Audio:	<input checked="" type="radio"/>	<input type="radio"/>
Emergency Call Notification - Visual:	<input checked="" type="radio"/>	<input type="radio"/>

Note: This selection field is found under CoS Options Assignments

Note: The circled selections were necessary in order for Calling.

Note: Name/Number to Display Properly on the Mitel PBX extensions.



Configuring Cisco CallManager

Route Patterns

Screenshot for Cisco CallManager Route Patterns (Overview)

The screenshot shows the Cisco CallManager 4.0 Administration web interface in Microsoft Internet Explorer. The browser address bar shows `http://b9/CCMAdmin/routepatternlist.asp`. The page title is "Find and List Route Patterns/Hunt Pilots". The interface includes a navigation menu with "System", "Route Plan", "Service", "Feature", "Device", "User", "Application", and "Help". The main heading is "Find and List Route Patterns/Hunt Pilots" with a link to "Add a New Route Pattern/Hunt Pilot". Below this, it states "10 matching record(s) for Pattern begins with """. A search form allows finding route patterns by "Pattern" (dropdown), "begins with" (dropdown), and a text input field, with a "Find" button. It also shows "and show 20 items per page" and a note: "To list all items, click Find without entering any search text." The results section is titled "Matching record(s) 1 to 10 of 10" and contains a table with 10 rows. Each row has a checkbox, a small icon, a route pattern, a partition, a description, a route filter, a gateway/route list, and a copy icon.

<input type="checkbox"/>	Route Pattern/Hunt Pilot	Partition	Description	Route Filter	Gateway/Route List	Copy
<input type="checkbox"/>	11XX		11xx		S4/DS1-0@A-3745	
<input type="checkbox"/>	3XXX		3xxx		S4/DS1-0@A-3745	
<input type="checkbox"/>	42XX				S4/DS1-0@A-3745	
<input type="checkbox"/>	5.3				S1/DS1-0@B-2611XM	
<input type="checkbox"/>	5.5				S1/DS1-0@B-2611XM	
<input type="checkbox"/>	7.XXXX				S4/DS1-0@A-3745	
<input type="checkbox"/>	8.3				S4/DS1-0@A-3745	
<input type="checkbox"/>	8.8				S4/DS1-0@A-3745	
<input type="checkbox"/>	8XXX		8xxx		S4/DS1-0@A-3745	
<input type="checkbox"/>	9.XXXX				S1/DS1-0@B-2611XM	

At the bottom, there is a "Delete Selected" button, navigation links "First Previous Next Last", and a page indicator "Page 1 of 1".



Screenshot for Cisco CallManager Route Patterns (Pattern 9.XXXX to Mitel Access 3300+ PBX, ENBLOC)

Cisco CallManager 4.0 Administration - Route Pattern/Hunt Pilot Configuration - Microsoft Internet Explorer

Address: http://b9/CCMAdmin/routepatternconfig.asp?pkid={9BE2C4A7-0BFD-43F2-891C-F969CDD7BB1C}

Route Pattern/Hunt Pilot: 9.XXXX

Status: Ready
Note: Any update to this Route Pattern or Hunt Pilot automatically resets the associated gateway or Route/Hunt List

Copy Update Delete

Pattern Definition

Route Pattern/Hunt Pilot*	9.XXXX
Partition	< None >
Description	
Numbering Plan*	North American Numbering Plan
Route Filter	< None >
MLPP Precedence	Default
Gateway or Route/Hunt List*	S1/DS1-0@B-2611XM (Edit)
Route Option	<input checked="" type="radio"/> Route this pattern <input type="radio"/> Block this pattern (Dropdown: -- Not Selected --)

Provide Outside Dial Tone Allow Overlap Sending Urgent Priority

Calling Party Transformations

Use Calling Party's External Phone Number Mask

Calling Party Transform Mask	
Prefix Digits (Outgoing Calls)	
Calling Line ID Presentation	Default
Calling Name Presentation	Default

Connected Party Transformations

Connected Line ID Presentation	Default
Connected Name Presentation	Default

Called Party Transformations

Discard Digits	PreDot
Called Party Transform Mask	
Prefix Digits (Outgoing Calls)	

ISDN Network-Specific Facilities Information Element

Carrier Identification Code		
Network Service Protocol	-- Not Selected --	
Network Service	Service Parameter Name	Service Parameter Value
-- Not Selected --	< Not Exist >	

* indicates required item.



Screenshot for Cisco CallManager Route Patterns (Pattern 5.5 to Mitel Access 3300+ PBX, Overlap)

Cisco CallManager 4.0 Administration - Route Pattern/Hunt Pilot Configuration - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media

Address <http://b9/CCMAdmin/routepatternconfig.asp?pkid={DF426EC4-69B2-4419-AD87-A1104AD6C0BE}>

Route Pattern/Hunt Pilot: 5.5
Status: Ready
Note: Any update to this Route Pattern or Hunt Pilot automatically resets the associated gateway or Route/Hunt List

Copy Update Delete

Pattern Definition

Route Pattern/Hunt Pilot*
Partition
Description
Numbering Plan*
Route Filter
MLPP Precedence
Gateway or Route/Hunt List* (Edit)
Route Option
 Route this pattern
 Block this pattern
 Provide Outside Dial Tone Allow Overlap Sending Urgent Priority

Calling Party Transformations

Use Calling Party's External Phone Number Mask
Calling Party Transform Mask
Prefix Digits (Outgoing Calls)
Calling Line ID Presentation
Calling Name Presentation

Connected Party Transformations

Connected Line ID Presentation
Connected Name Presentation

Called Party Transformations

Discard Digits
Called Party Transform Mask
Prefix Digits (Outgoing Calls)

ISDN Network-Specific Facilities Information Element

Carrier Identification Code
Network Service Protocol
Network Service Service Parameter Name Service Parameter Value

* indicates required item.

Done



Cisco CallManager Configuration for Cisco C2611XM Voice Router

Screenshot for Cisco CallManager – Cisco C2611XM Voice Router Configuration

The screenshot shows the Cisco CallManager 4.0 Administration web interface in Microsoft Internet Explorer. The browser address bar shows the URL: `http://b9/CCMAdmin/mgcpconfig.asp?IMGCP={5134E8B1-D0D9-4846-A531-145FECDD0F0DD}`. The page title is "Gateway Configuration".

System Route Plan Service Feature Device User Application Help

Cisco CallManager Administration
For Cisco IP Telephony Solutions

CISCO SYSTEMS

Gateway Configuration

[Back to Find/List Gateways](#)

Product: Cisco 26XX
Gateway : B-2611XM

Status: Ready

Domain Name*

Description

Cisco CallManager Group*

Installed Voice Interface Cards		Endpoint Identifiers		
Module in slot 0	<input type="text" value="< None >"/>			
Module in slot 1	<input type="text" value="NM-HD-2VE"/>			
Subunit 0	<input type="text" value="VIC-4FXS"/>	Begin Port 0	(1/0/0) POTS	(1/0/1) POTS
			(1/0/3) POTS	(1/0/2) POTS
Subunit 1	<input type="text" value="VVIC-1MFT-E1"/>	Begin Port 0	(1/0) E1PRI	

Product Specific Configuration

Switchback Timing*

Switchback uptime-delay (min)

Switchback schedule (hh:mm)

* indicates required item

[Back to Find/List Gateways](#)



Screenshot for Cisco CallManager – Cisco C2611XM Voice Router E1 PRI Trunk Configuration

The screenshot shows the Cisco CallManager 4.0 Administration interface in a Microsoft Internet Explorer browser window. The page title is "Gateway Configuration" and it displays configuration details for a Cisco 26XX device. The configuration includes product information, device information, multilevel precedence and preemption (MLPP) information, and interface information.

System Route Plan Service Feature Device User Application Help

Cisco CallManager Administration
For Cisco IP Telephony Solutions

Gateway Configuration

[Back to MGCP Configuration](#)
[Back to Find/List Gateways](#)
[Dependency Records](#)

Product : Cisco 26XX
Gateway : S1/DS1-0@B-2611XM
Device Protocol: Digital Access PRI
Registration: Registered with Cisco CallManager 172.20.43.253
IP Address: 172.20.43.155

Status: Ready

Device Information

End-Point Name*	S1/DS1-0@B-2611XM
Description	S1/DS1-0@B-2611XM
Device Pool*	Default
Network Locale	< None >
Media Resource Group List	< None >
Location	< None >
AAR Group	< None >
Load Information	

Multilevel Precedence and Preemption (MLPP) Information

MLPP Domain (e.g., "0000FF")	
MLPP Indication	Not available on this device
MLPP Preemption	Not available on this device

Interface Information

PRI Protocol Type*	PRI ISO QSIG E1
Protocol Side*	User
Channel Selection Order*	Bottom Up
Channel IE Type*	Timeslot Number
PCM Type*	A-law
Delay for first restart (1/8 sec ticks)	32
Delay between restarts (1/8 sec ticks)	4

Inhibit restarts at PRI initialization
 Enable status poll

Call Routing Information



Screenshot for Cisco CallManager – Cisco C2611XM Voice Router E1 PRI Trunk Configuration (Continued)

Call Routing Information	
Inbound Calls	
Significant Digits*	All
Calling Search Space	< None >
AAR Calling Search Space	< None >
Prefix DN	
Outbound Calls	
Calling Line ID Presentation*	Default
Calling Party Selection*	Originator
Called party IE number type unknown*	Cisco CallManager
Calling party IE number type unknown*	Cisco CallManager
Called Numbering Plan*	Cisco CallManager
Calling Numbering Plan*	Cisco CallManager
Number of digits to strip*	0
Caller ID DN	
SMDI Base Port*	0
PRI Protocol Type Specific Information	
<input checked="" type="checkbox"/> Display IE Delivery	
<input checked="" type="checkbox"/> Redirecting Number IE Delivery - Outbound	
<input checked="" type="checkbox"/> Redirecting Number IE Delivery - Inbound	
<input checked="" type="checkbox"/> Send Extra Leading Character In DisplayIE***	
<input type="checkbox"/> Setup non-ISDN Progress Indicator IE Enable****	
<input type="checkbox"/> MCDN Channel Number Extension Bit Set to Zero**	
<input type="checkbox"/> Send Calling Name In Facility IE	
<input type="checkbox"/> Interface Identifier Present**	
Interface Identifier Value**	0
Connected Line ID Presentation (QSIG Inbound Call)*	Default
Connected PBX Model	None
Product Specific Configuration	
Line Coding*	HDB3
Framing*	Non CRC4
Clock*	External
Input Gain (-6..14 db)*	0
Output Attenuation (-6..14 db)*	0
Echo Cancellation Enable*	Enable
Echo Cancellation Coverage (ms)*	Default
* indicates required item	
** applicable to DMS-100 protocol only	
*** applicable to DMS-100 protocol and DMS-250 protocol only	
**** may be required to force ringback from some PBXs	
Back to MGCP Configuration	



Configuring the Cisco C2611XM Voice Router

B-2611XM#sho run

Building configuration...

Current configuration : 2385 bytes

```
!  
version 12.3  
service timestamps debug uptime  
service timestamps log uptime  
no service password-encryption  
!  
hostname B-2611XM  
!  
boot-start-marker  
boot-end-marker  
!  
card type e1 1 1  
enable secret 5 $1$11Io$rrTZbWb3xci/uuEvYELWI.  
enable password cisco  
!  
no network-clock-participate slot 1  
no network-clock-participate wic 0  
ip subnet-zero  
!  
!  
ip cef  
no ip domain lookup  
ip host B9 172.20.43.253  
ip audit po max-events 100  
no aaa new-model  
no ftp-server write-enable  
isdn switch-type primary-qsig
```



```
voice-card 1
!
!
fax interface-type fax-mail
ccm-manager mgcp
ccm-manager music-on-hold
ccm-manager config server 172.20.43.253
ccm-manager config
!
!
controller E1 1/0
    framing NO-CRC4
    pri-group timeslots 1-31 service mgcp
!
no crypto isakmp enable
!
!
interface Tunnel1
    no ip address
!
interface FastEthernet0/0
    ip address 172.20.43.155 255.255.255.0
    no ip mroute-cache
    speed auto
    full-duplex
    no mop enabled
!
interface FastEthernet0/1
    no ip address
    no ip mroute-cache
    shutdown
    duplex auto
```



```
speed auto
!
interface Serial11/0:15
no ip address
no logging event link-status
isdn switch-type primary-qsig
isdn incoming-voice modem
isdn incoming-voice voice
isdn bind-13 ccm-manager
no cdp enable
!
ip classless
!
no ip http server
no ip http secure-server
!
!
control-plane
!
!
voice-port 1/0/0
!
voice-port 1/0/1
!
voice-port 1/0/2
!
voice-port 1/0/3
!
voice-port 1/0:15
!
mgcp
mgcp call-agent 172.20.43.253 2427 service-type mgcp version 0.1
```



```
mgcp dtmf-relay voip codec all mode out-of-band
mgcp rtp unreachable timeout 1000 action notify
mgcp modem passthrough voip mode nse
mgcp package-capability rtp-package
no mgcp package-capability res-package
mgcp package-capability sst-package
no mgcp package-capability fxr-package
no mgcp timer receive-rtcp

mgcp sdp simple
mgcp fax t38 inhibit
mgcp rtp payload-type g726r16 static
!
mgcp profile default
!
!
dial-peer cor custom
!
!
dial-peer voice 999111 pots
  application mgcpapp
!
dial-peer voice 3000 voip
!
dial-peer voice 999100 pots
  application mgcpapp
  port 1/0/0
!
dial-peer voice 999101 pots
  application mgcpapp
  port 1/0/1
!
dial-peer voice 999102 pots
```



```
application mgcpapp
port 1/0/2
!
dial-peer voice 999103 pots
application mgcpapp
port 1/0/3
!
!
line con 0
line aux 0
line vty 0 4
password cisco
login
line vty 5 15
password cisco
login
!
end
```

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