

Cisco Unified CallManager 4.1-PBX Interoperability: Nortel Meridian 1 Release 25.40B PBX with CMM-E1 QSIG as MGCP Gateway

October 27, 2006

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Introduction

This is an application note for connectivity of Nortel Meridian 1 Option 11C Release 25.40B PBX with Cisco CallManager Release 4.1 using Cisco CMM-E1 QSIG as MGCP gateway.

The network topology diagram (Figure 1) shows the test setup for end-to-end interoperability with the Cisco CallManager connected to the PBX via CMM-E1 QSIG link as MGCP gateway.

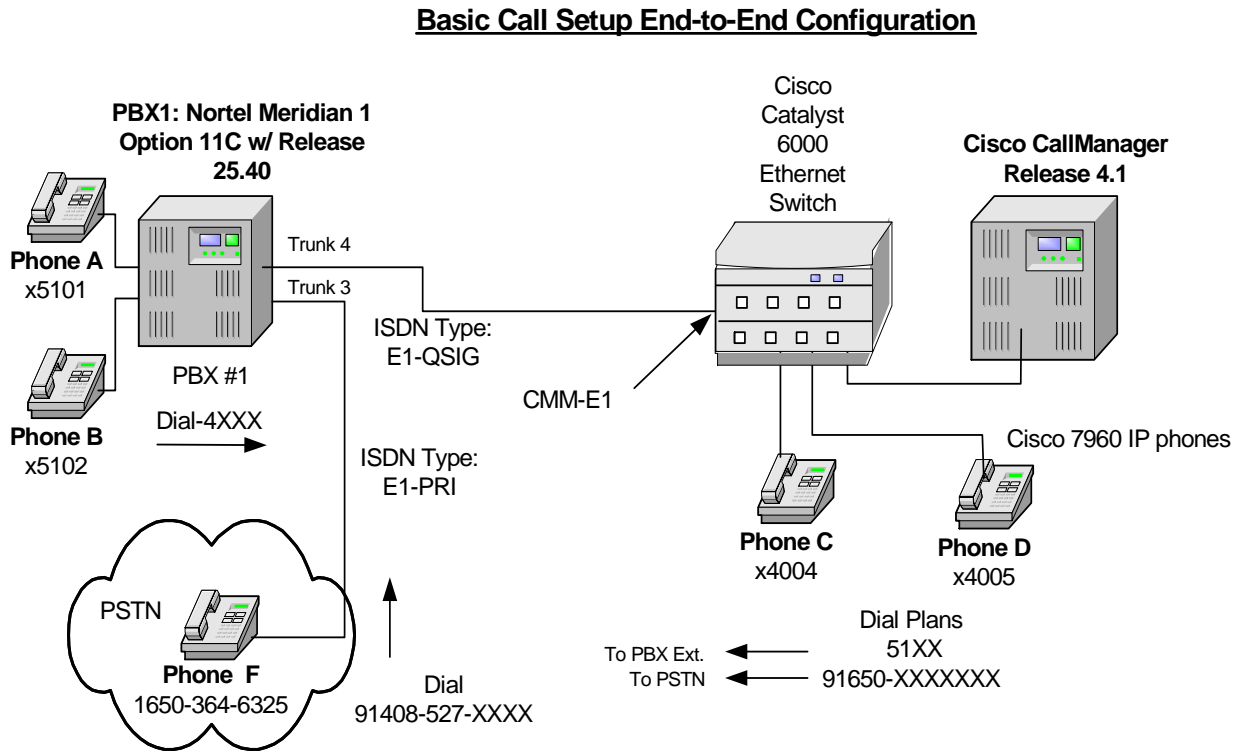
Connectivity is achieved by using the PRI QSIG E1 protocol type on the MGCP gateway and ISO QSIG switch type on the Nortel Meridian 1 Option 11C Release 25.40B PBX.

This Application Note uses the CMM-E1 voice gateway, however other Cisco voice gateways are also an option to use since Cisco CallManager QSIG implementation does not depend on the physical interface.



Network Topology

Figure 1. Network Topology or Test Setup



Limitations

Call Transfer Notification

The Nortel documentation states that this feature is supported on E1 and BRIT interfaces. Following is an excerpt from the Nortel Technical Publication (NTP):

“The QSIG Call Transfer Notification feature supports the Call Transfer Notification capability over QSIG private networks, and over mixed QSIG/MCDN and QSIG/DPNSS1 networks. This applies to 2.0 Mbps Primary Rate Interface (PRI2), and ISDN Basic Rate Trunking (BRIT) applications.”

However, the call trace shows that the Nortel PBX is not sending any call transfer information element containing the Original and Transferred-to parties' name and number even when this feature is enabled. Thus, the originating and transferred to parties' display are not updated.

Call Forwarding (Diversion) by Reroute

The Nortel does not initiate a Call Diversion by Reroute to deflect a call that is meant for a local station programmed to forward all calls to another station within the network. Thus, although the call was completed, no Reroute was done during the call. The Nortel, however, will respond to a Call Reroute message sent by another node and respond by initiating a new SETUP message to an alternate route.



Path Replacement

The CCM does not propose Path Replacement when it is the terminating side of the call on Call Fwd (U, B or NR). And the Nortel only initiates path replacement when it is the terminating side. So for call scenarios where the CCM is the terminating node of a forwarded call and the Nortel is the originating node, no Path Replacement will take place for this call scenario as both the Nortel and the CCM do not propose path replacement.

Message Waiting Indication

Message Waiting Indication works in two scenarios:

CCM is the Message Center PINX

Nortel is the Message Center PINX integrated with either Nortel Meridian Mail or Nortel Call Pilot

However, if the Nortel is acting as the Message Center PINX and is providing MWI through ACD, DN or Attendant Message Centers and requires the Nortel MIK (Message Indication Key) and MCK (Message Cancellation Key) keys to

send activate/deactivate messages (i.e. the Nortel Meridian 1 is integrated to a third-party vendor voicemail system such as an OCTEL ARIA or Serenade) then the Nortel does not convert this MCDN proprietary messages properly to QSIG to enable/disable the MWI lamp on the Cisco IP Phone. Please refer to the Notes on Nortel MWI section included in this document for more details.

System Components

Hardware Requirements

Cisco Hardware

Cisco Catalyst 6000 switch with CMM-E1 Gateway

Cisco CallManager Server

Nortel Meridian 1 Option 11C PBX

Software Requirements

PBX Release 25.40B

Cisco Unified CallManager 4.1

Features

CLIP-Calling Line (Number) Identification Presentation

CLIR-Calling Line (Number) Identification Restriction

CNIP-Calling Name Identification Presentation

CNIR-Calling Name Identification Restriction

COLP-Connected Line (Number) Identification Presentation

COLR- Connected Line (Number) Identification Restriction

CONP-Connected Name Identification Presentation

CONR- Connected Name Identification Restriction

Sending Alerting Name

CT-Call Transfer (by join) – *See Limitations Section*

CFU-Call Forwarding Unconditional (by join)

CFB-Call Forwarding Busy (by join)



CFNR-Call Forwarding No Reply (by join)

CFU-Call Forwarding Unconditional (by Reroute) – *see Limitations Section*

CFB-Call Forwarding Busy (by Reroute) – *see Limitations Section*

CFNR-Call Forwarding No Reply (by Reroute) – *see Limitations Section*

CCBS-Call Completion to Busy Subscriber

CCNR-Call Completion No Reply

ANF-PR-Additional Network Feature Path Replacement (for Call Transfer by join) – *see Limitations Section*

ANF-PR-Additional Network Feature Path Replacement (for Call Diversion by forward switching) – *see Limitations Section*

ANF-PR-Additional Network Feature Path Replacement (for Trombone connection)

MWI- Message Waiting Indication Configuration

Configuring the Nortel Meridian 1 Option 11C PBX

Configure in the following sequence:

1. Configure common equipment
2. Configure the D-Channel
3. Configure the Route Data Block.
4. Configure the Trunk Data Block
5. Configure the Coordinated Dialing Plan
6. Configure the Digital Station Phone

Configuration Tasks

Nortel Meridian 1 Option 11C PBX Configuration

```
REQ prt
TYPE cequ
```

```
CEQU
```

```
MPED 8D
SUPL 000 004 008 012
      016 032 036 040
      044 048 064 068
      072 V096
XCT 000
CONF 029 030 031 062
      094 095
```

```
DLOP NUM DCH FRM LCMT YALM T1TE TRSH
PRI 05 24 ESF B8S FDL - 00
     06 23 ESF B8S FDL - 00
     07 24 ESF B8S FDL - 00
     08 24 ESF B8S FDL - 00
```



09 23 ESF B8S FDL - 00
PRI2 03 04
DTI2
MISP



D-Channel Configuration

```
REQ prt
TYPE adan dch 4
```

```
ADAN      DCH 4
CTYP MSDL
CARD 04
PORT 1
DES e1_isgf
USR PRI
DCHL 4
OTBF 32
PARM RS422 DTE
DRAT 64KC
CLOK EXT
IFC ISGF
  PINX_CUST 0
  ISDN_MCNT 300
CLID OPT0
CO_TYPE STD
SIDE NET
CNEG 1
RLS ID **
QCHID YES
RCAP COLP NDI CCBI CCNI PRI DV3I CTI QMWI
PR_TRIGS DIV 2 3
  CNG 2 3
  CTR2 2 3
PR_RTN NO
MBGA NO
OVLN YES
DIDD 0
OVLN YES
OVLN 0
T310 120
T200 3
T203 10
N200 3
N201 260
K 7
```

isdn switch-type ISO Q.SIG with GF platform

QSIG Features to enable:

COLP Connected Line Presentation
NDI Name Display using Integer Coding (ISO)
CCBI Call Completion on BUSY (ISO)
CCNI Call Completion on No Response (ISO)
PRI Path Replacement (ISO)
DV3I Call Diversion Notification (ISO)
CTI Call Transfer Notification (ISO)
QMWI QSIG Message Waiting Indication (ISO)

```
REQ
```



Route Data Block Configuration

```
REQ: prt
TYPE: rdb
CUST 0
ROUT 104

TYPE RDB
CUST 00
DMOD
ROUT 104
DES E1_ISGF
TKTP TIE
NPID_TBL_NUM 0
ESN NO
CNVT NO
SAT NO
RCLS EXT
DTRK YES
BRIP NO
DGTP PRI2
ISDN YES
    MODE PRA
    IFC ISGF
    SBN NO
    PNI 00000
    NCNA NO
    NCRD NO
    CTYP UKWN
    INAC NO
    ISAR NO
    CPFXS YES
    DAPC NO
    INTC NO
DSEL VOD
PTYP DTT
AUTO NO
DNIS NO
DCDR NO
ICOG IAO
SRCH RRB
TRMB YES
STEP
ACOD 304
TCPP NO
TARG 01
CLEN 1
BILN NO
OABS
INST
ANTK
SIGO STD
```



ICIS YES
TIMR ICF 512
OGF 512
EOD 13952
NRD 10112
DDL 70
ODT 4096
RGV 640
GRD 896
SFB 3
NBS 2048
NBL 4096
TFD 0
DRNG NO
CDR NO
MUS NO
OHQ NO
OHQT 00
CBQ NO
AUTH NO
TTBL 0
ATAN NO
PLEV 2
ALRM NO
ART 0
SGRP 0
AACR NO



Trunk Data Block Configuration

```
REQ: prt
TYPE: tnb
TN 4 1
DATE
PAGE
DES
```

```
DES ELISGF to CMM
TN 004 01
TYPE TIE
CDEN SD
CUST 0
TRK PRI2
PDCA 1
PCML A
NCOS 0
RTMB 104 1
B-CHANNEL SIGNALING
TGAR 0
AST NO
IAPG 0
CLS UNR DTN CND WTA LPR APN THFD
P10 VNL
```

Coordinated Dialing Plan Configuration

```
REQ prt
CUST 0
FEAT cdp
TYPE dsc
DSC 400
DSC 400
FLEN 0
DSP LSC
RLI 4
NPA
NXX
```



Digital Station Phone Configuration

REQ: prt
TYPE: 2616

MARP NOT ACTIVATED

TN 001 0 0 0
DATE
PAGE
DES

DES TEST1
TN 001 0 00 00
TYPE 2616
CDEN 8D
CUST 0
OM 0
FDN
TGAR 0
LDN NO
NCOS 0
SGRP 0
RNPG 0
SCI 0
SSU
XLST

CLS CTD FBD WTA LPR MTD FND HTD ADD HFD
MWA LMPX RMMD SMWD AAD IMD XHD IRD NID OLD VCE DRG1
POD DSX VMD CMSD SLKD CCSD SWD LND **CNDA**
CFTA SFD MRD DDV CNID CDCA MSID DAPA BFED RCB
ICDD CDMD LLCN MCTD CLBD AUTU
GPUD DPUD **DNDA** CFXA ARHD CLTD ASCD
CPFA CPTA ABDD CFHD FICD NAID BUZZ AGRD MOAD AHD
DDGA NAMA
DRDD EXR0
USRD ULAD RTDD RBDD RBHD PGND FLXD FTTC DNDY DNO3 MCBN
CPND_LANG ENG
RCO 0
EFD 6001
HUNT 4001
EHT 6001
LHK 0
PLEV 02
AST
IAPG 0
AACS NO
ITNA NO
DGRP

CNDA	Call Party Name Display	ALLOWED
DNDA	Dialed Name Display	ALLOWED
DDGA	DN Display on other set	ALLOWED
NAMA	Name Display on other set	ALLOWED



```
MLWU_LANG 0
DNDR 0
KEY 00 SCR 5101 0      MARP
      CPND
          NAME BERT
          XPLN 13
          DISPLAY_FMT FIRST, LAST
01
02
03 CFW 12  5002
04 AO6
05 TRN
06 MWK 5001
07
08 ADL 16
09 ADL 16
10 ADL 16
11 ADL 16
12 ADL 16
13 ADL 16  5001
14 RGA
15
DATE 24 SEP 2004
```

NACT

Digital Station Phone Configuration – Name and Number Restriction

```
REQ: prt
TYPE: 2616
TN 001 0 0 0
DATE
PAGE
DES

DES TEST1
TN 001 0 00 00
TYPE 2616
CDEN 8D
CUST 0
OM 0
FDN
TGAR 0
LDN NO
NCOS 0
SGRP 0
RNPG 0
SCI 0
SSU
XLST
CLS CTD FBD WTA LPR MTD FND HTD ADD HFD
```

CNDD	Call Party Name Display DENIED
DNDD	Dialed Name Display DENIED
DDGD	DN Display on other set DENIED
NAMD	Name Display on other set DENIED



MWA LMPX RMM D SMWD AAD IMD XHD IRD NID OLD VCE DRG1
POD DSX VMD CMSD SLKD CCSD SWD LND **CNDD**
CFTA SFD MRD DDV CNID CDCA MSID DAPA BFED RCB D
ICDD CDMD LLCN MCTD CLBD AUTU
GPUD DPUD **DNDD** CFXA ARHD CLTD ASCD
CPFA CPTA ABDD CFHD FICD NAID BUZZ AGRD MOAD AHD
DDGD NAMD
DRDD EXR0
USRD ULAD RTDD RBDD RBHD PGND FLXD FTTC DNDY DNO3 MCBN

CPND_LANG ENG

RCO 0

EFD 6001

HUNT 4001

EHT 6001

LHK 0

PLEV 02

AST

IAPG 0

AACS NO

ITNA NO

DGRP

MLWU_LANG 0

DNDR 0

KEY 00 SCR 5101 0 MARP

CPND

NAME BERT

XPLN 13

DISPLAY_FMT FIRST, LAST

01

02

03 CFW 12 5002

04 AO6

05 TRN

06 MWK 5001

07

08 ADL 16

09 ADL 16

10 ADL 16

11 ADL 16

12 ADL 16

13 ADL 16 5001

14 RGA

15

DATE 24 SEP 2004

NACT



Cisco Unified CallManager Configuration

CMM-E1 Gateway Configuration

The screenshot shows the Cisco CallManager Administration interface for Gateway Configuration. The browser window title is "Cisco CallManager 4.1 Administration - Gateway Configuration - Microsoft Internet Explorer". The address bar shows the URL: <https://cm-mars/CCMAdmin/gatewayconfig.asp?pkid={E6173AAA-BE7F-4100-B626-CB202E9D4116}&Action=Update&Type=55&MGCP={554B838C-656F-4575-AC15-FA8B2EA9AC34}>

The page header includes "Cisco CallManager Administration For Cisco IP Telephony Solutions" and "CISCO SYSTEMS".

Gateway Configuration

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

Product : Communication Media Module
Gateway : S1/DS1-3@CMM-E1
Device Protocol: Digital Access PRI
Registration: Registered with Cisco CallManager CM-MARS
IP Address: 172.20.231.51

Status: Ready

Device Information

End-Point Name*	S1/DS1-3@CMM-E1
Description	S1/DS1-3@CMM-E1
Device Pool*	Default
Call Classification*	Use System 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 QSIG E1
Protocol Side*	User
Channel Selection Order*	Bottom Up
Channel IE Type*	TimeSlotNumber



Cisco CallManager 4.1 Administration - Gateway Configuration - Microsoft Internet Explorer

Address: https://cm-mars/CCMAdmin/gatewayconfig.asp?pkid={E6173AAA-BE7F-4100-B626-CB202E9D4116}&Action=Update&Type=55&MGCP={554B838C-656F-4575-AC15-FA8B2EA9AC34}

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

Inbound Calls

Significant Digits* All

Calling Search Space Incoming Trunk

AAR Calling Search Space < None >

Prefix DN

Outbound Calls

Calling Line ID Presentation* Default

Calling Party Selection* Originator

Called party IE number type unknown* Subscriber

Calling party IE number type unknown* Subscriber

Called Numbering Plan* Private

Calling Numbering Plan* Private

Number of digits to strip* 0

Caller ID DN

SMDI Base Port* 0

PRI Protocol Type Specific Information

Display IE Delivery

Redirecting Number IE Delivery - Outbound

Redirecting Number IE Delivery - Inbound

Send Extra Leading Character In DisplayIE***

Setup req. ISDN Process Indicator IE Enable****



Cisco CallManager 4.1 Administration - Gateway Configuration - Microsoft Internet Explorer

Address: https://cm-mars/CCMAdmin/gatewayconfig.asp?pkid={E6173AAA-BE7F-4100-B626-CB202E9D4116}&Action=Update&Type=55&MGCP={554B838C-656F-4575-AC15-FA82EA9AC34}

Display IE Delivery

Redirecting Number IE Delivery - Outbound

Redirecting Number IE Delivery - Inbound

Send Extra Leading Character In DisplayIE***

Setup non-ISDN Progress Indicator IE Enable****

MCDN Channel Number Extension Bit Set to Zero**

Send Calling Name In Facility IE

Interface Identifier Present**

Interface Identifier Value**

Connected Line ID Presentation (QSIG Inbound Call)*

UUIE Configuration

Passing Precedence Level Through UUIE

Security Access Level

Product Specific Configuration

Line Coding*

Framing*

Clock*

Input Gain (-6..14 db)*

Output Attenuation (-6..14 db)*

Echo Cancellation Enable*

Echo Cancel Coverage (ms)*

* 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](#)
[Back to Find/List Gateways](#)

Local intranet



Partitions Configuration for Incoming Trunk

The screenshot shows the Cisco CallManager Administration interface in a Microsoft Internet Explorer browser. The page title is "Cisco CallManager 4.1 Administration - Partition Configuration". The address bar shows the URL: <https://cm-mars/CCMAdmin/routepartitionconfig.asp?RoutePartition={92B06604-4001-4CF9-8C6D-604AA4342A2C}>. The page content includes a navigation menu (System, Route Plan, Service, Feature, Device, User, Application, Help) and a header for "Cisco CallManager Administration For Cisco IP Telephony Solutions". The main heading is "Partition Configuration". On the right, there are links: [Add a New Partition](#), [Back to Find/List Partitions](#), and [Dependency Records](#). The configuration details for the "Incoming Trunk" partition are shown below:

Partition: Incoming Trunk
Status: Ready

Partition Name*
Description
Time Schedule
Time Zone Originating Device
 Specific Time Zone

* indicates required item

Partitions Configuration for Phones



Cisco CallManager 4.1 Administration - Partition Configuration - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Search Favorites Media Print

Address: https://cm-mars/CCMAdmin/routepartitionconfig.asp?RoutePartition={BCE0A0C1-444F-45FD-BC67-EEFB857E83AD}

System Route Plan Service Feature Device User Application Help

Cisco CallManager Administration

For Cisco IP Telephony Solutions

CISCO SYSTEMS

Partition Configuration

[Add a New Partition](#)
[Back to Find/List Partitions](#)
[Dependency Records](#)

Partition: phones
Status: Ready

Partition Name*
Description
Time Schedule
Time Zone Originating Device
 Specific Time Zone

* indicates required item

Done Local intranet



Calling Search Space - Incoming Trunk

The screenshot displays the Cisco CallManager Administration web interface in Microsoft Internet Explorer. The browser address bar shows the URL: <https://cm-mars/CCMAdmin/callingsearchspace.asp?pkid={99050D6D-B82F-4721-A888-8E215A7185A7}>. The page title is "Cisco CallManager Administration - Calling Search Space Configuration".

The main content area is titled "Calling Search Space Configuration" and includes the following elements:

- Calling Search Space: Incoming Trunk (in use)**
 - Status: Ready
 - Buttons: Copy, Update, Delete
- Calling Search Space Information**
 - Calling Search Space Name*: Incoming Trunk
 - Description: [Empty text box]
- Route Partitions for this Calling Search Space**
 - Find Partitions containing: [Empty text box] Find
 - Available Partitions: phones
 - Selected Partitions* (ordered by highest priority): Incoming Trunk

A note at the bottom left states: "* indicates required item".

Calling Search Space - Path Replacement



Cisco CallManager 4.1 Administration - Calling Search Space Configuration - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address: https://cm-mars/CCMAdmin/callingsearchspace.asp?pkid={CE9DBE38-449C-4366-BF4B-63C2A2B899E1}

System Route Plan Service Feature Device User Application Help

Cisco CallManager Administration
For Cisco IP Telephony Solutions

Calling Search Space Configuration

[Add New Calling Search Space](#)
[Back to Find/List Calling Search Spaces](#)
[Dependency Records](#)

Calling Search Space: PathReplacementCSS
Status: Ready

Copy Update Delete

Calling Search Space Information

Calling Search Space Name* PathReplacementCSS

Description

Route Partitions for this Calling Search Space

Find Partitions containing Find

Available Partitions

Selected Partitions* (ordered by highest priority)

Incoming Trunk phones

* indicates required item

Done Local intranet

Calling Search Space - Phones



Cisco CallManager 4.1 Administration - Calling Search Space Configuration - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address: https://cm-mars/CCMAdmin/callingsearchspace.asp?pkid={BF275CFB-F29E-4773-ADFE-11A824FC94EC}

System Route Plan Service Feature Device User Application Help

Cisco CallManager Administration
For Cisco IP Telephony Solutions

Calling Search Space Configuration

[Add New Calling Search Space](#)
[Back to Find/List Calling Search Spaces](#)
[Dependency Records](#)

Calling Search Space: phones (in use)
Status: Ready
Copy Update Delete

Calling Search Space Information

Calling Search Space Name* phones
Description

Route Partitions for this Calling Search Space

Find Partitions containing [] Find

Available Partitions
Incoming Trunk

Selected Partitions* (ordered by highest priority)
phones

* indicates required item

Done Local intranet

Enbloc Route Pattern Configuration



Cisco CallManager 4.1 Administration - Route Pattern Configuration - Microsoft Internet Explorer

Address: https://cm-mars/CCMAdmin/routepatternconfig.asp?pkid={B4C71BE2-1117-4BE8-9BCE-2E041E2E9AB1}

System Route Plan Service Feature Device User Application Help

Cisco CallManager Administration

For Cisco IP Telephony Solutions

CISCO SYSTEMS

Route Pattern Configuration

[Add a New Route Pattern](#)
[Back to Find/List Route Patterns](#)

Route Pattern: 51XX
Status: Ready
Note: Any update to this Route Pattern automatically resets the associated gateway or Route List

Pattern Definition

Route Pattern*	51XX
Partition	< None >
Description	CMM to Nortel
Numbering Plan*	North American Numbering Plan
Route Filter	< None >
MLPP Precedence	Default
Gateway or Route List*	S1/DS1-3@CMM-E1 (Edit)
Route Option	<input checked="" type="radio"/> Route this pattern <input type="radio"/> Block this pattern <input type="text" value="-- Not Selected --"/>
Call Classification*	OffNet <input type="checkbox"/> Allow Device Override
<input checked="" type="checkbox"/> Provide Outside Dial Tone	<input type="checkbox"/> Allow Overlap Sending <input type="checkbox"/> Urgent Priority
<input type="checkbox"/> Require Forced Authorization Code	Authorization Level <input type="text" value="0"/>
<input type="checkbox"/> Require Client Matter Code	

Calling Party Transformations

Use Calling Party's External Phone Number Mask

Calling Party Transform Mask	<input type="text"/>
Prefix Digits (Outgoing Calls)	<input type="text"/>
Calling Line ID Presentation	Default
Calling Name Presentation	Default

Connected Party Transformations

<input type="text"/>



Cisco CallManager 4.1 Administration - Route Pattern Configuration - Microsoft Internet Explorer

Address: https://stopbars/CCMAdmin/routepatternconfig.asp?pkid={B4C71BE2-1117-4BE8-9BCE-2E041E2E9AB1}

Description: CMM to NoNet

Numbering Plan*: North American Numbering Plan

Route Filter: <None>

MLPP Precedence: Default

Gateway or Route List*: S1/DS1-3@CMM-E1 (Edit)

Route Option:
 Route this pattern
 Block this pattern (Not Selected)

Call Classification*: OffNet Allow Device Override

Provide Outside Dial Tone Allow Overlap Sending Urgent Priority

Require Forced Authorization Code

Authorization Level: 0

Require Client Matter Code

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: <None>

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>	<input type="text"/>

* indicates required item.





Overlap Sending Route Pattern Configuration

Cisco CallManager 4.1 Administration - Route Pattern Configuration - Microsoft Internet Explorer

Address: https://cm-mars/CCMAdmin/routepatternconfig.asp?pkid={5878F21C-E411-44B3-B7C4-6193A93AD721}&status=ic

System Route Plan Service Feature Device User Application Help

Cisco CallManager Administration
For Cisco IP Telephony Solutions

CISCO SYSTEMS

[Add a New Route Pattern](#)
[Back to Find/List Route Patterns](#)

Route Pattern Configuration

Route Pattern: 9.51
Status: Insert completed
Note: Any update to this Route Pattern automatically resets the associated gateway or Route List

Copy Update Delete

Pattern Definition

Route Pattern*	9.51
Partition	<None >
Description	Overlap CMM to Nortel
Numbering Plan*	North American Numbering Plan
Route Filter	<None >
MLPP Precedence	Default
Gateway or Route List*	S1/DS1-3@CMM-E1 (Edit)
Route Option	<input checked="" type="radio"/> Route this pattern <input type="radio"/> Block this pattern — Not Selected —
Call Classification*	OffNet <input type="checkbox"/> Allow Device Override
<input checked="" type="checkbox"/> Provide Outside Dial Tone	<input checked="" type="checkbox"/> Allow Overlap Sending <input type="checkbox"/> Urgent Priority
<input type="checkbox"/> Require Forced Authorization Code	Authorization Level: 0
<input type="checkbox"/> Require Client Matter Code	

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



Cisco CallManager 4.1 Administration - Route Pattern Configuration - Microsoft Internet Explorer

Address: https://cm-mars/CCMAdmin/routepatternconfig.asp?pkid={5878F21C-E411-44B3-B7C4-6193A93AD721}&status=ic

Description: OVensip CMM to Netel

Numbering Plan*: North American Numbering Plan

Route Filter: < None >

MLPP Precedence: Default

Gateway or Route List*: S1/DS1-3@CMM-E1 (Edit)

Route Option:
 Route this pattern
 Block this pattern (Not Selected)

Call Classification*: OffNet Allow Device Override

Provide Outside Dial Tone Allow Overlap Sending Urgent Priority

Require Forced Authorization Code
Authorization Level: 0

Require Client Matter Code

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: < None >

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 >	<input type="text"/>

* indicates required item.



PSTN Route Pattern Configuration

Cisco CallManager 4.1 Administration - Route Pattern Configuration - Microsoft Internet Explorer

Address: <https://cm-mars/CCMAdmin/routepatternconfig.asp?patternUsage=5>

System Route Plan Service Feature Device User Application Help

Cisco CallManager Administration
For Cisco IP Telephony Solutions

Route Pattern Configuration

[Add a New Route Pattern](#)
[Back to Find/List Route Patterns](#)

Route Pattern: New

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

Pattern Definition

Route Pattern*

Partition

Description

Numbering Plan*

Route Filter

MLPP Precedence

Gateway or Route List*

Route Option
 Route this pattern
 Block this pattern

Call Classification* Allow Device Override

Provide Outside Dial Tone Allow Overlap Sending Urgent Priority

Require Forced Authorization Code
Authorization Level

Require Client Matter Code

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



Translation Pattern for Incoming Calls

Cisco CallManager 4.1 Administration - Translation Pattern Configuration - Microsoft Internet Explorer

Address: https://cm-mars/CCMAdmin/translationconfig.asp?pkid={5C1F7203-31C4-4E1A-9A7B-963E8F4D12DA}

Translation Pattern Configuration

[Add a New Translation Pattern](#)
[Back to Find/List Translation Patterns](#)

Translation Pattern: 4XXX
Status: Ready

Pattern Definition

Translation Pattern	<input type="text" value="4XXX"/>
Partition	Incoming Trunk
Description	<input type="text"/>
Numbering Plan*	North American Numbering Plan
Route Filter	< None >
Calling Search Space	phones
MLPP Precedence	Default
Route Option	<input checked="" type="radio"/> Route this pattern <input type="radio"/> Block this pattern (Not Selected)
<input checked="" type="checkbox"/> Provide Outside Dial Tone	<input checked="" type="checkbox"/> Urgent Priority

Calling Party Transformations

Use Calling Party's External Phone Number Mask

Calling Party Transform Mask	<input type="text"/>
Prefix Digits (Outgoing Calls)	<input type="text"/>
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	< None >
Called Party Transform Mask	<input type="text"/>
Prefix Digits (Outgoing Calls)	<input type="text"/>

* indicates required item.



CLIR and CNIR Route Pattern Configuration

Cisco CallManager 4.1 Administration - Route Pattern Configuration - Microsoft Internet Explorer

Address: https://cm-mars/CCMAdmin/routepatternconfig.asp?pkid={B4C71BE2-1117-4BE9-9BCE-2E041E2E9AB1}

Route Pattern Configuration

[Add a New Route Pattern](#)
[Back to Find/List Route Patterns](#)

Route Pattern: 51XX
Status: Ready
Note: Any update to this Route Pattern automatically resets the associated gateway or Route List

Pattern Definition

Route Pattern*	51XX
Partition	< None >
Description	CMM to Nortel
Numbering Plan*	North American Numbering Plan
Route Filter	< None >
MLPP Precedence	Default
Gateway or Route List*	S1/DS1-3@CMM-E1 (Edit)
Route Option	<input checked="" type="radio"/> Route this pattern <input type="radio"/> Block this pattern — Not Selected —
Call Classification*	OffNet <input type="checkbox"/> Allow Device Override
<input checked="" type="checkbox"/> Provide Outside Dial Tone	<input type="checkbox"/> Allow Overlap Sending <input type="checkbox"/> Urgent Priority
<input type="checkbox"/> Require Forced Authorization Code	Authorization Level: 0
<input type="checkbox"/> Require Client Matter Code	

Calling Party Transformations

Use Calling Party's External Phone Number Mask

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

Connected Party Transformations

Connected Line ID Presentation	Default
Connected Name Presentation	Default

Called Party Transformations

Discard Digits	< None >
----------------	----------

Done Local intranet



COLR and CONR Translation Pattern Configuration

The screenshot shows the Cisco CallManager Administration web interface in Microsoft Internet Explorer. The browser address bar shows the URL: `https://cm-mars/CCMAdmin/translationconfig.asp?pkid={5C1F7203-31C4-4E1A-9A7B-963E8F4D12DA}`. The page title is "Cisco CallManager Administration - Translation Pattern Configuration".

The main heading is "Translation Pattern Configuration". Below it, there are two links: [Add a New Translation Pattern](#) and [Back to Find/List Translation Patterns](#).

The configuration details for the translation pattern "4XXX" are as follows:

- Translation Pattern:** 4XXX
- Status:** Ready
- Buttons:** Copy, Update, Delete
- Pattern Definition:**
 - Translation Pattern: 4XXX
 - Partition: Incoming Trunk
 - Description:
 - Numbering Plan*: North American Numbering Plan
 - Route Filter: <None>
 - Calling Search Space: phones
 - MLPP Precedence: Default
 - Route Option: Route this pattern, Block this pattern (dropdown: Not Selected)
 - Provide Outside Dial Tone
 - 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: Restricted
 - Connected Name Presentation: Restricted
- Called Party Transformations:**
 - Discard Digits: <None>
 - Called Party Transform Mask:
 - Prefix Digits (Outgoing Calls):

The bottom of the browser window shows the taskbar with the "Local intranet" icon.



MWI lamp On/Off Configuration

The screenshot shows the Cisco CallManager Administration interface for Message Waiting Configuration. The browser window title is "Cisco CallManager 4.1 Administration - Message Waiting Configuration - Microsoft Internet Explorer". The address bar shows the URL: <https://cm-mars/CCMAdmin/messagewaitingconfig.asp?pkid={29E4060E-A1B8-4709-8F74-014D01E2ED27}>. The page header includes "Cisco CallManager Administration For Cisco IP Telephony Solutions" and the Cisco Systems logo. The main content area is titled "Message Waiting Configuration" and shows a configuration for "Message Waiting Number : 7000". The status is "Ready". There are buttons for "Copy", "Update", and "Delete". The "Message Waiting Number" field contains "7000". The "Description" field is empty. The "Message Waiting Indicator" is set to "Off". The "Partition" and "Calling Search Space" are both set to "phones". A note at the bottom left states "* indicates required item".

Message Waiting Configuration

[Add a New Message Waiting Number](#)
[Back to Find/List Message Waiting Numbers](#)

Message Waiting Number : 7000
Status: Ready

Copy Update Delete

Message Waiting Number* 7000

Description

Message Waiting Indicator On Off

Partition phones

Calling Search Space phones

* indicates required item



Cisco CallManager 4.1 Administration - Message Waiting Configuration - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address: https://cm-mars/CCMAdmin/messagewaitingconfig.asp?pkid={C57D6244-840A-41D0-B3D8-CD98573F36DF}

System Route Plan Service Feature Device User Application Help

Cisco CallManager Administration
For Cisco IP Telephony Solutions

CISCO SYSTEMS

Message Waiting Configuration

[Add a New Message Waiting Number](#)
[Back to Find/List Message Waiting Numbers](#)

Message Waiting Number : 7001
Status: Ready

Copy Update Delete

Message Waiting Number*

Description

Message Waiting Indicator On Off

Partition

Calling Search Space

* indicates required item

Done Local intranet



CallBack Service Parameters

Cisco CallManager 4.1 Administration - Service Parameters Configuration - Microsoft Internet Explorer

Address: https://cm-mars/CCMAdmin/serviceparameters.asp

Calling Search Space: <None >

Clusterwide Parameters (Feature - Call Back)

Parameter Name	Parameter Value	Suggested Value
Callback Enabled Flag*	True	True
Callback Notification Audio File Name*	CallBack.raw	CallBack.raw
Connection Proposal Type*	Connection Retention	Connection Retention
Connection Response Type*	Default to Connection Release	Default to Connection Retention
Callback Request Protection Timer (T1) (sec)*	10	10
Callback Recall Timer (T3) (sec)*	20	20
Callback Calling Search Space	Incoming Trunk	

Clusterwide Parameters (Route Plan)

Parameter Name	Parameter Value	Suggested Value
Stop Routing on Out of Bandwidth Flag*	False	False
Stop Routing on Unallocated Number Flag*	True	True
Stop Routing on User Busy Flag*	True	True

Local intranet



Softkey Template Configuration

Cisco CallManager 4.1 Administration - Softkey Template Configuration - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Search Favorites Media

Address: https://cm-mars/CCMAdmin/softkeytemplateconfig.asp?pkid={E1672A7D-37F0-4D7D-8719-2A9DCD1A2CDD}

System Route Plan Service Feature Device User Application Help

Cisco CallManager Administration
For Cisco IP Telephony Solutions

CISCO SYSTEMS

Softkey Template Configuration

[Add New Softkey Template](#)
[Configure Softkey Layout](#)
[Dependency Records](#)
[Back to Find/List Softkey Templates](#)

Softkey Template: Standard User CallBack
Status: Ready

Copy Update Delete Restart Devices

Softkey Template Name* Standard User CallBack

Description Standard Softkey Template for CallManager only

Add Application Delete Application

Application Cisco CallManager

* indicates required item

Done Local intranet



CallBack Softkey Template Configuration

The screenshot shows the Cisco CallManager Administration web interface in Microsoft Internet Explorer. The browser address bar shows the URL: <https://cm-mars/CCMAdmin/softkeylayoutconfig.asp?pkid={E1672A7D-37F0-4D7D-8718-2A9DCD1A2CDD}&callState=0>. The page title is "Cisco CallManager Administration - Softkey Layout Configuration - Microsoft Internet Explorer".

The main content area is titled "Softkey Layout Configuration" and "Softkey Template Configuration". The selected template is "Standard User CallBack" with a status of "Ready". There are "Update" and "Restart Devices" buttons.

The interface is divided into two main sections for softkey configuration:

- Unselected Softkeys:** A list of softkeys that are not currently selected for this template. The list includes: Conference List (30)(ConfList), Direct Transfer (28)(DirTrfr), Immediate Divert (31)(iDivert), Join (15)(Join), Quality Report Tool (22)(QRT), Remove Last Conference Party (19), Select (29)(Select), Undefined (0)(Undefined), and Video Mode Command (33)(VidMod).
- Selected Softkeys (ordered by position):**** A list of softkeys that are currently selected for this template. The list includes: Redial (1)(Redial), **NewCall (2)(NewCall), Forward All (5)(FwdAll), and Call Back (20)(CallBack).

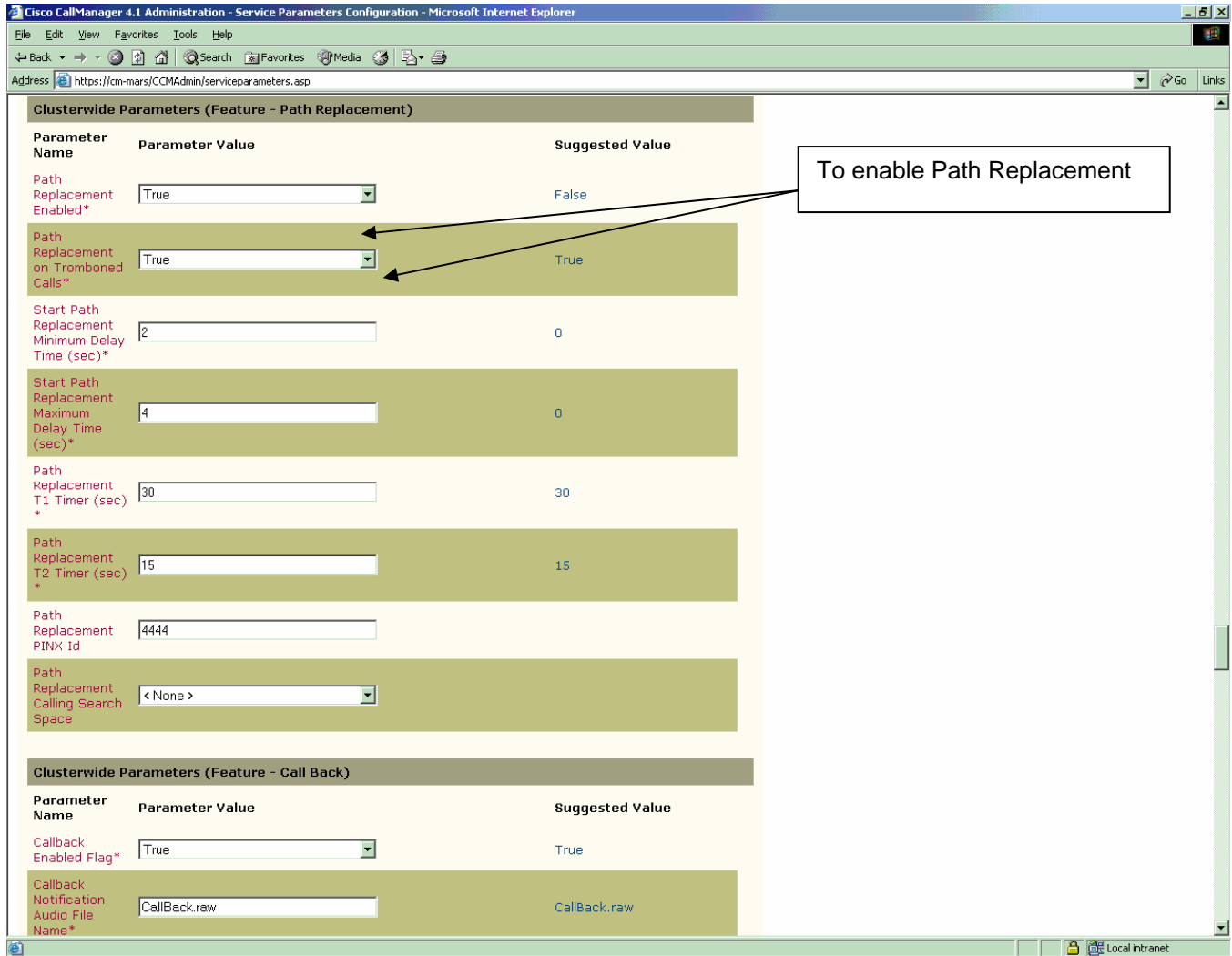
Navigation arrows are present between the two lists to move softkeys back and forth. A legend at the bottom indicates that "**" indicates mandatory fields and "*" indicates required items.

The left sidebar shows a list of "Call States" with icons: Connected, Connected Conference, Connected Transfer, Digits After First, Off Hook, Off Hook With Feature, On Hold, On Hook, Remote In Use, Ring In, and Ring Out.

The bottom status bar shows "Done" and "Local intranet".



Path Replacement Service Parameters



The screenshot shows the Cisco CallManager 4.1 Administration interface for configuring Path Replacement service parameters. The browser window title is "Cisco CallManager 4.1 Administration - Service Parameters Configuration - Microsoft Internet Explorer". The address bar shows "https://cm-mars/CCMAdmin/serviceparameters.asp".

The main content area is titled "Clusterwide Parameters (Feature - Path Replacement)". It contains a table with the following parameters:

Parameter Name	Parameter Value	Suggested Value
Path Replacement Enabled*	<input type="text" value="True"/>	False
Path Replacement on Tromboned Calls*	<input type="text" value="True"/>	True
Start Path Replacement Minimum Delay Time (sec)*	<input type="text" value="2"/>	0
Start Path Replacement Maximum Delay Time (sec)*	<input type="text" value="4"/>	0
Path Replacement T1 Timer (sec)*	<input type="text" value="30"/>	30
Path Replacement T2 Timer (sec)*	<input type="text" value="15"/>	15
Path Replacement PINX Id	<input type="text" value="4444"/>	
Path Replacement Calling Search Space	<input type="text" value="< None >"/>	

Below this section is another section titled "Clusterwide Parameters (Feature - Call Back)" with the following parameters:

Parameter Name	Parameter Value	Suggested Value
Callback Enabled Flag*	<input type="text" value="True"/>	True
Callback Notification Audio File Name*	<input type="text" value="CallBack.raw"/>	CallBack.raw

A callout box with the text "To enable Path Replacement" has two arrows pointing to the "Path Replacement Enabled*" and "Path Replacement on Tromboned Calls*" parameters, indicating that these must be set to "True" to enable the feature.



Forward by Reroute Service Parameter

Cisco CallManager 4.1 Administration - Service Parameters Configuration - Microsoft Internet Explorer

Address: https://jupiter/CCMAdmin/serviceparameters.asp?crNodeName=jupiter&crNodeID={445CA45F-51FA-4169-B4BB-37C889F09CDB}&crServiceType=0

Clusterwide Parameters (Feature - Forward)

Parameter Name	Parameter Value	Suggested Value
Forward Maximum Hop Count*	12	12
Forward No Answer Timer (sec)*	12	12
Max Forward Hops to DN*	12	12
Retain Forward Information*	False	False
Forward By Reroute Enabled*	True	False
Forward By Reroute T1 Timer (sec)*	15	10

Some parameters in this group are hidden, click on Advanced button to see hidden parameters

Clusterwide Parameters (Feature - Path Replacement)

Parameter Name	Parameter Value	Suggested Value
Path Replacement Enabled*	True	False
Path Replacement on Tromboned Calls*	True	True
Start Path Replacement	n	n

To forward by Reroute



IP Phone Configuration

Cisco CallManager 4.1 Administration - Phone Configuration - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <https://cm-mars/CCMAdmin/phoneconfig.asp?pkid={006529FA-EE0D-41E8-9D0B-19EDF836ADE0}>

System Route Plan Service Feature Device User Application Help

Cisco CallManager Administration
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CISCO SYSTEMS

Phone Configuration

[Add a new phone](#)
[Add/Update Speed Dials](#)
[Subscribe/Unsubscribe Services](#)
[Dependency Records](#)
[Back to Find/List Phones](#)

Directory Numbers

Base Phone

- 7712 Line 1 - 4004 in phones
- 7712 Line 2 - Add new DN

Phone: SEP003094C2B08E (Auto 4004)
Registration: Registered with Cisco CallManager CM-MARS
IP Address: **172.20.33.60**
Status: Ready

Phone Configuration (Model = Cisco 7960)

Device Information

MAC Address*	<input type="text" value="003094C2B08E"/>
Description	<input type="text" value="Auto 4004"/>
Owner User ID	<input type="text"/> (Select User ID)
Device Pool*	Default (View details)
Calling Search Space	< None >
AAR Calling Search Space	< None >
Media Resource Group List	< None >
User Hold Audio Source	< None >
Network Hold Audio Source	< None >
Location	< None >
User Locale	< None >
Network Locale	< None >
Device Security Mode	Use System Default
Signal Packet Capture Mode	None
Packet Capture Duration	<input type="text" value="0"/>
Built In Bridge	Default
Privacy	Default

Retry Video Call as Audio
 Ignore Presentation Indicators (internal calls only)

Done Local intranet



Cisco CallManager 4.1 Administration - Phone Configuration - Microsoft Internet Explorer

Address: https://cm-mars/CCMAdmin/phoneconfig.asp?pkid={006529FA-EE0D-41E8-9D0E-19E0F836ADE0}

Ignore Presentation Indicators (internal calls only)

Phone Button Template Information

Phone Button Template* Standard 7960 (View button list)

Softkey Template Information

Softkey Template Standard User CallBack

Expansion Module Information

Module 1 < None >

Module 2 < None >

Firmware Load Information (leave blank to use default)

Phone Load Name

Module 1 Load Name (Module 1 selection required)

Module 2 Load Name (Module 2 selection required)

Cisco IP Phone - External Data Locations (leave blank to use default)

Information

Directory

Messages

Services

Authentication Server

Proxy Server

Idle

Idle Timer (seconds)

Extension Mobility (Device Profile) Information

Enable Extension Mobility Feature

Log Out Profile - Not Selected -

Log In User ID < None >

Log In Time < None >

Log Out Time < None >

Certification Authority Proxy Function (CAPF) Information

Certificate Operation No Pending Operation

Authentication Mode By Authentication String

Authentication String Generate String

Key Size (bits) 1024

Operation Completes By** : : : (YYYY : MM : DD : HH)



Cisco CallManager 4.1 Administration - Phone Configuration - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <https://cm-mars/CCMAdmin/phoneconfig.asp?pkid={006529FA-EE0D-41E8-9D0B-19E0F836ADE0}> Go Links

Extension Mobility (Device Profile) Information

Enable Extension Mobility Feature

Log Out Profile

Log In User ID

Log In Time

Log Out Time

Certification Authority Proxy Function (CAPF) Information

Certificate Operation

Authentication Mode

Authentication String

Key Size (bits)

Operation Completes By** : : : (YYYY : MM : DD : HH)

Certificate Operation Status : None

Multilevel Precedence and Preemption (MLPP) Information

MLPP Domain (e.g., "0000FF")

MLPP Indication

MLPP Preemption

Product Specific Configuration i

Disable Speakerphone

Disable Speakerphone and Headset

Forwarding Delay*

PC Port*

Settings Access*

Gratuitous ARP*

PC Voice VLAN Access*

Video Capabilities*

Auto Line Select*

Web Access*

* indicates a required item.
** Indicates time on Publisher.

[Back to top of page](#)
[Back to Find/List Phones](#)

Done Local intranet



Directory Number Configuration

Cisco CallManager 4.1 Administration - Directory Number Configuration - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <https://cm-mars/CCMAdmin/directorynumber.asp?NumPlanMapID={2CDE5DEC-C5D5-4CF7-880D-8C2C3A507433}> Go Links

System Route Plan Service Feature Device User Application Help

Cisco CallManager Administration
For Cisco IP Telephony Solutions

CISCO SYSTEMS

Directory Number Configuration

[Configure Device \(SEP003094C2B08E\)](#)
[Dependency Records](#)

Associated With
SEP003094C2B08E
7900 (Line 1)

Directory Number: 4004 (phones)
Status: Ready
Note: Any update to this Directory Number automatically resets the associated devices

Update Remove from Device Reset Devices

Directory Number

Directory Number* 4004
Partition phones

Directory Number Settings

Voice Mail Profile <None >
(Choose <None> to use default)

Calling Search Space phones

AAR Group <None >

User Hold Audio Source <None >

Network Hold Audio Source <None >

Auto Answer Auto Answer Off

Call Forward and Pickup Settings

	Voice Mail	Coverage/ Destination	Calling Search Space
Forward All	<input type="checkbox"/>		<None >
Forward Busy Internal	<input type="checkbox"/>	5105	<None >
Forward Busy External	<input type="checkbox"/>	5105	<None >
Forward No Answer Internal	<input type="checkbox"/>	5105	<None >
Forward No Answer External	<input type="checkbox"/>	5105	<None >
Forward No Coverage Internal	<input type="checkbox"/>		<None >
Forward No Coverage External	<input type="checkbox"/>		<None >
No Answer Ring Duration			(seconds)
Call Pickup Group			<None >

MLPP Alternate Party Settings

Done Local intranet



Cisco CallManager 4.1 Administration - Directory Number Configuration - Microsoft Internet Explorer

Address: https://cm-mars/CCMAdmin/directorynumber.asp?NumPlanMapID={2CDE5DEC-C5D5-4CF7-880D-8C2C3A507433}

Forward No Answer Internal 5105 <None >

Forward No Answer External <None >

Forward No Coverage Internal <None >

Forward No Coverage External <None >

No Answer Ring Duration (seconds)

Call Pickup Group <None >

MLPP Alternate Party Settings

Target (Destination)

Calling Search Space <None >

No Answer Ring Duration (seconds)

Line Settings for all Devices

Alerting Name COOKIE

Line Settings for this Device

Display (Internal Caller ID) COOKIE

Line Text Label MARS4

External Phone Number Mask

Message Waiting Lamp Policy Use System Policy

Ring Setting (Phone Idle) Use System Default

Ring Setting (Phone Active)** Use System Default

Multiple Call / Call Waiting Settings

Maximum Number of Calls* 4 (1 - 200)

Busy Trigger* 2 (<= Max. Calls)

Forwarded Call Information Display

Caller Name Caller Number

Redirected Number Dialed Number

* indicates required item; changes to Line or Directory Number settings require restart.

** Ring Setting (Phone Active) applies to this line when any line on the phone has a call in progress.

Note:
If you are using a language other than English for Display (Internal Caller ID) or Line Text Label text, make sure the correct character set (shown below) is selected. Text displays incorrectly if the wrong character set is selected. (English characters are included in all character sets.)

Character Set Western European (Latin 1)

Done Local intranet



CMM-E1 Configuration

```
CMM-E1#sh ver
Cisco IOS Software, Cat6K-lc Software (wscmm-I6S-M), Version 12.3(8)XY2, RELEASE
SOFTWARE (fc1)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2004 by Cisco Systems, Inc.
Compiled Tue 16-Nov-04 12:19 by cmong
```

```
ROM: System Bootstrap, Version 12.2(1r)T2, RELEASE SOFTWARE (fc1)
```

```
CMM-E1 uptime is 4 weeks, 3 days, 22 hours, 13 minutes
System returned to ROM by power-on
System image file is "bootflash:wscmm-i6s-mz.123-8.XY2.bin"
```

```
cisco WS-SVC-CMM Cat6k Voice Linecard (R7000) processor (revision 0xFF) with 196
608K/65536K bytes of memory.
Processor board ID SAD0825030S
R7000 CPU at 400MHz, Implementation 39, Rev 3.3, 256KB L2 Cache
Last reset from power-on
1 FastEthernet interface
1 Gigabit Ethernet interface
186 Serial interfaces
6 Channelized E1/PRI ports
32768K bytes of processor board bootflash (Read/Write)
```

```
Configuration register is 0x2
```

```
CMM-E1#sh run
Building configuration...
```

```
Current configuration : 3554 bytes
!
version 12.3
no service pad
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname CMM-E1
!
boot-start-marker
boot-end-marker
!
no logging console
!
no aaa new-model
ip subnet-zero
ip tcp synwait-time 13
ip host CM-MARS 172.20.231.254
!
!
isdn switch-type primary-4ess
```



```
!  
!  
!  
!  
!  
!  
!  
!  
!  
!  
ccm-manager mgcp  
ccm-manager music-on-hold  
!  
!  
!  
controller E1 1/0  
  pri-group timeslots 1-31 service mgcp  
!  
controller E1 1/1  
  pri-group timeslots 1-31 service mgcp  
!  
controller E1 1/2  
  pri-group timeslots 1-31 service mgcp  
!  
controller E1 1/3  
  pri-group timeslots 1-31 service mgcp  
!  
controller E1 1/4  
  pri-group timeslots 1-31 service mgcp  
!  
controller E1 1/5  
  pri-group timeslots 1-31 service mgcp  
!  
interface GigabitEthernet1/0  
  ip address 172.20.231.51 255.255.255.0  
  no ip proxy-arp  
  no negotiation auto  
  no keepalive  
!  
interface Serial1/0:15  
  no ip address  
  no logging event link-status  
  isdn switch-type primary-net5  
  isdn incoming-voice voice  
  isdn bind-13 ccm-manager  
  no cdp enable  
!  
interface Serial1/1:15  
  no ip address  
  no logging event link-status  
  isdn switch-type primary-net5  
  isdn protocol-emulate network  
  isdn incoming-voice voice  
  isdn bind-13 ccm-manager
```



```
no isdn outgoing display-ie
no cdp enable
!
interface Serial1/2:15
no ip address
no logging event link-status
isdn switch-type primary-qsig
isdn protocol-emulate network
isdn incoming-voice voice
isdn bind-13 ccm-manager
no cdp enable
!
interface Serial1/3:15
no ip address
no logging event link-status
isdn switch-type primary-qsig
isdn incoming-voice voice
isdn map address . plan privacy type subscriber
isdn bind-13 ccm-manager
no cdp enable
!
interface Serial1/4:15
no ip address
no logging event link-status
isdn switch-type primary-qsig
isdn incoming-voice voice
isdn bind-13 ccm-manager
no cdp enable
!
interface Serial1/5:15
no ip address
no logging event link-status
isdn switch-type primary-qsig
isdn incoming-voice voice
isdn bind-13 ccm-manager
no cdp enable
!
ip classless
ip route 0.0.0.0 0.0.0.0 172.20.231.1
no ip http server
!
!
control-plane
!
!
voice-port 1/0:15
echo-cancel coverage 64
!
voice-port 1/1:15
echo-cancel coverage 64
!
voice-port 1/2:15
echo-cancel coverage 64
!
```



```
voice-port 1/3:15
  echo-cancel coverage 64
!
voice-port 1/4:15
  echo-cancel coverage 64
!
voice-port 1/5:15
  echo-cancel coverage 64
!
mgcp
mgcp call-agent CM-MARS 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 timer receive-rtcp
mgcp sdp simple
mgcp fax t38 inhibit
mgcp rtp payload-type g726r16 static
!
mgcp profile default
!
!
!
!
dial-peer voice 1 pots
  application mgcpapp
!
dial-peer voice 2 pots
  application mgcpapp
!
dial-peer voice 3 pots
  application mgcpapp
!
dial-peer voice 4 pots
  application mgcpapp
!
dial-peer voice 5 pots
  application mgcpapp
  port 1/4:15
!
dial-peer voice 6 pots
  application mgcpapp
  port 1/5:15
!
dial-peer voice 9991015 pots
  application mgcpapp
  port 1/0:15
!
dial-peer voice 9991115 pots
  application mgcpapp
  port 1/1:15
```



```
!  
dial-peer voice 9991215 pots  
  application mgcpapp  
  port 1/2:15  
!  
dial-peer voice 9991315 pots  
  application mgcpapp  
  port 1/3:15  
!  
!  
line con 0  
  transport preferred all  
  transport output all  
line vty 0 4  
  login  
  transport preferred all  
  transport input all  
  transport output all  
!  
end
```

Notes on Nortel MWI

Nortel's Network Message Services (NMS) provides messaging services across Meridian 1 network using ISDN signaling. There are two NMS applications:

1. The Network Message Service – Message Center allows a caller transparent access to a centralized message center over an ISDN PRI/ISL network. Three types of Message Center configurations are supported:
 - a) ACD Message Center
 - b) DN Message Center
 - c) Attendant Message Center

For these types of Message Centers, the message taker's set is used to activate and deactivate a user's Message Waiting Indicator. Message Indication Key (MIK) and Message Cancellation Keys (MCK) are used to turn on/off the Message Waiting Indication on a user telephone.

2. The Network Message Service – Meridian Mail offers access to the Meridian Mail system across the Meridian 1 network. Remote users defined as part of the NMS-MM server have access to all the Meridian Mail features available on the local switch. This type of configuration uses the existing Nortel Meridian 1 voice mail system (i.e. Meridian Mail or Nortel Call Pilot) as the network's voice mail hub while in the process of migrating to IP telephony.

Limitations

For the Nortel Meridian 1 PBX to support the QSIG MWI feature, the PBX must **at least** have an Enterprise software level (to get ISDN Tie lines) with **X11 Rel. 25.40 or 25.40B software** (to get QSIG MWI).

In addition to NMS software and Phantom TN Features, the following packages must be installed on the PBX:

- PKG 305 (QSIG Generic Function)
 - PKG 316 (QSIG Supplementary Services)
 - PKG 263 (Qsig Basic Call/Name Display)
 - PKG 175 (Network Message Service)
- As mentioned earlier in this document, using MCK and MIK keys to send activate/deactivate messages (i.e. the Nortel Meridian 1 is integrated to a third-party vendor voicemail system such as an OCTEL ARIA or Serenade) do not work to enable/disable the Cisco IP Phone Message Waiting Indicator. The Nortel does not convert the Nortel MCDN proprietary activate/deactivate messages properly to QSIG Facility message.



Nortel Option 11C D-Channel Configuration:

```

ADAN DCH 32
CTYP TMDI
CARD 32 --- defines card in slot 32 (loop 32) as the QSIG trunk to CCM
PORT 1
DES Qsig
USR PRI
DCHL 32
OTBF 127
PARM RS232 DTE
DRAT 64KC
CLOK EXT
IFC ISGF --- defines switch-type ISO QSIG with GF platform
  PINX_CUST 0
  ISDN_MCNT 300
CLID OPT0
CO_TYPE STD
SIDE USR
CNEG 1
RLS ID **
RCAP COLP QMWI --- enables MWI feature across QSIG trunk
MBGA NO
OVLN NO
OVLS NO
T310 120
T200 3
T203 10
N200 3
N201 260
K 7

```

Acronyms

Acronym	Definitions
ANF-PR	Additional Network Feature Path Replacement
CCM	Cisco Unified CallManager
CCBS	Call Completion to Busy Subscriber
CCNR	Call Completion on No Reply
CFB	Call Forwarding on Busy
CFNR	Call Forwarding No Reply
CFU	Call Forwarding Unconditional
CLIP	Calling Line (Number) Identification Presentation
CLIR	Calling Line (Number) Identification Restriction
CMM	Communication Media Module (CMM) is a Cisco Catalyst® 6500 Series and Cisco 7600 Series line card that provides flexible and high-density T1/E1 gateways
CNIP	Calling Name Identification Presentation
CNIR	Calling Name Identification Restriction
COLP	Connected Line (Number) Identification Presentation
COLR	Connected Line (Number) Identification Restriction
CONP	Connected Name Identification Presentation
CONR	Connected Name Identification Restriction
CT	Call Transfer
MWI	Message Waiting Indicator
PSTN	Public Switched Telephone Network



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