

Application Note

Product: Gateway

Purpose: Provide information on connecting Ascom VoIP Gateway to the Lucent Definity G3si (Version 6) and Avaya S8700

Date: 5/7/2008

Connecting ASCOM VoIP Gateway to the Lucent Definity G3si (Version 6) or S8700

1. Overview

Intended Audience: Lucent Definity G3si PBX System Administrators or persons having extensive knowledge of the Lucent Definity G3si PBX.

This document contains configuration information that may be used as a guide to configure the VoIP Gateway to the Lucent Definity G3si PBX. Figure 1 below provides a general overview of the PBX connections. The following sections are provided:

Gateway Connection –

Configuration information is available in this document.

Using Audix's Hunt Group for Voice Mail Delivery to Lucent's Definity Audix-

Configuration information is available in this document.

Using Automated Attendant for Voice Mail Delivery to Lucent's Definity Audix –

Configuration information is available in this document.

Using Outcalling to Dial Message Waiting Pager Number-

Configuration information is available in this document.

Using Uniform Dialing Plan to Route Calls to the Gateway-

Configuration information is available in this document.

Connection settings for S8700

Provides information about settings in S8700

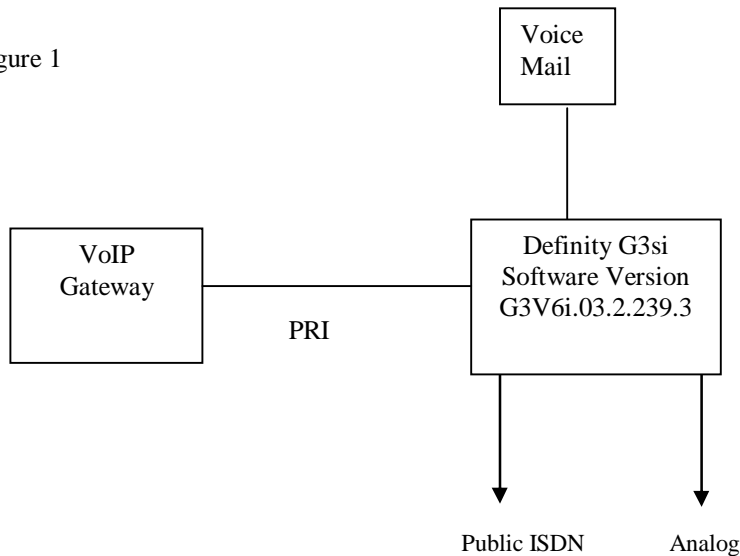
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Figure 1



!!!! PLEASE READ THE PARAGRAPH BELOW !!!!

A majority of the information presented within this document was captured from print screens of the Lucent's Definity G3si PBX and Audix voice mail system. **Red** and black characters will be used within the print screens to indicate important fields for the current frame and default settings respectively. **The installation process will be easier if the data form on page 7 is completed before the installation process begins.** Data requests from the data form will appear as **Blue** text. Class of Service (COS) and Class of Restriction (COR) values defined within this document are for reference only. The PBX administrator is responsible for assigning the appropriate COS or COR settings. Examples of COS and COR forms referenced within this document will appear in the Appendix.

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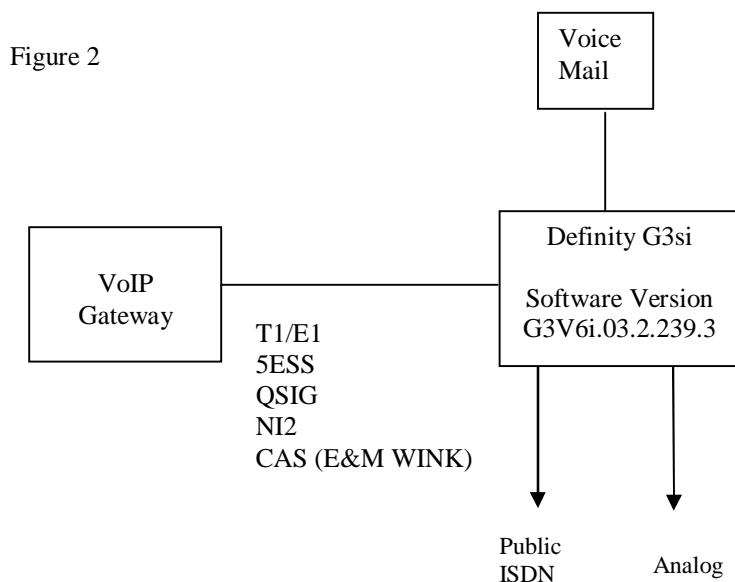
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2. Technical Discussion

2.1. Connection



Important General information:

VoIP gateway usually receives clock from PBX.

VoIP Gateway only supports Extended Superframe, B8ZS.

VoIP Gateway does NOT support shared D-Channel. Each PRI will need it's own signaling group in the PBX.

PRI-1 and PRI-2 are used towards PBX if there is no standby gateway.

PRI-1 and PRI-3 are used towards the PBX if there is a standby gateway
PRI-2 and PRI-4 in the Master are connected to PRI-1 and PRI-3 in the Standby gateway

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ascom
Ascom® Wireless Solutions Inc.

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Audix may not be able to trigger MWI icon on ASCOM handsets. This is because the MWI string must be done as an outdial from Audix, with the string similar to:

“3599-*1*2245”, where:

3599 = MWI object in Gateway

- = pause

1 = MWI Set

2245 = Extension to be triggered.

Audix uses the “*” as a pause, and so MWI may not work unless Audix can send * as a DTMF digit after connect. There is a work-around at the end of this document in section 2.4 detailing how to implement this.

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VoIP Gateway PRI Setup

➤ PRI settings

- PRIx → Physical, Protocol, Interop:

Input Field Name	Data fill	Meaning
NT Mode	Ticked or unticked	Ticked = Network Unticked = User
Clock Mode	Derived from NT Mode Master Slave	Derived = follow NT mode settings Master = provide clock Slave = receive clock
Swap TX/RX	Ticked/Unticked	According to cable connection
Do not use for Sync	Unticked Ticked	Use as Sync source Do not use as Sync Source
U-Law	Ticked	
T-1	Ticked Unticked	Ticked = T-1 Unticked = E-1
CAS	Unticked Ticked	PRI Mode E&M Wink Start mode
No CRC4	Unticked	
Relay Off	Unticked	
Loopback	Unticked	
TX Level	0DB	Yes
Send Flags on FDL	Unticked	
Protocol	5ESS NI QSIG ECMA1 QSIG ECMA2 T-1 Wink	5ESS NI2 QSIG ECMA1 (Channels 1-15, 17-31) QSIG ECMA2 (Channels 1-30 or 1-23 for T-1) Wink Start E&M T-1 Span
Assign Channels from top	Ticked/unticked	Ticked = channels are assigned 1 – 23 Unticked = channels are assigned 23 - 1
Suppress HLC	Unticked	
Suppress FTY	Unticked	
Suppress Subaddress	Unticked	
No Restart	Unticked	
No Overlap Receive	Unticked	
No Disc	Unticked	
Annex-N	Unticked	
Volume	Unticked	
CR Length	Default	
CHI Length	Default	

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Go to Gateway → Interfaces → PRI-1

Name = PBX Link 1

Disable = Unticked

Tones = US

Interface Maps = Manual

Registration = H323

Coder

Preference = G711u

Frame = 30

Exclusive = unticked

SC = unticked

Enable T.38 = unticked

Enable PCM = unticked

Registration

Primary Gatekeeper Address = 127.0.0.1

Secondary Gatekeeper Address = blank

Gatekeeper ID = blank

Name = EXTERN (as defined under PBX → General → Route External Calls to:

Number = blank

Password = blank

Supplementary Services = unticked

Dynamic Group = blank

Direct Dial = blank

Locked white list = blank

Go to Gateway → Routes

There should be two routes created by the system:

Edit the routes by clicking on the arrow pointing right under the “TO” column.

Tick the box labeled QSIG Interworking if the Avaya is sending Caller’s Name to ASCOM. ASCOM will only send names using QSIG or NI2, not with 5ESS.

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Data Form

DATA#	DATA VALUE	DATA VALUE EXAMPLE	DESCRIPTION	FORM
Data1		01A15	DS1 Location: [cabinet(1-3); carrier(A-E); slot (0-20 example:01A15 Recommended card type = TN464 F	DS1 Circuit Pack
Data2		3	Signaling Group	Signaling Group
Data3		1001	Data Extension	Data Module
Data4		30002	Maintenance Extension	Data Module
Data5		4	Physical Channel	Data Module
Data6		541	TAC	Trunk Group
Data7		4321	System Guest Password: Needed when section 2.4 will be used for voice mail delivery	System-Parameters Features (Audix-Voice Mail System)
Data8		32333	Automated Attendant's Hunt Group Extension #	Hunt Group
Data9		2	Coverage Path for Automated Attendant	Coverage Path
Data10		32999	Audix's Hunt Group Extension #	Hunt Group
Data11		1	# of Ports to be Used for Outcalling	System-Parameters Outcalling (Audix VMS)
Data12		226	RNX code to be used by UDP	Uniform Dialing Plan
Data13		4	Route between G3si and Gateway	Pattern Number
Data14		3	Trunk to Gateway	Trunk Group
Data15		1	Automated Attendant's Hunt Group #	Hunt Group
Data16		97	Audix's Hunt Group #	Hunt Group

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The forms listed below are needed to connect a 5ESS PRI between the G3si and the Gateway:

DS1 Circuit Pack
Signaling Group
Synchronization Plan
Trunk Group
ISDN Numbering - Private

Using the G3si's console or remote terminal enter the *commands* listed below and refer to the captured print screens for examples:

add ds1 Data1

DS1 CIRCUIT PACK	
Page 1 of 2	
Location: Data1	Name: Locally Defined
Bit Rate: 1.544	Line Coding: b8zs
Line Compensation: 1	Framing Mode: esf
Signaling Mode: isdn-pri	Interface: network
Connect: pbx	Country Protocol: 1
	Protocol Version: a
Interface Companding: mulaw	CRC? n
Idle Code: 11111111	
DCP/Analog Bearer Capability: 3.1kHz	
Slip Detection? n	Near-end CSU Type: other

Page 2 of 2	
ESF DATA LINK OPTIONS	
Network Management Protocol: tabs	
Send ANSI-T1.403 One-Second Performance Reports? n	
Far-end CSU Address: b	

Note: Interface: identifies the side of the connection for the D-Channel. Avaya = network, then IGWP NT Mode = Unticked. Peer-Master = QSIG Master. Protocol Version a = 5ESS, b = QSIG

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add signaling-group Data2

SIGNALING GROUP

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Group Number: **Data2**

Associated Signaling? **y**

Max number of NCA TSC: 0

Primary D-Channel: **Data124**

Max number of CA TSC: 0

Trunk Group for NCA TSC:

Trunk Group for Channel Selection:

Supplementary Service Protocol: **a**

Accept default settings for pages 2 to N

Note: Supplementary Service Protocol a = 5ESS, b= QSIG

display synchronization

SYNCHRONIZATION PLAN

Page 1 of 2

Stratum: 4

Primary: Previously Defined Secondary:

Location

Name

Slip

Data1

Locally Defined

n

NOTE: DS1 and BRI TRUNK sources result in stratum 4, type II synchronization

add trunk-group Data14

TRUNK GROUP

Page 1 of N

Group Number: **Data14**

Group Type: **isdn**

CDR Reports: **y**

Group Name: **Locally Defined**

COR: **Locally defined (Example 95)**

TN: 1 TAC: **Data6**

Direction: **two-way**

Outgoing Display? **y**

Dial Access? **n**

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: 6

Codeset to Send TCM,Lookahead: 6

Max Message Size to Send: 260

Charge Advice: none

Supplementary Service Protocol: **a**

Digit Handling (in/out): enbloc/enbloc

Trunk Hunt: cyclical

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

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

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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 Hop Dgt? n Send Connected Number: y
Suppress # Outpulsing? n Numbering Format: private
Outgoing Channel ID Encoding: preferred UII IE Treatment: service-provider
Send UCID? n
Send Codeset 6/7 LAI IE? y

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INCOMING CALL HANDLING TREATMENT

Service/ Feature	Called Len	Called Number	Del	Insert	Per Call CPN/BN	Night Serv
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Page 4 of N

TRUNK GROUP

Administered Members (min/max): 1/23

GROUP MEMBER ASSIGNMENTS

Total Administered Members: 23

Port	Code	Sfx	Name	Night	Sig Grp
1: Data101	TN464	F			Data2
2: Data102	TN464	F			Data2
3: Data103	TN464	F			Data2
4: Data104	TN464	F			Data2
5: Data105	TN464	F			Data2
6: Data106	TN464	F			Data2
7: Data107	TN464	F			Data2
8: Data108	TN464	F			Data2
9: Data109	TN464	F			Data2
10: Data110	TN464	F			Data2
11: Data111	TN464	F			Data2
12: Data112	TN464	F			Data2
13: Data113	TN464	F			Data2
14: Data114	TN464	F			Data2
15: Data115	TN464	F			Data2
16: Data116	TN464	F			Data2
17: Data117	TN464	F			Data2
18: Data118	TN464	F			Data2

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19: Data119	TN464 F	Data2
20: Data120	TN464 F	Data2
21: Data121	TN464 F	Data2
22: Data122	TN464 F	Data2
23: Data123	TN464 F	Data2

Accept default settings for remaining pages

***** Refer to section 2.5 for voice mail configuration information. *****

2.2. Connection via E1 Q-SIG

The forms listed below are needed to connect an E1 Q-Sig PRI between the G3si and the Gateway:

- DS1 Circuit Pack
- Signaling Group
- Synchronization Plan
- Trunk Group
- ISDN Numbering - Private

Using the G3si's console or remote terminal enter the *commands* listed below and refer to the captured print screens for examples.

add ds1 Data1

DS1 CIRCUIT PACK		Page 1 of 2
Location: Data1	Name: Locally Defined	
Bit Rate: 2.048	Line Coding: hdb3	
Signaling Mode: isdn-pri	Interface: peer-slave	
Connect: pbx	Peer Protocol: Q-SIG	
	Side: b	
Interface Companding: ulaw	CRC? y	
Idle Code: 11111111		
DCP/Analog Bearer Capability: 3.1kHz		
Slip Detection? n	Near-end CSU Type: other	
		Page 2 of 2
ESF DATA LINK OPTIONS		
Network Management Protocol: tabs		
Send ANSI-T1.403 One-Second Performance Reports? n		

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Far-end CSU Address: b

add signaling-group Data2

SIGNALING GROUP

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Group Number: **Data2**

Associated Signaling? **y**

Max number of NCA TSC: 0

Primary D-Channel: **Data116**

Max number of CA TSC: 0

Trunk Group for NCA TSC:

Trunk Group for Channel Selection:

Supplementary Service Protocol: **b**

Accept default settings for remaining pages

display synchronization

SYNCHRONIZATION PLAN

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Stratum: 4

Primary: Previously Defined Secondary:

Location

Name

Slip

Data1

Locally Defined

n

NOTE: DS1 and BRI TRUNK sources result in stratum 4, type II synchronization

Accept default settings for page 2

add trunk-group next

TRUNK GROUP

Page 1 of N

Group Number: **Data14**

Group Type: **isdn** CDR Reports: **y**

Group Name: Locally Defined

COR: **Locally defined (example 95)** TN: 1 TAC: **Data6**

Direction: **two-way**

Outgoing Display? **y**

Dial Access? **n**

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: 6

Codeset to Send TCM,Lookahead: 6

Max Message Size to Send: 260

Charge Advice: none

Supplementary Service Protocol: **b**

Digit Handling (in/out): enbloc/enbloc

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Trunk Hunt: cyclical
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? n
Answer Supervision Timeout: 0

Page 2 of N

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 Hop Dgt? n Send Connected Number: y
Suppress # Outpulsing? n Numbering Format: private
Outgoing Channel ID Encoding: preferred UII IE Treatment: service-provider
Send UCID? n
Send Codeset 6/7 LAI IE? y

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INCOMING CALL HANDLING TREATMENT

Service/ Feature	Called Len	Called Number	Del	Insert	Per Call CPN/BN	Night
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TRUNK GROUP

Administered Members (min/max): 1/23

GROUP MEMBER ASSIGNMENTS

Total Administered Members: 23

Port	Code	Sfx	Name	Night	Sig Grp
1: Data101	TN464	F			Data2
2: Data102	TN464	F			Data2
3: Data103	TN464	F			Data2
4: Data104	TN464	F			Data2
5: Data105	TN464	F			Data2
6: Data106	TN464	F			Data2
7: Data107	TN464	F			Data2
8: Data108	TN464	F			Data2
9: Data109	TN464	F			Data2
10: Data110	TN464	F			Data2
11: Data111	TN464	F			Data2
12: Data112	TN464	F			Data2
13: Data113	TN464	F			Data2

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14: Data114	TN464 F	Data2
15: Data115	TN464 F	Data2
16: Data117	TN464 F	Data2
17: Data118	TN464 F	Data2
18: Data119	TN464 F	Data2
19: Data120	TN464 F	Data2
20: Data121	TN464 F	Data2
21: Data122	TN464 F	Data2
22: Data123	TN464 F	Data2
23: Data124	TN464 F	Data2
24: Data125	TN464 F	Data2
25: Data126	TN464 F	Data2
26: Data127	TN464 F	Data2
27: Data128	TN464 F	Data2
28: Data129	TN464 F	Data2
29: Data130	TN464 F	Data2
30: Data131	TN464 F	Data2

Accept default settings for remaining pages

change isdn private-numbering

ISDN NUMBERING - PRIVATE FORMAT

Network Level: * 0
Level 2 Code:
Level 1 Code:

PBX Identifier:
Deleted Digits: 0

- * Use 0 whenever the NPI is PNP and the TON is local
- Use 1 whenever the NPI is PNP and the TON is Regional 1
- Use 2 whenever the NPI is PNP and the TON is Regional 2

***** Refer to section 2.4 for voice mail configuration information. *****

2.3. Connection via T1 Q-SIG

The forms listed below are needed to connect a T1 Q-Sig PRI between the G3si and the Gateway:

- DS1 Circuit Pack
- Signaling Group
- Synchronization Plan
- Data Module
- Interface Links
- Processor Channel
- Trunk Group
- ISDN Numbering - Private

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Using the G3si's console or remote terminal enter the *commands* listed below and refer to the captured print screens for examples:

add ds1 Data1

DS1 CIRCUIT PACK		Page 1 of 2
Location: Data1	Name: Locally Defined	
Bit Rate: 1.544	Line Coding: b8zs	
Line Compensation: 1	Framing Mode: esf	
Signaling Mode: isdn-pri		
Connect: pbx	Interface: peer-slave	
	Peer Protocol: Q-SIG	
	Side: b	
	CRC? n	
Interface Companding: mulaw		
Idle Code: 11111111		
DCP/Analog Bearer Capability: 3.1kHz		
Slip Detection? n	Near-end CSU Type: other	

add signaling-group next

SIGNALING GROUP			Page 1 of N
Group Number: Data2	Associated Signaling? y	Max number of NCA TSC: 0	
	Primary D-Channel: Data1	Max number of CA TSC: 0	
		Trunk Group for NCA TSC:	
Trunk Group for Channel Selection:			
Supplementary Service Protocol: b			
Accept default settings for pages 2 to N			

display synchronization

SYNCHRONIZATION PLAN			Page 1 of 2
Stratum: 4			
Primary: Previously Defined	Secondary:		
Location	Name	Slip	
Data1	Locally Defined	n	
NOTE: DS1 and BRI TRUNK sources result in stratum 4, type II synchronization			
Accept default settings for page 2			

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add trunk-group next

TRUNK GROUP

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Group Number: **Data14** Group Type: **isdn** CDR Reports: y
Group Name: **Locally Defined** COR: **Locally defined (95)** TN: 1 TAC: **Data6**
Direction: two-way Outgoing Display? **y**
Dial Access? n 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: 6 Codeset to Send TCM,Lookahead: 6
Max Message Size to Send: 260 Charge Advice: none
Supplementary Service Protocol: **b** Digit Handling (in/out): enbloc/enbloc
Trunk Hunt: cyclical
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? n
Answer Supervision Timeout: 0

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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 Hop Dgt? n Send Connected Number: **y**
Suppress # Outpulsing? n Numbering Format: **private**
Outgoing Channel ID Encoding: preferred UUI IE Treatment: service-provider
Send UCID? n
Send Codeset 6/7 LAI IE? y

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INCOMING CALL HANDLING TREATMENT

Service/ Feature	Called Len	Called Number	Del	Insert	Per Call CPN/BN	Night Serv
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TRUNK GROUP

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Administered Members (min/max): 1/23

GROUP MEMBER ASSIGNMENTS

Total Administered Members: 23

Port	Code	Sfx	Name	Night	Sig Grp
1: Data101	TN464	F			Data2
2: Data102	TN464	F			Data2
3: Data103	TN464	F			Data2
4: Data104	TN464	F			Data2
5: Data105	TN464	F			Data2
6: Data106	TN464	F			Data2
7: Data107	TN464	F			Data2
8: Data108	TN464	F			Data2
9: Data109	TN464	F			Data2
10: Data110	TN464	F			Data2
11: Data111	TN464	F			Data2
12: Data112	TN464	F			Data2
13: Data113	TN464	F			Data2
14: Data114	TN464	F			Data2
15: Data115	TN464	F			Data2
16: Data116	TN464	F			Data2
17: Data117	TN464	F			Data2
18: Data118	TN464	F			Data2
19: Data119	TN464	F			Data2
20: Data120	TN464	F			Data2
21: Data121	TN464	F			Data2
22: Data122	TN464	F			Data2
23: Data123	TN464	F			Data2

change isdn private-numbering

ISDN NUMBERING - PRIVATE FORMAT

Network Level: * 0

Level 2 Code:

Level 1 Code:

PBX Identifier:

Deleted Digits: 0

- * Use 0 whenever the NPI is PNP and the TON is local
- Use 1 whenever the NPI is PNP and the TON is Regional 1
- Use 2 whenever the NPI is PNP and the TON is Regional 2

***** Refer to section 2.4 for voice mail configuration information. *****

2.4. Using Audix's Hunt Group for Voice Mail Delivery to Lucent's Definity Audix

Audix's Hunt Group extension number should be used as the Voice Mail Address for the Gateway using T1 or E1 Q-SIG, however calls to unavailable wireless users will only receive the System Greeting. The formatting information listed below should be used as a **guide** for configuring the Gateway's database.

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VM CFB/CFNRSetting: 3299,32017#4321#, where 3299 is the VM access number, “,” is a Wait for Connect, 32017 is a voice mailbox and 4321# is Audix's system guest password (See note below)

Note: To illuminate the Message Waiting lamp on a desk phone (PBX extension), the desk phone's extension number must be a subscriber within the voice mail system and defined in the voice mail subaddress field of the associated Gateway end user.

Example: (Assumption: PBX Object is set for CFB and CFNR configured for voice mail.)

Gateway User = 74123 PBX extension or desk phone = 32017 Default Voice Mail = 32999

If a call is routed to unavailable user 74123, the calling party should be redirected to the address 32999. Once the connection is established, the remaining digits are sent in DTMF mode into the Automated Attendant as DTMF characters (32017#4321#). DTMF string "32017#4321#" will allow a voice mail message to be left for voice mail subscriber 32017. Whenever a voice mail message is left for 32017 the message-waiting lamp will illuminate on the desk phone and an MWI should be directed to mobile 74123 via the Outcalling feature. See section 2.6 for more information related to Outcalling.

The system guest password can be defined by logging into Audix, entering the command shown below, defining a System Guest Password, and defining a Minimum Password Length:

change system-parameters features

SYSTEM-PARAMETERS FEATURES			Page 1 of 3
AUDIX	Active	Alarms: wA Thresholds: none	Logins: 1
LOG-IN PARAMETERS			
Login Retries: 3			Consecutive Invalid Attempts: 18
System Guest Password: Data7			Minimum Password Length: 4
PASSWORD AGING LIMITS (DAYS)			
	Subscriber	Administrator	
	Mailboxes	Login	
Expiration Interval:	0	0	(0 disables expiration)
Minimum Age Before Changes:	0	0	
Expiration Warning:	0	0	(0 disables warnings)
INPUT TIME LIMITS (SECONDS)			
Normal: 60	Full Mailbox Timeout: 5		Wait (*W): 180
	Between Digits at Auto-attendant or Standalone Menu:	3	(3-12)
DISCONNECT OPTIONS			
Quick Silence Disconnect? n		Silence Limit? 30	(5-30 seconds)
Tone Based Disconnect? n			

Application Note

Product: Gateway

Purpose: Provide information on connecting Ascom VoIP Gateway to the Lucent Definity G3si (Version 6) and Avaya S8700

Date: 5/7/2008

AUDIX Active Alarms: wA Thresholds: none Logins: 1

Page 2 of 3

SYSTEM-PARAMETERS FEATURES

MISCELLANEOUS PARAMETERS

Broadcast Mailbox Extension:
System Prime Time, Start: 08:00 End: 17:00
Weekly Backup Enabled? y Locals Only? n
Increment(l/s), Rewind: s Advance: s

FEATURE ACTIVATION

Traffic Collection? y
Name Record by Subscriber? y
Multiple Personal Greetings? y
End of Message Warning? y Warning Time (seconds): 15
Priority on Call Answer? n

CALL TRANSFER OUT OF AUDIX

Transfer Type: basic Transfer Restriction: subscribers
Covering Extension:

enter command: change system-parameters features

AUDIX Active Alarms: wA Thresholds: none Logins: 1

Page 3 of 3

SYSTEM-PARAMETERS FEATURES

ANNOUNCEMENT SETS

System: us-eng Administrative:

RESCHEDULING INCREMENTS FOR UNSUCCESSFUL MESSAGE DELIVERY

Incr 1: 0 days 0 hrs 5 mins Incr 2: 0 days 0 hrs 15 mins
Incr 3: 0 days 0 hrs 30 mins Incr 4: 0 days 1 hrs 0 mins
Incr 5: 0 days 2 hrs 0 mins Incr 6: 0 days 6 hrs 0 mins
Incr 7: 1 days 0 hrs 0 mins Incr 8: 2 days 0 hrs 0 mins
Incr 9: 7 days 0 hrs 0 mins Incr10: 14 days 0 hrs 0 mins

Please note that DID numbers from the PBX will be re-assigned to Gateway users and the PBX extension will be assigned a new number (ghost number). The ghost number will be used to define a voice mail box for the desk and mobile phone. To allow users to forward comments to voice mail messages, each subscriber's voice mailbox should be addressed by name instead of extension. Changes to the Class of Service form will effect all assigned users. Enter the following commands from Audix's console or remote terminal:

Application Note

Product: Gateway

Purpose: Provide information on connecting Ascom VoIP Gateway to the Lucent Definity G3si
(Version 6) and Avaya S8700

Date: 5/7/2008

change cos X, where X is the class-of-service applied to new Audix subscribers

AUDIX Active Alarms: wA Thresholds: none

Logins: 1
Page 1 of 2

CLASS OF SERVICE

Name: Default

COS Number: X

Modified? y

Addressing Format: name

System Multilingual is OFF Call Answer Primary Annc.

Login Announcement Set: System

Call Answer Language Choice? n

Set: System

Call Answer Secondary Annc. Set: System

PERMISSIONS

Type: call-answer

Announcement Control? n

Outcalling? y

Priority Messages? n

Broadcast: none

IMAPI Access? n

IMAPI Voice File Transfer? n

Accept defaults for page 2

Application Note

Product: Gateway

Purpose: Provide information on connecting Ascom VoIP Gateway to the Lucent Definity G3si (Version 6) and Avaya S8700

Date: 5/7/2008

After changing the COS form, verify that each subscriber's addressing format is name. A subscriber's addressing format may also be changed on an individual basis by typing *change subscriber X*, where X is the subscriber's voice mail box.

Verify the following from the Gateway's Service Areas:

PBX, Objects, Show:

CF setting

CFB = Call Forward busy

CFNR = Call Forward, no response/no Answer

CFU = Call Forward Unconditional

Using a single “,” indicates that the dialed digit string should wait for connect and then sent the remaining digits in DTMF mode. Using more than one “,” is a times, where each “,” is one second. Setting the “Only Not” parameter to “#” will prevent the user from erasing the settings.

The i75 handsets have two profiles, Normal, and Charger. These profiles are sent to the Gateway when the phone changes modes, and the possibility is there that the handset can erase the Gateway settings. Using the Only Not = # eliminates this possibility.

In the handset, when editing the Normal or Charge Profile for CFU/CFB/CFNR settings, press and hold the “*” key until a “P” is displayed. The “P” will be translated into “,” in the gateway.

2.5. Using Automated Attendant for Voice Mail Delivery to Lucent's Definity Audix

Voice mail delivery via the Automated Attendant should only be used on 5ESS PRIs. See **format** and **example** listed below:

Note: To illuminate the Message Waiting lamp on a desk phone (PBX extension), the desk phone must be a subscriber within the voice mail system and defined in the voice mail subaddress field of the associated Gateway end user.

Example: (Assumption: Stations within Active Profile are unavailable and the Absent Profile is configured for voice mail.)

Gateway User = 74123 PBX extension or desk phone = 32017 Default Voice Mail = 32999

If a call is routed to unavailable user 74123, the calling party will be redirected to the directory number defined within the CF settings of 74123. Whenever a voice mail message is left for 32017 the message-waiting lamp will illuminate on the desk phone and an MWI will be directed to mobile 74123 via the Outcalling feature. See section 2.6 for more information related to Outcalling. The voice mail access field will be used whenever a Gateway user attempts to retrieve voice mail via the Personal Assistant.

Commands from G3si's (PBX) console or remote terminal

Application Note

Product: Gateway

Purpose: Provide information on connecting Ascom VoIP Gateway to the Lucent Definity G3si
(Version 6) and Avaya S8700

Date: 5/7/2008

add coverage path next

COVERAGE PATH

Page 1 of 1

Coverage Path Number: [Data9](#)

Hunt after Coverage? n

Next Path Number: Linkage

COVERAGE CRITERIA

Station/Group Status	Inside Call	Outside Call	
Active?	y	y	
Busy?	y	y	
Don't Answer?	y	y	Number of Rings: 1
All?	y	y	
DND/SAC/Goto Cover?	y	y	

COVERAGE POINTS

Terminate to Coverage Pts. with Bridged Appearances? n

Point1: [hData16](#)

Point2:

Point3:

Point4:

Point5:

Point6:

add hunt-group Data15

HUNT GROUP

Page 1 of N

Group Number: [Data8](#)

ACD? n

Group Name: [auto attendant](#)

Queue? y (optional)

Group Extension: [Locally defined](#)

Vector? n

Group Type: ucd-mia

Coverage Path: [Data9](#)

TN: 1

Night Service Destination:

COR: [Locally defined](#)

MM Early Answer? n

Security Code: optional

ISDN Caller Display:

Queue Length: 1

Calls Warning Threshold: Port:

Time Warning Threshold: Port:

Accept default settings for pages 2 to N

Application Note

Product: Gateway

Purpose: Provide information on connecting Ascom VoIP Gateway to the Lucent Definity G3si (Version 6) and Avaya S8700

Date: 5/7/2008

Commands from Audix's (Voice Mail System) console or remote terminal

add subscriber X, where X is the Automated Attendant's number

SUBSCRIBER		Page 1 of N
AUDIX	Active Alarms: wA Thresholds: none	Logins: 1
Name:	auto attendant	Locked? n
Extension:	Data8	Password: Locally Defined
COS:	default	Miscellaneous:
Switch Number:	Locally defined	Covering Extension:
Community ID:	Locally defined	Broadcast Mailbox? n
The Name field on this page must match the Group Name field of Hunt Group form above. COS will change from default to custom when PERMISSIONS Type is set to auto-attendant.		
SUBSCRIBER CLASS OF SERVICE PARAMETERS		Page 2 of N
AUDIX	Active Alarms: wA Thresholds: none	Logins: 1
SUBSCRIBER CLASS OF SERVICE PARAMETERS		
Addressing Format:	extension	Login Announcement Set: System
System Multilingual is	OFF	Call Answer Primary Annc. Set: System
Call Answer Language Choice?	n	Call Answer Secondary Annc. Set: System
PERMISSIONS Type:	auto-attendant	Announcement Control? n
Outcalling? y	Priority Messages? n	Broadcast: none
IMAPI Access? n	IMAPI Voice File Transfer? n	
INCOMING MAILBOX	Order: fifo	Category Order: nuo
Retention Times (days), New:	10 Old: 10	Unopened: 10
OUTGOING MAILBOX	Order: fifo	Category Order: unfda
Retention Times(days), File Cab:	10 Delivered/Nondeliverable: 5	
Voice Mail Message (seconds),	Maximum Length: 300	Minimum Needed: 32
Call Answer Message (seconds),	Maximum Length: 120	Minimum Needed: 8
End of Message Warning Time (seconds):		
Maximum Mailing Lists: 25	Total Entries in all Lists: 250	
Mailbox Size (seconds), Maximum:	1200	Minimum Guarantee: 0
SUBSCRIBER AUTOMATED ATTENDANT MENU		Page 3 of 3
AUDIX	Active Alarms: wA Thresholds: none	Logins: 1
SUBSCRIBER AUTOMATED ATTENDANT MENU		
Allow Call Transfer? y		

Application Note

Product: Gateway

Purpose: Provide information on connecting Ascom VoIP Gateway to the Lucent Definity G3si (Version 6) and Avaya S8700

Date: 5/7/2008

Button	Extension	Treatment	Comment
1:	e	call-answer	Access to all 10000 series voice mail boxes
2:	e	call-answer	Access to all 20000 series voice mail boxes
3:	e	call-answer	Access to all 30000 series voice mail boxes
4:	e	call-answer	Access to all 40000 series voice mail boxes
5:	e	call-answer	Access to all 50000 series voice mail boxes
6:	e	call-answer	Access to all 60000 series voice mail boxes
7:	e	call-answer	Access to all 70000 series voice mail boxes
8:	e	call-answer	Access to all 80000 series voice mail boxes
9:	e	call-answer	Access to all 90000 series voice mail boxes
0:	e	call-answer	Access to all 00000 series voice mail boxes

Timeout:

Length Of Time-Out On Initial Entry : 5

After completing all forms, the Automated Attendant's personal greeting can be administered by dialing into Audix and entering extension# (automated attendant's number), password#, "3", "1", "1", and "1". The personal greeting for the Automated Attendant should describe the buttons defined on the SUBSCRIBER AUTOMATED ATTENDANT MENU of the subscribers page (shown above).

The DID number for PBX extensions will be removed from the PBX and re-assigned to Gateway users. The PBX extension will be assigned a new number (ghost number). The ghost number will be used to define a voice mail box for the desk and mobile phone. To allow users to forward comments to voice mail messages, each subscriber's voice mail box should be addressed by name instead of extension. Enter the following commands from Audix's console or remote terminal:

change cos X, where X is the class-of-service applied to new Audix subscribers

AUDIX	Active	Alarms: wA	Thresholds: none	Logins: 1
				Page 1 of 2
CLASS OF SERVICE				
Name: Default	COS Number: X		Modified? y	
Addressing Format: name				
System Multilingual is OFF		Call Answer Primary Annc.	Login Announcement Set: System	
Call Answer Language Choice? n			Set: System	
			Call Answer Secondary Annc. Set: System	
PERMISSIONS	Type: call-answer		Announcement Control? n	
Outcalling? y	Priority Messages? n		Broadcast: none	
IMAPI Access? n	IMAPI Voice File Transfer? n			
Accept defaults for page 2				

After changing the COS form, verify that each Audix subscriber's addressing format is name.

Verify the following from the Gateway Service Areas:

Application Note

Product: Gateway

Purpose: Provide information on connecting Ascom VoIP Gateway to the Lucent Definity G3si (Version 6) and Avaya S8700

Date: 5/7/2008

PBX, Objects, Show:

CF setting

CFB = Call Forward busy

CFNR = Call Forward, no response/no Answer

CFU = Call Forward Unconditional

Using a single “,” indicates that the dialed digit string should wait for connect and then sent the remaining digits in DTMF mode. Using more than one “,” is a times, where each “,” is one second. Setting the “Only Not” parameter to “#” will prevent the user from erasing the settings.

The i75 handsets have two profiles, Normal, and Charger. These profiles are sent to the Gateway when the phone changes modes, and the possibility is there that the handset can erase the Gateway settings. Using the Only Not = # eliminates this possibility.

In the handset, when editing the Normal or Charge Profile for CFU/CFB/CFNR settings, press and hold the “*” key until a “P” is displayed. The “P” will be translated into “,” in the gateway.

2.6. Using Outcalling to Dial Message Waiting Pager Number

The Outcalling feature can be used whenever Message Waiting Notification is not a feature of the PBX. The Outcalling feature can be used to page the Gateway whenever a new message is entered into a users voice mailbox. The commands for administering Outcalling on Audix are listed below:

change system-parameters outcalling

SYSTEM-PARAMETERS OUTCALLING				Page 1 of 1
AUDIX	Active	Alarms: wA	Thresholds: none	Logins: 1
Outcalling Active? y				
Start Time	End Time	Interval	Maximum Simultaneous	
(hh:mm)	(hh:mm)	(hh:mm)	Ports	
1: 00:00	23:59	00:15	Data 1	
2: :	:	:		
3: :	:	:		
Initial Delay (mins): 0				
Maximum Number Digits: 29				
Maximum Number of Unsuccessful Outcall Attempts: 4 (Blank for no limit)				

display subscriber X, where X is a voice mailbox; verify that each subscriber’s outcalling option is set to “y”

SUBSCRIBER				Page 1 of 2
AUDIX	Active	Alarms: wA	Thresholds: none	Logins: 1

Application Note

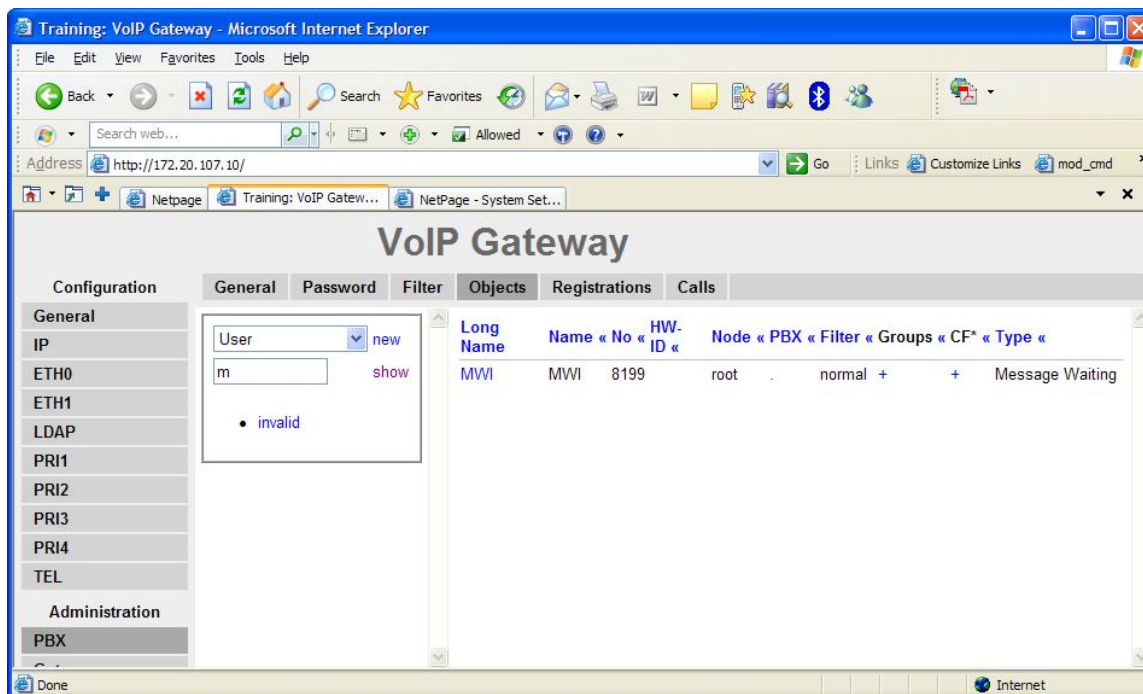
Product: Gateway

Purpose: Provide information on connecting Ascom VoIP Gateway to the Lucent Definity G3si (Version 6) and Avaya S8700

Date: 5/7/2008

The VoIP gateway has a Message Waiting Indication Object.

Under PBX → Objects, you create a new MWI Object, assign a name and a phone number (preferably non-did). This example uses 8199



To use the object, when the voice mail receives a deposit for the subscriber, it performs some sort of remote notification. Audix calls this Outcalling.

The voice mail would be programmed to dial the MWI number, and after connect send DTMF digits to activate the icon. The DTMF string must consist of *1*xxxx, where *1* instructs the VoIP Gateway to activate the icon, and xxxx is the target handset.

In Audix the “*” represents a 1 second pause, and so the MWI fails, as we would only see 819918100.

To resolve this in Audix, assign Outcalling as a feature to the Ascom handsets that have a mailbox on the Audix system. This is required, not optional.

Once outcalling is available, set the outcall number. You may have to log in as the mailbox user and use the telephone interface to do so. (Option 6 once you get logged in).

This example, the mailbox (ext. 8105) outcalling is set to dial 8199***8105. 8199 is the MWI number, *** is a three second pause, 8105 is the Ascom handset.

On the VoIP Gateway, go to Gateway → Routes

Application Note

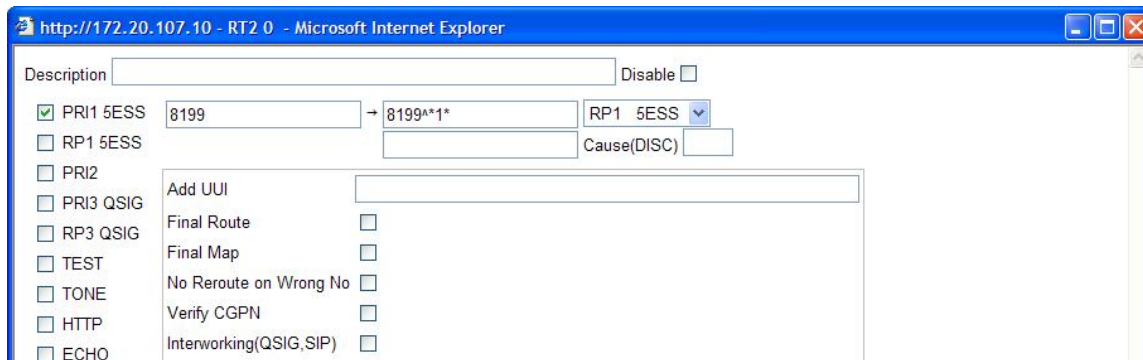
Product: Gateway

Purpose: Provide information on connecting Ascom VoIP Gateway to the Lucent Definity G3si (Version 6) and Avaya S8700

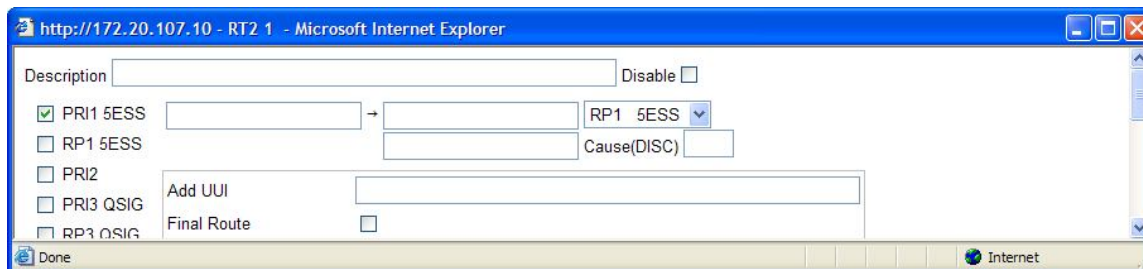
Date: 5/7/2008

On the incoming PRI route(s) two maps are needed.

The first MAP should show call from PRI1 with Number In = 8199, and Number = 8199^*1*, with a destination = RP1



The second map should show the call coming from PRI1 with Number In = blank, Number = blank, and destination = RP1



When the call comes in from Audix with 8199, it is translated to 8199^*1*. The “^” specifies to wait for connect and switch to DTMF. The call will be connected to MWI, the mode is switched to DTMF and dials *1*. Then the Audix pauses will expire and it will send 8105 in DTMF. The Gateway sees 8199*1*8105, and triggers the icon on the phone.

The second MAP is a catch all for incoming calls that were not addressed to 8199...i.e. everything else.

Note:

The Audix cannot turn off the MWI.

If a user checks messages from their desk phone, then the icon will remain on the Ascom phone. However, when the icon is triggered on the Ascom Phone, it gives an option to “listen” to messages or “Call” voice mail.

For IP-DECT, under the DECT → Supplementary Services, turn on the services, and enter the VM Call back number (this examples uses 8500) in both the Message Center Number and the Local Clear of MWI field. The

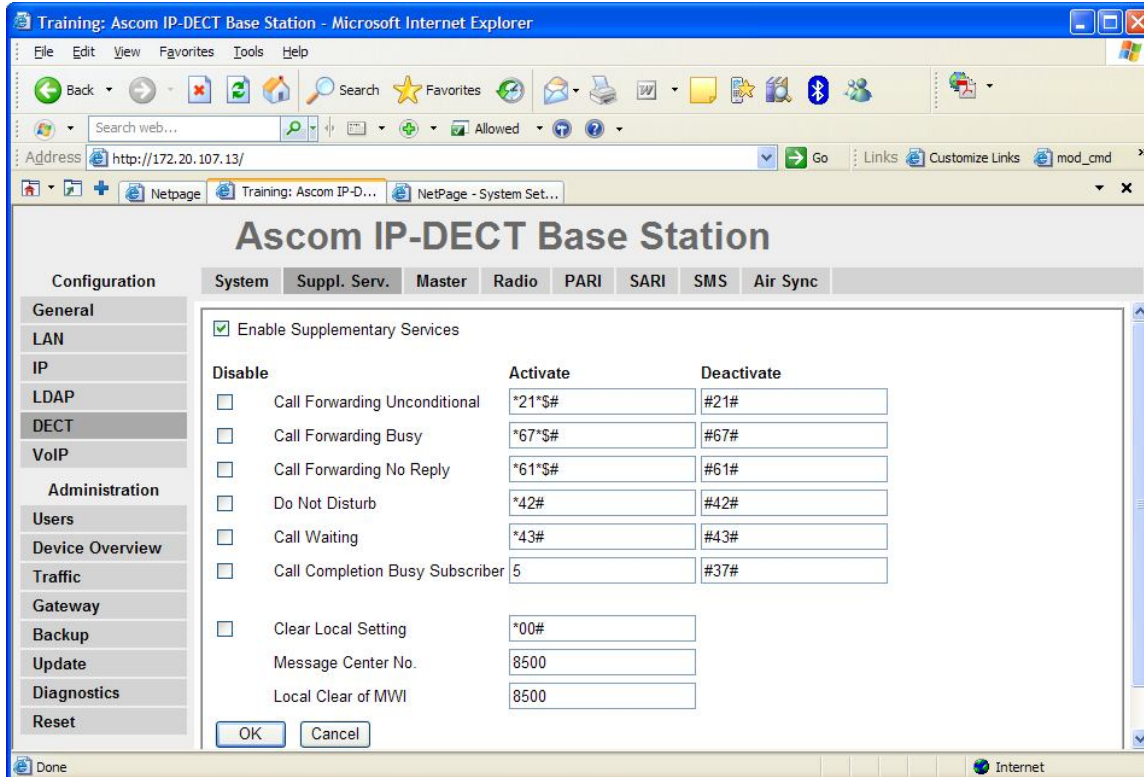
Application Note

Product: Gateway

Purpose: Provide information on connecting Ascom VoIP Gateway to the Lucent Definity G3si (Version 6) and Avaya S8700

Date: 5/7/2008

Message center number is contained in the SMS notification, and the Local Clear erases the icon when this number is dialed.



Application Note

Product: Gateway

Purpose: Provide information on connecting Ascom VoIP Gateway to the Lucent Definity G3si (Version 6) and Avaya S8700

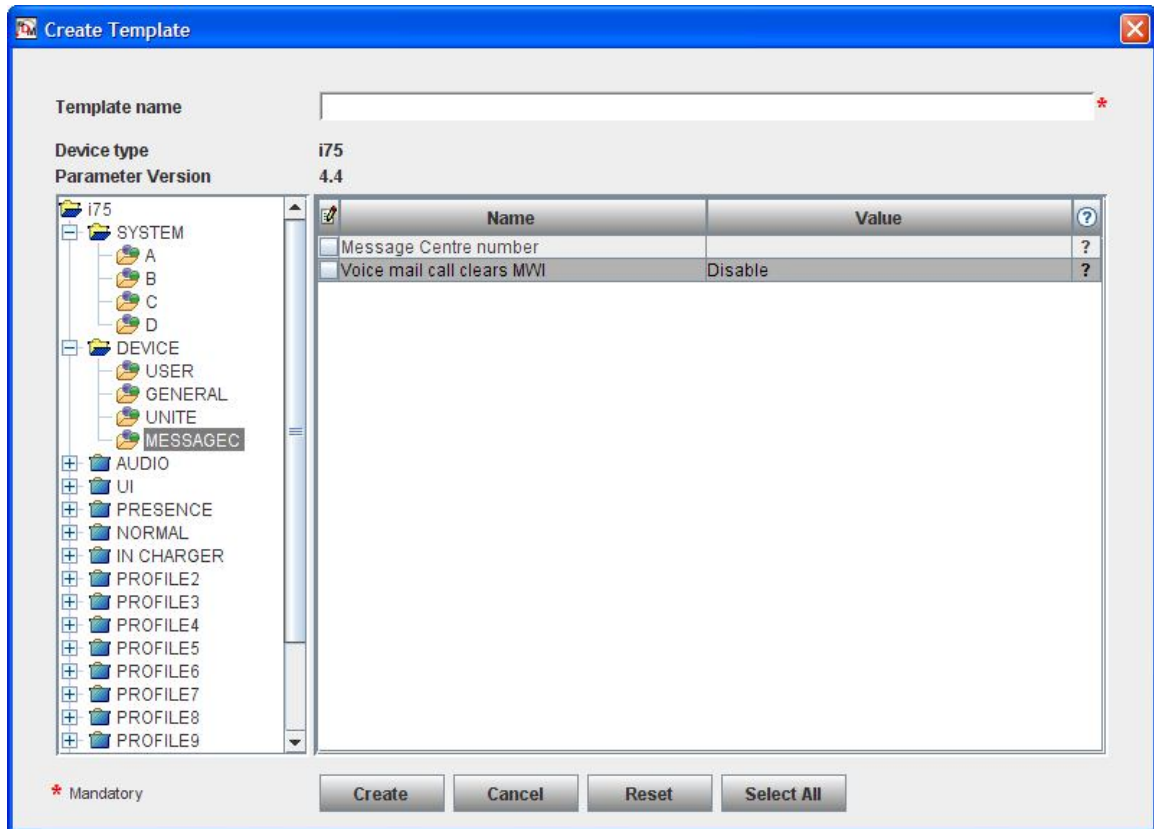
Date: 5/7/2008

For i75 phones, the settings are in the PDM:

Go to Device → Messagec

Enter the Voice Mail Cal Back Number in the Message Centre Number

Enable the Voice Mail Call clears MWI



Application Note

Product: Gateway

Purpose: Provide information on connecting Ascom VoIP Gateway to the Lucent Definity G3si (Version 6) and Avaya S8700

Date: 5/7/2008

2.7. Using Uniform Dialing Plan to route calls to the Gateway (Optional PBX feature)

Uniform Dial Plan (UDP) can be used to provide 4 - or 5- digit dialing between 2 or more switches. The Uniform Dialing Plan, Dial Plan, and Automatic Alternate Route (AAR) forms will be used to configure UDP.

To verify that UDP is active, log into the G3si and type "display system-parameters customer-options". On the 2nd page of the form, "y" should be on the right side of the Uniform Dialing Plan feature. **If UDP is not active, calls can be routed to the Gateway by using Automatic Route Selection (ARS), please refer to APPENDIX B for administration information.**

The *commands* listed below should be entered from a G3si's console or remote terminal:

display dialplan

Verify Uniform dialing Plan is 4- or 5- digit

DIAL PLAN RECORD

Page 1 of 1

North American Area Code: Locally Defined

Local Node Number: 1

ARS Prefix 1 Required? Locally defined

ETA Node Number:

Uniform Dialing Plan: **5-digit**

ETA Routing Pattern:

change UDP X, where X is a 1 to 5 digit number that describes the number series or specific numbers for Gateway users.

Example: For Gateway users belonging to the 74000-74999 series (5 digit plan).
Type change UDP 74 to make changes for that entire range.

UNIFORM DIALING PLAN

Page 1 of 2

Ext Codes: 74ddx

Ext Code: 7xxxx Type:

Ext Code: 74xxx Type: **AARCode** Data12

dd	Type	dd	Type	dd	Type	dd	Type	dd	Type
----	------	----	------	----	------	----	------	----	------

0x:	1x:	2x:	3x:	4x:
-----	-----	-----	-----	-----

00:	10:	20:	30:	40:
-----	-----	-----	-----	-----

01:	11:	21:	31:	41:
-----	-----	-----	-----	-----

02:	12:	22:	32:	42:
-----	-----	-----	-----	-----

03:	13:	23:	33:	43:
-----	-----	-----	-----	-----

04:	14:	24:	34:	44:
-----	-----	-----	-----	-----

05:	15:	25:	35:	45:
-----	-----	-----	-----	-----

06:	16:	26:	36:	46:
-----	-----	-----	-----	-----

07:	17:	27:	37:	47:
-----	-----	-----	-----	-----

08:	18:	28:	38:	48:
-----	-----	-----	-----	-----

09:	19:	29:	39:	49:
-----	-----	-----	-----	-----

Application Note

Product: Gateway

Purpose: Provide information on connecting Ascom VoIP Gateway to the Lucent Definity G3si (Version 6) and Avaya S8700

Date: 5/7/2008

Accept default settings for page 2

change aar analysis Data12

AAR DIGIT ANALYSIS TABLE

Page 1 of 1

Partitioned Group Number: 1 Percent Full: 7

Dialed String	Total Mn	Rte Mx	Rte Pat	Call Type	Nd Num	ANI Rq	Dialed String	Total Mn	Rte Mx	Rte Pat	Call Type	Nd Num	ANI Rq
Data12	7	7	Data13	aar	locally defined	n							n

Application Note

Product: Gateway

Purpose: Provide information on connecting Ascom VoIP Gateway to the Lucent Definity G3si (Version 6) and Avaya S8700

Date: 5/7/2008

change route-pattern Data13, The insert field should be blank for 4- digit plans while the 5- digit plan requires a digit to be inserted (See explanation below).

UDP can only use 7 digits, which includes a 3- digit RNX code (private network location) and 4- digits, which identifies the extension to be reached. If a 5- digit plan is being used, UDP will only recognize the last four digits of the 5- digit number (222 74123 would be represented as 222 4123 in UDP). To create the number needed by the Gateway 222 should be deleted and a 7 inserted via the route pattern form.

Pattern Number: Data13									
Page 1 of 1									
Grp. No.	FRL	NPA	Pfx Mrk	Hop Lmt	Toll List	No. Del Digits	Inserted Digits	IXC user	
1:	Data14	Locally Defined				3	Locally Defined		
	BCC VALUE	TSC	CA-TSC		ITC	BCIE	Service/Feature	Numbering Format	LAR
	0 1 2 3 4 W		Request						
1:	y y y y n	n			rest			*lev0-pvt	none

* Note: If lev0-pvt does not appear as an option for Numbering Format, unk-unk may be selected. When using the unk-unk numbering format, verify that the Numbering Plan Indicator (NPI) and Type of Number (TON) for the PBX range on the Gateway side is being converted to private (MNPI) and local (MTON). Per call restrictions can be applied by the Gateway using Trunk Call Discrimination (TCD).

3. Solution

N/A

4. Reference

1. Installation and Basic Maintenance Manual
2. Definity AUDIX System Feature Descriptions 585-300-206 Comcode 107241903 issue 4, Sept 1994
3. Definity ECS release 6 Administration and Feature Description 555230522 Comcode 108136201 issue3, Jan 1998

Application Note

Product: Gateway
 Purpose: Provide information on connecting Ascom VoIP Gateway to the Lucent Definity G3si (Version 6) and Avaya S8700
 Date: 5/7/2008

APPENDIX A

CLASS OF SERVICE																	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Auto Callback	n	n	y	n	y	n	y	n	y	n	y	n	y	n	y	n	
Call Fwd-All Calls			n	n	y	y	y	n	n	y	n	n	y	y	n	n	y
Data Privacy	n	n	y	n	n	y	y	y	n	n	n	n	y	y	y		
Priority Calling	n	n	y	n	n	n	n	n	n	y	y	y	y	y	y		
Console Permissions			n	n	y	n	n	n	n	n	n	n	n	n	n	n	n
Off-hook Alert	n	n	y	n	n	n	n	n	n	n	n	n	n	n	n	n	
Client Room	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	
Restrict Call Fwd-Off Net			y	y	y	y	y	y	y	y	y	y	y	y	y	y	y
Call Forwarding Busy/DA	n	n	y	n	n	n	n	n	n	n	n	n	n	n	n	n	
Personal Station Access (PSA)	n	n	y	n	n	n	n	n	n	n	n	n	n	n	n	n	
Extended Forwarding All	n	n	y	n	n	n	n	n	n	n	n	n	n	n	n	n	
Extended Forwarding B/DA	n	n	y	n	n	n	n	n	n	n	n	n	n	n	n	n	
Trk-to-Trk Transfer Override	n	n	y	n	n	n	n	n	n	n	n	n	n	n	n	n	
QSIG Call Offer Originations	n	n	y	n	n	n	n	n	n	n	n	n	n	n	n	n	

CLASS OF RESTRICTION	
	Page 1 of 3
COR Number: 89	
COR Description: Data Modules	
	APLT? y
FRL: 0	
Can Be Service Observed? n	Calling Party Restriction: none
Can Be A Service Observer? n	Called Party Restriction: none
Time of Day Chart: 1	Forced Entry of Account Codes? n
Priority Queuing? n	Direct Agent Calling? n
Restriction Override: none	Facility Access Trunk Test? n
Restricted Call List? n	Can Change Coverage? n
Access to MCT? y	Fully Restricted Service? n
Category For MFC ANI: 7	
Send ANI for MFE? n	
MF ANI Prefix:	Automatic Charge Display? n
Hear System Music on Hold? y	PASTE (Display PBX Data on Phone)? n
	Can Be Picked Up By Directed Call Pickup? n
	Can Use Directed Call Pickup? n

	Page 2 of 3
CLASS OF RESTRICTION	

Application Note

Product: Gateway

Purpose: Provide information on connecting Ascom VoIP Gateway to the Lucent Definity G3si (Version 6) and Avaya S8700

Date: 5/7/2008

CALLING PERMISSION (Enter "y" to grant permission to call specified COR)

0? y	12? y	24? y	36? y	48? y	60? y	72? y	84? y
1? y	13? y	25? y	37? y	49? y	61? n	73? y	85? y
2? y	14? y	26? y	38? y	50? y	62? y	74? y	86? y
3? y	15? y	27? y	39? y	51? y	63? y	75? y	87? y
4? y	16? y	28? y	40? y	52? y	64? y	76? y	88? y
5? y	17? y	29? y	41? y	53? y	65? y	77? y	89? y
6? y	18? y	30? y	42? y	54? y	66? y	78? y	90? y
7? y	19? y	31? y	43? y	55? y	67? y	79? y	91? y
8? y	20? y	32? y	44? y	56? y	68? y	80? y	92? y
9? y	21? y	33? y	45? y	57? y	69? y	81? y	93? y
10? y	22? y	34? y	46? y	58? y	70? y	82? y	94? y
11? y	23? y	35? y	47? y	59? y	71? y	83? y	95? y

Page 3 of 3

CLASS OF RESTRICTION

SERVICE OBSERVING PERMISSIONS

(Enter "y" to grant permission to service observe the specified COR)

0? y	12? y	24? y	36? y	48? y	60? y	72? y	84? y
1? y	13? y	25? y	37? y	49? y	61? y	73? y	85? y
2? y	14? y	26? y	38? y	50? y	62? y	74? y	86? y
3? y	15? y	27? y	39? y	51? y	63? y	75? y	87? y
4? y	16? y	28? y	40? y	52? y	64? y	76? y	88? y
5? y	17? y	29? y	41? y	53? y	65? y	77? y	89? y
6? y	18? y	30? y	42? y	54? y	66? y	78? y	90? y
7? y	19? y	31? y	43? y	55? y	67? y	79? y	91? y
8? y	20? y	32? y	44? y	56? y	68? y	80? y	92? y
9? y	21? y	33? y	45? y	57? y	69? y	81? y	93? y
10? y	22? y	34? y	46? y	58? y	70? y	82? y	94? y
11? y	23? y	35? y	47? y	59? y	71? y	83? y	95? y

CLASS OF RESTRICTION

COR Number: 95

COR Description: Trunk

FRL: 0

Can Be Service Observed? n

Can Be A Service Observer? n

Time of Day Chart: 1

Priority Queuing? n

Restriction Override: none

Restricted Call List? n

APLT? y

Calling Party Restriction: none

Called Party Restriction: none

Forced Entry of Account Codes? n

Direct Agent Calling? n

Facility Access Trunk Test? n

Can Change Coverage? n

Application Note

Product: Gateway

Purpose: Provide information on connecting Ascom VoIP Gateway to the Lucent Definity G3si (Version 6) and Avaya S8700

Date: 5/7/2008

Access to MCT? y Fully Restricted Service? n
Category For MFC ANI: 7
Send ANI for MFE? n
MF ANI Prefix: Automatic Charge Display? n
Hear System Music on Hold? n PASTE (Display PBX Data on Phone)? n
Can Be Picked Up By Directed Call Pickup? n
Can Use Directed Call Pickup? n

Page 2 of 3

CLASS OF RESTRICTION

CALLING PERMISSION (Enter "y" to grant permission to call specified COR)

0? y	12? y	24? y	36? y	48? y	60? y	72? y	84? y
1? y	13? y	25? y	37? y	49? y	61? n	73? y	85? y
2? y	14? y	26? y	38? y	50? y	62? y	74? y	86? y
3? y	15? y	27? y	39? y	51? y	63? y	75? y	87? y
4? y	16? y	28? y	40? y	52? y	64? y	76? y	88? y
5? y	17? y	29? y	41? y	53? y	65? y	77? y	89? y
6? y	18? y	30? y	42? y	54? y	66? y	78? y	90? y
7? y	19? y	31? y	43? y	55? y	67? y	79? y	91? y
8? y	20? y	32? y	44? y	56? y	68? y	80? y	92? y
9? y	21? y	33? y	45? y	57? y	69? y	81? y	93? y
10? y	22? y	34? y	46? y	58? y	70? y	82? y	94? y
11? y	23? y	35? y	47? y	59? y	71? y	83? y	95? y

Page 3 of 3

CLASS OF RESTRICTION

SERVICE OBSERVING PERMISSIONS

(Enter "y" to grant permission to service observe the specified COR)

0? y	12? y	24? y	36? y	48? y	60? y	72? y	84? y
1? y	13? y	25? y	37? y	49? y	61? y	73? y	85? y
2? y	14? y	26? y	38? y	50? y	62? y	74? y	86? y
3? y	15? y	27? y	39? y	51? y	63? y	75? y	87? y
4? y	16? y	28? y	40? y	52? y	64? y	76? y	88? y
5? y	17? y	29? y	41? y	53? y	65? y	77? y	89? y
6? y	18? y	30? y	42? y	54? y	66? y	78? y	90? y
7? y	19? y	31? y	43? y	55? y	67? y	79? y	91? y
8? y	20? y	32? y	44? y	56? y	68? y	80? y	92? y
9? y	21? y	33? y	45? y	57? y	69? y	81? y	93? y
10? y	22? y	34? y	46? y	58? y	70? y	82? y	94? y
11? y	23? y	35? y	47? y	59? y	71? y	83? y	95? y

Application Note

Product: Gateway

Purpose: Provide information on connecting Ascom VoIP Gateway to the Lucent Definity G3si (Version 6) and Avaya S8700

Date: 5/7/2008

CLASS OF SERVICE COS (0)

Page 1 of 2

AUDIX Active Alarms: wA Thresholds: none Logins: 1

Name: Default COS Number: 0 Modified? y
Addressing Format: name

Login Announcement Set: System

System Multilingual is OFF Call Answer Primary Annc. Set: System

Call Answer Language Choice? n Call Answer Secondary Annc. Set: System

PERMISSIONS Type: call-answer Announcement Control? n

Outcalling? y Priority Messages? n Broadcast: none

IMAPI Access? n IMAPI Voice File Transfer? n

AUDIX Active Alarms: wA Thresholds: none Logins: 1

Page 2 of 2

CLASS OF SERVICE

INCOMING MAILBOX Order: fifo Category Order: nuo
Retention Times (days), New: 10 Old: 10 Unopened: 10

OUTGOING MAILBOX Order: fifo Category Order: unfda
Retention Times(days),File Cab: 10 Delivered/Nondeliverable: 5
Voice Mail Message (seconds), Maximum Length: 300 Minimum Needed: 32
Call Answer Message (seconds), Maximum Length: 120 Minimum Needed: 8

End of Message Warning Time (seconds):

Maximum Mailing Lists: 25 Total Entries in all Lists: 250
Mailbox Size (seconds), Maximum: 1200 Minimum Guarantee: 0

CLASS OF RESTRICTION COR Number: 60

Page 1 of 3

COR Description: AUDIX Hunt Group (FRL 0)

FRL: 0 APLT? y
Can Be Service Observed? n Calling Party Restriction: none
Can Be A Service Observer? n Called Party Restriction: none
Time of Day Chart: 1 Forced Entry of Account Codes? n
Priority Queuing? n Direct Agent Calling? n
Restriction Override: none Facility Access Trunk Test? n

Application Note

Product: Gateway

Purpose: Provide information on connecting Ascom VoIP Gateway to the Lucent Definity G3si (Version 6) and Avaya S8700

Date: 5/7/2008

Restricted Call List? n Can Change Coverage? n
Access to MCT? y Fully Restricted Service? n
Category For MFC ANI: 7
Send ANI for MFE? n
MF ANI Prefix: Automatic Charge Display? n
Hear System Music on Hold? y PASTE (Display PBX Data on Phone)? n
Can Be Picked Up By Directed Call Pickup? n
Can Use Directed Call Pickup? n

Page 2 of 3

CLASS OF RESTRICTION

CALLING PERMISSION (Enter "y" to grant permission to call specified COR)

0? y	12? y	24? y	36? y	48? y	60? y	72? y	84? y
1? y	13? y	25? y	37? y	49? y	61? y	73? y	85? y
2? y	14? y	26? y	38? y	50? y	62? y	74? y	86? y
3? y	15? y	27? y	39? y	51? y	63? y	75? y	87? y
4? y	16? y	28? y	40? y	52? y	64? y	76? y	88? y
5? y	17? y	29? y	41? y	53? y	65? y	77? y	89? y
6? y	18? y	30? y	42? y	54? y	66? y	78? y	90? y
7? y	19? y	31? y	43? y	55? y	67? y	79? y	91? y
8? y	20? y	32? y	44? y	56? y	68? y	80? y	92? y
9? y	21? y	33? y	45? y	57? y	69? y	81? y	93? y
10? y	22? y	34? y	46? y	58? y	70? y	82? y	94? y
11? y	23? y	35? y	47? y	59? y	71? y	83? y	95? y

Page 3 of 3

CLASS OF RESTRICTION

SERVICE OBSERVING PERMISSIONS

(Enter "y" to grant permission to service observe the specified COR)

0? y	12? y	24? y	36? y	48? y	60? y	72? y	84? y
1? y	13? y	25? y	37? y	49? y	61? y	73? y	85? y
2? y	14? y	26? y	38? y	50? y	62? y	74? y	86? y
3? y	15? y	27? y	39? y	51? y	63? y	75? y	87? y
4? y	16? y	28? y	40? y	52? y	64? y	76? y	88? y
5? y	17? y	29? y	41? y	53? y	65? y	77? y	89? y
6? y	18? y	30? y	42? y	54? y	66? y	78? y	90? y
7? y	19? y	31? y	43? y	55? y	67? y	79? y	91? y
8? y	20? y	32? y	44? y	56? y	68? y	80? y	92? y
9? y	21? y	33? y	45? y	57? y	69? y	81? y	93? y
10? y	22? y	34? y	46? y	58? y	70? y	82? y	94? y
11? y	23? y	35? y	47? y	59? y	71? y	83? y	95? y

Application Note

Product: Gateway

Purpose: Provide information on connecting Ascom VoIP Gateway to the Lucent Definity G3si (Version 6) and Avaya S8700

Date: 5/7/2008

APPENDIX B

Using Automatic Route Selection (ARS) to Route Calls to the Gateway

Automatic Route Selection may be used to route calls to the Gateway when Uniform Dial Plan (UDP) is not available. PBX users must dial 9 + Personal Number (DUN) to be routed to Gateway users. The commands listed below should be entered from the G3si's console:

change ars analysis X, where X is a string that describes a number series for Gateway users.

ARS DIGIT ANALYSIS TABLE

Page 1 of 1

Partitioned Group Number: 1 Percent Full: 7

Dialed String	Total Mn Mx	Rte Pat	Call Type	Nd Num	ANI Rq
X	5 5	Data13	locl	n	n

The Total Mn and Mx will vary according dial plan (for 4 digit dial plans Mn =4 and Mx = 4)

change route-pattern Data13

Pattern Number: Data13

Page 1 of 1

Grp. No.	FRL	NPA	Pfx Mrk	Hop Lmt	Toll List	No. Del Digits	Inserted Digits	IXC user	
1:	Data14	Locally Defined							
	BCC VALUE	TSC	CA-TSC Request		ITC	BCIE	Service/Feature	Numbering Format	LAR
1:	y y y y n	n			rest			*lev0-pvt	none

* Note: If lev0-pvt does not appear as an option for Numbering Format, unk-unk may be selected.

Application Note

ascom
Ascom® Wireless Solutions Inc.

Product: Gateway

Purpose: Provide information on connecting Ascom VoIP Gateway to the Lucent Definity G3si
(Version 6) and Avaya S8700

Date: 5/7/2008

Using T-1 CAS (E&M Wink Start) integration

In the “Change DS1 xxxx” screen, set the:
Signaling Mode to robbed-bit,
Line Coding = B8ZS,
Framing = ESF

In the “Change Trunk Group” screen, set the
Group Type = TIE,
Trunk Type IN/OUT = wink/wink,
Disconnect Supervision in = yes, out = yes

Application Note

Product: Gateway

Purpose: Provide information on connecting Ascom VoIP Gateway to the Lucent Definity G3si (Version 6) and Avaya S8700

Date: 5/7/2008

Appendix C Avaya S8700

When using an Avaya S8700, the same settings are present, but not on the same screens as the G3. Following are screen shots of the relevant screens for integrating with the S8700:

These shots routes 8100 to the other end using 5ess PRI

Change Dialplan Analysis identifies the Extension series (8100 in this example)

172.20.96.62 - PuTTY

display dialplan analysis Page 1 of 12

DIAL PLAN ANALYSIS TABLE

Percent Full: 4

Dialed String	Total Length	Call Type	Dialed String	Total Length	Call Type	Dialed String	Total Length	Call Type
1	4	ext	81	4	ext			
2	4	ext	82	4	ext			
3	4	ext	83	4	ext			
4	4	ext	84	4	ext			
5	4	ext	85	4	ext			
6	4	ext	86	4	ext			
70	4	ext	87	4	ext			
71	4	ext	88	4	ext			
72	4	ext	89	4	ext			
73	4	ext	9	1	fac			
75	2	ext	*	3	fac			
76	4	ext	#	3	fac			
77	4	ext						
78	4	ext						
80	3	dac						

F1 Cancel F2 Refres F3 Enter F4 Clear F5 Help F6 Edit F7 Next F8 Prev F9 F10

Application Note

Product: Gateway

Purpose: Provide information on connecting Ascom VoIP Gateway to the Lucent Definity G3si
(Version 6) and Avaya S8700

Date: 5/7/2008

Display Route Pattern

Route pattern 254 uses trunk group 1, FRL=0, delete 3 digits. (2548100 becomes 8100)

Observe the QSIG settings on the right.

```
172.20.96.62 - PuTTY
display route-pattern 254
Pattern Number: 254 Pattern Name:

  Grp FRL NPA Pfx Hop Toll No.  Inserted          DCS/  IXC
  No   Mrk Lmt List Del  Digits           QSIG
                                     Intw
1: 1   0           3                n     user
2:           3                n     user
3:           3                n     user
4:           3                n     user
5:           3                n     user
6:           3                n     user

  BCC VALUE  TSC CA-TSC  ITC BCIE Service/Feature BAND  No. Numbering LAR
  0 1 2 3 4 W   Request      Dgts Format
                                     Subaddress
1: y y y y y n n           rest           none
2: y y y y y n n           rest           none
3: y y y y y n n           rest           none
4: y y y y y n n           rest           none
5: y y y y y n n           rest           none
6: y y y y y n n           rest           none

Command:
F1 Cancel F2 Refres F3 Enter F4 Clear F5 Help F6 Edit F7 Next F8 Prev F9 F10
```

Application Note

Product: Gateway

Purpose: Provide information on connecting Ascom VoIP Gateway to the Lucent Definity G3si (Version 6) and Avaya S8700

Date: 5/7/2008

Display Trunk Group

Trunk group 1

Supplementary Service Protocol b = qsig, a = National ISDN (5ESS/N12)

Send Name and Number on page 2

```
172.20.96.62 - PuTTY
display trunk-group 1 Page 1 of 10
TRUNK GROUP
Group Number: 1          Group Type: isdn          CDR Reports: y
Group Name: PRI to House MD      COR: 1          TN: 1          TAC: 801
Direction: two-way          Outgoing Display? y
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: 7      Codeset to Send National IEs: 7
Max Message Size to Send: 260  Charge Advice: none
Supplementary Service Protocol: a  Digit Handling (in/out): enbloc/enbloc
Trunk Hunt: cyclical
Digital Loss Group: 13
Incoming Calling Number - Delete:  Insert:          Format:
Bit Rate: 1200          Synchronization: async  Duplex: full
Disconnect Supervision - In? y  Out? y
Answer Supervision Timeout: 0
```

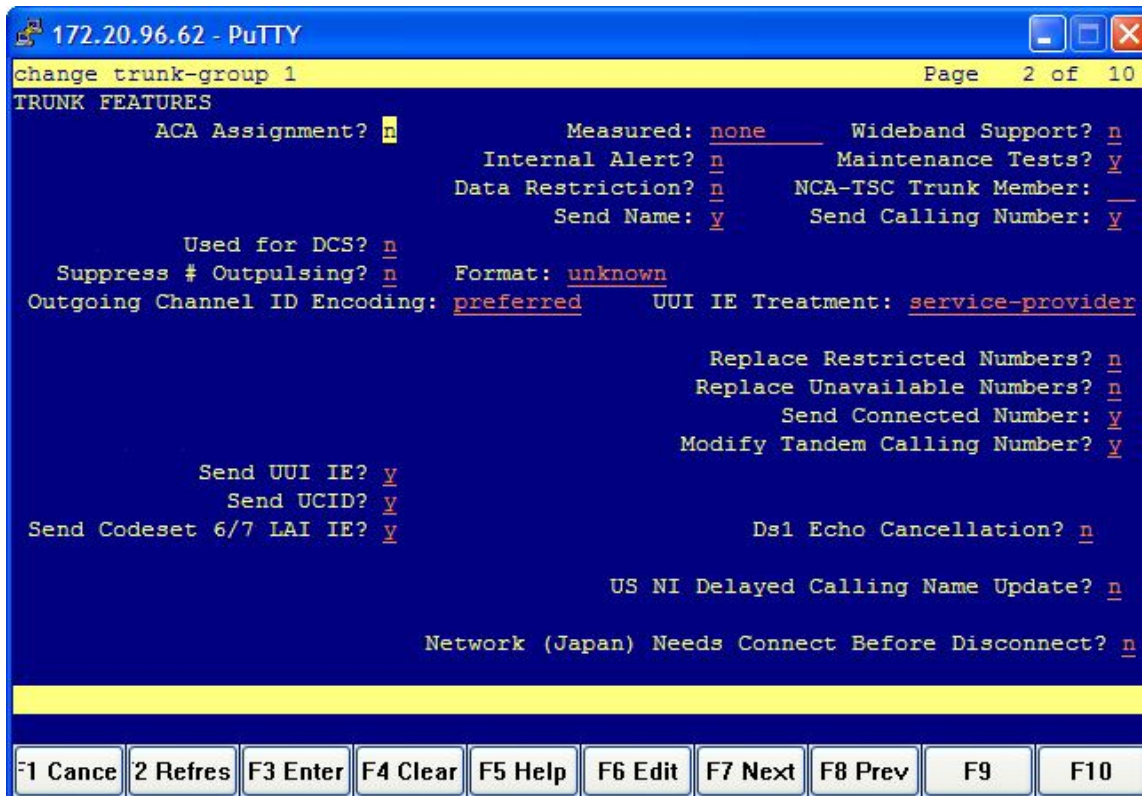
Application Note

Product: Gateway

Purpose: Provide information on connecting Ascom VoIP Gateway to the Lucent Definity G3si
(Version 6) and Avaya S8700

Date: 5/7/2008

...page 2



The screenshot shows a PuTTY terminal window titled "172.20.96.62 - PuTTY". The terminal displays the configuration for "change trunk-group 1" on page 2 of 10. The configuration is titled "TRUNK FEATURES" and lists various settings with their current values and underlined characters for navigation. At the bottom of the terminal, there is a row of function key buttons: F1 Cancel, F2 Refres, F3 Enter, F4 Clear, F5 Help, F6 Edit, F7 Next, F8 Prev, F9, and F10.

```
change trunk-group 1 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: __
  Send Name: y              Send Calling Number: y
  Used for DCS? n
  Suppress # Outpulsing? n   Format: unknown
  Outgoing Channel ID Encoding: preferred  UII IE Treatment: service-provider
  Replace Restricted Numbers? n
  Replace Unavailable Numbers? n
  Send Connected Number: y
  Modify Tandem Calling Number? y
  Send UII IE? y
  Send UCID? y
  Send Codeset 6/7 LAI IE? y   Ds1 Echo Cancellation? n
  US NI Delayed Calling Name Update? n
  Network (Japan) Needs Connect Before Disconnect? n
```

F1 Cancel F2 Refres F3 Enter F4 Clear F5 Help F6 Edit F7 Next F8 Prev F9 F10

Application Note

Product: Gateway

Purpose: Provide information on connecting Ascom VoIP Gateway to the Lucent Definity G3si (Version 6) and Avaya S8700

Date: 5/7/2008

Display Signaling-group

Trunk group uses signaling group 1.

Supplemenatry service protocol b = qsig, a =National (AT&T)

```
172.20.96.62 - PuTTY
change signaling-group 1 Page 1 of 5
SIGNALING GROUP

Group Number: 1
Associated Signaling? y           Max number of NCA TSC: 0
Primary D-Channel: 01A1024       Max number of CA TSC: 0
Trunk Group for NCA TSC:         Trunk Group for Channel Selection: 1
X-Mobility/Wireless Type: NONE
Supplementary Service Protocol: a
T303 Timer(sec): 0

F1 Cancel F2 Refres F3 Enter F4 Clear F5 Help F6 Edit F7 Next F8 Prev F9 F10
```

Application Note

Product: Gateway

Purpose: Provide information on connecting Ascom VoIP Gateway to the Lucent Definity G3si
(Version 6) and Avaya S8700

Date: 5/7/2008

Change DS1 xxxx

DS1

Connect = PBX

Interface = User or Network (5ess / NI2)

Interface = Peer-Master or Peer-Slave (QSIG)

Protocol Version = a (National ISDN / 5ESS)

Protocol Version = B (QSIG)

```
172.20.96.62 - PuTTY
change ds1 1a10
Page 1 of 2
DS1 CIRCUIT PACK

Location: 01A10                      Name: PRI to House
Bit Rate: 1.544                      Line Coding: b8zs
Line Compensation: 1                  Framing Mode: esf
Signaling Mode: isdn-pri
Connect: pbx                          Interface: user
TN-C7 Long Timers? n                 Country Protocol: 1
Interworking Message: PROGRESS        Protocol Version: a
                                       CRC? n
Idle Code: 11111111                  DCP/Analog Bearer Capability: speech
                                       T303 Timer(sec): 4
Slip Detection? y                     Near-end CSU Type: other

a          b          c          d

F1 Cancel F2 Refres F3 Enter F4 Clear F5 Help F6 Edit F7 Next F8 Prev F9 F10
```