

Cisco Catalyst 6608 Voice Gateway - PBX Interoperability: Siemens HiPath 4300 PBX with Cisco CallManager with E1 QSIG

Introduction

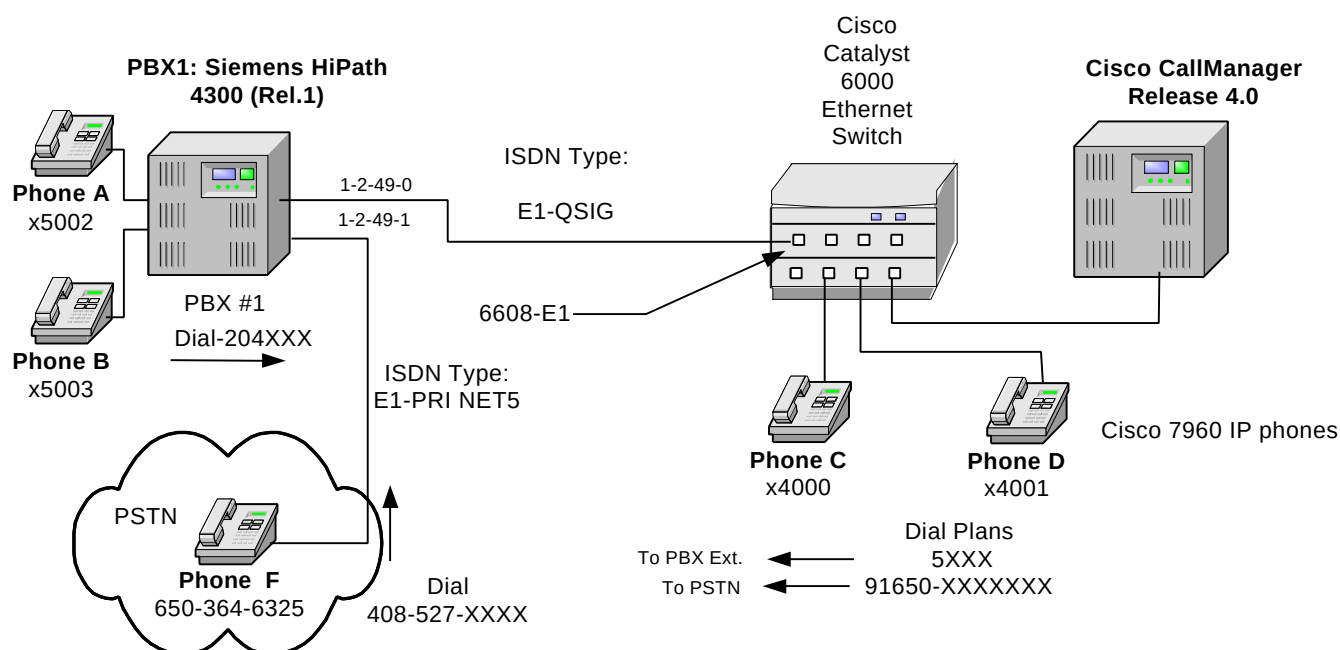
This is an application note for connectivity of the Siemens HiPath 4300 Release 1 PBX with Cisco CallManager Release 4.0 using Cisco 6608-E1 QSIG as MGCP gateway.

- Connectivity is achieved by using the PRI ISO QSIG E1 protocol type on the MGCP gateway and the PSS1V2 switch type on the Siemens HiPath 4300 PBX.
- Siemens HiPath 4300 PBX uses sequential channel numbering (1-30) when ISO QSIG protocol “PSS1V2” is selected. Therefore, the Cisco 6608-E1 Gateway configuration for Channel IE Type field should be set to Continuous Number.

Network Topology

The following diagram shows the test setup for end-to-end interoperability with the Cisco CallManager connected to the PBX via 6608-E1 QSIG link as MGCP gateway.

Basic Call Setup End-to-End Configuration





Limitations

Cisco CallManager (CCM4.0) release does not support the following:

- Sending Alerting Name or Busy Name Identification information.
- Calling Name Identification Presentation
- Calling Number Identification Presentation
- Connected Name Identification Presentation
- Connected Number Identification Presentation

System Components

Hardware Requirements

- Cisco Catalyst 6000 switch with 6608-E1 Gateway
- Siemens HiPath 4300 PBX, DIU-N

Software Requirements

- PBX Software Release 1
- Cisco CallManager Release 4.0

Configuration

Configuring the Siemens Hicom 330E PBX

Configure the PBX in the following sequence:

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

DPLN

```
<DISPLAY-WABE:TYPE=GEN;
```

```
DISPLAY-WABE:TYPE=GEN;
```

```
H500: AMO WABE STARTED
```



DIGIT INTERPRETATION		VALID FOR ALL DIAL PLANS	
CODE	CALL PROGRESS STATE	DIGIT	RESERVED/CONVERT
	1 11111 11112 22	ANALYSIS	DNI/ADD-INFO
	0 12345 67890 12345 67890 12	RESULT	*=OWN NODE
0	. .***** ..*** **...	CO	R
001	*	NETRTE	
002 - 003	*	NETRTE	R
11 - 14	. .***** ***** **...	TIE	
20 - 27	. .***** ***** **...	TIE	
21	. ..... .....	KNVRKY	
22	. ..... .....	DNDKY	
23	. ..... .....	FWDKY	
24	. ..... .....	MBKY	
25	. ..... .....	MSGRKY	
26	. ..... .....	DAKY	
27	. ..... .....	DSSKY	

DIGIT INTERPRETATION		VALID FOR ALL DIAL PLANS	
CODE	CALL PROGRESS STATE	DIGIT	RESERVED/CONVERT
	1 11111 11112 22	ANALYSIS	DNI/ADD-INFO
	0 12345 67890 12345 67890 12	RESULT	*=OWN NODE
28	. ..... .....	VCRKY	
2800 - 2999	. .***** ***** **...	STN	R
			DESTNO 111
			DNNO 0- 0- 0
29	. ..... .....	VCKY	
30	. ..... .....	CONFKY	



| 31	| . . . . . * ..	| NAMEKY	|
| 32	| . . . . . * ..	| PARKKY	|
| 33	| . . . . . * ..	| CCKY	|
| 34	| . . . . . * ..	| HTKY	|
| 35	| . . . . . * ..	| STKY	|
| 36	| . . . . . * ..	| REMKY	|

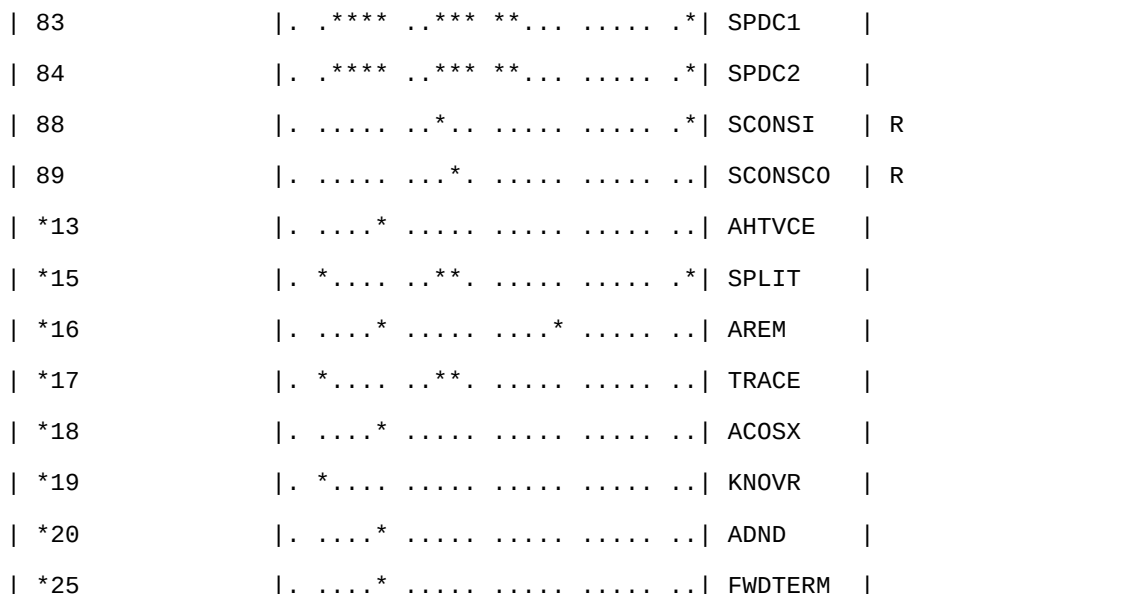
DIGIT INTERPRETATION VALID FOR ALL DIAL PLANS

|	| CALL PROGRESS STATE	| DIGIT	| RESERVED/CONVERT	|
| CODE	| 1 11111 11112 22	| ANALYSIS	| DNI/ADD-INFO	|
|	| 0 12345 67890 12345 67890 12	| RESULT	| *=OWN NODE	|

| 36 - 37	| . .**** ..*** **... .. .*	| CO	|
| 38	| . . . . . * ..	| TIMEKY	|
| 39	| . .**** ***** **... .. .*	| TIE	|
| 4567	| . .**** ***** **... .. .*	| STN	|
|	|	| DESTNO 34	|
|	|	| DNNO 0- 0- 34	|
| 5000 - 5040	| . .**** ***** **... .. .*	| STN	|
|	|	| DESTNO 0	|
|	|	| DNNO 2- 1-200*	|
| 6000 - 6009	| . .**** ***** **... .. .*	| STN	| R
|	|	| DESTNO 0	|
|	|	| DNNO 2- 1-200*	|

DIGIT INTERPRETATION VALID FOR ALL DIAL PLANS

|	| CALL PROGRESS STATE	| DIGIT	| RESERVED/CONVERT	|
| CODE	| 1 11111 11112 22	| ANALYSIS	| DNI/ADD-INFO	|
|	| 0 12345 67890 12345 67890 12	| RESULT	| *=OWN NODE	|



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

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		SPC : 22		
		FDSFIELD : 0	SDSFIELD : 0	PINDP : N
+-----+-----+-----+-----+-----+				
DPLN	LROUTE	LAUTH		
-----+-----+-----+-----+-----+				
0	20	3		
1	20	3		
2	20	3		
3	20	3		
4	20	3		
5	20	3		
6	20	3		
7	20	3		
8	20	3		
9	20	3		
10	20	3		
11	20	3		
12	20	3		
13	20	3		
14	20	3		
15	20	3		
+-----+-----+-----+-----+-----+				

AM0-LDPLN-216 ADMINISTRATION LCR DIALPLAN

DISPLAY COMPLETED;

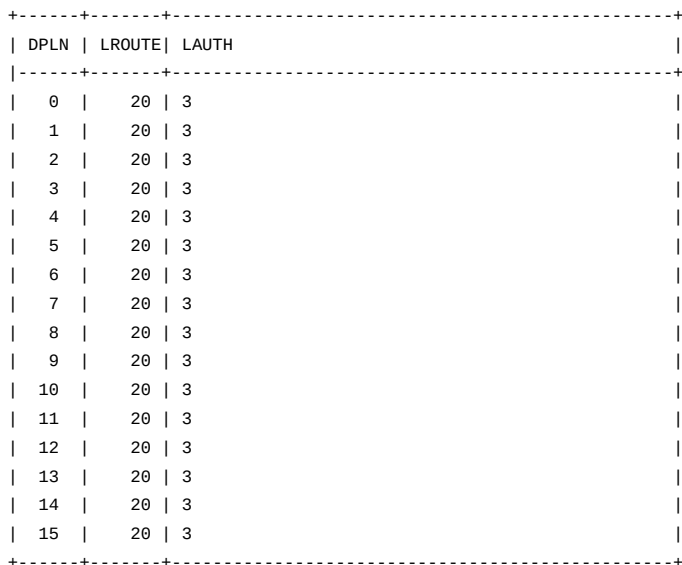
Overlap Sending Dial Plan, DPLN

<DISPLAY-LDPLN:TYPE=LDP,LDPN0=5;

DISPLAY-LDPLN:TYPE=LDP,LDPN0=5;

H500: AM0 LDPLN STARTED

+-----+-----+-----+-----+-----+				
| LDPN0 : 5 |	| LDP : 20-X			|
|	| SPC : 22			|
|	| FDSFIELD : 0 SDSFIELD : 0 PINDP : N			|



```
BCSU
<DISPLAY-BCSU:TYPE=TBL,LTG=1,LTU=2,SLOT=49;

DISPLAY-BCSU:TYPE=TBL,LTG=1,LTU=2,SLOT=49;

H500:  AMO BCSU  STARTED
```

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

```
Class of Trunk, COT
<DISPLAY-COT:COTNO=21;

DISPLAY-COT:COTNO=21;

H500:  AMO COT   STARTED
```



COT: 21 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 FORWARDING NO-ANSWER	FNAN
SUPPRESSION OF RECALLS TO AC	RCLS
REGENERATED CO DIALTONE ON OUTGOING SEIZURE	COTN
TRANSFER OF USER ITR GROUPS VIA S0/S2 (NWU)	ITRN
DON'T RELEASE CALL TO BUSY HUNT GROUP	BSHT
DESTINATION NUMBER WITH PREFIX DIGITS TO CDR	DPRE
CONNECTION TO ROUTE OPTIMIZATION NODE	ROPT
INCOMING CDR BY ZONE OR FROM LINE	ICZL
TRUNK SENDS CALL CHARGES TO ORIGINATING NODE NUMBER	TRSC
USE DEFAULT NODE NUMBER OF LINE	DFNN
CALL FORWARDING PROGRAMING FOR OTHER SUBSCRIBERS	CFOS
NO TONE	NTON

AM0-COT -216 CLASS OF TRUNK FOR CALL PROCESSING

DISPLAY COMPLETED;

Class of Parameter for Device Handler, COP
<DISPLAY-COP:COPNO=21;

DISPLAY-COP:COPNO=21;

H500: AM0 COP STARTED



COP: 21 INFO:

DEVICE: INDEP SOURCE: DB

PARAMETER:

CO TRUNK ACCESS:

TRUNK ACCESS TA

TOLL ACCESS:

TRUNK ACCESS TA

AM0-COP -216 CLASS OF PARAMETER FOR DEVICE HANDLER

DISPLAY COMPLETED;

Class of Service, COSSU

<DISPLAY-COSSU:TYPE=COS,COS=10;

DISPLAY-COSSU:TYPE=COS,COS=10;

H500: AM0 COSSU STARTED

+-----+-----+-----+-----+-----+				
| COS |	VOICE	| FAX	| DTE	|
+-----+-----+-----+-----+-----+				
| 10 |>				|
|	TA	| NOCO	| NOCO	|
|	TNOTCR	| NOTIE	| NOTIE	|
|	CDRC	|	|	|
+-----+-----+-----+-----+-----+				

AM0-COSSU-216 CLASSES OF SERVICE

DISPLAY COMPLETED;

<DISPLAY-COSSU:TYPE=LCOSV,LCOSV=1;

DISPLAY-COSSU:TYPE=LCOSV,LCOSV=1;



H500: AMO COSSU STARTED

```
+-----+-----+-----+-----+-----+-----+-----+-----+
| LCOS|                                     LAUTH|      |
|  V |           1           2           3           4           5           6 |      |
|    |123456789012345678901234567890123456789012345678901234|COPIN|
|    |>SERVICE INFORMATION                                     | NUM |
+-----+-----+-----+-----+-----+-----+-----+-----+
|  1|X.....| 0 |
|    |>LCR ATTENDANT FOR VOICE                                     |
+-----+-----+-----+-----+-----+-----+-----+-----+
```

AM0-COSSU-216 CLASSES OF SERVICE

DISPLAY COMPLETED;

Trunk Group Access Code, BUEND

<DISPLAY-BUEND:TGRP=20;

DISPLAY-BUEND:TGRP=20;

H500: AMO BUEND STARTED

```
+-----+-----+-----+-----+-----+-----+-----+-----+
| TGRP NUMBER :    20  TGRP NAME   : PRI PSSV1          MAXIMUM NO.   :    70 |
|               CHARCON      : NEUTRAL                  |
| SUBGROUP NO.:    3   DEVICE TYPE : S2CONN            TRACENO       :    0 |
| RESERVED    :    N   SEARCH MODE : CIRCULAR          ACD THRESHOLD :    * |
| NUMBER OF ASSOCIATED ROUTES      : 1                  PRIORITY       :    2 |
| TDDRFLAG    :    ON  TDDRTHRESHOLD: 3                SOURCEGROUPIDX :    1 |
| GDTRRULE    :    0   ACDPMGRP   : 0                  |
| THE FOLLOWING TRUNKS (LTG-LTU-SLOT-CCT) HAVE BEEN ALLOCATED: |
+-----+-----+-----+-----+-----+-----+-----+-----+
|  1- 2- 49-0          1 |  1- 2- 49-0          2 |  1- 2- 49-0          3 |
|  1- 2- 49-0          4 |  1- 2- 49-0          5 |  1- 2- 49-0          6 |
|  1- 2- 49-0          7 |  1- 2- 49-0          8 |  1- 2- 49-0          9 |
```



| 1- 2- 49-0	10	| 1- 2- 49-0	11	| 1- 2- 49-0	12
| 1- 2- 49-0	13	| 1- 2- 49-0	14	| 1- 2- 49-0	15
| 1- 2- 49-0	16	| 1- 2- 49-0	17	| 1- 2- 49-0	18
| 1- 2- 49-0	19	| 1- 2- 49-0	20	| 1- 2- 49-0	21
| 1- 2- 49-0	22	| 1- 2- 49-0	23	| 1- 2- 49-0	24
| 1- 2- 49-0	25	| 1- 2- 49-0	26	| 1- 2- 49-0	27
| 1- 2- 49-0	28	| 1- 2- 49-0	29	| 1- 2- 49-0	30

+-----+

AM0-BUEND-216 TRUNK GROUP

DISPLAY COMPLETED;

Trunk Configuration, TDCSU

For Master-side Configuration

<dis-tdcsu:1-2-49-0

PEN2 = ;

DIS-TDCSU:1-2-49-0, ;

H500: AM0 TDCSU STARTED

+----- DIGITAL TRUNK (FORMAT=L) -----+					
DEV	=	S2CONN	PEN	=	1-02-049-0
TGRP	=	20			
+-----					
PROTVAR	=	PSS1V2	INS	=	Y
SRCHMODE	=	CIR			
COTNO	=	21	COPNO	=	21
DPLN	=	0			
ITR	=	1	COS	=	10
LCOSV	=	1			
LCOSD	=	1	CCT	=	HICOM S2
DESTNO	=	1			
SEGMENT	=	1	DEDSKC	=	
DEDSVC	=	NONE			
FACILITY	=		DITIDX	=	
SRTIDX	=				
TRTBL	=	GDTR	SIDANI	=	N
ATNTYP	=	TIE			
CBMATR	=	NONE	NWMUXTIM	=	10
TCHARG	=	N			
SUPPRESS	=	0	DGTPR	=	
CHIMAP	=	N			
ISDNIP	=		ISDNNP	=	
PNPL2P	=		PNPL1P	=	
PNPAC	=				



| TRACOUNT = 31	SATCOUNT = MANY	NNO = 1 -1 -300	|
| ALARMNO = 0	FIDX = 1	CARRIER = 1	|
| ZONE = EMPTY	COTX = 21	FWDX = 5	|
| 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		|
| BCHAN = 1 && 30			|

+-----+

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

AM0-TDCSU-216 DIGITAL TRUNKS

DISPLAY COMPLETED;

<DISPLAY-LWPAR:INFOPAT="1",FORMAT=L;

DISPLAY-LWPAR:INFOPAT="1",FORMAT=L;

H500: AM0 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     =                                           |
+-----+
```

AM0-LWPAR-216 LOADWARE PARAMETERS FOR NETWORKING MODULES

DISPLAY COMPLETED;

For Slave-side Configuration

<DIS-TDCSU:1-2-49-0,;

H500: AM0 TDCSU STARTED

```
+----- DIGITAL TRUNK (FORMAT=L) -----+
| DEV      = S2CONN          PEN      = 1-02-049-0  TGRP      = 20          |
|-----|
| PROTVAR = PSS1V2          INS      = Y           SRCHMODE = CIR          |
| COTNO    = 21              COPNO    = 21          DPLN      = 0           |
| ITR      = 1              COS      = 10          LCOSV     = 1           |
| LCOSD    = 1              CCT      = HICOM S2     DESTNO    = 1           |
| SEGMENT  = 1              DEDSCC    =            DEDSVC    = NONE        |
| FACILITY =                DITIDX    =            SRTIDX    =            |
| TRTBLE   = 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  -1  -300  |
| ALARMNO  = 0              FIDX      = 1           CARRIER  = 1           |
| ZONE     = EMPTY          COTX      = 21          FWDX      = 5           |
| DOMTYPE  =                DOMAINNO =            TPROFNO   =            |
| INIGHT   =                | CCHDL    =            |
| UUSCCX   = 16             UUSCCY    = 8           FNIDX     = 1           |
| CLASSMRK = EC            & G711    & G7290PT     SRCGRP    =            |
| TCCID    =                |
```



```
|-----|
| BCNEG      = N          BCGR      = 1          LWPARG      = 0          |
| LWPP       = 0          LWLT      = 0          LWPS       = 0          |
| LWR1       = 0          LWR2      = 0          |
| BCHAN      = 1 && 30    |
|                                                     |
+-----+
```

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

AM0-TDCSU-216 DIGITAL TRUNKS
DISPLAY COMPLETED;
DISPLAY-LWPARG:INFOPAT="0",FORMAT=L;
H500: AM0 LWPARG STARTED

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

AM0-LWPARG-216 LOADWARE PARAMETERS FOR NETWORKING MODULES
DISPLAY COMPLETED;



Reference Clock Configuration, REFTA

For Master-side Configuration

<DISPLAY-REFTA:TYPE=CIRCUIT,PEN=1-2-49-0;

DISPLAY-REFTA:TYPE=CIRCUIT,PEN=1-2-49-0;

H500: AMO REFTA STARTED

R E F E R E N C E C L O C K C I R C U I T S									
PEN	MODULE	DEVICE	PRI	ERROR	BLOCK	SUPP.	READY	SRCGRP	
							BUT		
							ASYN.		
1- 2- 49- 0	DIU-N2	S2CONN	0	0	N		N		1

AM0-REFTA-216 REFERENCE CLOCK TABLE

DISPLAY COMPLETED;

For Slave-side Configuration

<DISPLAY-REFTA:TYPE=CIRCUIT,PEN=1-2-49-0;

DISPLAY-REFTA:TYPE=CIRCUIT,PEN=1-2-49-0;

H500: AMO REFTA STARTED

R E F E R E N C E C L O C K C I R C U I T S									
PEN	MODULE	DEVICE	PRI	ERROR	BLOCK	SUPP.	READY	SRCGRP	
							BUT		
							ASYN.		
1- 2- 49- 0	DIU-N2	S2CONN	11	0	N		N		1



AM0-REFTA-216 REFERENCE CLOCK TABLE

DISPLAY COMPLETED;

Trunk Least Cost Routing Configuration

LDAT

<DISPLAY-LDAT:TYPE=LCR,LROUTE=20;

DISPLAY-LDAT:TYPE=LCR,LROUTE=20;

H500: AM0 LDAT STARTED

```
+-----+
| LROUTE = 20   LDPLN      NAME = PSS1V                      SERVICE = ALL |
| TYPE = LCR                                DNNO OF ROUTE =    111 |
| SERVICE INFO =                                |
+-----+-----+-----+-----+-----+-----+-----+-----+
|           |           |           |           |           | SCHEDULE | CARRIER |           |           |
| LRTEL | LVAL| TGRP| ODR| LAUTH| ABCDEFGH |           ZONE | LATTR | LDSRT|
+-----+-----+-----+-----+-----+-----+-----+-----+
|      1 |      1|   20|   15|    3 | ***** |    1   EMPTY |    NONE |      |
+-----+-----+-----+-----+-----+-----+-----+-----+
```

AM0-LDAT -216 LCR-DIRECTIONS

DISPLAY COMPLETED;

RICHT

<DISPLAY-RICHT:MODE=LRTE,LRTE=20;

DISPLAY-RICHT:MODE=LRTE,LRTE=20;

H500: AM0 RICHT STARTED

```
+-----+
| LRTE = 20      NAME = PSS1V              (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 =    3 |
| EMCYRTT = NO          CONFTONE = NO  RERINGRP = NO   RTENO =    3 |
| INFO = |
+-----+
| TGRP =  20  LDAT  PRI PSSV1          (NEUTRAL)  SUBGROUP =    3 |
+-----+
```

AM0-RICHT-216 TRUNK ROUTING

DISPLAY COMPLETED;

LCR Out-dial Rules, LODR

<DISPLAY-LODR:ODR=15;

DISPLAY-LODR:ODR=15;

H500: AM0 LODR STARTED

```
+-----+
|  ODR      POSITION  CMD          PARAMETER          |
+-----+-----+-----+-----+
|   15    |      1   ECHO        2                  |
|         |      2   END                    |
+-----+-----+-----+-----+
```

H03: THE NEXT FREE ODR IS 1

AM0-LODR -216 ADMINISTRATION OF LCR OUTDIAL RULES

DISPLAY COMPLETED;

Configuring Cisco CallManager



6608-E1 Gateway Configuration

Cisco CallManager 4.0 Administration - Gateway Configuration - Microsoft Internet Explorer

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Address <http://cm-klinton/CCMAdmin/gatewayconfig.asp?pkid={2E043967-780A-4425-8FEF-343CBAD17186}&type=2> Go Links

System Route Plan Service Feature Device User Application Help

Cisco CallManager Administration
For Cisco IP Telephony Solutions

Gateway Configuration

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

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

Status: Ready

Device Information

MAC Address*	0001C9D8633E
Description	SDA0001C9D8633E
Device Pool*	Default
Network Locale	United States
Media Resource Group List	< None >
Location	< None >
AAR Group	< None >
Load Information	

Multilevel Precedence and Preemption (MLPP) Information

MLPP Domain (e.g., "0000FF")	
MLPP Indication	Not available on this device
MLPP Preemption	Not available on this device

Interface Information

PRI Protocol Type*	PRI ISO QSIG E1
Protocol Side*	User
Channel Selection Order*	Top Down
Channel IE Type*	Continuous Number

Local intranet



Cisco CallManager 4.0 Administration - Gateway Configuration - Microsoft Internet Explorer

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Address <http://cm-klinton/CCMAdmin/gatewayconfig.asp?pkid={2E043967-780A-4425-8FEF-343CBAD17186}&type=2> Go Links

PCM Type* A-law

Delay for first restart (1/8 sec ticks) 32

Delay between restarts (1/8 sec ticks) 4

☒ Inhibit restarts at PRI initialization

☐ Enable status poll

Call Routing Information

Inbound Calls

Significant Digits* All

Calling Search Space Phones

AAR Calling Search Space < None >

Prefix DN

Outbound Calls

Calling Line ID Presentation* Default

Calling Party Selection* Originator

Called party IE number type unknown* Cisco CallManager

Calling party IE number type unknown* Cisco CallManager

Called Numbering Plan* Private

Calling Numbering Plan* Cisco CallManager

Number of digits to strip* 0

Caller ID DN

SMDI Base Port* 0

PRI Protocol Type Specific Information

☒ Display IE Delivery

☒ Redirecting Number IE Delivery - Outbound

☒ Redirecting Number IE Delivery - Inbound

☒ Send Extra Leading Character In DisplayIE***

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

Local intranet



Cisco CallManager 4.0 Administration - Gateway Configuration - Microsoft Internet Explorer

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Address <http://cm-klinton/CCMAdmin/gatewayconfig.asp?pkid={2E043967-780A-4425-8FEF-343CBAD17186}&type=2> Go Links

☐ MCDN Channel Number Extension Bit Set to Zero**

☐ Send Calling Name In Facility IE

☐ Interface Identifier Present**

Interface Identifier Value**

Connected Line ID Presentation (QSIG Inbound Call)*

Connected PBX Model

Product Specific Configuration

Clock Reference*

Framing*

Audio Signal Adjustment into IP Network*

Audio Signal Adjustment from IP Network*

Zero Suppression*

Digit On Duration(50-500ms)*

Interdigit Duration(50-500msec)*

SNMP Community String

Disable SNMP Set operations* ☐

Debug Port Enable* ☒

Hold Tone Silence Duration*

Port Used for Voice Calls* ☒

Port Used for Modem Calls* ☒

Port Used for Fax Calls* ☒

Fax and Modem Parameters

Fax Relay Enable* ☒

Fax Error Correction Mode Override* ☒

Maximum Fax Rate*

Fax Payload Size*

Non Standard Facilities Country Code*

Non Standard Facilities Number

Local intranet



Cisco CallManager 4.0 Administration - Gateway Configuration - Microsoft Internet Explorer

File Edit View Favorites Tools Help

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Address <http://cm-klinton/CCMAdmin/gatewayconfig.asp?pkid={2E043967-780A-4425-8FEF-343CBAD17186}&type=2> Go Links >>

Non Standard Facilities Vendor Code*

Fax/Modem Packet Redundancy* ☐

NSE Type*

Playout Delay Parameters

Initial Playout Delay*

Minimum Playout Delay*

Maximum Playout Delay*

Echo Canceller Configuration

Echo TailLength (ms)*

Minimum ERL (db)*

* indicates required item
** applicable to DMS-100 protocol only
*** applicable to DMS-100 protocol and DMS-250 protocol only
**** may be required to force ringback from some PBXs

[Back to Find/List Gateways](#)

Local intranet



Enbloc Route Pattern Configuration

Cisco CallManager 4.0 Administration - Route Pattern/Hunt Pilot Configuration - Microsoft Internet Explorer

File Edit View Favorites Tools Help

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Address <http://cm-klinton/CCMAdmin/routepatternconfig.asp?pkid={89F5482D-22A8-4FEE-A402-C2E89728F18D}> Go Links »

Route Pattern/Hunt Pilot: 5XXX

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

Copy Update Delete

Pattern Definition

Route Pattern/Hunt Pilot* 5XXX

Partition < None >

Description

Numbering Plan* North American Numbering Plan

Route Filter < None >

MLPP Precedence Default

Gateway or Route/Hunt List* S0/DS1-0@SDA0001C9D8633E (Edit)

Route Option

☒ Route this pattern

☐ Block this pattern — Not Selected —

☒ Provide Outside Dial Tone ☐ Allow Overlap Sending ☐ Urgent Priority

Calling Party Transformations

☐ Use Calling Party's External Phone Number Mask

Calling Party Transform Mask

Prefix Digits (Outgoing Calls)

Calling Line ID Presentation Default

Calling Name Presentation Default

Connected Party Transformations

Connected Line ID Presentation Default

Connected Name Presentation Default

Called Party Transformations

Discard Digits < None >

Called Party Transform Mask

Prefix Digits (Outgoing Calls)

ISDN Network-Specific Facilities Information Element

Carrier Identification Code

Network Service Protocol — Not Selected —

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

Done Local intranet



Overlap Sending Route Pattern Configuration

Cisco CallManager 4.0 Administration - Route Pattern/Hunt Pilot Configuration - Microsoft Internet Explorer

File Edit View Favorites Tools Help

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Address <http://cm-klinton/CCMAdmin/routepatternconfig.asp?pkid={E959BFF6-5645-4444-9E24-2768AFCAAD03}> Go Links

Route Pattern/Hunt Pilot: 9.X

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

Copy Update Delete

Pattern Definition

Route Pattern/Hunt Pilot*

Partition

Description

Numbering Plan*

Route Filter

MLPP Precedence

Gateway or Route/Hunt List* (Edit)

Route Option
☒ Route this pattern
☐ Block this pattern

☒ Provide Outside Dial Tone ☒ Allow Overlap Sending ☐ Urgent Priority

Calling Party Transformations

☐ Use Calling Party's External Phone Number Mask

Calling Party Transform Mask

Prefix Digits (Outgoing Calls)

Calling Line ID Presentation

Calling Name Presentation

Connected Party Transformations

Connected Line ID Presentation

Connected Name Presentation

Called Party Transformations

Discard Digits

Called Party Transform Mask

Prefix Digits (Outgoing Calls)

ISDN Network-Specific Facilities Information Element

Carrier Identification Code

Network Service Protocol

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

Done Local intranet



PSTN Route Pattern Configuration

Cisco CallManager 4.0 Administration - Route Pattern/Hunt Pilot Configuration - Microsoft Internet Explorer

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Address <http://cm-klinton/CCMAdmin/routepatternconfig.asp?pkid={A0E58AC2-80ED-4857-9D43-DCC43AA6EA56}> Go Links »

Route Pattern/Hunt Pilot: 91650XXXXXX

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

Copy Update Delete

Pattern Definition

Route Pattern/Hunt Pilot* 91650XXXXXX

Partition < None >

Description

Numbering Plan* North American Numbering Plan

Route Filter < None >

MLPP Precedence Default

Gateway or Route/Hunt List* S0/DS1-0@SDA0001C9D8633E (Edit)

Route Option

☒ Route this pattern

☐ Block this pattern — Not Selected —

☒ Provide Outside Dial Tone ☐ Allow Overlap Sending ☐ Urgent Priority

Calling Party Transformations

☐ Use Calling Party's External Phone Number Mask

Calling Party Transform Mask

Prefix Digits (Outgoing Calls) 408527

Calling Line ID Presentation Default

Calling Name Presentation Default

Connected Party Transformations

Connected Line ID Presentation Default

Connected Name Presentation Default

Called Party Transformations

Discard Digits < None >

Called Party Transform Mask

Prefix Digits (Outgoing Calls)

ISDN Network-Specific Facilities Information Element

Carrier Identification Code

Network Service Protocol — Not Selected —

Network Service Service Parameter Name Service Parameter Value

— Not Selected — < Not Exist >

Done Local intranet



7960 IP phone Configuration



Cisco CallManager 4.0 Administration - Phone Configuration - Microsoft Internet Explorer

File Edit View Favorites Tools Help

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Address http://cm-klington/CCMAdmin/phoneconfig.asp?pkid={ED74929A-A8BB-4A58-8129-2E4358F511BB} Go Links

Phone Configuration

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

Directory Numbers
Base Phone

7718 7719 Line 1 - 4001 in Phones

7718 7719 Line 2 - Add new DN

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

Copy Update Delete Reset Phone

Phone Configuration (Model = Cisco 7960)
Device Information
MAC Address* 003094C39863
Description Auto 4001
Owner User ID (Select User ID)
Device Pool* Default (View details)
Calling Search Space < None >
AAR Calling Search Space < None >
Media Resource Group List < None >
User Hold Audio Source < None >
Network Hold Audio Source < None >
Location < None >
User Locale < None >
Network Locale < None >
Device Security Mode Use System Default
Built In Bridge Default
Privacy Default

Phone Button Template Information
Phone Button Template* Standard 7960 (View button list)

Softkey Template Information
Softkey Template < None >

Expansion Module Information
Module 1 < None >
Module 2 < None >

Done Local intranet



Cisco CallManager 4.0 Administration - Phone Configuration - Microsoft Internet Explorer

File Edit View Favorites Tools Help

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Address <http://cm-klinton/CCMAdmin/phoneconfig.asp?pkid={ED74929A-A8BB-4A58-8129-2E4358F511BB}> Go Links

Module 1 Load Name (Module 1 selection required)

Module 2 Load Name (Module 2 selection required)

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

Information

Directory

Messages

Services

Authentication Server

Proxy Server

Idle

Idle Timer (seconds)

Extension Mobility (Device Profile) Information

☐ Enable Extension Mobility Feature

Log Out Profile

Log In User ID

Log In Time

Log Out Time

Multilevel Precedence and Preemption (MLPP) Information

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

MLPP Indication

MLPP Preemption

Product Specific Configuration

Disable Speakerphone ☐

Disable Speakerphone and Headset ☐

Forwarding Delay*

PC Port*

Settings Access*

Gratuitous ARP*

PC Voice VLAN Access*

Video Capabilities*

Auto Line Select*

Done Local intranet



Cisco CallManager 4.0 Administration - Directory Number Configuration - Microsoft Internet Explorer

File Edit View Favorites Tools Help

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Address http://cm-klinton/CCMAdmin/directorynumber.asp?NumPlanMapID={17A63DCE-8B3B-4403-A131-B02B19FC9CF4} Go Links

Directory Number Configuration

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

Associated With
SEP003094C39863
7960 (Line 1)

Directory Number: 4001 (Phones)
Status: Ready
Note: Any update to this Directory Number automatically resets the associated devices

Update Remove from Device Reset Devices

Directory Number

Directory Number* 4001

Partition Phones

Directory Number Settings

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

Calling Search Space Phones

AAR Group <None>

User Hold Audio Source <None>

Network Hold Audio Source <None>

Auto Answer Auto Answer Off

Call Forward and Pickup Settings

	Voice Mail Destination	Calling Search Space
Forward All	☐ []	<None>
Forward Busy	☐ []	<None>
Forward No Answer	☐ []	<None>
No Answer Ring Duration	[] (seconds)	
Call Pickup Group	<None>	

MLPP Alternate Party Settings

Target (Destination) []

Calling Search Space <None>

No Answer Ring Duration [] (seconds)

Line Settings for this Device

Display (Internal Caller ID) JOHN DOE

Line Text Label []

External Phone Number Mask []

Done Local intranet



Cisco CallManager 4.0 Administration - Directory Number Configuration - Microsoft Internet Explorer

File Edit View Favorites Tools Help

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Address <http://cm-klngon/CCMAdmin/directorynumber.asp?NumPlanMapID={17A63DCE-8B3B-4403-A131-B02B19FC9CF4}> Go Links »

Message Waiting Lamp Policy Use System Policy

Ring Setting (Phone Idle) Use System Default

Ring Setting (Phone Active)** Use System Default

Multiple Call / Call Waiting Settings

Maximum Number of Calls* 4 (1 - 200)

Busy Trigger* 2 (<= Max. Calls)

Forwarded Call Information Display

☒ Caller Name ☒ Caller Number

☒ Redirected Number ☒ Dialed Number

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

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

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

Character Set Western European (Latin 1)

Done Local intranet

Configuring the Catalyst 6000 Switch

Router# **show version**

```
WS-C6006 Software, Version NmpSW: 7.6(2)  
Copyright (c) 1995-2003 by Cisco Systems  
NMP S/W compiled on Jul 16 2003, 23:01:27
```

System Bootstrap Version: 5.3(1)

System Boot Image File is 'slot0:cat6000-supk8.7-6-2.bin'

System Configuration register is 0x2



Hardware Version: 2.0 Model: WS-C6006 Serial #: TBA04511172

PS1 Module: WS-CAC-1300W Serial #: SON04501278

Mod	Port	Model	Serial #	Versions
1	2	WS-X6K-SUP1A-2GE	SAD05010NBK	Hw : 7.0 Fw : 5.3(1) Fw1: 5.4(2) Sw : 7.6(2) Sw1: 7.6(2)
		WS-X6K-SUP1A-2GE	SAD05010NBK	Hw : 7.0 Sw :
3	48	WS-X6348-RJ-45	SAD04420N7B	Hw : 1.4 Fw : 5.4(2) Sw : 7.6(2)
		WS-F6K-VPWR		Hw : 1.0 Sw : 1.0
5	8	WS-SVC-NAM-2	SAD065002TK	Hw : 1.0 Fw : 7.2(1) Fw1: 7.2(1) Sw : 3.2(0.13) Sw1: 7.6(2)
6	8	WS-X6608-E1	SAD04380DW1	Hw : 1.1 Fw : 5.4(2) Sw : 7.6(2) HP1: D004040000003; DSP1: D0054133 (4.1. 33) HP2: (not online); DSP2: (not online) HP3: (not online); DSP3: (not online) HP4: D004030300020; DSP4: D0054130 (4.1.

30)



HP5: C00103010013; DSP5: C002E031 (3.3.

2)

HP6: C00103010013; DSP6: C002E031 (3.3.

2)

HP7: C00103010013; DSP7: C002E031 (3.3.

2)

HP8: C00103010013; DSP8: C002E031 (3.3.

2)

Module	DRAM			FLASH			NVRAM		
	Total	Used	Free	Total	Used	Free	Total	Used	Free
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1	65408K	47433K	17975K	16384K	16107K	277K	512K	289K	223K

Uptime is 48 days, 9 hours, 54 minutes

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