

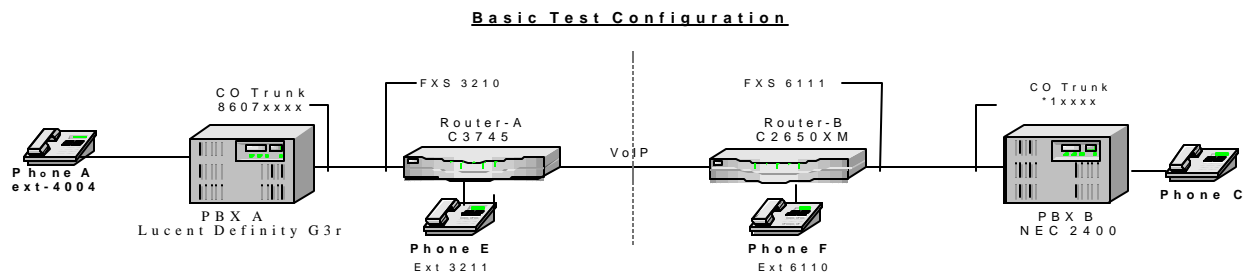
Cisco 2600XM Gateway - PBX Interoperability: NEC 2400 PBX using Analog FXS Interfaces to an H.323 Gateway

Introduction

- This note describes the interoperability between the NEC 2400 PBX and a Cisco 2600XM using analog FXS interfaces to an H.323 Gateway.
- The Network Topology diagram shows the end-to-end interoperability.

Network Topology

Figure 1. Network Topology



Limitations

None noted.

System Components

Hardware Requirements

- Cisco 2650XM router
- Cisco VIC-VG-2FXS
- NEC 2400 PBX

Software Requirements

- Cisco IOS Software Release 12.2(15)ZJ
- PBX Software Release, IMGx 6300 Version J5.80



Configuration

Configuring the NEC 2400 PBX

Configure the NEC 2400 PBX. Use the following tables as a reference.

Trunks (Routes)

Route	Description	PIM	Slot	Access Code
1	Analog COT	0	6	*1

Analog CO Trunk (FXO)

Switch	Position	Description	Setting
SW00		Make Busy	Down
SW01 MB0-7	0-7	On = Make Busy Off = Cancel Make Busy	Off
SW02 MB8-15	0-7	On = Make Busy Off = Cancel Make Busy	Off
SW0 or SW10 Termination Impedance. Should be set by user. Refer to NEC docs.	1	Termination Impedance	Off
	2	Termination Impedance	Off
	3	Termination Impedance	Off
	4	Termination Impedance	Off
	5	Fixed	Off
	6	Fixed	Off
	7	Fixed	Off
	8	Fixed	Off
SW1 or SW11	1	Fixed	Off
	2	Fixed	Off
	3	On = Call abandon if ringing signal not received in 3 seconds. Off = Call abandon if ringing signal not received in 6 seconds	Off
	4	On = Circuit 0 used as paging trunk. Circuit 1 cannot be used for CO trunk Off = Circuit 0 used as CO trunk. Circuit 1 can be used as CO trunk.	Off
	5	Fixed	Off
	6	Fixed	Off
	7	Fixed	Off
	8	Fixed	Off



ARTD Listing

[LRTD]

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* ROUTE CLASS DATA LIST *

[ROUTE: 1 TO 5] CO Trunk = Route #1

CDN FUNCTION	R O U T E					N U M B E R				
	1	2	3	4	5	1	2	3	4	5
1 OSGS	2	0	0	0	0	2	0	0	0	0
2 ONSG	3	2	2	2	2	3	2	2	2	2
3 ISGS	1	0	0	0	0	1	0	0	0	0
4 INSG	3	2	2	2	2	3	2	2	2	2
5 TF	3	3	3	3	3	3	3	3	3	3
6 TCL	1	4	4	4	4	1	4	4	4	4
7 L/T	1	1	1	1	1	1	1	1	1	1
8 RLP	2	2	2	2	2	2	2	2	2	2
9 TQ	0	0	0	0	0	0	0	0	0	0
10 SMDR	0	1	0	1	0	0	1	0	1	0
11 TD	0	0	0	0	0	0	0	0	0	0
12 DR	0	0	0	0	0	0	0	0	0	0
13 AC	1	0	0	0	0	1	0	0	0	0
14 TNT	0	0	0	0	0	0	0	0	0	0
15 LSG	0	12	13	12	13	0	12	13	12	13
16 SMDR2	0	0	0	0	0	0	0	0	0	0
17 H/M	0	0	0	0	0	0	0	0	0	0
18 MC	0	0	0	0	0	0	0	0	0	0
19 ANI	0	0	0	0	0	0	0	0	0	0
20 D	0	0	0	0	0	0	0	0	0	0
21 MSB	0	0	0	0	0	0	0	0	0	0
22 MSW	0	0	0	0	0	0	0	0	0	0
23 TR	0	0	0	0	0	0	0	0	0	0
24 OC	0	0	0	0	0	0	0	0	0	0
25 R/L	0	0	0	0	0	0	0	0	0	0
26 RVSD	0	0	0	0	0	0	0	0	0	0
27 TL	0	0	0	0	0	0	0	0	0	0
28 ANS	0	1	1	1	0	0	1	1	1	0
29 TELP	0	0	0	0	0	0	0	0	0	0
30 PAD	0	4	7	4	7	0	4	7	4	7
31 OGRL	0	1	0	1	0	0	1	0	1	0
32 ICRL	0	1	0	1	0	0	1	0	1	0
33 HD	0	0	0	0	0	0	0	0	0	0
34 GUARD	0	1	0	1	0	0	1	0	1	0
35 WINK	0	0	0	0	0	0	0	0	0	0
36 VAD	0	0	0	0	0	0	0	0	0	0



* ROUTE CLASS DATA LIST *

CDN FUNCTION	R O U T E N U M B E R				
	1	2	3	4	5
37 CLD	0	0	0	0	0
38 FA	0	0	0	0	0
39 BC	0	0	0	0	0
40 TCM	0	0	0	0	0
41 TDMQ	0	0	0	0	0
42 TRSC	0	0	0	0	0
43 BT	0	1	1	1	0
44 PRV	0	0	0	0	0
45 A/D	0	1	1	1	1
46 CW	0	0	0	0	0
47 TPQ	0	0	0	0	0
48 BL	0	0	0	0	0
49 TRKS	0	0	0	0	0
50 DPLY	0	1	1	1	1
51 ACD	0	0	0	0	0
52 2W/4W	0	0	0	0	0
53 FAAT	0	0	0	0	0
54 GW	0	0	0	0	0
55 TCMA	0	0	0	0	0
56 SMDR3	0	0	0	0	0
57 HDT	0	0	0	0	0
58 CD	0	0	0	0	0
59 CCH	0	0	0	0	0
60 TC/EC	0	0	0	0	0
61 IRE	0	0	0	0	0
62 SCR	0	0	0	0	0
63 LYER1	0	0	0	0	0
64 NET	0	0	0	0	0
65 INT	0	10	10	10	10
66 DC	0	4	4	4	4
67 HKS	0	0	0	0	0
68 SCF	0	0	0	0	0
69 SMDR4	0	0	0	0	0

Configuring the Cisco 2651XM Router

- The following sample output shows the router configuration for interoperability with the PBX.

```
C2651xm#show run
Building configuration...

version 12.2
service timestamps debug uptime
```



```
service timestamps log uptime
no service password-encryption
!
hostname C2651XM
!
logging buffered 1000000 debugging
enable password cisco
!
ip subnet-zero
ip tcp synwait-time 13
!
!
no ip domain lookup
!
mpls ldp logging neighbor-changes
isdn switch-type basic-qsig
!
voice-card 1
!
voice call carrier capacity active
!
no voice hpi capture buffer
no voice hpi capture destination
!
interface FastEthernet0/0
 ip address 100.1.1.2 255.255.255.0
 no ip mroute-cache
 duplex auto
 speed 100
!
interface FastEthernet0/1
 ip address 10.1.1.9 255.255.255.0
 no ip mroute-cache
 duplex auto
 speed auto
!
interface BRI1/0
 no ip address
 shutdown
!
interface BRI1/1
 no ip address
 shutdown
!
ip http server
ip classless
!
call rsvp-sync
!
voice-port 1/0/0
 compand-type a-law
!
voice-port 1/0/1
!
voice-port 1/1/0
!
voice-port 1/1/1
!
```



```
mgcp profile default
!
dial-peer cor custom
!
dial-peer voice 2 voip
 destination-pattern 2...
 session target ipv4:100.1.1.1
!
dial-peer voice 1 voip
 destination-pattern 3...
 session target ipv4:100.1.1.1
!
dial-peer voice 3 pots
 destination-pattern 1...
 direct-inward-dial
 port 1/0/0
 prefix 1
!
dial-peer voice 4 pots
 destination-pattern 6110
 port 1/1/0
!
dial-peer voice 6 pots
 destination-pattern 6111
 port 1/1/1

line con 0
 exec-timeout 0 0
line aux 0
 exec-timeout 0 0
line vty 0 4
 exec-timeout 0 0
 password c
 no login
line vty 5 15
 no login
!
!
end
```

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