Avaya™

Connectivity Guide

06/2003 4700-0001-4.0

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About This Guide

This document provides instructions for installing and configuring AltiGen products as an adjunct solution to an Avaya Definity G3 PBX. The adjunct solution can be used as a cost effective solution for call centers, remote IP agents, remote IP extensions, IP gateways, or any of these solutions.

The document also outlines numbering plans associated with adjunct connecting of call centers, remote agents, extensions or IP tie lines. It supplements the *AltiWare OE 4.6 System Installation and Administration Manual.*

Avaya Definity G3 Integration

This following shows the AltiServ system as a call center and/or IP extension or trunk gateway for the Avaya Definity G3 switch via PRI spans.

A sample configuration and connected call flow is shown below.

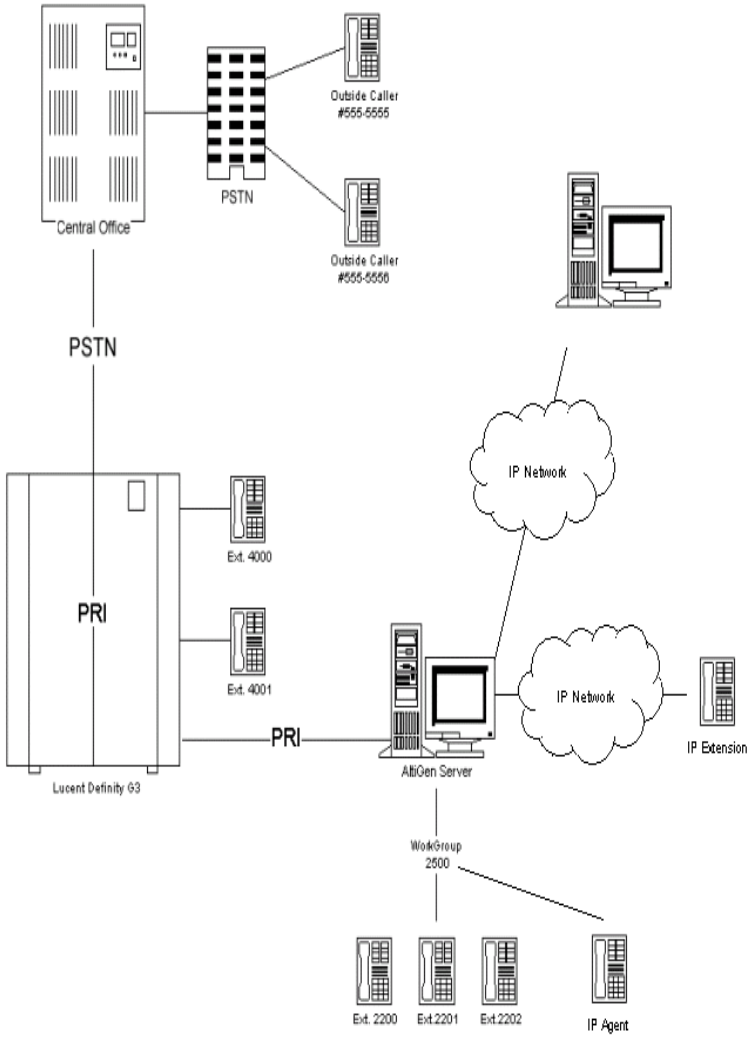

Figure 1. AltiGen system integrated with Avaya Definity G3 Switch (legacy PBX)

System Requirements and Installation

AltiWare-specific minimum system requirements are:

- Avaya Definity running G3 software with at least one DS1/ISDN Trunk Pack (PRI trunk)
- An AltiServ system running AltiWare OE Release 4.0A or above, with at least one T1/PRI board; to install this board, consult the *Quick Install Guide* provided with it
- Analog or IP extensions

AltiServ System Requirement Guidelines

Table 1. System Selection Guidelines

Number of Quantum or Triton Boards per System	CPU Type	Available Memory	Hard Disk Controller	Power Supply	5V Requirement	12V Requirement
1–3	333 MHz	128 MB	IDE/ SCSI	Single 300W	15A	6A or better
4–6	700 MHz	256 MB	IDE ATA-100/ SCSI	Single 400W or Dual 400W load sharing recommended	20A	16A
7–16	850+ MHz	512 MB	IDE ATA-100/ SCSI	Dual 400W with load sharing required	40A	20A

**Individual requirements may vary depending on particular applications. Please contact AltiGen Sales Engineering or Technical Support for assistance on selecting the most appropriate system configuration for your installation.*

Power Requirements

The power requirements are as follows for *each* individual board:

Table 2. Individual Board Power Requirements

Board	5V	12V	Slot Type
Quantum	1.6	1.4A	ISA
Triton Analog Extension	1.6	1A*	PCI
Triton Analog Trunk LS/GS	1.6	0.25A	PCI
Triton Analog Trunk LS	1.6A	0	PCI
Triton VoIP	1.6	0	PCI
Triton T1/PRI	1.6	0	PCI

*1A@12V is provided by power connector.

For complete instructions on installing and configuring the AltiServ system, consult the *AltiWare OE System Installation and Administration Manual.*

AltiWare T1/PRI and Trunk Configuration

See Chapters 6 and 7 in the *AltiWare OE Release 4.6 System Installation Administration Manual* for instructions on configuring the T1/PRI board and the trunk. Use the following settings for AltiWare.

T1 Configuration

- Frame Type = ESF
- Line Code = B8ZS

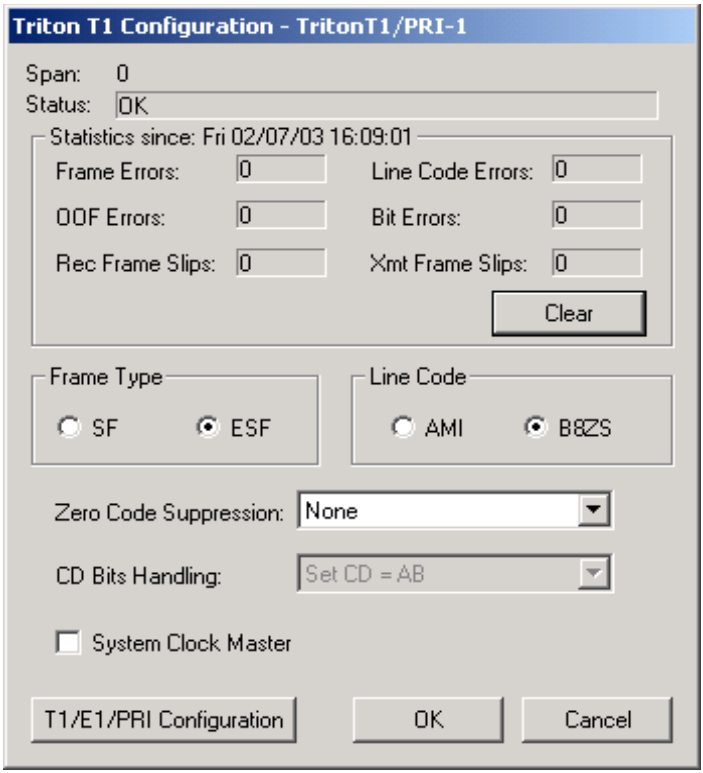

Figure 2. T1 Configuration window

T1/PRI Configuration

- Span type selection = Regular ISDN PRI
- Switch mode = ATT 5ESS PRI
- NSF = None
- TEI = Default setting

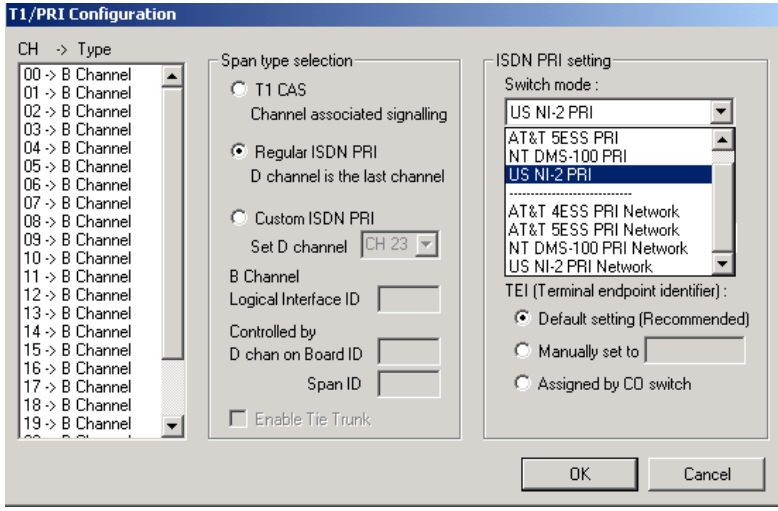

Figure 3. T1/PRI Configuration window

Trunk Configuration

- Assign an access code for the PRI trunks to your system number plan.
- Assign an access code for an out call route, which will be created after trunk configuration is complete.

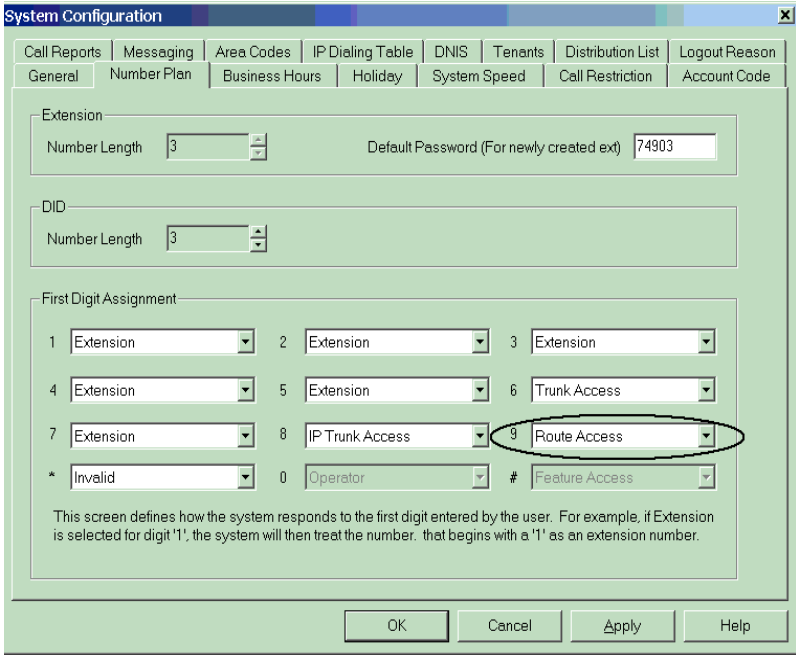

Figure 4. Assigning first-dialed digits to the Avaya PRI trunk access code and the out call route

- Set the access code for all PRI trunks to the same value.

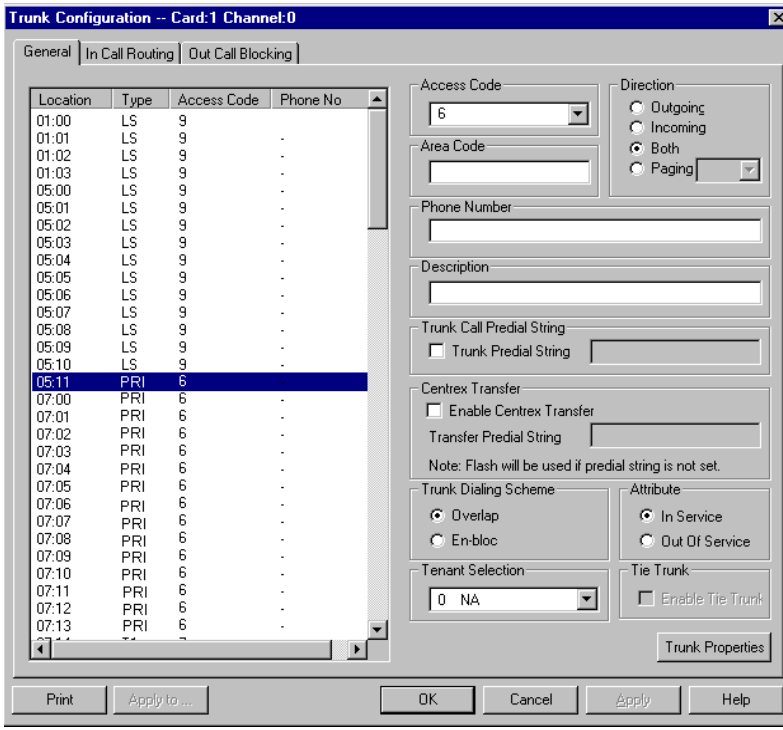

Figure 5. Access Code for all PRI trunks set to "6"

Routing Calls Across PRI Trunks

To route outgoing calls from AltiWare through the PRI trunks on the Avaya Definity system, use Out Call Routing. See Chapter 9 in the *AltiWare OE Release 4.6 System Installation and Administration Manual* for complete instructions on configuring out call routing.

- Create an out call route and assign all the PRI trunks to it.
- Set “Insert Digits” to the Avaya Definity trunk access code.

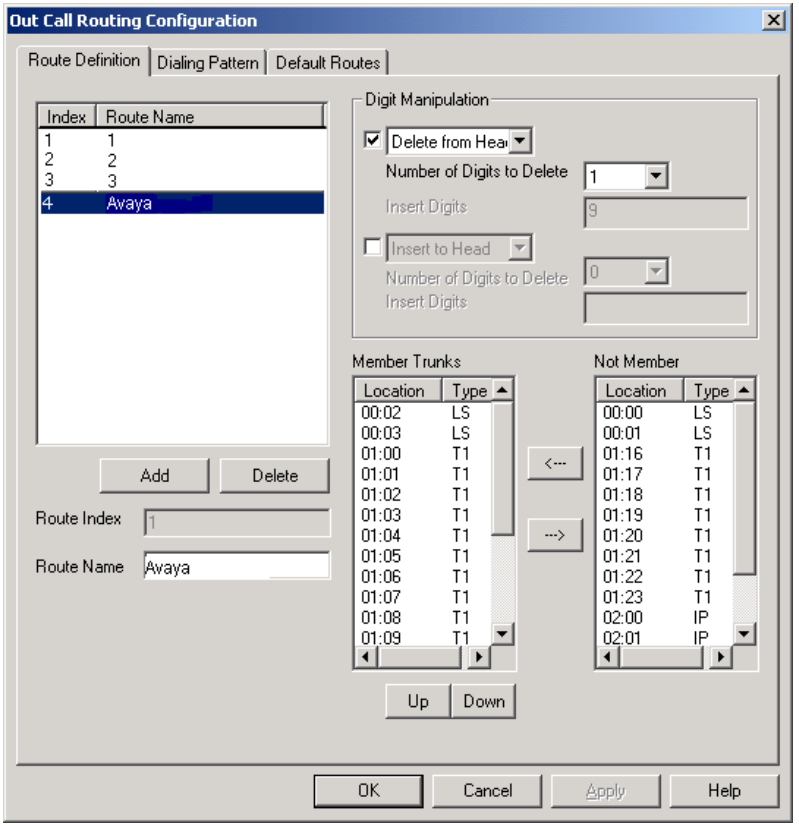

Figure 6. All PRI trunks are Member Trunks of Route “Avaya,” with the Avaya Definity trunk access code inserted at the head of each outbound call

- Create a Dialing Pattern something like the example shown below, setting the Route Priority to the route you created. This pattern designates outgoing trunk calls beginning with a “1” as long-distance calls, and calls beginning with digits 2 through 9 as any type of call (for example, local calls with or without area code).

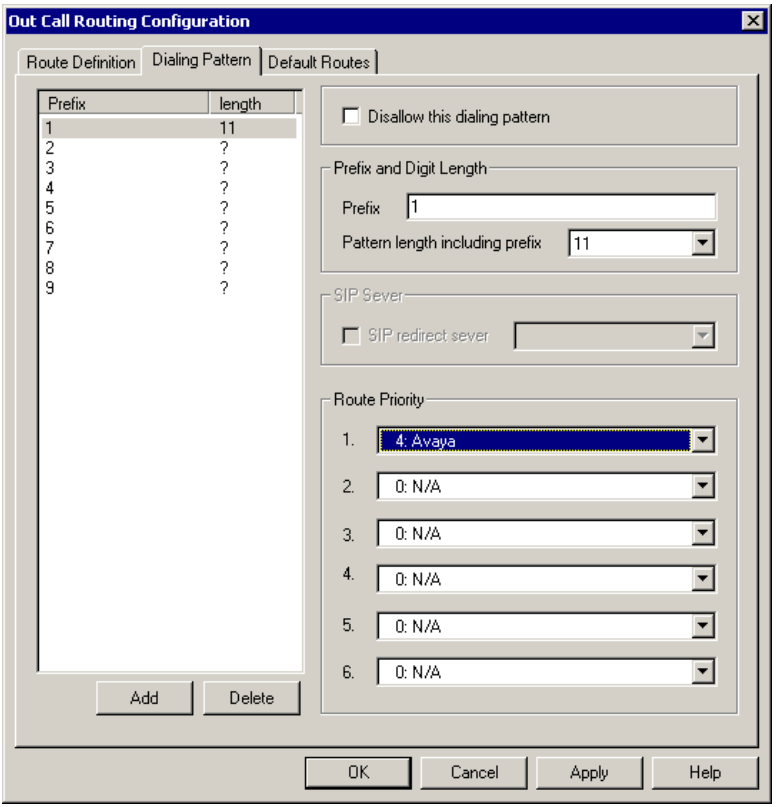

Figure 7. Creating a dialing pattern for outbound calls

Enabling Transparent Dialing

To enable transparent dialing between the Avaya and AltiServ systems, map virtual extensions to the extensions on the Avaya system. See Chapter 8 in the *AltiWare OE Release 4.6 System Installation and Administration Manual* for complete instructions on configuring extensions.

- Add a virtual extension corresponding to each extension number on the Avaya system.

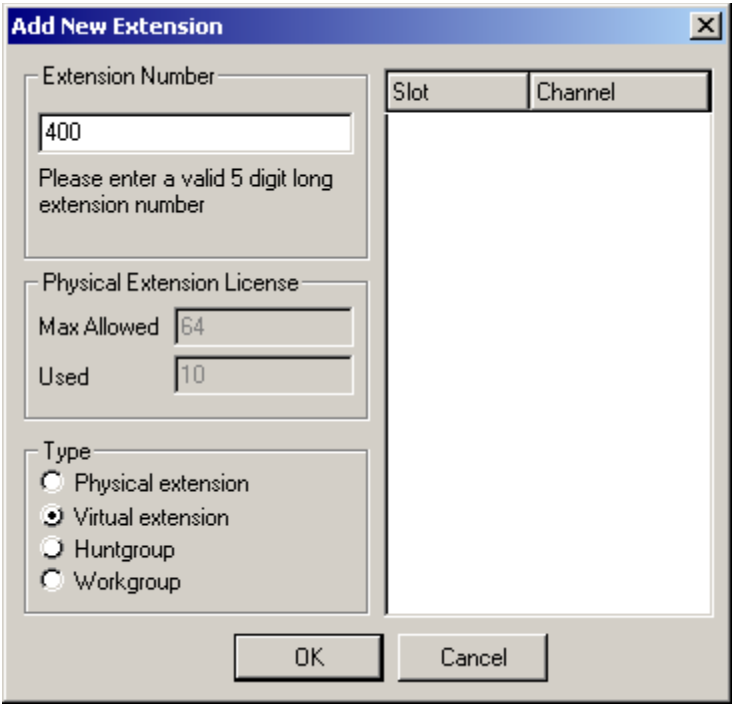

Figure 8. Adding extensions

- Allow call forwarding for these extensions to an outside number.

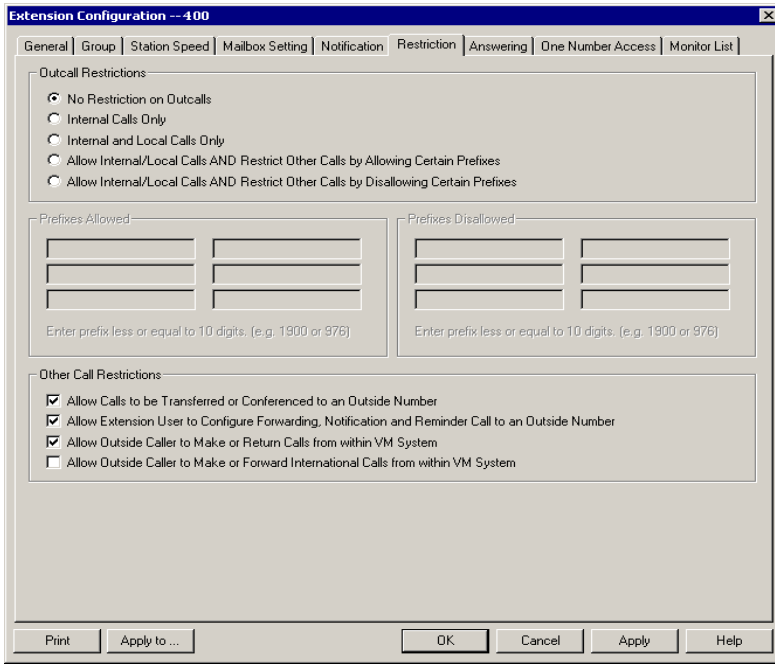

Figure 9. Allowing calls to be forwarded to an outside number

- Set call forwarding to an outside number for this extension. Set the first digit to the PRI trunk access code and the number to the Avaya user's DID extension.

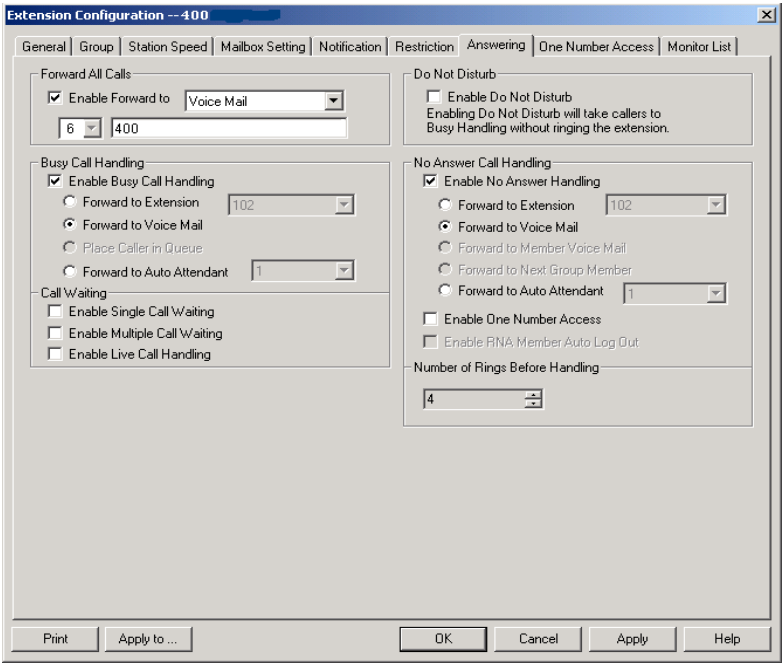

Figure 10. Forwarding all calls over the PRI trunks

- Set each physical extension's Direct Inward Dialing value to the extension number itself.

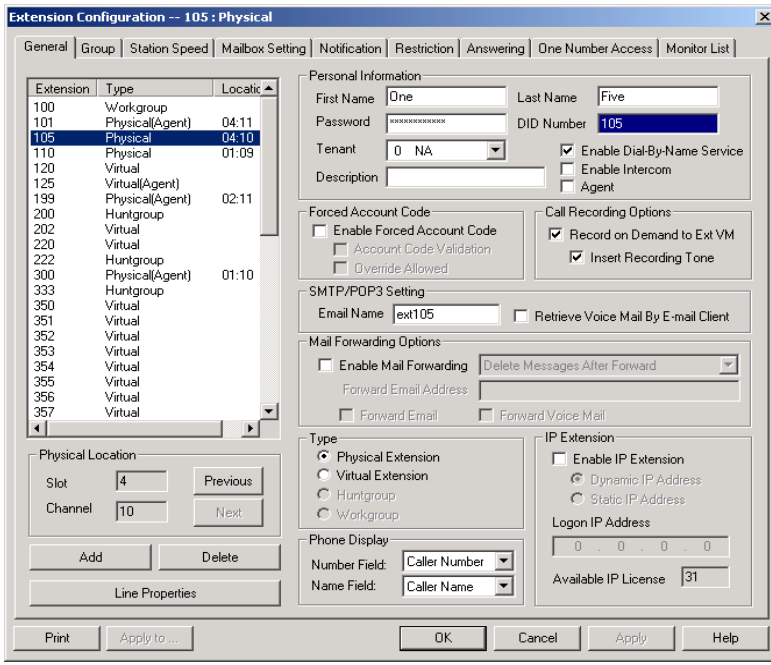

Figure 11. DID for physical extensions set to the same numbers as the extensions themselves

Avaya Definity Configuration

For the Avaya Definity G3, you must configure the **Trunk Group** and the **Signaling Group.**

Trunk Group Configuration

Use all defaults, with the following exceptions:

- **Group Number** - assign any (shown as ***[N]*** in the sample screen below)
- **Group Name** - assign any (shown as ***[Name]*** in the sample screen below)
- **Carrier Medium** - set *PRI/BRI*
- **Disconnect Supervision** - set *In=y, Out=n*

- **UDP Codes -** A Universal Dialing Plan (UDP) maintains the appearance of caller information as coming from a single system. The following settings are an example:

  — Ext code= 2xxx

  — Type UDP code = 222

  With these settings, a call from ext 4000 on Avaya to ext 2000 on the AltiGen server would show “2224000” as the Caller ID on the Alti-Gen side.

Trunk Group Configuration Sample Screen

TRUNK GROUP

Group Number: [N] Group Type: isdn CDR Reports: y
Group Name: [Name] COR: 1 TN: 1 TAC: 8009
Direction: two-way Outgoing Display? n ***Carrier Medium: PRI/BRI***
Dial Access? n Busy Threshold: 99 Night Service:
Queue Length: 0
Service Type: cbc Auth Code? n TestCall ITC: rest
Usage Alloc? n Far End Test Line No:
TestCall BCC: 4 TestCall Service:
TRUNK PARAMETERS
Codeset to Send Display: 6 Codeset to Send National IEs: 6
Max Message Size to Send: 260 Charge Advice: none
Supplementary Service Protocol: a Digit Handling (in/out): enbloc/enbloc

Trunk Hunt: descend
Digital Loss Group: 13
Calling Number - Delete: Insert: Numbering Format:
Bit Rate: 1200 Synchronization: async Duplex: full
Disconnect Supervision - In? y Out? n
Answer Supervision Timeout: 0
TRUNK FEATURES
ACA Assignment? n Measured: none Wideband Support? 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

Replace Restricted Numbers? n
Replace Unavailable Numbers? n
Send Connected Number: n

Send UCID? n
Send Codeset 6/7 LAI IE? n Ds1 Echo Cancellation? n

US NI Delayed Calling Name Update? n

Network (Japan) Needs Connect Before Disconnect? n

INCOMING CALL HANDLING TREATMENT

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

TRUNK GROUP

Administered Members (min/max): 1/23

GROUP MEMBER ASSIGNMENTS Total Administered Members: 23

	Port	Code	Sfx	Name	Night	Sig Grp
1:	01A1301	TN464	F			***[N]***
2:	01A1302	TN464	F			***[N]***
3:	01A1303	TN464	F			***[N]***
4:	01A1304	TN464	F			***[N]***
5:	01A1305	TN464	F			***[N]***
6:	01A1306	TN464	F			***[N]***
7:	01A1307	TN464	F			***[N]***
8:	01A1308	TN464	F			***[N]***
9:	01A1309	TN464	F			***[N]***
10:	01A1310	TN464	F			***[N]***
11:	01A1311	TN464	F			***[N]***
12:	01A1312	TN464	F			***[N]***
13:	01A1313	TN464	F			***[N]***
14:	01A1314	TN464	F			***[N]***
15:	01A1315	TN464	F			***[N]***

TRUNK GROUP

Administered Members (min/max): 1/23

GROUP MEMBER ASSIGNMENTS Total Administered Members: 23

	Port	Code	Sfx	Name	Night	Sig Grp
16:	01A1316	TN464	F			***[N]***
17:	01A1317	TN464	F			***[N]***
18:	01A1318	TN464	F			***[N]***
19:	01A1319	TN464	F			***[N]***
20:	01A1320	TN464	F			***[N]***
21:	01A1321	TN464	F			***[N]***
22:	01A1322	TN464	F			***[N]***
23:	01A1323	TN464	F			***[N]***
24:						
25:						
26:						

etc.

Signal Group Configuration

Use all defaults, with the following exceptions:

- **Group Number** - assign any (shown as ***[N]*** in the sample screen below)
- **Group Type** - set *isdn-pri*
- **Associated Signaling** - set *y*
- **Primary D-Channel** - physical address of the PRI D-channel

Signaling Group Configuration Sample Screen

```
SIGNALING GROUP

 Group Number: [N]          Group Type: isdn-pri
              Associated Signaling? y        Max number of NCA TSC: 0
                Primary D-Channel: 01A1324   Max number of CA TSC: 0
                                             Trunk Group for NCA TSC:
    Trunk Group for Channel Selection: [N]
      Supplementary Service Protocol: a      Network Call Transfer? n
```

System Limitations

The following are known limitations of the Avaya Definity G3 integration.

- Incoming trunk calls transferred from the Avaya system to the AltiServ system will show the caller ID of the Avaya user.
- Voice messages cannot be forwarded between the Avaya and AltiServ systems; however, AltiServ can forward voice messages via email to individual users.
- AltiWare Call Detail Reporting will not be available on incoming calls to the Avaya system, but will be available for all calls to and from the AltiServ system.
- Currently, the maximum PRI spans are as follows:
  - — a maximum of 4 PRI spans is supported in OE 4.0
  - — a maximum of 6 PRI spans is supported in OE 4.5
  - — a maximum of 8 PRI spans is supported in OE 4.6

Glossary of Terms

AltiClient - AltiGen's client software for call center workgroup agents.

AltiGen - AltiGen Communications, Inc.

AltiServ system - the AltiServ call center that adjuncts to another system (AltiWare or Avaya Definity) that contains the PRI trunks used for incoming and outgoing calls.

AltiSupervisor - AltiGen's client software for call center workgroup supervisors; allows silent monitoring and barge-in.

AltiWare system - a system running AltiGen's system software and containing the PRI trunks used for incoming and outgoing calls to and from the adjunct AltiServ system.