



Avaya Definity G3 CM2.0 to Avaya Definity G3 MV1.1 with Cisco IAD881 BRI Voice Gateways to Tunnel BRI NET3 over SIP

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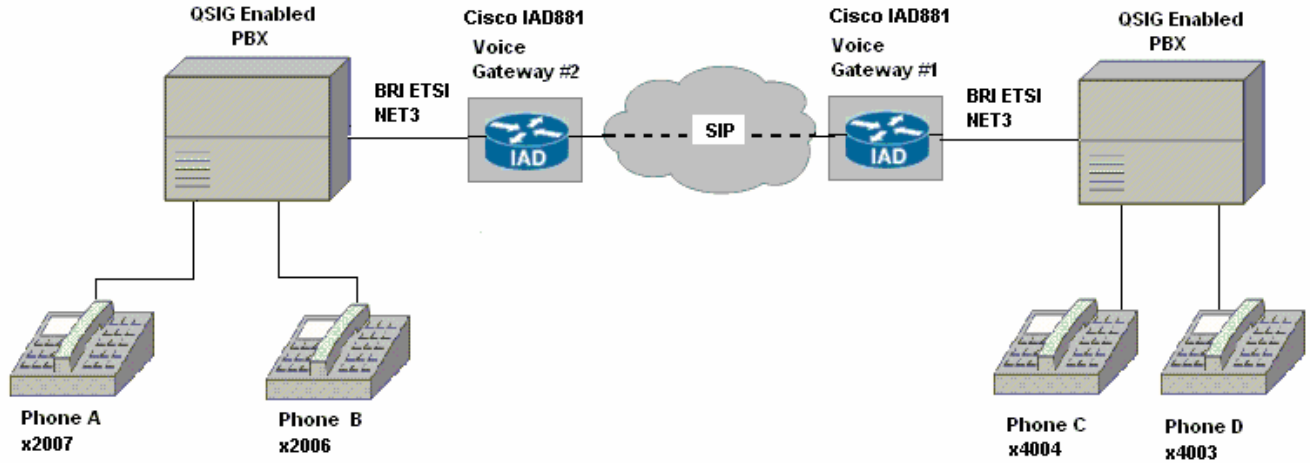
Introduction

- This application note provides interoperability information and documented configurations for a toll bypass solution using Cisco IAD881BRI Voice Gateways tunneling NET3 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 NET3 trunks. The IAD881 gateways establish the ISDN connection between the two PBXs via SIP. An end-to-end connection is established between Avaya PBXs. The SIP protocol used between Cisco IAD881 Voice Gateways “tunnels” the BRI NET3 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). 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 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 (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
- Call waiting
- Alerting name
- Call transfer consultation (local and network/external)
- Call transfer early-attended (local and network/external)
- Call forward unconditional by join (local and network/external)
- Call forward busy by join (local and network/external)
- Call forward no reply by join (local and network/external)
- Call hold and resume (originating/terminating end perform hold and resume)
- Call conferencing (local and network/external)

Features Not Supported

- Connected name restriction is not honored. NET3 does not support connected name restriction because it uses Display IE.



Configuration

Avaya S8500 configurations

Avaya S8500 MV1.1 BRI card 01A06 configuration

```

display bri-trunk-board 1a06                                     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  TEI  Time  Invert  Synch  Layer 1  Detect
      Interface  Side  Protocol    Fill Bits?  Source? Stable? Slips?
1:  network                etsi    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 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    ID    ID    NCR 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:                                5:
2:                                6:
3:                                7:
4:                                8:
  
```

CANCEL REFRESH HELP GO TO PAGE NEXT PAGE PREV PAGE



Avaya S8500 MV1.1 BRI trunk-group configuration

```
display trunk-group 6                                     Page 1 of 10
TRUNK GROUP
Group Number: 6          Group Type: isdn          CDR 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: c  Digit Handling (in/out): enbloc/enbloc
Trunk Hunt: cyclical
  QSIG Value-Added? n
  Digital Loss Group: 13
Calling Number - Delete:      Insert:          Numbering Format: unk-unk
  Bit Rate: 1200              Synchronization: async  Duplex: full
Disconnect Supervision - In? y  Out? y
Answer Supervision Timeout: 0
```

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

```
display trunk-group 6                                     Page 3 of 10
INCOMING CALL HANDLING TREATMENT
Service/   Called   Called   Del Insert   Per Call   Night
Feature    Len    Number                                     CPN/BN    Serv
```

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



```
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

```
display trunk-group 6                                     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

Station 4004 configurations



```
display station 4004                                     Page 1 of 4
STATION
Extension: 4004                                         Lock Messages? n      BCC: 0
Type: 84100                                           Security Code:        TN: 1
Port: 01A0406                                         Coverage Path 1: 3    COR: 1
Name: MU-4004                                         Coverage Path 2:      COS: 1
                                                         Hunt-to Station:

STATION OPTIONS
Loss Group: 2                                         Personalized Ringing Pattern: 1
Data Module? n                                       Message Lamp Ext: 4004
Speakerphone: 2-way                                  Mute Button Enabled? y
Display Language: english

Media Complex Ext:
IP SoftPhone? n
Remote Office Phone? n

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

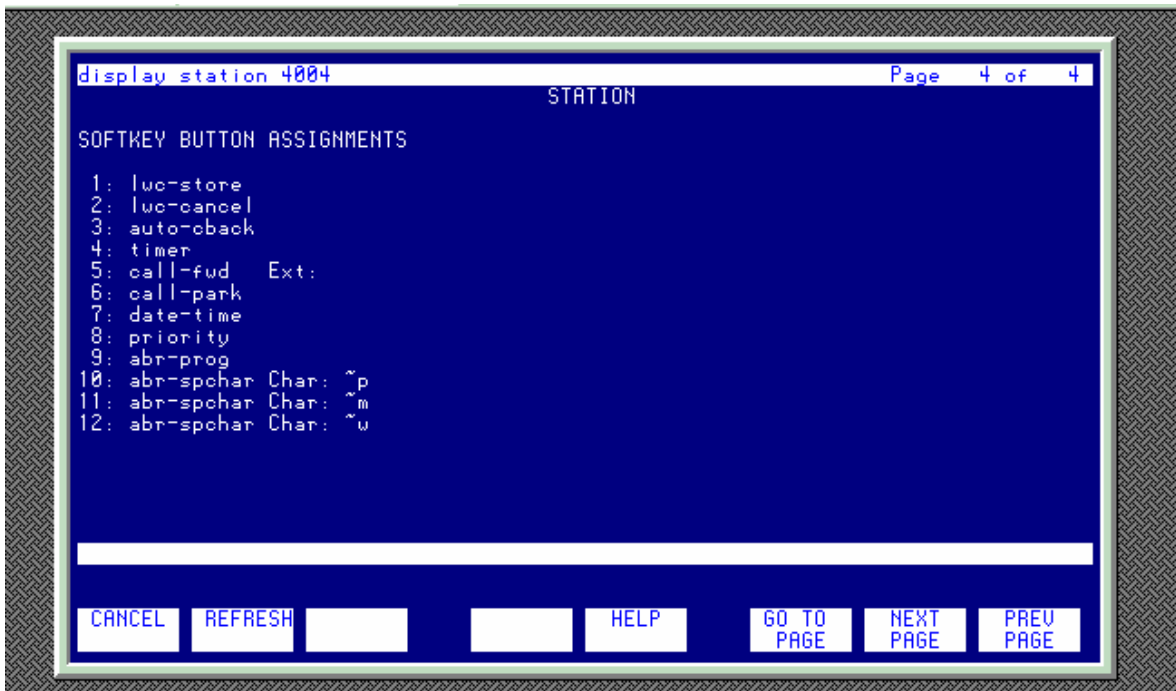
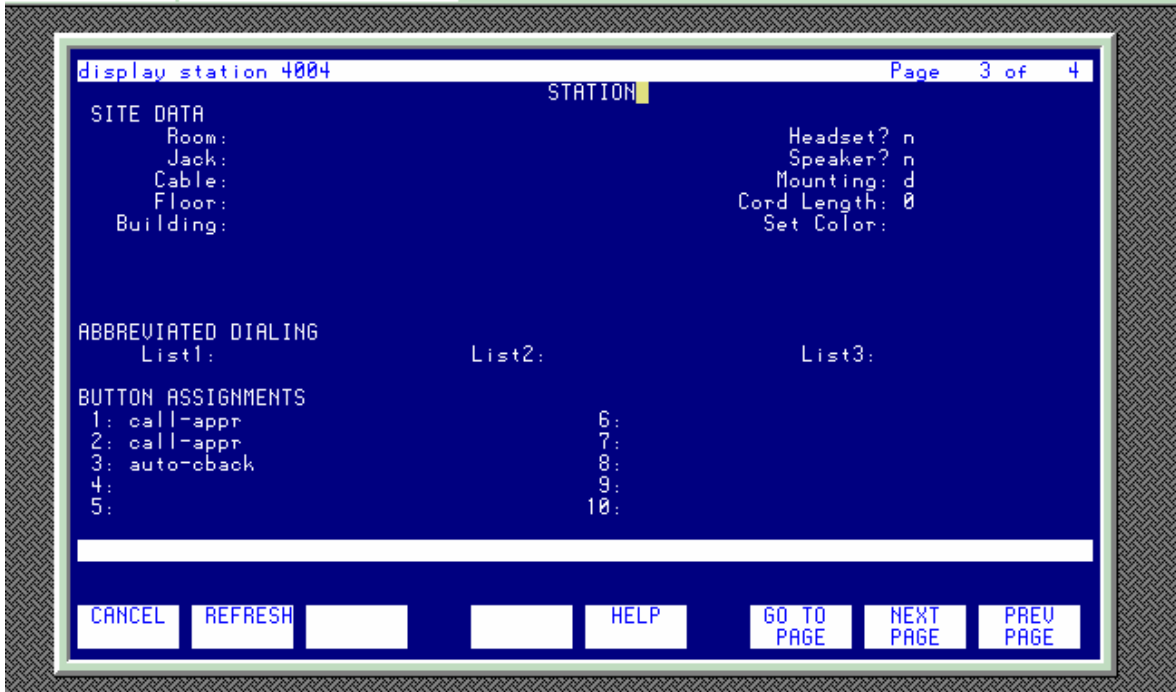
```
display station 4004                                     Page 2 of 4
STATION
FEATURE OPTIONS
LWC Reception: spe                                   Auto Select Any Idle Appearance? y
LWC Activation? y                                   Coverage Msg Retrieval? y
LWC Log External Calls? n                           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
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: 4004

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



Station 4003 configurations



```
display station 4003                                     Page 1 of 4
STATION
Extension: 4003                                         Lock Messages? n      BCC: 0
Type: 84100                                           Security Code:        TN: 1
Port: 01A0402                                         Coverage Path 1:     COR: 1
Name: OSCAR Delayhoya                                Coverage Path 2:     COS: 1
                                                       Hunt-to Station:

STATION OPTIONS
Loss Group: 2                                         Personalized Ringing Pattern: 1
Data Module? n                                       Message Lamp Ext: 4003
Speakerphone: 2-way                                  Mute Button Enabled? y
Display Language: english

Media Complex Ext:
IP SoftPhone? n
Remote Office Phone? n

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

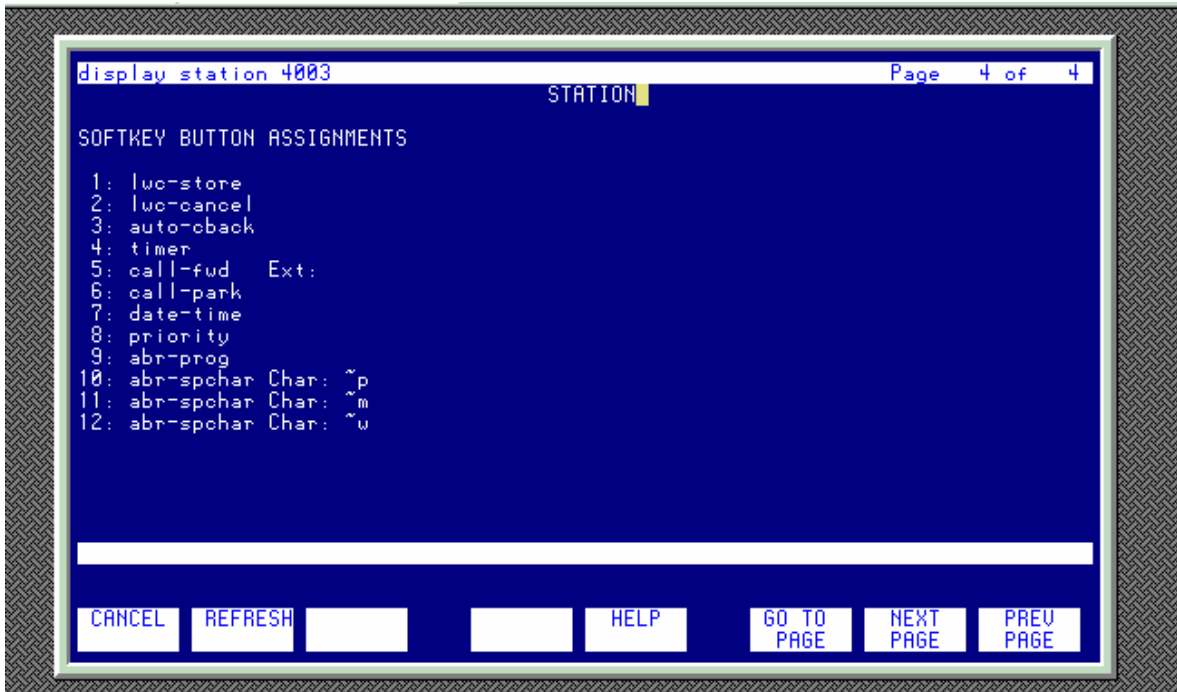
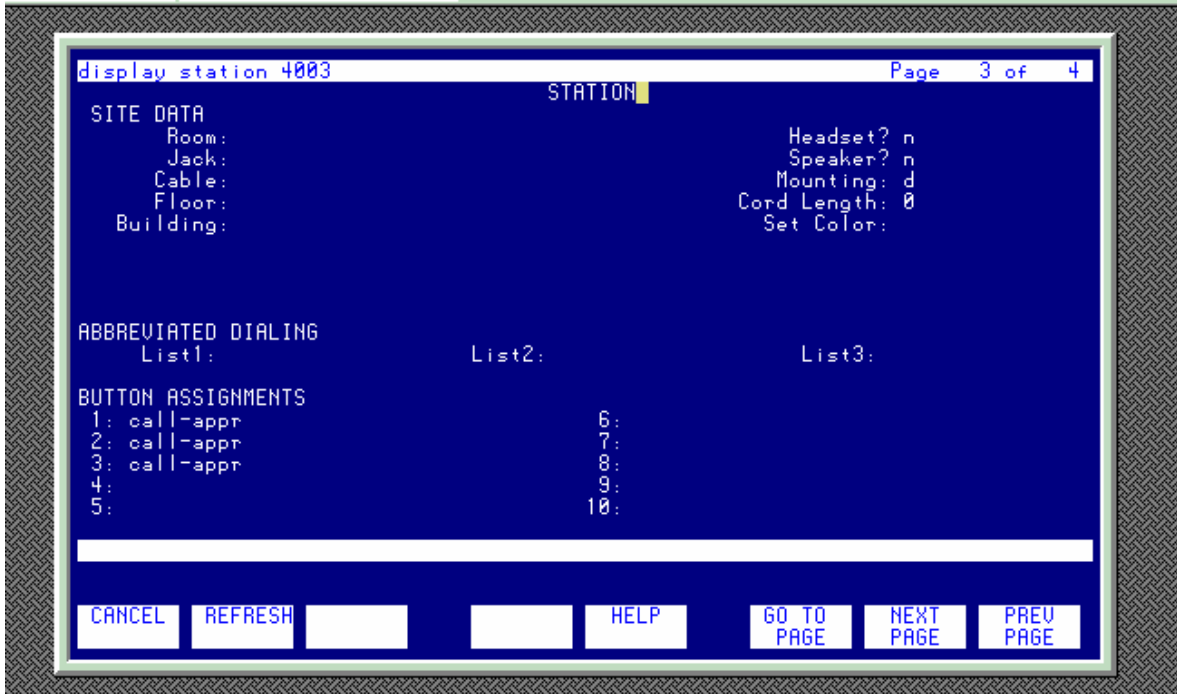
```
display station 4003                                     Page 2 of 4
STATION
FEATURE OPTIONS
LWC Reception: spe                                   Auto Select Any Idle Appearance? y
LWC Activation? y                                   Coverage Msg Retrieval? y
LWC Log External Calls? n                           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 PAGE  NEXT PAGE  PREV PAGE
```



Avaya S8500 CM2.0 configurations

BRI Card 01A06



```
display bri-trunk-board 1a08 Page 1 of 2
ISDN-BRI TRUNK CIRCUIT PACK

Location: 01A08 Name: BRI trunk
Interface Companding: mu-law DCP/Analog Bearer Capability: 3.1kHz
T3 Timer Length (sec): 15

Port Interface Side Cntry/Peer TEI Time Invert Synchron Layer 1 Detect
      :      :      : Protocol Fill Bits? Source? Stable? Slips?
1: network etsi 0 ones n n y n
2: network etsi 0 ones n n y 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 [ ] [ ] HELP GO TO NEXT PREU
                        PAGE PAGE PAGE
```

```
display bri-trunk-board 1a08 Page 2 of 2
ISDN-BRI TRUNK CIRCUIT PACK

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

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

BRI trunk configurations



```
display 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
TestCall BCC: 4 Far End Test Line No:
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: c 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 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 NCA-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

Service/ Feature	Called Len	Called Number	Del	Insert	Per Call CPN/BN	Night Serv
INCOMING CALL HANDLING TREATMENT						

display trunk-group 8 Page 4 of 10

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:					

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



```
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:

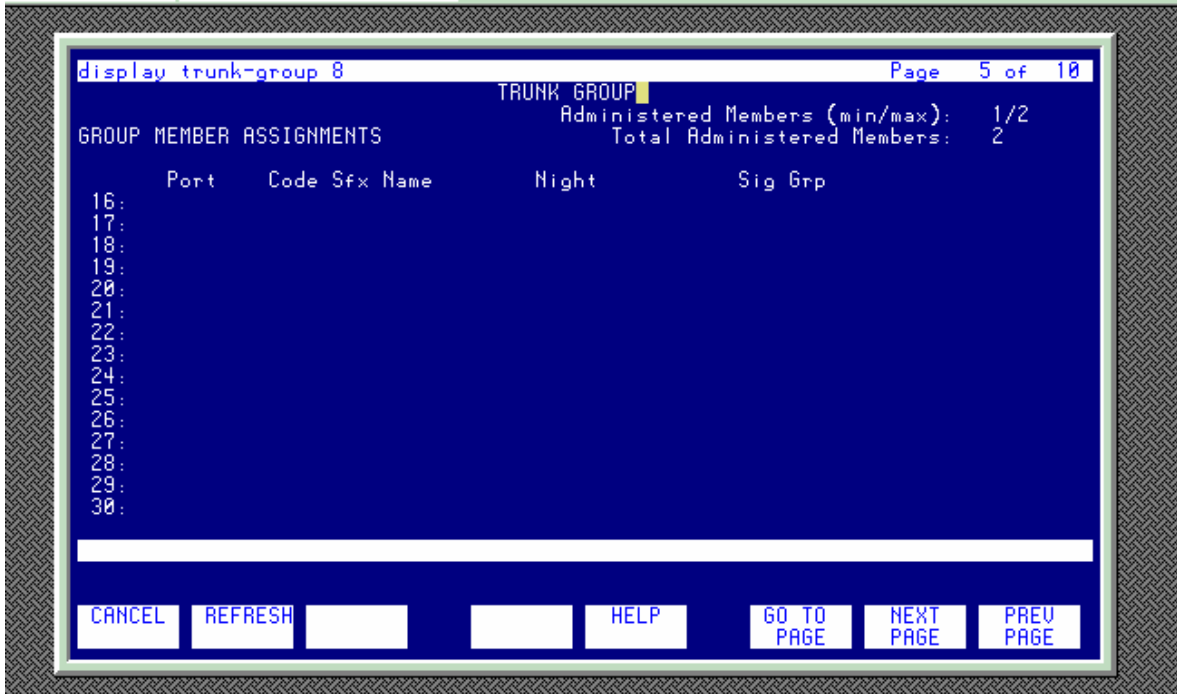
[CANCEL] [REFRESH] [ ] [ ] [HELP] [GO TO PAGE] [NEXT PAGE] [PREV PAGE]
```

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

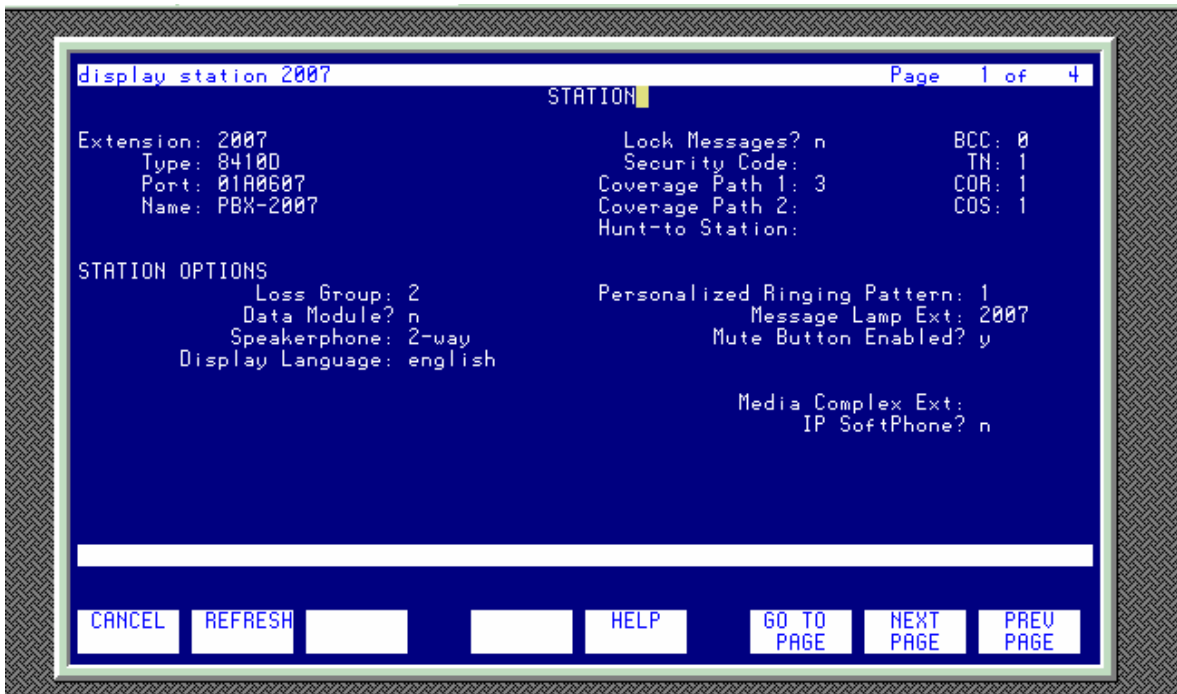
GROUP MEMBER ASSIGNMENTS

  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] [PREV PAGE]
```



Station 2007 configurations





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

```
display station 2007                                     Page 3 of 4
STATION
SITE DATA
  Room:
  Jack:
  Cable:
  Floor:
  Building:
  Headset? n
  Speaker? n
  Mounting: d
  Cord Length: 0
  Set Color:

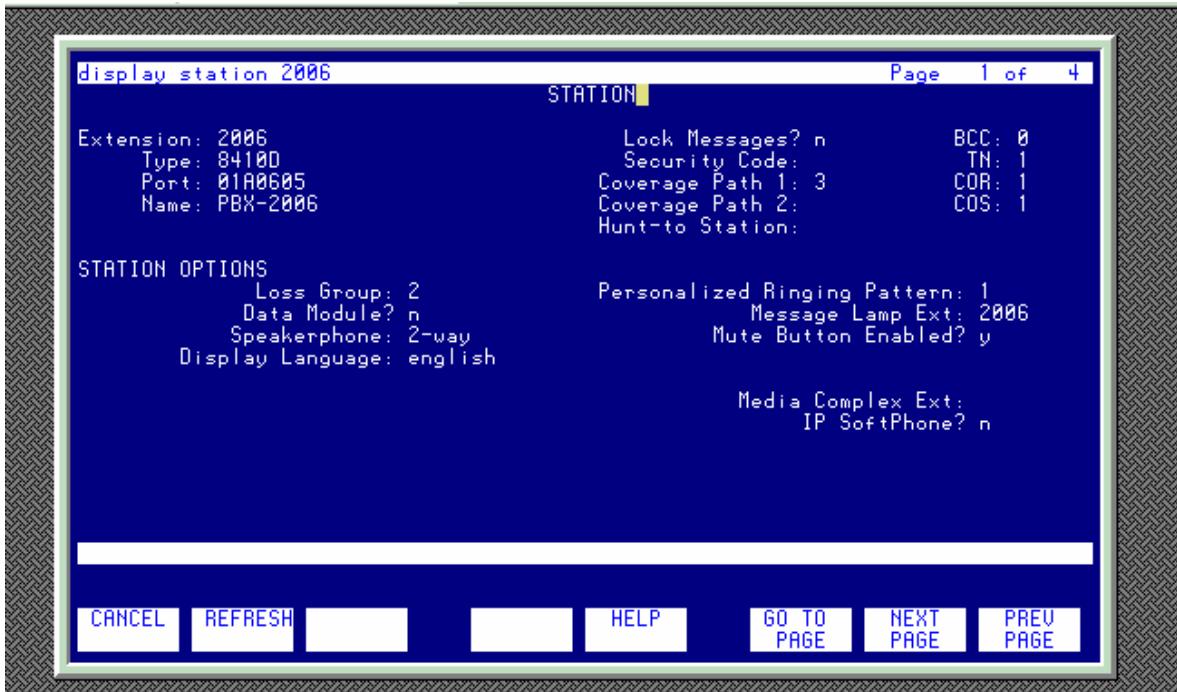
ABBREVIATED DIALING
  List1:
  List2:
  List3:

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

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



Station 2006 configurations





```
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

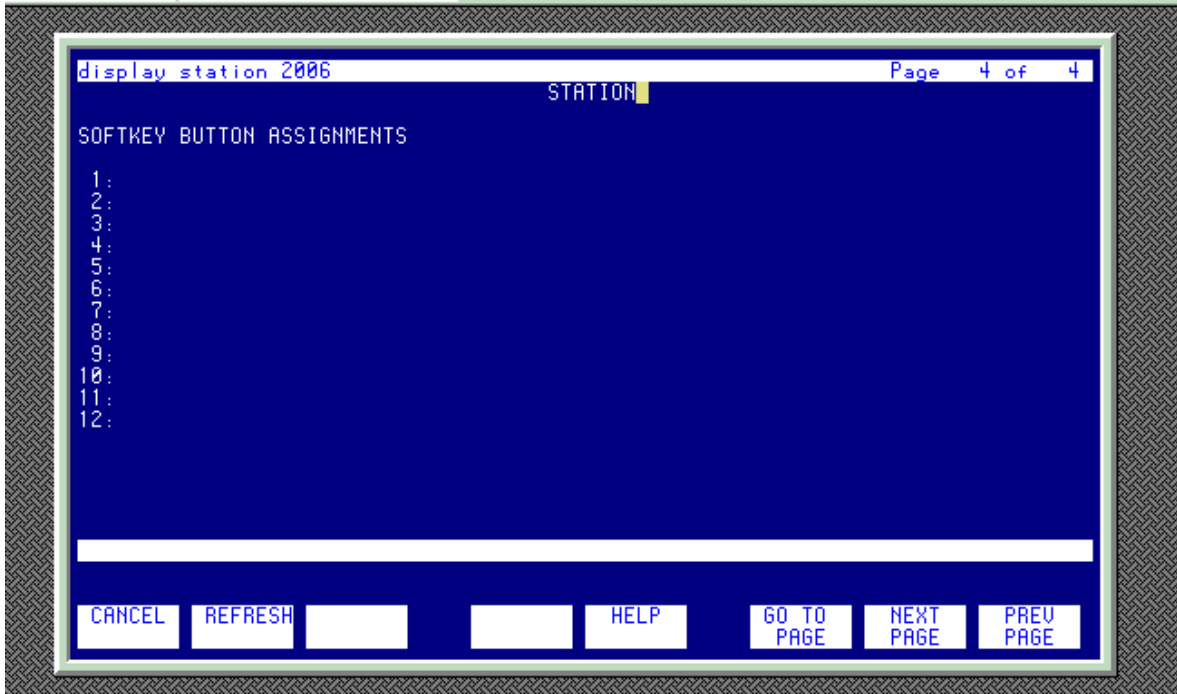
CANCEL REFRESH [ ] [ ] HELP GO TO NEXT PREV
                        PAGE PAGE PAGE
```

```
display station 2006                                     Page 3 of 4
STATION
SITE DATA
  Room:
  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: cfud-bsyda Ext: 8:
  4: call-fud Ext: 9:
  5: auto-back 10:

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





Cisco IAD881 BRI NET3 configurations

```
IAD881BRI_1#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
Copyright (c) 1986-2008 by Cisco Systems, Inc.
Compiled Fri 11-Jul-08 06:46 by prod_rel_team
```

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

```
IAD881BRI_1 uptime is 1 week, 3 days, 2 hours, 35 minutes
System returned to ROM by reload at 00:00:27 UTC Thu Dec 10 1908
System image file is "flash:c880voice-universalk9-mz.124-20.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 0x100) 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#
```

```
IAD881BRI_1#sh run
```



Building configuration...

Current configuration : 2769 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 system flash c880voice-universalk9-mz.124-20.T.bin  
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  
ip name-server 171.69.2.133  
!  
!  
!  
isdn switch-type basic-net3  
isdn gateway-max-interworking1  
!  
!  
voice service pots  
!  
voice service voip  
sip  
!  
!  
!  
!  
!  
!  
!  
!
```

¹ This command is required for IOS encoding the name in a “display IE” (not a valid IE for qsig signaling)



```
!  
!  
!  
!  
!  
voice-card 0  
!  
!  
!  
!  
!  
archive  
  log config  
  hidekeys  
!  
!  
!  
!  
interface BRI1  
  no ip address  
  isdn switch-type basic-net3  
  isdn point-to-point-setup  
  isdn layer1-emulate network  
  isdn incoming-voice voice  
  isdn supp-service name calling  
  isdn static-tei 0  
!  
interface BRI2  
  no ip address  
  isdn switch-type basic-net3  
  isdn timer T310 120000  
  isdn overlap-receiving  
  isdn tei-negotiation preserve  
  isdn point-to-point-setup  
  isdn incoming-voice voice  
  isdn global-disconnect  
  isdn static-tei 0  
!  
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  
!  
!  
!  
!  
!  
tftp-server flash:c880voice-universalk9-mz.124-20.T.bin  
!  
control-plane  
!  
!  
voice-port 1  
!  
voice-port 2  
  compand-type a-law  
!  
!  
!  
dial-peer voice 4000 voip  
  destination-pattern [1-4][0,6]..  
  signaling forward unconditional  
  session protocol sipv2  
  session target ipv4:172.20.8.40  
  dtmf-relay rtp-nte  
!  
dial-peer voice 2000 pots  
  destination-pattern 20..  
  incoming called-number 40..  
  direct-inward-dial  
  port 1  
  forward-digits all  
!  
dial-peer voice 1100 pots  
  destination-pattern 13..  
  incoming called-number 42..  
  direct-inward-dial  
  port 2  
  forward-digits all  
!  
dial-peer voice 4200 voip  
  description to Ericsson 42XX  
  destination-pattern 43..  
  signaling forward unconditional  
  session protocol sipv2
```



```
session target ipv4:172.20.8.40
dtmf-relay rtp-nte
!
dial-peer voice 3200 voip
description to Alcatel 32xx
destination-pattern 32..
signaling forward unconditional
session protocol sipv2
session target ipv4:172.20.8.40
incoming called-number 62..
dtmf-relay rtp-nte
!
dial-peer voice 6200 pots
destination-pattern 62..
incoming called-number 32..
direct-inward-dial
port 2
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
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
Copyright (c) 1986-2008 by Cisco Systems, Inc.
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, 3 days, 2 hours, 34 minutes
System returned to ROM by reload at 23:40:40 UTC Tue Dec 9 2008
System image file is "flash:c880voice-universalk9-mz.124-20.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



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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#

IAD881BRI_2#sh run
Building configuration...

```
Current configuration : 2669 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 system flash c880voice-universalk9-mz.124-20.T.bin
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-net3
isdn gateway-max-interworking2
!
!
voice service voip
sip
!
!
!
!
!
!
!
!
!
!
!
voice-card 0
!
!
!
!
!
!
archive
log config
hidekeys
!
!
!
!
!
interface BRI1
no ip address
isdn switch-type basic-net3
```

² This command is required for IOS encoding the name in a “display IE” (not a valid IE for qsig signaling)



```
isdn point-to-point-setup
isdn layer1-emulate network
isdn incoming-voice voice
isdn supp-service name calling ie 40 cs 0
isdn static-tei 0
!
interface BRI2
no ip address
isdn switch-type basic-net3
isdn timer T310 120000
isdn overlap-receiving
isdn tei-negotiation preserve
isdn point-to-point-setup
isdn incoming-voice voice
isdn global-disconnect
isdn static-tei 0
!
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
compand-type a-law
!
!
```



```
!  
!  
dial-peer voice 2000 voip  
destination-pattern [1,2][0,6]..  
signaling forward unconditional  
session protocol sipv2  
session target ipv4:172.20.110.80  
!  
dial-peer voice 4000 pots  
destination-pattern [1-4][0,1,3-6]..  
incoming called-number 20..  
direct-inward-dial  
port 1  
forward-digits all  
!  
dial-peer voice 1100 voip  
description to Ericsson 11XX  
destination-pattern 13..  
signaling forward unconditional  
session protocol sipv2  
session target ipv4:172.20.110.80  
dtmf-relay rtp-nte  
!  
dial-peer voice 4200 pots  
destination-pattern 43..  
incoming called-number 11..  
direct-inward-dial  
port 2  
forward-digits all  
!  
dial-peer voice 6200 voip  
description to Alcatel 62xx  
destination-pattern 62..  
signaling forward unconditional  
session protocol sipv2  
session target ipv4:172.20.110.80  
incoming called-number 32..  
dtmf-relay rtp-nte  
!  
dial-peer voice 3200 pots  
destination-pattern 32..  
incoming called-number 62..  
direct-inward-dial  
port 2  
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 Interface
PBX	Private Branch Exchange
MWI	Message Waiting Indication



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