

Siemens Hipath 4000 Release 1 using E1-QSIG to Cisco Unified Communications Manager 5.0

Table of Contents

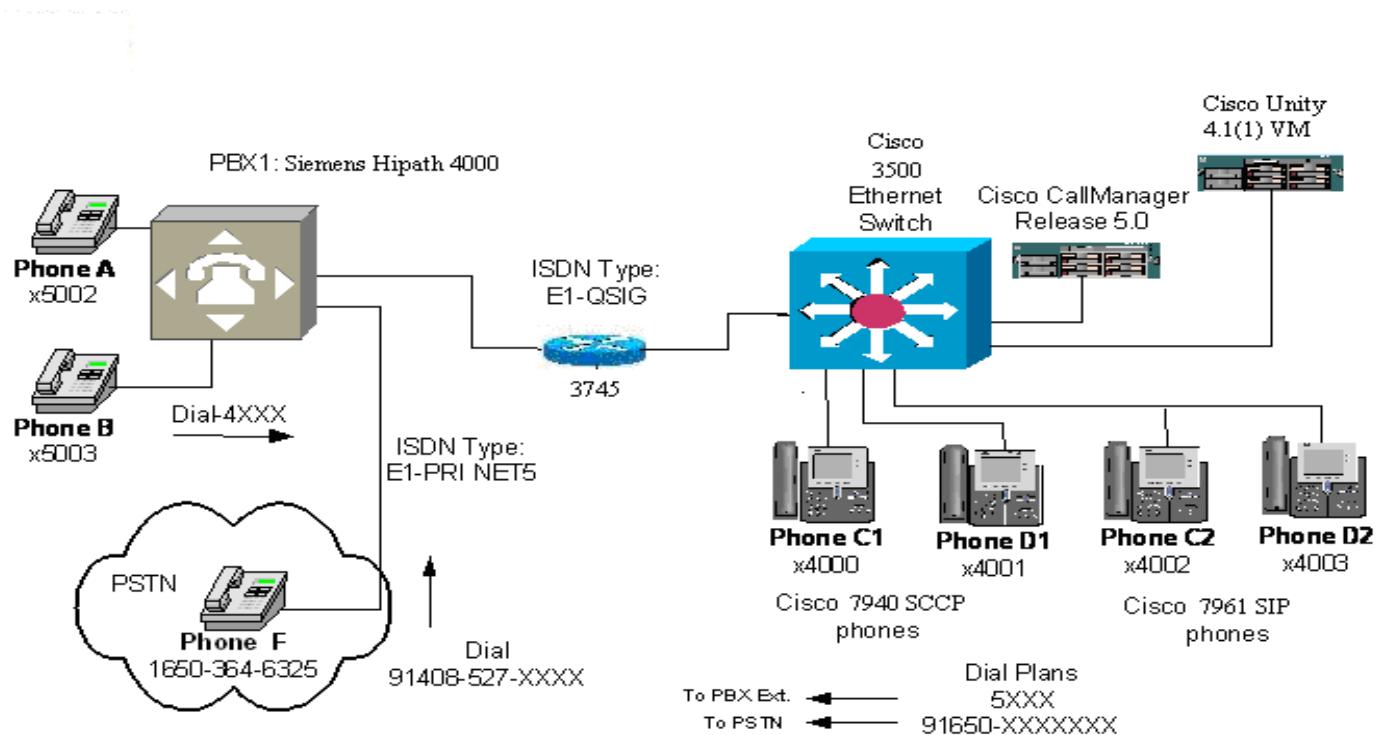
Introduction	1
Network Topology.....	2
Limitations.....	2
System Components	3
Hardware Requirements	3
Software Requirements	3
Features	3
Features Supported	3
Features Not Supported	4
Configuration.....	4
Configuring the Siemens Hipath 4000	4
Configuration Menus and Commands for Hipath 4000.....	5
Configuring the Cisco Unified CallManager.....	24
Configuring the 3745 router	59
Acronyms	69

Introduction

- This is an application note for connectivity of Siemens HiPath 4000 Release 1 PBX with Cisco Unified CallManager Release 5.0 via Cisco 3745 w/ VWIC-2MFT-E1 as MGCP gateway using ISO QSIG protocol.
- The network topology diagram (Figure 1) shows the test setup for end-to-end interoperability with the Cisco Unified CallManager connected to the PBX via Cisco3745 w/ VWIC-2MFT-E1 link as MGCP gateway.
- Connectivity is achieved by using the PRI QSIG E1 protocol type on the MGCP gateway with CallManager Service parameter QSIG variant of ISO and PSS1V2 switch type on the Hipath 4000 PBX.
- This Application Note uses the Cisco 3745 w/ VWIC-2MFT-E1 voice gateway, however other Cisco voice gateways are also an option to use since CallManager QSIG implementation does not depend on the physical interface.

Network Topology

Figure 1. Basic Call Setup



Limitations

B-Channel Mapping

- Siemens HiPath 4000 PBX uses sequential channel numbering (1-30) when QSIG protocol “PSS1V2” is selected, therefore the Cisco 3745 Gateway configuration for **Channel IE Type** field should be set to **Continuous Number**.

Connected Name and Number Restrictions

- Siemens phone displayed dialed number and trunk name when CCM sends Connected Name and Number as restricted.

Additional Network Feature Path Replacement for Call Diversion

- Siemens HiPath 4000 PBX does not send Path Replacement proposal for Call Diversion by forward switching.



Overlap Sending

- When CCM is configured for Overlap Sending calls made from SIP Phones C2 or D2 (Fig 1) to Siemens Hipath result in the Name and Number not being updated on the SIP phones (Siemens has been verified to be sending both Alerting Name and Connected Name and Number). This interoperability issue is considered a limitation on Cisco Unified CallManager and an internal corrective action bug fix ticket known internally as DDTs has been generated to resolve this issue in future releases. (DDTs # CSCse36865 Title: Name and Number not updating on SIP Phone when using Overlap sending).

System Components

Hardware Requirements

Cisco Hardware:

- Cisco 3500 Ethernet Switch
- Cisco 3745 Gateway
- Cisco Unified CallManager Server

Siemens Hipath 4000 PBX Hardware:

- DIU-N2

Software Requirements

- Cisco Unified CallManager Release 5.0
- Siemens Hipath 4000 Release 1
- Cisco IOS Release (for the gateway)

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 (see limitations section)
- CONP-Connected Name Identification Presentation
- CONR- Connected Name Identification Restriction (see limitations section)
- Sending Alerting Name
- CT-Call Transfer (by join)
- CFU-Call Forwarding Unconditional (by join)
- CFB-Call Forwarding Busy (by join)
- CFNR-Call Forwarding No Reply (by join)
- CFU-Call Forwarding Unconditional (by Reroute)



- CFB-Call Forwarding Busy (by Reroute)
- CFNR-Call Forwarding No Reply (by Reroute)
- CCBS-Call Completion to Busy Subscriber
- CCNR-Call Completion No Reply
- ANF-PR-Additional Network Feature Path Replacement (for Call Transfer by join)
- ANF-PR-Additional Network Feature Path Replacement (for Call Diversion by forward switching) (see limitations section)
- ANF-PR-Additional Network Feature Path Replacement (for Trombone connection)
- MWI- Message Waiting Indication (lamp ON, lamp OFF)¹

Features Not Supported

- None

Configuration

Configuring the Siemens Hipath 4000

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 LDATA + RICHT.
10. Configure LCR Out-dial Rules using LODR.
11. Enable In-Band DTMF signaling for the Digital Stations using SBCSU.
12. Configure Digital Station for MWI application.
13. Configure Message Center's Service Access Number for MWI application.
14. Configure Digital Station's Class of Service for Mailbox MWI application.

¹ MWI was tested with CallManager 5.0 as the Message Center PINX and PBX users as remote subscribers.



Configuration Menus and Commands for Hipath 4000

DPLN

<dis-wabe:gen;

DIS-WABE:GEN;

H500: AMO WABE STARTED

DIGIT INTERPRETATION		VALID FOR ALL DIAL PLANS		
CODE	CALL PROGRESS STATE 1 11111 11112 22 0 12345 67890 12345 67890 12	DIGIT ANALYSIS RESULT	RESERVED/CONVERT DNI/ADD-INFO *=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 1 11111 11112 22 0 12345 67890 12345 67890 12	DIGIT ANALYSIS RESULT	RESERVED/CONVERT DNI/ADD-INFO *=OWN NODE	
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 1 11111 11112 22 0 12345 67890 12345 67890 12	DIGIT ANALYSIS RESULT	RESERVED/CONVERT DNI/ADD-INFO *=OWN NODE	
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	RESERVED/CONVERT	
	1 11111 11112 22		DNI/ADD-INFO	
	0 12345 67890 12345 67890 12	RESULT	*=OWN NODE	
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 ANALYSIS	RESERVED/CONVERT	
	1 11111 11112 22		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 ANALYSIS	RESERVED/CONVERT	
	1 11111 11112 22		DNI/ADD-INFO	
	0 12345 67890 12345 67890 12	RESULT	*=OWN NODE	
*18 *	ACOSX	
*19	. *	KNOVR	
*20 *	ADND	



25	FWDTERM	
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	LDP	SPC	FDSFIELD	SDSFIELD	PINDP
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	LDP	SPC	FDSFIELD	SDSFIELD	PINDP
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	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;

**For Call Forwarding by Reroute need to add FNAN and FWDN to COT22
For Path Replacement need to add ROPT to COT 22 on the Hipath 4000.**

```
<CHANGE-COT:COTNO=22,COTTYPE=COTADD,PAR=FNAN&FWDN;  
CHANGE-COT:COTNO=22,COTTYPE=COTADD,PAR=FNAN&FWDN&ROPT;  
H500: AMO COT STARTED  
H07: CHANGED COT STILL LINKED WITH FOLLOWING TRUNKS:  
COT TRUNK BCGR DEVICE  
-----  
22 1- 3- 55- 0 1 CDGCONN  
1- 3- 55- 1 1 CDGCONN  
1- 3- 25- 0 1 S2CONN  
1- 3- 25- 1 1 S2CONN  
-----
```

H06: COT 22 CHANGED

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

```
<DISPLAY-COT:COTNO=22;  
DISPLAY-COT:COTNO=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  
NETWORKWIDE CALL FORWARDING PERMITTED FWDN  
NETWORKWIDE FORWARDING NO-ANSWER FNAN  
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	1	2	3	4	5	6	COPIN
V	123456789012345678901234567890123456789012345678901234		LAUTH				NUM
			>SERVICE INFORMATION				
1	X.....					0	
			>LCR ATTENDANT FOR VOICE				

AMO-COSSU-111 CLASSES OF SERVICE
DISPLAY COMPLETED;



Trunk Group Access Code, BUEND

<DISPLAY-BUEND:TGRP=26,FORMAT=L;

DISPLAY-BUEND:TGRP=26,FORMAT=L;

H500: AMO BUEND STARTED

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

AMO-BUEND-111 TRUNK GROUP

DISPLAY COMPLETED;

<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, TDGSU

For Master-side Configuration

```
<dis-tdcsu:1-3-25-1;
DIS-TDCSU:1-3-25-1;
H500: AMO TDGSU STARTED
+----- DIGITAL TRUNK (FORMAT=L) -----
| 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   =             PNPAC    =
| PNPL2P   =             PNPL1P   =             NNO      = 111
| TRACOUNT = 31         SATCOUNT = MANY       CARRIER  = 1
| ALARMNO  = 0           FIDX     = 1          FWDX    = 5
| ZONE     = EMPTY       COTX     = 22         PROFNO   =
| DOMTYPE  =             DOMAINNO=             CCHDL    =
| INIGHT   =             UUSCCY   = 8          FNIDX   = 1
| UUSCCX   = 16          & G711    & G729OPT  SRCGRP   =
| CLASSMRK= EC          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       NWMMUXTIM = 10        TCHARG   = N   |
| SUPPRESS= 0          DGTPR    =             CHIMAP   = N   |
| ISDNIP   =             ISDNNP   =             PNPAC    =       |
| PNPL2P   =             PNPL1P   =             NNO     = 111  |
| TRACOUNT= 31         SATCOUNT = MANY        CARRIER  = 1   |
| ALARMNO = 0          FIDX     = 1          FWDX    = 5   |
| ZONE    = EMPTY       COTX     = 22         TPROFNO =       |
| DOMTYPE =             DOMAINNO=             CCHDL   =       |
| INIGHT   =             UUSCCY   = 8          FNIDX   = 1   |
| UUSCCX  = 16          CLASSMRK= EC & G711 & G729OPT SRCGRP =       |
| TCCID   =             BCHPAN   = 1 && 30        LWPAR   = 0   |
| BCNEG   = N           BCGR     = 1          LWPS     = 0   |
| LWPP    = 0           LWLT     = 0          LWR1    = 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-tdcsv: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
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
CBMATTR	= NONE	NWMUXTIM	= 10	TCHARG = N
SUPPRESS	= 0	DGTPR	=	CHIMAP = N
ISDNIP	=	ISDNNP	=	
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	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;
```

Trunk Configuration to Hicom node, TDCSU

```
<DISPLAY-TDCSU: PEN1=1-3-25-0;
```

```
DISPLAY-TDCSU: PEN1=1-3-25-0;
```

```
H500: AMO TDCSU STARTED
```

DIGITAL TRUNK (FORMAT=L)				
DEV	= S2CONN	PEN	= 1-03-025-0	TGRP
PROTVAR	= PSS1V2	INS	= Y	SRCHMODE = CIR
COTNO	= 22	COPNO	= 21	DPLN = 0
ITR	= 1	COS	= 32	LCOSV = 1
LCOSD	= 1	CCT	= PRI ECMA 3	DESTNO = 222
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 = 222
ALARMNO	= 0	FIDX	= 1	CARRIER = 1
ZONE	= EMPTY	COTX	= 22	FWDX = 10
DOMTYPE	=	DOMAINNO	=	TPROFNO =
INIGHT	=			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;

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
1- 3- 25- 1	DIU-N2	S2CONN	0	0	N	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	SRCGRP
1- 3- 25- 1	DIU-N2	S2CONN	11	0	N	N	N	1

AMO-REFTA-111 REFERENCE CLOCK TABLE
 DISPLAY COMPLETED;



LRTEL	LVAL	TGRP	ODR	LAUTH	SCHEDULE	CARRIER	ZONE	LATTR	LDSRT
					ABCDEFGH				
1	1	23	50	1	*****	1	EMPTY	NONE	
				DNNO =	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
| DNNO = 111    PDNNO = 0             DESTNO =111
| ROUTOPT = YES   REROUT = YES     PLB = NO      FWDBL = NO
| DTMFCNV = WITHOUT DTMFDSP = WITHOUT DTMFTEXT =
| DTMFPULS =      BUGS = LIN     ROUTATT = NO      MAINGRP = 24
| EMCYRTT = NO    CONFTONE = 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=26;
DISPLAY-RICHT:MODE=LRTE ,LRTE=26;
H500: AMO RICHT STARTED

```
+-----+
| LRTE = 26     NAME = PRI 3 ECMA1      (NEUTRAL)  LSVC = ALL
| DNNO = 111    PDNNO = 0
| ROUTOPT = YES   REROUT = YES     PLB = NO      FWDBL = NO
| DTMFCNV = WITHOUT DTMFDSP = WITHOUT DTMFTEXT =
| DTMFPULS =      BUGS = LIN     ROUTATT = NO      MAINGRP = 14
| EMCYRTT = NO    CONFTONE = NO    RERINGRP = NO     RTENO = 14
| INFO =
| NOPRCFWD = NO
+-----+
| TGRP = 26 LDAT PRI ECMA 3           (NEUTRAL)  SUBGROUP = 9 |
+-----+
```

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;

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 DTMFCTRDI=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-sbcsv: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 RCBKB =N
ALARMNO =0 DF SVCANA= SPDI =0 RCBKNA =N
HMUSIC =0 FLASH = SPDC1 =
CBKNAMB =Y
PMIDX =0 SPDC2 =
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 OPTISOA :
OPTIDA =
OPTISPA :0 PATTERN =
OPTIABA :0
DCFWBUSY=N HEADSET =N APICLASS=
DNIDSP =N HSKEY =NORMAL ACFAPPL =0
DTMFBLK =N
DTMFCTRDI=Y BASICSVC= IPPASSW =
DVCFIG =OPTIP500 TSI =1 SPROT =
DOPROT =
FPROT =
SOPTIDX =
DOPTIDX =
FOPTIDX =
----- ACTIVATION IDENTIFIERS FOR FEATURES -----
FWDS :N HTOS :N DND :N
FWDD :N HTOD :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 for MWI Application:

To get the MWI light to work, the station configuration should be changed so that the parameter PMIDX (phoneMail Index parameter) needs to point to the IDX identifier that identifies the Message Center's Service Access Number.

```
<dis-sbcsv: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 =
SSTNO =N EXTBUS =
TRACE =N LCOSD1 =6
ALARMNO =0 DF SVCANA= SPDI =0 RCBKNA =N
HMUSIC =0 FLASH = SPDC1 = CBKNAMB =Y
PMIDX =1 SPDC2 =
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 OPTISOA :
OPTIDA = OPTISPA :0 PATTERN =
OPTIABA :0
DCFWBUSY=N HEADSET =N APICLASS=
DNIDSP =N HSKEY =NORMAL ACFAPPL =0
DTMFBLK =N
DTMFCTR=Y BASICSVC= IPPASSW =
DVCFIG =OPTIP500 TSI =1 SPROT = SOPTIDX =
DPROT = DOPTIDX =
FPROT = FOPTIDX =
----- ACTIVATION IDENTIFIERS FOR FEATURES -----
FWDS :N HTOS :N DND :N
FWDD :N HTOD :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 Message Center's Service Access Number for MWI Application:

Since the MWI was tested with the Message Center integrated on CallManager side, the PBX needs to configure an identifier for the Message Center's Service Access Number in order for the MWI light to work. Without this identifier the MWI light will not work.

```
<ADD-RICHT:MODE=PM,IDX=1,SAN=4005;
ADD-RICHT:MODE=PM,IDX=1,SAN=4005;
H500: AMO RICHT STARTED

AMO-RICHT-111      TRUNK ROUTING
ADD COMPLETED;
<DISP-RICHT:MODE=PM;
S3: DATA SUBSYSTEM FOR AMO RICH NOT FOUND ON HARD DISK
```

```
<DISP-RICHT
MODE = PM
DISP-RICHT:PM;
H500: AMO RICHT STARTED
+-----+
| IDX |     SAN      |          NAME       |   TYPE  |
+-----+           +           +           +-----+
|   1 | 4005      |           OTHER      |
```

```
AMO-RICHT-111      TRUNK ROUTING
DISPLAY COMPLETED;
<
```

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
          CDRINT
          CDRS
          CDRC
          MB
          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;			
<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

3745 Gateway Configuration

Gateway Configuration Related Links: [Back to MGCP Configuration](#) [Go](#)

Status
 Status: Ready

Device Information

Product	Cisco MGCP E1 Port
Gateway	3745B4_E1
Device Protocol	Digital Access PRI
Registration	Registered with Cisco Unified CallManager CM-Vindaloo
IP Address	172.20.221.200
End-Point Name *	S2/DS1-1@3745B4_E1
Description	S2/DS1-1@3745B4_E1
Device Pool*	Default
Call Classification*	Use System Default
NetworkLocale	< None >
Packet Capture Mode*	None
Packet Capture Duration	60
Media Resource Group List	< None >
Location*	Hub_None
AAR Group	< None >
Load Information	

Transmit UTF-8 for Calling Party Name
 V150 (subset)

Multilevel Precedence and Preemption (MLPP) Information

MLPP Domain	< None >
-------------	----------

MLPP Indication Not available on this device
MLPP Preemption Not available on this device

Interface Information

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

Inhibit restarts at PRI initialization
 Enable status poll
 Unattended Port



Call Routing Information - Inbound Calls

Significant Digits *	All
Calling Search Space	Incoming Trunk
AAR Calling Search Space	< None >
Prefix DN	

Call Routing Information - Outbound Calls

Calling Party Presentation*	Default
Calling Party Selection*	Originator
Called party IE number type unknown*	National
Calling party IE number type unknown*	National
Called Numbering Plan*	Private
Calling Numbering Plan*	Private
Number of digits to strip*	0
Caller ID DN	
SMDI Base Port*	0

PRI Protocol Type Specific Information

<input checked="" type="checkbox"/> Display IE Delivery
<input 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 Display IE***
<input checked="" type="checkbox"/> Setup non-ISDN Progress Indicator IE Enable****
<input checked="" type="checkbox"/> MCDN Channel Number Extension Bit Set to Zero**
<input checked="" type="checkbox"/> Send Calling Name In Facility IE
<input checked="" type="checkbox"/> Interface Identifier Present**

Interface Identifier Value **

Connected Line ID Presentation (QSIG Inbound Call)*

UUIE Configuration

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

Product Specific Configuration

Line Coding * <input type="button" value="HDB3"/>
Framing * <input type="button" value="CRC4"/>
Clock * <input type="button" value="External"/>

-



Partition Configuration

Cisco Unified CallManager Administration For Cisco IP Telecommunication Solutions Logged in as:CCMAdministrator

System ▾ Call Routing ▾ Media Resources ▾ Voice Mail ▾ Device ▾ Application ▾ User Management ▾ Bulk Administration ▾ Help ▾ Log off

Find and List Partitions

Status
2 records found

Search Options
Find partition where Partition Name begins with Search Within Results
(name begins with any)

Search Results

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

Add New Select All Clear All Delete Selected Rows per Page 50

Calling Search Space

Cisco Unified CallManager Administration For Cisco IP Telecommunication Solutions Logged in as:CCMAdministrator

System ▾ Call Routing ▾ Media Resources ▾ Voice Mail ▾ Device ▾ Application ▾ User Management ▾ Bulk Administration ▾ Help ▾ Log off

Find and List Calling Search Spaces

Status
3 records found

Search Options
Find where Name begins with Search Within Results
(name begins with any)

Search Results

	CSS Name	Description	
<input type="checkbox"/>	Incoming Trunk	3745 E1	
<input type="checkbox"/>	Path ReplacementCCS	Path ReplacementCCS	
<input type="checkbox"/>	Phones	7960 and 7940	

Add New Select All Clear All Delete Selected Rows per Page 50



Cisco Unified CallManager Administration For Cisco IP Telecommunication Solutions Logged in as:CCMAdministrator

System ▾ Call Routing ▾ Media Resources ▾ Voice Mail ▾ Device ▾ Application ▾ User Management ▾ Bulk Administration ▾ Help ▾ Log Off

Calling Search Space Configuration Related Links: Back To Find/List Go

Status: Status: Ready

Calling Search Space Information

Name * Incoming Trunk

Description 3745 E1

Route Partitions for this Calling Search Space

Available Partitions: Phones

Selected Partitions (Ordered by highest priority): Incoming Trunk

Save | Delete | Copy | Add New

Cisco Unified CallManager Administration For Cisco IP Telecommunication Solutions Logged in as:CCMAdministrator

System ▾ Call Routing ▾ Media Resources ▾ Voice Mail ▾ Device ▾ Application ▾ User Management ▾ Bulk Administration ▾ Help ▾ Log Off

Calling Search Space Configuration Related Links: Back To Find/List Go

Status: Status: Ready

Calling Search Space Information

Name * Phones

Description 7960 and 7940

Route Partitions for this Calling Search Space

Available Partitions: Incoming Trunk

Selected Partitions (Ordered by highest priority): Phones

Save | Delete | Copy | Add New



Cisco Unified CallManager Administration For Cisco IP Telecommunication Solutions Logged in as:CCMAdministrator

System Call Routing Media Resources Voice Mail Device Application User Management Bulk Administration Help Log off

Calling Search Space Configuration Related Links: Back To Find/List Go

Status: Ready

Calling Search Space Information

Name * Path ReplacementCCS

Description Path ReplacementCCS

Route Partitions for this Calling Search Space

Available Partitions

Selected Partitions (Ordered by highest priority) Incoming Trunk Phones

Save Delete Copy Add New

Enbloc Route Configuration

Find and List Route Patterns

Status: 6 records found

Search Options

Find Route Patterns where Pattern begins with Find Search Within Results
(numplan,dnorpattern begins with any)

Search Results

Pattern	Description	Partition	Route Filter	Associated Device	Copy
222	CCM-Vindaloo to Hicom			S2/DS1-0@3745B4_E1	
555	CCM-Vindaloo to Hipath			S2/DS1-1@3745B4_E1	
5XXX	CCM-Vindaloo to Hipath			S2/DS1-1@3745B4_E1	
8XXX	CCM-Vindaloo to Hicom			S2/DS1-0@3745B4_E1	
9.5	CCM-Vindaloo to Hipath			S2/DS1-1@3745B4_E1	
9.8	CCM-Vindaloo to Hicom			S2/DS1-0@3745B4_E1	

Add New Select All Clear All Delete Selected Rows per Page 50



Route Pattern Configuration

Related Links: [Back To Find/List](#) [Go](#)

Status
 Status: Ready

Pattern Definition

Route Pattern*
Route Partition
Description
Numbering Plan
Route Filter
MLPP Precedence*
Gateway/Route List *
Route Option
 Route this pattern
 Block this pattern
Call Classification*
 Allow Device Override Provide Outside Dial Tone Allow Overlap Sending Urgent Priority
 Require Forced Authorization Code
Authorization Level*
 Require Client Matter Code

Calling Party Transformations

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

Connected Party Transformations

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

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



Route Pattern Configuration

Related Links: [Back To Find>List](#) [Go](#)

Status
 Status: Ready

Pattern Definition

Route Pattern *

Route Partition

Description

Numbering Plan

Route Filter

MLPP Precedence *

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

Route Option
 Route this pattern
 Block this pattern

Call Classification *

Allow Device Override Provide Outside Dial Tone Allow Overlap Sending Urgent Priority

Require Forced Authorization Code

Authorization Level *

Require Client Matter Code

Calling Party Transformations

Use Calling Party's External Phone Number Mask

Calling Party Transform Mask

Prefix Digits (Outgoing Calls)

Calling Line ID Presentation *

Calling Name Presentation *

Connected Party Transformations

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

Network Service Protocol

Carrier Identification Code

Network Service	Service Parameter Name	Service Parameter Value
-- Not Selected --	< Not Exist >	



Cisco Unified CallManager Administration For Cisco IP Telecommunication Solutions Logged in as:CCMAdministrator

System ▾ Call Routing ▾ Media Resources ▾ Voice Mail ▾ Device ▾ Application ▾ User Management ▾ Bulk Administration ▾ Help ▾ Log Off

Route Pattern Configuration Related Links: Back To Find/List ▾ Go

Status
Status: Ready

Pattern Definition

Route Pattern* 5XXX
Route Partition < None >
Description CCM-Vindaloo to Hipath
Numbering Plan -- Not Selected --
Route Filter < None >
MLPP Precedence* Default
Gateway/Route List * S2/DS1-1@3745B4_E1 (Edit) Find
Route Option Route this pattern
 Block this pattern No Error
Call Classification* OffNet
 Allow Device Override Provide Outside Dial Tone Allow Overlap Sending Urgent Priority
 Require Forced Authorization Code
Authorization Level* 0
 Require Client Matter Code

Calling Party Transformations

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

Connected Party Transformations

Connected Line ID Presentation* Default
Connected Name Presentation* Default

Called Party Transformations

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

ISDN Network-Specific Facilities Information Element

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



Route Pattern Configuration

Related Links: [Back To Find/List](#) [Go](#)

Status
(i) Status: Ready

Pattern Definition

Route Pattern *

Route Partition

Description

Numbering Plan

Route Filter

MLPP Precedence *

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

Route Option
 Route this pattern
 Block this pattern

Call Classification *

Allow Device Override Provide Outside Dial Tone Allow Overlap Sending Urgent Priority

Require Forced Authorization Code

Authorization Level *

Require Client Matter Code

Calling Party Transformations

Use Calling Party's External Phone Number Mask

Calling Party Transform Mask

Prefix Digits (Outgoing Calls)

Calling Line ID Presentation *

Calling Name Presentation *

Connected Party Transformations

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

Network Service Protocol

Carrier Identification Code

Network Service	Service Parameter Name	Service Parameter Value
<input type="button" value="-- Not Selected --"/>	<input type="text" value="< Not Exist >"/>	<input type="text"/>



Overlap Sending Route Pattern Configuration

Route Pattern Configuration

Related Links: [Back To Find>List](#) [Go](#)

Status
Status: Ready

Pattern Definition

Route Pattern * 9.5
Route Partition < None >
Description CCM-Vindaloo to Hipath
Numbering Plan -- Not Selected --
Route Filter < None >
MLPP Precedence * Default
Gateway/Route List * S2/DS1-1@3745B4_E1 [\(Edit\)](#) [Find](#)
Route Option Route this pattern
 Block this pattern No Error
Call Classification * OffNet
 Allow Device Override Provide Outside Dial Tone Allow Overlap Sending Urgent Priority
 Require Forced Authorization Code
Authorization Level * 0
 Require Client Matter Code

Calling Party Transformations

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

Connected Party Transformations

Connected Line ID Presentation * Default
Connected Name Presentation * Default

Called Party Transformations

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

ISDN Network-Specific Facilities Information Element

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



Route Pattern Configuration

Related Links: [Back To Find>List](#) [Go](#)

Status
(i) Status: Ready

Pattern Definition

Route Pattern * Route Partition

Description Numbering Plan

Route Filter MLPP Precedence *

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

Route Option
 Route this pattern
 Block this pattern

Call Classification *

Allow Device Override Provide Outside Dial Tone Allow Overlap Sending Urgent Priority

Require Forced Authorization Code

Authorization Level *

Require Client Matter Code

Calling Party Transformations

Use Calling Party's External Phone Number Mask
Calling Party Transform Mask

Prefix Digits (Outgoing Calls)

Calling Line ID Presentation * Calling Name Presentation *

Connected Party Transformations

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

Network Service Protocol Carrier Identification Code

Network Service	Service Parameter Name	Service Parameter Value
<input type="button" value="-- Not Selected --"/>	<input type="text" value="< Not Exist >"/>	



Translation Pattern for Incoming Calls

Translation Pattern Configuration

Related Links: [Back To Find/List](#) [Go](#)

Status
 Status: Ready

Pattern Definition

Translation Pattern: 4XXX
Partition: Incoming Trunk
Description:
Numbering Plan: < None >
Route Filter: < None >
MLPP Precedence*: Default
Calling Search Space: Phones
Route Option:
 Route this pattern
 Block this pattern: No Error
 Provide Outside Dial Tone Urgent Priority

Calling Party Transformations

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

Connected Party Transformations

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

Called Party Transformations

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



CLIR Route Pattern Configuration

Cisco Unified CallManager Administration For Cisco IP Telecommunication Solutions Logged in as:CCMAdministrator

System Call Routing Media Resources Voice Mail Device Application User Management Bulk Administration Help Log Off

Route Pattern Configuration Related Links: Back To Find/List Go

Status
Status: Ready

Pattern Definition

Route Pattern*

Route Partition

Description

Numbering Plan

Route Filter

MLPP Precedence*

Gateway/Route List *

Route Option
 Route this pattern
 Block this pattern

Call Classification*

Allow Device Override Provide Outside Dial Tone Allow Overlap Sending Urgent Priority

Require Forced Authorization Code

Authorization Level*

Require Client Matter Code

Calling Party Transformations

Use Calling Party's External Phone Number Mask

Calling Party Transform Mask

Prefix Digits (Outgoing Calls)

Calling Line ID Presentation*

Calling Name Presentation*

Connected Party Transformations

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

Network Service Protocol

Carrier Identification Code

Network Service	Service Parameter Name	Service Parameter Value
<input type="button" value="-- Not Selected --"/>	<input >"="" exist="" not="" type="text" value="<"/>	<input type="text"/>



CNIR Route Pattern Configuration

Cisco Unified CallManager Administration For Cisco IP Telecommunication Solutions Logged in as:CCMAdministrator

System Call Routing Media Resources Voice Mail Device Application User Management Bulk Administration Help Log Off

Route Pattern Configuration Related Links: Back To Find/List Go

Status
Status: Ready

Pattern Definition

Route Pattern*

Route Partition

Description

Numbering Plan

Route Filter

MLPP Precedence*

Gateway/Route List *

Route Option
 Route this pattern
 Block this pattern

Call Classification*

Allow Device Override Provide Outside Dial Tone Allow Overlap Sending Urgent Priority

Require Forced Authorization Code

Authorization Level*

Require Client Matter Code

Calling Party Transformations

Use Calling Party's External Phone Number Mask

Calling Party Transform Mask

Prefix Digits (Outgoing Calls)

Calling Line ID Presentation*

Calling Name Presentation*

Connected Party Transformations

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

Network Service Protocol

Carrier Identification Code

Network Service	Service Parameter Name	Service Parameter Value
<input type="button" value="-- Not Selected --"/>	<input >"="" exist="" not="" type="button" value="<"/>	<input type="text"/>



COLR Translation Pattern Configuration

Translation Pattern Configuration

Related Links: [Back To Find/List](#) [Go](#)

Status
 Status: Ready

Pattern Definition

Translation Pattern: 4XXX
Partition: Incoming Trunk
Description:
Numbering Plan: < None >
Route Filter: < None >
MLPP Precedence*: Default
Calling Search Space: Phones
Route Option:
 Route this pattern
 Block this pattern
 No Error
 Provide Outside Dial Tone Urgent Priority

Calling Party Transformations

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

Connected Party Transformations

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

Called Party Transformations

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

ISDN Network-Specific Facilities Information Element

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



CONR Translation Pattern Configuration

Translation Pattern Configuration Related Links: [Back To Find/List](#) [Go](#)

Status
 Status: Ready

Pattern Definition

Translation Pattern	4XXX
Partition	Incoming Trunk
Description	
Numbering Plan	< None >
Route Filter	< None >
MLPP Precedence*	Default
Calling Search Space	Phones
Route Option	<input checked="" type="radio"/> Route this pattern <input type="radio"/> Block this pattern <select>No Error</select>
<input checked="" type="checkbox"/> Provide Outside Dial Tone <input checked="" type="checkbox"/> Urgent Priority	

Calling Party Transformations

<input type="checkbox"/> Use Calling Party's External Phone Number Mask	
Calling Party Transform Mask	
Prefix Digits (Outgoing Calls)	
Calling Line ID Presentation*	Default
Calling Name Presentation*	Default

Connected Party Transformations

Connected Line ID Presentation*	Default
Connected Name Presentation*	Restricted

Called Party Transformations

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

ISDN Network-Specific Facilities Information Element

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



MWI lamp On/Off Configuration

Cisco Unified CallManager Administration For Cisco IP Telecommunication Solutions Logged in as: CCMAdministrator

System ▾ Call Routing ▾ Media Resources ▾ Voice Mail ▾ Device ▾ Application ▾ User Management ▾ Bulk Administration ▾ Help ▾ Log Off

Find and List Message Waiting Numbers

Status: 2 records found

Search Options: Find Message Waiting Numbers where Directory Number begins with and where Message Waiting Indicator is Both (numplan.dnorpattern begins with any)

Search Results:

	Directory Number	Description	Partition	Calling Search Space	Copy
	4038	MWI On		Path ReplacementCCS	
	4039	MWI Off		Path ReplacementCCS	

Add New Select All Clear All Delete Selected Rows per Page: 50

Message Waiting Configuration Related Links: Back To Find/List Go

Status: Status: Ready

Message Waiting Information

Message Waiting Number*: 4038
Partition: < None >
Description: MWI On
Message Waiting Indicator*: On Off
Calling Search Space: Path ReplacementCCS

Message Waiting Configuration Related Links: Back To Find/List Go

Status: Status: Ready

Message Waiting Information

Message Waiting Number*: 4039
Partition: < None >
Description: MWI Off
Message Waiting Indicator*: On Off
Calling Search Space: Path ReplacementCCS



CallBack Service Parameters

Clusterwide Parameters (Feature - Call Back)	
<u>Call Back Enabled Flag</u> *	True
<u>Call Back Notification Audio File Name</u> *	CallBack.raw
<u>Connection Proposal Type</u> *	Connection Retention
<u>Connection Response Type</u> *	Default to Connection Retention
<u>Call Back Request Protection T1 Timer</u> *	10
<u>Call Back Recall T3 Timer</u> *	20
<u>Call Back Calling Search Space</u>	< None >
<u>No Path Reservation</u> *	True
<u>Set Private Numbering Plan for Call Back</u> *	False

CallBack Softkey Configuration

Cisco Unified CallManager Administration For Cisco IP Telecommunication Solutions Logged in as:CCMAdministrator

System ▾ Call Routing ▾ Media Resources ▾ Voice Mail ▾ Device ▾ Application ▾ User Management ▾ BIK Administration ▾ Help ▾ Log Off

Softkey Template Configuration Related Links: Configure Softkey Layout ▾ Go

Status: Status: Ready

Softkey Template Information

Name *	Standard Feature-CB
Description	Standard Softkey Template for CM Combined Feature
Applications *	Cisco CallManager

Add Application
Remove Application



Softkey Template Configuration

Related Links: Softkey Template Configuration Go

Status: Status: Ready

Softkey Layout Configuration

Softkey Template: Standard Feature-CB

Select a call state to configure: Ring Out

Unselected Softkeys: Undefined (Undefined)

Selected Softkeys (ordered by position)**: **End Call (EndCall), Direct Transfer (DirTrfr), Call Back (CallBack)

Up and Down arrows for reordering softkeys between the two lists.

Softkey Template Configuration

Related Links: Softkey Template Configuration Go

Status: Status: Ready

Softkey Layout Configuration

Softkey Template: Standard Feature-CB

Select a call state to configure: On Hook

Unselected Softkeys: Conference List (ConfList), Direct Transfer (DirTrfr), Group Pick Up (GPickUp), Immediate Divert (Divert), Join (Join), Meet Me (MeetMe), Other Pickup (oPickup), Pick Up (PickUp), Quality Report Tool (QRT), Remove Last Conference Party (RmLstC), Select (Select), Undefined (Undefined), Video Mode Command (VidMode)

Selected Softkeys (ordered by position)**: Redial (Redial), **NewCall (NewCall), Forward All (CfwdAll), Call Back (CallBack)

Up and Down arrows for reordering softkeys between the two lists.



Path Replacement Service Parameters

Clusterwide Parameters (Feature - Path Replacement)

<u>Path Replacement Enabled</u> *	<input type="checkbox"/> True	<input checked="" type="checkbox"/> False
<u>Path Replacement on Tromboned Calls</u> *	<input type="checkbox"/> True	<input checked="" type="checkbox"/> False
<u>Start Path Replacement Minimum Delay Time</u> *	2	0
<u>Start Path Replacement Maximum Delay Time</u> *	10	0
<u>Path Replacement T1 Timer</u> *	30	30
<u>Path Replacement T2 Timer</u> *	15	15
<u>Path Replacement PINX ID</u>	111	
<u>Path Replacement Calling Search Space</u>	Path ReplacementCCS	<input checked="" type="checkbox"/>

Call Pick Up Group

Call Pickup Group Information

Call Pickup Group Name *	QSIG PINX ID
Call Pickup Group Number *	111
Description	QSIG PINX ID
Partition	< None >

Associated Call Pickup Group Information

Find Pickup Numbers by Numbers/Partition

Partition	< None >
Call Pickup Group Numbers Contain	<input type="text"/>
Available Call Pickup Groups	(No Matches Found)

Add to Associated Call Pickup Groups

Current Associated Call Pickup Groups

Reverse Order of Selected Numbers	
Selected Call Pickup Groups	111
▼ ▲	
Removed Call Pickup Groups (to be removed when you click Save)	



Forward by Reroute Service Parameter

Clusterwide Parameters (Feature - Forward)	
<u>Forward Maximum Hop Count</u> *	12
<u>Forward No Answer Timer</u> *	12
<u>Max Forward Hops to DN</u> *	12
<u>Retain Forward Information</u> *	False
<u>Forward By Reroute Enabled</u> *	False
<u>Transform Forward by Reroute Destination</u> *	True
<u>Include Voice Mailbox Address in QSIG Call Diversion APDUs</u> *	False
<u>Always Forward Switch Voice Mail Calls</u> *	True
<u>Forward By Reroute T1 Timer</u> *	10
<u>Include Original Called Info for QSIG Call Diversions</u> *	Only after the first diversion



IP phone Configuration

Phone Configuration Related Links: [Back To Find>List](#) [Go](#)

Status: Status: Ready

Association Information

1 Line [1] - 4000 in Phones
2 Add a new SD
----- Unassigned Associated Items -----
3 Line [2] - Add a new DN
4 Add a new SD
5 Add a new SURL
6 Add a new BLF SD
7 Privacy
8 None

Phone Type

Product Type: Cisco 7940
Device Protocol: SCCP

Device Information

Registration	Registered with Cisco Unified CallManager CM-Vindaloo
IP Address	172.20.221.101
MAC Address*	000427D3FFF7
Description	Auto 4000
Device Pool*	Default
Phone Button Template*	Standard 7940 SCCP
Softkey Template	Standard Feature-CB
Common Phone Profile*	Standard Common Phone Profile
Calling Search Space	< None >
AAR Calling Search Space	< None >
Media Resource Group List	< None >
User Hold Audio Source	< None >
Network Hold Audio Source	< None >
Location*	Hub_None
User Locale	English United States
Network Locale	< None >
Built In Bridge*	Default



Privacy*	Default
Owner User ID	< None >
Phone Load Name	
<input checked="" type="checkbox"/> Retry Video Call as Audio	
<input type="checkbox"/> Ignore Presentation Indicators (internal calls only)	
<input checked="" type="checkbox"/> Allow Control of Device from CTI	
Protocol Specific Information	
Packet Capture Mode*	None
Packet Capture Duration	0
Presence Group*	Standard Presence group
SCCP Phone Security Profile*	Standard SCCP Profile for Auto Registration
SUBSCRIBE Calling Search Space	< None >
<input type="checkbox"/> Unattended Port	
<input type="checkbox"/> Require DTMF Reception	
<input type="checkbox"/> RFC2833 Disabled	
External Data Locations Information (Leave blank to use default)	
Information	
Directory	
Messages	
Services	
Authentication Server	
Proxy Server	
Idle	
Idle Timer (seconds)	
Extension Information	
<input type="checkbox"/>	Enable Extension Mobility
Log Out Profile	-- Not Selected --
Login in User ID	< None >
Login in Time	< None >
Log out Time	< None >
Certification Authority Proxy Function (CAPF) Information	
Certificate Operation*	No Pending Operation
Authentication String	
MLPP Information	
MLPP Domain	< None >
MLPP Indication*	Default
MLPP Preemption*	Default



Secure Shell Information	
Secure Shell User	<input type="text"/>
Secure Shell Password	<input type="password"/>
Product Specific Configuration Layout	
?	
<input type="checkbox"/> Disable Speakerphone	
<input type="checkbox"/> Disable Speakerphone and Headset	
PC Port *	<input type="button" value="Enabled"/>
Settings Access*	<input type="button" value="Enabled"/>
Gratuitous ARP*	<input type="button" value="Enabled"/>
PC Voice VLAN Access*	<input type="button" value="Enabled"/>
Video Capabilities*	<input type="button" value="Disabled"/>
Auto Line Select*	<input type="button" value="Disabled"/>
Web Access*	<input type="button" value="Enabled"/>

Directory Number Configuration Related Links: [Back To Find>List](#)

Status: Status: Ready

Note: Changes to Line or Directory Number settings require restart.

Directory Number Information

Directory Number*	<input type="text" value="4000"/>
Route Partition	<input type="button" value="Phones"/>
Description	<input type="text"/>
Alerting Name	<input type="text" value="Vindaloo-00(Alert)"/>
ASCII Alerting Name	<input type="text" value="Vindaloo-00(Alert)"/>

Allow Control of Device from CTI

Associated Devices

SEP000427D3FFF7	<input type="button" value="Edit Device"/>	<input type="button" value="Edit Line Appearance"/>
-----------------	--	---

Dissociate Devices



Directory Number Settings

Voice Mail Profile	< None >	(Choose <None> to use system default)
Calling Search Space	Phones	
Presence Group*	Standard Presence group	
AAR Group	< None >	
User Hold Audio Source	< None >	
Network Hold Audio Source	< None >	
Auto Answer*	Auto Answer Off	

Call Forward and Call Pickup Settings

Forward All	Voice Mail Destination <input type="checkbox"/> or <input type="text"/>	Calling Search Space Phones
Secondary Calling Search Space for Forward All	< None >	
Forward Busy Internal	<input type="checkbox"/> or <input type="text"/>	Phones
Forward Busy External	<input type="checkbox"/> or <input type="text"/>	Phones
Forward No Answer Internal	<input type="checkbox"/> or <input type="text"/>	Phones
Forward No Answer External	<input type="checkbox"/> or <input type="text"/>	Phones
Forward No Coverage Internal	<input type="checkbox"/> or <input type="text"/>	< None >
Forward No Coverage External	<input type="checkbox"/> or <input type="text"/>	< None >
Forward on CTI Failure	<input type="checkbox"/> or <input type="text"/>	< None >
No Answer Ring Duration (seconds)	<input type="text"/>	
Call Pickup Group	< None >	

MLPP Alternate Party Settings

Target (Destination)	<input type="text"/>
MLPP Calling Search Space	Phones
MLPP No Answer Ring Duration (seconds)	<input type="text"/>

Line 1 on Device SEP000427D3FFF7

Display (Internal Caller ID)	Vindaloo-00	Display text for a line appearance is intended for displaying text such as a name instead of a number for internal calls. If you specify a number, the person receiving a call may not see the proper identity of the caller.
ASCII Display (Internal Caller ID)	Vindaloo-00	
Line Text Label	Vindaloo-00	
ASCII Line Text Label	Vindaloo-00	
External Phone Number Mask	<input type="text"/>	
Message Waiting Lamp Policy*	Use System Policy	
Ring Setting (Phone Idle)*	Ring	
Ring Setting (Phone Active)	Use System Default	Applies to this line when any line on the phone has a call in progress.

Multiple Call/Call Waiting Settings on Device SEP000427D3FFF7

Note: The range to select the Max Number of calls is: 1-200

Maximum Number of Calls*	<input type="text" value="4"/>	
Busy Trigger*	<input type="text" value="2"/>	(Less than or equal to Max. Calls)



Forwarded Call Information Display on Device SEP000427D3FFF7

- Caller Name
- Caller Number
- Redirected Number
- Dialed Number

SIP phone Configuration

Phone Configuration Related Links: [Back To Find>List](#) [Go](#)

Status
 Status: Ready

Association Information

Modify Button Items

- 1 Line [1] - 4002 in Phones
- 2 Line [2] - Add a new DN
- 3 Add a new SD
- 4 Add a new SD
- 5 Add a new SD
- 6 Add a new SD
- Unassigned Associated Items -----
- 7 Add a new SD
- 8 Add a new SURL
- 9 Add a new BLF SD
- 10 Privacy
- 11 None

Phone Type

Product Type: Cisco 7961
Device Protocol: SIP

Device Information

Registration	Registered with Cisco Unified CallManager CM-Vindaloo
IP Address	172.20.221.103
MAC Address*	00170EEE2F9E
Description	Auto 4002
Device Pool*	Default
Phone Button Template*	Standard 7961 SIP
Softkey Template	Standard Feature-CB
Common Phone Profile*	Standard Common Phone Profile
Calling Search Space	< None >
AAR Calling Search Space	< None >
Media Resource Group List	< None >
User Hold Audio Source	< None >
Network Hold Audio Source	< None >
Location*	Hub_None
User Locale	< None >
Network Locale	< None >
Built In Bridge*	Default
Privacy*	Default
Owner User ID	< None >
Phone Load Name	

Ignore Presentation Indicators (internal calls only)
 Allow Control of Device from CTI



Protocol Specific Information	
Packet Capture Mode*	<input type="text" value="None"/>
Packet Capture Duration	<input type="text" value="0"/>
Presence Group*	<input type="text" value="Standard Presence group"/>
SIP Dial Rules	<input type="text" value="< None >"/>
MTP Preferred Originating Codec*	<input type="text" value="711ulaw"/>
SIP Phone Security Profile*	<input type="text" value="Standard SIP Profile for Auto Registration"/>
Rerouting Calling Search Space	<input type="text" value="< None >"/>
SUBSCRIBE Calling Search Space	<input type="text" value="< None >"/>
SIP Profile*	<input type="text" value="Standard SIP Profile"/>
Digest User	<input type="text" value="< None >"/>
<input type="checkbox"/> Media Termination Point Required	
<input type="checkbox"/> Unattended Port	
<input type="checkbox"/> Require DTMF Reception	
External Data Locations Information (Leave blank to use default)	
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"/>
Extension Information	
<input type="checkbox"/> Enable Extension Mobility	
Log Out Profile	<input type="text" value="-- Not Selected --"/>
Login in User ID	< None >
Log in Time	< None >
Log out Time	< None >
Certification Authority Proxy Function (CAPF) Information	
Certificate Operation*	<input type="text" value="No Pending Operation"/>
Authentication String	<input type="text"/>
MLPP Information	
MLPP Domain	<input >"="" none="" type="text" value="<"/>
Secure Shell Information	
Secure Shell User	<input type="text"/>
Secure Shell Password	<input type="text"/>



Product Specific Configuration Layout



<input type="checkbox"/> Disable Speakerphone	
<input type="checkbox"/> Disable Speakerphone and Headset	
PC Port *	Enabled
Settings Access *	Enabled
Gratuitous ARP *	Enabled
PC Voice VLAN Access *	Enabled
Video Capabilities *	Disabled
Auto Line Select *	Disabled
Web Access *	Enabled
Span to PC Port *	Disabled
Logging Display *	PC Controlled
Load Server	

Directory Number Configuration

Related Links: [Back To Find>List](#)



Status

Status: Ready

Note: Changes to Line or Directory Number settings require restart.

Directory Number Information

Directory Number *	4002
Route Partition	Phones
Description	SIP
Alerting Name	Vindaloo-SIP-02(Alert)
ASCII Alerting Name	Vindaloo-SIP-02(Alert)

Allow Control of Device from CTI

Associated Devices

SEP00170EEE2F9E

[Edit Device](#)

[Edit Line Appearance](#)



Dissociate Devices



Directory Number Settings

Voice Mail Profile	<input type="button" value="< None >"/> (Choose <None> to use system default)
Calling Search Space	<input type="button" value="Phones"/>
Presence Group*	<input type="button" value="Standard Presence group"/>
AAR Group	<input type="button" value="< None >"/>
User Hold Audio Source	<input type="button" value="< None >"/>
Network Hold Audio Source	<input type="button" value="< None >"/>
Auto Answer*	<input type="button" value="Auto Answer Off"/>

Call Forward and Call Pickup Settings

Voice Mail Destination	Calling Search Space
Forward All	<input type="checkbox"/> or <input type="button" value="Phones"/>
Secondary Calling Search Space for Forward All	<input type="button" value="< None >"/> <input type="button" value="Find"/>
Forward Busy Internal	<input type="checkbox"/> or <input type="button" value="Phones"/>
Forward Busy External	<input type="checkbox"/> or <input type="button" value="Phones"/>
Forward No Answer Internal	<input type="checkbox"/> or <input type="button" value="Phones"/>
Forward No Answer External	<input type="checkbox"/> or <input type="button" value="Phones"/>
Forward No Coverage Internal	<input type="checkbox"/> or <input type="button" value="< None >"/>
Forward No Coverage External	<input type="checkbox"/> or <input type="button" value="< None >"/>
Forward on CTI Failure	<input type="checkbox"/> or <input type="button" value="< None >"/>
No Answer Ring Duration (seconds)	<input type="text"/>
Call Pickup Group	<input type="button" value="< None >"/>

MLPP Alternate Party Settings

Target (Destination)	<input type="button"/>
MLPP Calling Search Space	<input type="button" value="< None >"/>
MLPP No Answer Ring Duration (seconds)	<input type="text"/>

Line 1 on Device SEP00170EEE2F9E

Display (Internal Caller ID)	<input type="button" value="Vindaloo-SIP-02"/>	Display text for a line appearance is intended for displaying text such as a name in: number for internal calls. If you specify a number, the person receiving a call may not see the proper identity of the caller.
ASCII Display (Internal Caller ID)	<input type="button" value="Vindaloo-SIP-02"/>	
Line Text Label	<input type="button" value="Vindaloo-SIP-02"/>	
ASCII Line Text Label	<input type="button" value="Vindaloo-SIP-02"/>	
External Phone Number Mask	<input type="button"/>	
Message Waiting Lamp Policy*	<input type="button" value="Use System Policy"/>	
Ring Setting (Phone Idle)*	<input type="button" value="Ring"/>	
Ring Setting (Phone Active)	<input type="button" value="Use System Default"/>	Applies to this line when any line on the phone has a call in progress.



Multiple Call/Call Waiting Settings on Device SEP00170EEE2F9E

Note: The range to select the Max Number of calls is: 1-200

Maximum Number of Calls *

4

Busy Trigger *

2

(Less than or equal to Max. Calls)

Forwarded Call Information Display on Device SEP00170EEE2F9E

Caller Name

Caller Number

Redirected Number

Dialed Number

Voicemail Profile Configuration

Cisco Unified CallManager Administration For Cisco IP Telecommunication Solutions

System ▾ Call Routing ▾ Media Resources ▾ Voice Mail ▾ Device ▾ Application ▾ User Management ▾ BIK Administration ▾ Help ▾

Voice Mail Profile Configuration Related Links:

Status
(i) Status: Ready

Voice Mail Profile Information

Voice Mail Profile	Unity (used by 4 devices)
Voice Mail Profile Name*	Unity
Description	Default voice messaging profile
Voice Mail Pilot**	4030/Phones
Voice Mail Box Mask	

Make this the default Voice Mail Profile for the System

Save Delete Copy Reset Add New



Voicemail Pilot Configuration

Navigation Cisco Unified CallManager Administration For Cisco IP Telecommunication Solutions

System ▾ Call Routing ▾ Media Resources ▾ Voice Mail ▾ Device ▾ Application ▾ User Management ▾ Bulk Administration ▾ Help ▾

Voice Mail Pilot Configuration Related Links:

Status
Status: Ready

Voice Mail Pilot Information

Voice Mail Pilot Number: 4030

Calling Search Space: Phones

Description: Unity

Make this the default Voice Mail Pilot for the system

Actions: Save | Delete | Add New

Voicemail Ports

Cisco Unified CallManager Administration For Cisco IP Telecommunication Solutions Logged in as:CCMAdministrator Log Off

System ▾ Call Routing ▾ Media Resources ▾ Voice Mail ▾ Device ▾ Application ▾ User Management ▾ Bulk Administration ▾ Help ▾

Find and List Voice Mail Ports

Status
4 records found

Search Options

Find Voice Mail Port where Device Name begins with Find Search Within Results
 Select item or enter search text

(device.name begins with any)

Search Results

Device Name	Description	Device Pool	SCCP Security Profile	Status	IP Address	Copy
Vindaloo-VI1	Unity VM	Default	Standard SCCP Profile for Auto Registration	Registered with CM-Vindaloo	172.20.239.252	
Vindaloo-VI2	Unity VM	Default	Standard SCCP Profile for Auto Registration	Registered with CM-Vindaloo	172.20.239.252	
Vindaloo-VI3	Unity VM	Default	Standard SCCP Profile for Auto Registration	Registered with CM-Vindaloo	172.20.239.252	
Vindaloo-VI4	Unity VM	Default	Standard SCCP Profile for Auto Registration	Registered with CM-Vindaloo	172.20.239.252	

Actions: Add New | Select All | Clear All | Delete Selected | Reset Selected | Rows per Page: 50



Voice Mail Port Configuration

Related Links: [Back To Find/List](#) [Go](#)

Status
Status: Ready

Device Information

Registration	Registered with Cisco Unified CallManager CM-Vindaloo
IP Address *	172.20.239.252
Port Name *	Vindaloo-VI1
Description	Unity VM
Device Pool *	Default
Calling Search Space	< None >
AAR Calling Search Space	< None >
Location *	Hub_None
SCCP Phone Security Profile *	Standard SCCP Profile for Auto Registration

Directory Number Information

Directory Number *	4091
Partition	< None >
Calling Search Space	< None >
AAR Group	< None >
Internal Caller ID Display	VoiceMail
Internal Caller ID Display (ASCII format)	VoiceMail
External Number Mask	

Voice Mail Port Configuration

Related Links: [Back To Find/List](#) [Go](#)

Status
Status: Ready

Device Information

Registration	Registered with Cisco Unified CallManager CM-Vindaloo
IP Address *	172.20.239.252
Port Name *	Vindaloo-VI2
Description	Unity VM
Device Pool *	Default
Calling Search Space	< None >
AAR Calling Search Space	< None >
Location *	Hub_None
SCCP Phone Security Profile *	Standard SCCP Profile for Auto Registration

Directory Number Information

Directory Number *	4092
Partition	< None >
Calling Search Space	< None >
AAR Group	< None >
Internal Caller ID Display	VoiceMail
Internal Caller ID Display (ASCII format)	VoiceMail
External Number Mask	



Voice Mail Port Configuration

Related Links: [Back To Find/List](#) [Go](#)

Status: Ready

Device Information

Registration	Registered with Cisco Unified CallManager CM-Vindaloo
IP Address	172.20.239.252
Port Name*	Vindaloo-VI3
Description	Unity VM
Device Pool*	Default
Calling Search Space	< None >
AAR Calling Search Space	< None >
Location*	Hub_None
SCCP Phone Security Profile*	Standard SCCP Profile for Auto Registration

Directory Number Information

Directory Number*	4093
Partition	< None >
Calling Search Space	< None >
AAR Group	< None >
Internal Caller ID Display	VoiceMail
Internal Caller ID Display (ASCII format)	VoiceMail
External Number Mask	

Voice Mail Port Configuration

Related Links: [Back To Find/List](#) [Go](#)

Status: Ready

Device Information

Registration	Registered with Cisco Unified CallManager CM-Vindaloo
IP Address	172.20.239.252
Port Name*	Vindaloo-VI4
Description	Unity VM
Device Pool*	Default
Calling Search Space	< None >
AAR Calling Search Space	< None >
Location*	Hub_None
SCCP Phone Security Profile*	Standard SCCP Profile for Auto Registration

Directory Number Information

Directory Number*	4094
Partition	< None >
Calling Search Space	< None >
AAR Group	< None >
Internal Caller ID Display	VoiceMail
Internal Caller ID Display (ASCII format)	VoiceMail
External Number Mask	



Voicemail Version

The screenshot shows the 'Software Versions' page of the Cisco Unity interface. The left sidebar includes links for Settings, Software Versions, Recordings, Contacts, Phone Languages, and GUI Languages. The main content area displays a table of software components and their versions:

Component	Version
Cisco Unity Version	4.1
Build Number	4.1(1)
Windows Server Version	Microsoft Windows 2000 build 2195 (Service Pack 4)
System Administrator DLL	4.1.0.237
AVLOGMGRSVR	4.1.0.111
AVRESLOADERSVR	4.0.4.53
DOH	4.1.0.259
AvResMgr	4.0.3.46
AvMiuSwr	4.1.0.209
AVVIRTUALQUEUESVR	4.0.3.21
AVSASCHEDULERSVR	4.0.4.39
AvRulerSwr	4.0.3.86
AVARBITERSVR	4.1.0.220
AVCONVENGNSVR	4.1.0.146
AvPhraseServerSwr	4.1.0.89
AVPAGERCONNSVR	4.1.0.118
AVFAILURECONNSVR	4.0.3.34
AVCONVMGRSVR	4.1.0.146
AVDOHMMSVR	4.0.4.2
AvStatMonSwr	4.1.0.105
AVTrapSVR	4.1.0.84
AVRSASVR	4.0.4.21

At the bottom left, there are links for Cisco, Unity, Log off, and © 1998-2005 Cisco Systems, Inc.



MWI Configuration

Cisco Unified CallManager Administration For Cisco IP Telecommunication Solutions Logged in as:CCMAdministrator

System ▾ Call Routing ▾ Media Resources ▾ Voice Mail ▾ Device ▾ Application ▾ User Management ▾ Bulk Administration ▾ Help ▾ Log Off

Find and List Message Waiting Numbers

Status: 2 records found

Search Options:

Find Message Waiting Numbers where Directory Number begins with Search Within Results
and where Message Waiting Indicator is Both

(numplan.dnorpattern begins with any)

Search Results:

	Directory Number	Description	Partition	Calling Search Space	Copy
<input type="checkbox"/>	4038	MWI On		Path ReplacementCCS	
<input type="checkbox"/>	4039	MWI Off		Path ReplacementCCS	

Add New | Select All | Clear All | Delete Selected | Rows per Page: 50

MWI ON

Cisco Unified CallManager Administration For Cisco IP Telecommunication Solutions Logged in as:CCMAdministrator

System ▾ Call Routing ▾ Media Resources ▾ Voice Mail ▾ Device ▾ Application ▾ User Management ▾ Bulk Administration ▾ Help ▾ Log Off

Message Waiting Configuration

Related Links: [Back To Find/List](#)

Status: Status: Ready

Message Waiting Information:

Message Waiting Number*:
Partition: < None >
Description: MWI On
Message Waiting Indicator*: On off
Calling Search Space:

Save | Delete | Copy | Add New



MWI OFF

Cisco Unified CallManager Administration For Cisco IP Telecommunication Solutions Logged in as:CCMAdministrator

System Call Routing Media Resources Voice Mail Device Application User Management Bulk Administration Help Log Off

Message Waiting Configuration Related Links: Back To Find/List Go

Status: Ready

Message Waiting Information

Message Waiting Number*	4039
Partition	< None >
Description	MWI Off
Message Waiting Indicator*	<input type="radio"/> On <input checked="" type="radio"/> Off
Calling Search Space	Path ReplacementCCS

[Save](#) [Delete](#) [Copy](#) [Add New](#)

Configuring the 3745 router

sho ver

Cisco IOS Software, 3700 Software (C3745-IPVOICE-M), Version 12.4(3), RELEASE SOFTWARE (fc2)
Technical Support: <http://www.cisco.com/techsupport>
Copyright (c) 1986-2005 by Cisco Systems, Inc.
Compiled Fri 22-Jul-05 03:09 by hqluong

ROM: System Bootstrap, Version 12.2(8r)T2, RELEASE SOFTWARE (fc1)

3745B4_E1 uptime is 2 weeks, 6 days, 19 hours, 11 minutes
System returned to ROM by power-on
System image file is "flash:c3745-ipvoice-mz.124-3.bin"

Cisco 3745 (R7000) processor (revision 2.0) with 241664K/20480K bytes of memory.
Processor board ID JMX0715L08P
R7000 CPU at 350MHz, Implementation 39, Rev 3.3, 256KB L2, 2048KB L3 Cache
2 FastEthernet interfaces
124 Serial interfaces
4 Channelized E1/PRI ports
2 Voice FXS interfaces
DRAM configuration is 64 bits wide with parity disabled.
151K bytes of NVRAM.
125184K bytes of ATA System CompactFlash (Read/Write)
62592K bytes of ATA Slot0 CompactFlash (Read/Write)
Configuration register is 0x2102

3745B4_E1#

sho run

Building configuration...

Current configuration : 3738 bytes



```
!
version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname 3745B4_E1
!
boot-start-marker
boot system flash:c3745-ipvoice-mz.124-3.bin
boot-end-marker
!
logging buffered 1000000 debugging
!
no aaa new-model
!
resource policy
!
no network-clock-participate slot 1
no network-clock-participate slot 2
voice-card 1
  dspfarm
!
voice-card 2
  dspfarm
!
ip subnet-zero
ip cef
ip tcp synwait-time 13
!
!
no ip dhcp use vrf connected
ip dhcp excluded-address 192.168.10.0 192.168.10.60
ip dhcp excluded-address 192.168.11.0 192.168.11.10
!
ip dhcp pool hq-pool-phones
  network 192.168.10.0 255.255.255.0
  option 150 ip 192.168.10.50
  default-router 192.168.10.1
!
ip dhcp pool hq-pool-data
  network 192.168.11.0 255.255.255.0
  default-router 192.168.11.1
!
!
no ip domain lookup
ip host whiz 171.69.1.162
ip host dirt 171.69.1.129
ip host danube 171.69.17.14
ip host CM-VINDALOO 172.20.221.254
ip name-server 172.20.221.254
ip dhcp-server 192.168.10.1
isdn switch-type primary-net5
!
!
voice call carrier capacity active
!
!
```



```
!
!
!
!
!
!
controller E1 1/0
pri-group timeslots 1-31 service mgcp
!
controller E1 1/1
pri-group timeslots 1-31 service mgcp
!
controller E1 2/0
pri-group timeslots 1-31 service mgcp
!
controller E1 2/1
pri-group timeslots 1-31 service mgcp
!
!
!
interface FastEthernet0/0
ip address 172.20.221.200 255.255.255.0
duplex auto
speed auto
!
interface FastEthernet0/0.10
encapsulation dot1Q 10
no snmp trap link-status
!
interface FastEthernet0/0.11
encapsulation dot1Q 11
ip address 192.168.11.1 255.255.255.0
no snmp trap link-status
!
interface FastEthernet0/1
no ip address
shutdown
duplex auto
speed auto
!
interface Serial1/0:15
no ip address
isdn switch-type primary-net5
isdn incoming-voice voice
isdn bind-l3 ccm-manager
no cdp enable
!
interface Serial1/1:15
no ip address
isdn switch-type primary-net5
isdn protocol-emulate network
isdn incoming-voice voice
isdn bind-l3 ccm-manager
no cdp enable
!
interface Serial2/0:15
```



```
no ip address
isdn switch-type primary-qsig
isdn incoming-voice voice
isdn bind-l3 ccm-manager
no cdp enable
!
interface Serial2/1:15
no ip address
isdn switch-type primary-qsig
isdn protocol-emulate network
isdn incoming-voice voice
isdn T310 120000
isdn bind-l3 ccm-manager
no cdp enable
!
ip classless
ip route 0.0.0.0 0.0.0.0 FastEthernet0/0
ip route 0.0.0.0 0.0.0.0 172.20.221.1
!
ip http server
!
dialer-list 1 protocol ip permit
!
!
!
control-plane
!
!
!
voice-port 1/0:15
!
voice-port 1/1:15
!
voice-port 2/0:15
!
voice-port 2/1:15
!
voice-port 3/0/0
!
voice-port 3/0/1
!
ccm-manager mgcp
ccm-manager music-on-hold
ccm-manager config server CM-VINDALOO
ccm-manager config
!
mgcp
mgcp call-agent CM-Vindaloo 2427 service-type mgcp version 0.1
mgcp dtmf-relay voip codec all mode out-of-band
mgcp rtp unreachable timeout 1000 action notify
mgcp modem passthrough voip mode nse
mgcp package-capability rtp-package
no mgcp package-capability res-package
mgcp package-capability sst-package
no mgcp package-capability fxr-package
mgcp package-capability pre-package
no mgcp timer receive-rtcp
mgcp sdp simple
mgcp fax t38 inhibit
```



```
mgcp rtp payload-type g726r16 static
!
mgcp profile default
!
!
dial-peer cor custom
!
!
!
dial-peer voice 1 pots
service mgcpapp
port 2/0:15
!
dial-peer voice 2 pots
service mgcpapp
port 2/1:15
!
dial-peer voice 3 pots
service mgcpapp
port 3/0/0
!
dial-peer voice 4 pots
service mgcpapp
port 3/0/1
!
dial-peer voice 999300 pots
service mgcpapp
port 3/0/0
!
dial-peer voice 999301 pots
service mgcpapp
port 3/0/1
!
dial-peer voice 5 pots
service mgcpapp
!
!
line con 0
line aux 0
line vty 0 4
login
!
!
end

3745B4_E1#
sho diag
c3700 IO-Board EEPROM:
    Hardware Revision      : 2.0
    Top Assy. Part Number : 800-14462-01
    Board Revision        : B0
    Deviation Number      : 0-0
    Fab Version          : 03
    PCB Serial Number    : JAD07060M7X
    RMA Test History     : 00
    RMA Number            : 0-0-0-0
    RMA History           : 00
    Calibration Data     : Minimum: -1 dBmV, Maximum: -1 dBmV
    Calibration values   : 0xFFFF 0xFFFF 0xC28B 0xA4D 0x5830
```



```
0x3731 0x354C 0x3038 0x50FF 0xFFFF 0xFFFF  
0xFFFF 0xFFFF 0xFFFF 0xFFFF 0xFFFF 0xFFFF  
0xFFFF 0x1F15 0xA3C7 0x8B00 0x0000 0x0161  
0x13A5 0x6465 0x1F3F 0x6000 0x0000 0x0200  
0x0000 0x0100 0x0001 0x0565 0x25B4 0x4065  
0x25B4 0x0065 0x25B3 0xC065 0x25B3 0x8000  
0x0000 0x0000 0x0000 0x0200 0x0000 0x0300  
0x0000 0x0000 0x0000 0x0000 0x0000 0x0000  
0x0000 0x0000 0x0000 0x0000 0x0000 0x0000  
0x0000 0x0000 0x0000 0x0200 0x0000 0x0100  
0x0000 0x0000 0x0000 0x0000 0x0000 0x0000  
0x0000 0x0000 0x0000 0x0000 0x0000 0x0065  
0x25B3 0x4065 0x25B3 0x0000 0x0000 0x0000  
0x0001 0x09FF 0xFFFF 0xFF00 0x0000 0x0000  
0x0000 0x0015 0xA3C7 0x8B00 0x0000 0x0161  
0x13A5 0x6465 0x1F3F 0x6000 0x0000 0x0100  
0x0000 0x0100 0x0000 0xC065 0x25B5 0xC065  
0x25B5 0x8065 0x25B5 0x4065 0x25B5 0x0000  
0x0000 0x0000 0x0000 0x0200 0x0000 0x0300  
0x0000 0x0000 0x0000 0x0000 0x0000 0x0000  
0x0000 0x0000 0x0000 0x0000 0x0000 0x0000  
0x0000 0x0000 0x0000 0x0200 0x0000 0x0100  
0x0000 0x0000 0x0000 0x0000 0x0000 0x0000  
0x0000 0x0000 0x0000 0x0000 0x0000 0x0065  
0x25B0 0xC065 0x25B0 0x8000 0x0000 0x0000  
0x0001 0x08FF 0xFFFF 0xFF00 0x0000 0x0000  
0x0000 0x0015 0xA3C7 0x8B00 0x0000 0x0161  
0x7274 0x8065 0x1F3F 0x6000 0x0000 0x0064  
0x7832 0xDCAA 0xAAAA 0xA000 0x0000 0x0000  
0x0000 0x0000 0x0000 0x0000 0x0000 0x0000  
0x0000 0x6400 0x2D00 0x3700 0x1400 0x1E00  
0x0000 0x0200 0x0000 0x0C66 0xE5D 0xD000  
0x100 0x0060 0x399D 0xD060 0x39A6 0x8460  
0x39A4 0x6C00 0x0000 0x0060 0x39A6 0xF400  
0x0000 0x0000 0x0000 0x0000 0x0000 0x0064  
0x1FC3 0x3065 0x2131 0xB800 0x0000 0x0000  
0x0000 0x0000 0x0042 0x4000 0x0000 0x0064  
0x7043 0x0C00 0x0000 0x0000 0x0000 0x0000  
0x0000 0x0015 0xA3C7
```

Chassis Serial Number : JMX0715L08P

EEPROM format version 4

EEPROM contents (hex):

```
0x00: 04 FF 40 02 F8 41 02 00 C0 46 03 20 00 38 7E 01  
0x10: 42 42 30 80 00 00 00 02 03 C1 8B 4A 41 44 30  
0x20: 37 30 36 30 4D 37 58 03 00 81 00 00 00 00 04 00  
0x30: C8 09 FF FF FF FF FF FF FF FF C2 8B 4A 4D 58  
0x40: 30 37 31 35 4C 30 38 50 FF FF FF FF FF FF FF FF FF  
0x50: FF  
0x60: FF  
0x70: FF FF
```

c3700 Mid-Plane EEPROM:

Hardware Revision : 2.0

Top Assy. Part Number : 800-12289-01

Board Revision : A0

Deviation Number : 0-0

Fab Version : 05



0x60: FF
0x70: FF FF

Slot 0:

C3745 Mother board 2FE(TX)-3W Port adapter, 2 ports
Port adapter is analyzed
Port adapter insertion time unknown
EEPROM contents at hardware discovery:
PCB Serial Number : JAD071106DY
Processor type : 69
Top Assy. Part Number : 800-15934-02
Board Revision : B0
Fab Part Number : 28-4672-04
Deviation Number : 65535-65535
Manufacturing Test Data : FF FF FF FF FF FF FF FF
RMA Number : 0-0-0-0
RMA History : 00
RMA Test History : 00
Field Diagnostics Data : FF FF FF FF FF FF FF FF
Hardware Revision : 2.0
Fab Version : 04
Chassis Serial Number : JMX0715L08P
Product (FRU) Number : C3745-2FE
EEPROM format version 4
EEPROM contents (hex):
0x00: 04 FF C1 8B 4A 41 44 30 37 31 31 30 36 44 59 09
0x10: 69 40 02 F7 C0 46 03 20 00 3E 3E 02 42 42 30 85
0x20: 1C 12 40 04 80 FF FF FF C4 08 FF FF FF FF FF
0x30: FF FF FF 81 00 00 00 04 00 03 00 C5 08 FF FF
0x40: FF FF FF FF FF 41 02 00 02 04 C2 8B 4A 4D 58
0x50: 30 37 31 35 4C 30 38 50 FF FF FF FF FF FF FF
0x60: FF
0x70: FF FF

Slot 1:

High Density Voice Port adapter
Port adapter is analyzed
Port adapter insertion time unknown
EEPROM contents at hardware discovery:
Hardware Revision : 1.1
Top Assy. Part Number : 800-03567-01
Board Revision : G0
Deviation Number : 0-0
Fab Version : 02
PCB Serial Number : JAD06380IBZ
RMA Test History : 00
RMA Number : 0-0-0-0
RMA History : 00
Product (FRU) Number : NM-HDV=
EEPROM format version 4
EEPROM contents (hex):
0x00: 04 FF 40 00 CC 41 01 01 C0 46 03 20 00 0D EF 01
0x10: 42 47 30 80 00 00 00 02 02 C1 8B 4A 41 44 30
0x20: 36 33 38 30 49 42 5A 03 00 81 00 00 00 00 04 00
0x30: FF
0x40: FF
0x50: FF
0x60: FF
0x70: FF FF



HDV SIMMs: Product (FRU) Number: PVDM-12=
SIMM slot 0: PVDM-12 SIMM present.
SIMM slot 1: PVDM-12 SIMM present.
SIMM slot 2: PVDM-12 SIMM present.
SIMM slot 3: PVDM-12 SIMM present.
SIMM slot 4: PVDM-12 SIMM present.

WIC Slot 0:
E1 (2 Port) Multi-Flex Trunk WAN Daughter Card
Hardware revision 1.0 Board revision B0
Serial number 29416808 Part number 800-04479-03
FRU Part Number VWIC-2MFT-E1=

Test history 0x0 RMA number 00-00-00
Connector type PCI
EEPROM format version 1
EEPROM contents (hex):
0x20: 01 23 01 00 01 C0 DD 68 50 11 7F 03 00 00 00 00
0x30: 58 00 00 00 02 12 24 00 FF FF FF FF FF FF FF FF FF

HDV firmware: Compiled Fri 19-Nov-04 14:23 by michen
HDV memory size 524280 heap free 141761

Slot 2:
High Density Voice Port adapter
Port adapter is analyzed
Port adapter insertion time unknown
EEPROM contents at hardware discovery:
Hardware Revision : 1.1
Top Assy. Part Number : 800-03567-01
Board Revision : E0
Deviation Number : 0-0
Fab Version : 02
PCB Serial Number : JAB043409F7
RMA Test History : 00
RMA Number : 0-0-0-0
RMA History : 00
Product (FRU) Number : NM-HDV=
EEPROM format version 4
EEPROM contents (hex):
0x00: 04 FF 40 00 CC 41 01 01 C0 46 03 20 00 0D EF 01
0x10: 42 45 30 80 00 00 00 02 02 C1 8B 4A 41 42 30
0x20: 34 33 34 30 39 46 37 03 00 81 00 00 00 00 04 00
0x30: FF
0x40: FF
0x50: FF
0x60: FF
0x70: FF FF

HDV SIMMs: Product (FRU) Number: PVDM-12=
SIMM slot 0: PVDM-12 SIMM present.
SIMM slot 1: PVDM-12 SIMM present.
SIMM slot 2: PVDM-12 SIMM present.
SIMM slot 3: PVDM-12 SIMM present.
SIMM slot 4: PVDM-12 SIMM present.

WIC Slot 0:
E1 (2 Port) Multi-Flex Trunk WAN Daughter Card
Hardware revision 1.0 Board revision B0



Serial number 22101697 Part number 800-04479-02
FRU Part Number VWIC-2MFT-E1=

Test history 0x0 RMA number 00-00-00
Connector type PCI
EEPROM format version 1
EEPROM contents (hex):
0x20: 01 23 01 00 01 51 3E C1 50 11 7F 02 00 00 00 00
0x30: 58 00 00 00 00 09 07 00 FF FF FF FF FF FF FF FF FF

HDV firmware: Compiled Fri 19-Nov-04 14:23 by michen
HDV memory size 524280 heap free 141761

Slot 3:

4 PORT Voice PM for MARs Port adapter
Port adapter is analyzed
Port adapter insertion time unknown
EEPROM contents at hardware discovery:
Hardware revision 1.1 Board revision H0
Serial number 25100457 Part number 800-02491-02
FRU Part Number: NM-2V=

Test history 0x0 RMA number 00-00-00
EEPROM format version 1
EEPROM contents (hex):
0x00: 01 65 01 01 01 7F 00 A9 50 09 BB 02 00 00 00 00
0x10: 88 00 00 00 01 03 09 17 FF FF FF FF FF FF FF FF

VIC Slot 0:

FXS Voice daughter card (2 port)
Hardware revision 1.1 Board revision B0
Serial number 27635018 Part number 800-02493-04
FRU Part Number VIC-2FXS=

Test history 0x0 RMA number 00-00-00
Connector type Wan Module
EEPROM format version 1
EEPROM contents (hex):
0x20: 01 0E 01 01 01 A5 AD 4A 50 09 BD 04 00 00 00 00
0x30: 58 00 00 00 02 06 22 01 FF FF FF FF FF FF FF FF



Acronyms

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



Important Information

THE SPECIFICATIONS AND INFORMATION REGARDING THE PRODUCTS IN THIS MANUAL ARE SUBJECT TO CHANGE WITHOUT NOTICE. ALL STATEMENTS, INFORMATION, AND RECOMMENDATIONS IN THIS MANUAL ARE BELIEVED TO BE ACCURATE BUT ARE PRESENTED WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. USERS MUST TAKE FULL RESPONSIBILITY FOR THEIR APPLICATION OF ANY PRODUCTS.

IN NO EVENT SHALL CISCO OR ITS SUPPLIERS BE LIABLE FOR ANY INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES, INCLUDING, WITHOUT LIMITATION, LOST PROFITS OR LOSS OR DAMAGE TO DATA ARISING OUT OF THE USE OR INABILITY TO USE THIS MANUAL, EVEN IF CISCO OR ITS SUPPLIERS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.



Corporate Headquarters	European Headquarters	Americas Headquarters	Asia Pacific Headquarters
Cisco Systems, Inc. 170 West Tasman Drive San Jose, CA 95134-1706 USA www.cisco.com Tel: 408 526-4000 800 553-NETS (6387) Fax: 408 526-4100	Cisco Systems International BV Haarlerbergpark Haarlerbergweg 13-19 1101 CH Amsterdam The Netherlands www-europe.cisco.com Tel: 31 0 20 357 1000 Fax: 31 0 20 357 1100	Cisco Systems, Inc. 170 West Tasman Drive San Jose, CA 95134-1706 USA www.cisco.com Tel: 408 526-7660 Fax: 408 527-0883	Cisco Systems, Inc. Capital Tower 168 Robinson Road #22-01 to #29-01 Singapore 068912 www.cisco.com Tel: +65 317 7777 Fax: +65 317 7799

Cisco Systems has more than 200 offices in the following countries and regions. Addresses, phone numbers, and fax numbers are listed on the Cisco Web site at www.cisco.com/go/offices.

Argentina • Australia • Austria • Belgium • Brazil • Bulgaria • Canada • Chile • China PRC • Colombia • Costa Rica • Croatia • Czech Republic • Denmark • Dubai, UAE • Finland • France • Germany • Greece • Hong Kong SAR • Hungary • India • Indonesia • Ireland • Israel • Italy • Japan • Korea • Luxembourg • Malaysia • Mexico • The Netherlands • New Zealand • Norway • Peru • Philippines • Poland • Portugal • Puerto Rico • Romania • Russia • Saudi Arabia • Scotland • Singapore • Slovakia • Slovenia • South Africa • Spain • Sweden • Switzerland • Taiwan • Thailand • Turkey • Ukraine • United Kingdom • United States • Venezuela • Vietnam • Zimbabwe

© 2007 Cisco Systems, Inc. All rights reserved.

CCDE, CCENT, Cisco Eos, Cisco Lumin, Cisco Nexus, Cisco StadiumVision, Cisco TelePresence, the Cisco logo, DCE, and Welcome to the Human Network are trademarks; Changing the Way We Work, Live, Play, and Learn and Cisco Store are service marks; and Access Registrar, Aironet, AsyncOS, Bringing the Meeting To You, Catalyst, CCDA, CCDP, CCIE, CCIP, CCNA, CCNP, CCSP, CCVP, Cisco, the Cisco Certified Internetwork Expert logo, Cisco IOS, Cisco Press, Cisco Systems, Cisco Systems Capital, the Cisco Systems logo, Cisco Unity, Collaboration Without Limitation, EtherFast, EtherSwitch, Event Center, Fast Step, Follow Me Browsing, FormShare, GigaDrive, HomeLink, Internet Quotient, IOS, iPhone, iQ Expertise, the iQ logo, iQ Net Readiness Scorecard, iQuick Study, IronPort, the IronPort logo, LightStream, Linksys, MediaTone, MeetingPlace, MeetingPlace Chime Sound, MGX, Networkers, Networking Academy, Network Registrar, PCNow, PIX, PowerPanels, ProConnect, ScriptShare, SenderBase, SMARTnet, Spectrum Expert, StackWise, The Fastest Way to Increase Your Internet Quotient, TransPath, WebEx, and the WebEx logo are registered trademarks of Cisco Systems, Inc. and/or its affiliates in the United States and certain other countries.

All other trademarks mentioned in this document or Website are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (0807R)

