



# Siemens HiPath 4000 Release 1 using E1 QSIG to Cisco Unified CallManager 4.0

December 14, 2007 Revision 4

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## Introduction

This is an application note for connectivity of Siemens HiPath 4000 Rel. 1 PBX with Cisco Unified CallManager (CUCM) Release 4.0 using Cisco 6608-E1 QSIG 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 6608-E1 QSIG link as MGCP gateway.

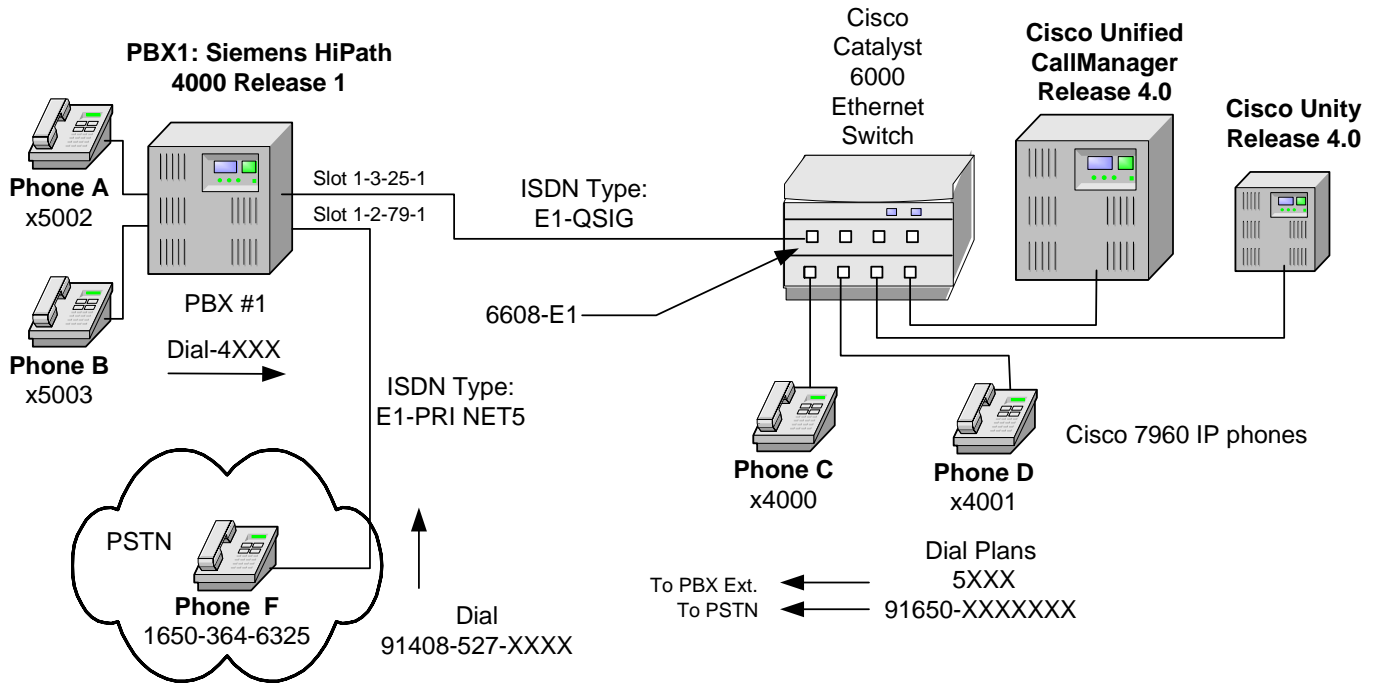
Connectivity is achieved by using the PRI ISO QSIG E1 protocol type on the MGCP gateway and PSS1V2 switch type on the Siemens HiPath 4000 PBX.

Basic calls worked fine in both directions with Calling/Connected Name and Calling/Connected Number features support.

## Network Topology

Figure 1. Network Topology

### Basic Call Setup End-to-End Configuration



## Limitations

### B-Channel Mapping

Siemens HiPath 4000 PBX uses sequential channel numbering (1-30) when ISO QSIG protocol "PSS1V2" is selected, therefore the Cisco 6608-E1 Gateway configuration for **Channel IE Type** field should be set to **Continuous Number**.

## System Components

### Hardware Requirements

Cisco Hardware:

- Cisco Catalyst 6000 switch with 6608-E1 Gateway

- Cisco Unified CallManager 4.0

Siemens HiPath 4000 PBX Hardware:

- DIU-N2



## Software Requirements

PBX Software version 1

Cisco Unified CallManager Release 4.0

Cisco WS-X6608-E1 gateway Version 7.6(2)

## Features

### Features Supported

CLIP-Calling Line (Number) Identification Presentation

CLIR-Calling Line (Number) Identification Restriction

CNIP-Calling Name Identification Presentation

CNIR-Calling Name Identification Restriction

COLP-Connected Line (Number) Identification Presentation

COLR- Connected Line (Number) Identification Restriction

CONP-Connected Name Identification Presentation

CONR- Connected Name Identification Restriction

CT-Call Transfer (by join)

CFU-Call Forwarding Unconditional (by join)

CFB-Call Forwarding Busy (by join)

CFNR-Call Forwarding No Reply (by join)

MWI- Message Waiting Indication (lamp ON, lamp OFF) <sup>1</sup>

### Features Not Supported

Cisco Unified CallManager 4.0 release does not support sending Alerting Name or Busy Name Identification information

## Configuration

### Configuring the Siemens HiPath 4000 PBX

Configure in the following sequence:

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.
11. Enable In-Band DTMF signaling for the Digital Stations using SBSCSU.
12. Configure Digital Station's Class of Service for Mailbox (MWI) application.

---

<sup>1</sup> MWI was tested with Cisco Unified CallManager 4.0 configured with Cisco Unity as the message center PINX and PBX users as remote subscribers. Siemens HiPath PBX was not configured to handle Q.SIG MWI messages at the time of testing therefore it was not known at that time whether Q.SIG MWI integration with the HiPath PBX will work.



## 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 ANALYSIS RESULT	RESERVED/CONVERT DNI/ADD-INFO				
		1	11111	11112	22						
		0	12345	67890	12345	67890	12				
0		.	****	..	***	..	..	..	*	CO	R
001	- 009	*	.....	.....	.....	.....	.....	.....	.....	NETRTE	
111		.	****	*****	**	.....	.....	.....	.....	TIE	
12		.	****	*****	**	.....	.....	.....	.....	TIE	R
13	- 14	.	****	*****	**	.....	.....	.....	.....	TIE	
21		.	.....	.....	.....	.....	.....	.....	.....*	KNVRKY	
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	11111	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	11111	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	11111	11112	22		
4568 - 4999	0	12345	67890	12345 67890 12	STN	DESTNO 222 DNNO 0- 0-222
5000 - 5040	0	12345	67890	12345 67890 12	STN	DESTNO 0 DNNO 0- 0-555*
5500 - 5501	0	12345	67890	12345 67890 12	STN	DESTNO 56 DNNO 0- 0-560
555	0	12345	67890	12345 67890 12	OWNNODE	
560	0	12345	67890	12345 67890 12	TIE	
59	0	12345	67890	12345 67890 12	TIE	
6000 - 6009	0	12345	67890	12345 67890 12	STN	R DESTNO 0 DNNO 0- 0-555*

DIGIT INTERPRETATION VALID FOR ALL DIAL PLANS

CODE	CALL PROGRESS STATE				DIGIT ANALYSIS RESULT	RESERVED/CONVERT DNI/ADD-INFO
	1	11111	11112	22		
7000 - 7002	0	12345	67890	12345 67890 12	STN	DESTNO 56 DNNO 0- 0-560
8000 - 8050	0	12345	67890	12345 67890 12	STN	DESTNO 222 DNNO 0- 0-222
8060	0	12345	67890	12345 67890 12	TIE	
8070	0	12345	67890	12345 67890 12	TIE	
83	0	12345	67890	12345 67890 12	SPDC1	
84	0	12345	67890	12345 67890 12	SPDC2	
88	0	12345	67890	12345 67890 12	SCONSI	R
89	0	12345	67890	12345 67890 12	SCONSCO	R
9	0	12345	67890	12345 67890 12	TIE	
*13	0	12345	67890	12345 67890 12	AHTVCE	
*15	0	12345	67890	12345 67890 12	SPLIT	
*16	0	12345	67890	12345 67890 12	AREM	
*17	0	12345	67890	12345 67890 12	TRACE	

DIGIT INTERPRETATION VALID FOR ALL DIAL PLANS

CODE	CALL PROGRESS STATE				DIGIT ANALYSIS RESULT	RESERVED/CONVERT DNI/ADD-INFO
	1	11111	11112	22		
*18	0	12345	67890	12345 67890 12	ACOSX	





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**

**QSIG 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 XFER
TRUNK SIGNALING ANSWER ANS
CHANGEOVER FROM HOLD TO RING TONE CHRT
KNOCKING OVERRIDE POSSIBLE KNOR
CALL EXTEND FOR BUSY, RING OR CALL STATE CEBC
NETWORKWIDE AUTOMATIC CALLBACK ON BUSY CBBN
NETWORKWIDE AUTOMATIC CALLBACK ON FREE CBFN
DON'T RELEASE CALL TO BUSY HUNT GROUP BSHT
CONNECTION TO ROUTE OPTIMIZATION NODE ROPT
TSC-SIGNALING FOR NETWORKWIDE FEATURES (MANDATORY) TSCS
INCOMING CDR BY ZONE OR FROM LINE ICZL
AOC PER CALL (AUTOMATICAL OR ON REQUEST), MAND. CORNET-NQ AOCC
LINE WITH IMPLICIT NUMBERS LINO
NO TONE 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 EOD
SPECIAL MODE SFRM
CODE CALLING RELEASE AFTER EVERY TASK CCR
REGISTRATION OF LAYER 3 ADVISORIES 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	LAUTH												COPIN
V	1	2	3	4	5	6						NUM	
>	SERVICE INFORMATION												NUM
1	X	.....										0	
>	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

FORMAT = L								
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	ACDPMGRP	:	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 = PSS1V2      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   =          ISDNIP  =
| 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          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;

<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
+-----+-----+-----+-----+-----+-----+
| LNTYPE   = 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
| TEIVERIF = 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

```

```

-----+
| DEV      = S2CONN      PEN      = 1-03-025-1  TGRP      = 27
|-----+-----+-----+
| PROTVAR = PSS1V2    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   =           ISDNNP  =
| 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          FNIDX    = 1
| UUSCCX   = 16        CLASSMRK = EC      & G711  & G729OPT SRCGRP   =
| TCCID    =
|-----+-----+-----+
| BCNEG    = N          BCGR    = 1          LWPAR   = 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-LWPAR:FORMAT=L,BLNO=0,TYPE=DIUS2;
DISPLAY-LWPAR:FORMAT=L,BLNO=0,TYPE=DIUS2;
H500: AMO LWPAR 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-LWPAR-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   =
| TRTBL    = 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   =            UUSCCY   = 8          FNIDX    = 1
| UUSCCX   = 16          CLASSMRK = EC      & G711  & G729OPT SRCGRP   =
| TCCID    =
+-----+
| 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 | SRCGRP |
|          |        |        |     |       |       |       | BUT  |        |
|          |        |        |     |       |       |       | ASYN. |        |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 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
```

LDAT:TYPE=LCR,LROUTE=1											
LROUTE = 1		LDPLN	NAME = ROPTCCM			SERVICE = ALL					
TYPE = LCR										DNNO OF ROUTE = 111	
SERVICE INFO =											
LRTEL	LVAL	TGRP	ODR	LAUTH	SCHEDULE ABCDEFGH	CARRIER ZONE	LATTR	LDSRT			
1	1	27	111	1	*****	1 EMPTY	NONE				
DNNO =			111								

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

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

LDAT:TYPE=LCR,LROUTE=27										
LROUTE = 27		LDPLN	NAME = PRI 4 ECMA1			SERVICE = ALL				
TYPE = LCR										DNNO OF ROUTE = 111
SERVICE INFO =										
LRTEL	LVAL	TGRP	ODR	LAUTH	SCHEDULE ABCDEFGH	CARRIER ZONE	LATTR	LDSRT		
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
```

LDAT:TYPE=LCR,LROUTE=165										
LROUTE = 165		LDPLN	NAME = PSTN 91650			SERVICE = ALL				
TYPE = LCR										DNNO OF ROUTE = 89
SERVICE INFO =										
LRTEL	LVAL	TGRP	ODR	LAUTH	SCHEDULE ABCDEFGH	CARRIER ZONE	LATTR	LDSRT		





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;

**In-Band DTMF signaling:**

**In order to enable In-band DTMF signaling on digital stations for Voicemail applications, the station configuration has to be changed so that the parameter DTMFCTR=D=Y.**

**Name and Number Restrictions:**

**To use Name and Number Restrictions, the station configuration should be changed so that the parameter SSTNO=Y, (Secret Station Number must be set to Yes).**

<dis-sbcSU:5002;  
 DIS-SBCSU:5002;  
 H500: AMO SBCSU STARTED

```

----- USER DATA -----
STNO   =5002   OPT   =OPTI   COS1   =2       DPLN   =1

```



```

MAINO =5002      CONN =DIR      COS2 =2      ITR =1
PEN = 1- 3- 31- 2      LCOSV1 =6      COSX =0
INS =Y          ASYNCT =500      LCOSV2 =6
                PERMACT =      LCOSD1 =6
SSTNO =Y      EXTBUS =      LCOSD2 =6      CBKBMAX =5
TRACE =N
ALARMNO =0      DFSVCANA=      SPDI =0      RCBKB =N
HMUSIC =0      FLASH =      SPDC1 =      RCBKNA =N
PMIDX =0      SPDC2 =      CBKNAMB =Y
                COMGRP =0

SECR =N          DIGNODIS=N      DSSTNA =N
STD =55         CALLOG =NONE    DSSTNB =Y      TEXTSEL =ENGLISH

REP =0          OPTICOM =N      OPTIUSB :0      VPI =
IDCR =N         OPTICA =1      OPTIS0A :      VCI =
                OPTIDA =      OPTISPA :0      PATTERN =
                OPTIABA :0

DCFWBUSY=N      HEADSET =N      APICLASS=
DNIDSP =N       HSKEY =NORMAL   ACFAPPL =0
DTMFBLK =N
DTMFCTR=Y      BASICSVC=
DVCFIG =OPTIP500 TSI =1          SPROT =      SOPTIDX =
                DPROT =      DOPTIDX =
                FPROT =      FOPTIDX =

----- ACTIVATION IDENTIFIERS FOR FEATURES -----
FWDS :N          HTOS :N          DND :N
FWDD :N          HTOF :N          VCP :Y          TWLOGIN :N
FWDF :N          HTOF :N          CWT :N

----- FEATURES AND GROUP MEMBERSHIPS -----
PUGR :          ESSTN :
KEYSYS :N       NOPTNO :
HUNT CD :N

----- SUBSCRIBER ATTRIBUTES (AMO SDAT) -----
NONE
-----

```

AMO-SBCSU-111

### Configure Digital Station's Class of Service for Mailbox (MWI) application

```

<DISPLAY-COSSU:TYPE=COS,COS=2,FORMAT=L;
DISPLAY-COSSU:TYPE=COS,COS=2,FORMAT=L;
H500: AMO COSSU STARTED

```

COS	VOICE	FAX	DTE
2	>		
	TA	NOCO	TA
	TSUID	NOTIE	TNOTCR
	TNOTCR	BASIC	BASIC
	CDRINT		
	CDRS		
	CDRC		
	<b>MB</b>		
	COSXCD		
	VCE		
	SPKR		
	DATA		
	FWDNWK		
	RERING		
	CDRIND		
	MSN		
	FWDECA		
	FWDBAS		



```

+-----+-----+-----+-----+
|         |         |         |         |
|         |         |         |         |
|         |         |         |         |
|         |         |         |         |
|         |         |         |         |
|         |         |         |         |
|         |         |         |         |
|         |         |         |         |
|         |         |         |         |
|         |         |         |         |
|         |         |         |         |
+-----+-----+-----+-----+

```

FWDDIR  
CFB  
CFNR  
CCBS  
CW  
FWDEXT  
GRPCAL  
SUTVA

AMO-COSSU-111                    CLASSES OF SERVICE  
DISPLAY COMPLETED;



## Configuring the Cisco Unified CallManager

### 6608-E1 Gateway Configuration

System Route Plan Service Feature Device User Application Help

**Cisco CallManager Administration**  
For Cisco IP Telephony Solutions

CISCO SYSTEMS

## Gateway Configuration

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

**Product : Cisco Catalyst 6000 E1 VoIP Gateway**  
**Gateway : S0/DS1-0@SDA0001C9D8633E**  
**Device Protocol: Digital Access PRI**  
**Registration: Registered with Cisco CallManager 172.20.32.254**  
**IP Address: [172.20.32.103](#)**

Status: Ready

### Device Information

MAC Address*	<input type="text" value="0001C9D8633E"/>
Description	<input type="text" value="SDA0001C9D8633E"/>
Device Pool*	<input type="text" value="Default"/>
Network Locale	<input type="text" value="United States"/>
Media Resource Group List	<input type="text" value="&lt; None &gt;"/>
Location	<input type="text" value="&lt; None &gt;"/>
AAR Group	<input type="text" value="&lt; None &gt;"/>
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 ISO QSIG E1"/>
Protocol Side*	<input type="text" value="User"/>
Channel Selection Order*	<input type="text" value="Top Down"/>
Channel IE Type*	<input type="text" value="Continuous 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	
<b>Call Routing Information</b>	
<b>Inbound Calls</b>	
Significant Digits*	All
Calling Search Space	Phones
AAR Calling Search Space	< None >
Prefix DN	
<b>Outbound Calls</b>	
Calling Line ID Presentation*	Default
Calling Party Selection*	Originator
Called party IE number type unknown*	Cisco CallManager
Calling party IE number type unknown*	Cisco CallManager
Called Numbering Plan*	Private
Calling Numbering Plan*	Cisco CallManager
Number of digits to strip*	0
Caller ID DN	
SMDI Base Port*	0
<b>PRI Protocol Type Specific Information</b>	
<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"/>
Connected PBX Model	<input type="text" value="None"/>
<b>Product Specific Configuration</b> 	
Clock Reference*	<input type="text" value="Network"/>
Framing*	<input type="text" value="CRC4"/>
Audio Signal Adjustment into IP Network*	<input type="text" value="NoDbPadding"/>
Audio Signal Adjustment from IP Network*	<input type="text" value="NoDbPadding"/>
Zero Suppression*	<input type="text" value="HDB3"/>
Digit On Duration(50-500ms)*	<input type="text" value="100"/>
Interdigit Duration(50-500msec)*	<input type="text" value="100"/>
SNMP Community String	<input type="text" value="public"/>
Disable SNMP Set operations*	<input type="checkbox"/>
Debug Port Enable*	<input checked="" type="checkbox"/>
Hold Tone Silence Duration*	<input type="text" value="0"/>
Port Used for Voice Calls*	<input checked="" type="checkbox"/>
Port Used for Modem Calls*	<input checked="" type="checkbox"/>
Port Used for Fax Calls*	<input checked="" type="checkbox"/>
<b>Fax and Modem Parameters</b>	
Fax Relay Enable*	<input checked="" type="checkbox"/>
Fax Error Correction Mode Override*	<input checked="" type="checkbox"/>
Maximum Fax Rate*	<input type="text" value="14400bps"/>
Fax Payload Size*	<input type="text" value="20"/>
Non Standard Facilities Country Code*	<input type="text" value="65535"/>
Non Standard Facilities Number*	<input type="text"/>

Non Standard Facilities Vendor Code*	<input type="text" value="65535"/>
Fax/Modem Packet Redundancy*	<input type="checkbox"/>
NSE Type*	<input type="text" value="Non-IOS Gateways"/>

**Playout Delay Parameters**

Initial Playout Delay*	<input type="text" value="40"/>
Minimum Playout Delay*	<input type="text" value="20"/>
Maximum Playout Delay*	<input type="text" value="150"/>

**Echo Canceller Configuration**

Echo TailLength (ms)*	<input type="text" value="32 ms"/>
Minimum ERL (db)*	<input type="text" value="6 db"/>

\* 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 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

Page  of 1

## Calling Search Space Configuration

System
Route Plan
Service
Feature
Device
User
Application
Help

Cisco CallManager Administration
CISCO SYSTEMS
For Cisco IP Telephony Solutions

### Calling Search Space Configuration

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

**Calling Search Space: Incoming Trunk**  
 Status: Ready

**Calling Search Space Information**

Calling Search Space Name\*   
 Description

**Route Partitions for this Calling Search Space**

Find Partitions containing    
 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/Hunt Pilot: 5XXX**  
Status: Ready  
Note: Any update to this Route Pattern or Hunt Pilot automatically resets the associated gateway or Route/Hunt List

**Pattern Definition**

Route Pattern/Hunt Pilot*	<input type="text" value="5XXX"/>	
Partition	< None >	
Description	<input type="text"/>	
Numbering Plan*	North American Numbering Plan	
Route Filter	< None >	
MLPP Precedence	Default	
Gateway or Route/Hunt List*	S0/DS1-0@SDA0001C9D8633E <a href="#">(Edit)</a>	
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 type="checkbox"/> Allow Overlap Sending	<input type="checkbox"/> Urgent Priority

**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	Default
Calling Name Presentation	Default

**Connected Party Transformations**

Connected Line ID Presentation	Default
Connected Name Presentation	Default

**Called Party Transformations**

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

**ISDN Network-Specific Facilities Information Element**

Carrier Identification Code	<input type="text"/>	
Network Service Protocol	— Not Selected —	
Network Service	Service Parameter Name	Service Parameter Value
— Not Selected —	< Not Exist >	<input type="text"/>



## Overlap Sending Route Pattern Configuration

**Route Pattern/Hunt Pilot: 9.X**

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

**Pattern Definition**

Route Pattern/Hunt Pilot\*

Partition

Description

Numbering Plan\*

Route Filter

MLPP Precedence

Gateway or Route/Hunt List\*  [\(Edit\)](#)

Route Option

Route this pattern

Block this pattern

Provide Outside Dial Tone     Allow Overlap Sending     Urgent Priority

**Calling Party Transformations**

Use Calling Party's External Phone Number Mask

Calling Party Transform Mask

Prefix Digits (Outgoing Calls)

Calling Line ID Presentation

Calling Name Presentation

**Connected Party Transformations**

Connected Line ID Presentation

Connected Name Presentation

**Called Party Transformations**

Discard Digits

Called Party Transform Mask

Prefix Digits (Outgoing Calls)

**ISDN Network-Specific Facilities Information Element**

Carrier Identification Code

Network Service Protocol

Network Service	Service Parameter Name	Service Parameter Value
<input type="text" value=" — Not Selected —"/>	<input type="text" value=" &lt; Not Exist &gt;"/>	<input type="text"/>



## PSTN Route Pattern Configuration

**Route Pattern/Hunt Pilot: 91650XXXXXXX**

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

**Pattern Definition**

Route Pattern/Hunt Pilot\*

Partition

Description

Numbering Plan\*

Route Filter

MLPP Precedence

Gateway or Route/Hunt List\*  (Edit)

Route Option

Route this pattern

Block this pattern

Provide Outside Dial Tone     Allow Overlap Sending     Urgent Priority

**Calling Party Transformations**

Use Calling Party's External Phone Number Mask

Calling Party Transform Mask

Prefix Digits (Outgoing Calls)

Calling Line ID Presentation

Calling Name Presentation

**Connected Party Transformations**

Connected Line ID Presentation

Connected Name Presentation

**Called Party Transformations**

Discard Digits

Called Party Transform Mask

Prefix Digits (Outgoing Calls)

**ISDN Network-Specific Facilities Information Element**

Carrier Identification Code

Network Service Protocol

Network Service	Service Parameter Name	Service Parameter Value
<input type="text" value="— Not Selected —"/>	<input type="text" value="&lt; Not Exist &gt;"/>	<input type="text"/>



## Route Pattern for Cisco Unity Voicemail

**Route Pattern/Hunt Pilot: 499X**

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

[Copy](#) [Update](#) [Delete](#)

---

**Pattern Definition**

Route Pattern/Hunt Pilot\*

Partition

Description

Numbering Plan\*

Route Filter

MLPP Precedence

Gateway or Route/Hunt List\*  [\(Edit\)](#)

Route Option

Route this pattern

Block this pattern

Provide Outside Dial Tone     Allow Overlap Sending     Urgent Priority

---

**Calling Party Transformations**

Use Calling Party's External Phone Number Mask

Calling Party Transform Mask

Prefix Digits (Outgoing Calls)

Calling Line ID Presentation

Calling Name Presentation

---

**Connected Party Transformations**

Connected Line ID Presentation

Connected Name Presentation

---

**Called Party Transformations**

Discard Digits

Called Party Transform Mask

Prefix Digits (Outgoing Calls)

---

**ISDN Network-Specific Facilities Information Element**

Carrier Identification Code

Network Service Protocol

Network Service	Service Parameter Name	Service Parameter Value
<input type="text" value="— Not Selected —"/>	<input type="text" value="&lt; Not Exist &gt;"/>	<input type="text"/>

Cisco Unity Voicemail HuntList


System   Route Plan   Service   Feature   Device   User   Application   Help

Cisco CallManager Administration
CISCO SYSTEMS

[Add a new Route/Hunt List](#)  
[Back to Find/List Route/Hunt Lists](#)  
[Dependency Records](#)

## Route/Hunt List Configuration

**Route/Hunt List Details**

 CiscoUM1

**Route/Hunt List: UnityHuntList**

Status: Ready

**Route/Hunt List Information**

Route/Hunt List Name\*

Description

Cisco CallManager Group\*

Enable this Route/Hunt List (change effective on Update; no reset required)

**Route/Hunt List Member Information**

Selected Groups\*  
(ordered by highest priority)

CiscoUM1

▼ ▲

Removed Groups  
(to be removed from Route/Hunt List when you click Update)

\* indicates required item



## Cisco Unity Voicemail Line Group

# Line Group Configuration

[Add new Line Group](#)  
[Back to Find/List Line Groups](#)  
[Dependency Records](#)

**Directory Numbers**

- 4990
- 4991

**Line Group: CiscoUM1**

Status: Ready

**Line Group Information**

Line Group Name\*

RNA Reversion Timeout\*

Distribution Algorithm\*

**Hunt Options**

No Answer\*

Busy\*\*

Not Available\*\*

**Line Group Member Information**

**Find Directory Numbers to add to Line Group**

Route Partition

Directory Numbers Contains

Available DN/Route Partition  
(Do not include directory numbers of application-controlled IP phones, or application-monitored IP phones in the line group.)

**Current Line Group Members**

Selected DN/Route Partition\*

Removed DN/Route Partition  
(to be removed from Line Group when you click Update)



Cisco Unity Subscriber

### Subscribers

- [Profile](#)
- [Account](#)
- [Phone Password](#)
- [Private Lists](#)
- [Conversation](#)
- [Call Transfer](#)
- [Greetings](#)
- [Caller Input](#)
- [Messages](#)
- [Message Notification](#)
- [Alternate Extensions](#)

[Log off](#)

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## Digital Test2 HiPath 4300

### Profile

#### Subscriber Information

First name:

Last name:

Display name:

Class of service:  [View](#)

Extension:

Fax ID:

Recorded voice:

Active schedule:  [View](#)

Time zone:

Set subscriber for self-enrollment at next login

List in phone directory

Show subscriber in e-mail server address book

#### Exchange Information

Alias:

Server:



## 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="&lt; None &gt;"/>	
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 type="checkbox"/> Allow Overlap Sending	<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="&lt; None &gt;"/>
Called Party Transform Mask	<input type="text"/>
Prefix Digits (Outgoing Calls)	<input type="text"/>

\* indicates required item.



## CLIR Route Pattern Configuration

System Route Plan Service Feature Device User Application Help

**Cisco CallManager Administration**  
For Cisco IP Telephony Solutions

CISCO SYSTEMS

### Route Pattern/Hunt Pilot Configuration

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

**Route Pattern/Hunt Pilot: 5XXX**

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

#### Pattern Definition

Route Pattern/Hunt Pilot*	<input type="text" value="5XXX"/>	
Partition	<input type="text" value=" &lt; None &gt;"/>	
Description	<input type="text" value=" Siemens HiPath 4300 route"/>	
Numbering Plan*	<input type="text" value=" North American Numbering Plan"/>	
Route Filter	<input type="text" value=" &lt; None &gt;"/>	
MLPP Precedence	<input type="text" value=" Default"/>	
Gateway or Route/Hunt List*	<input type="text" value=" S0/DS1-0@SDA0001C9D8633E"/> <a href="#">(Edit)</a>	
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 type="checkbox"/> Allow Overlap Sending	<input 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=" Restricted"/>
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=" &lt; None &gt;"/>
----------------	--

## CNIR Route Pattern Configuration

System		Route Plan	Service	Feature	Device	User	Application	Help
<b>Cisco CallManager Administration</b> <i>For Cisco IP Telephony Solutions</i>								
<h1>Route Pattern/Hunt Pilot Configuration</h1>						<a href="#">Add a New Route Pattern/Hunt Pilot</a> <a href="#">Back to Find/List Route Patterns and Hunt Pilots</a>		
<b>Route Pattern/Hunt Pilot: 5XXX</b> Status: Update completed Note: Any update to this Route Pattern or Hunt Pilot automatically resets the associated gateway or Route/Hunt List								
<input type="button" value="Copy"/> <input type="button" value="Update"/> <input type="button" value="Delete"/>								
<b>Pattern Definition</b>								
Route Pattern/Hunt Pilot*	<input type="text" value="5XXX"/>							
Partition	<input type="text" value="&lt; None &gt;"/>							
Description	<input type="text" value="Siemens HiPath 4300 route"/>							
Numbering Plan*	<input type="text" value="North American Numbering Plan"/>							
Route Filter	<input type="text" value="&lt; None &gt;"/>							
MLPP Precedence	<input type="text" value="Default"/>							
Gateway or Route/Hunt List*	<input type="text" value="S0/DS1-0@SDA0001C9D8633E"/> <a href="#">(Edit)</a>							
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 type="checkbox"/>	Allow Overlap Sending	<input type="checkbox"/>	Urgent Priority			
<b>Calling Party Transformations</b>								
<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="Restricted"/>							
<b>Connected Party Transformations</b>								
Connected Line ID Presentation	<input type="text" value="Default"/>							
Connected Name Presentation	<input type="text" value="Default"/>							
<b>Called Party Transformations</b>								
Discard Digits	<input type="text" value="&lt; None &gt;"/>							



## COLR Translation Pattern Configuration

# Translation Pattern Configuration

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

**Translation Pattern: 4XXX**

Status: Update completed

Copy

Update

Delete

### 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="&lt; None &gt;"/>
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="Restricted"/>
Connected Name Presentation	<input type="text" value="Default"/>

### Called Party Transformations

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

\* indicates required item.



## CONR Translation Pattern Configuration

### Translation Pattern Configuration

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

**Translation Pattern: 4XXX**  
Status: Update completed

#### 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="&lt; None &gt;"/>
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 —"/>

Provide Outside Dial Tone  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="Restricted"/>

#### Called Party Transformations

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

\* indicates required item.



## 7960 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 - 4001 in Phones
- Line 2 - Add new DN

Phone: SEP003094C39863 (Auto 4001)  
Registration: Registered with Cisco CallManager 172.20.32.254  
IP Address: [172.20.32.110](#)  
Status: Ready

**Phone Configuration (Model = Cisco 7960)**

**Device Information**

MAC Address*	<input type="text" value="003094C39863"/>
Description	<input type="text" value="Auto 4001"/>
Owner User ID	<input type="text"/> <a href="#">(Select User ID)</a>
Device Pool*	<input type="text" value="Default"/> <a href="#">(View details)</a>
Calling Search Space	<input type="text" value="&lt; None &gt;"/>
AAR Calling Search Space	<input type="text" value="&lt; None &gt;"/>
Media Resource Group List	<input type="text" value="&lt; None &gt;"/>
User Hold Audio Source	<input type="text" value="&lt; None &gt;"/>
Network Hold Audio Source	<input type="text" value="&lt; None &gt;"/>
Location	<input type="text" value="&lt; None &gt;"/>
User Locale	<input type="text" value="&lt; None &gt;"/>
Network Locale	<input type="text" value="&lt; None &gt;"/>
Device Security Mode	<input type="text" value="Use System Default"/>
Built In Bridge	<input type="text" value="Default"/>
Privacy	<input type="text" value="Default"/>

**Phone Button Template Information**

Phone Button Template*	<input type="text" value="Standard 7960"/> <a href="#">(View button list)</a>
------------------------	---


**Softkey Template Information**

Softkey Template	<input type="text" value="&lt; None &gt;"/>
------------------	---

**Expansion Module Information**

Module 1	<input type="text" value="&lt; None &gt;"/>
Module 2	<input type="text" value="&lt; None &gt;"/>



Module 1 Load Name	<input type="text"/>	(Module 1 selection required)
Module 2 Load Name	<input type="text"/>	(Module 2 selection required)
<b>Cisco IP Phone - External Data Locations (leave blank to use default)</b>		
Information	<input type="text"/>	
Directory	<input type="text"/>	
Messages	<input type="text"/>	
Services	<input type="text"/>	
Authentication Server	<input type="text"/>	
Proxy Server	<input type="text"/>	
Idle	<input type="text"/>	
Idle Timer (seconds)	<input type="text"/>	
<b>Extension Mobility (Device Profile) Information</b>		
<input type="checkbox"/> Enable Extension Mobility Feature		
Log Out Profile	<input type="text" value="-- Not Selected --"/>	
Log In User ID	<input type="text" value="&lt; None &gt;"/>	
Log In Time	<input type="text" value="&lt; None &gt;"/>	
Log Out Time	<input type="text" value="&lt; None &gt;"/>	
<b>Multilevel Precedence and Preemption (MLPP) Information</b>		
MLPP Domain	<input type="text"/>	(e.g., "0000FF")
MLPP Indication	<input type="text" value="Default"/>	
MLPP Preemption	<input type="text" value="Default"/>	
<b>Product Specific Configuration</b> 		
Disable Speakerphone	<input type="checkbox"/>	
Disable Speakerphone and Headset	<input type="checkbox"/>	
Forwarding Delay*	<input type="text" value="Disabled"/>	
PC Port*	<input type="text" value="Enabled"/>	
Settings Access*	<input type="text" value="Enabled"/>	
Gratuitous ARP*	<input type="text" value="Enabled"/>	
PC Voice VLAN Access*	<input type="text" value="Enabled"/>	
Video Capabilities*	<input type="text" value="Disabled"/>	
Auto Line Select*	<input type="text" value="Disabled"/>	

# Directory Number Configuration

[Configure Device \(SEP003094C39863\)](#)  
[Dependency Records](#)

**Associated With**

SEP003094C39863  
 7960 (Line 1)

**Directory Number: 4001 (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 Destination	Calling Search Space
Forward All <input type="checkbox"/>	<input type="text"/>	<input type="text" value=" &lt; None &gt;"/>
Forward Busy <input type="checkbox"/>	<input type="text"/>	<input type="text" value=" &lt; None &gt;"/>
Forward No Answer <input type="checkbox"/>	<input type="text"/>	<input type="text" value=" &lt; None &gt;"/>
No Answer Ring Duration <input type="text"/>	(seconds)	
Call Pickup Group <input type="text"/>	<input type="text" value=" &lt; None &gt;"/>	

**MLPP Alternate Party Settings**

Target (Destination)   
 Calling Search Space   
 No Answer Ring Duration  (seconds)

**Line Settings for this Device**

Display (Internal Caller ID)   
 Line Text Label   
 External Phone Number Mask

Message Waiting Lamp Policy	<input type="text" value="Use System Policy"/>
Ring Setting (Phone Idle)	<input type="text" value="Use System Default"/>
Ring Setting (Phone Active)**	<input type="text" value="Use System Default"/>
<b>Multiple Call / Call Waiting Settings</b>	
Maximum Number of Calls*	<input type="text" value="4"/> (1 - 200)
Busy Trigger*	<input type="text" value="2"/> (<= Max. Calls)
<b>Forwarded Call Information Display</b>	
<input checked="" type="checkbox"/> Caller Name	<input checked="" type="checkbox"/> Caller Number
<input checked="" type="checkbox"/> Redirected Number	<input checked="" type="checkbox"/> Dialed Number
<p>* 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.</p>	
<b>Note:</b> 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	<input type="text" value="Western European (Latin 1)"/>



## 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.
CFB	Call Forwarding Busy
CFNR	Call Forwarding No Reply
CFU	Call Forwarding Unconditional
CLIP	Calling Line (Number) Identification Presentation
CLIR	Calling Line (Number) Identification Restriction
CNIP	Calling Name Identification Presentation
CNIR	Calling Name Identification Restriction
COLP	Connected Line (Number) Identification Presentation
COLR	Connected Line (Number) Identification Restriction
CONP	Connected Name Identification Presentation
CONR	Connected Name Identification Restriction
CT	Call Transfer
CUCM	Cisco Unified CallManager
MWI	Message Waiting Indicator
PSTN	Public Switched Telephone Network



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