



Siemens HiPath 4000 Release 1 using E1 PRI EURO to Cisco Unified CallManager 4.1

November 8, 2007 Revision 2

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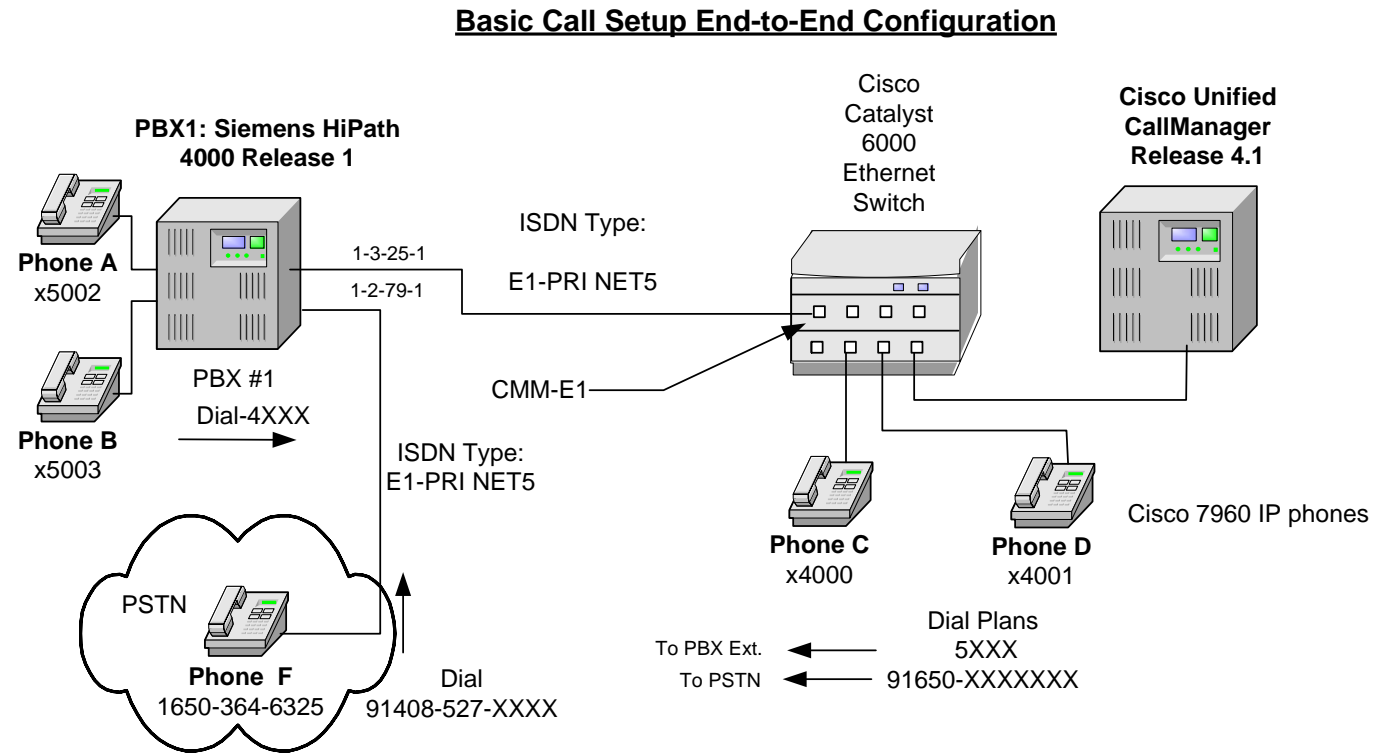
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Introduction

- This is an application note for connectivity of Siemens HiPath 4000 Release 1 PBX with Cisco Unified CallManager (CUCM) Release 4.1 using Cisco Communication Media Module CMM-E1 PRI as MGCP gateway.
- 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 PRI link as MGCP gateway.
- Connectivity is achieved by using the PRI EURO protocol type on the MGCP gateway and ETSI switch type on the Siemens HiPath 4000 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 ISDN PRI implementation does not depend on the physical interface.

Network Topology

Figure 1. Network Topology



Limitations

Calling Name and Number Feature

- The Siemens HiPath 4000 PRI Interface with ETSI protocol does not support Calling Name Delivery Presentation feature.
- Cisco Unified CallManager 4.1 PRI implementation does not support sending Connected Number information.

B-Channel Mapping

- Siemens HiPath 4000 PBX uses Timeslot channel numbering (1-15, 17-31) when ETSI protocol is selected, therefore the Cisco CMM-E1 Gateway configuration for **Channel IE Type** field should be set to **Timeslot Number**.

System Components

Hardware Requirements

- Cisco Hardware:
 - Cisco Catalyst 6000 switch with CMM-E1 Gateway
 - Cisco Unified CallManager Server



- Siemens HiPath 4000 PBX Hardware:

- DIU-N2

Software Requirements

- PBX Software version 1
- Cisco CallManager 4.1

Features

Features Supported

- CLIP-Calling Line (Number) Identification Presentation

Features Not Supported

- Calling/Connected Name delivery is not supported by the Siemens HiPath 4000 PRI Interface with ETSI protocol
- Sending Connected Number is not supported by Cisco CallManager 4.1 PRI protocol

Configuration

Configuring the Siemens HiPath 4000 PBX

1. Add the new access code to Dialing Plans using WABE + LDPLN.
2. Add the new trunk board using BCSU.
3. Configure Class of Trunk using COT.
4. Configure Class of Parameter for device handler using COP.
5. Configure Class of Service using COSSU.
6. Add the new trunk group access code using BUEND.
7. Configure trunk using TDCSU.
8. Configure Reference Clock using REFTA.
9. Configure trunk Least Cost Routing using LDAT + RICHT.
10. Configure LCR Out-dial Rules using LODR.

Configuration Menus and Commands

DPLN

```
<dis-wabe:gen;
DIS-WABE:GEN;
H500: AMO WABE STARTED
```

DIGIT INTERPRETATION		VALID FOR ALL DIAL PLANS					
CODE		CALL	PROGRESS	STATE	DIGIT	RESERVED/CONVERT	
		1	11111	11112	22	ANALYSIS	DNI/ADD-INFO
		0	12345	67890	12345	67890	12
						RESULT	*=OWN NODE
0		. . . . .	. . . . .	. . . . .	. . . . .	CO	R
001	- 009	* . . . . .	. . . . .	. . . . .	. . . . .	NETRTE	
111		. . . . .	. . . . .	. . . . .	. . . . .	TIE	
12		. . . . .	. . . . .	. . . . .	. . . . .	TIE	R
13	- 14	. . . . .	. . . . .	. . . . .	. . . . .	TIE	
21		. . . . .	. . . . .	. . . . .	. . . . .	KNOVRKY	
22		. . . . .	. . . . .	. . . . .	. . . . .	DNDKY	
222		. . . . .	. . . . .	. . . . .	. . . . .	TIE	
23		. . . . .	. . . . .	. . . . .	. . . . .	FWDKY	
24		. . . . .	. . . . .	. . . . .	. . . . .	MBKY	
25		. . . . .	. . . . .	. . . . .	. . . . .	MSGRKY	
26		. . . . .	. . . . .	. . . . .	. . . . .	DAKY	
27		. . . . .	. . . . .	. . . . .	. . . . .	DSSKY	



28	. . . . . * . .	VCRKY
29	. . . . . * . .	VCKY
30	. . . . . * . .	CONFKY

DIGIT INTERPRETATION VALID FOR ALL DIAL PLANS

CODE	CALL PROGRESS STATE		DIGIT ANALYSIS RESULT	RESERVED/CONVERT DNI/ADD-INFO
	1 1111 11112 22	0 12345 67890 12345 67890 12		

3000 - 3010	. . . . . * . .	STN	DESTNO 30 DNNO 0- 0-222
3011 - 3020	. . . . . * . .	STN	DESTNO 31 DNNO 0- 0- 31
3021 - 3030	. . . . . * . .	STN	DESTNO 32 DNNO 0- 0- 32
3031 - 3040	. . . . . * . .	STN	DESTNO 33 DNNO 0- 0- 33
3041 - 3050	. . . . . * . .	STN	DESTNO 35 DNNO 0- 0- 35
31	. . . . . * . .	NAMEKY	
32	. . . . . * . .	PARKKY	

DIGIT INTERPRETATION VALID FOR ALL DIAL PLANS

CODE	CALL PROGRESS STATE		DIGIT ANALYSIS RESULT	RESERVED/CONVERT DNI/ADD-INFO
	1 1111 11112 22	0 12345 67890 12345 67890 12		

33	. . . . . * . .	CCKY	
34	. . . . . * . .	HTKY	
35	. . . . . * . .	STKY	
36	. . . . . * . .	REMKY	
36 - 37	. . . . . * . .	CO	
38	. . . . . * . .	TIMEKY	
39	. . . . . * . .	TIE	
4000 - 4050	. . . . . * . .	STN	DESTNO 111 DNNO 0- 0-111
4051 - 4566	. . . . . * . .	STN	DESTNO 222 DNNO 0- 0-222
4567	. . . . . * . .	STN	DESTNO 34 DNNO 0- 0-200

DIGIT INTERPRETATION VALID FOR ALL DIAL PLANS

CODE	CALL PROGRESS STATE		DIGIT ANALYSIS RESULT	RESERVED/CONVERT DNI/ADD-INFO
	1 1111 11112 22	0 12345 67890 12345 67890 12		

4568 - 4999	. . . . . * . .	STN	DESTNO 222 DNNO 0- 0-222
5000 - 5040	. . . . . * . .	STN	DESTNO 0 DNNO 0- 0-555*
5500 - 5501	. . . . . * . .	STN	DESTNO 56 DNNO 0- 0-560
555	. . . . . * . .	OWNNODE	



560	. **** * *	TIE	
59	. **** * *	TIE	
6000 - 6009	. **** * *	STN	R
			DESTNO 0
			DNNO 0- 0-555*

DIGIT INTERPRETATION VALID FOR ALL DIAL PLANS

CODE	CALL PROGRESS STATE		DIGIT	RESERVED/CONVERT
	1 1111 1112 22	ANALYSIS	DNI/ADD-INFO	
0 12345 67890 12345 67890 12	RESULT	*=OWN NODE		

7000 - 7002	. **** * *	STN	
			DESTNO 56
			DNNO 0- 0-560
8000 - 8050	. **** * *	STN	
			DESTNO 222
			DNNO 0- 0-222
8060	. **** * *	TIE	
8070	. **** * *	TIE	
83	. **** *	SPDC1	
84	. **** *	SPDC2	
88	. . . . . *	SCONSI	R
89	. . . . . *	SCONSCO	R
9	. **** * *	TIE	
*13	. . . . *	AHTVCE	
*15	. * . . . *	SPLIT	
*16	. . . . *	AREM	
*17	. * . . . *	TRACE	

DIGIT INTERPRETATION VALID FOR ALL DIAL PLANS

CODE	CALL PROGRESS STATE		DIGIT	RESERVED/CONVERT
	1 1111 1112 22	ANALYSIS	DNI/ADD-INFO	
0 12345 67890 12345 67890 12	RESULT	*=OWN NODE		

*18	. . . . *	ACOSX	
*19	. * . . .	KNOVR	
*20	. . . . *	ADND	
*25	. . . . *	FWDFRM	
*29	. . . . *	AFFWDVCE	

AMO-WABE -111 DIALLING PLANS, FEATURE ACCESS CODES
 DISPLAY COMPLETED;

Enbloc Sending Dial Plan, DPLN

<DISPLAY-LDPLN:TYPE=LDP,LDPNO=4;
 DISPLAY-LDPLN:TYPE=LDP,LDPNO=4;
 H500: AMO LDPLN STARTED

LDPNO : 4	LDP : 111-X	
	SPC : 22	
	FDSFIELD : 0 SDSFIELD : 0 PINDP : N	
DPLN	LROUTE	LAUTH
0	1	1
1	1	1
2	1	1
3	1	1
4	1	1
5	1	1



6	1	1
7	1	1
8	1	1
9	1	1
10	1	1
11	1	1
12	1	1
13	1	1
14	1	1
15	1	1

AMO-LDPLN-111 ADMINISTRATION LCR DIALPLAN
DISPLAY COMPLETED;

Access code for Overlap Sending Dial Plan, DPLN

<DISPLAY-LDPLN:TYPE=LDP,LDPNO=12;
DISPLAY-LDPLN:TYPE=LDP,LDPNO=12;
H500: AMO LDPLN STARTED

LDPNO :	12	LDP :	59-X
		SPC :	22
		FDSFIELD :	0 SDSFIELD : 0 PINDP : N
DPLN	LROUTE	LAUTH	
0	27	1	
1	27	1	
2	27	1	
3	27	1	
4	27	1	
5	27	1	
6	27	1	
7	27	1	
8	27	1	
9	27	1	
10	27	1	
11	27	1	
12	27	1	
13	27	1	
14	27	1	
15	27	1	

AMO-LDPLN-111 ADMINISTRATION LCR DIALPLAN
DISPLAY COMPLETED;

PSTN Dial Plan, DPLN

<DISPLAY-LDPLN:TYPE=LDP,LDPNO=5;
DISPLAY-LDPLN:TYPE=LDP,LDPNO=5;
H500: AMO LDPLN STARTED

LDPNO :	5	LDP :	9-1650-XXXXXXX
		SPC :	22
		FDSFIELD :	0 SDSFIELD : 0 PINDP : N
DPLN	LROUTE	LAUTH	
0	165	1	
1	165	1	
2	165	1	



3	165	1
4	165	1
5	165	1
6	165	1
7	165	1
8	165	1
9	165	1
10	165	1
11	165	1
12	165	1
13	165	1
14	165	1
15	165	1

AMO-LDPLN-111 ADMINISTRATION LCR DIALPLAN
 DISPLAY COMPLETED;

BCSU

PRI Board

<DISPLAY-BCSU:TYPE=TBL,LTG=1,LTU=3,SLOT=25;
 DISPLAY-BCSU:TYPE=TBL,LTG=1,LTU=3,SLOT=25;
 H500: AMO BCSU STARTED

ADDRESS : LTG 1 LTU 3 SOURCE GROUP 1

PEN	ASSIGNED MODULE	MODULE TYPE	FCT ID	HWY BDL	INSERTED MODULE	STATE	HW-INFO	MODULE STATUS
25	Q2196-X	DIU-N2	1	A	Q2196-X	1	-06 -	READY

AMO-BCSU -111 BOARD CONFIGURATION, SWITCHING UNIT
 DISPLAY COMPLETED;
 <

PSTN board

<DISPLAY-BCSU:TYPE=TBL,LTG=1,LTU=2,SLOT=79;
 DISPLAY-BCSU:TYPE=TBL,LTG=1,LTU=2,SLOT=79;
 H500: AMO BCSU STARTED

ADDRESS : LTG 1 LTU 2 SOURCE GROUP 1

PEN	ASSIGNED MODULE	MODULE TYPE	FCT ID	HWY BDL	INSERTED MODULE	STATE	HW-INFO	MODULE STATUS
79	Q2196-X	DIU-N2	1	A	Q2196-X	1	-06 -	READY

AMO-BCSU -111 BOARD CONFIGURATION, SWITCHING UNIT
 DISPLAY COMPLETED;

Class of Trunk, COT

<dis-cot:22;
 DIS-COT:22;
 H500: AMO COT STARTED

COT: 22 INFO:
 DEVICE: INDEP SOURCE: DB
 PARAMETER:
 PRIORITY FOR AC WILL BE DETERMINED FROM MESSAGE PRI
 RECALL IF USER HANGS UP IN CONSULTATION CALL RCL



```

TRUNK CALL TRANSFER
TRUNK SIGNALING ANSWER
CHANGEOVER FROM HOLD TO RING TONE
KNOCKING OVERRIDE POSSIBLE
CALL EXTEND FOR BUSY, RING OR CALL STATE
NETWORKWIDE AUTOMATIC CALLBACK ON BUSY
NETWORKWIDE AUTOMATIC CALLBACK ON FREE
DON'T RELEASE CALL TO BUSY HUNT GROUP
CONNECTION TO ROUTE OPTIMIZATION NODE
TSC-SIGNALING FOR NETWORKWIDE FEATURES (MANDATORY)
INCOMING CDR BY ZONE OR FROM LINE
AOC PER CALL (AUTOMATICAL OR ON REQUEST), MAND. CORNET-NQ
LINE WITH IMPLICIT NUMBERS
NO TONE
XFER
ANS
CHRT
KNOR
CEBC
CBBN
CBFN
BSHT
ROPT
TSCS
ICZL
AOCC
LINO
NTON

```

```

AMO-COT -111 CLASS OF TRUNK FOR CALL PROCESSING
DISPLAY COMPLETED;

```

Class of Parameter for Device Handler, COP

```

<DISPLAY-COP:COPNO=21;
DISPLAY-COP:COPNO=21;
H500: AMO COP STARTED

```

```

COP: 21 INFO:
DEVICE: INDEP SOURCE: DB
PARAMETER:
  LINE WITH END-OF-DIAL
  SPECIAL MODE
  CODE CALLING RELEASE AFTER EVERY TASK
  REGISTRATION OF LAYER 3 ADVISORIES
  EOD
  SFRM
  CCR
  L3AR
CO TRUNK ACCESS:
  TRUNK ACCESS TA
TOLL ACCESS:
  TRUNK ACCESS TA

```

```

AMO-COP -111 CLASS OF PARAMETER FOR DEVICE HANDLER
DISPLAY COMPLETED;

```

Class of Service, COSSU

```

<DISPLAY-COSSU:TYPE=COS,COS=32;
DISPLAY-COSSU:TYPE=COS,COS=32;
H500: AMO COSSU STARTED

```

COS	VOICE	FAX	DTE
32	> TA TNOTCR	NOCO NOTIE	TA TNOTCR BASIC MSN CDRINT MULTRA

```

AMO-COSSU-111 CLASSES OF SERVICE
DISPLAY COMPLETED;

```

```

<DISPLAY-COSSU:TYPE=LCOSV,LCOSV=1;
DISPLAY-COSSU:TYPE=LCOSV,LCOSV=1;
H500: AMO COSSU STARTED

```



```

+-----+-----+-----+-----+-----+-----+-----+
| LCOS |           |           |           |           |           |           |           |
| V    |           |           |           |           |           |           |           |
|      | 123456789012345678901234567890123456789012345678901234 | COPIN |
|      | >SERVICE INFORMATION                                     | NUM  |
+-----+-----+-----+-----+-----+-----+-----+
| 1 | X..... | ..... | ..... | ..... | ..... | ..... | ..... |
|      | >LCR ATTENDANT FOR VOICE                               |      |
+-----+-----+-----+-----+-----+-----+-----+

```

AMO-COSSU-111 CLASSES OF SERVICE
 DISPLAY COMPLETED;

Trunk Group Access Code, BUEND

<DISPLAY-BUEND:TGRP=27,FORMAT=L;
 DISPLAY-BUEND:TGRP=27,FORMAT=L;
 H500: AMO BUEND STARTED

```

+-----+-----+-----+-----+-----+-----+-----+
| TGRP NUMBER : 27 TGRP NAME : PRI ECMA 4 MAXIMUM NO. : 30 |
|              | CHARCON : NEUTRAL |
| SUBGROUP NO.: 10 DEVICE TYPE : S2CONN TRACENO : 0 |
| RESERVED : N SEARCH MODE : CIRCULAR ACD THRESHOLD : * |
| NUMBER OF ASSOCIATED ROUTES : 4 PRIORITY : 2 |
| TDDRFLAG : ON TDDRTHRESHOLD: 3 SOURCEGROUPIDX : 1 |
| GDTRRULE : 0 ACDDPMGRP : 0 |
| THE FOLLOWING TRUNKS (LTG-LTU-SLOT-CCT) HAVE BEEN ALLOCATED: |
+-----+-----+-----+-----+-----+-----+-----+
| 1- 3- 25-1 1 | 1- 3- 25-1 2 | 1- 3- 25-1 3 |
| 1- 3- 25-1 4 | 1- 3- 25-1 5 | 1- 3- 25-1 6 |
| 1- 3- 25-1 7 | 1- 3- 25-1 8 | 1- 3- 25-1 9 |
| 1- 3- 25-1 10 | 1- 3- 25-1 11 | 1- 3- 25-1 12 |
| 1- 3- 25-1 13 | 1- 3- 25-1 14 | 1- 3- 25-1 15 |
| 1- 3- 25-1 16 | 1- 3- 25-1 17 | 1- 3- 25-1 18 |
| 1- 3- 25-1 19 | 1- 3- 25-1 20 | 1- 3- 25-1 21 |
| 1- 3- 25-1 22 | 1- 3- 25-1 23 | 1- 3- 25-1 24 |
| 1- 3- 25-1 25 | 1- 3- 25-1 26 | 1- 3- 25-1 27 |
| 1- 3- 25-1 28 | 1- 3- 25-1 29 | 1- 3- 25-1 30 |
+-----+-----+-----+-----+-----+-----+-----+

```

AMO-BUEND-111 TRUNK GROUP
 DISPLAY COMPLETED;

Trunk Configuration, TDCSU

For Master-side Configuration

<dis-tdcsu:1-3-25-1;
 DIS-TDCSU:1-3-25-1;
 H500: AMO TDCSU STARTED

```

+-----+-----+-----+-----+-----+-----+-----+
| DEV = S2CONN PEN = 1-03-025-1 TGRP = 27 |
+-----+-----+-----+-----+-----+-----+-----+
| PROTVAR = ETSI INS = Y SRCHMODE = CIR |
| COTNO = 22 COPNO = 21 DPLN = 0 |
| ITR = 1 COS = 32 LCOSV = 1 |
| LCOSD = 1 CCT = PRI ECMA 4 DESTNO = 111 |
| SEGMENT = 1 DEDSCC = DEDSVC = NONE |
| FACILITY = DITIDX = SRTIDX = |
+-----+-----+-----+-----+-----+-----+-----+

```



```

| TRTBL   = GDTR          SIDANI   = N          ATNTYP   = TIE
| CBMATTR = NONE         NWMUXTIM = 10         TCHARG   = N
| SUPPRESS = 0           DGTPR    =           CHIMAP   = N
| ISDNIP   =           ISDNPNP   =
| PNPL2P   =           PNPL1P   =           PNPAC    =
| TRACOUNT = 31         SATCOUNT = MANY   NNO       = 111
| ALARMNO  = 0         FIDX     = 1         CARRIER  = 1
| ZONE     = EMPTY     COTX     = 22        FWDX     = 5
| DOMTYPE  =           DOMAINNO  =           TPROFNO  =
| INIGHT   =           UUSCCY    = 8         CCHDL    =
| UUSCCX   = 16        UUSCCY    = 8         FNIDX    = 1
| CLASSMRK = EC        & G711    & G729OPT   SRCGRP   =
| TCCID    =
+-----+
| BCNEG    = N          BCGR     = 1          LWPARG   = 1
| LWPP     = 0         LWLT     = 0          LWPS     = 0
| LWR1     = 0         LWR2     = 0
| SVCDOM   =
| BCHAN    = 1 && 30
+-----+

```

AMOUNT OF B-CHANNELS IN THIS DISPLAY-OUTPUT: 30

AMO-TDCSU-111 DIGITAL TRUNKS
 DISPLAY COMPLETED;

<DISPLAY-LWPAR:FORMAT=L,BLNO=1,TYPE=DIUS2;
 DISPLAY-LWPAR:FORMAT=L,BLNO=1,TYPE=DIUS2;
 H500: AMO LWPAR STARTED

```

+-----+
| LOADWARE PARAMETERS      CIRCUIT TYPE: DIUS2  SOURCE:DB  BLOCK: 1 |
+-----+
| LNTPYE  = COPPER        VERSION  = S2          QUAL      = ON
| MASTER  = Y             DCHAN1  = 16         DCHAN2    = 0
| PATTERN = D5H           QUAL1    = 10 SEC.   QUAL2     = 10 MIN.
| SMD     = Y             PERMACT = Y          FCBAB     = DFH
| CDG     = N             FIXEDTEI = 0         CNTRNR    = 255
| TELVERIF = N           CRC4REP  = N
| DEV     = INDEP
| INFO    =
+-----+

```

AMO-LWPAR-111 LOADWARE PARAMETERS FOR NETWORKING MODULES
 DISPLAY COMPLETED;

For Slave-side Configuration

<dis-tdcsu:1-3-25-1;
 DIS-TDCSU:1-3-25-1;
 H500: AMO TDCSU STARTED

```

+-----+ DIGITAL TRUNK (FORMAT=L) +-----+
| DEV     = S2CONN        PEN      = 1-03-025-1  TGRP     = 27
+-----+
| PROTVAR = ETSI         INS       = Y          SRCHMODE = CIR
| COTNO   = 22          COPNO    = 21         DPLN     = 0
| ITR     = 1           COS       = 32         LCOSV    = 1
| LCOSD   = 1          CCT       = PRI ECMA 4  DESTNO   = 111
| SEGMENT = 1          DEDSCC   =          DEDSVC   = NONE
| FACILITY =           DITIDX   =          SRTIDX   =
| TRTBL   = GDTR        SIDANI   = N          ATNTYP   = TIE
| CBMATTR = NONE        NWMUXTIM = 10         TCHARG   = N
| SUPPRESS = 0          DGTPR    =          CHIMAP   = N
| ISDNIP   =           ISDNPNP   =
| PNPL2P   =           PNPL1P   =          PNPAC    =
+-----+

```



```

TRACOUNT = 31          SATCOUNT = MANY          NNO          = 111
ALARMNO  = 0           FIDX          = 1           CARRIER     = 1
ZONE     = EMPTY      COTX          = 22          FWDX        = 5
DOMTYPE  =             DOMAINNO    =             TPROFNO     =
INIGHT   =             UUSCCY      = 8           CCHDL       =
UUSCCX   = 16         UUSCCY      = 8           FNIDX       = 1
CLASSMRK = EC        & G711      & G729OPT    SRCGRP      =
TCCID    =
-----
BCNEG    = N           BCGR       = 1           LWPARG      = 0
LWPP     = 0           LWLT      = 0           LWPS       = 0
LWR1     = 0           LWR2      = 0
SVCDOM   =
BCHAN    = 1 && 30
-----

```

AMOUNT OF B-CHANNELS IN THIS DISPLAY-OUTPUT: 30

AMO-TDCSU-111 DIGITAL TRUNKS
 DISPLAY COMPLETED;

<DISPLAY-LWPARG:FORMAT=L,BLNO=0,TYPE=DIUS2;
 DISPLAY-LWPARG:FORMAT=L,BLNO=0,TYPE=DIUS2;
 H500: AMO LWPARG STARTED

```

+-----+
| LOADWARE PARAMETERS      CIRCUIT TYPE: DIUS2  SOURCE:DB  BLOCK: 0 |
+-----+
| LNTYPE = COPPER          VERSION = S2          QUAL      = ON
| MASTER = N              DCHAN1 = 16          DCHAN2   = 0
| PATTERN = D5H           QUAL1  = 10 SEC.    QUAL2    = 10 MIN.
| SMD     = N             PERMACT = Y          FCBAB    = DFH
| CDG     = N             FIXEDTEI = 0          CNTRNR   = 255
| TEIVERIF = N           CRC4REP  = N
| DEV     = INDEP
| INFO    =
+-----+

```

AMO-LWPARG-111 LOADWARE PARAMETERS FOR NETWORKING MODULES
 DISPLAY COMPLETED;

PSTN Trunk Configuration, TDCSU

<dis-tdcsu:1-2-79-1;
 DIS-TDCSU:1-2-79-1;
 H500: AMO TDCSU STARTED

```

+-----+ DIGITAL TRUNK (FORMAT=L) -----+
| DEV      = S2CONN      PEN      = 1-02-079-1  TGRP      = 23
+-----+
| PROTVAR  = ETSI       INS       = Y          SRCHMODE  = CIR
| COTNO    = 21         COPNO   = 21          DPLN     = 0
| ITR      = 1          COS       = 10          LCOSV    = 32
| LCOSD    = 32        CCT       = PRI ECMA 2  DESTNO   = 100
| SEGMENT  = 8         DEDSCC  =          DEDSVC   = NONE
| FACILITY =           DITIDX   =          SRTIDX   =
| TRTBLE  = GDTR       SIDANI   = N          ATNTYP   = TIE
| CBMATR   = NONE      NWMUXTIM = 10         TCHARG   = N
| SUPPRESS = 0         DGTPR   =          CHIMAP   = N
| ISDNIP   =           ISDNPN  =
| PNPL2P   =           PNPL1P  =          PNPAC   =
| TRACOUNT = 31        SATCOUNT = MANY      NNO       = 1
| ALARMNO  = 0         FIDX     = 1          CARRIER  = 1
| ZONE     = EMPTY     COTX     = 21          FWDX     = 10
| DOMTYPE  =           DOMAINNO =          TPROFNO  =
+-----+

```



```

| INIGHT =                               CCHDL =
| UUSCCX = 16                           UUSCCY = 8           CCHDL =
| CLASSMRK = EC & G711 & G729OPT        FNIDX = 1
| TCCID =                               SRCGRP =
|-----|-----|-----|-----|
| BCNEG = N                             BCGR = 1           LWPAR = 1
| LWPP = 0                               LWLT = 0          LWPS = 0
| LWR1 = 0                               LWR2 = 0
| SVCDOM =
| BCHAN = 1 && 30
|-----|-----|-----|-----|

```

AMOUNT OF B-CHANNELS IN THIS DISPLAY-OUTPUT: 30

AMO-TDCSU-111 DIGITAL TRUNKS
 DISPLAY COMPLETED;

Reference Clock Configuration, REFTA

For Master-side Configuration

```

<DISPLAY-REFTA:TYPE=CIRCUIT,PEN=1-3-25-1,KIND=ALL;
DISPLAY-REFTA:TYPE=CIRCUIT,PEN=1-3-25-1,KIND=ALL;
H500: AMO REFTA STARTED

```

REFERENCE CLOCK CIRCUITS								
PEN	MODULE	DEVICE	PRI	ERROR	BLOCK	SUPP.	READY BUT ASYN.	SRCGRP
1- 3- 25- 1	DIU-N2	S2CONN	0	0	N		N	1

AMO-REFTA-111 REFERENCE CLOCK TABLE
 DISPLAY COMPLETED;

For Slave-side Configuration

```

<DISPLAY-REFTA:TYPE=CIRCUIT,PEN=1-3-25-1,KIND=ALL;
DISPLAY-REFTA:TYPE=CIRCUIT,PEN=1-3-25-1,KIND=ALL;
H500: AMO REFTA STARTED

```

REFERENCE CLOCK CIRCUITS								
PEN	MODULE	DEVICE	PRI	ERROR	BLOCK	SUPP.	READY BUT ASYN.	SRCGRP
1- 3- 25- 1	DIU-N2	S2CONN	11	0	N		N	1

AMO-REFTA-111 REFERENCE CLOCK TABLE
 DISPLAY COMPLETED;

Trunk Least Cost Routing Configuration

LDAT



```
<DISPLAY-LDAT:TYPE=LCR,LROUTE=1;
DISPLAY-LDAT:TYPE=LCR,LROUTE=1;
H500: AMO LDAT STARTED
```

```

+-----+
| LROUTE = 1      LDPLN      NAME = ROPTCCM      SERVICE = ALL |
| TYPE = LCR      DNNNO OF ROUTE = 111 |
| SERVICE INFO = |
+-----+
| LRTEL | LVAL | TGRP | ODR | LAUTH | SCHEDULE | CARRIER | LATTR | LDSRT |
| ABCDEFGH | ZONE | | | | | | | |
+-----+
| 1 | 1 | 27 | 111 | 1 | ***** | 1 | EMPTY | NONE |
| DNNNO = 111 |
+-----+

```

```
AMO-LDAT -111      LCR-DIRECTIONS
DISPLAY COMPLETED;
```

```
<DISPLAY-LDAT:TYPE=LCR,LROUTE=27;
DISPLAY-LDAT:TYPE=LCR,LROUTE=27;
H500: AMO LDAT STARTED
```

```

+-----+
| LROUTE = 27      LDPLN      NAME = PRI 4 ECMA1      SERVICE = ALL |
| TYPE = LCR      DNNNO OF ROUTE = 111 |
| SERVICE INFO = |
+-----+
| LRTEL | LVAL | TGRP | ODR | LAUTH | SCHEDULE | CARRIER | LATTR | LDSRT |
| ABCDEFGH | ZONE | | | | | | | |
+-----+
| 1 | 1 | 27 | 15 | 1 | ***** | 1 | EMPTY | NONE |
+-----+

```

```
AMO-LDAT -111      LCR-DIRECTIONS
DISPLAY COMPLETED;
```

```
<DISPLAY-LDAT:TYPE=LCR,LROUTE=165;
DISPLAY-LDAT:TYPE=LCR,LROUTE=165;
H500: AMO LDAT STARTED
```

```

+-----+
| LROUTE = 165      LDPLN      NAME = PSTN 91650      SERVICE = ALL |
| TYPE = LCR      DNNNO OF ROUTE = 89 |
| SERVICE INFO = |
+-----+
| LRTEL | LVAL | TGRP | ODR | LAUTH | SCHEDULE | CARRIER | LATTR | LDSRT |
| ABCDEFGH | ZONE | | | | | | | |
+-----+
| 1 | 1 | 23 | 50 | 1 | ***** | 1 | EMPTY | NONE |
| DNNNO = 89 |
+-----+

```

```
AMO-LDAT -111      LCR-DIRECTIONS
DISPLAY COMPLETED;
```

RICHT

```
DISPLAY-RICHT:MODE=LRTE,LRTE=1;
H500: AMO RICHT STARTED
```

```

+-----+
| LRTE = 1      NAME = ROPTCCM      (NEUTRAL) LSVC = ALL |
| DNNNO = 111 PDNNO = 0      DESTNO =111 |
| ROUTOPT = YES REROUT = YES PLB = NO FWDDBL = NO |
| DTMFCNV = WITHOUT DTMFDSP = WITHOUT DTMFTEXT = |
| DTMFPULS = BUGS = LIN ROUNTATT = NO      MAINGRP = 24 |
| EMCYRRT = NO      CONFONE = NO RERINGRP = NO RTENO = 24 |
+-----+

```



```

| INFO =
| NOPRCFWD = NO
+-----+
| TGRP = 27 LDAT PRI ECMA 4 (NEUTRAL) SUBGROUP = 10
+-----+

```

AMO-RICHT-111 TRUNK ROUTING
 DISPLAY COMPLETED;

```

<DISPLAY-RICHT:MODE=LRTE,LRTE=27;
DISPLAY-RICHT:MODE=LRTE,LRTE=27;
H500: AMO RICHT STARTED

```

```

+-----+
| LRTE = 27 NAME = PRI 4 ECMA1 (NEUTRAL) LSVC = ALL
| DNNO = 111 PDNNO = 0
| ROUTOPT = YES REROUT = YES PLB = NO FWDBL = NO
| DTMFCNV = FIX DTMFDSP = WITHOUT DTMFTEXT =
| DTMFPULS = PP300 BUGS = LIN ROUTATT = NO MAINGRP = 15
| EMCYRTT = NO CONFTONE = NO RERINGRP = NO RTENO = 15
| INFO =
| NOPRCFWD = NO
+-----+
| TGRP = 27 LDAT PRI ECMA 4 (NEUTRAL) SUBGROUP = 10
+-----+

```

AMO-RICHT-111 TRUNK ROUTING
 DISPLAY COMPLETED;

PSTN RICHT

```

<DISPLAY-RICHT:MODE=LRTE,LRTE=165;
DISPLAY-RICHT:MODE=LRTE,LRTE=165;
H500: AMO RICHT STARTED

```

```

+-----+
| LRTE = 165 NAME = PSTN 91650 (NEUTRAL) LSVC = ALL
| DNNO = 89 PDNNO = 0 DESTNO = 89
| ROUTOPT = YES REROUT = YES PLB = NO FWDBL = NO
| DTMFCNV = WITHOUT DTMFDSP = WITHOUT DTMFTEXT =
| DTMFPULS = BUGS = LIN ROUTATT = NO MAINGRP = 27
| EMCYRTT = NO CONFTONE = NO RERINGRP = NO RTENO = 27
| INFO =
| NOPRCFWD = NO
+-----+
| TGRP = 23 LDAT ECMA 2 (NEUTRAL) SUBGROUP = 6
+-----+

```

AMO-RICHT-111 TRUNK ROUTING
 DISPLAY COMPLETED;

LCR Out-dial Rules, LODR

```

<DISPLAY-LODR:ODR=111,FORMAT=L;
H500: AMO LODR STARTED

```

ODR	POSITION	CMD	PARAMETER
111	1	ECHO	1
	2	ECHO	2
	3	END	

H03: THE NEXT FREE ODR IS 2



```
AMO-LODR -111      ADMINISTRATION OF LCR OUTDIAL RULES
DISPLAY COMPLETED;
<DISPLAY-LODR:ODR=15,FORMAT=L;
DISPLAY-LODR:ODR=15,FORMAT=L;
H500: AMO LODR STARTED
```

ODR	POSITION	CMD	PARAMETER
15	1	ECHO	2
	2	END	

H03: THE NEXT FREE ODR IS 2

```
AMO-LODR -111      ADMINISTRATION OF LCR OUTDIAL RULES
DISPLAY COMPLETED;
<DISPLAY-LODR:ODR=50,FORMAT=L;
DISPLAY-LODR:ODR=50,FORMAT=L;
H500: AMO LODR STARTED
```

ODR	POSITION	CMD	PARAMETER
50	1	ECHO	2
	2	ECHO	3
	3	END	

H03: THE NEXT FREE ODR IS 2

```
AMO-LODR -111      ADMINISTRATION OF LCR OUTDIAL RULES
DISPLAY COMPLETED;
```

```
<DISPLAY-PERSI:TYPE=NAME,STNO=5002;
DISPLAY-PERSI:TYPE=NAME,STNO=5002;
H500: AMO PERSI STARTED
```

STNO	CHRISTIAN AND SURNAME	CHARCON	ORGANIZATIONAL UNIT
5002	HIPATH DT2*		

```
AMO-PERSI-111      PERSONAL IDENTIFICATION DATA
DISPLAY COMPLETED;
```



Configuring the Cisco Unified CallManager

CMM-E1 Gateway Configuration

Cisco CallManager Administration
For Cisco IP Telephony Solutions

CISCO SYSTEMS

Gateway Configuration

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

Product : Communication Media Module
Gateway : S1/DS1-1@CMM-E1
Device Protocol: Digital Access PRI
Registration: Unknown
IP Address: Not Found

Status: Update completed.

Device Information

End-Point Name*	<input type="text" value="S1/DS1-1@CMM-E1"/>
Description	<input type="text" value="CM-MARS to Hipath"/>
Device Pool*	<input type="text" value="Default"/>
Call Classification*	<input type="text" value="Use System Default"/>
Network Locale	<input type="text" value="United States"/>
Media Resource Group List	<input type="text" value="< None >"/>
Location	<input type="text" value="< None >"/>
AAR Group	<input type="text" value="< None >"/>
Load Information	<input type="text"/>

Multilevel Precedence and Preemption (MLPP) Information

MLPP Domain (e.g., "0000FF")	<input type="text"/>
MLPP Indication	Not available on this device
MLPP Preemption	Not available on this device

Interface Information

PRI Protocol Type*	<input type="text" value="PRI EURO"/>
Protocol Side*	<input type="text" value="Network"/>
Channel Selection Order*	<input type="text" value="Top Down"/>
Channel IE Type*	<input type="text" value="Timeslot Number"/>

PCM Type*	A-law
Delay for first restart (1/8 sec ticks)	32
Delay between restarts (1/8 sec ticks)	4
<input checked="" type="checkbox"/> Inhibit restarts at PRI initialization <input type="checkbox"/> 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*	Unknown
Calling party IE number type unknown*	Unknown
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	
<input checked="" type="checkbox"/> Display IE Delivery <input checked="" type="checkbox"/> Redirecting Number IE Delivery - Outbound <input checked="" type="checkbox"/> Redirecting Number IE Delivery - Inbound <input checked="" type="checkbox"/> Send Extra Leading Character In DisplayIE*** <input type="checkbox"/> Setup non-ISDN Progress Indicator IE Enable**** <input type="checkbox"/> MCDN Channel Number Extension Bit Set to Zero**	

<input checked="" type="checkbox"/>	Display IE Delivery	
<input checked="" type="checkbox"/>	Redirecting Number IE Delivery - Outbound	
<input checked="" type="checkbox"/>	Redirecting Number IE Delivery - Inbound	
<input checked="" type="checkbox"/>	Send Extra Leading Character In DisplayIE****	
<input type="checkbox"/>	Setup non-ISDN Progress Indicator IE Enable****	
<input type="checkbox"/>	MCDN Channel Number Extension Bit Set to Zero**	
<input type="checkbox"/>	Send Calling Name In Facility IE	
<input type="checkbox"/>	Interface Identifier Present**	
Interface Identifier Value**		<input type="text" value="0"/>
Connected Line ID Presentation (QSIG Inbound Call)*		<input type="text" value="Default"/>

UUIE Configuration		
<input type="checkbox"/>	Passing Precedence Level Through UUIE	
Security Access Level		<input type="text" value="2"/>

Product Specific Configuration		
Line Coding*		<input type="text" value="HDB3"/>
Framing*		<input type="text" value="CRC4"/>
Clock*		<input type="text" value="External"/>
Input Gain (-6..14 db)*		<input type="text" value="0"/>
Output Attenuation (-6..14 db)*		<input type="text" value="0"/>
Echo Cancellation Enable*		<input type="text" value="Enable"/>
Echo Cancel Coverage (ms)*		<input type="text" value="64"/>

* 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](#)

Partitions Configuration

System Route Plan Service Feature Device User Application Help

Cisco CallManager Administration
For Cisco IP Telephony Solutions

CISCO SYSTEMS

Find and List Partitions [Add a New Partition](#)

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

Find Partitions where Partition Name
and show items per page
To list all items, click Find without entering any search text.

Matching record(s) 1 to 2 of 2

<input type="checkbox"/>	Partition Name	Description
<input type="checkbox"/>	Incoming Trunk	Incoming Trunk
<input type="checkbox"/>	phones	phones

First Previous Next Last Page of 1



Calling Search Space Configuration

System Route Plan Service Feature Device User Application Help

Cisco CallManager Administration
For Cisco IP Telephony Solutions

CISCO SYSTEMS

Calling Search Space Configuration

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

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 Find

Available Partitions

phones

Selected Partitions* (ordered by highest priority)

Incoming Trunk

* indicates required item

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

Calling Search Space Information

Calling Search Space Name*

Description

Route Partitions for this Calling Search Space

Find Partitions containing

Available Partitions



Selected Partitions*
(ordered by highest priority)



* indicates required item



Enbloc Route Pattern Configuration

Route Pattern: 5XXX

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

Pattern Definition

Route Pattern*	<input type="text" value="5XXX"/>
Partition	<input type="text" value="< None >"/>
Description	<input type="text" value="CM-MARS to HiPath"/>
Numbering Plan*	<input type="text" value="North American Numbering Plan"/>
Route Filter	<input type="text" value="< None >"/>
MLPP Precedence	<input type="text" value="Default"/>
Gateway or Route List*	<input type="text" value="S1/DS1-1@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*	<input type="text" value="OnNet"/> <input type="checkbox"/> Allow Device Override
<input 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	<input type="text" value="Default"/>
Calling Name Presentation	<input type="text" value="Default"/>

Connected Party Transformations

Connected Line ID Presentation	<input type="text" value="Default"/>
Connected Name Presentation	<input type="text" value="Default"/>

Called Party Transformations

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

IPDN Network: Specific Facilities Information Element



Overlap Sending Route Pattern Configuration

Route Pattern: 9.5
Status: Update completed
Note: Any update to this Route Pattern automatically resets the associated gateway or Route List

Pattern Definition

Route Pattern*	<input type="text" value="9.5"/>	
Partition	<input style="border: none;" type="text" value=" < None > "/>	
Description	<input type="text" value="Ovlp sending CM-MARS to HiPath"/>	
Numbering Plan*	<input style="border: none;" type="text" value="North American Numbering Plan"/>	
Route Filter	<input style="border: none;" type="text" value=" < None > "/>	
MLPP Precedence	<input style="border: none;" type="text" value="Default"/>	
Gateway or Route List*	<input style="border: none;" type="text" value="S1/DS1-1@CMM-E1"/> (Edit)	
Route Option	<input checked="" type="radio"/> Route this pattern <input type="radio"/> Block this pattern <input style="border: none;" type="text" value=" — Not Selected — "/>	
Call Classification*	<input style="border: none;" type="text" value="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 <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	<input style="border: none;" type="text" value="Default"/>
Calling Name Presentation	<input style="border: none;" type="text" value="Default"/>

Connected Party Transformations

Connected Line ID Presentation	<input style="border: none;" type="text" value="Default"/>
Connected Name Presentation	<input style="border: none;" type="text" value="Default"/>

Called Party Transformations

Discard Digits	<input style="border: none;" type="text" value="PreDot"/>
Called Party Transform Mask	<input type="text"/>
Prefix Digits (Outgoing Calls)	<input type="text"/>

ISDN Network-Specific Facilities Information Element



PSTN Route Pattern Configuration

Route Pattern: 91650364XXXX

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

Pattern Definition

Route Pattern*	<input type="text" value="91650364XXXX"/>
Partition	<input type="text" value="< None >"/>
Description	<input type="text" value="PSTN gateway"/>
Numbering Plan*	<input type="text" value="North American Numbering Plan"/>
Route Filter	<input type="text" value="< None >"/>
MLPP Precedence	<input type="text" value="Default"/>
Gateway or Route List*	<input type="text" value="S1/DS1-1@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*	<input type="text" value="OnNet"/> <input type="checkbox"/> Allow Device Override
<input 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

<input type="checkbox"/> 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	<input type="text" value="Default"/>
Calling Name Presentation	<input type="text" value="Default"/>

Connected Party Transformations

Connected Line ID Presentation	<input type="text" value="Default"/>
Connected Name Presentation	<input type="text" value="Default"/>

Called Party Transformations

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

ISDN Network: Specify Facility Information Element



Translation Pattern for Incoming Calls

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	<input type="text" value="Incoming Trunk"/>
Description	<input type="text"/>
Numbering Plan*	<input type="text" value="North American Numbering Plan"/>
Route Filter	<input type="text" value="< None >"/>
Calling Search Space	<input type="text" value="phones"/>
MLPP Precedence	<input type="text" value="Default"/>
Route Option	<input checked="" type="radio"/> Route this pattern <input type="radio"/> Block this pattern <input type="text" value="-- 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	<input type="text" value="Default"/>
Calling Name Presentation	<input type="text" value="Default"/>

Connected Party Transformations

Connected Line ID Presentation	<input type="text" value="Default"/>
Connected Name Presentation	<input type="text" value="Default"/>

Called Party Transformations

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

* indicates required item.



IP phone Configuration

Phone Configuration

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

Directory Numbers

Base Phone

Line 1 - 4000 in 7960 phones
Line 2 - Add new DN 7960

Phone: SEP003094C331AD (Auto 4000)
Registration: Registered with Cisco CallManager 172.20.231.254
IP Address: 172.20.231.102
Status: Ready

Phone Configuration (Model = Cisco 7960)

Device Information

MAC Address*	<input type="text" value="003094C331AD"/>
Description	<input type="text" value="Auto 4000"/>
Owner User ID	<input type="text"/> (Select User ID)
Device Pool*	<input type="text" value="Default"/> (View details)
Calling Search Space	<input type="text" value="< None >"/>
AAR Calling Search Space	<input type="text" value="< None >"/>
Media Resource Group List	<input type="text" value="< None >"/>
User Hold Audio Source	<input type="text" value="1 - SampleAudioSource"/>
Network Hold Audio Source	<input type="text" value="< None >"/>
Location	<input type="text" value="< None >"/>
User Locale	<input type="text" value="< None >"/>
Network Locale	<input type="text" value="< None >"/>
Device Security Mode	<input type="text" value="Use System Default"/>
Signal Packet Capture Mode	<input type="text" value="None"/>
Packet Capture Duration	<input type="text" value="0"/>
Built In Bridge	<input type="text" value="Default"/>
Privacy	<input type="text" value="Default"/>

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

Phone Button Template Information

Phone Button Template* [\(View button list\)](#)

Softkey Template Information

Softkey Template



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	
<input type="checkbox"/> 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	<input type="text"/> <input type="button" value="Generate String"/>
Key Size (bits)	1024
Operation Completes By**	: : : (YYYY : MM : DD : HH)
Certificate Operation Status : None	
Multilevel Precedence and Preemption (MLPP) Information	
MLPP Domain	(e.g., "0000FF")
MLPP Indication	Default

Multilevel Precedence and Preemption (MLPP) Information	
MLPP Domain	<input type="text" value=""/> (e.g., "0000FF")
MLPP Indication	Default
MLPP Preemption	Default

Product Specific Configuration	
Disable Speakerphone	<input type="checkbox"/>
Disable Speakerphone and Headset	<input type="checkbox"/>
Forwarding Delay*	Disabled
PC Port*	Enabled
Settings Access*	Enabled
Gratuitous ARP*	Enabled
PC Voice VLAN Access*	Enabled
Video Capabilities*	Disabled
Auto Line Select*	Disabled

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

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[Back to Find/List Phones](#)



Directory Number Configuration

[Configure Device \(SEP003094C331AD\)](#)
[Dependency Records](#)

Associated With

SEP003094C331AD
7960 (Line 1)

Directory Number: 4000 (phones)

Status: Ready

Note: Any update to this Directory Number automatically resets the associated devices

Directory Number

Directory Number*

Partition

Directory Number Settings

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

Calling Search Space

AAR Group

User Hold Audio Source

Network Hold Audio Source

Auto Answer

Call Forward and Pickup Settings

	Voice Mail	Coverage/ Destination	Calling Search Space
Forward All	<input type="checkbox"/>	<input type="text"/>	<input type="text" value="< None >"/>
Forward Busy Internal	<input type="checkbox"/>	<input type="text"/>	<input type="text" value="< None >"/>
Forward Busy External	<input type="checkbox"/>	<input type="text"/>	<input type="text" value="< None >"/>
Forward No Answer Internal	<input type="checkbox"/>	<input type="text"/>	<input type="text" value="< None >"/>
Forward No Answer External	<input type="checkbox"/>	<input type="text"/>	<input type="text" value="< None >"/>
Forward No Coverage Internal	<input type="checkbox"/>	<input type="text"/>	<input type="text" value="< None >"/>
Forward No Coverage External	<input type="checkbox"/>	<input type="text"/>	<input type="text" value="< None >"/>

No Answer Ring Duration (seconds)

Call Pickup Group

MLPP Alternate Party Settings

Target (Destination)

Calling Search Space

No Answer Ring Duration (seconds)



No Answer Ring Duration	<input type="text"/> (seconds)
Call Pickup Group	< None >
MLPP Alternate Party Settings	
Target (Destination)	<input type="text"/>
Calling Search Space	< None >
No Answer Ring Duration	<input type="text"/> (seconds)
Line Settings for all Devices	
Alerting Name	MARS 0
Line Settings for this Device	
Display (Internal Caller ID)	MARS 0
Line Text Label	MARS 0
External Phone Number Mask	<input type="text"/>
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	
<input checked="" type="checkbox"/> Caller Name	<input checked="" type="checkbox"/> Caller Number
<input checked="" type="checkbox"/> Redirected Number	<input checked="" type="checkbox"/> 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 charset 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 Internetwork Operating System Software
IOS (tm) Cat6K-lc Software (wscmm-I6S-M), Version 12.2(13)ZP3, EARLY DEPLOYMENT
RELEASE SOFTWARE (fc1)
TAC Support: http://www.cisco.com/tac
Copyright (c) 1986-2004 by cisco Systems, Inc.
Compiled Thu 05-Feb-04 17:38 by pwade
Image text-base: 0x60010940, data-base: 0x60D80000

ROM: System Bootstrap, Version 12.2(1r)T2, RELEASE SOFTWARE (fc1)
ROM: Cat6K-lc Software (wscmm-I6S-M), Version 12.2(13)ZP3, EARLY DEPLOYMENT RELE
ASE SOFTWARE (fc1)

CMM-E1 uptime is 2 days, 54 minutes
System returned to ROM by power-on
System image file is "bootflash:wscmm-i6s-mz.122-13.ZP3.bin"

cisco WS-SVC-CMM Cat6k Voice Linecard (R7000) processor (revision 0xFF) with 196
608K/65536K bytes of memory.
R7000 CPU at 400Mhz, Implementation 39, Rev 3.3, 256KB L2 Cache
Last reset from power-on
Bridging software.
Primary Rate ISDN software, Version 1.1.
Channelized E1, Version 1.0.
1 FastEthernet/IEEE 802.3 interface(s)
1 Gigabit Ethernet/IEEE 802.3 interface(s)
186 Serial network interface(s)
6 Channelized E1/PRI port(s)
32768K bytes of processor board bootflash (Read/Write)

Configuration register is 0x2

CMM-E1#

CMM-E1#sh run
Building configuration...

Current configuration : 3519 bytes
!
version 12.2
no service config
no service pad
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname CMM-E1
!
!
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  
ccm-manager config server CM-MARS  
ccm-manager config  
ms dsp firmware 0 bundled  
ms dsp firmware 1 bundled  
ms dsp firmware 2 bundled  
!  
!  
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 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
!
!
arp 127.0.0.30 0000.0300.0000 ARPA
arp 127.0.0.12 0000.2100.0000 ARPA
arp 127.0.0.11 0000.1100.0000 ARPA
call rsvp-sync
!
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
  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
!
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
!
!
line con 0
line vty 0 4
  login
!
!
end

CMM-E1#
```



Acronyms

Acronym	Definitions
AOC	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.
CUCM	Cisco Unified CallManager
CLIP	Calling Line (Number) Identification Presentation
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
PSTN	Public Switched Telephone Network



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