Cisco Catalyst 6000 Series Gateway-PBX Interoperability: Lucent Definity G3si with E1 PRI Signaling

This document describes the interoperability and configuration of a Cisco Catalyst 6000 series voice gateway Lucent Definity G3si PBX using E1 PRI signaling. It includes the following sections:

- System Components
- Configuration Tasks
- Caveats

System Components

PBX Model	Lucent Definity G3si
PBX Release	Software Version R 7.0
Telephony Signaling	E1 PRI
Voice Gateway	Cisco Catalyst 6608
Gateway Release	5.5(6a)
Call Manager Release	3.1(0.212)
VoX Protocol	MGCP

Configuration Tasks

See the following sections for configuration tasks for this feature:

- Set Up
-

Lucent Definity G3si PBX Configuration

-

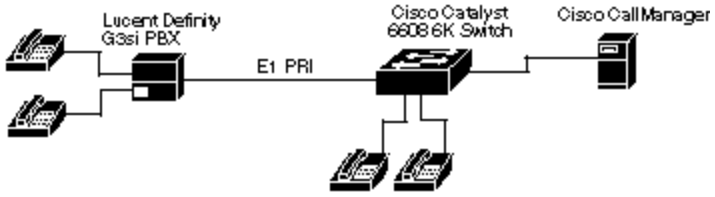
Call Manager Configuration

Set Up

This section includes the following information:

- Connectivity Diagrams
- Set Up Notes

Connectivity Diagrams



Set Up Notes

- The Cisco 6608-E1 Gateway with ISDN protocol type setting of PRI-EURO supports both protocol sides by selecting “Network/User” in the protocol side field when configuring the Gateway via CallManager.

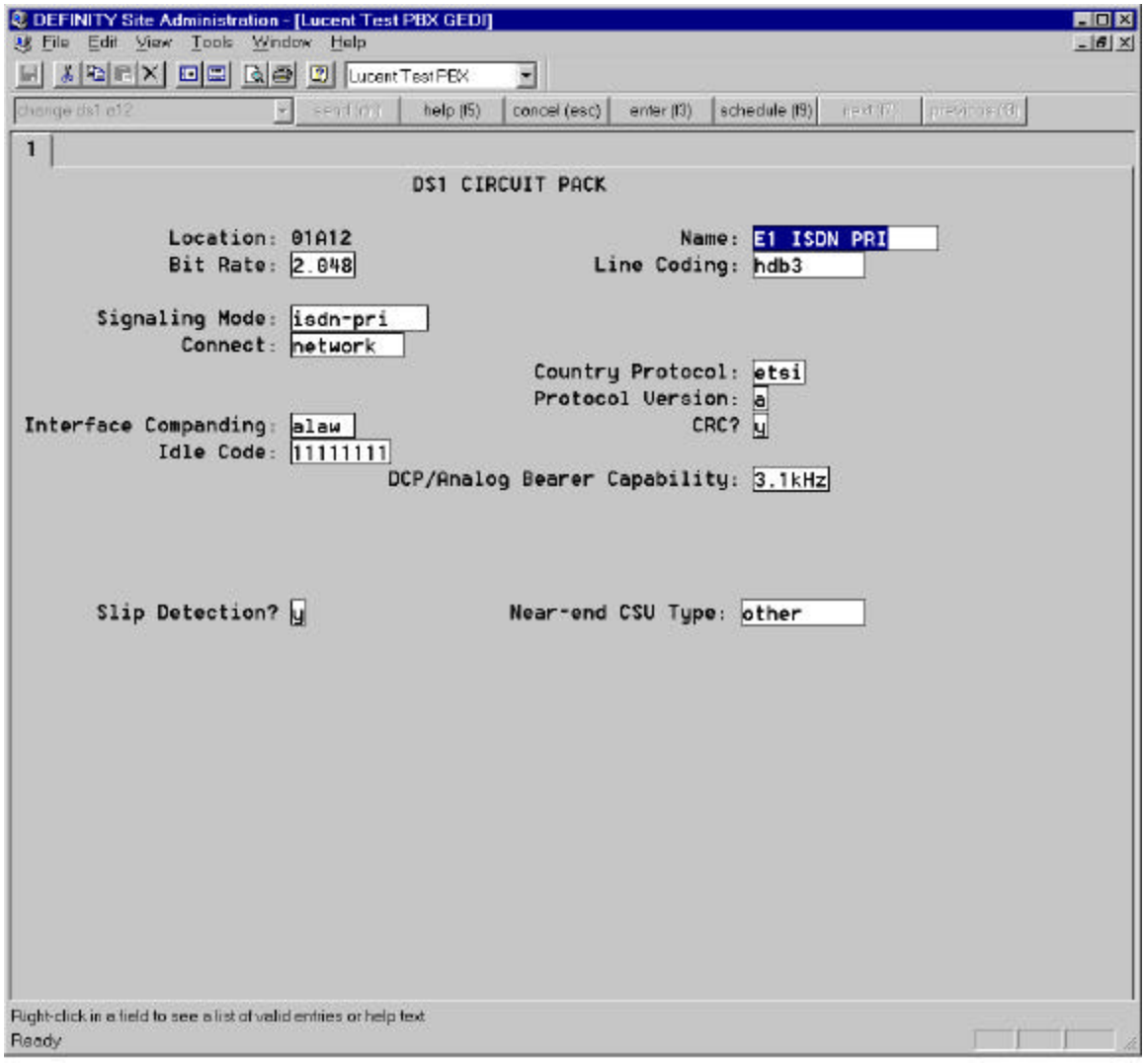
Lucent Definity G3si PBX Configuration

Lucent Definity G3si PBX Version Information

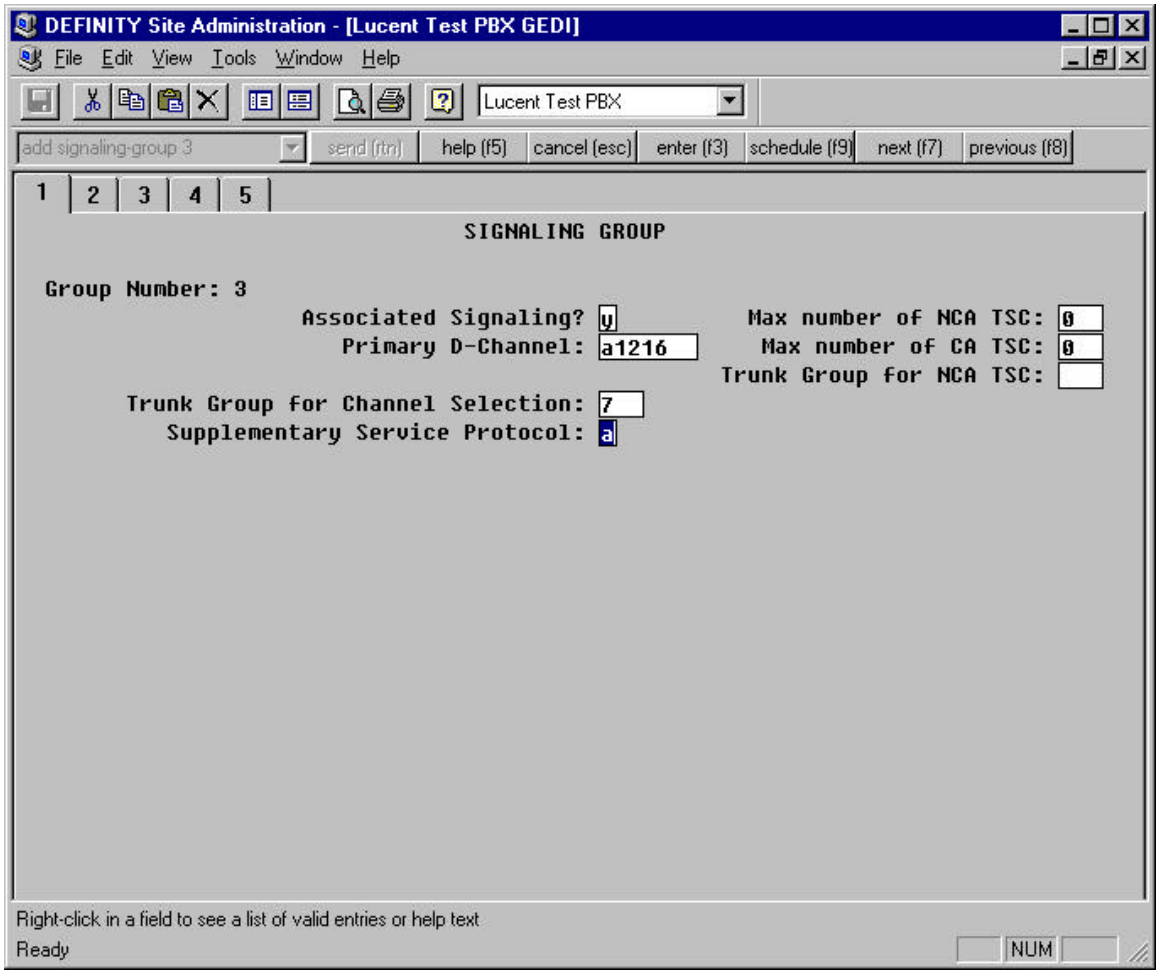
- Software: Version G3V7i.01.0.343.7
- Hardware: TN464F, DS1 INTFC 24/32

Lucent Definity G3si PBX Sample Configuration

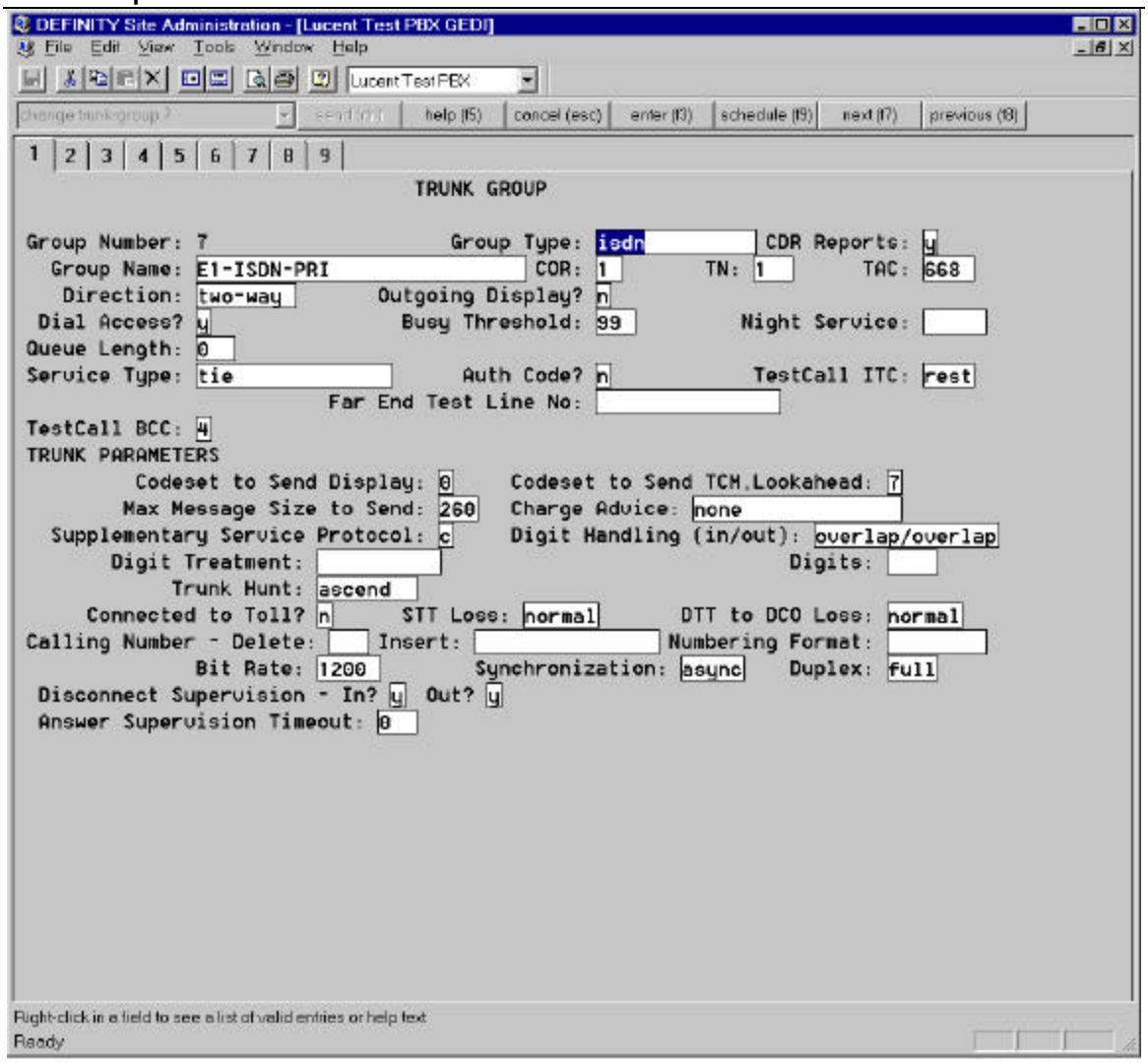
DS1 CIRCUIT PACK

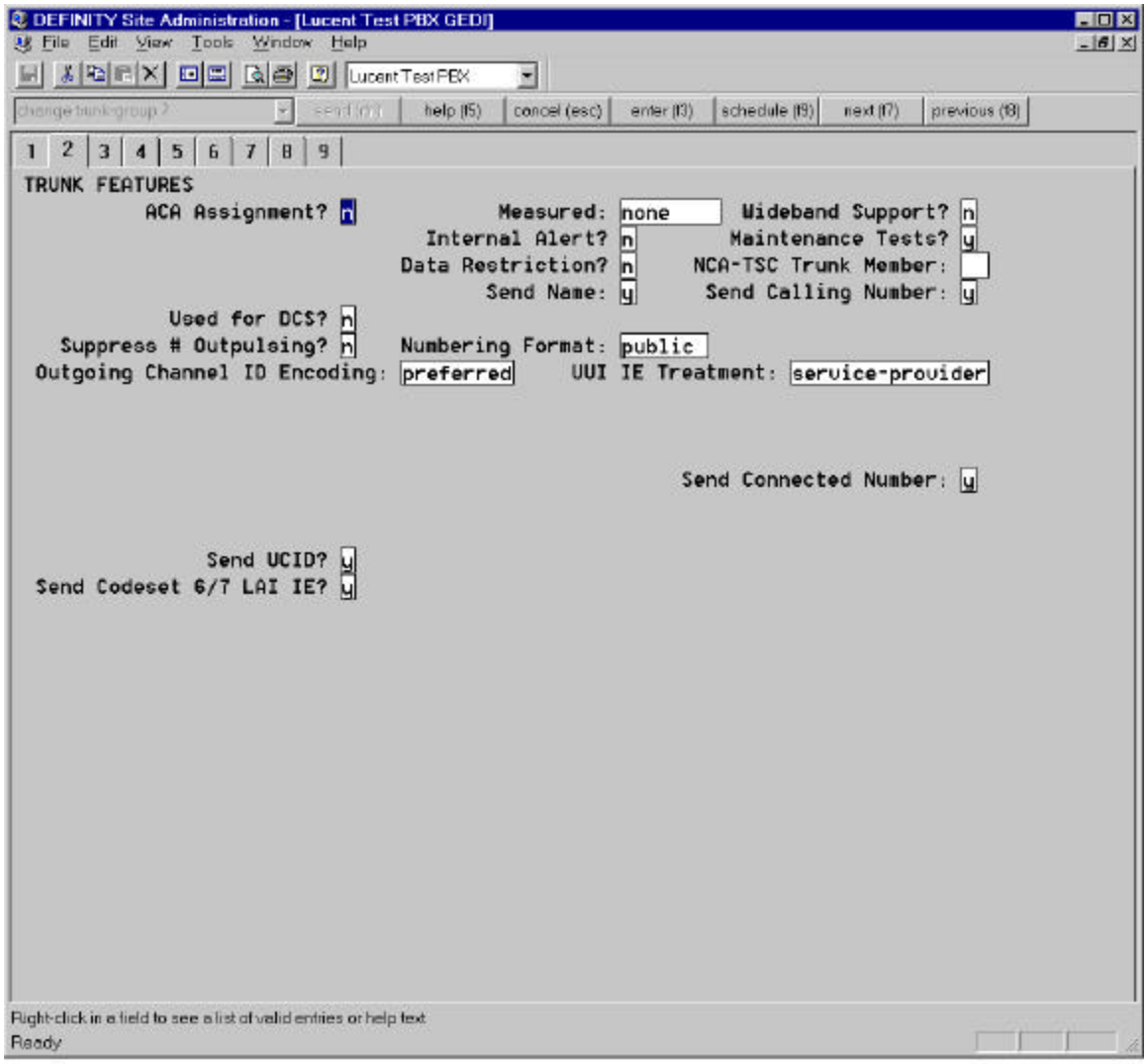


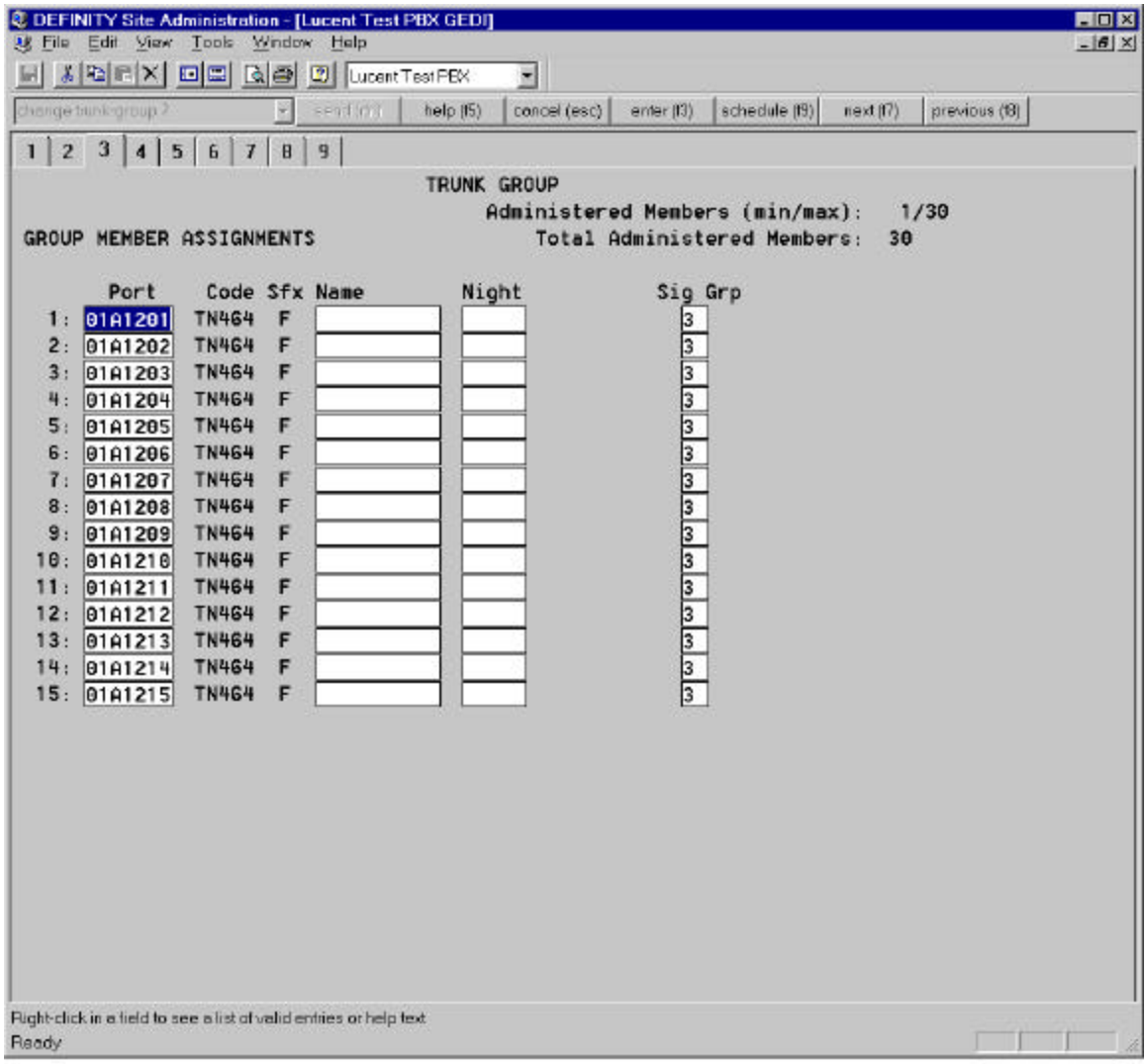
Signaling Group

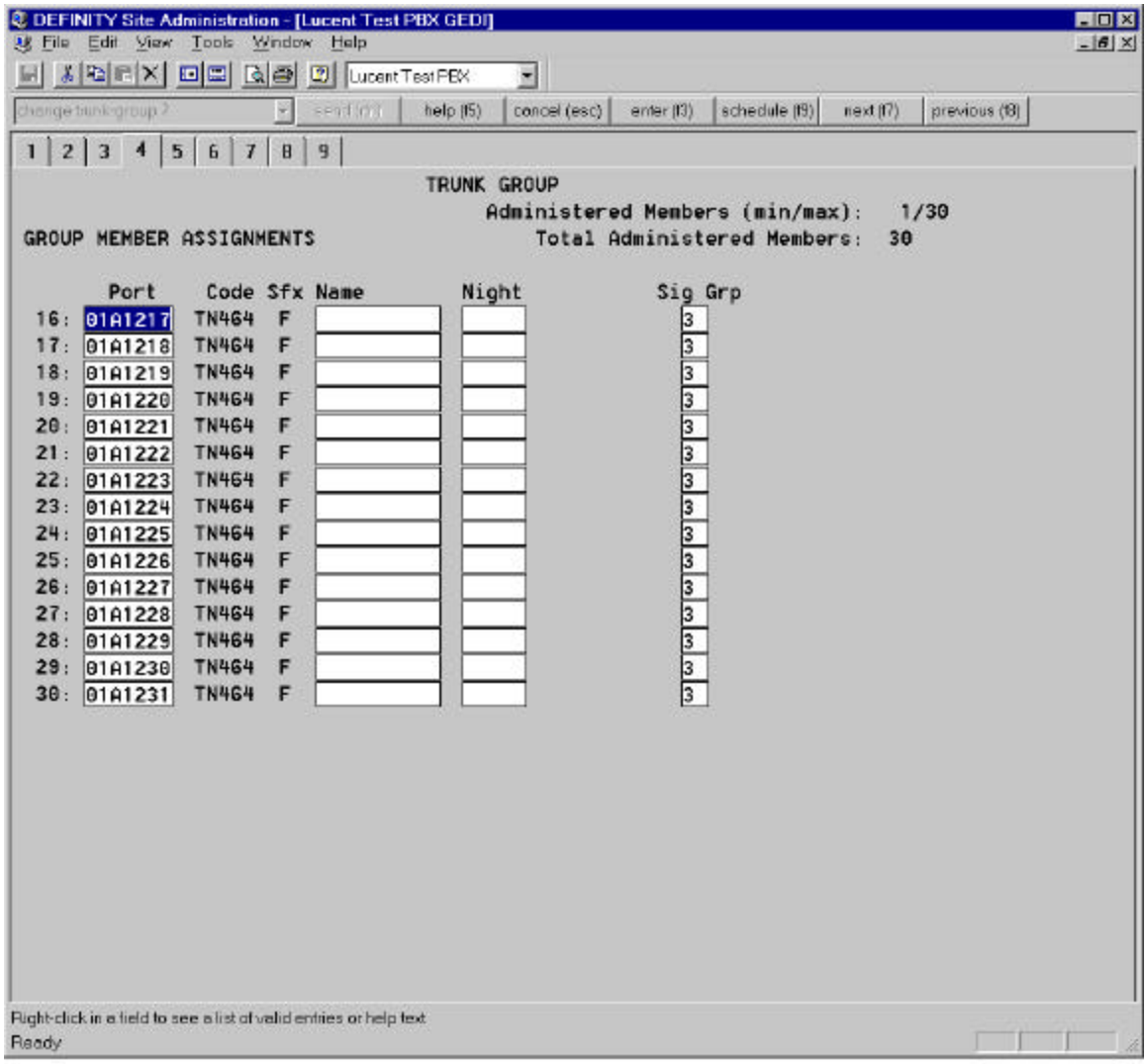


Trunk Group

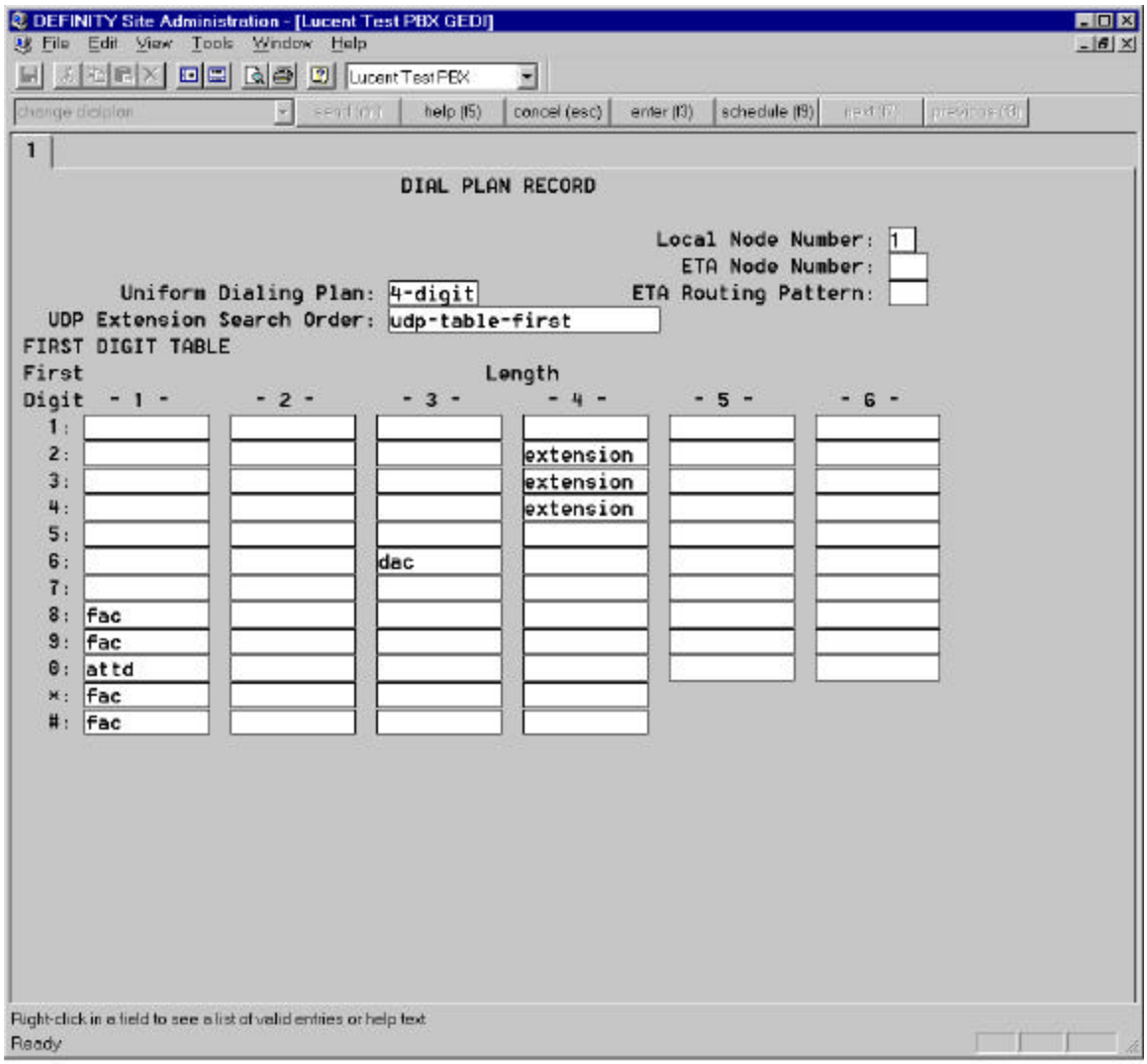

DEFINITY Site Administration - [Lucent Test PBX GED]
File Edit View Tools Window Help
Lucent Test PBX
help (f5)
cancel (esc)
enter (f3)
schedule (f9)
next (f7)
previous (f8)
1 2 3 4 5 6 7 8 9
TRUNK GROUP
Group Number: 7
Group Type: isdn
CDR Reports: y
Group Name: E1-ISDN-PRI
COR: 1
TN: 1
TAC: 668
Direction: two-way
Outgoing Display? n
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 TCM Lookahead: 7
Max Message Size to Send: 260
Charge Advice: none
Supplementary Service Protocol: c
Digit Handling (in/out): overlap/overlap
Digit Treatment:
Digits:
Trunk Hunt: ascend
Connected to Toll? n
STT Loss: normal
DTT to DCO Loss: normal
Calling Number - Delete:
Insert:
Numbering Format:
Bit Rate: 1200
Synchronization: async
Duplex: full
Disconnect Supervision - In? y Out? y
Answer Supervision Timeout: 0
Right-click in a field to see a list of valid entries or help text
Ready


DEFINITY Site Administration - [Lucent Test PBX GEDI]
File Edit View Tools Window Help
Lucent Test PBX
help (f5)
cancel (esc)
enter (f3)
schedule (f9)
next (f7)
previous (f8)
1 2 3 4 5 6 7 8 9
TRUNK FEATURES
ACA Assignment? n
Measured: none
Wideband Support? n
Internal Alert? n
Maintenance Tests? y
Data Restriction? n
NCA-TSC Trunk Member:
Send Name: y
Send Calling Number: y
Used for DCS? n
Suppress # Outpulsing? n
Numbering Format: public
Outgoing Channel ID Encoding: preferred
UUI IE Treatment: service-provider
Send Connected Number: y
Send UCID? y
Send Codeset 6/7 LAI IE? y
Right-click in a field to see a list of valid entries or help text
Ready


DEFINITY Site Administration - [Lucent Test PBX GEDI]
File Edit View Tools Window Help
Lucent Test PBX
help (f5)
cancel (esc)
enter (f3)
schedule (f9)
next (f7)
previous (f8)
1 2 3 4 5 6 7 8 9
TRUNK GROUP
Administered Members (min/max): 1/30
GROUP MEMBER ASSIGNMENTS
Total Administered Members: 30
Port Code Sfx Name Night Sig Grp
1: 01A1201 TN464 F 3
2: 01A1202 TN464 F 3
3: 01A1203 TN464 F 3
4: 01A1204 TN464 F 3
5: 01A1205 TN464 F 3
6: 01A1206 TN464 F 3
7: 01A1207 TN464 F 3
8: 01A1208 TN464 F 3
9: 01A1209 TN464 F 3
10: 01A1210 TN464 F 3
11: 01A1211 TN464 F 3
12: 01A1212 TN464 F 3
13: 01A1213 TN464 F 3
14: 01A1214 TN464 F 3
15: 01A1215 TN464 F 3
Right-click in a field to see a list of valid entries or help text
Ready

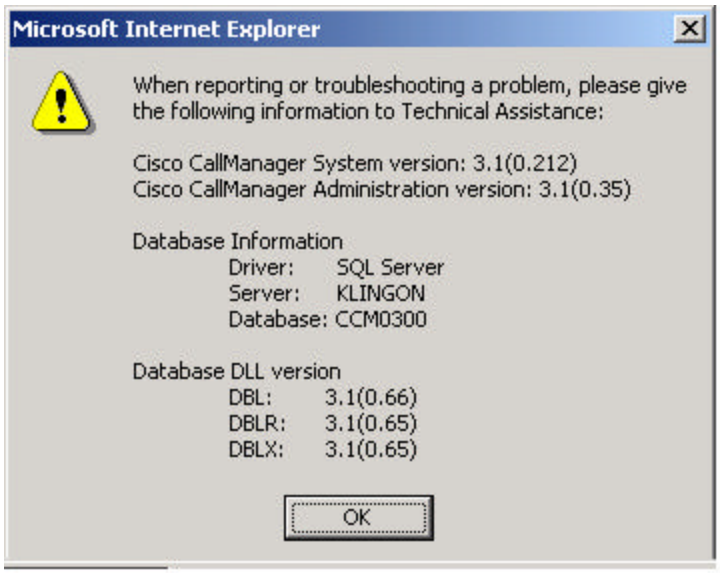

DEFINITY Site Administration - [Lucent Test PBX GEDI]
File Edit View Tools Window Help
Lucent Test PBX
help (f5)
cancel (esc)
enter (f3)
schedule (f9)
next (f7)
previous (f8)
1 2 3 4 5 6 7 8 9
TRUNK GROUP
Administered Members (min/max): 1/30
GROUP MEMBER ASSIGNMENTS
Total Administered Members: 30
Port Code Sfx Name Night Sig Grp
16: 01A1217 TN464 F 3
17: 01A1218 TN464 F 3
18: 01A1219 TN464 F 3
19: 01A1220 TN464 F 3
20: 01A1221 TN464 F 3
21: 01A1222 TN464 F 3
22: 01A1223 TN464 F 3
23: 01A1224 TN464 F 3
24: 01A1225 TN464 F 3
25: 01A1226 TN464 F 3
26: 01A1227 TN464 F 3
27: 01A1228 TN464 F 3
28: 01A1229 TN464 F 3
29: 01A1230 TN464 F 3
30: 01A1231 TN464 F 3
Right-click in a field to see a list of valid entries or help text
Ready

Uniform Dialing Plan



Call Manager Configuration

Call Manager Version Information



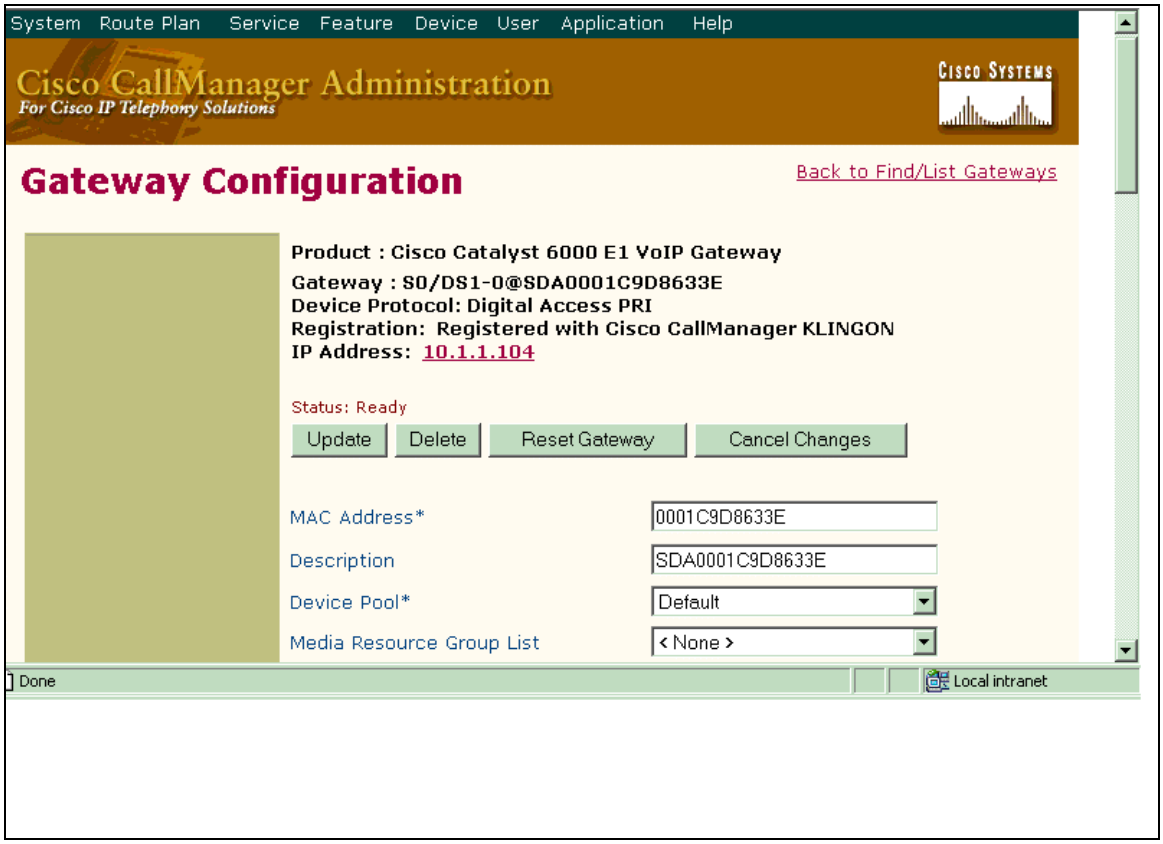
Cisco Catalyst 6608 Gateway Configuration

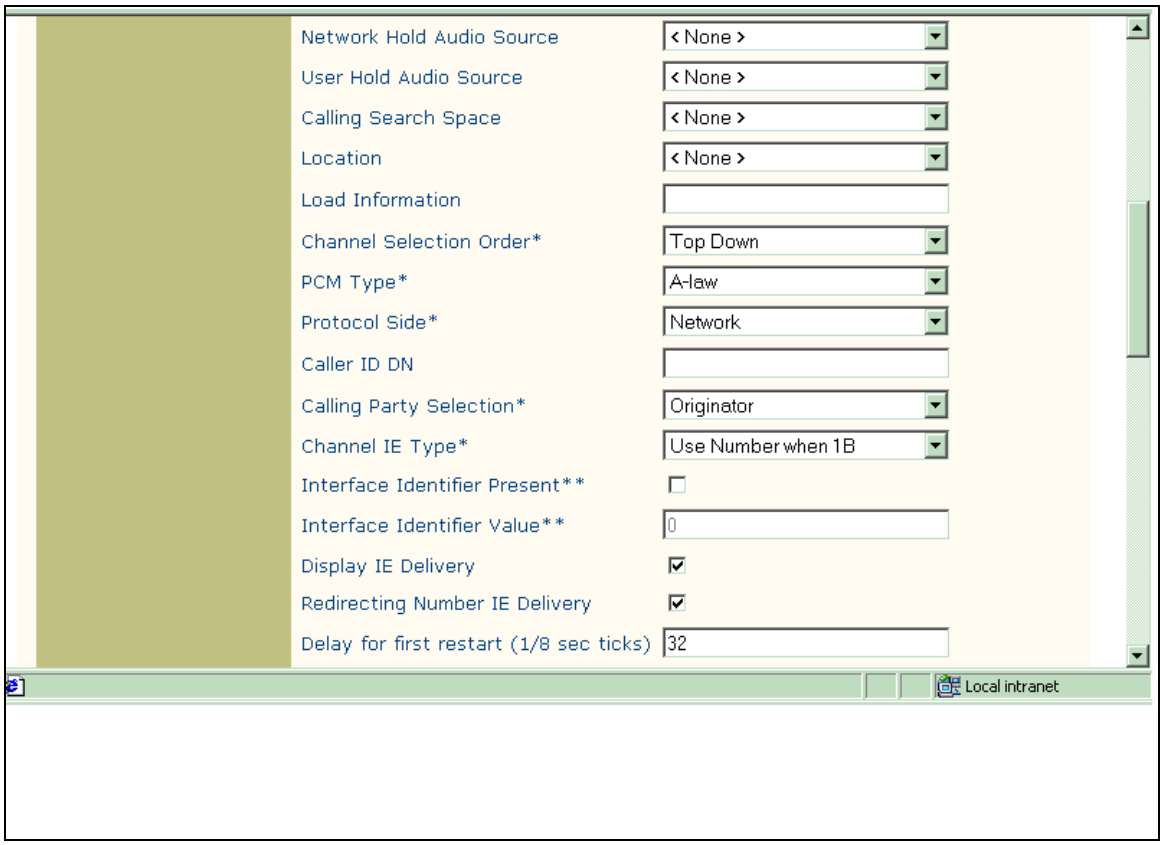
The following is the configuration of the Cisco Catalyst 6608 voice gateway connected to the Lucent Definity G3si PBX E1 PRI interface.

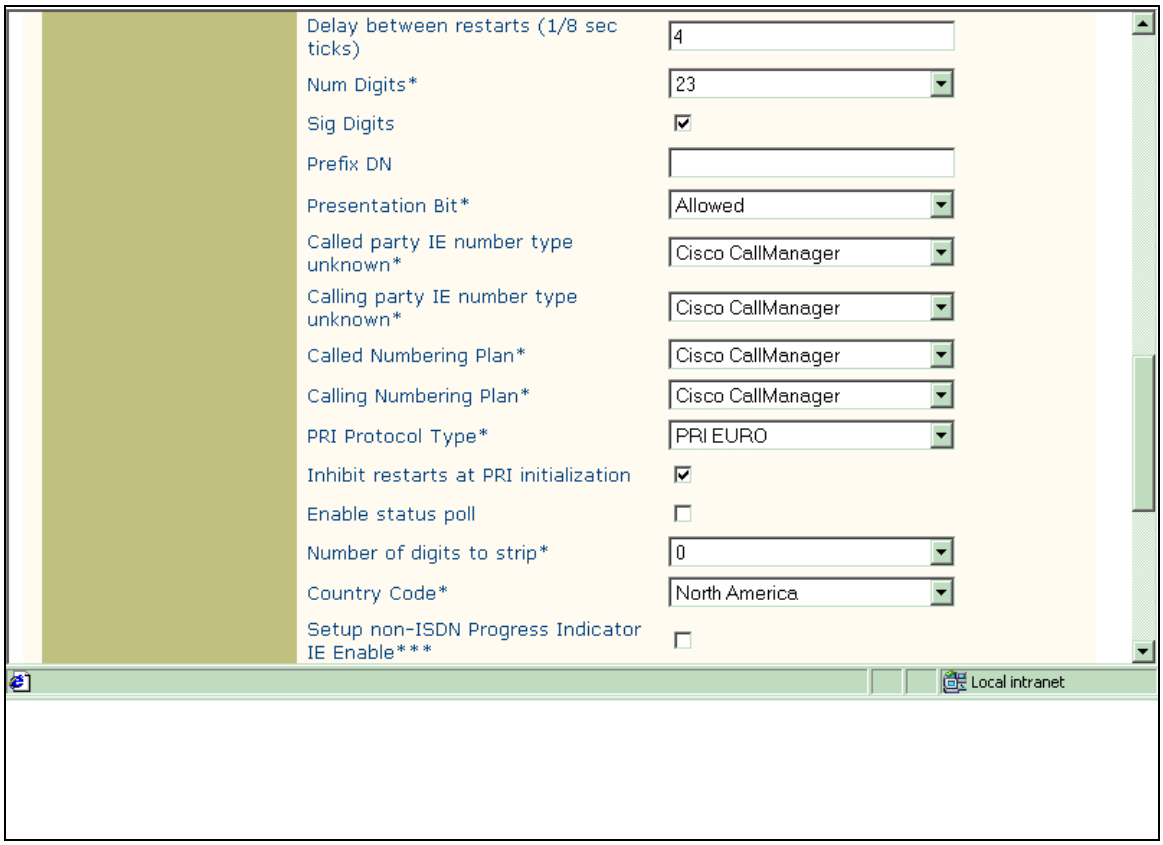
Cisco Catalyst 6608 Voice Gateway Version Information

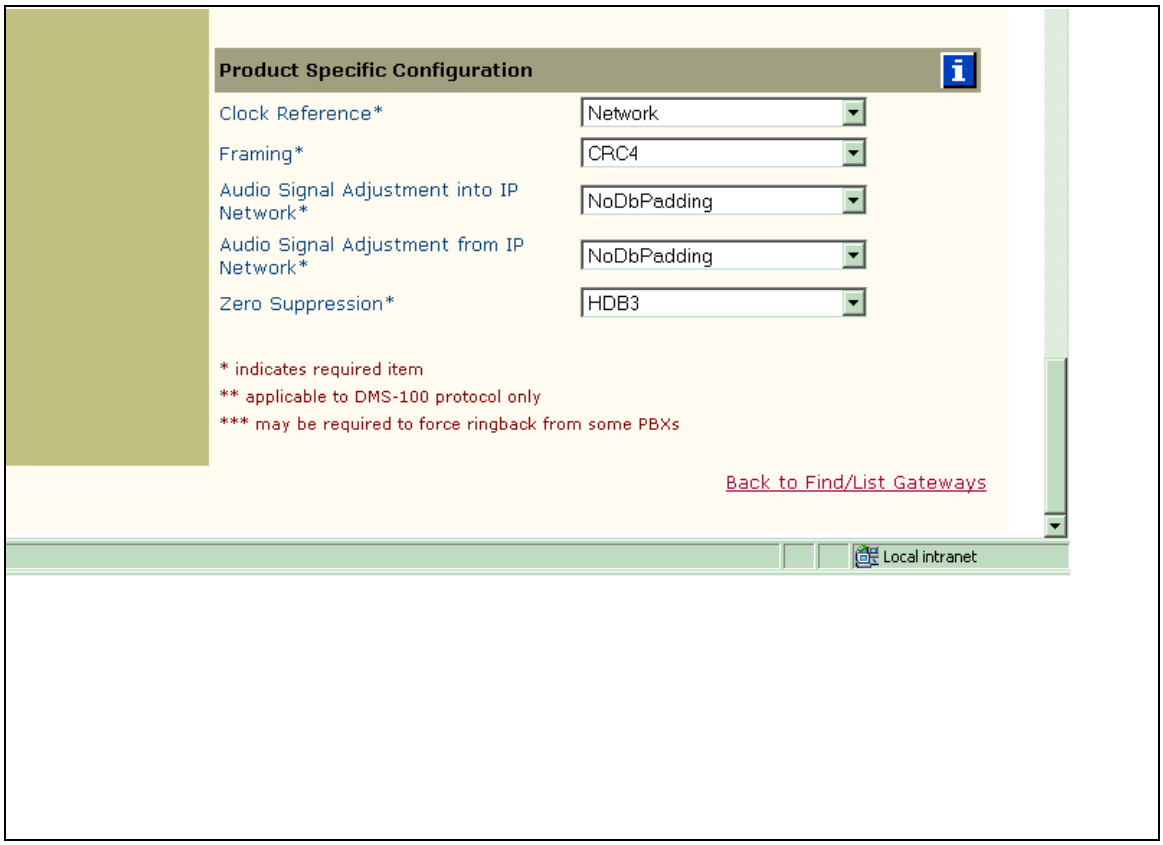
- Software: Cisco IOS™ Version 5.5(6a)
- Hardware: Cisco Catalyst 6608

6608 Gateway Configuration

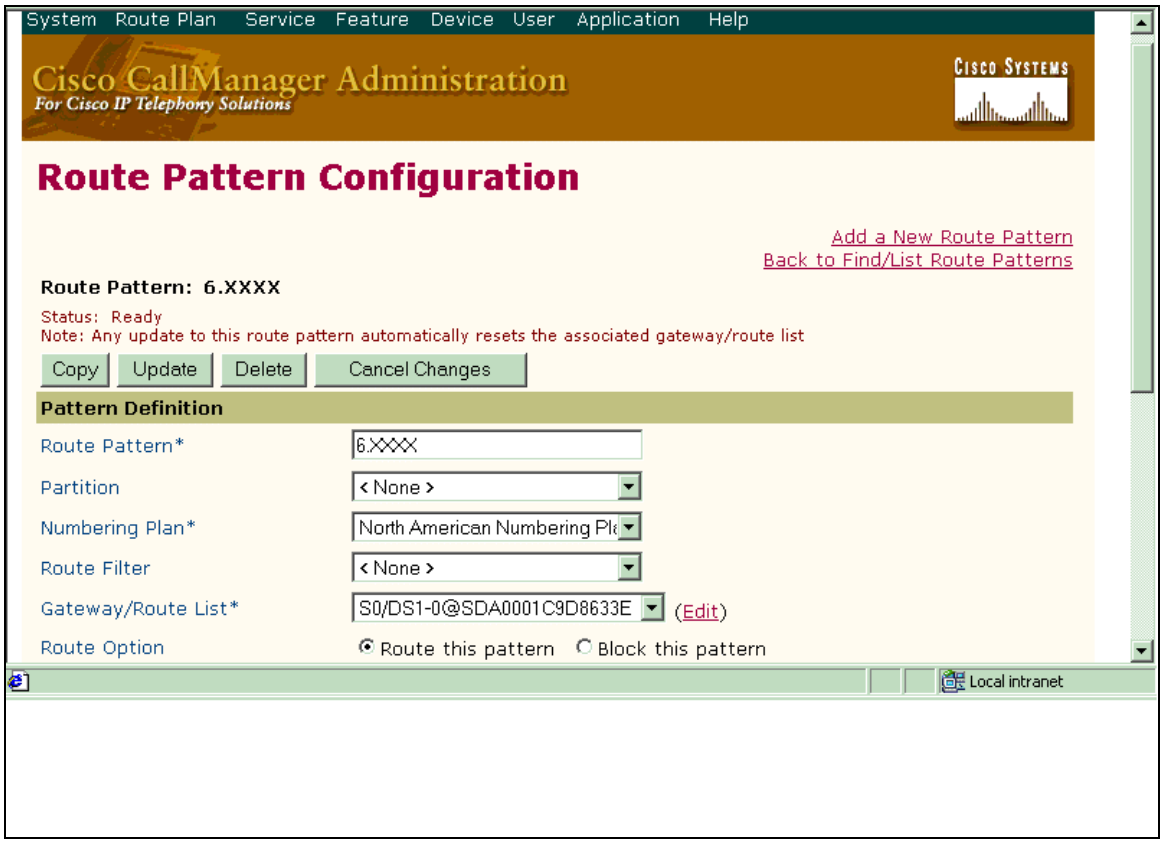


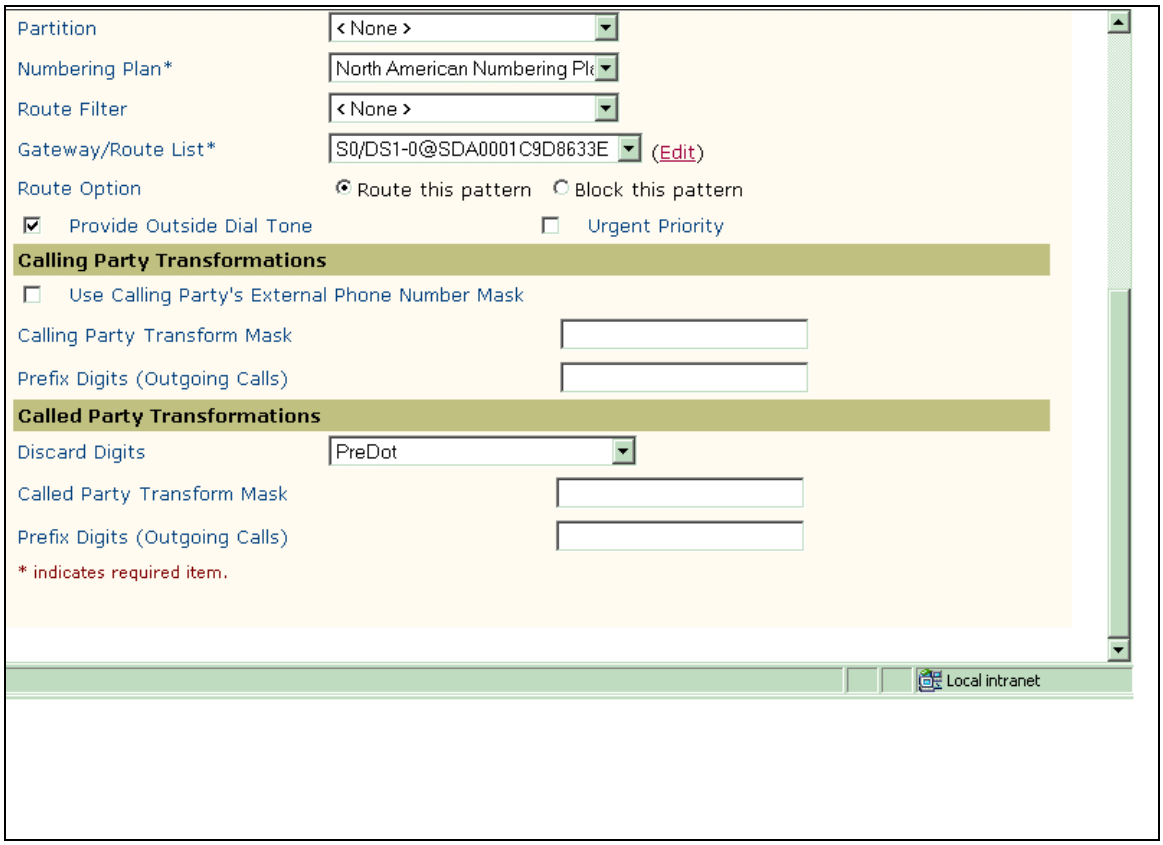

Network Hold Audio Source
< None >
User Hold Audio Source
< None >
Calling Search Space
< None >
Location
< None >
Load Information
Channel Selection Order*
Top Down
PCM Type*
A-law
Protocol Side*
Network
Caller ID DN
Calling Party Selection*
Originator
Channel IE Type*
Use Number when 1B
Interface Identifier Present**
Interface Identifier Value**
0
Display IE Delivery
Redirecting Number IE Delivery
Delay for first restart (1/8 sec ticks)
32
Local intranet


Delay between restarts (1/8 sec ticks)
4
Num Digits*
23
Sig Digits
Prefix DN
Presentation Bit*
Allowed
Called party IE number type unknown*
Cisco CallManager
Calling party IE number type unknown*
Cisco CallManager
Called Numbering Plan*
Cisco CallManager
Calling Numbering Plan*
Cisco CallManager
PRI Protocol Type*
PRI EURO
Inhibit restarts at PRI initialization
Enable status poll
Number of digits to strip*
0
Country Code*
North America
Setup non-ISDN Progress Indicator IE Enable***
Local intranet


Product Specific Configuration
Clock Reference*
Network
Framing*
CRC4
Audio Signal Adjustment into IP Network*
NoDbPadding
Audio Signal Adjustment from IP Network*
NoDbPadding
Zero Suppression*
HDB3
* indicates required item
** applicable to DMS-100 protocol only
*** may be required to force ringback from some PBXs
Back to Find/List Gateways
Local intranet

Route Pattern Configuration





Cisco Catalyst 6608 Voice Gateway Sample Configuration

Configure in the following sequence:

1. DS1 Circuit Pack
2. Signaling Group
3. Trunk Group
4. Uniform Dialing Plan

Caveats

- When calling from Cisco 7960 IP phone to Lucent digital phone, Calling/Called Number is displayed on both phones after the call is answered as expected. Cisco 7960 phone however only displays “Called Number” even though Lucent sends both “Connected Name” and “Connected Number” in the connect message.
- When calling from Lucent digital phone to Cisco 7960 IP phone, IP phone displays Connected Number after the call is answered. Lucent phone however did not display "Called Name" or "Called Number".