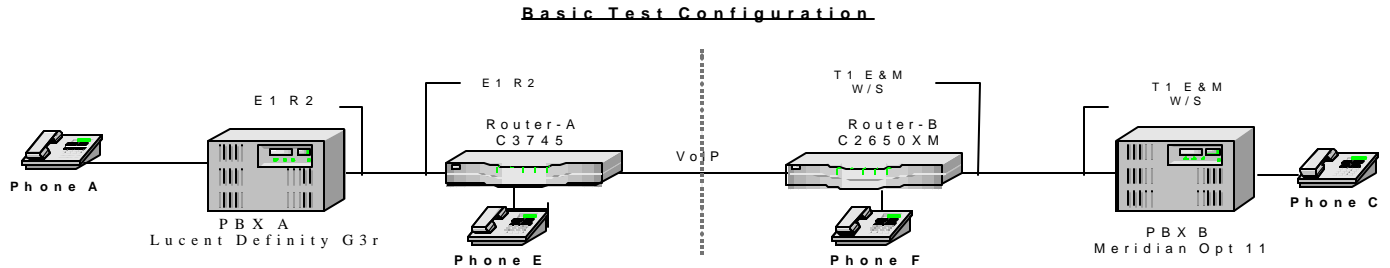


Cisco 3745 Gateway-PBX Interoperability: Lucent Definity G3r Using E1 R2 Interfaces to an H.323 Gateway

Introduction

- This note describes the connectivity or interoperability of a Lucent Definity G3r PBX to a Cisco 3745 router.
- The network topology diagram shows the set up for end-to-end interoperability between PBXs.

Network Topology



System Components

Hardware Requirements

- Cisco Hardware
Cisco 3745 with dual multifrequency trunk (MFT) T1 interfaces
- PBX Hardware.
Lucent Definity G3r Version 7

Software Requirements

- Cisco IOS Software Release 12.2(15)ZJ
- PBX Software Release Version 7



Configuration

Configuring the Lucent Definity G3r

Trunk Group

CO Trunk

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change trunk-group 14 send (return) help (f5) cancel (esc) enter (f3) schedule (f9) next (f7) previous (f8)

1 2 3 4 5 6 7 8 9 10 11

TRUNK GROUP

Group Number: 14 Group Type: tie CDR Reports:
Group Name: E1-R2 COR: 1 TN: 1 TAC: 614
Direction: two-way Outgoing Display? Trunk Signaling Type:
Dial Access? Busy Threshold: 99 Night Service:
Queue Length: 0 Incoming Destination:
Comm Type: voice Auth Code?
Trunk Flash?

TRUNK PARAMETERS

Trunk Type (in/out): immed/immed Incoming Rotary Timeout(sec):
Outgoing Dial Type: mf Incoming Dial Type: mf
Digit Treatment: Disconnect Timing(msec):
Expected Digits: Digits:
Connected to Toll? STT Loss: normal Sig Bit Inversion: none
Incoming Dial Tone? DTT to DCO Loss: normal

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

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1

DS1 CIRCUIT PACK

Location:	01A14	Name:	E1-R2
Bit Rate:	2.048	Line Coding:	hdb3
Signaling Mode:	CAS		
Interconnect:	pbx	Country Protocol:	16
Interface Companding:	alaw	CRC?	y
Idle Code:	11111111		
Slip Detection?	y	Near-end CSU Type:	other

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1 2 3 4 5 6 7 8 9 10 11

TRUNK FEATURES

ACA Assignment? Measured:

Internal Alert? Maintenance Tests?

Data Restriction?

Used for DCS?

Suppress # Outpulsing?

Seize When Maintenance Busy:

Connected to CO? MF Tariff Free?

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1 2 3 4 5 6 7 8 9 10 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

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

END TO END SIGNALING

Tone(msec):	350	Pause(msec):	150
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OUTPULSING INFORMATION

PPS:	10	Make(msec):	40	Break(msec):	60
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1 2 3 4 5 6 7 8 9 10 11

ATMS THRESHOLDS

TTL Type: Far End Test No:

TTL Vendor: TTL Contact:

Trunk Vendor: Trunk Contact:

Trunk Length:

	MARGINAL		UNACCEPTABLE	
	Min	Max	Min	Max
1004 Hz Loss:	<input type="text" value="-2"/>	<input type="text" value="21"/>	<input type="text" value="-2"/>	<input type="text" value="21"/>
	-Dev	+Dev	-Dev	+Dev
404 Hz Loss:	<input type="text" value="9"/>	<input type="text" value="9"/>	<input type="text" value="9"/>	<input type="text" value="9"/>
2804 Hz Loss:	<input type="text" value="9"/>	<input type="text" value="9"/>	<input type="text" value="9"/>	<input type="text" value="9"/>
Maximum C Message Noise:	<input type="text" value="55"/>		<input type="text" value="55"/>	
Maximum C Notched Noise:	<input type="text" value="74"/>		<input type="text" value="74"/>	
Minimum SRL-HI:	<input type="text" value="0"/>		<input type="text" value="0"/>	
Minimum SRL-LO:	<input type="text" value="0"/>		<input type="text" value="0"/>	
Minimum ERL:	<input type="text" value="0"/>		<input type="text" value="0"/>	

Allow ATMS Busyout, Error Logging and Alarming?

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1 2 3 4 5 6 7 8 9 10 11

TRUNK GROUP

Administered Members (min/max): 1/5
Total Administered Members: 5

GROUP MEMBER ASSIGNMENTS

	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:									
7:									
8:									
9:									
10:									
11:									
12:									
13:									
14:									
15:									

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display system-parameters multifr send (return) help (f5) cancel (esc) enter (f3) schedule (f9) next (f7) previous (f8)

1 2 3 4

MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

Incoming Call Type: group-ii-mfc ANI Prefix:
Outgoing Call Type: group-ii-mfc ANI for PBX:
Maintenance Call Type: none NEXT ANI DIGIT
Test Call Extension: Incoming: send-ani
Interdigit Timer (sec): 10 Outgoing: send-ani
Maximum Resend Requests:
Received Signal Gain (dB): 0
Transmitted Signal Gain (dB): -3
Request Incoming ANI (non-AAR/ARS)? n
Outgoing Forward Signal Present Timer (sec): 15
Outgoing Forward Signal Absent Timer (sec): 30
Multifrequency Signaling Incoming Intercept Treatment? y
Collect All Digits Before Seizure? n
Overlap Sending on Link-to-Link Tandem Calls? n
Private Group II Permissions and Public Interworking? n
Group II Called Party Category: user-type
Use COR for Calling Party Category? n
Outgoing Shuttle Exchange Cycle Timer (sec): 4

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1 2 3 4

MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

Request Call Category at Start of Call? n
Restart ANI from Caller Category? y
Number of Incoming ANI Digits: 0
Number of Outgoing ANI Digits: 0
Truncate Station Number in ANI: no
Address Digits Include End-of-digits Signal? n
ANI Source for Forwarded & Covered Calls: caller

	INCOMING	OUTGOING
ANI Available:		
ANI Not Available:		

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display system-parameters multifr send (return) help (f5) cancel (esc) enter (f3) schedule (f9) next (f7) previous (f8)

1 2 3 4

MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

INCOMING FORWARD SIGNAL TYPES (Tones from CO)		INCOMING BACKWARD SIGNAL TYPES (Tones to CO)	
Group-I	Group-II	Group-A	Group-B
11: ignored	1: normal	1 : next-digit	2 : intercept
12: ignored	2: normal	3 : end-of-dial	3 : busy
13: ignored	3: normal	4 : congestion	4 : congestion
14: ignored	4: normal	5 : send-ani	6 : free
15: ignored	5: normal	:	:
	6: normal	:	:
	7: normal	:	:
	8: normal	:	:
	9: normal	:	:
	10: normal	:	:
	11: normal	:	:
	12: normal	:	:
	13: normal	:	:
	14: normal	:	:
	15: normal	:	:

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display system-parameters multifr send (return) help (f5) cancel (esc) enter (f3) schedule (f9) next (f7) previous (f8)

1 2 3 4

MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

OUTGOING FORWARD SIGNAL TYPES (Tones to C0)		OUTGOING BACKWARD SIGNAL TYPES (Tones from C0)	
Group-I	Group-II	Group-A	Group-B
12: ani-not-avail	1 : attendant	1: next-digit	1: congestion
15: end-of-ani	2 : normal	2: last-2-digits	2: intercept
:	6 : data-call	3: end-of-dial	3: busy
:	:	4: congestion	4: congestion
:	:	5: send-ani	5: intercept
:	:	6: setup-sppath	6: free
:	:	7: last-3-digits	7: free
:	:	8: congestion	8: busy
:	:	9: last-digit	9: congestion
:	:	10: restart	10: congestion
:	:	11: congestion	11: congestion
:	:	12: congestion	12: congestion
:	:	13: congestion	13: congestion
:	:	14: congestion	14: congestion
:	:	15: congestion	15: congestion

Ready

Configuring the Cisco 3745 Router

```
c3745#show running
Building configuration...
Current configuration : 1514 bytes
!
version 12.2
service timestamps debug datetime msec
service timestamps log uptime
no service password-encryption
!
hostname c3745
!
boot system flash:c3745-jsx-mz-v122_15_zj_throttle.0.5.0
```



```
logging queue-limit 100
logging buffered 1000000 debugging
!
ip subnet-zero
!
no ip domain lookup
!
mpls ldp logging neighbor-changes
isdn switch-type primary-ni
!
voice-card 2
  no dspfarm
!
voice-card 3
  no dspfarm
!
voice rtp send-recv
!
no voice hpi capture buffer
no voice hpi capture destination
!
mta receive maximum-recipients 0
!
controller E1 2/0
  ds0-group 1 timeslots 1-5 type r2-analog r2-compelled ani
  cas-custom 1
  country argentina
!
controller E1 2/1
!
interface FastEthernet0/0
```



```
ip address 100.1.1.1 255.255.255.0
duplex auto
speed auto
!
interface FastEthernet0/1
ip address 172.20.8.20 255.255.255.0
duplex auto
speed auto
!
ip default-gateway 10.1.1.2
ip http server
ip classless
ip route 0.0.0.0 0.0.0.0 FastEthernet0/1
!
call rsvp-sync
!
voice-port 2/0:1
cptone AR
!
voice-port 2/1/0
!
voice-port 2/1/1
!
mgcp profile default
!
dial-peer cor custom
!
dial-peer voice 1 pots
destination-pattern 20..
direct-inward-dial
port 2/0:1
```



```
prefix 20
!
dial-peer voice 3 voip
  destination-pattern 26..
  session target ipv4:100.1.1.2
!
dial-peer voice 4 voip
  destination-pattern 4000
  session target ipv4:100.1.1.2
!
dial-peer voice 2 pots
  destination-pattern 3000
  port 2/1/1
!
line con 0
line aux 0
line vty 0 4
  login
!
end
```

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