

Cisco 6608 - PBX Interoperability: Siemens Hicom 300 E CS Rel6.6 PBX with Cisco CallManager using T1 QSIG Protocol as an MGCP Gateway

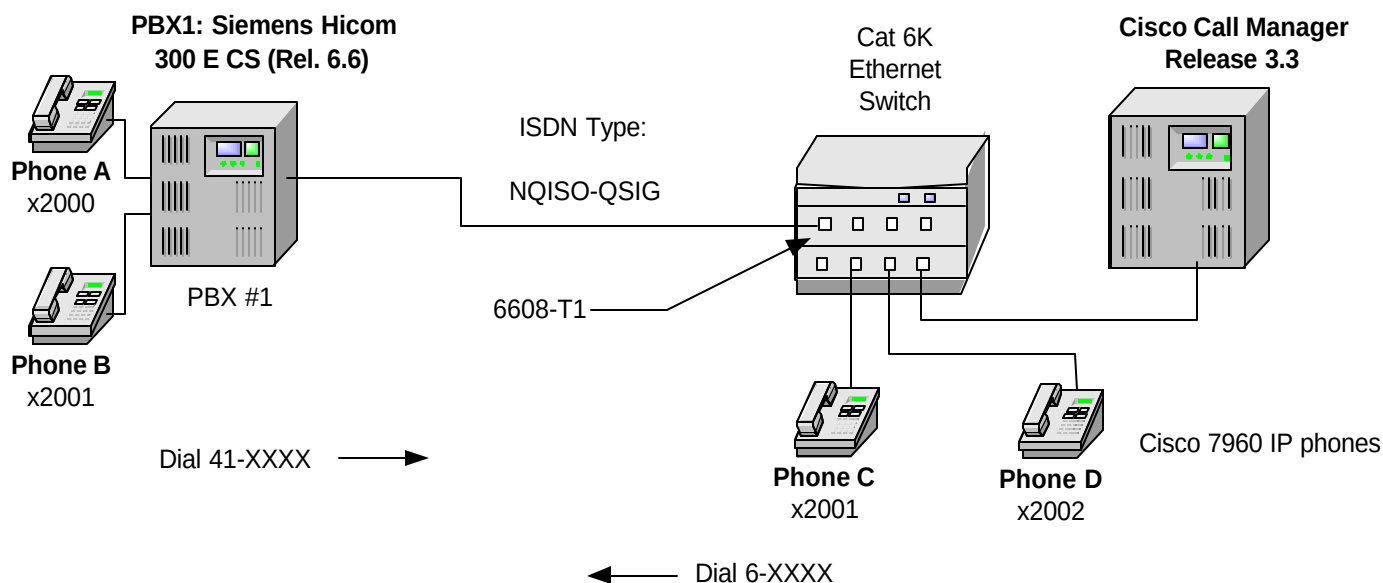
Introduction

This is an application note for connectivity of the Siemens Hicom 300 E CS Release 6.6 PBX with Cisco CallManager using Cisco 6608-T1 QSIG as an MGCP Gateway. Connectivity is achieved by using the PRI ISO QSIG T1 protocol type on the MGCP gateway and NQISO switch type on the Siemens PBX

Network Topology

As shown in the diagram above, a Siemens Hicom 300 E CS PBX is connected via an ISDN T1 PRI QSIG link to a Cisco 6608-T1 Gateway,

Basic Call Setup End-to-End Configuration



which in turn, is connected to an Ethernet switch. Interoperability testing involves Layers 1, 2 and 3 on the ISDN PRI QSIG link between a Cisco 6608-T1 and the PBX.



Layer 1 (Physical Layer)

The Siemens PBX configuration screen for the T1 trunk interface is reached with the command:

<cha-bssu

Layers 2 & 3 (Q.921 and Q.931)

Layer 2 and 3 packet exchanges are monitored using an Acacia Clarinet protocol analyzer, bridged across the PRI link in high impedance mode.

Layer 2 Q.921 packets are monitored to ensure that each PBX/6608-T1 software configuration properly exchanges SABME/UA packets to initialize the ISDN link, and then RR packets are exchanged every 30 seconds.

Layer 3 Q.931 packets are monitored to ensure that the appropriate call setup/teardown packets are exchanged for each configuration, and that the SETUP packets contain the mandatory Information Elements with the necessary details, as well as optional IEs such as Calling Name and Number.

Telephone calls are made end-to-end in both directions through the Cisco 6608-T1 Gateway, and a check is made to ensure that there is an audio path in both directions for each call.

User/Network Settings

The Cisco 6608-T1 Gateway with the ISDN protocol type **PRI ISO QSIG T1** set supports both protocol sides by selecting “Network/User” in the Protocol Side field when configuring the Gateway via Cisco CallManager.

The “network/user” choice for the Siemens Hicom 300 E CS PBX is made by deactivating the D- and B- channels (<**dea-dssu**) and the DS1 board (<**dea-bssu**) consecutively. A change command is then issued to the Board Configuration Switching Unit (BCSU) to get to the “network/user” prompt (<**cha-bcsu**). The DS1 board is then activated (<**act-bssu**), then the D- and B-channels are reactivated (<**act-dssu**), after the settings are changed.

Key features supported

- Calling Name Identification Presentation
- Calling Number Identification Presentation
- Calling Number Identification Restriction
- Connected Name Identification Presentation
- Connected Number Identification Presentation
- Honor Calling/Connected Name Identification Restriction
- Honor Calling/Connected Number Identification Restriction

Limitations

Cisco CallManager 3.3 release does not support the following:

- Sending Alerting Name Identification
- Sending Busy Name Identification
- Sending Calling/Connected Name Identification Restriction
- Sending Connected Number Identification Restriction



- Updating Connected Name and Number for Call Transfers
- Updating Connected Name for Call Forwarding

System Components

Hardware Requirements

- Cisco Catalyst 6000 switch with Cisco 6608-T1 Gateway
- Siemens Hicom 300 E CS PBX, TMDN or TMDN 64

Software Requirements

- Cisco IOS Software Release 6.1(4)
- PBX Software Release 6.6 with CorNetNQ package
- Cisco CallManager Release 3.3

Configuration

Configuring the Siemens Hicom 300 E CS PBX

Configure in the following sequence:

- Add the new access code to Dialing Plans
- Add the new trunk board using BCSU
- Configure Class of Trunk using COT
- Configure Class of Parameter for device handler using COP
- Add the new trunk group access code using TGACC
- Add the channels using TCSU
- Configure Trunk Least Cost Routing using LROUT
- Configure LCR Out-dial Rules using LODR

Adding the New Access Code to the Dial Plan (DPLN)

```
<dis-dpln;
```

```
TYPE = dgts
```

```
DGTS = ;
```

```
DIS-DPLN:DGTS,;
```

```
H500: AMO DPLN STARTED
```

```
-----  
| DIGIT INTERPRETATION                VALID FOR DIAL PLAN 0                |
```



```
-----
|          | CALL PROGRESS STATE | DIGIT ANALYSIS|          |          |
| DIRECTORY NUMBER|      1 11111 1111222|      RESULT    |RSVD | ROUTE|
|          |12345 67890 12345 6789012| (SKIP DIGIT) |      |          |
-----
```

```
| 0          | ....* ..... | GENANS          |          |          |
| 1          | .*. ** *.** *... | CO              |          |          |
| 2000 - 2002 | .**** *...*... | STN             |          |          |
| 2003 - 2024 | .**** *...*... | STN             | R        |          |
| 2025 - 2026 | .**** *...*... | STN             |          |          |
| 2222       | .**** *.** *... | ATNDIND         |          |          |
| 37 - 41    | .*. ** *.** *... | CO              |          |          |
| 43 - 48    | .**** *...*... | TIE             |          |          |
| 49 - 55    | .*. ** *.** *... | CO              |          |          |
| 71000      | .**** *...*... | STN             |          | 1        |
| 71001 - 79998 | .**** *...*... | STN             | R        |          |
| 79999      | .**** *...*... | STN             |          |          |
-----
```

```
| DIGIT INTERPRETATION                                VALID FOR DIAL PLAN 0 |
-----
```

```
|          | CALL PROGRESS STATE | DIGIT ANALYSIS|          |          |
| DIRECTORY NUMBER|      1 11111 1111222|      RESULT    |RSVD | ROUTE|
|          |12345 67890 12345 6789012| (SKIP DIGIT) |      |          |
-----
```

```
| 9          | .*. ** *.** *... | CO              |          |          |
| *0         | *...* ..**.. | ACDWORK         |          |          |
| *2         | *...* ..**.. | ACCTCODE        |          |          |
| *3         | ...* ..**.. | PUDIR           |          |          |
| *4         | *...* ..**.. | CONFRNC         |          |          |
| *52        | ....* ..... | MWCAN           |          |          |
-----
```



| *530	| ....* .....*|	PMCANCEL	|	|	|
| *532	| ....* .....*|	PMCALLBK	|	|	|
| *563	| *.... ..**.	BADLINE	|	|	|
| *564	| *...* ..**.	ACDLOGON	|	|	|
| *565	| *...* ..**.	ACDLOGOF	|	|	|
| *570	| *...* ..**.	ACDPQ	|	|	|

DIGIT INTERPRETATION VALID FOR DIAL PLAN 0

|	| CALL PROGRESS STATE	| DIGIT ANALYSIS|	|	|	|
| DIRECTORY NUMBER|	1 11111 1111222|	RESULT	|RSVD	| ROUTE|	
|	|12345 67890 12345 6789012|	(SKIP DIGIT)	|	|	|

| *571	| *...* ..**.	ACDPS	|	|	|
| *572	| ....* .....|	RING	|	|	|
| *580	| *...* ..**.	ACDSQ	|	|	|
| *581	| *...* ..**.	ACDSS	|	|	|
| *6	| ***** ..**.	ROLMPARK	|	|	|
| *7	| *...* ..**.	CONSULT	|	|	|
| *80 - *89	| .**** ..**.	PARK	|	|	|
| *9	| ....* ..**.	HOLD	|	|	|
| **0	| .***. ....	BVSL	|	|	|
| **1	| *.... ..**.	TOGGLE	|	|	|
| **3	| ....* ..**.	PU	|	|	|
| **41 - **48	| ..... ..*..	CONFRMV	|	|	|

DIGIT INTERPRETATION VALID FOR DIAL PLAN 0

|	| CALL PROGRESS STATE	| DIGIT ANALYSIS|	|	|	|
| DIRECTORY NUMBER|	1 11111 1111222|	RESULT	|RSVD	| ROUTE|	
|	|12345 67890 12345 6789012|	(SKIP DIGIT)	|	|	|



| **50	| *...* ..**.	.....	| CAFGRAVL	|	|	|
| **51	| *...* ..**.	.....	| CAFGRUNA	|	|	|
| **6	| ....* ..**.	.....	| INTERCOM	|	|	|
| **8	| ....* .....	.....	| MWANS	|	|	|
| ***4	| ....* .....	.....*	| CONFRMVL	|	|	|
| ***5	| ....* .....	.....	| MONSLNT	|	|	|
| **65	| *...* ..**.	.....	| CAFGROFF	|	|	|
| *#01	| ....* .....	.....	| RCHNL	|	|	|
| *#02	| ....* .....	.....	| RTERM	|	|	|
| *#03	| ....* .....	.....	| LTERM	|	|	|
| *#04	| ....* .....	*.....*	| PRITEST	|	|	|
| *#274	| *...* .....	.....	| WS	|	|	|

| DIGIT INTERPRETATION	VALID FOR DIAL PLAN 0	|
----------------------	-----------------------	--

|	CALL PROGRESS STATE	| DIGIT ANALYSIS|	|	|
| DIRECTORY NUMBER|	1 11111 1111222|	RESULT	|RSVD |	ROUTE|
|	|12345 67890 12345 6789012|	(SKIP DIGIT)	|	|

| *#50	| *...* ..**.	.....	| CAFAVLB	|	|	|
| *#51	| *...* ..**.	.....	| CAFUNAV	|	|	|
| *#55	| *...* ..**.	.....	| CAFFWD	|	|	|
| *#56	| *...* ..**.	.....	| CAFFWDC	|	|	|
| *#57	| ....* ..**.	.....*	| PIDON	|	|	|
| *#58	| ....* ..**.	.....*	| PIDOFF	|	|	|
| *#590	| ....* .....	.....	| DCOSX	|	|	|
| *#591	| ....* .....	.....	| ACOSX	|	|	|
| *#63	| *****	*****	| CLEAR	|	|	|
| *#65	| *...* ..**.	.....	| CAFLOGOF	|	|	|
| *#735	| ....* .....	.....	| RELOCATE	|	|	|



|	*#738	|	....* .....	|	SET	|		|		|
--	-------	--	-------------	--	-----	--	--	--	--	--

|	DIGIT INTERPRETATION				VALID FOR DIAL PLAN 0				|
--	----------------------	--	--	--	-----------------------	--	--	--	--

|		|	CALL PROGRESS STATE	|	DIGIT ANALYSIS|	|		|		|
|	DIRECTORY NUMBER|		1 11111 1111222|		RESULT	|	RSVD	|	ROUTE|	
|		|	12345 67890 12345 6789012|		(SKIP DIGIT)	|		|		|

|	*#97	|	..*.. *. ....	|	COXFER	|		|		|
|	#0	|	*...* ..**.	|	ACDUNAV	|		|		|
|	#1	|	*.... *. .... *	|	ACBK	|		|		|
|	#2	|	*...* ..**.	|	PRION	|		|		|
|	#3	|	..**.* ..**.	|	SPDI	|		|		|
|	#4	|	***.* ..**.	|	SNR	|		|		|
|	#5	|	....* .....	|	ADND	|		|		|
|	#61	|	..**** ..*** **.	|	SPDC1	|		|		|
|	#62	|	..**** ..*** **.	|	SPDC2	|		|		|
|	#80	|	*...* ..**.	|	BROADCAST	|		|		|
|	#81	|	*...* ..**.	|	SPKRCALL	|		|		|
|	#8378	|	....* .....	|	HWTEST	|		|		|

|	DIGIT INTERPRETATION				VALID FOR DIAL PLAN 0				|
--	----------------------	--	--	--	-----------------------	--	--	--	--

|		|	CALL PROGRESS STATE	|	DIGIT ANALYSIS|	|		|		|
|	DIRECTORY NUMBER|		1 11111 1111222|		RESULT	|	RSVD	|	ROUTE|	
|		|	12345 67890 12345 6789012|		(SKIP DIGIT)	|		|		|

|	#91	|	....* .....	|	CFWVABTH	|		|		|
|	#92	|	....* .....	|	CFWVAEXT	|		|		|
|	#93	|	....* .....	|	CFWVAINT	|		|		|
|	#94	|	....* .....	|	CFWVB	|		|		|



| #95	| ....* .....* .....	| CFWVBN	|	|	|
| #96	| ....* .....* .....	| CFWVNA	|	|	|
| #*056	| ....* .....* .....	| DATA56	|	|	|
| #*1	| ***** ..**.	| MWACT	|	|	|
| #*2	| *...* ..**.	| BUZZ	|	|	|
| #*329	| .**.* *...*	| FAX	| R	|	|
| #*4	| *...* ..**.	| VCECALL	|	|	|
| #*75	| ....* .....* .....	| DIGIDAT	|	|	|

DIGIT INTERPRETATION VALID FOR DIAL PLAN 0

|	| CALL PROGRESS STATE	| DIGIT ANALYSIS|	|	|	|
| DIRECTORY NUMBER|	1 11111 1111222|	RESULT	|RSVD	| ROUTE|	|
|	|12345 67890 12345 6789012|	(SKIP DIGIT)	|	|	|

| #*76	| ....* *... ..**.	| SWITCH	|	|	|
| #*77	| ....* *...* ***.	| DTE	|	|	|
| #*78	| ....* ..**.	| CODE	|	|	|
| #*79	| ....* ..**.	| SPEED	|	|	|
| #*8	| ***** ****. .***	| MWCANORI	|	|	|
| #*90	| ....* .....* .....	| HUNTPROG	|	|	|
| #*92	| ....* .....* .....	| AHTVCE	|	|	|
| #*93	| ....* .....* .....	| DHTVCE	|	|	|
| #*94	| ....* .....* .....	| AHTDTE	|	|	|
| #*95	| ....* .....* .....	| DHTDTE	|	|	|
| #*96	| ....* .....* .....	| AHTFAX	|	|	|
| #*97	| ....* .....* .....	| DHTFAX	|	|	|

DIGIT INTERPRETATION VALID FOR DIAL PLAN 0

|	| CALL PROGRESS STATE	| DIGIT ANALYSIS|	|	|	|
--	---------------------	----------------	--	--	--



DIRECTORY NUMBER	1 11111 1111222	RESULT	RSVD	ROUTE
	12345 67890 12345 6789012	(SKIP DIGIT)		

99	*	HUNTCLR		
##0	*...* ..**.	ACDAVLB		
##1	**	DCBK		
##2	*...* ..**.	PRIOFF		
##3	**	SPDIPROG		
##4	*...* ..**.	LNR		
##5	**	DDND		
##7	*.....*	KNOVR		
##8	***** ..**.	DTA		
##91	**	CFWVAOFF		
##*78	* ..**.	RESET		
###1	*..... ..**.	TRACE		

DIGIT INTERPRETATION	VALID FOR DIAL PLAN 0
----------------------	-----------------------

CALL PROGRESS STATE	DIGIT ANALYSIS			
DIRECTORY NUMBER	1 11111 1111222	RESULT	RSVD	ROUTE
	12345 67890 12345 6789012	(SKIP DIGIT)		

###20	**..* **..*	MILLWAT		
###21	**..* **..*	LOOPBACK		
###22	**..* **..*	SILENCE		
###23	**..* **..*	COMBO		
###4	*.....*	THRCONF		
###6	**	MONTONE		



AM0-DPLN -105 DIALING PLANS, FEATURE ACCESS CODES

DISPLAY COMPLETED;

Adding a New Trunk Board using BCSU

<dis-bcsu

TYPE = tmd

LTG = 1

LTU = 2

SLOT = 25;

DIS-BCSU:TMD,1,2,25;

H500: AM0 BCSU STARTED

```
-----
| DETAILS OF TMD BOARD AT ADDRESS (LTG.LTU.SLOT) = 1. 2. 25 |
|                                                              |
| CABTYP = 1          TIMTYP = SYST          SIGTYP = MOS      |
| FRAME = ESF         TABS = NO             FCTID = 2         |
| BI8SUB = YES        BIVDET = NO           |
|-----|
| RDRATIO = 6         RDTH = 2500          RDQUAL = 15000     |
| YLSEND = 5000       YLTH = 400          YLQUAL = 100       |
| LOS = 150          AOS = 4000           |
| SESDISTH = 10      SESREQTH = 10         |
| OESDISTH = 30      OESDISIN = 24-00-00   |
| OESREQTH = 4000    OESREQIN = 04-00-00   |
|-----|
| NETUSR = NETWK      ACKTIM = 1000        DLVTIM = 5000      |
```



```

|   OCTMAX = 260       RETMAX =    3       WINDOW =    7   |
|   CRIDC  =           TTSC   =           NSFIV  =         |
|   NSFTSC =           PFDGT  =           |
|-----|
|       IGN = 0         IID = 0           |
|-----|

```

AM0-BCSU -105 BOARD CONFIGURATION, SWITCHING UNIT
 DISPLAY COMPLETED;

Configuring Class of Trunk (COT)

<dis-cot

COTNO = ;

DIS-COT:;

H500: AMO COT STARTED

```

|D|A|D|D|M|S|V|E|E|R| | |
|I|N|S|S|I|D|A|L|S|N|F|
|T|S|A|A|S|R|T|S|P|P|I|L|
| |R| |S| | |A|A|D|D|A|
| | | | | |T|N|N|N|S|
| | | | | |I|I|I|H|

```

COT | | | | | | | |S|S| |

-----+--+--+--+--+--+--+--+--+

0 | | | | | | | | | |

1 | |X| | | | | | | |

3 |X| | | | | | | | |

6 | |X| | | | | | | |

14 |X| | |X| | | | | |

-----+--+--+--+--+--+--+--+--+

AM0-COT -105 CLASS OF TRUNK FOR CALL PROCESSING



DISPLAY COMPLETED;

Configuring Class of Parameter (COP) for Device Handler

<dis-cop;

DIS-COP;

H500: AMO COP STARTED

|	|	S			E	A	|	|
|	|	T			E	S	N	|
|	|	A	S	V	S	P	I	D
|	|	D	Z	L	P	D	D	T
|	|	I	A	A	S	S	A	N
|	|	C	O	P	A	N	C	A
|	|	I	I	N	I	I	N	I
|	|	L	S	K	T	T	I	S
|	|	L	S	K	T	T	I	S

|	|	0	|	|	|	|
|	|	1	|	X	|	|
|	|	6	|	X	X	|
|	|	50	|	X	|	X

AMO-COP -105 CLASS OF PARAMETER
DISPLAY COMPLETED;

Adding the New Trunk Group Access Code (TGACC)

<dis-tgacc

TGRP = 41;



DIS-TGACC:41;

H500: AMO TGACC STARTED

```
+-----+
| TGRP NUMBER      :    41   TGRP NAME   : QSIG           /N   MAXIMUM NO:   23 |
| SUBGROUP NUMBER:     5   DEVICE TYPE: CORNET B           DIR TYPE  : BOTH |
| ACD THRESHOLD   :     *   TRACENO      :              0   USAGE TYPE: TERR |
| ALLOCATED TO AT LEAST ONE ROUTE                               GDTR RULE :    0 |
| SELECTION        :   LOW   CFBLOCK      : DISABLED                |
| THE FOLLOWING PORTS (LTG-LTU-SLOT-CIRCUIT) ARE ALLOCATED:         |
+-----+
| 1- 2- 25- 1| 1- 2- 25- 2| 1- 2- 25- 3| 1- 2- 25- 4| 1- 2- 25- 5| 1- 2- 25- 6|
+-----+
| 1- 2- 25- 7| 1- 2- 25- 8| 1- 2- 25- 9| 1- 2- 25-10| 1- 2- 25-11| 1- 2- 25-12|
+-----+
| 1- 2- 25-13| 1- 2- 25-14| 1- 2- 25-15| 1- 2- 25-16| 1- 2- 25-17| 1- 2- 25-18|
+-----+
| 1- 2- 25-19| 1- 2- 25-20| 1- 2- 25-21| 1- 2- 25-22| 1- 2- 25-23|  -  -  -  |
+-----+
```

AMO-TGACC-105 TRUNK GROUP ACCESS CODE

DISPLAY COMPLETED;

Adding the TCSU-B Channel

<dis-tcsu

PEN1 = 1-2-25-1;

DIS-TCSU:1-2-25-1;

H500: AMO TCSU STARTED

```
+-----+
| PEN: 1- 2- 25- 1  INS: Y   BOARD: TMDN64P   DEV: S1B       TGRP: 41  |
+-----+
```



```
| TRKID : 0002          TCCID : |
| CCT : QSIG /0002 |
|
| ACDATA : 0          COTNO : 6          LCRCOSD : 5 |
| ATNTYP : TIE        DITIDX : 0          LCRCOSV : 5 |
| BNEGOT : N          DPLN : 0          LOCANA : |
| COPNO : 6          ITR : 0          REMANA : |
| COSNO : 75 |
+-----+
```

AM0-TCSU -105 TRUNK CONFIGURATION, SWITCHING UNIT
DISPLAY COMPLETED;

Configuring the TCSU-D Channel

<dis-tcsu

PEN1 = 1-2-25-24;

DIS-TCSU:1-2-25-24;

H500: AM0 TCSU STARTED

```
+-----+
| PEN: 1- 2- 25-24 INS: Y BOARD: TMDN64P DEV: S1D |
+-----+
| TCCID : |
| CCT : QSIG |
|
| ACDATA : 0          COTNO : 6          DPLN : 0 |
| COPNO : 6          DITIDX :          ITR : 0 |
| CONVER : N          PROTOCOL : NQISO |
| BEARER: ONE |
```



```
| TMR: |
| 302: 15 303: 6 304: 20 305: 30 306: 30 |
| 308: 6 309: 90 310: 110 313: 4 314: 6 |
| 316: 120 322: 4 384: 30 385: 30 386: 30 |
+-----+
```

AM0-TCSU -105 TRUNK CONFIGURATION, SWITCHING UNIT

DISPLAY COMPLETED;

Configuring Trunk Least Cost Routing (LROUT)

<dis-lrout

ROUTE = 41;

DIS-LROUT:41;

H500: AM0 LROUT STARTED

LCR ROUTE DEFINITION TABLE

```
-----
|ROUTENUM = 41          SCHED A = X  AORT  =          INFORMATION          |
|ROUTELEE = 1           B =    AUTH  = 1    TRANS CAP = S3V              |
|BEARER   = ONE         C =    ONHKQ = Y    TRKSIG = COR                 |
|BANDWTH  = 1           D =    OFFHKQ = Y    SCCID  =                    |
|TRUNKGRP = 41          E =    ODRNUM = 1    SVCVCE = NON                 |
|MASTGRP  = 3           F =    APLTYP = VFD  SVCN-V = NON                 |
|ROUTSERV = N           G =                                     FACNUM =    |
|                       H =                                     |
-----
```



```
-----  
|ROUTENUM = 41          SCHED A = X  AORT   =          INFORMATION      |  
|ROUTELEE = 2           B =    AUTH   = 1    TRANS CAP = S3V          |  
|BEARER   = ONE        C =    ONHKQ  = Y    TRKSIG = COR             |  
|BANDWTH  = 1          D =    OFFHKQ = Y    SCCID  =                  |  
|TRUNKGRP = 41          E =    ODRNUM = 1    SVCVCE = NON            |  
|MASTGRP  = 3           F =    APLTYP = VD    SVCN-V = NON            |  
|ROUTSERV = N           G =                                  FACNUM =    |  
|                                           H =                                  |  
-----
```

END OF LCR ROUTE DEFINITION TABLE DISPLAY

AM0-LROUT-105 ROUTE DEFINITION DETERMINATION PACKAGE

DISPLAY COMPLETED;

Configuring LCR Out-dial Rules (LODR)

<dis-lodr;

DIS-LODR;

H500: AM0 LODR STARTED

<< DISPLAY LCR OUTDIAL RULE >>

ODR NO	COMMAND	BRANCH VALUE
-----	-----	-----
1	ECHOALL	
	END	

----- END OF DISPLAY -----



AM0-L0DR -105 AM0 LCR ODR FOR SWITCHING UNIT

DISPLAY COMPLETED;

Configuring the SCSU Station

<dis-scsu

STNO = 2000;

TYPE = all

DIS-SCSU:2000,ALL;

H500: AM0 SCSU STARTED

STNO	2000	NAME	ERIC	DOE				ACT	DEV
COS1	60	COSX	0	DIAL	-	DLIDX	-	DEVFUNC	OPTI
COS2	60	SPDC1	-	DPLN	0	TA	N	PEN	1-2-37-0
LCRCOSV1	12	SPDC2	-	HTLNIDX	-	TADLIDX	-	PUBSCR	2000
LCRCOSV2	12	SPDI	10	ITR	0	TAINS	-	ACTCDE	000000000000
LCRCOSD1	12	HANDSFR	Y	SPECL	-	ACCLASS	-	NTYPE	-
LCRCOSD2	12	INS	Y	PUGRP	-	QPRIOR	-	RPTYPE	
DSSALERT	N	DTS	Y	STD	1	FAXSERV	N/A	HDSTYPE	NONE
NWBALNO	-	CDIDX	-	WINKOFF	-	SEIZE	-	DTE DL VER	
CFWDV	N	CFWDD	N	DND	N	CALLWAIT	N	VCE DL VER	0
VCP	OFF	MSGWLMP	-	PHONMAIL	N	COMGRP	0	DNIDSP	N
MAIN0	-	CUI	N	KEYM	0	TSI	1	LOCODE	-
DCFWBUSY	N	API	N	EVMS	N	EVMSIDX	0	OPTITYPE	0EADVPL
TATYPE	-			TATYPE2	-			FLASH	-
PATTERN	-	TFAGROUP	-	ATMADDR	-			SPKALERT	Y
RELTEST	-								



FIXED CFW1 - FIXED CFW2 - VAR CFW -

STATION-HUNT N

UCD-HUNT N

PILOT-HUNT N

NIGHTVARIANT N

AMO-SCSU -105 SUBSCRIBER CONFIGURATION IN THE SWU

DISPLAY COMPLETED;

Configuring Cisco CallManager



6608-T1 Gateway Configuration

Cisco CallManager 3.3 Administration - Gateway Configuration - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites History Print

Address <http://ferengi/CCMAdmin/gatewayconfig.asp?pkid={3466B2B5-3ACD-495D-B532-8926E45EFC65}&type=1> 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](#)

Product : Cisco Catalyst 6000 T1 VoIP Gateway
Gateway : S0/DS1-0@SDA0001C9D93A98
Device Protocol: Digital Access PRI
Registration: Registered with Cisco CallManager 10.10.10.1
IP Address: [10.10.10.116](#)

Status: Ready

Device Information

MAC Address*	0001C9D93A98
Description	SDA0001C9D93A98
Device Pool*	Default
Network Locale*	United States
Media Resource Group List	< None >
Location	< None >
AAR Group	< None >
Load Information	

Interface Information

PRI Protocol Type*	PRI ISO QSIG T1
Protocol Side*	User
Channel Selection Order*	Top Down

Local intranet



Cisco CallManager 3.3 Administration - Gateway Configuration - Microsoft Internet Explorer

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Address <http://ferengi/CCMAdmin/gatewayconfig.asp?pkid={3466B2B5-3ACD-495D-B532-8926E45EFC65}&type=1> Go Links

Channel IE Type* Timeslot Number

PCM Type* μ -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 < None >

AAR Calling Search Space < None >

Prefix DN

Outbound Calls

Calling Party Presentation* Allowed

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

PRI Protocol Type Specific Information

☐ Display IE Delivery

Local intranet



Cisco CallManager 3.3 Administration - Gateway Configuration - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites History Print

Address <http://ferengi/CCMAdmin/gatewayconfig.asp?pkid={3466B2B5-3ACD-495D-B532-8926E45EFC65}&type=1> Go Links

☐ Redirecting Number IE Delivery - Outbound

☐ Redirecting Number IE Delivery - Inbound

☒ Send Extra Leading Character In DisplayIE***

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

☐ MCDN Channel Number Extension Bit Set to Zero**

☐ Interface Identifier Present**

Interface Identifier Value**

Product Specific Configuration 

Clock Reference*	Network
TX-Level CSU*	0dB
FDL Channel*	ATT 54016
Framing*	ESF
Audio Signal Adjustment into IP Network*	NoDbPadding
Audio Signal Adjustment from IP Network*	NoDbPadding
Yellow Alarm*	Bit2
Zero Suppression*	B8ZS
Digit On Duration(50-500ms)*	100
Interdigit Duration(50-500msec)*	100
Adaptive Gain Control Enable*	☐
SNMP Community String	public
Debug Port Enable*	☒
Hold Tone Silence Duration*	0
Port Used for Voice Calls*	☒

Local intranet



Cisco CallManager 3.3 Administration - Gateway Configuration - Microsoft Internet Explorer

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Address <http://ferengi/CCMAdmin/gatewayconfig.asp?pkid={3466B2B5-3ACD-495D-B532-8926E45EFC65}&type=1> Go Links

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*	14400bps
Fax Payload Size*	20
Non Standard Facilities Country Code*	65535
Non Standard Facilities Vendor Code*	65535
Fax/Modem Packet Redundancy*	☐
V.21 Flag Sequence Detection Count*	4
NSE Type*	Non-IOS Gateways

Playout Delay Parameters

Initial Playout Delay*	40
Minimum Playout Delay*	20
Maximum Playout Delay*	150

* 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

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Enbloc Route Pattern Configuration

Cisco CallManager 3.3 Administration - Route Pattern Configuration - Microsoft Internet Explorer

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Address <http://ferengi/CCMAdmin/routepatternconfig.asp?pkid={AB9DD1D1-A861-44F8-A286-72E0CA4426A1}&status=uc> Go Links

Cisco CallManager Administration
For Cisco IP Telephony Solutions

CISCO SYSTEMS

Route Pattern Configuration

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

Route Pattern: 6.XXXX
Status: Update completed
Note: Any update to this route pattern automatically resets the associated gateway/route list

Copy Update Delete

Pattern Definition

Route Pattern*	6.XXXX
Partition	< None >
Description	
Numbering Plan*	North American Numbering Plan
Route Filter	< None >
Gateway/Route List*	S0/DS1-0@SDA0001C9D93A98 (Edit)
Route Option	☒ Route this pattern ☐ Block this pattern
☒ Provide Outside Dial Tone	☐ Urgent Priority

Calling Party Transformations

☐ Use Calling Party's External Phone Number Mask

Calling Party Transform Mask	
Prefix Digits (Outgoing Calls)	
Calling Party Presentation	Default

Called Party Transformations

Discard Digits	PreDot
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 >	

Local intranet



Configuring the Catalyst 6000 Switch

Console> (enable) **show version**

WS-C6506 Software, Version NmpSW: 6.1(4)

Copyright (c) 1995-2001 by Cisco Systems

NMP S/W compiled on May 15 2001, 12:27:20

System Bootstrap Version: 5.3(1)

Hardware Version: 2.0 Model: WS-C6506 Serial #: TBA04110341

Mod	Port	Model	Serial #	Versions
1	2	WS-X6K-SUP1A-2GE	SAD041504XL	Hw : 3.1 Fw : 5.3(1) Fw1: 5.1(1)CSX Sw : 6.1(4) Sw1: 6.1(4)
		WS-F6K-PFC	SAD0413097K	Hw : 1.1
3	48	WS-X6248-RJ-45	SAD04150CK1	Hw : 1.2 Fw : 5.1(1)CSX Sw : 6.1(4)
4	24	WS-X6624-FXS	SAD050203M8	Hw : 3.0 Fw : 5.4(2) Sw : 6.1(4) HP : A00203030009; DSP : A003D033 (3.6.
5	8	WS-X6608-E1	SAD043300AJ	Hw : 1.1 Fw : 5.4(2) Sw : 6.1(4)



33) HP1: D00403030009; DSP1: D005D033 (3.6.

33) HP2: D00403030009; DSP2: D005D033 (3.6.

33) HP3: D00403030009; DSP3: D005D033 (3.6.

33) HP4: D00403030009; DSP4: D005D033 (3.6.

2) HP5: C00103010007; DSP5: C002E031 (3.3.

2) HP6: C00103010007; DSP6: C002E031 (3.3.

2) HP7: C00103010007; DSP7: C002E031 (3.3.

2) HP8: C00103010007; DSP8: C002E031 (3.3.

6 8 WS-X6608-T1 SAD04400EM0 Hw : 1.1

Fw : 5.4(2)

Sw : 6.1(4)

33) HP1: D00403030009; DSP1: D005D033 (3.6.

15) HP2: D00403010044; DSP2: D005Q031 (3.6.

15) HP3: D00403010044; DSP3: D005Q031 (3.6.

15) HP4: D00403010044; DSP4: D005Q031 (3.6.

15) HP5: D00403010044; DSP5: D005Q031 (3.6.

15) HP6: D00403010044; DSP6: D005Q031 (3.6.



HP7: D00403010044; DSP7: D005Q031 (3.6.

15)

HP8: D00403010044; DSP8: D005Q031 (3.6.

15)

	DRAM			FLASH			NVRAM		
Module	Total	Used	Free	Total	Used	Free	Total	Used	Free
1	65408K	43764K	21644K	16384K	5327K	11057K	512K	245K	267K

Uptime is 229 days, 22 hours, 39 minutes

Console> (enable)

Console> (enable) **sh module**

Mod	Slot	Ports	Module-Type	Model	Sub	Status
---	---	---	-----	-----	---	-----
1	1	2	1000BaseX Supervisor	WS-X6K-SUP1A-2GE	yes	ok
3	3	48	10/100BaseTX Ethernet	WS-X6248-RJ-45	no	ok
4	4	24	FXS	WS-X6624-FXS	no	ok
5	5	8	E1	WS-X6608-E1	no	ok
6	6	8	T1	WS-X6608-T1	no	ok

Mod	Module-Name	Serial-Num
---	-----	-----
1		SAD041504XL
3		SAD04150CK1
4		SAD050203M8
5		SAD043300AJ
6		SAD04400EM0



Mod	MAC-Address(es)	Hw	Fw	Sw

1	00-d0-d3-37-f9-8e to 00-d0-d3-37-f9-8f	3.1	5.3(1)	6.1(4)
	00-d0-d3-37-f9-8c to 00-d0-d3-37-f9-8d			
	00-01-63-af-5c-00 to 00-01-63-af-5f-ff			
3	00-01-97-4a-10-30 to 00-01-97-4a-10-5f	1.2	5.1(1)CSX	6.1(4)
4	00-03-32-ba-2e-35	3.0	5.4(2)	6.1(4)
5	00-01-64-12-22-80 to 00-01-64-12-22-87	1.1	5.4(2)	6.1(4)
6	00-01-c9-d9-3a-98 to 00-01-c9-d9-3a-9f	1.1	5.4(2)	6.1(4)

Mod	Sub-Type	Sub-Model	Sub-Serial	Sub-Hw

1	L3 Switching Engine	WS-F6K-PFC	SAD0413097K	1.1

Console> (enable)

Console> (enable) **show port 6/1**

Port	Name	Status	Vlan	Duplex	Speed	Type

6/1		connected	1	full	1.544	T1

Port	DHCP	MAC-Address	IP-Address	Subnet-Mask

6/1	enable	00-01-c9-d9-3a-98	10.10.10.116	255.255.255.0

Port	Call-Manager(s)	DHCP-Server	TFTP-Server	Gateway

6/1	10.10.10.1	10.10.10.1	10.10.10.1	10.10.10.125

Port	DNS-Server(s)	Domain



6/1 - -

Port	CallManagerState	DSP-Type
------	------------------	----------

6/1	registered	C549
-----	------------	------

Port	NoiseRegen	NonLinearProcessing
------	------------	---------------------

6/1	enabled	enabled
-----	---------	---------

Port	Trap	IfIndex
------	------	---------

6/1	disabled	98
-----	----------	----

Console> (enable)



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