Ericsson MD-110 Release BC12 using E1 Q.SIG to Cisco Unified CallManager 4.1

November 5, 2007 Revision 5

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Introduction

- This is an application note for connectivity of Ericsson MD-110 Release BC12 PBX with Cisco Unified CallManager Release 4.1 via Cisco Communication Media Module CMM-E1 as MGCP gateway using ISO QSIG protocol.

- The network topology diagram (Figure 1) shows the test setup for end-to-end interoperability with the Cisco Unified 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 with Cisco Unified CallManager Service parameter QSIG variant of ISO and ISO switch type on the Ericsson MD-110 PBX.

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

Figure 1. Network Topology

Basic Call Setup End-to-End Configuration

Limitations

Calling/Connected Name Restrictions

- Ericsson phone displayed Calling/Connected Name when Cisco Unified CallManager sends it as restricted.

Call Completion (Call Back)

- For the case of Cisco IP phone initiating the Call Back, Ericsson MD-110 PBX accepts the Call Back Request from Cisco Unified CallManager. Ericsson MD-110 PBX tries to complete the Call Back as the Ericsson phone becomes free. Cisco Unified CallManager sends the call setup as a response, but Ericsson MD-110 PBX drops the call with “FailureToMatch” error message. Ericsson MD110 PBX is complaining about Numbering Plan encoding in the Call Back request not matching the Numbering Plan encoding when Cisco Unified CallManager tries to complete the Call Back.

- For the case of Ericsson phone initiating the Call Back, Cisco Unified CallManager accepts the Call Back Request from Ericsson MD-110 PBX. Cisco Unified CallManager tries to complete the Call Back as the Cisco IP phone becomes free but Ericsson MD110 PBX responds with Call Back Cancel. The issue is the MD110 wants to do Call Back with “Path Reservation” method and Cisco Unified CallManager responds in the return result to a CCBS/CCNR request with: “No-Path-Reservation” method. In order to get CallBack feature to work from Ericsson phone, Cisco Unified CallManager needs to respond to the Call Back request with “Path Reservation” method.
ANF-PR-Additional Network Feature Path Replacement for Call Diversion by join

- Ericsson MD-110 PBX did not initiate Path Replacement proposal for a Call that originated from Ericsson PBX and was diverted from Cisco Unified CallManager to another Ericsson MD-110 PBX node.

System Components

Hardware Requirements

- Cisco Hardware:
  - Cisco Catalyst 6000 switch with CMM-E1 Gateway
  - Cisco Unified CallManager Server
- Ericsson MD-110 PBX Hardware:
  - TLU76/1, E1 PRI/QSIG

Software Requirements

- PBX Software version BC12
- Cisco Unified CallManager 4.1

Features

Features Supported

- CLIP-Calling Line (Number) Identification Presentation
- CLIR-Calling Line (Number) Identification Restriction
- CNIP-Calling Name Identification Presentation
- COLP-Connected Line (Number) Identification Presentation
- COLR-Connected Line (Number) Identification Restriction
- CONP-Connected Name Identification Presentation
- Sending Alerting Name
- CT-Call Transfer (by join)
- 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)
- CFB-Call Forwarding Busy (by Reroute)
- CFNR-Call Forwarding No Reply (by Reroute)
- ANF-PR-Additional Network Feature Path Replacement (for Call Transfer by join)
- ANF-PR-Additional Network Feature Path Replacement (for Trombone connection)

Features Not Supported

- Ericsson PBX did not honor CNIR-Calling Name Identification Restriction
• Ericsson PBX did not honor CONR- Connected Name Identification Restriction
• Ericsson PBX did not support Network Call Forwarding (CFU, CFB, CFNR) by join. It did diversion by Reroute instead
• Ericsson PBX did not support Q.SIG MWI- Message Waiting Indication (lamp ON, lamp OFF)

**Configuration**

**Configuring the Ericsson MD-110 PBX**

**Warning:** The Ericsson MD-110 PBX user interface is very cryptic. All parameters and options are mapped to position-dependent numeric fields within the various commands listed below. The user must have the correct revision of the Ericsson MD-110 PBX administration manual to be able to decipher each field position and determine its meaning. It is therefore not advisable to make changes to an MD-110 PBX unless you know exactly what you are doing. A single number out of place in a command string can cause unusual behavior on the PBX.

Configure the Ericsson MD-110 PBX in the following sequence:

1. **ROCAI** Route Category Initiate
2. **RODAI** Route Data Initiate
3. **ROEQI** Route Equipment Initiate
4. **RODDI** Route External Destination

**Configuration Menus and Commands**

**Route Category Initiate**

Setup internal characteristics for the route. Ex. Traffic direction, services, Bearer capabilities.

**For Ericsson 1 node**

```
<ROCAP:ROU=100;
ROUTE CATEGORY DATA
ROU SEL  TRM SERV  NODG DIST DISL TRAF  SIG  BCAP
100 7110000000000010 5 2110030000 0 30 128 03151515 111110000031 111111
END

<ROCAP:ROU=101;
ROUTE CATEGORY DATA
ROU SEL  TRM SERV  NODG DIST DISL TRAF  SIG  BCAP
101 7110000000000010 5 2110030000 0 30 128 03151515 111110000031 001100
END
```

**For Ericsson 2 node**

```
<ROCAP:ROU=1;
ROUTE CATEGORY DATA
ROU SEL  TRM SERV  NODG DIST DISL TRAF  SIG  BCAP
1 7110000000000010 5 3110000000 0 30 128 03151515 111110000031 111111
END

<ROCAP:ROU=3;
ROUTE CATEGORY DATA
```
Route Data Initiate

For Ericsson 1 node

E1-PRI ISO QSIG Route Protocol Characteristics, protocol side “Network”

```
<RODAP:ROU=100;
ROUTE DATA
ROU   TYPE  VARC        VARI        VARO        FILTER
100   SL60  H'00000310  H'55450000  H'06300000  NO
END
```

PSTN trunk E1-PRI ETSI Route Protocol Characteristics, protocol side “Network”

```
<RODAP:ROU=100;
ROUTE DATA
ROU   TYPE  VARC        VARI        VARO        FILTER
100   SL60  H'00000310  H'05400000  H'06300000  NO
END
```

E1-PRI ISO QSIG Route Protocol Characteristics, protocol side “User”

```
<RODAP:ROU=101;
ROUTE DATA
ROU   TYPE  VARC        VARI        VARO        FILTER
101   SL60  H'00000310  H'55440000  H'06400000  NO
END
```

For Ericsson 2 node

```
<RODAP:ROU=1;
ROUTE DATA
ROU   TYPE  VARC        VARI        VARO        FILTER
1     SL60  H'00000310  H'55440000  H'06400000  NO
END
```
```
<RODAP:ROU=3;
ROUTE DATA
ROU   TYPE  VARC        VARI        VARO        FILTER
3     SL60  H'00000310  H'55440000  H'06400000  NO
END
```

Route Equipment Initiate

For Ericsson 1 node

E1-PRI QSIG trunk lines (B-channels)

```
<ROEDP:ROU=100,TRU=ALL;
ROUTE EQUIPMENT DATA
```
<table>
<thead>
<tr>
<th>ROU</th>
<th>TRU</th>
<th>EQU</th>
<th>SQU</th>
<th>INDDAT</th>
<th>CNTRL</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>001-1</td>
<td>001-0-30-01</td>
<td>H'000000000000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>001-2</td>
<td>001-0-30-02</td>
<td>H'000000000000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>001-3</td>
<td>001-0-30-03</td>
<td>H'000000000000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>001-4</td>
<td>001-0-30-04</td>
<td>H'000000000000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>001-5</td>
<td>001-0-30-05</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>001-6</td>
<td>001-0-30-06</td>
<td>H'000000000000</td>
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<td></td>
</tr>
<tr>
<td>100</td>
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<td>001-0-30-07</td>
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<td></td>
</tr>
<tr>
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<td>001-0-30-08</td>
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<td></td>
</tr>
<tr>
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<td>001-0-30-09</td>
<td>H'000000000000</td>
<td></td>
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</tr>
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<td>001-10</td>
<td>001-0-30-10</td>
<td>H'000000000000</td>
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<td></td>
</tr>
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<td>001-0-30-11</td>
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<td></td>
<td></td>
</tr>
<tr>
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<td>001-0-30-12</td>
<td>H'000000000000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>001-13</td>
<td>001-0-30-13</td>
<td>H'000000000000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>001-14</td>
<td>001-0-30-14</td>
<td>H'000000000000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
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<td>001-0-30-15</td>
<td>H'000000000000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
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<td>001-0-30-16</td>
<td>H'000000000000</td>
<td></td>
<td></td>
</tr>
<tr>
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<td>001-17</td>
<td>001-0-30-17</td>
<td>H'000000000000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>001-18</td>
<td>001-0-30-18</td>
<td>H'000000000000</td>
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<td></td>
</tr>
<tr>
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<td>001-19</td>
<td>001-0-30-19</td>
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</tr>
<tr>
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<td>001-0-30-20</td>
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<td></td>
</tr>
<tr>
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<td>001-0-30-21</td>
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<tr>
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<td>001-0-30-22</td>
<td>H'000000000000</td>
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<td></td>
</tr>
<tr>
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<td>001-23</td>
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<td></td>
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<td>001-0-30-24</td>
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<td>100</td>
<td>001-25</td>
<td>001-0-30-25</td>
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<td></td>
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<tr>
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<td>001-26</td>
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<td>H'000000000000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>001-27</td>
<td>001-0-30-27</td>
<td>H'000000000000</td>
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<td></td>
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<td>001-28</td>
<td>001-0-30-28</td>
<td>H'000000000000</td>
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<td></td>
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<tr>
<td>100</td>
<td>001-29</td>
<td>001-0-30-29</td>
<td>H'000000000000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>001-30</td>
<td>001-0-30-30</td>
<td>H'000000000000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

END
For Ericsson 2 node

<ROEDP:ROU=1,TRU=ALL;
ROUTE EQUIPMENT DATA
ROU  TRU   EQU   IP ADDRESS   SQU   INDDAT   CNTRL
1    001-1  001-1-40-01  H'000000000000
1    001-2  001-1-40-02  H'000000000000
1    001-3  001-1-40-03  H'000000000000
1    001-4  001-1-40-04  H'000000000000
1    001-5  001-1-40-05  H'000000000000
1    001-6  001-1-40-06  H'000000000000
1    001-7  001-1-40-07  H'000000000000
1    001-8  001-1-40-08  H'000000000000
1    001-9  001-1-40-09  H'000000000000
1    001-10 001-1-40-10  H'000000000000
1    001-11 001-1-40-11  H'000000000000
1    001-12 001-1-40-12  H'000000000000
1    001-13 001-1-40-13  H'000000000000
1    001-14 001-1-40-14  H'000000000000
1    001-15 001-1-40-15  H'000000000000
1    001-16 001-1-40-16  H'000000000000
1    001-17 001-1-40-17  H'000000000000
1    001-18 001-1-40-18  H'000000000000
1    001-19 001-1-40-19  H'000000000000
1    001-20 001-1-40-20  H'000000000000
1    001-21 001-1-40-21  H'000000000000
1    001-22 001-1-40-22  H'000000000000
1    001-23 001-1-40-23  H'000000000000
1    001-24 001-1-40-24  H'000000000000
1    001-25 001-1-40-25  H'000000000000
1    001-26 001-1-40-26  H'000000000000
1    001-27 001-1-40-27  H'000000000000
1    001-28 001-1-40-28  H'000000000000
1    001-29 001-1-40-29  H'000000000000
1    001-30 001-1-40-30  H'000000000000
1    001-31 001-1-40-31  H'000000000000

END

<ROEDP:ROU=3,TRU=ALL;
ROUTE EQUIPMENT DATA
ROU  TRU   EQU   IP ADDRESS   SQU   INDDAT   CNTRL
3    001-1  001-1-50-01  H'000000000000
3    001-2  001-1-50-02  H'000000000000
3    001-3  001-1-50-03  H'000000000000
3    001-4  001-1-50-04  H'000000000000

END
Route External Destination Data Initiate

For Ericsson 1 PSTN ROUTE

NANSI:NUMTYP=ED,NUMSE=650;
RODDI:DEST=650,ROU=100,ADC=1707000000000250107001100,SRT=1;
NANLS:EXL=650,MIN=10,MAX=10;

For Ericsson 1 node
Route and Access Code for the trunk Information- Note Route 100 & 101 are the PRI QSIG

<RODDP:DEST=ALL;
EXTERNAL DESTINATION ROUTE DATA

<table>
<thead>
<tr>
<th>DEST</th>
<th>DRN</th>
<th>ROU</th>
<th>CHO</th>
<th>CUST</th>
<th>ADC</th>
<th>TRC</th>
<th>SRT</th>
<th>NUMACK</th>
<th>PRE</th>
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<td></td>
<td></td>
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<tr>
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<td>0</td>
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<td>0</td>
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<td>0</td>
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<td>0</td>
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<tr>
<td>950</td>
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<td></td>
<td></td>
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<td>0</td>
<td>7</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

END
For Ericsson 2 node
Route and Access Code for the trunk Information- Note Route 1 & 3 are the PRI QSIG

```
<RODDP:DEST=ALL;
EXTERNAL DESTINATION ROUTE DATA
DEST  DRN  ROU  CHO  CUST  ADC  TRC  SRT  NUMACK  PRE
11     1    1707200000000250107001100  0  1  0
21     1    1727000000000250107001100  0  1  0
23     3    1727000000000250107001100  0  1  0
31     11   1005200000000250100001100  0  3  0
40     3    1707000000000250107001100  0  1  0
50     11   0606000000000250106001100  0  1  0
550    11   0606000000000250106001100  0  1  0
551    3    0707100000000250107001100  0  1  0
560    11   0606000000000250106001100  0  1  0
60     11   0606000000000250106001100  0  1  0
777    1    0707000000000250007001100  0  1  0
950    11   0606000000000250106001100  0  7  0

END
```

Overlap/Enbloc sending

For Ericsson 1 node

To do overlap sending First remove access code
```
<NANLR:EXL=40;
To do Enbloc sending
```

```
<NANLS:EXL=40,MIN=4,MAX=4;
```

Key System Directory

For Ericsson 1 node

```
<KSDDP:DIR=1154;
KEY SYSTEM DIRECTORY DATA
DIR  CUST  EQU  CAT  ADN  ODN  CALALT  TIMER
1154  001-0-20-03 -  1  0

END
```

```
<KSDDP:DIR=1155;
KEY SYSTEM DIRECTORY DATA
DIR  CUST  EQU  CAT  ADN  ODN  CALALT  TIMER
1155  001-0-20-04 -  1  0

END
```

For Ericsson 2 node

```
<KSDDP:DIR=4200&&4201;
KEY SYSTEM DIRECTORY DATA
DIR  CUST  EQU  CAT  ADN  ODN  CALALT  TIMER
4200  001-1-20-00  1  1  0
4201  001-1-20-01  1  1  0

END
```
Calling/Connected Name and Number Restrictions

To configure Calling/Connected Name and Number Restricted, use the following command:
<KWAC:DIR=1154&1155,ADC=00010013010000;

To configure Calling/Connected Name and Number Allowed, use the following command:
<KWAC:DIR=1154&1155,ADC=00100013010000;

To remove Name, use the following command:
<NINE:DIR=1154;//REMOVE NAME

To add Name, use the following command:
<NINI:DIR=1154,NAME1="BC12-1",NAME2="FOUR",PRES=20; //ADD NAME

To print Station’s Name, use the following command:
<NINP:DIR=1154&1155;

EXTENSION NAMES
DIR    NAME1                 NAME2                 PRES  INFO
1154   BC12-1                FOUR                 10
1155   BC12-1                FIVE                 10
END

Path Replacement (Route Optimization)

To enable/disable Path Replacement, use the following command:
<ASPAC:PARNUM=66,PARVAL=1; //Route optimization allowed. --- FORWARD
<ASPAC:PARNUM=66,PARVAL=0; //Route optimization NOT allowed.

Call Diversion on Busy/No Reply

To enable/disable Diversion on Busy/No Reply, use the following command:
<CDINI:DIR=1154,DIV=4200; // CALL DIVERSION INDIVIDUAL NUMBER INITIATE
<CDINE:DIR=1154;       // CALL DIVERSION INDIVIDUAL NUMBER END

Diversion Counter

<ASUVP:PARNUM=121; // check current setting for maximum number of hop diversions
<ASPAC:PARNUM=121,PARVAL= VALUE; // To set maximum number of hop diversions where VALUE range is 0-255
<ASUVP:PARNUM=121;
APPLICATION SYSTEM PARAMETER VALUES FOR UNIT
Network Services

<ASPAC:PARNUM=223,PARVAL=7; // Network Features: Standard SS-Call Forwarding, Standard SS-Call Transfer, Path Replacement for route optimization.

Ericsson MD-110 Software Version

For Ericsson 1 node

<•CADAP;
CALENDAR DATA
IDENTITY=ACM-1
VERSION=CXP1010101/2/BC12SP5/R2A
15:19:20
TUE 10 MAY 2005
END

For Ericsson 2 node

<•CADAP;
CALENDAR DATA
IDENTITY=DANDS-EURO
VERSION=CXP1010101/2/BC12SP5/R2A
17:23:44
TUE 10 MAY 2005
END

Configuring the Cisco Unified CallManager

ISO Protocol Service Parameter
<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Parameter Value</th>
<th>Suggested Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASN.1 ROSE OID Encoding*</td>
<td>Use Local Value</td>
<td>Use Local Value</td>
</tr>
<tr>
<td>QSIG Variant*</td>
<td>ISO (Protocol Profile B(16)F)</td>
<td>ISO (Protocol Profile B(16)F)</td>
</tr>
<tr>
<td>Caller ID</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calling Party Number</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Screening Indicator*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change B+ Channel Maintenance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Channel Maintenance Status 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Channel Maintenance Status 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Channel Maintenance Status 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Channel Maintenance Status 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Channel Maintenance Status 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clear Calls Flag When Dial Plan</td>
<td>True</td>
<td>True</td>
</tr>
<tr>
<td>Is Down*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Device Status Poll Interval</td>
<td>3000</td>
<td>3000</td>
</tr>
<tr>
<td>(nscc)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Gateway Configuration

**Product:** Communication Media Module  
**Protocol:** MGCP  
**MGCP:** CMM-E1

### Status: Ready

**Domain Name**: CMM-E1  
**Description**: CMM-E1  
**Cisco CallManager Group**: Default

### Installed Voice Interface Cards

<table>
<thead>
<tr>
<th>Module in Slot 1</th>
<th>Subunit</th>
<th>Endpoint Identifiers</th>
</tr>
</thead>
<tbody>
<tr>
<td>WS-X6600</td>
<td>WS-X6600-6E1</td>
<td>(1/2), (1/1), (1/3), (1/4), (1/5)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Module in Slot 2</th>
<th>&lt;None&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module in Slot 3</td>
<td>&lt;None&gt;</td>
</tr>
<tr>
<td>Module in Slot 4</td>
<td>&lt;None&gt;</td>
</tr>
</tbody>
</table>

### Product Specific Configuration

- **Global ISDN Switch Type**: *ESS*  
- **Switchback Timing**: Graceful  
- **Switchback uptime-delay (min)**: 10  
- **Switchback schedule (hh:mm)**: 12:00  
- **Fax mode**: Fax Relay

* indicates required item
## Gateway Configuration

### Product: Communication Media Module

**Gateway**: S1/DS1-1@CMM-E1  
**Device Protocol**: Digital Access PRI  
**Registration**: Registered with Cisco CallManager CM-MARS  
**IP Address**: 172.20.231.51

**Status**: Ready

### Device Information

<table>
<thead>
<tr>
<th><strong>End-Point Name</strong></th>
<th>S1/DS1-1@CMM-E1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>CM-MARS to Ericsson E1</td>
</tr>
<tr>
<td><strong>Device Pool</strong></td>
<td>Default</td>
</tr>
<tr>
<td><strong>Call Classification</strong></td>
<td>Use System Default</td>
</tr>
<tr>
<td><strong>Network Locale</strong></td>
<td>United States</td>
</tr>
<tr>
<td><strong>Media Resource Group List</strong></td>
<td>&lt; None &gt;</td>
</tr>
<tr>
<td><strong>Location</strong></td>
<td>&lt; None &gt;</td>
</tr>
<tr>
<td><strong>AAR Group</strong></td>
<td>&lt; None &gt;</td>
</tr>
<tr>
<td><strong>Load Information</strong></td>
<td></td>
</tr>
</tbody>
</table>

### 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

<table>
<thead>
<tr>
<th><strong>PRI Protocol Type</strong></th>
<th>PRI CSIG E1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Protocol Side</strong></td>
<td>Network</td>
</tr>
<tr>
<td><strong>Channel Selection Order</strong></td>
<td>Top Down</td>
</tr>
<tr>
<td><strong>Channel IE Type</strong></td>
<td>Continuous Number</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Configuration Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCM Type*</td>
<td>A-law</td>
</tr>
<tr>
<td>Delay for first restart (1/9 sec ticks)</td>
<td>32</td>
</tr>
<tr>
<td>Delay between restarts (1/9 sec ticks)</td>
<td>4</td>
</tr>
<tr>
<td>Inhibit restarts at PRI initialization</td>
<td></td>
</tr>
<tr>
<td>Enable status poll</td>
<td></td>
</tr>
</tbody>
</table>

### 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***: National
- **Calling party IE number type unknown***: National
- **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 non-ISDN Progress Indicator IE Enable
- MCDN Channel Number Extension Bit Set to Zero
<table>
<thead>
<tr>
<th><strong>Display IE Delivery</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Redirecting Number IE Delivery - Outbound</td>
</tr>
<tr>
<td>Redirecting Number IE Delivery - Inbound</td>
</tr>
<tr>
<td>Send Extra Leading Character In Display IE **</td>
</tr>
<tr>
<td>Setup non-ISDN Progress Indicator IE Enable ****</td>
</tr>
<tr>
<td>MCDN Channel Number Extension Bit Set to Zero **</td>
</tr>
<tr>
<td>Send Calling Name In Facility IE</td>
</tr>
<tr>
<td>Interface Identifier Present **</td>
</tr>
</tbody>
</table>

**Interface Identifier Value**<br>0

**Connected Line ID Presentation (QSIG Inbound Call)**<br>Default

---

**UUIE Configuration**

- **Passing precedence level through UUIE**

**Security Access Level**<br>2

---

**Product Specific Configuration**

<table>
<thead>
<tr>
<th><strong>Line Coding</strong></th>
<th>HDB3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Framing</strong></td>
<td>CRC4</td>
</tr>
<tr>
<td><strong>Clock</strong></td>
<td>External</td>
</tr>
<tr>
<td><strong>Input Gain (-6..14 db)</strong></td>
<td>0</td>
</tr>
<tr>
<td><strong>Output Attenuation (-6..14 db)</strong></td>
<td>0</td>
</tr>
<tr>
<td><strong>Echo Cancellation Enable</strong></td>
<td>Enable</td>
</tr>
<tr>
<td><strong>Echo Cancel Coverage (ms)</strong></td>
<td>64</td>
</tr>
</tbody>
</table>

* 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

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Page 16 of 54
## Find and List Partitions

2 matching record(s) for Partition Name begins with "".

Find Partitions where Partition Name begins with:

and show 20 items per page.

To list all items, click Find without entering any search text.

### Matching record(s) 1 to 2 of 2

<table>
<thead>
<tr>
<th>Partition Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ ☑ Incoming Trunk</td>
<td>Incoming Trunk</td>
</tr>
<tr>
<td>☑ ☑ phones</td>
<td>phones</td>
</tr>
</tbody>
</table>

Delete Selected

First Previous Next Last

Page 1 of 1
Calling Search Space Configuration

Calling Search Space: Incoming Trunk (In use)
Status: Ready
- Copy
- Update
- Delete
- Restart Devices

Calling Search Space Information
- Calling Search Space Name: Incoming Trunk
- Description

Route Partitions for this Calling Search Space
Find Partitions containing
Available Partitions
- phones

Selected Partitions:
- Incoming Trunk

* indicates required item
### Calling Search Space Configuration

**Calling Search Space:** phones (in use)

**Status:** Ready

<table>
<thead>
<tr>
<th>Copy</th>
<th>Update</th>
<th>Delete</th>
<th>Restart/Devices</th>
</tr>
</thead>
</table>

**Calling Search Space Information**

**Calling Search Space Name:** phones

**Description**

**Route Partitions for this Calling Search Space**

**Find Partitions containing**

**Available Partitions**

- Incoming Trunk

**Selected Partitions** *(ordered by highest priority)*

| phones |

* indicates required item
# Calling Search Space Configuration

**Calling Search Space:** PathReplacementCSS  
**Status:** Ready

### Calling Search Space Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calling Search Space Name</td>
<td>PathReplacementCSS</td>
</tr>
<tr>
<td>Description</td>
<td></td>
</tr>
</tbody>
</table>

### Route Partitions for this Calling Search Space

<table>
<thead>
<tr>
<th>Find Partitions containing</th>
<th>Find</th>
</tr>
</thead>
<tbody>
<tr>
<td>Available Partitions</td>
<td></td>
</tr>
</tbody>
</table>

### Selected Partitions (ordered by highest priority)

- Incoming Trunk phones

* indicates required item
Enbloc Route Pattern Configuration

<table>
<thead>
<tr>
<th>Route Pattern: 11XX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status: Ready</td>
</tr>
<tr>
<td>Note: Any update to this Route Pattern automatically resets the associated gateway or Route List</td>
</tr>
</tbody>
</table>

### Pattern Definition

- **Route Pattern**: 11XX
- **Partition**: (None)
- **Description**: CM-MARS to Ericsson 1
- **Numbering Plan**: North American Numbering Plan
- **Route Filter**: (None)
- **MLPP Precedence**: Default
- **Gateway or Route List**: RI/DS1-1@CMM-E1
- **Route Option**: Route this pattern
- **Call Classification**: OnNet
- **Provide Outside Dial Tone**: No
- **Allow Overlap Sending**: No
- **Urgent Priority**: No
- **Require Forced Authorization Code**: No
- **Authorization Level**: 0
- **Require Client Matter Code**: No

### Calling Party Transformations

- **Use Calling Party’s External Phone Number Mask**: No
- **Calling Party Transform Mask**: 551XXX
- **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)**: 
**Route Pattern: 777**

Status: Ready

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

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Route Pattern</td>
<td>777</td>
</tr>
<tr>
<td>Partition</td>
<td>None</td>
</tr>
<tr>
<td>Description</td>
<td>CM-MARS to Ericsson 1</td>
</tr>
<tr>
<td>Numbering Plan</td>
<td>North American Numbering Plan</td>
</tr>
<tr>
<td>Route Filter</td>
<td>None</td>
</tr>
<tr>
<td>MLPP Precedence</td>
<td>Default</td>
</tr>
<tr>
<td>Gateway or Route List*</td>
<td>SY/DST1@CM-M/E1</td>
</tr>
<tr>
<td>Route Option</td>
<td>Route this pattern</td>
</tr>
<tr>
<td>Call Classification*</td>
<td>OnNet</td>
</tr>
<tr>
<td>Call Option</td>
<td>Block this pattern</td>
</tr>
<tr>
<td>Authorization Level</td>
<td>0</td>
</tr>
<tr>
<td>Authorization Level Override</td>
<td>Yes</td>
</tr>
<tr>
<td>Provide Outside Dial Tone</td>
<td>False</td>
</tr>
<tr>
<td>Allow Overlap Sending</td>
<td>Yes</td>
</tr>
<tr>
<td>Require Forced Authorization Code</td>
<td>Yes</td>
</tr>
<tr>
<td>Require Client Matter Code</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**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

**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): None
Overlap Sending Route Pattern Configuration

Route Pattern: 9.1
Status: Ready

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

Pattern Definition

Route Pattern*: 9.1
Partition: <None>
Description: Overloading CM-MARS to Ericsson 1
Numbering Plan*: North American Numbering Plan
Route Filter: <None>
MLPP Precedence: Default
Gateway or Route List*: S1/DS1-1@CMM-E1 (Edit)
Route Option: Route this pattern

Call Classification*: 
- Provide Outside Dial Tone
- Allow Overlap Sending
- Allow Device Override
- Require Forced Authorization Code
- 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

Connected Party Transformations

Connected Line ID Presentation: Default
Connected Name Presentation

Called Party Transformations

- Discard Digits
Called Party Transform Mask
Prefix Digits (Outgoing Calls)
PSTN Route Pattern Configuration

Route Pattern: 650364XXXX

Status: Update completed

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

Pattern Definition

Route Pattern*: 650364XXXX
Partition: (None)
Description: PSTN Route gateway
Numbering Plan*: North American Numbering Plan
Route Filter: (None)
MLPP Precedence: Default
Gateway or Route List*: S1/D1-1@CMM-E1
Route Option: Route this pattern
Block this pattern: Not Selected

Call Classification*: OnNet

Provide Outside Dial Tone: False
Allow Overlap Sending: False
Urgent Priority: False
Require Forced Authorization Code: False
Authorization Level: 0
Require Client Matter Code: False

Calling Party Transformations

Use Calling Party's External Phone Number Mask

Calling Party Transform Mask: 
Prefix Digits (Outgoing Calls): 408527
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): 

Translation Pattern for Incoming Calls

Translation Pattern Configuration

Translation Pattern: 40XX
Status: Ready

Pattern Definition
Translation Pattern: 40XX
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: Not Selected

Provide Outside Dial Tone

Called 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):

* indicates required item.
### CLIR Route Pattern Configuration

**Route Pattern:** 11XX  
**Status:** Ready  
**Note:** Any update to this Route Pattern automatically resets the associated gateway or Route List

#### Pattern Definition

<table>
<thead>
<tr>
<th>Setting</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Route Pattern*</td>
<td>11XX</td>
</tr>
<tr>
<td>Partition</td>
<td>&lt;None&gt;</td>
</tr>
<tr>
<td>Description</td>
<td>CM-MARS to Ericsson 1</td>
</tr>
<tr>
<td>Numbering Plan*</td>
<td>North American Numbering Plan</td>
</tr>
<tr>
<td>Route Filter</td>
<td>&lt;None&gt;</td>
</tr>
<tr>
<td>MLPP Precedence</td>
<td>Default</td>
</tr>
<tr>
<td>Gateway or Route List*</td>
<td>S1/D31-1@CMM-E1</td>
</tr>
<tr>
<td>Route Option*</td>
<td>Route this pattern</td>
</tr>
<tr>
<td>Call Classification*</td>
<td>OnNet</td>
</tr>
<tr>
<td>Allow Outside Dial Tone</td>
<td></td>
</tr>
<tr>
<td>Allow Overlap Sending</td>
<td></td>
</tr>
<tr>
<td>Allow Device Override</td>
<td></td>
</tr>
<tr>
<td>Require Forced Authorization</td>
<td></td>
</tr>
<tr>
<td>Authorization Level</td>
<td>0</td>
</tr>
<tr>
<td>Require Client Matter Code</td>
<td></td>
</tr>
</tbody>
</table>

#### Calling Party Transformations

<table>
<thead>
<tr>
<th>Setting</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use Calling Party's External Phone Number Mask</td>
<td></td>
</tr>
<tr>
<td>Calling Party Transform Mask</td>
<td>551XXXX</td>
</tr>
<tr>
<td>Prefix Digits (Outgoing Calls)</td>
<td></td>
</tr>
<tr>
<td>Calling Line ID Presentation</td>
<td>Restricted</td>
</tr>
<tr>
<td>Calling Name Presentation</td>
<td>Default</td>
</tr>
</tbody>
</table>

#### Connected Party Transformations

<table>
<thead>
<tr>
<th>Setting</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connected Line ID Presentation</td>
<td>Default</td>
</tr>
<tr>
<td>Connected Name Presentation</td>
<td>Default</td>
</tr>
</tbody>
</table>

#### Called Party Transformations

<table>
<thead>
<tr>
<th>Setting</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discard Digits</td>
<td>&lt;None&gt;</td>
</tr>
<tr>
<td>Called Party Transform Mask</td>
<td></td>
</tr>
<tr>
<td>Prefix Digits (Outgoing Calls)</td>
<td></td>
</tr>
</tbody>
</table>

---

### CNIR Route Pattern Configuration

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Page 28 of 54
**Route Pattern: 11XX**

**Status:** Ready

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

<table>
<thead>
<tr>
<th>Pattern Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Route Pattern</strong></td>
</tr>
<tr>
<td><strong>Partition</strong></td>
</tr>
<tr>
<td><strong>Description</strong></td>
</tr>
<tr>
<td><strong>Numbering Plan</strong></td>
</tr>
<tr>
<td><strong>Route Filter</strong></td>
</tr>
<tr>
<td><strong>MLPP Precedence</strong></td>
</tr>
<tr>
<td><strong>Gateway or Route List</strong></td>
</tr>
<tr>
<td><strong>Route Option</strong></td>
</tr>
<tr>
<td><strong>Call Classification</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

**Calling Party Transformations**

- **Use Calling Party's External Phone Number Mask**
- **Calling Party Transform Mask** | 551-xxxx |
- **Prefix Digits (Outgoing Calls)** |
- **Calling Line ID Presentation** | Default |
- **Calling Name Presentation** | Restricted |

**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)** |
**Translation Pattern Configuration**

**Translation Pattern: 40XX**

**Status: Ready**

- **Copy**
- **Update**
- **Delete**

### Pattern Definition

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Translation Pattern</td>
<td>40XX</td>
</tr>
<tr>
<td>Partition</td>
<td>Incoming Trunk</td>
</tr>
<tr>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>Numbering Plan*</td>
<td>North American Numbering Plan</td>
</tr>
<tr>
<td>Route Filter</td>
<td>&lt;None&gt;</td>
</tr>
<tr>
<td>Calling Search Space</td>
<td>phones</td>
</tr>
<tr>
<td>MLFP Precedence</td>
<td>Default</td>
</tr>
<tr>
<td>Route Option</td>
<td></td>
</tr>
<tr>
<td>Block this pattern</td>
<td>—Not Selected—</td>
</tr>
<tr>
<td>Provide Outside Dial Tone</td>
<td></td>
</tr>
<tr>
<td>Urgent Priority</td>
<td></td>
</tr>
</tbody>
</table>

#### Calling Party Transformations

- **Use Calling Party's External Phone Number Mask**: False
- **Calling Party Transform Mask**: 0
- **Prefix Digits (Outgoing Calls)**: 0
- **Calling Line ID Presentation**: Default
- **Calling Name Presentation**: Default

#### Connected Party Transformations

- **Connected Line ID Presentation**: Restricted
- **Connected Name Presentation**: Default

#### Called Party Transformations

- **Discard Digits**: <None>
- **Called Party Transform Mask**: 0
- **Prefix Digits (Outgoing Calls)**: 0

*indicates required item.*

---

**CONR Translation Pattern Configuration**
Translation Pattern Configuration

Translation Pattern: 40XX
Status: Ready

Pattern Definition
Translation Pattern: 40XX
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

[ ] 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: Default
Connected Name Presentation: Restricted

Called Party Transformations
Discard Digits: <None>
Called Party Transform Mask:
Prefix Digits (Outgoing Calls):

* indicates required item.

MWI Lamp On/Off Configuration
### Translation Pattern Configuration

**Translation Pattern:** 7701  
**Status:** Ready

<table>
<thead>
<tr>
<th>Pattern Definition</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Translation Pattern</strong></td>
<td>7701</td>
</tr>
<tr>
<td><strong>Partition</strong></td>
<td>phones</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Numbering Plan</strong>*</td>
<td>North American Numbering Plan</td>
</tr>
<tr>
<td><strong>Route Filter</strong></td>
<td>&lt; None &gt;</td>
</tr>
<tr>
<td><strong>Calling Search Space</strong></td>
<td>phones</td>
</tr>
<tr>
<td><strong>MLPP Precedence</strong></td>
<td>Default</td>
</tr>
<tr>
<td><strong>Route Option</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Provide Outside Dial Tone</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Urgent Priority</strong></td>
<td></td>
</tr>
</tbody>
</table>

#### Calling Party Transformations

- **Use Calling Party’s External Phone Number Mask**  
  - **Calling Party Transform Mask:** 1154
  - **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:** 7001
- **Prefix Digits (Outgoing Calls)**:  

* indicates required item.
**Translation Pattern Configuration**

**Translation Pattern:** 7700  
**Status:** Ready

### Pattern Definition

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Translation Pattern</td>
<td>7700</td>
</tr>
<tr>
<td>Partition</td>
<td>phones</td>
</tr>
<tr>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>Numbering Plan*</td>
<td>North American Numbering Plan</td>
</tr>
<tr>
<td>Route Filter</td>
<td>&lt;None&gt;</td>
</tr>
<tr>
<td>Calling Search Space</td>
<td>phones</td>
</tr>
<tr>
<td>MLPP Precedence</td>
<td>Default</td>
</tr>
<tr>
<td>Route Option</td>
<td></td>
</tr>
<tr>
<td>Provide Outside Dial Tone</td>
<td></td>
</tr>
<tr>
<td>Block this pattern</td>
<td>Not Selected</td>
</tr>
<tr>
<td>Urgent Priority</td>
<td></td>
</tr>
</tbody>
</table>

### Calling Party Transformations

- **Use Calling Party's External Phone Number 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:**
- **Called Party Transform Mask:** 7700
- **Prefix Digits (Outgoing Calls):**

*indicates required item.
## CallBack Service Parameters

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Parameter Value</th>
<th>Suggested Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Callback Notification Audio File Name*</td>
<td></td>
<td>CallBack:raw</td>
</tr>
<tr>
<td>Connection Proposal Type*</td>
<td>Selection</td>
<td>Connection Release</td>
</tr>
<tr>
<td>Connection Response Type*</td>
<td>Selection</td>
<td>Default to Connection Retention</td>
</tr>
<tr>
<td>Callback Request Protection Timer (T1) (sec)*</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Callback Recall Timer (T3) (sec)*</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Callback Calling Search Space</td>
<td>Selection</td>
<td>None</td>
</tr>
</tbody>
</table>
CallBack Softkey Configuration

Softkey Template Configuration

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
### Softkey Layout Configuration

**Softkey Template: Standard User CallBack**

<table>
<thead>
<tr>
<th>Status: Ready</th>
</tr>
</thead>
</table>

**Unselected Softkeys**

| Conference List (30) (ConfList) |
| Direct Transfer (29) (DirTrn) |
| Immediate Divert (31) (Divert) |
| Join (15) (Join) |
| Quality Report Tool (22) (QRT) |
| Remove Last Conference Party (19) |
| Select (23) (Select) |
| Undefined (0) (Undefined) |
| Video Mode Command (33) (VidMod) |

**Selected Softkeys (ordered by position)**

| Pedial (1) (Redial) |
| *NewCall (2) (NewCall) |
| Forward All (5) (FwdAll) |
| Call Back (21) (CallBack) |

**indicates mandatory fields**

**indicates required item**
**Softkey Layout Configuration**

- **Softkey Template:** Standard User Calling Back
  - **Status:** Ready

- **Unselected Softkeys**:
  - Undefined (0)(Undefined)

- **Selected Softkeys** (ordered by position)**
  - Undefined (0)(Undefined)
  - Canonical Call (9)(EndCall)
  - Call Back (20)(CallBack)

**indicates mandatory fields
* indicates required item**
### Path Replacement Service Parameters

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Parameter Value</th>
<th>Suggested Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Path Replacement Enabled*</td>
<td>True</td>
<td>False</td>
</tr>
<tr>
<td>Path Replacement on Tromboned Calls*</td>
<td>True</td>
<td>True</td>
</tr>
<tr>
<td>Start Path Replacement Minimum Delay Time (sec)*</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Start Path Replacement Maximum Delay Time (sec)*</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Path Replacement T1 Timer (sec)*</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Path Replacement T2 Timer (sec)*</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Path Replacement PINX Id</td>
<td>551</td>
<td></td>
</tr>
<tr>
<td>Path Replacement Calling Search Space</td>
<td>PathReplacementCSS</td>
<td></td>
</tr>
</tbody>
</table>
### Call Pickup Configuration

**Call Pickup Number:** 551 - Incoming Trunk  
Status: Ready

<table>
<thead>
<tr>
<th>Action</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copy</td>
<td></td>
</tr>
<tr>
<td>Update</td>
<td></td>
</tr>
<tr>
<td>Delete</td>
<td></td>
</tr>
</tbody>
</table>

- **Call Pickup Number:** 551  
- **Description:**  
- **Partition:** Incoming Trunk

* indicates required item
### Clusterwide Parameters (Feature - Forward)

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Parameter Value</th>
<th>Suggested Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward Maximum Hop Count*</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Forward No Answer Timer (sec)*</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Max Forwards Hops to DN*</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Retain Forward Information*</td>
<td>False</td>
<td>False</td>
</tr>
<tr>
<td>Forward By Reroute Enabled*</td>
<td>True</td>
<td>False</td>
</tr>
<tr>
<td>Forward By Reroute Timer (sec)*</td>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>
### Expansion Module Information

<table>
<thead>
<tr>
<th>Module 1</th>
<th>&lt;None&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module 2</td>
<td>&lt;None&gt;</td>
</tr>
</tbody>
</table>

### Firmware Load Information (leave blank to use default)

<table>
<thead>
<tr>
<th>Phone Load Name</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Module 1 Load Name</td>
<td>(Module 1 selection required)</td>
</tr>
<tr>
<td>Module 2 Load Name</td>
<td>(Module 2 selection required)</td>
</tr>
</tbody>
</table>

### 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

<table>
<thead>
<tr>
<th>Log Out Profile</th>
<th>— Not Selected —</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log In User ID</td>
<td>&lt; None &gt;</td>
</tr>
<tr>
<td>Log In Time</td>
<td>&lt; None &gt;</td>
</tr>
<tr>
<td>Log Out Time</td>
<td>&lt; None &gt;</td>
</tr>
</tbody>
</table>

### Certification Authority Proxy Function (CAPF) Information

- Certificate Operation
- Authentication Mode
- Authentication String
- Key Size (bits)
- Operation Completes By**
- Certificate Operation Status

<table>
<thead>
<tr>
<th>Certificate Operation</th>
<th>No Pending Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authentication Mode</td>
<td>By Authentication String</td>
</tr>
<tr>
<td>Authentication String</td>
<td>1024</td>
</tr>
<tr>
<td>Key Size (bits)</td>
<td>1024</td>
</tr>
<tr>
<td>Operation Completes By**</td>
<td>YYYY : MM : DD : HH</td>
</tr>
<tr>
<td>Certificate Operation Status</td>
<td>None</td>
</tr>
</tbody>
</table>

### Multilevel Precedence and Preemption (MLPP) Information

- MLPP Domain
- MLPP Indication

<table>
<thead>
<tr>
<th>MLPP Domain</th>
<th>(e.g., &quot;0000FF&quot;)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLPP Indication</td>
<td>Default</td>
</tr>
</tbody>
</table>

---

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Page 43 of 54
### Multilevel Precedence and Preemption (MLPP) Information

<table>
<thead>
<tr>
<th>MLPP Domain</th>
<th>(e.g., &quot;0000FF&quot;)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLPP Indication</td>
<td>Default</td>
</tr>
<tr>
<td>MLPP Preemption</td>
<td>Default</td>
</tr>
</tbody>
</table>

### Product Specific Configuration

<table>
<thead>
<tr>
<th>Feature</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disable Speakerphone</td>
<td></td>
</tr>
<tr>
<td>Disable Speakerphone and Headset</td>
<td></td>
</tr>
<tr>
<td>Forwarding Delay*</td>
<td>Disabled</td>
</tr>
<tr>
<td>PC Port*</td>
<td>Enabled</td>
</tr>
<tr>
<td>Settings Access*</td>
<td>Enabled</td>
</tr>
<tr>
<td>Gratuitous ARP*</td>
<td>Enabled</td>
</tr>
<tr>
<td>PC Voice VLAN Access*</td>
<td>Enabled</td>
</tr>
<tr>
<td>Video Capabilities*</td>
<td>Disabled</td>
</tr>
<tr>
<td>Auto Line Select*</td>
<td>Disabled</td>
</tr>
</tbody>
</table>

* Indicates a required item.
** Indicates time on publisher.
<table>
<thead>
<tr>
<th><strong>No Answer Ring Duration</strong></th>
<th>(seconds)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Call Pickup Group</strong></td>
<td>&lt; None &gt;</td>
</tr>
</tbody>
</table>

**MLPP Alternate Party Settings**

<table>
<thead>
<tr>
<th><strong>Target (Destination)</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Calling Search Space</strong></td>
<td>&lt; None &gt;</td>
</tr>
<tr>
<td><strong>No Answer Ring Duration</strong></td>
<td>(seconds)</td>
</tr>
</tbody>
</table>

**Line Settings for all Devices**

| **Alerting Name** | MARS 0 |

**Line Settings for this Device**

<table>
<thead>
<tr>
<th><strong>Display (Internal Caller ID)</strong></th>
<th>MARS 0</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Line Text Label</strong></td>
<td>MARS 0</td>
</tr>
<tr>
<td><strong>External Phone Number Mask</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Message Waiting Lamp Policy</strong></td>
<td>Use System Policy</td>
</tr>
<tr>
<td><strong>Ring Setting (Phone Idle)</strong></td>
<td>Use System Default</td>
</tr>
<tr>
<td><strong>Ring Setting (Phone Active)</strong></td>
<td>Use System Default</td>
</tr>
</tbody>
</table>

**Multiple Call / Call Waiting Settings**

<table>
<thead>
<tr>
<th><strong>Maximum Number of Calls</strong></th>
<th>1 (1 - 200)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Busy Trigger</strong></td>
<td>2 (&lt; Max. Calls)</td>
</tr>
</tbody>
</table>

**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)
Configuring the Cisco CMM-E1 MGCP Router

CMM-E1#
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 5 days, 1 hour, 8 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 196608K/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 : 3496 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
ip host CM-VENUS 172.20.214.254
!

isdn switch-type primary-4ess
!

ccm-manager mgcp
ccm-manager music-on-hold
ccm-manager config server CM-MARS
ccm-manager config
!
!
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-qsig
  isdn incoming-voice voice
  isdn bind-l3 ccm-manager
  no cdp enable
!
interface Serial1/1:15
  no ip address
  no logging event link-status
  isdn switch-type primary-qsig
  isdn protocol-emulate network
  isdn incoming-voice voice
  isdn T310 120000
  isdn bind-l3 ccm-manager
  no cdp enable
interface Serial1/2:15
  no ip address
  no logging event link-status
  isdn switch-type primary-net5
  isdn protocol-emulate network
  isdn incoming-voice voice
  isdn bind-l3 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 bind-l3 ccm-manager
  no cdp enable

interface Serial1/4:15
  no ip address
  no logging event link-status
  isdn switch-type primary-qsig
  isdn protocol-emulate network
  isdn incoming-voice voice
  isdn T310 120000
  isdn bind-l3 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-l3 ccm-manager
  no cdp enable

ip classless
ip route 0.0.0.0 0.0.0.0 172.20.231.1
ip route 0.0.0.0 0.0.0.0 172.20.214.1
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
mgcp package-capability pre-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
    port 1/0:15
!
dial-peer voice 2 pots
  application mgcpapp
    port 1/1:15
!
dial-peer voice 3 pots
  application mgcpapp
    port 1/2:15
!
dial-peer voice 4 pots
  application mgcpapp
    port 1/3:15
!
dial-peer voice 5 pots
  application mgcpapp
    port 1/4:15
!
dial-peer voice 6 pots
  application mgcpapp
    port 1/5:15
!
line con 0
transport preferred all
transport output all
line vty 0 4
 login
 transport preferred all
 transport input all
 transport output all
!
!
end

CMM-E1#
### Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANF-PR</td>
<td>Additional Network Feature Path Replacement</td>
</tr>
<tr>
<td>AOC</td>
<td>Advice-of-charge. Information element is sent with the connection setup information for incoming Euro-ISDN connections. The AOC IE is used for call charge calculation.</td>
</tr>
<tr>
<td>CUCM</td>
<td>Cisco Unified CallManager</td>
</tr>
<tr>
<td>CCBS</td>
<td>Call Completion to Busy Subscriber</td>
</tr>
<tr>
<td>CCNR</td>
<td>Call Completion on No Reply</td>
</tr>
<tr>
<td>CFB</td>
<td>Call Forwarding on Busy</td>
</tr>
<tr>
<td>CFNR</td>
<td>Call Forwarding No Reply</td>
</tr>
<tr>
<td>CFU</td>
<td>Call Forwarding Unconditional</td>
</tr>
<tr>
<td>CLIP</td>
<td>Calling Line (Number) Identification Presentation</td>
</tr>
<tr>
<td>CLIR</td>
<td>Calling Line (Number) Identification Restriction</td>
</tr>
<tr>
<td>CMM</td>
<td>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</td>
</tr>
<tr>
<td>CNIP</td>
<td>Calling Name Identification Presentation</td>
</tr>
<tr>
<td>CNIR</td>
<td>Calling Name Identification Restriction</td>
</tr>
<tr>
<td>COLP</td>
<td>Connected Line (Number) Identification Presentation</td>
</tr>
<tr>
<td>COLR</td>
<td>Connected Line (Number) Identification Restriction</td>
</tr>
<tr>
<td>CONP</td>
<td>Connected Name Identification Presentation</td>
</tr>
<tr>
<td>CONR</td>
<td>Connected Name Identification Restriction</td>
</tr>
<tr>
<td>CT</td>
<td>Call Transfer</td>
</tr>
<tr>
<td>MWI</td>
<td>Message Waiting Indicator</td>
</tr>
<tr>
<td>PSTN</td>
<td>Public Switched Telephone Network</td>
</tr>
</tbody>
</table>
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