

Cisco 3745 Gateway-PBX Interoperability: Avaya Definity G3 V6 Using NM-HDV2-E1 CAS with H.323

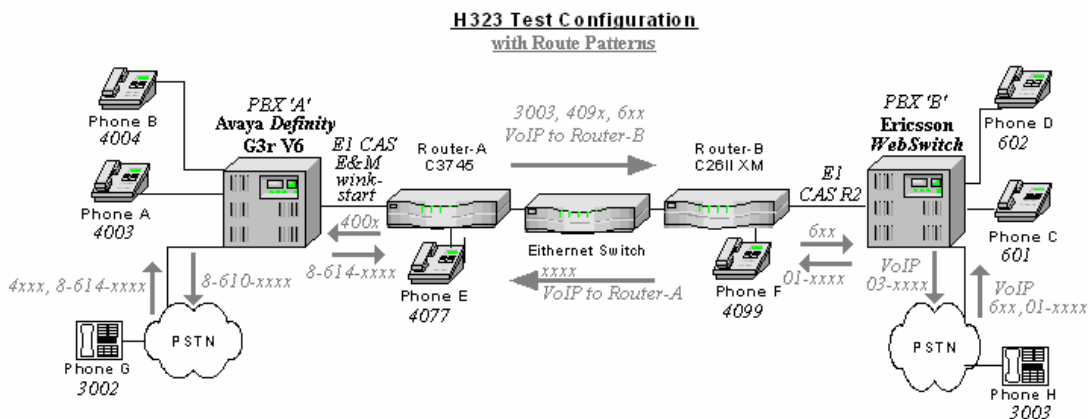
Introduction

This document discusses interoperability between a Cisco 3745 gateway and an Avaya Definity G3r V6 PBX using an NM-HDV2-E1 CAS with H.323 VoIP.

Network Topology

The figure shows two Cisco voice gateways connected through an Ethernet switch and controlled via H.323. This document pertains to the left side that shows the Avaya Definity G3r V6 PBX.

Figure 1. Network Topology



Limitations

- The correct position of jumper J7 on the NM-HDV2-T1/E1 is critical to establish Layer 1 connectivity. Looking into the NM-HDV2-T1/E1 in the direction of insertion into the router, the jumper should be placed to connect the left and middle pins.



System Components

Hardware Requirements

- Cisco C3745 with an NM-HDV2-2T1/E1
- Avaya Definity G3r V6 PBX

Software Requirements

- Cisco IOS software, 3700 software (C3745-ADVENTERPRISEK9-M), Version 12.3(7)T, RELEASE SOFTWARE (fc1)
- Avaya Definity G3V6i.01.0.018.2

Configuration

Configuring the Avaya Definity G3 V6 T1 Trunk Configuration

```
display trunk-group 14                                     Page 1 of 11
TRUNK GROUP
Group Number: 14          Group Type: tie          CDR Reports: y
Group Name: E1 E&M wink   COR: 1              TN: 1            TAC: 614
Direction: two-way       Outgoing Display? y   Trunk Signaling Type:
Dial Access? y           Busy Threshold: 99    Night Service:
Queue Length: 0          Incoming Destination:
Comm Type: voice         Auth Code? n
                          Trunk Flash? n

TRUNK PARAMETERS
Trunk Type (in/out): wink/wink      Incoming Rotary Timeout(sec):
Outgoing Dial Type: tone            Incoming Dial Type: tone
Wink Timer(msec): 300               Disconnect Timing(msec):
Digit Treatment:                    Digits:
                                     Sig Bit Inversion: none
Connected to Toll? n                STT Loss: normal      DTT to DCO Loss: normal
Incoming Dial Tone? y

Disconnect Supervision - In? y Out? y
Answer Supervision Timeout: 0        Receive Answer Supervision? y

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



```
display trunk-group 14                                     Page 2 of 11
TRUNK FEATURES
  ACA Assignment? n           Measured: none
                             Internal Alert? n       Maintenance Tests? y
                             Data Restriction? n
                             Glare Handling: none
  Used for DCS? n
  Suppress # Outpulsing? n
                             Seize When Maintenance Busy: neither-end

Incoming Tone (DTMF) ANI? n
  Connected to CO? n
```

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

```
display trunk-group 14                                     Page 3 of 11
TRUNK GROUP
ADMINISTRABLE TIMERS
  Incoming Disconnect(msec): 500      Outgoing Disconnect(msec): 500
  Incoming Dial Guard(msec): 70       Outgoing Dial Guard(msec): 1600
  Incoming Glare Guard(msec): 1500    Outgoing Glare Guard(msec): 1500

                                     Outgoing Seizure Response(sec): 5
  Programmed Dial Pause(msec): 1500   Disconnect Signal Error(sec): 240
  Flash Length(msec): 540             Incoming Incomplete Dial Alarm(sec): 255

END TO END SIGNALING
  Tone(msec): 350      Pause(msec): 150

OUTPULSING INFORMATION
  PPS: 10      Make(msec): 40      Break(msec): 60
```

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



```
display trunk-group 14                                     Page 4 of 11
ATMS THRESHOLDS
TTL Type: 105-w-r1           Far End Test No:
TTL Vendor:                  TTL Contact:
Trunk Vendor:                Trunk Contact:
Trunk Length:

MARGINAL              UNACCEPTABLE
  Min  Max             Min  Max
1004 Hz Loss: -2    21    -2    21

-Dev +Dev             -Dev +Dev
404 Hz Loss: 9      9      9      9
2804 Hz Loss: 9      9      9      9

Maximum C Message Noise:    55          55
Maximum C Notched Noise:    74          74
Minimum SRL-HI:             0            0
Minimum SRL-LO:             0            0
Minimum ERL:                0            0

Allow ATMS Busyout, Error Logging and Alarming? n

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

```
display trunk-group 14                                     Page 5 of 11
TRUNK GROUP
Administered Members (min/max): 1/29
GROUP MEMBER ASSIGNMENTS      Total Administered Members: 29

Port   Code Sfx Name      Night      Mode      Type      Ans Delay
1: 01A1401 TN464 F
2: 01A1402 TN464 F
3: 01A1403 TN464 F
4: 01A1404 TN464 F
5: 01A1405 TN464 F
6: 01A1406 TN464 F
7: 01A1407 TN464 F
8: 01A1408 TN464 F
9: 01A1409 TN464 F
10: 01A1410 TN464 F
11: 01A1411 TN464 F
12: 01A1412 TN464 F
13: 01A1413 TN464 F
14: 01A1414 TN464 F
15: 01A1415 TN464 F

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



```
display trunk-group 14                                     Page 6 of 11
```

TRUNK GROUP							
						Administered Members (min/max):	1/29
GROUP MEMBER ASSIGNMENTS						Total Administered Members: 29	
Port	Code	Sfx	Name	Night	Mode	Type	Ans Delay
16:	01A1417	TN464	F				
17:	01A1418	TN464	F				
18:	01A1419	TN464	F				
19:	01A1420	TN464	F				
20:	01A1421	TN464	F				
21:	01A1422	TN464	F				
22:	01A1423	TN464	F				
23:	01A1424	TN464	F				
24:	01A1425	TN464	F				
25:	01A1426	TN464	F				
26:	01A1427	TN464	F				
27:	01A1428	TN464	F				
28:	01A1429	TN464	F				
29:	01A1430	TN464	F				
30:							

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

Configuring the Cisco 3745

```
3745-A# show running-config
```

```
Building configuration...
```

```
Current configuration : 2467 bytes
```

```
!
```

```
version 12.3
```

```
service timestamps debug datetime msec
```

```
service timestamps log datetime msec
```

```
no service password-encryption
```

```
!
```

```
hostname 3745-A
```

```
!
```

```
boot-start-marker
```

```
boot-end-marker
```

```
!
```



```
card type e1 4 1
!
no network-clock-participate slot 1
no network-clock-participate slot 2
no network-clock-participate slot 3
no network-clock-participate slot 4
no network-clock-participate wic 0
no network-clock-participate wic 1
no network-clock-participate wic 2
no network-clock-participate aim 0
no network-clock-participate aim 1
no aaa new-model
ip subnet-zero
ip cef
!
ip audit po max-events 100
no ftp-server write-enable
isdn switch-type primary-net5
voice-card 1
    dspfarm
!
voice-card 4
    dspfarm
!
voice rtp send-recv
!
voice class h323 1
!
controller E1 4/0
    ds0-group 1 timeslots 1-15,17-31 type e&m-melcas-wink
    description CAS connection to V6
!
```



```
controller E1 4/1
!
no crypto isakmp enable
!
interface FastEthernet0/0
 ip address 172.20.43.151 255.255.255.0
 duplex auto
 speed auto
!
interface FastEthernet0/1
 no ip address
 shutdown
 duplex auto
 speed auto
!
ip classless
ip route 0.0.0.0 0.0.0.0 172.20.43.1
ip route 0.0.0.0 255.255.255.0 FastEthernet0/0
!
no ip http server
no ip http secure-server
!
control-plane
!
voice-port 1/0/0
 shutdown
!
voice-port 1/0/1
 shutdown
!
voice-port 1/0/2
 shutdown
```



```
!  
voice-port 1/0/3  
  shutdown  
!  
voice-port 4/0/0  
  compand-type a-law  
  station-id name phone E  
  station-id number 4077  
  caller-id enable  
!  
voice-port 4/0/1  
  station-id name phone EE  
  station-id number 4078  
  caller-id enable  
!  
voice-port 4/0:1  
!  
dial-peer voice 400 pots  
  destination-pattern 4077  
  port 4/0/0  
!  
dial-peer voice 401 pots  
  destination-pattern 4078  
  port 4/0/1  
!  
dial-peer voice 2 voip  
  destination-pattern 53..  
  session target ipv4:172.20.43.253  
!  
dial-peer voice 3 voip  
  destination-pattern 3003  
  session target ipv4:172.20.43.155
```




```
!  
dial-peer voice 4 voip  
  destination-pattern 409.  
  session target ipv4:172.20.43.155  
!  
dial-peer voice 6 voip  
  destination-pattern 6..  
  session target ipv4:172.20.43.155  
!  
dial-peer voice 4004 pots  
  destination-pattern 400.  
  port 4/0:1  
  forward-digits all  
!  
dial-peer voice 7 voip  
  description VoIP dial-peer for Stan CER  
  destination-pattern 405.  
  session target ipv4:172.20.43.199  
!  
dial-peer voice 3002 pots  
  destination-pattern 3002  
  direct-inward-dial  
  port 4/0:1  
  forward-digits all  
!  
line con 0  
line aux 0  
line vty 0 4  
  login  
!  
end
```



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