



Avaya Definity G3 CM2.0 to Avaya Definity G3 MV1.1 with Cisco IAD881 BRI Voice Gateways to Tunnel QSIG over SIP

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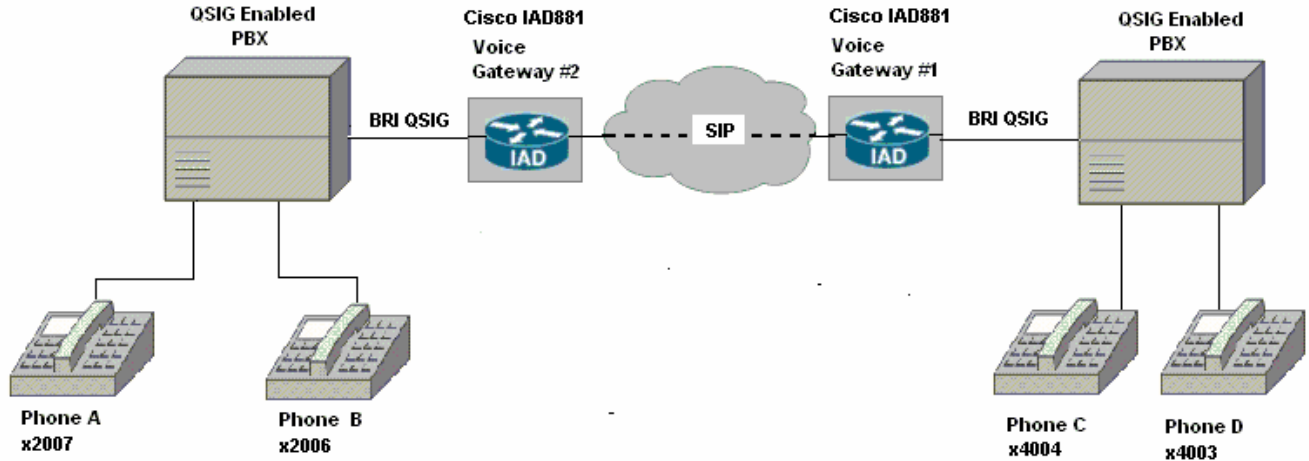
Introduction

- This application note provides interoperability information and documented configurations for a toll bypass solution using Cisco IAD881BRI Voice Gateways tunneling QSIG over SIP between Avaya Definity G3 Communications Manager Release 2.0 and Avaya Definity G3 MV1.1. The integration consists of two Cisco IAD881 BRI Voice Gateways connecting to the Avaya PBXs using BRI QSIG trunks. The IAD881 gateways establish the QSIG connection between the two PBXs via SIP. An end-to-end connection is thus established between Avaya PBXs. The SIP protocol used between Cisco IAD881 Voice Gateways “tunnels” the BRI QSIG with Avaya, resulting in a connection similar to connecting the PBXs directly. Figure 1 shows the integration topology. • •
- The following basic call and supplementary services features were verified: proper establishing and disconnecting of calls; calling name and number presentation and restriction; alerting name; call transfer (consultation and early-attended); call forwarding (all, busy, and no reply)with reroute; callback; path replacement on trombone call; and voicemail access with MWI activation and deactivation. Please note that this document does not address performance and scalability, which are part of broader criteria for a deployment-ready solution.
- This application note uses the Cisco IAD881 BRI Voice Gateways. However, the implementation is not platform-dependent, so you may also choose other Cisco IOS Voice Gateways. Be careful when selecting a voice gateway platform and consider the capacity and capability required for the intended deployment.

[Cisco IAD880 Series Integrated Access Devices](#)

Network Topology

Figure 1. Basic Call Setup



Limitations

These are the known limitations, caveats, or integration issues.

- Call forwarding by Join: Avaya Definity G3 CM2.0 and Avaya Definity G3 MV1.1 do not support call forwarding by Join. Both Avaya Definity G3 CM2.0 and Avaya Definity G3 MV1.1 can not block call forwarding. As a result, all test calls were forwarded by reroute.
- Call forwarding (local) both calling and called numbers are not displayed. This is the normal behavior of the Avaya digital telephones



System Components

Hardware Requirements

The following hardware is required:

Cisco equipment

- Two Cisco IAD881B voice gateway

Avaya Equipments

- Two Avaya Definity G3 PBXs
- Four Avaya digital stations 8410D

Software Requirements

The following software is required:

- Cisco IAD881B voice gateway software version C880voice-universalk9-mz.124(20)T or later
- Avaya Definity G3 CM Release 2.0
- Avaya Definity G3 MV1.1

Features

This section lists supported and unsupported features.

Features Supported

- Basic calls (Enbloc sending)
- Basic calls with proper disconnect method
- Basic calls with calling name and number restrictions
- Basic calls with call name and number restrictions
- Basic calls with connected name and number restrictions
- Alerting name
- Call transfer (consultation local transfers)
- Call transfer (blind local transfers)
- Call transfer (consultation Network/External)
- Call transfer (blind Network/External)
- Call forward unconditional by join (local)- See the Limitations section
- Call forward unconditional by join (Network/External)- See the Limitations section
- Call forward busy by join (local)- See the Limitations section
- Call forward no reply by join (local)- See the Limitations section
- Call forward no reply by join (Network/External)- See the Limitations section
- Call forward unconditional by reroute (Network/External)
- Call forward busy by reroute (Network/External)



- Call completion to busy subscriber
- Call completion on no answer
- Path replacement for trombone call transfer
- Voice mail access, leave a message and QSIG MWI activate/deactivate

Features Not Supported

- None found during testing

Configuration

Avaya S8500 configurations

Avaya S8500 MV1.1 BRI QSIG card 01A06 configuration

change bri-trunk-board 01a06 Page 1 of 2

ISDN-BRI TRUNK CIRCUIT PACK

Location: 01A06 Name: BRI-test
Interface Companding: mu-law DCP/Analog Bearer Capability: speech
T3 Timer Length (sec): 15

Port	Interface	Side	Cntry/Peer Protocol	TEI	Time Fill	Invert Bits?	Synch Source?	Layer 1 Stable?	Detect Slips?
1:	network		qsig	0	ones	n	n	n	n
2:	network		etsi	0	ones	n	n	n	n
3:				0	ones	n	n	y	n
4:				0	ones	n	n	y	n
5:				0	ones	n	n	y	n
6:				0	ones	n	n	y	n
7:				0	ones	n	n	y	n
8:				0	ones	n	n	y	n

CANCEL REFRESH ENTER CLEAR FIELD HELP GO TO PAGE NEXT PAGE PREV PAGE



```
display bri-trunk-board 1a06 Page 2 of 2
ISDN-BRI TRUNK CIRCUIT PACK

Port  Interwork  XID  Endpt  SPID  Endpt  SPID  Endpt  Max
Message Test? Init? ID      ID      NCA TSC
1:  PROGRESS  n    n      n      n      n      n      10
2:  PROGRESS  n    n      n      n      n      n      10
3:  PROGRESS  n    n      n      n      n      n      0
4:  PROGRESS  n    n      n      n      n      n      0
5:  PROGRESS  n    n      n      n      n      n      0
6:  PROGRESS  n    n      n      n      n      n      0
7:  PROGRESS  n    n      n      n      n      n      0
8:  PROGRESS  n    n      n      n      n      n      0

Port  Directory  Directory  Port  Directory  Directory
Number  Number      Number      Number  Number
1:
2:
3:
4:
5:
6:
7:
8:

CANCEL  REFRESH  HELP  GO TO  NEXT  PREU
PAGE   PAGE   PAGE
```

Avaya S8500 MV1.1 BRI trunk-group configuration

```
change trunk-group 6 Page 1 of 10
TRUNK GROUP

Group Number: 6          Group Type: isdn          COR Reports: y
Group Name:  BRI-ISDN-trunk  COR: 1          TN: 1          TAC: 606
Direction:  two-way        Outgoing Display? n      Carrier Medium: PRI/BRI
Dial Access? y            Busy Threshold: 99       Night Service:
Queue Length: 0
Service Type: tie          Auth Code? n          TestCall ITC: rest
Far End Test Line No:

TestCall BCC: 4
TRUNK PARAMETERS
Codeset to Send Display: 0      Codeset to Send National IEs: 6
Max Message Size to Send: 260  Charge Advice: none
Supplementary Service Protocol: b  Digit Handling (in/out): enbloc/enbloc

Trunk Hunt: cyclical          QSIG Value-Added? n
Digital Loss Group: 13
Calling Number - Delete:      Insert:
Bit Rate: 1200                Synchronization: async  Duplex: full
Disconnect Supervision - In? y Out? y
Answer Supervision Timeout: 0

F1  F2  F3  F4  F5  F6  F7  F8
```



display trunk-group 6 Page 3 of 10

Service/ Feature	Called Len	Called Number	Del	Insert	Per Call CPN/BN	Night Serv
---------------------	---------------	------------------	-----	--------	--------------------	---------------

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display trunk-group 6 Page 4 of 10

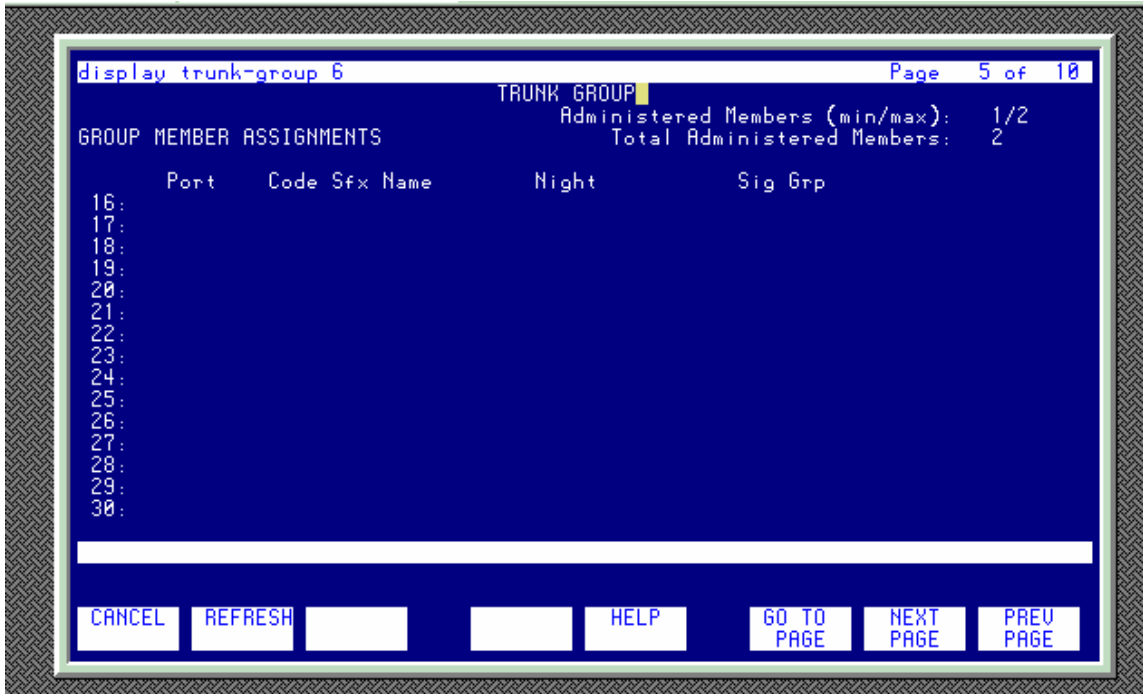
TRUNK GROUP

Administered Members (min/max): 1/2
Total Administered Members: 2

GROUP MEMBER ASSIGNMENTS

	Port	Code Sfx	Name	Night	Sig Grp
1:	01A0601	TN2185	B		
2:	01A0617	TN2185	B		
3:					
4:					
5:					
6:					
7:					
8:					
9:					
10:					
11:					
12:					
13:					
14:					
15:					

CANCEL REFRESH HELP GO TO PAGE NEXT PAGE PREV PAGE



Station 4004 configurations





```
display station 4004                                     Page 2 of 4
STATION
FEATURE OPTIONS
  LWC Reception: spe                                     Auto Select Any Idle Appearance? y
  LWC Activation? y                                     Coverage Msg Retrieval? y
  LWC Log External Calls? n                             Auto Answer: none
  CDR Privacy? n                                       Data Restriction? n
  Redirect Notification? y                             Idle Appearance Preference? n
  Per Button Ring Control? n                           Restrict Last Appearance? y
  Bridged Call Alerting? n
  Active Station Ringing: single
  H.320 Conversion? n                                  Per Station CPN - Send Calling Number?
  Service Link Mode: as-needed                          Audible Message Waiting? n
  Multimedia Mode: basic                               Display Client Redirection? n
  MWI Served User Type:                               Select Last Used Appearance? y
  Coverage After Forwarding? s
  Multimedia Early Answer? n
  Direct IP-IP Audio Connections? y
  IP Audio Hairpinning? y
  Emergency Location Ext: 4004

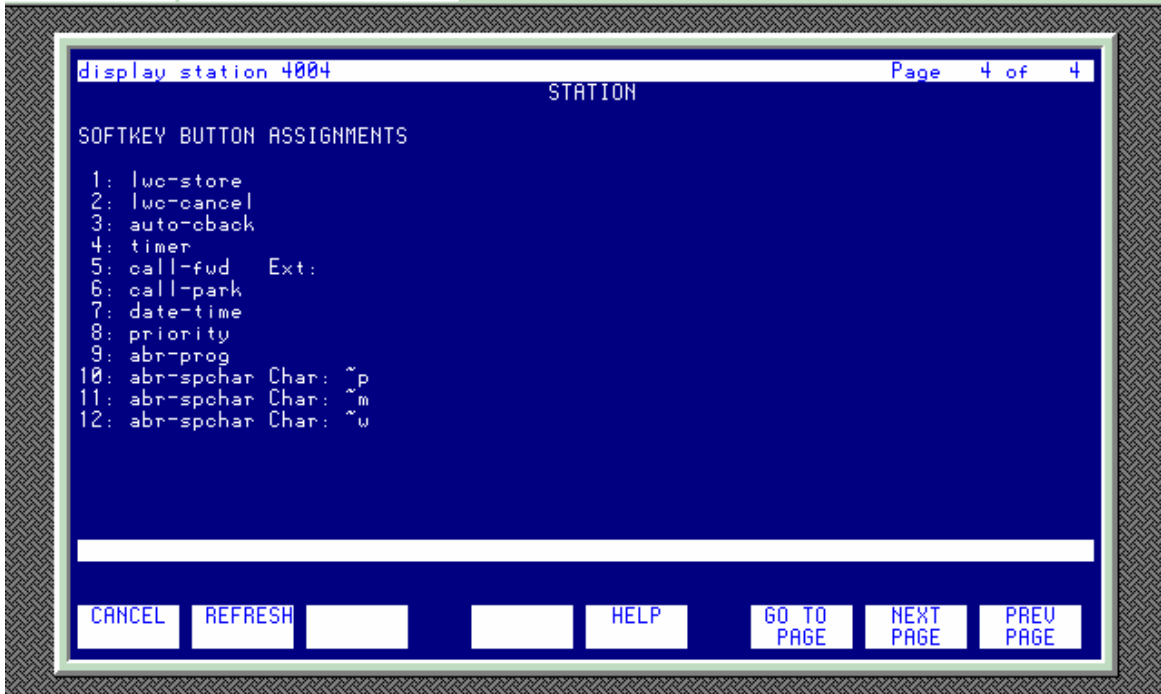
CANCEL REFRESH [ ] [ ] HELP GO TO NEXT PREV
                        PAGE PAGE PAGE
```

```
display station 4004                                     Page 3 of 4
STATION
SITE DATA
  Room: Headset? n
  Jack: Speaker? n
  Cable: Mounting: d
  Floor: Cord Length: 0
  Building: Set Color:

ABBREVIATED DIALING
  List1: List2: List3:

BUTTON ASSIGNMENTS
  1: call-appr 6:
  2: call-appr 7:
  3: auto-back 8:
  4: 9:
  5: 10:

CANCEL REFRESH [ ] [ ] HELP GO TO NEXT PREV
                        PAGE PAGE PAGE
```



Station 4003 configurations





```
display station 4003                                     Page 2 of 4
STATION
FEATURE OPTIONS
  LWC Reception: spe                               Auto Select Any Idle Appearance? y
  LWC Activation? y                               Coverage Msg Retrieval? y
  LWC Log External Calls? n                       Auto Answer: none
  CDR Privacy? n                                  Data Restriction? n
  Redirect Notification? y                         Idle Appearance Preference? n
  Per Button Ring Control? n                       Restrict Last Appearance? y
  Bridged Call Alerting? n
  Active Station Ringing: single

  H.320 Conversion? n                             Per Station CPN - Send Calling Number?
  Service Link Mode: as-needed
  Multimedia Mode: basic
  MWI Served User Type:

  Audible Message Waiting? n
  Display Client Redirection? n
  Select Last Used Appearance? y
  Coverage After Forwarding? s
  Multimedia Early Answer? n
  Direct IP-IP Audio Connections? y
  IP Audio Hairpinning? y

Emergency Location Ext: 4003

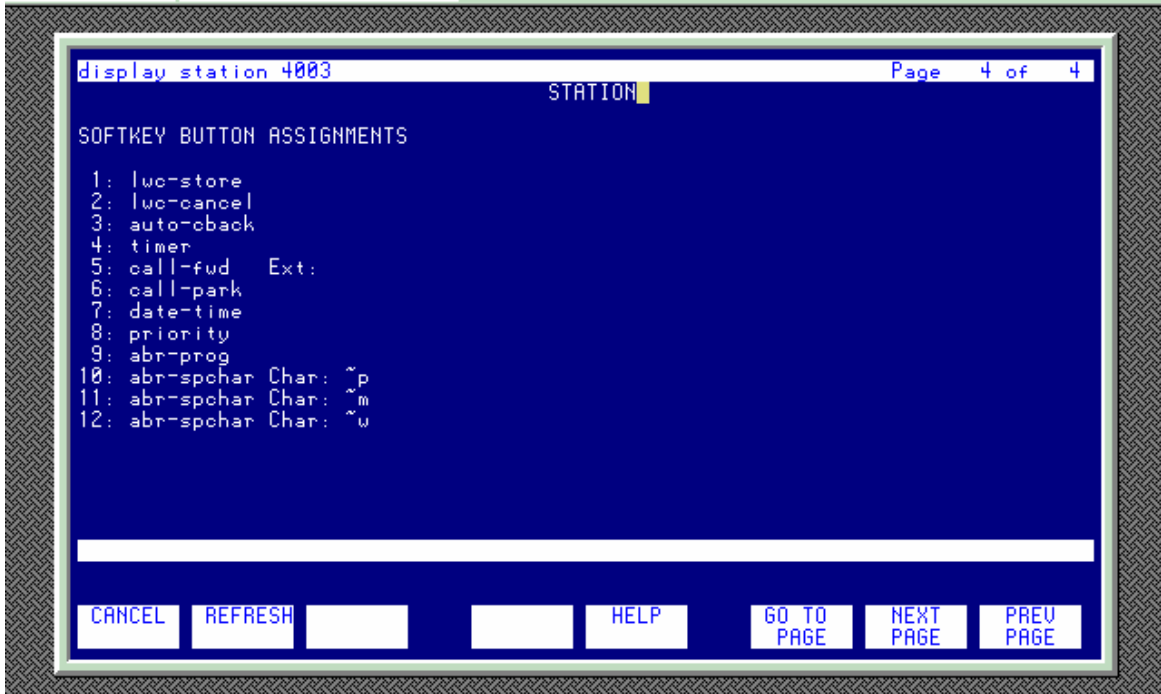
CANCEL REFRESH [ ] [ ] HELP GO TO NEXT PREV
                        PAGE PAGE PAGE
```

```
display station 4003                                     Page 3 of 4
STATION
SITE DATA
  Room:
  Jack:
  Cable:
  Floor:
  Building:
  Headset? n
  Speaker? n
  Mounting: d
  Cord Length: 0
  Set Color:

ABBREVIATED DIALING
  List1:
  List2:
  List3:

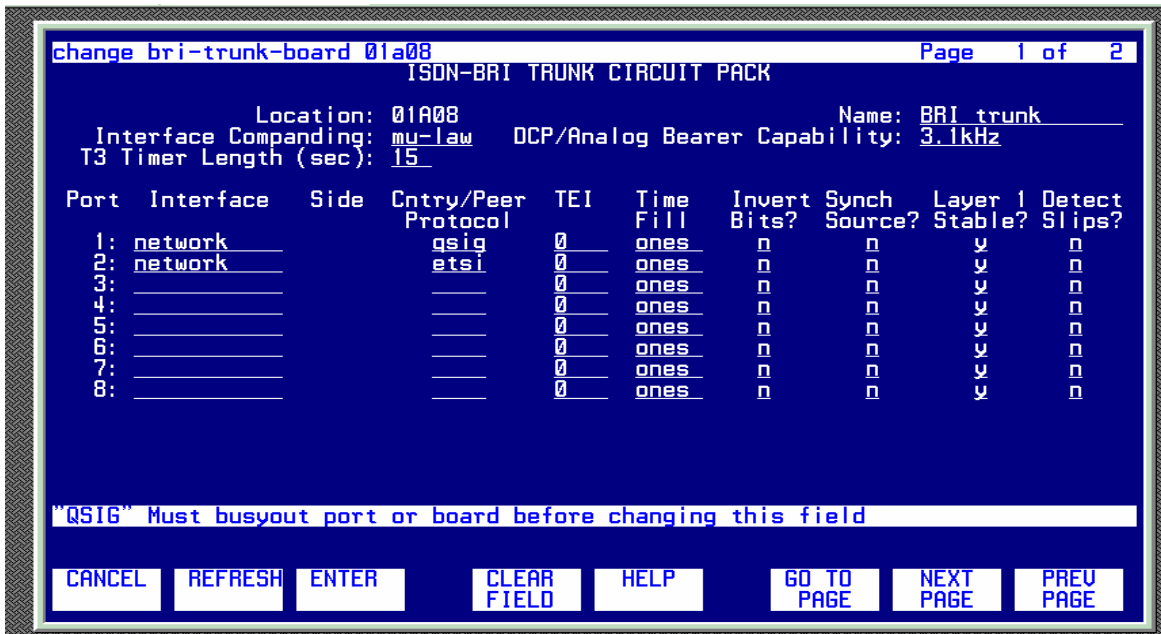
BUTTON ASSIGNMENTS
  1: call-appr 6:
  2: call-appr 7:
  3: call-appr 8:
  4:           9:
  5:           10:

CANCEL REFRESH [ ] [ ] HELP GO TO NEXT PREV
                        PAGE PAGE PAGE
```



Avaya S8500 CM2.0 configurations

BRI QSIG Card



BRI Trunk board 01A08



display bri-trunk-board 1a08 Page 2 of 2

ISDN-BRI TRUNK CIRCUIT PACK

Port	Interwork Message	XID Test?	Endpt Init?	SPID	Endpt ID	SPID	Endpt ID	Max NCA	TSC
1:	PROGress	n	n					5	5
2:	PROGress	n	n					0	0
3:	PROGress	n	n					0	0
4:	PROGress	n	n					0	0
5:	PROGress	n	n					0	0
6:	PROGress	n	n					0	0
7:	PROGress	n	n					0	0
8:	PROGress	n	n					0	0

Port	Directory Number	Directory Number	Port	Directory Number	Directory Number
1:			5:		
2:			6:		
3:			7:		
4:			8:		

CANCEL REFRESH ENTER CLEAR FIELD HELP GO TO PAGE NEXT PAGE PREV PAGE

BRI QSIG trunk configurations

change trunk-group 8 Page 1 of 10

TRUNK GROUP

Group Number: 8 Group Type: isdn CDR Reports: y
 Group Name: CME test BRI CDR: 1 TN: 1 TAC: 608
 Direction: two-way Outgoing Display? n Carrier Medium: PRI/BRI
 Dial Access? y Busy Threshold: 99 Night Service: _____
 Queue Length: 0
 Service Type: tie Auth Code? n TestCall ITC: rest
 Far End Test Line No: _____
 TestCall BCC: 4
 TRUNK PARAMETERS
 Codeset to Send Display: 0 Codeset to Send National IEs: 6
 Max Message Size to Send: 250 Charge Advice: none
 Supplementary Service Protocol: b Digit Handling (in/out): enbloc/enbloc
 Trunk Hunt: cyclical QSIG Value-Added? n
 Calling Number - Delete: _____ Insert: _____ Digital Loss Group: 13
 Bit Rate: 1200 Synchronization: async Numbering Format: unk-unk
 Disconnect Supervision - In? y Out? y Duplex: full
 Answer Supervision Timeout: 0

CANCEL REFRESH ENTER CLEAR FIELD HELP GO TO PAGE NEXT PAGE PREV PAGE



```
display trunk-group 8 Page 2 of 10
TRUNK FEATURES
  ACA Assignment? n           Measured: none           Wideband Support? n
                             Internal Alert? n           Maintenance Tests? y
                             Data Restriction? n          NRA-TSC Trunk Member: 1
                             Send Name: y              Send Calling Number: y
  Used for DCS? n
  Suppress # Outpulsing? n   Numbering Format: unknown
  Outgoing Channel ID Encoding: preferred  UUI IE Treatment: service-provider
                             Replace Restricted Numbers? y
                             Replace Unavailable Numbers? y
                             Send Connected Number: y
  Send UUI IE? y
  Send UCID? n
  Send Codeset 6/7 LAI IE? y
                             Dsl Echo Cancellation? n
  SBS? n  Network (Japan) Needs Connect Before Disconnect? n
```

CANCEL REFRESH [] [] HELP GO TO PAGE NEXT PAGE PREV PAGE

```
display trunk-group 8 Page 3 of 10
INCOMING CALL HANDLING TREATMENT
Service/   Called   Called   Del   Insert   Per Call   Night
Feature    Len      Number  Del   Insert   CPN/BH     Serv
```

CANCEL REFRESH [] [] HELP GO TO PAGE NEXT PAGE PREV PAGE



```
display trunk-group 8                                     Page 4 of 10
TRUNK GROUP
Administered Members (min/max): 1/2
Total Administered Members: 2

GROUP MEMBER ASSIGNMENTS

  Port   Code Sfx Name      Night      Sig Grp
1: 01A0001 TN2185 B
2: 01A0017 TN2185 B
3:
4:
5:
6:
7:
8:
9:
10:
11:
12:
13:
14:
15:
```

CANCEL REFRESH HELP GO TO PAGE NEXT PAGE PREV PAGE

```
display trunk-group 8                                     Page 5 of 10
TRUNK GROUP
Administered Members (min/max): 1/2
Total Administered Members: 2

GROUP MEMBER ASSIGNMENTS

  Port   Code Sfx Name      Night      Sig Grp
16:
17:
18:
19:
20:
21:
22:
23:
24:
25:
26:
27:
28:
29:
30:
```

CANCEL REFRESH HELP GO TO PAGE NEXT PAGE PREV PAGE



```
display trunk-group 8                                     Page 5 of 10
TRUNK GROUP
Administered Members (min/max): 1/2
Total Administered Members: 2

GROUP MEMBER ASSIGNMENTS

  Port   Code Sfx Name      Night      Sig Grp
16:
17:
18:
19:
20:
21:
22:
23:
24:
25:
26:
27:
28:
29:
30:

CANCEL REFRESH [ ] [ ] HELP GO TO PAGE NEXT PAGE PREU PAGE
```

```
display trunk-group 8                                     Page 5 of 10
TRUNK GROUP
Administered Members (min/max): 1/2
Total Administered Members: 2

GROUP MEMBER ASSIGNMENTS

  Port   Code Sfx Name      Night      Sig Grp
16:
17:
18:
19:
20:
21:
22:
23:
24:
25:
26:
27:
28:
29:
30:

CANCEL REFRESH [ ] [ ] HELP GO TO PAGE NEXT PAGE PREU PAGE
```

Station 2007 configurations



```
display station 2007                                     Page 1 of 4
STATION
Extension: 2007                                         Lock Messages? n      BCC: 0
Type: 84100                                           Security Code:       TN: 1
Port: 01A0607                                         Coverage Path 1: 3   COR: 1
Name: PBX-2007                                        Coverage Path 2:     COS: 1
                                                       Hunt-to Station:

STATION OPTIONS
  Loss Group: 2                                         Personalized Ringing Pattern: 1
  Data Module? n                                       Message Lamp Ext: 2007
  Speakerphone: 2-way                                  Mute Button Enabled? y
  Display Language: english

                                                       Media Complex Ext:
                                                       IP SoftPhone? n

CANCEL  REFRESH  GO TO PAGE  NEXT PAGE  PREV PAGE
```

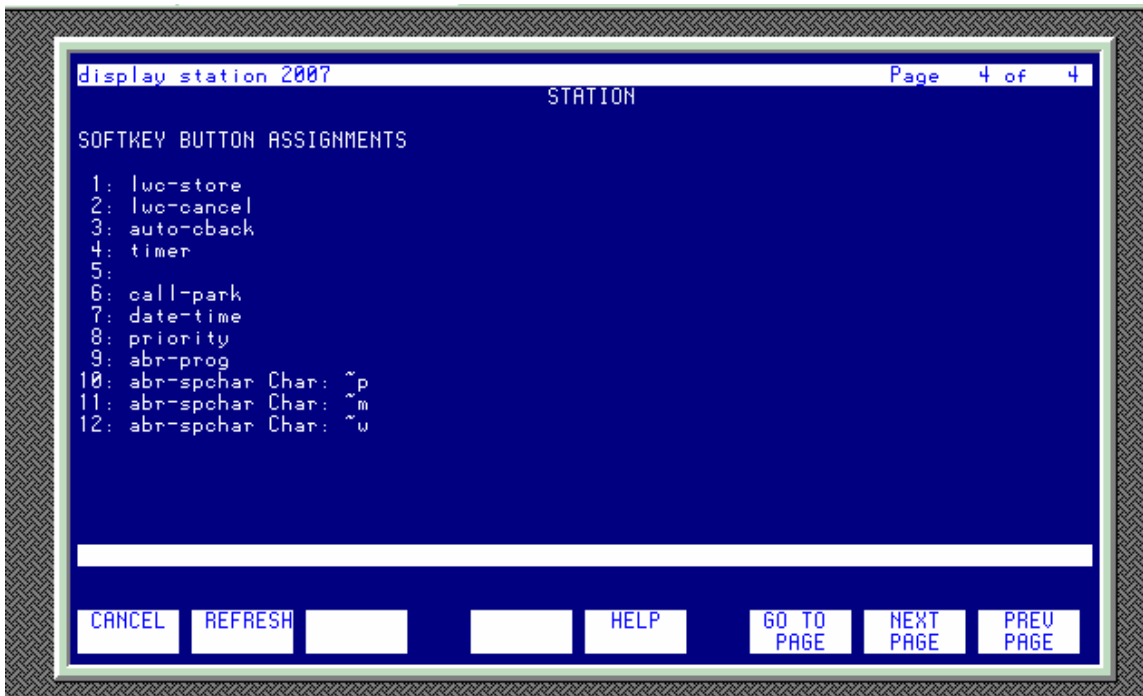
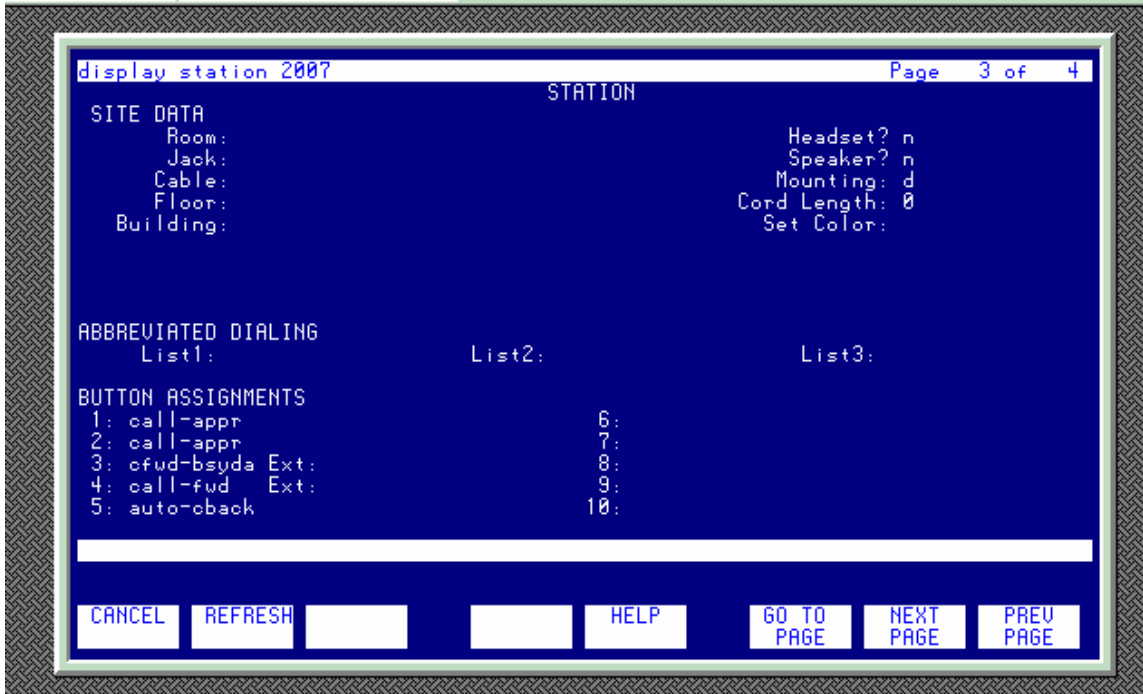
```
display station 2007                                     Page 2 of 4
STATION
FEATURE OPTIONS
  LWC Reception: spe                                   Auto Select Any Idle Appearance? n
  LWC Activation? y                                   Coverage Msg Retrieval? y
  LWC Log External Calls? n                           Auto Answer: none
  CDR Privacy? n                                     Data Restriction? n
  Redirect Notification? y                             Idle Appearance Preference? n
  Per Button Ring Control? n                           Restrict Last Appearance? y
  Bridged Call Alerting? n
  Active Station Ringing: single

  H.320 Conversion? n                               Per Station CPN - Send Calling Number? y
  Service Link Mode: as-needed
  Multimedia Mode: basic
  MWI Served User Type:

  Audible Message Waiting? n
  Display Client Redirection? n
  Select Last Used Appearance? n
  Coverage After Forwarding? n
  Multimedia Early Answer? n
  Direct IP-IP Audio Connections? y
  IP Audio Hairpinning? y

Emergency Location Ext: 2007

CANCEL  REFRESH  GO TO PAGE  NEXT PAGE  PREV PAGE
```



Station 2006 configurations



```
display station 2006                                     Page 1 of 4
STATION
Extension: 2006                                         Lock Messages? n      BCC: 0
Type: 84100                                             Security Code:        TN: 1
Port: 01A0605                                          Coverage Path 1: 3    COR: 1
Name: PBX-2006                                         Coverage Path 2:      COS: 1
                                                         Hunt-to Station:

STATION OPTIONS
Loss Group: 2                                           Personalized Ringing Pattern: 1
Data Module? n                                          Message Lamp Ext: 2006
Speakerphone: 2-way                                     Mute Button Enabled? y
Display Language: english

                                                         Media Complex Ext:
                                                         IP SoftPhone? n

CANCEL REFRESH [ ] [ ] HELP GO TO NEXT PREV
                PAGE  PAGE  PAGE
```

```
display station 2006                                     Page 2 of 4
STATION
FEATURE OPTIONS
LWC Reception: spe                                     Auto Select Any Idle Appearance? n
LWC Activation? y                                     Coverage Msg Retrieval? y
LWC Log External Calls? n                             Auto Answer: none
CDR Privacy? n                                        Data Restriction? n
Redirect Notification? y                               Idle Appearance Preference? n
Per Button Ring Control? n                            Restrict Last Appearance? n
Bridged Call Alerting? n
Active Station Ringing: single

H.320 Conversion? n                                  Per Station CPN - Send Calling Number?
Service Link Mode: as-needed
Multimedia Mode: basic
MWI Served User Type:

                                                         Audible Message Waiting? n
                                                         Display Client Redirection? n
                                                         Select Last Used Appearance? n
                                                         Coverage After Forwarding? n
                                                         Multimedia Early Answer? n
                                                         Direct IP-IP Audio Connections? y
                                                         IP Audio Hairpinning? y

Emergency Location Ext: 2006

CANCEL REFRESH [ ] [ ] HELP GO TO NEXT PREV
                PAGE  PAGE  PAGE
```



display station 2006 Page 3 of 4

STATION

SITE DATA

Room:	Headset?	n
Jack:	Speaker?	n
Cable:	Mounting:	d
Floor:	Cord Length:	0
Building:	Set Color:	

ABBREVIATED DIALING

List1: List2: List3:

BUTTON ASSIGNMENTS

1: call-appr	6:
2: call-appr	7:
3: cfud-bsyda Ext:	8:
4: call-fud Ext:	9:
5: auto-cback	10:

CANCEL REFRESH HELP GO TO PAGE NEXT PAGE PREV PAGE

display station 2006 Page 4 of 4

STATION

SOFTKEY BUTTON ASSIGNMENTS

1:
2:
3:
4:
5:
6:
7:
8:
9:
10:
11:
12:

CANCEL REFRESH HELP GO TO PAGE NEXT PAGE PREV PAGE



Cisco IAD881 BRI configurations

IAD881BRI_1#sh ver

Cisco IOS Software, C880 Software (C880VOICE-UNIVERSALK9-M), Version 12.4(22)T, RELEASE SOFTWARE (fc1)

Technical Support: <http://www.cisco.com/techsupport>

Copyright (c) 1986-2008 by Cisco Systems, Inc.

Compiled Fri 10-Oct-08 13:41 by prod_rel_team

ROM: System Bootstrap, Version 12.4(20071105:170421) [jerryc-STEELERS_20071105 102], DEVELOPMENT SOFTWARE

IAD881BRI_1 uptime is 3 weeks, 1 hour, 52 minutes
System returned to ROM by reload at 22:32:33 UTC Tue Oct 20 1908
System image file is "flash:c880voice-universalk9-mz.124-22.T.bin"
Last reload reason: Reload Command

This product contains cryptographic features and is subject to United States and local country laws governing import, export, transfer and use. Delivery of Cisco cryptographic products does not imply third-party authority to import, export, distribute or use encryption. Importers, exporters, distributors and users are responsible for compliance with U.S. and local country laws. By using this product you agree to comply with applicable laws and regulations. If you are unable to comply with U.S. and local laws, return this product immediately.

A summary of U.S. laws governing Cisco cryptographic products may be found at:
<http://www.cisco.com/www/export/crypto/tool/stqrg.html>

If you require further assistance please contact us by sending email to export@cisco.com.

Cisco IAD881B (MPC8300) processor (revision 1.0) with 498688K/25600K bytes of memory.

Processor board ID FHH1146002D

5 FastEthernet interfaces
2 ISDN Basic Rate interfaces
1 DSP, 16 Voice resources
256K bytes of non-volatile configuration memory.
253008K bytes of ATA CompactFlash (Read/Write)

License Information for 'c880-iad'

License Level: advsecurity Type: Default. No valid license found.

Next reboot license Level: advsecurity

*Nov 11 00:47:53.494: ISDN BR1 Q931: Sending SETUP callref = 0x01C5 callID = 0x8148 switch = basic-qsig interface = User

*Nov 11 01:03:50.442: ISDN BR1 **ERROR**: L3_BadPeerMsg: event 0x75 cr 0x8075 callID 0x0



```
*Nov 11 01:05:33.406: ISDN BR1 Q931: Applying typeplan for sw-type 0x17 is 0x0 0
x0, Calling num 4004
*Nov 11 01:05:33.406: ISDN BR1 Q931: Sending SETUP callref = 0x01C6 callID = 0x
8149 switch = basic-qsig interfaConfiguration register is 0x2102
```

```
IAD881BRI_1#clear log
Clear logging buffer [confirm]
IAD881BRI_1#
IAD881BRI_1#sh ver
Cisco IOS Software, C880 Software (C880VOICE-UNIVERSALK9-M), Version 12.4(22)T,
RELEASE SOFTWARE (fc1)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2008 by Cisco Systems, Inc.
Compiled Fri 10-Oct-08 13:41 by prod_rel_team
```

```
ROM: System Bootstrap, Version 12.4(20071105:170421) [jerryc-STEELERS_20071105 1
02], DEVELOPMENT SOFTWARE
```

```
IAD881BRI_1 uptime is 3 weeks, 2 hours, 34 minutes
System returned to ROM by reload at 22:32:33 UTC Tue Oct 20 1908
System image file is "flash:c880voice-universalk9-mz.124-22.T.bin"
Last reload reason: Reload Command
```

This product contains cryptographic features and is subject to United States and local country laws governing import, export, transfer and use. Delivery of Cisco cryptographic products does not imply third-party authority to import, export, distribute or use encryption. Importers, exporters, distributors and users are responsible for compliance with U.S. and local country laws. By using this product you agree to comply with applicable laws and regulations. If you are unable to comply with U.S. and local laws, return this product immediately.

A summary of U.S. laws governing Cisco cryptographic products may be found at:
<http://www.cisco.com/www/export/crypto/tool/stqrg.html>

If you require further assistance please contact us by sending email to export@cisco.com.

Cisco IAD881B (MPC8300) processor (revision 1.0) with 498688K/25600K bytes of memory.
Processor board ID FHH1146002D

```
5 FastEthernet interfaces
2 ISDN Basic Rate interfaces
1 DSP, 16 Voice resources
256K bytes of non-volatile configuration memory.
253008K bytes of ATA CompactFlash (Read/Write)
```

```
License Information for 'c880-iad'
License Level: advsecurity Type: Default. No valid license found.
Next reboot license Level: advsecurity
```



Configuration register is 0x2102

IAD881BRI_1#sh run
Building configuration...

Current configuration : 2028 bytes

```
!  
version 12.4  
no service pad  
service timestamps debug datetime msec  
service timestamps log datetime msec  
no service password-encryption  
!  
hostname IAD881BRI_1  
!  
boot-start-marker  
boot-end-marker  
!  
logging message-counter syslog  
logging buffered 10000000  
no logging console  
enable password cisco  
!  
no aaa new-model  
network-clock-participate wic 0  
!  
!  
ip source-route  
!  
!  
ip cef  
no ip domain lookup  
no ipv6 cef  
!  
!  
!  
!  
!  
isdn switch-type basic-qsig  
!  
!  
voice service pots  
!  
voice service voip  
signaling forward unconditional  
sip  
!  
!  
!  
!
```



```
!  
!  
!  
!  
!  
!  
!  
!  
!  
voice-card 0  
!  
!  
!  
!  
!  
archive  
  log config  
  hidekeys  
!  
!  
!  
!  
!  
interface BRI1  
  no ip address  
  isdn switch-type basic-qsig  
  isdn point-to-point-setup  
  isdn layer1-emulate network  
  isdn incoming-voice voice  
  isdn static-tei 0  
!  
interface BRI2  
  no ip address  
!  
interface FastEthernet0  
!  
interface FastEthernet1  
!  
interface FastEthernet2  
!  
interface FastEthernet3  
!  
interface FastEthernet4  
  ip address 172.20.110.80 255.255.255.0  
  duplex auto  
  speed auto  
!  
interface Vlan1  
  no ip address  
!
```



```
ip forward-protocol nd
ip route 0.0.0.0 0.0.0.0 172.20.110.1
no ip http server
no ip http secure-server
!
!
!
!
!
!
!
!
control-plane
!
!
voice-port 1
!
voice-port 2
!
!
!
!
!
!
dial-peer voice 4000 voip
destination-pattern [1,4][0,6]..
signaling forward rawmsg1
session protocol sipv2
session target ipv4:172.20.8.40
!
dial-peer voice 2000 pots
destination-pattern 20..
incoming called-number 40..
direct-inward-dial
port 1
forward-digits all
!
!
sip-ua
!
!
line con 0
no modem enable
line aux 0
line vty 0 4
exec-timeout 0 0
password cisco
login
!
exception data-corruption buffer truncate
```

¹ This command enables the QSIG tunneling feature end-to-end



```
scheduler max-task-time 5000
end
```

IAD881BRI_2#sh ver

Cisco IOS Software, C880 Software (C880VOICE-UNIVERSALK9-M), Version 12.4(20)T, RELEASE SOFTWARE (fc3)
Technical Support: <http://www.cisco.com/techsupport>
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Compiled Fri 11-Jul-08 06:46 by prod_rel_team

ROM: System Bootstrap, Version 12.4(15r)XZ2, RELEASE SOFTWARE (fc1)

IAD881BRI_2 uptime is 1 week, 4 days, 6 hours, 35 minutes
System returned to ROM by power-on
System image file is "flash:c880voice-universalk9-mz.124-20.T"

This product contains cryptographic features and is subject to United States and local country laws governing import, export, transfer and use. Delivery of Cisco cryptographic products does not imply third-party authority to import, export, distribute or use encryption. Importers, exporters, distributors and users are responsible for compliance with U.S. and local country laws. By using this product you agree to comply with applicable laws and regulations. If you are unable to comply with U.S. and local laws, return this product immediately.

A summary of U.S. laws governing Cisco cryptographic products may be found at:
<http://www.cisco.com/www/export/crypto/tool/stqrg.html>

If you require further assistance please contact us by sending email to export@cisco.com.

Cisco IAD881B (MPC8300) processor (revision 0x100) with 249856K/12288K bytes of memory.

Processor board ID FHK123429DN

5 FastEthernet interfaces
2 ISDN Basic Rate interfaces
1 DSP, 16 Voice resources
256K bytes of non-volatile configuration memory.
253008K bytes of ATA CompactFlash (Read/Write)

License Information for 'c880-iad'

License Level: advsecurity Type: Permanent
Next reboot license Level: advsecurity

Configuration register is 0x2102

IAD881BRI_2#sh run

Building configuration...

Current configuration : 1955 bytes



```
!  
version 12.4  
no service pad  
service timestamps debug datetime msec  
service timestamps log datetime msec  
no service password-encryption  
!  
hostname IAD881BRI_2  
!  
boot-start-marker  
boot-end-marker  
!  
logging message-counter syslog  
logging buffered 10000000  
no logging console  
!  
no aaa new-model  
network-clock-participate wic 0  
!  
!  
ip source-route  
!  
!  
ip cef  
no ip domain lookup  
!  
!  
!  
isdn switch-type basic-qsig  
!  
!  
voice service voip  
signaling forward unconditional  
sip  
!  
!  
!  
!  
!  
!  
!  
!  
!  
!  
!  
voice-card 0  
!  
!  
!  
!
```



```
!  
!  
archive  
  log config  
  hidekeys  
!  
!  
!  
!  
!  
interface BRI1  
  no ip address  
  isdn switch-type basic-qsig  
  isdn point-to-point-setup  
  isdn layer1-emulate network  
  isdn incoming-voice voice  
  isdn static-tei 0  
!  
interface BRI2  
  no ip address  
!  
interface FastEthernet0  
!  
interface FastEthernet1  
!  
interface FastEthernet2  
!  
interface FastEthernet3  
!  
interface FastEthernet4  
  ip address 172.20.8.40 255.255.255.0  
  duplex auto  
  speed auto  
!  
interface Vlan1  
  no ip address  
!  
ip forward-protocol nd  
ip route 0.0.0.0 0.0.0.0 172.20.8.1  
no ip http server  
no ip http secure-server  
!  
!  
!  
!  
!  
control-plane  
!  
!  
voice-port 1
```



```
!  
voice-port 2  
!  
!  
!  
!  
dial-peer voice 2000 voip  
destination-pattern [1,2][0,6]..  
signaling forward rawmsg  
session protocol sipv2  
session target ipv4:172.20.110.80  
!  
dial-peer voice 4000 pots  
destination-pattern [1,4][0,6]..  
incoming called-number 20..  
direct-inward-dial  
port 1  
forward-digits all  
!  
!  
sip-ua  
!  
!  
line con 0  
password cisco  
login  
no modem enable  
line aux 0  
line vty 0 4  
exec-timeout 0 0  
password cisco  
login  
!  
exception data-corruption buffer truncate  
scheduler max-task-time 5000  
end  
  
IAD881BRI_2#
```

Acronyms

Acronym	Definition
IAD	Integrated Access Device
SIP	Session Initiation Protocol
BRI	Basic Rate
PBX	Private Branch Exchange
IAD	Integrated Access Device
SIP	Session Initiation Protocol
BRI	Basic Rate
PBX	Private Branch Exchange





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Corporate 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

European Headquarters

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

Americas Headquarters

Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-7660
Fax: 408 527-0883

Asia Pacific Headquarters

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

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Printed in the USA

