

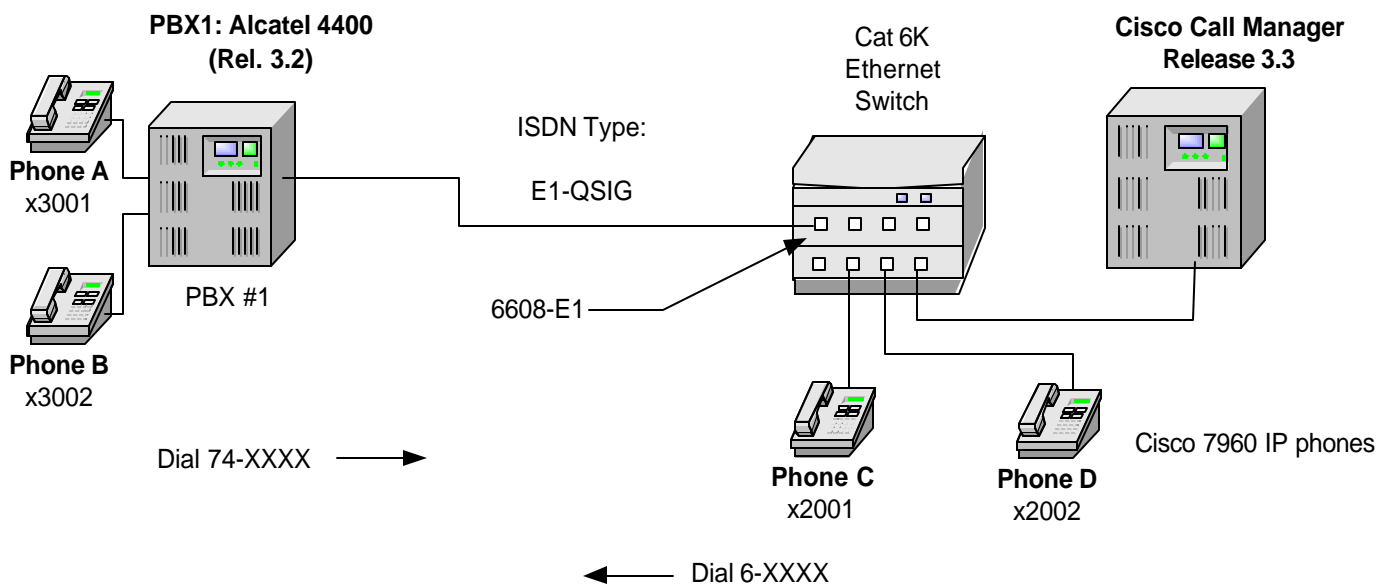
Cisco 6608-E1 - Alcatel 4400 Release 3.2 PBX with Cisco CallManager using the 6608-E1 QSIG Protocol as an MGCP Gateway

Introduction

This is an application note for connectivity of the Alcatel 4400 Release 3.2 PBX with Cisco CallManager using Cisco 6608-E1 QSIG as an MGCP Gateway. The network topology diagram shows the test set-up for end-to-end interoperability with the Cisco CallManager connected to the PBX via a Cisco 6608-E1 QSIG link acting as an MGCP Gateway.

Network Topology

Basic Call Setup End-to-End Configuration



Limitations

- When calling from an Alcatel digital phone to a Cisco 7960 IP phone, the Cisco IP phone displays calling name and number when the call is answered. The Alcatel phone, however, displays connected name only and no connected number when the call is answered. Alcatel does not



support Connected Number Identification Presentation QSIG service even though Cisco CallManager is sending the Connected Number information in the connect message.

- Cisco CallManager 3.3 release does not support sending Alerting Name or Busy Name Identification information.
- Calls did not complete when the IP phone calls an Alcatel phone that is setup to forward to another Alcatel phone. Alcatel in this case sends Facility IE for 'CallRerouting'. Since Cisco CallManager 3.3 release does not support 'CallRerouting', the call is not completed.

System Components

Hardware Requirements

- Cisco Cat6K switch with the Cisco 6608-E1 Gateway
- Alcatel 4400 PBX

Software Requirements

- Cisco IOS Software
- PBX Software Release 32
- Cisco CallManager Release 3.3

Configuration

Configuring the Alcatel 4400 PBX

Configure in the following sequence:

1. ISO function system parameter
2. Board
3. Digital access options
4. Trunk group
5. Trunk detail

Configuring the ISO Function System Parameter

```
\compidea\System::1\Other System Param::1
```

```
Other System Param.
```

```
Instance (reserved) 1
```

```
Trunk seizure via attendant True
```

```
No detect.of On-hook tone True
```

```
TrkGrp in ticket for trans.call True
```

```
VPN service False
```

```
ISVPN Node No. 1
```



Nb Digits displayed on sets 1
Melody Ringing Type 1
Int.Call Ringing Cadence No 1
Ext.Call Ringing Cadence No 1
Executive Type Ringing Cadence No 1
Prioritary Call Cadence No 1
ISO Function True
Booking B Channel True
Uncontrol.Business Account Code False
Business Pref.With Business No. True
Project prefix With Code False
Follow-Me on Remote forwarding False
BC HLC Fax1
VG Recording Gain from an UA set 3
Calling Id.length 7
Nb Of Secret Code Errors 0
Transfer All Business Call Types True
Attendt Keep Local on Enqu.cancel False
Compatibility GF True
Alphanum.Char.Entering-mode2 True
Spain version 2 False
Delete First STAR Digit True
QSIG1 (reserved) 0
QSIG2 (reserved) 0
Stop Tie Line Supervision False
Tie Line Germany 0
Entity For Virtual Set 0
Nb Of Business Code Errors 0
Disabled Code Duration 0
Poor ARS Rerouting memo.Dur. 20
Poor ARS Route Inhibit Dur.180



Charging by Nb MiniMessages True
Remote Numeric Gain For 4630 True
Project Code In Redial Key True
Cx on Progress message False
Differred transm.(Swiss trick) False
Send NDS NDI False
Calls Distributed On Att.In Order False
Nb non answ. int. messages by set 16
NS_read_before_ack False
SNCM 0

Configuring the Board

Interface type must be set to **PRA2**

\compidea\Shelf::0\Board::4

Board

Board Address 4

Interface Type PRA2

Administrative status Enabled

Usage State Busy

Operational State Enabled

Main/Standby State Main (Master)

Number Of Sets Being Connect. 1

Remote Shelf Address 255

Remote Board Address 255

Synchronisation Priority 255

IO2 With SPB NO

AUXU Parameters 1 None

AUXU Parameters 2 None

AUXU Parameters 3 None



AUXU Parameters 4 None

CRC4 YES

Country Protocol Type Default

Time Slots\0 0

Time Slots\1 1

Time Slots\2 1

Time Slots\3 1

Time Slots\4 1

Time Slots\5 1

Time Slots\6 1

Time Slots\7 1

Time Slots\8 1

Time Slots\9 1

Time Slots\10 1

Time Slots\11 1

Time Slots\12 1

Time Slots\13 1

Time Slots\14 1

Time Slots\15 1

Time Slots\16 0

Time Slots\17 1

Time Slots\18 1

Time Slots\19 1

Time Slots\20 1

Time Slots\21 1

Time Slots\22 1

Time Slots\23 1

Time Slots\24 1

Time Slots\25 1

Time Slots\26 1

Time Slots\27 1



Time Slots\28 1
Time Slots\29 1
Time Slots\30 1
Time Slots\31 1
Voice-->Data TS YES
SU shelf Type 2 PCM Shelf
DECT Location area number 255
Send Init Dynamic Msg False
Param By Default True
Clock Mode Internal
CPU with Optimized B ChannelAccessNO
Board with DTM False
Incidents Teleservice YES
Max.VG Recording Duration 0
DASS2 Simulate Network NO
DPNSS Layer 2 Address A
ISDN Board Layer 2 Parameters\Retransmission Timer 100
ISDN Board Layer 2 Parameters\TEI Identity Check Timer 100
ISDN Board Layer 2 Parameters\Polling Timer 1000
ISDN Board Layer 2 Parameters\Nb_Of_Retransmission 3
ISDN Board Layer 2 Parameters\Max Frame Size (Bytes) 260
ISDN Board Layer 2 Parameters\Window Size In Frames SAPI S T0 1
ISDN Board Layer 2 Parameters\Window Size In Frames SAPI P T0 3
ISDN Board Layer 2 Parameters\Window Size In Frames SAPI S T2 7
ISDN Board Layer 2 Parameters\Window Size In Frames SAPI P T2 7
Number of configured ports 1
Associated CPU 255
Number of configured E1 ports 8
Synchronisation mode Adaptive method
In Band Signalling NO
Passive board NO



SS7 signalling NO
PRA7 TS signalling 16
Use Data Compression NO
Mutual Aid YES
LIO Daughter Board 6 Compressors
Tone on Board R2 Tone
Number of Used Compressors 0
GNISC in Rack 255
GNISC in position 255
Usage State Suite Slave
Atm address
TS used on PCM 0 0
TS used on PCM 1 0
TS used on PCM 2 0
TS used on PCM 3 0
TS used on PCM 4 0
TS used on PCM 5 0
TS used on PCM 6 0
TS used on PCM 7 0
Daughter board equipped NO
Number of Used Compressors 0
Mode Gateway IP
Embedded Ethernet YES
Voice Guide Lang Index 1
CLIP Signalization No CLIP
IVR Protocol No IVR Protocol Protocol
4615 Present NO
LIOE coupler 1 address 255
LIOE coupler 2 address 255
Associated BBC2 coupler 255
Associated BBC2 access 255



Use of volume in system YES

Local volume (dB) 0

Configuring Digital Access Options

Note: **Network mode** must be set to **Yes** for (Master/Network) or **No**- (Slave/User). **Access Type** must be set to **T2**.

\compidea\Shelf::0\Board::4\Digital Access::0

Digital Access

T0/T2 Access No. 0

Access Type T2

Used Access YES

Synchronisation Priority 255

Network Mode YES

Max Nb Of Used B Channels 30

Max_Nb_Of_Compressed_B_Channels 0

Nb Of Signalization TS 1

TieLine Mode YES

With AlarmNO

Access Type S0 NO

Reserved1 NO

Reserved2 NO

Network Date Time Update NO

CRC4 YES

Port ClassNOT SIG

Multiframe Type SF

Line Type Short Haul 0 to 35 meters

Pulses Encoding AMI

Retransmission Timer 100

TEI Identity Check Timer 100



Polling Timer 1000
Nb_Of_Retransmission 3
Max Frame Size (Bytes) 260
Window Size In Frames SAPI S 7
Window Size In SAPI P 7
B Channel Rate 64K

64K

Configuring the Trunk Group

Q931 signal variant is used to set the protocol type to **ABC-F**

\compidea\Trunk Groups::1

Trunk Groups

Trunk Group Id 1
Trunk Group Type T2
Trunk Group Name PRI-ABCF
Node number 1
Transcom Trunk Group False
Auto.reserv.by Attendant False
Overflow trunk group No. -1
Tone on seizure False
Private Trunk Group False
Paging Trunk Group False
Paging Table Id -1
Paging Signalization NDDI
Security Patrol False

Q931 signal variant ABC-F

Operator Id ANSI



Number Compatible With -1
Prefix Sending False
Number Of Digits To Send 4
Channel selection type Quantum
Remote Network 15
Shared Trunk Group False
T.line Calling last dig.length 0
auto.DTMF dialing on outgoing callNO
T2 Specificity None
Public Network Category 0
DDI transcoding False
Special Services Nothing
Can support UUS in SETUP True
Register Signalling Decadic/MF Q23

Configuring the Trunk Detail

\compidea\Trunk Groups::1\Trunk Group::1

Trunk Group

Instance (reserved) 1

Trunk Group Type T2

Public Network Ref.

Dialling end to end NO

DTMF end to end signal. NO

Paying Incoming Calls NO

TS Permanently assigned NO

Min. Nb.of digits on seize 0

Signal.with access code NO

Trunk group used in DISA NO



DISA Secret Code
VG for non-existent No. YES
Routing To Executive NO
Trunk Category Id 19
Nb of digits unused (ISDN) 4
B Channel Choice NO
Channels Reserved By Attend. 0
Dissuasion For ACD NO
DTO joining NO
Enquiry Call On B Channel NO
DDI Mode NO
Automated Attendant NO
Calling party Rights category 0
Entity Number 0
TS Overflow YES
Number To Be Added
Supervised by Routing NO
Access Cluster Id -1
VPN Cost Limit for Incom.Calls 0
Immediat Trk Listening For VPNCall YES
VPN TS % 50
Csta Monitored NO
Max.% of trunks out CCD 0
Charge Calling And ADN Creation NO
Ratio analog.to ISDN tax
Collect Calls Allowed YES
Priority of Call NO
PCM Network Mode NO
LogicalChannel 1__15 & 17__31
TS Distribution on Accesses YES
Use Split Acces NO



Heterogeneous Remote Network NO
Barring mode Not barred
ARS class of service 31
Quality profile for voice on IP Profile #1
IP compression type Default
Use of volume in system YES
Local volume (dB) 0

Configuring T2 Access

\compidea\Trunk Groups::1\T2/T1/T0 Access::0-4-0

T2/T1/T0 Access

Physical Address 0-4-0

Access Type T2

Access Cluster Id -1

Time Slots T2 01111111111111110111111111111111

Time Slots T0 011

Time Slots T1 CCS 0111111111111111111111111110

Time Slots Virtual 011111100000000

DLCI 16

Committed Information Rate 48

Extended Information Rate 64

CIR Measurement Interval 10

Support Time Slot Address

ISDN Compression Number

Release Support Timer (100ms) 0

Protection Timer (1mn)

Configuring Cisco CallManager



6608-E1 Gateway Configuration

Cisco CallManager Administration
For Cisco IP Telephony Solutions

Gateway Configuration [Back to Find/List Gateways](#)

Product : Cisco Catalyst 6000 E1 VoIP Gateway
Gateway : S0/DS1-0@SDA000164122280
Device Protocol: Digital Access PRI
Registration: Registered with Cisco CallManager 10.10.10.1
IP Address: [10.10.10.104](#)

Status: Ready

Device Information

MAC Address*	<input type="text" value="000164122280"/>
Description	<input type="text" value="SDA000164122280"/>
Device Pool*	<input type="text" value="Default"/>
Network Locale*	<input type="text" value="United States"/>
Media Resource Group List	<input type="text" value="< None >"/>
Location	<input type="text" value="< None >"/>
AAR Group	<input type="text" value="< None >"/>
Load Information	<input type="text"/>

Interface Information

PRI Protocol Type*	<input type="text" value="PRI ISO QSIG E1"/>
Protocol Side*	<input type="text" value="User"/>
Channel Selection Order*	<input type="text" value="Top Down"/>

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://ferengj/CCMAdmin/gatewayconfig.asp?pkid={CB557D64-12B9-451A-979A-E4D32198D86A}&type=2> Go Links

Channel IE Type*	Timeslot Number
PCM Type*	A-law
Delay for first restart (1/8 sec ticks)	32
Delay between restarts (1/8 sec ticks)	4
<input checked="" type="checkbox"/> Inhibit restarts at PRI initialization	
<input type="checkbox"/> Enable status poll	

Call Routing Information

Inbound Calls

Significant Digits*	23
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

<input type="checkbox"/> 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://ferengj/CCMAdmin/gatewayconfig.asp?pkid={CB557D64-12B9-451A-979A-E4D32198D86A}&type=2> 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*

Framing*

Audio Signal Adjustment into IP Network*

Audio Signal Adjustment from IP Network*

Zero Suppression*

Digit On Duration(50-500ms)*

Interdigit Duration(50-500msec)*

Adaptive Gain Control Enable*

SNMP Community String

Fax Parameters

Fax Relay Enable*

Fax Error Correction Mode Override*

* indicates required item

** applicable to DMS-100 protocol only

*** applicable to DMS-100 protocol and DMS-250 protocol only

Local intranet



Enbloc Route Pattern Configuration

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

Address: http://ferengi/CCMAdmin/routepatternconfig.asp?pkid={AB9DD1D1-A861-44F8-A286-72E0CA4426A1}

Route Pattern: 6.XXXX

Status: Ready
Note: Any update to this route pattern automatically resets the associated gateway/route list

Pattern Definition

Route Pattern*	6.XXXX
Partition	< None >
Description	
Numbering Plan*	North American Numbering Plan
Route Filter	< None >
Gateway/Route List*	S0/DS1-0@SDA000164122280 (Edit)
Route Option	<input checked="" type="radio"/> Route this pattern <input type="radio"/> Block this pattern
<input checked="" type="checkbox"/> Provide Outside Dial Tone	<input type="checkbox"/> 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 >	

Done Local intranet



Overlap Sending Route Pattern Configuration

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

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites History Print

Address <http://ferengi/CCMAdmin/routepatternconfig.asp?pkid={D2244682-022B-4947-9D29-4F8714BFB6E0}> Go Links

Route Pattern: 9.X

Status: Ready
Note: Any update to this route pattern automatically resets the associated gateway/route list

Copy Update Delete

Pattern Definition

Route Pattern*	9.X
Partition	< None >
Description	
Numbering Plan*	North American Numbering Plan
Route Filter	< None >
Gateway/Route List*	S0/DS1-0@SDA000164122280 (Edit)
Route Option	<input checked="" type="radio"/> Route this pattern <input type="radio"/> Block this pattern
<input checked="" type="checkbox"/> Provide Outside Dial Tone	<input type="checkbox"/> 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 >	

Done Local intranet



Alcatel 4400 Software Release

\compidea\node

Node

Node Number (reserved) 1

Software Version R3.2

Version name c1.712

Patch No. 5

Notes

Object Identity

Node Number (reserved) 1

Ethernet Notes\Netmask

Ethernet Notes\Local CPU\Name x000000_tun

Ethernet Notes\Local CPU\IP Address 172.30.253.253

Ethernet Notes\Twin Cpu\Name

Ethernet Notes\Twin Cpu\IP Address

Ethernet Notes\Main Cpu\Name xm000000

Ethernet Notes\Main Cpu\IP Address 10.253.253.3

Ethernet Notes\StandBy Cpu\Name

Ethernet Notes\StandBy Cpu\IP Address

SL Notes

IP/X25 Tunnel Notes\Netmask 255.255.0.0

IP/X25 Tunnel Notes\Local Node\Name x000000_tun

IP/X25 Tunnel Notes\Local Node\IP Address 172.30.253.253



Configuring the Cisco 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)
5	8	WS-X6608-E1	SAD043300AJ	Hw : 1.1 Fw : 5.4(2) Sw : 6.1(4) HP1: D00403030007; DSP1: D005b033 (3.6. 33) HP2: D00403030007; DSP2: D005b033 (3.6. 33)



HP3: D00403030007; DSP3: D005B033 (3.6.

33)

HP4: D00403030007; DSP4: D005B033 (3.6.

33)

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.

2)

Module	DRAM			FLASH			NVRAM		
	Total	Used	Free	Total	Used	Free	Total	Used	Free
1	65408K	43645K	21763K	16384K	5327K	11057K	512K	245K	267K

Uptime is 199 days, 22 hours, 13 minutes

Console> (enable)

Console> (enable) **show 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
5	5	8	E1	WS-X6608-E1	no	ok

Mod	Module-Name	Serial-Num
---	-----	-----



```
1          SAD041504XL
3          SAD04150CK1
5          SAD043300AJ
```

```
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)
5  00-01-64-12-22-80 to 00-01-64-12-22-87 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 5/1**

```
Port  Name          Status    Vlan    Duplex Speed Type
-----
5/1          connected  1        full  2.048 E1
```

```
Port  DHCP    MAC-Address    IP-Address    Subnet-Mask
-----
5/1    enable  00-01-64-12-22-80  10.10.10.104  255.255.255.0
```

```
Port  Call-Manager(s)  DHCP-Server    TFTP-Server    Gateway
-----
5/1    10.10.10.1       10.10.10.1     10.10.10.1     10.10.10.1
```



Port	DNS-Server(s)	Domain
5/1	-	-

Port	CallManagerState	DSP-Type
5/1	registered	C549

Port	NoiseRegen	NonLinearProcessing
5/1	enabled	enabled

Port	Trap	IfIndex
5/1	disabled	66

Console> (enable)



Alcatel 4400 Software Release

\compidea\node

Node

Node Number (reserved) 1

Software Version R3.2

Version name c1.712

Patch No. 5

Notes

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Ethernet Notes\Local CPU\Name x000000_tun

Ethernet Notes\Local CPU\IP Address 172.30.253.253

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Ethernet Notes\Main Cpu\Name xm000000

Ethernet Notes\Main Cpu\IP Address 10.253.253.3

Ethernet Notes\StandBy Cpu\Name

Ethernet Notes\StandBy Cpu\IP Address

SL Notes

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IP/X25 Tunnel Notes\Local Node\IP Address 172.30.253.253

Configuring the Cisco Catalyst 6000 Switch

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EDCS# 217702



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System Bootstrap Version: 5.3(1)

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

Mod	Port	Model	Serial #	Versions
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		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)
5	8	WS-X6608-E1	SAD043300AJ	Hw : 1.1 Fw : 5.4(2) Sw : 6.1(4) HP1: D00403030007; DSP1: D005b033 (3.6. 33) HP2: D00403030007; DSP2: D005b033 (3.6. 33) HP3: D00403030007; DSP3: D005B033 (3.6. 33) HP4: D00403030007; DSP4: D005B033 (3.6.



33)

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.

2)

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	Total	Used	Free	Total	Used	Free	Total	Used	Free
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5	5	8	E1	WS-X6608-E1	no	ok

Mod	Module-Name	Serial-Num
1		SAD041504XL
3		SAD04150CK1
5		SAD043300AJ



Mod	MAC-Address(es)	Hw	Fw	Sw
1	00-d0-d3-37-f9-8e to 00-d0-d3-37-f9-8f 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	3.1	5.3(1)	6.1(4)
3	00-01-97-4a-10-30 to 00-01-97-4a-10-5f	1.2	5.1(1)CSX	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)

Mod	Sub-Type	Sub-Model	Sub-Serial	Sub-Hw
1	L3 Switching Engine	WS-F6K-PFC	SAD0413097K	1.1

Console> (enable)

Console> (enable) **sh port 5/1**

Port	Name	Status	Vlan	Duplex	Speed	Type
5/1		connected	1	full	2.048	E1

Port	DHCP	MAC-Address	IP-Address	Subnet-Mask
5/1	enable	00-01-64-12-22-80	10.10.10.104	255.255.255.0

Port	Call-Manager(s)	DHCP-Server	TFTP-Server	Gateway
5/1	10.10.10.1	10.10.10.1	10.10.10.1	10.10.10.1

Port	DNS-Server(s)	Domain
------	---------------	--------



```
-----  
5/1      -          -  
  
Port      CallManagerState DSP-Type  
-----  
5/1      registered      C549  
  
Port      NoiseRegen NonLinearProcessing  
-----  
5/1      enabled        enabled  
  
Port      Trap          IfIndex  
-----  
5/1      disabled      66  
Console> (enable)
```



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