



Avaya Solution & Interoperability Test Lab

Application Notes for Configuring Avaya Aura® Communication Manager R6.2, Avaya Aura® Application Enablement Services R6.2 and Avaya Proactive Contact R5.0.1 to interoperate with Geomant Unified Agent 1.4 – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for Geomant Unified Agent 1.4 to interoperate with Avaya Aura® Communication Manager, Avaya Aura® Application Enablement Services and Avaya Proactive Contact R5.0.1 using Avaya PG230 Digital Switch. In the compliance testing, Geomant Unified Agent used the Agent API from Avaya Proactive Contact and the Telephony Services Application Programmer Interface from Avaya Aura® Application Enablement Services to provide a custom agent desktop for Communication Manager and/or Avaya Proactive Contact agents for handling of inbound calls delivered by Avaya Aura® Communication Manager and outbound calls delivered by Avaya Proactive Contact or a blend of the two.

Information in these Application Notes has been obtained through DevConnect compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.

1. Introduction

These Application Notes describe the configuration steps required for Geomant Unified to interoperate with Avaya Aura® Communication Manager and Avaya Proactive Contact using Avaya PG230 Digital Switch and agent blending. In the compliance testing, Geomant Unified Agent used the Agent API from Avaya Proactive Contact and the Telephony Services Application Programmer Interface (TSAPI) from Avaya Aura® Application Enablement Services (AES) to provide a custom agent desktop for Avaya Aura® Communication Manager and/or Avaya Proactive Contact agents, for handling of inbound calls delivered by Avaya Aura® Communication Manager and outbound calls delivered by Avaya Proactive Contact or a blend of the two (Proactive Agent Blend environment).

Geomant Unified Agent is a client which provides a user interface for Avaya Aura® Communication Manager and/or Avaya Proactive Contact call center agents. This is a Google Web Toolkit based application and uses only html pages, web services and javascripts. Geomant Unified Agent is deployed onto a Tomcat application server, and is accessed via a URL from a browser on the agent desktop PC.

Events and activities performed on the Geomant Unified Agent client in relation to the Avaya Aura® Communication Manager Call Center are handled by the Geomant CCI Service via a TSAPI connection to Avaya Aura® Application Enablement Services via Geomant's Contact Centre Integration (CCI) framework.

Events and activities performed on the Geomant Unified Agent client in relation to Avaya Proactive Contact are sent from the Tomcat application to the Geomant APC Service, which handles the connection to the Proactive Contact Agent API via Geomant's Contact Centre Integration (CCI) framework.

In the Proactive Agent Blend (PAB) environment, the inbound calls are delivered to the agents by Avaya Aura® Communication Manager. The TSAPI interface from Avaya Aura® Application Enablement Services is used by Geomant Unified Agent to request call control functions for the inbound calls.

2. General Test Approach and Test Results

The interoperability compliance testing evaluated the ability of Unified Agent to carry out call handling functions in a variety of scenarios through its TSAPI and Agent API interface with AES and Proactive Contact respectively. Inbound calls were placed manually via a VDN to agents administered on Communication Manager and handled by agents using the Unified Agent client. Outbound calls from a Proactive Contact calling list were placed automatically based on the configuration and job commencement administered using the Proactive Contact Editor Application and handled by Proactive Contact Agents using the Unified Agent client.

The correct handling of a variety of call scenarios was tested and the Proactive Contact Agent API events were monitored using the agentx_API.trans log file. Communication Manager agents were monitored using the SAT.

DevConnect Compliance Testing is conducted jointly by Avaya and DevConnect members. The jointly-defined test plan focuses on exercising APIs and/or standards-based interfaces pertinent to the interoperability of the tested products and their functionalities. DevConnect Compliance Testing is not intended to substitute full product performance or feature testing performed by DevConnect members, nor is it to be construed as an endorsement by Avaya of the suitability or completeness of a DevConnect member's solution.

2.1. Interoperability Compliance Testing

The feature testing focused on verifying proper display and handling of calls using the Unified Agent with appropriate options, fields, and values for the following scenarios:

- Outbound and managed jobs
- Inbound ACD calls
- Change ACD agent state
- Proactive Agent Blend
- Log in, join job, go on/off break, leave job, and logoff
- Hold, retrieve, forward work, NVDT call transfer, conference, place manual call, agent drop, release line, hang-up, and finish work
- Set recall and agent owned recall

2.2. Test Results

All test cases were executed and successfully passed with the following observations:

- Where an inbound call is delivered to and ringing on the Unified Agent client, the Drop Call icon is visible but cannot be used and shouldn't be presented.
- Where an inbound call with auto-in and manual-accept configured was received and answered by Unified Agent the info display was not updated when the call ended.
- Where an inbound call from PSTN A is delivered to and answered by a Unified Agent client and subsequently blind transferred to PSTN B the Unified Agent client displays PSTN B transferred to Txxxx. This is logically the reverse of what should be shown, and does not include the original calling party number
- Where a Proactive Contact agent attempts to login using the Unified Agent client with an incorrect or invalid Extension, the info display shows **The server did not respond** for 30 secs and the Proactive Contact agent remains logged in. This prevents further login with the same Proactive Contact agent and the web page must be refreshed or the browser closed and re-opened to clear the Proactive Agent login. Alternatively the Proactive Contact Supervisor menu must be accessed to clear the login.
- Where an outbound call is connected to the Unified Agent client and subsequently transferred by the Unified Agent client, the info display does not update to reflect the successful transfer of the call.
- Where an outbound call is connected to the Unified Agent client and subsequently a conference is created by the Unified Agent client with a 3rd party, the info area does not notify of the conference and where the customer terminates the call the Unified Agent info area displays **Transfer failed! The customer hung up** despite the successful termination.

2.3. Support

Technical Support for the Geomant Unified Agent can be obtained through the following:

- Phone: +44 207 022 4874
- Email: help@geomant.com

3. Reference Configuration

The configuration used for the compliance testing is shown in **Figure 1**. In the compliance testing, Unified Agent used the Proactive Contact Agent API to monitor and control outbound calls for the agents, and used TSAPI to monitor and control the inbound calls for the agents. All calls were answered and controlled using the Unified Agent Client.

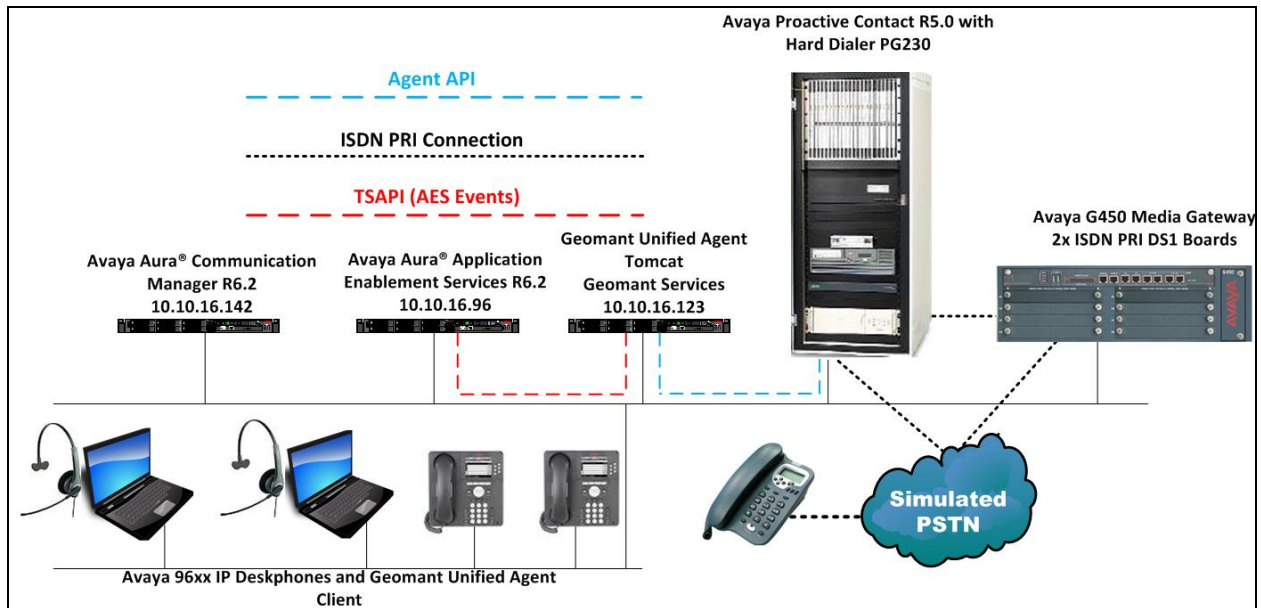


Figure 1: Test Configuration for Avaya Aura® Communication Manager, Avaya Aura® Application Enablement Services and Avaya Proactive Contact with Geomant Unified Agent Solution

4. Equipment and Software Validated

The following equipment and software were used for the sample configuration provided:

Equipment/Software	Release/Version
Avaya Aura® Communicaiton Manager running on Avaya S8800 Server	R6.2 SP4
Avaya Aura® Application Enablement Services running on Avaya S8800 Server	R6.2
Avaya 9630 IP Deskphone	H323 S3.105S
Avaya Proactive Contact	R5.0.1 with patch 301, 302, 307, 309, 323, 328
Avaya PG230 Digital Switch	Generic Version 15.3.1
Geomant Unified Agent	1.4.4 1.4.4.1 for PAB

5. Configure Avaya Aura® Communication Manager

This section provides the procedures for configuring Communication Manager to support the PG230 integration, CTI connection to Application Enablement Services and the Inbound call center configuration which is also used for Proactive Agent Blend. The procedures include the following areas.

- Configure AE Services
- Configure Inbound ACD
- Configure Avaya Proactive Contact Acquire feature
- Configure ACD agent for Proactive Agent Blend
- Configure feature access codes for Call Centre features
- Configure Trunks to Avaya PG230 Digital Switch

5.1. Configure AE Services

Enter the node **Name** and **IP Address** for AE Services. Take a note of the **procr** node **Name** and **IP Address**.

change node-names ip		Page 1 of 2
IP NODE NAMES		
Name	IP Address	
procr	10.10.16.142	
CM521	10.10.16.23	
Gateway	10.10.16.1	
IPbuffer	10.10.16.184	
Intuition	10.10.16.51	
MedPro	10.10.16.32	
Presence	10.10.16.83	
RDTT	10.10.16.185	
SESMNGR	10.10.16.44	
SM1	10.10.16.43	
SM61	10.10.16.201	
default	0.0.0.0	
aesserver62	10.10.16.96	

In order for Communication Manager to establish a connection to AE Services, administer the CTI Link as shown below. Specify an available **Extension** number, set the **Type** as **ADJ-IP**, which denotes that this is a link to an IP connected adjunct, and name the link for easy identification, in this instance, the node-name is used.

add cti-link 1		Page 1 of 3
CTI LINK		
CTI Link: 1		
Extension: 5899		
Type: ADJ-IP		
		COR: 1
Name: aesserver62		

Use the command **change ip-services** to configure IP-Services for the AESVCS service. Use the **procr** node name as noted above as the **Local Node** and set **Enabled** to **y**.

change ip-services					Page	1 of	4
IP SERVICES							
Service	Enabled	Local	Local	Remote	Remote		
Type		Node	Port	Node	Port		
AESVCS	y	procr	8765				

On **Page 4**, set the **AE Services Server** hostname and the **Password** that AE Services will use to authenticate with Communication Manager. In this example the hostname and node-name are configured as **aesserver62**. Set **Enabled** to **y**.

change ip-services				Page	4 of 4
AE Services Administration					
Server ID	AE Services Server	Password	Enabled	Status	
1:	aesserver62	Avayapassword1	y	in use	

5.2. Configure Inbound ACD

For the purposes of proactive agent blend, an inbound vector and VDN must be configured. This is used for delivering inbound calls to ACD agents independent of Proactive Contact. When a call to this VDN is made and queued to skill 2 configured in its vector, Blend Agents (agents which are assigned both skill 2 and skill 1, as described in **Section 5.3**) will automatically be detached from the outbound job, and handle the inbound call. Once the call is complete and there are no more calls queued for the inbound skill, Proactive Contact will acquire the agent for outbound call handling again. Using the command **add vdn xxxx** where **xxxx** is a valid extension, in this case **5812**, administer the VDN as shown below and assign to it a **Name** for identification purposes, and an unassigned **Vector Number**.

```
add vdn 5812                                     Page 1 of 3
                                         VECTOR DIRECTORY NUMBER

      Extension: 5812
      Name*: Inbound
      Destination: Vector Number      2
      Attendant Vectoring? n
      Meet-me Conferencing? n
      Allow VDN Override? n
      COR: 1
      TN*: 1
      Measured: none

      VDN of Origin Annc. Extension*:
      1st Skill*:
      2nd Skill*:
      3rd Skill*:
```

VDN 5812 has a destination of Vector Number 2. Enter the command **change vector 2** and configure the vector to **queue-to** an unassigned skill, in this case, **skill 2** with a **priority** of **m**.

```
change vector 2                                     Page 1 of 6
                                         CALL VECTOR

      Number: 2                               Name: Inbound
Multimedia? n      Attendant Vectoring? n      Meet-me Conf? n      Lock? n
      Basic? y      EAS? y      G3V4 Enhanced? y      ANI/II-Digits? y      ASAI Routing? y
      Prompting? y      LAI? y      G3V4 Adv Route? y      CINFO? y      BSR? y      Holidays? y
      Variables? y      3.0 Enhanced? y
01 queue-to      skill 2      pri m
02 wait-time      60      secs hearing ringback
```


Calls routed to VDN 5812 will route to skill 2, which is administered as a hunt group. Enter the command **add hunt-group 2** and configure the hunt group with an appropriate **Group Extension** number in the dial plan, and a **Group Name** for identification. Set **ACD**, **Queue** and **Vector** to **y** (yes), these parameters define that the group is an ACD group, controlled by a vector with queuing enabled.

add hunt-group 2		Page 1 of 4
HUNT GROUP		
Group Number: 2		ACD? y
Group Name: Inbound		Queue? y
Group Extension: 5822		Vector? y
Group Type: ucd-mia		
TN: 1		
COR: 1		MM Early Answer? n
Security Code:		Local Agent Preference? n
ISDN/SIP Caller Display:		
Queue Limit: unlimited		
Calls Warning Threshold:	Port:	
Time Warning Threshold:	Port:	

On **Page 2** set **Skill** to **y** (yes). This tells the ACD that calls routed to this group will be handled by agents assigned with this skill.

add hunt-group 2		Page 2 of 4
HUNT GROUP		
Skill? y	Expected Call Handling Time (sec): 180	
AAS? n		
Measured: none		
Supervisor Extension:		
Controlling Adjunct: none		
Timed ACW Interval (sec):		
Multiple Call Handling: none		

5.3. Configure Avaya Proactive Contact Acquire feature

In order for Proactive Agent Blend to function, Communication Manager must be configured with a VDN monitored by Proactive Contact. When the agents who belong to the skill to which the Acquire VDN routes are not taking any inbound ACD calls, they are automatically acquired by Proactive Contact to service calls delivered by the outbound job administered in Proactive Contact Editor. Enter the command **add vdn xxxx** where xxxx is a number appropriate to the dialplan. Enter an identifying **Name** and unused **Vector Number**.

```
add vdn 5811                                     Page 1 of 3
                                         VECTOR DIRECTORY NUMBER

      Extension: 5811
      Name*: Dialer Acquire-Out
      Destination: Vector Number           1
      Attendant Vectoring? n
      Meet-me Conferencing? n
      Allow VDN Override? n
      COR: 1
      TN*: 1
      Measured: none

      VDN of Origin Annc. Extension*:
      1st Skill*:
      2nd Skill*:
      3rd Skill*:
```

VDN 5811 has a destination of Vector Number 1. Enter the command **change vector 1** and configure an identifying **Name** and a step to **queue-to skill 1** with a priority of **h**.

```
change vector 1                                     Page 1 of 6
                                         CALL VECTOR

      Number: 1                                     Name: DialerAcquireOu
Multimedia? n      Attendant Vectoring? n      Meet-me Conf? n      Lock? n
      Basic? y      EAS? y      G3V4 Enhanced? y      ANI/II-Digits? y      ASAI Routing? y
      Prompting? y      LAI? y      G3V4 Adv Route? y      CINFO? y      BSR? y      Holidays? y
      Variables? y      3.0 Enhanced? y
01 queue-to      skill 1      pri h
02 wait-time      60 secs hearing ringback
```

As shown in vector 1, skill 1 will be the skill in which the agents required for Proactive Agent Blending will reside. Skill 1 is administered as a hunt group. Enter the command **add hunt-group 1**, specify **Group Name**, and **Group Extension**, and set **ACD**, **Queue** and **Vector** to **y**.

add hunt-group 1		Page 1 of 4
HUNT GROUP		
Group Number: 1		ACD? y
Group Name: Dialer Acquire-Out		Queue? y
Group Extension: 5821		Vector? y
Group Type: ucd-mia		
TN: 1		
COR: 1		MM Early Answer? n
Security Code:		Local Agent Preference? n
ISDN/SIP Caller Display:		
Queue Limit: unlimited		
Calls Warning Threshold:	Port:	
Time Warning Threshold:	Port:	

On **Page 2**, set **Skill** to **y**.

add hunt-group 1		Page 2 of 4
HUNT GROUP		
Skill? y	Expected Call Handling Time (sec): 180	
AAS? n		
Measured: none		
Supervisor Extension:		
Controlling Adjunct: none		
Timed ACW Interval (sec):		
Multiple Call Handling: none		

5.4. Configure ACD agent for Proactive Agent Blend

In order for the ACD agent to be acquired by Proactive Contact once it has completed taking inbound calls using the Proactive Agent Blend feature, it must be in both the inbound skill (2) and the Acquire skill (1). Using the command **add agent-loginID xxxx** where **xxxx** is a valid extension number in the dialplan, administer a **Name** as shown below.

add agent-loginID 5621	Page 1 of 3
AGENT LOGINID	
Login ID: 5621	AAS? n
Name: Agent1	AUDIX? n
TN: 1	LWC Reception: spe
COR: 1	LWC Log External Calls? n
Coverage Path:	AUDIX Name for Messaging:
Security Code:	LoginID for ISDN/SIP Display? n
	Password:
	Password (enter again):
	Auto Answer: station
	MIA Across Skills: system
	ACW Agent Considered Idle: system
	Aux Work Reason Code Type: system
	Logout Reason Code Type: system
	Maximum time agent in ACW before logout (sec): system
	Forced Agent Logout Time: :
WARNING: Agent must log in again before changes take effect	

On **Page 2** configure the agent in both the inbound skill and the Acquire skill, ensure that the Acquire skill is assigned a higher Skill Level (**SL**) than the Inbound Skill.

add agent-loginID 6002	Page 2 of 3
AGENT LOGINID	
Direct Agent Skill:	Service Objective? n
Call Handling Preference: skill-level	Local Call Preference? n
SN RL SL	SN RL SL
1: 1 1	16: 31: 46:
2: 2 2	17: 32: 47:

5.5. Configure feature access codes for Call Centre features

Call Center related Feature Access Codes must be administered in order to control the agent state. Enter the command **change feature-access-codes**, on **Page 5** configure **Auto-In Access Code**, **Login Access Code** and **Logout Access Code** according to the dialplan.

change feature-access-codes									
Page 5 of 10									
FEATURE ACCESS CODE (FAC)									
Call Center Features									
AGENT WORK MODES									
After Call Work Access Code: *36									
Assist Access Code: *37									
Auto-In Access Code: *38									
Aux Work Access Code: *39									
Login Access Code: *40									
Logout Access Code: *41									
Manual-in Access Code: *42									

5.6. Configure Trunks to Avaya PG230 Digital Switch

It is assumed that the configuration of the PRI trunk between Communication Manager and Proactive Contact is configured, its configuration is not relevant to the interoperation of Unified Agent with the Geomant solution. The **list trunk-group** command below shows the trunks configured for use with headsets, inbound, outbound and transfer operations

list trunk-group										Page	1
TRUNK GROUPS											
Grp				No.				Out			Que
No.	TAC	Group	Type	Group Name	Mem	TN	COR	CDR	Meas	Dsp	Len
21	721	isdn		QSIG to PG230 - Headsets	5	1	1	y	none	y	0
22	722	isdn		QSIG to PG230 - Outbound	10	1	1	y	none	n	0
23	723	isdn		QSIG to PG230 - Inbound	5	1	1	y	none	n	0
24	724	isdn		QSIG to PG230 - Transfer	1	1	1	y	none	n	0

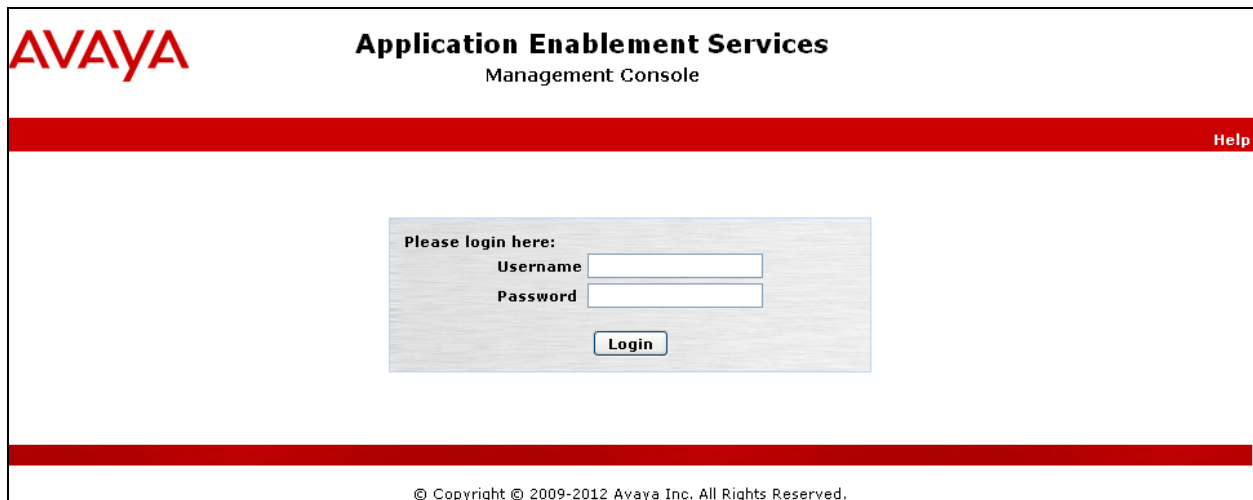
6. Configure Avaya Aura® Application Enablement Services

This section provides the procedures for configuring Application Enablement Services. The procedures include the following areas:

- Launch OAM interface
- Administer the Switch Connection
- Administer TSAPI Link
- Restart TSAPI Service
- Obtain Tlink Name
- Administer Avaya Proactive Contact and Geomant user

6.1. Launch OAM Interface

Access the OAM web-based interface of AES, in this instance using the URL <https://10.10.16.96>. The Management console is displayed. Login using the appropriate credentials.



The screenshot shows the Avaya Application Enablement Services Management Console login page. At the top left is the Avaya logo. To its right, the text "Application Enablement Services" is displayed in bold, with "Management Console" underneath it. A red horizontal bar spans the width of the page, with a "Help" link on the right. In the center, there is a login box with the text "Please login here:" followed by "Username" and "Password" labels, each with a corresponding text input field. Below these fields is a "Login" button. At the bottom of the page, a red horizontal bar is present, and below it, the copyright notice "© Copyright © 2009-2012 Avaya Inc. All Rights Reserved." is displayed.

The **Welcome to OAM** screen is displayed next.

The screenshot shows the Avaya Application Enablement Services Management Console. The top header includes the Avaya logo, the title "Application Enablement Services Management Console", and a welcome message for user "craft" with login details. A red navigation bar contains "Home", "Help", and "Logout" links. A left sidebar lists menu items: AE Services, Communication Manager Interface, Licensing, Maintenance, Networking, Security, Status, User Management, Utilities, and Help. The main content area, titled "Welcome to OAM", explains the console's purpose and lists administrative domains: AE Services, Communication Manager Interface, Licensing, Maintenance, Networking, Security, Status, User Management, Utilities, and Help. A copyright notice for 2009-2012 Avaya Inc. is at the bottom.

AVAYA **Application Enablement Services**
Management Console

Welcome: User craft
Last login: Tue Oct 2 15:09:34 2012 from 10.10.16.62
Number of prior failed login attempts: 0
HostName/IP: aesserver62/10.10.16.96
Server Offer Type: TURNKEY
SW Version: r6-2-0-18-0
Server Date and Time: Fri Oct 5 15:17:18 BST 2012

Home Home | Help | Logout

▸ AE Services
▸ Communication Manager Interface
▸ Licensing
▸ Maintenance
▸ Networking
▸ Security
▸ Status
▸ User Management
▸ Utilities
▸ Help

Welcome to OAM

The AE Services Operations, Administration, and Management (OAM) Web provides you with tools for managing the AE Server. OAM spans the following administrative domains:

- AE Services - Use AE Services to manage all AE Services that you are licensed to use on the AE Server.
- Communication Manager Interface - Use Communication Manager Interface to manage switch connection and dialplan.
- Licensing - Use Licensing to manage the license server.
- Maintenance - Use Maintenance to manage the routine maintenance tasks.
- Networking - Use Networking to manage the network interfaces and ports.
- Security - Use Security to manage Linux user accounts, certificate, host authentication and authorization, configure Linux-PAM (Pluggable Authentication Modules for Linux) and so on.
- Status - Use Status to obtain server status informations.
- User Management - Use User Management to manage AE Services users and AE Services user-related resources.
- Utilities - Use Utilities to carry out basic connectivity tests.
- Help - Use Help to obtain a few tips for using the OAM Help system

Depending on your business requirements, these administrative domains can be served by one administrator for all domains, or a separate administrator for each domain.

Copyright © 2009-2012 Avaya Inc. All Rights Reserved.

6.2. Administer the Switch Connection

To establish the connection between Communication Manager and AES, click **Communication Manager Interface** → **Switch Connections**. In the field next to **Add Connection** enter **CM62** and click on **Add Connection**.

The screenshot shows the "Switch Connections" page within the Communication Manager Interface. The left sidebar highlights "Switch Connections" under "Communication Manager Interface". The main area has a text input field containing "CM62" and an "Add Connection" button. Below this is a table with columns: Connection Name, Processor Ethernet, Msg Period, and Number of Active Connections. At the bottom, there are buttons for "Edit Connection", "Edit PE/CLAN IPs", "Edit H.323 Gatekeeper", "Delete Connection", and "Survivability Hierarchy".

Communication Manager Interface | Switch Connections Home | Help | Logout

▸ AE Services
▾ Communication Manager Interface
 Switch Connections
▸ Dial Plan
▸ Licensing
▸ Maintenance

Switch Connections

CM62 Add Connection

Connection Name	Processor Ethernet	Msg Period	Number of Active Connections
-----------------	--------------------	------------	------------------------------

Edit Connection Edit PE/CLAN IPs Edit H.323 Gatekeeper Delete Connection Survivability Hierarchy

The following screen is displayed. Complete the configuration as shown and enter the password specified in **Section 5.1** when configuring AESVCS in the ip-services form. Click on **Apply** when done.

Communication Manager Interface | Switch Connections Home | Help | Logout

- ▶ AE Services
- ▼ Communication Manager Interface
 - Switch Connections
 - ▶ Dial Plan
- ▶ Licensing
- ▶ Maintenance
- ▶ Networking
- ▶ Security
- ▶ Status
- ▶ User Management
- ▶ Utilities
- ▶ Help

Connection Details - CM62

Switch Password

Confirm Switch Password

Msg Period Minutes (1 - 72)

SSL ☒

Processor Ethernet ☒

Apply
Cancel

Copyright © 2009-2012 Avaya Inc. All Rights Reserved.

The following screen will be shown displaying the newly added switch connection, click **Edit PE/CLAN IPs**.

Communication Manager Interface | Switch Connections Home | Help | Logout

- ▶ AE Services
- ▼ Communication Manager Interface
 - Switch Connections
 - ▶ Dial Plan
- ▶ Licensing
- ▶ Maintenance
- ▶ Networking
- ▶ Security
- ▶ Status
- ▶ User Management
- ▶ Utilities
- ▶ Help

Switch Connections

Add Connection

Connection Name	Processor Ethernet	Msg Period	Number of Active Connections
CM62	Yes	30	0

Edit Connection
Edit PE/CLAN IPs
Edit H.323 Gatekeeper
Delete Connection
Survivability Hierarchy

Copyright © 2009-2012 Avaya Inc. All Rights Reserved.

The following screen is displayed. Next to **Add/Edit Name or IP**, enter the IP address of the procr as shown below.

Communication Manager Interface | Switch Connections Home | Help | Logout

AE Services
Communication Manager Interface
Switch Connections
Dial Plan
Licensing
Maintenance
Networking
Security
Status
User Management
Utilities
Help

Edit Processor Ethernet IP - CM62

10.10.16.142 Add/Edit Name or IP

Name or IP Address	Status
Back	

Copyright © 2009-2012 Avaya Inc. All Rights Reserved.

The following screen will now appear displaying the newly added IP address.

Communication Manager Interface | Switch Connections Home | Help | Logout

AE Services
Communication Manager Interface
Switch Connections
Dial Plan
Licensing
Maintenance
Networking
Security
Status
User Management
Utilities
Help

Edit Processor Ethernet IP - CM62

10.10.16.142 Add/Edit Name or IP

Name or IP Address	Status
10.10.16.142	Idle
Back	

Copyright © 2009-2012 Avaya Inc. All Rights Reserved.

6.3. Administer TSAPI Link

Select **AE Services** → **TSAPI** → **TSAPI Links** from the left pane. The **TSAPI Links** screen is displayed, click **Add Link**.

The screenshot shows the 'AE Services | TSAPI | TSAPI Links' interface. On the left, a navigation pane lists 'AE Services' with sub-items: CVLAN, DLG, DMCC, SMS, TSAPI (expanded), TSAPI Links (selected), TSAPI Properties, TWS, and Communication Manager Interface. The main area is titled 'TSAPI Links' and contains a table with two columns: 'Link' and 'Switch Connection'. Below the table are three buttons: 'Add Link' (highlighted with a red box), 'Edit Link', and 'Delete Link'.

Configure the TSAPI Link using the newly configured **Switch Connection** as shown below where the **Switch CTI Link Number** configured in **Section 5.1** is chosen, and click **Apply Changes**.

The screenshot shows the 'Add TSAPI Links' configuration screen. The left navigation pane is identical to the previous screenshot. The main area is titled 'Add TSAPI Links' and contains the following fields: 'Link' (dropdown set to 1), 'Switch Connection' (dropdown set to CM62, highlighted with a red box), 'Switch CTI Link Number' (dropdown set to 1, highlighted with a red box), 'ASAI Link Version' (dropdown set to 4), and 'Security' (dropdown set to Both). At the bottom are two buttons: 'Apply Changes' (highlighted with a red box) and 'Cancel Changes'.

The screen below will be displayed with instructions to restart the TSAPI Server. Click **Apply** taking note of the instructions given.

AE Services | TSAPI | TSAPI Links

▼ AE Services

▶ CVLAN

▶ DLG

▶ DMCC

▶ SMS

▼ TSAPI

■ TSAPI Links


■ TSAPI Properties

▶ TWS

▶ Communication Manager Interface

Apply Changes to Link

Warning! Are you sure you want to apply the changes?
These changes can only take effect when the TSAPI server restarts.

 **Please use the Maintenance -> Service Controller page to restart the TSAPI server.**

Apply

Cancel

The following screen will be displayed showing the TSAPI Link.

AE Services | TSAPI | TSAPI Links

Home | Help | Logout

▼ AE Services

▶ CVLAN

▶ DLG

▶ DMCC

▶ SMS

▼ TSAPI

■ TSAPI Links

■ TSAPI Properties

▶ TWS

TSAPI Links

Link	Switch Connection	Switch CTI Link #	ASA1 Link Version	Security
1	CM62	1	4	Both

Add Link

Edit Link

Delete Link

6.4. Restart TSAPI Service

Select **Maintenance** → **Service Controller** from the left pane, to display the **Service Controller** screen in the right pane. Check the **TSAPI Service**, and click **Restart Service**.

The screenshot shows a web interface with a red header bar labeled "Maintenance | Service Controller". On the left is a navigation pane with a tree structure. The "Maintenance" section is expanded, and "Service Controller" is selected. The main area on the right is titled "Service Controller" and contains a table with two columns: "Service" and "Controller Status".

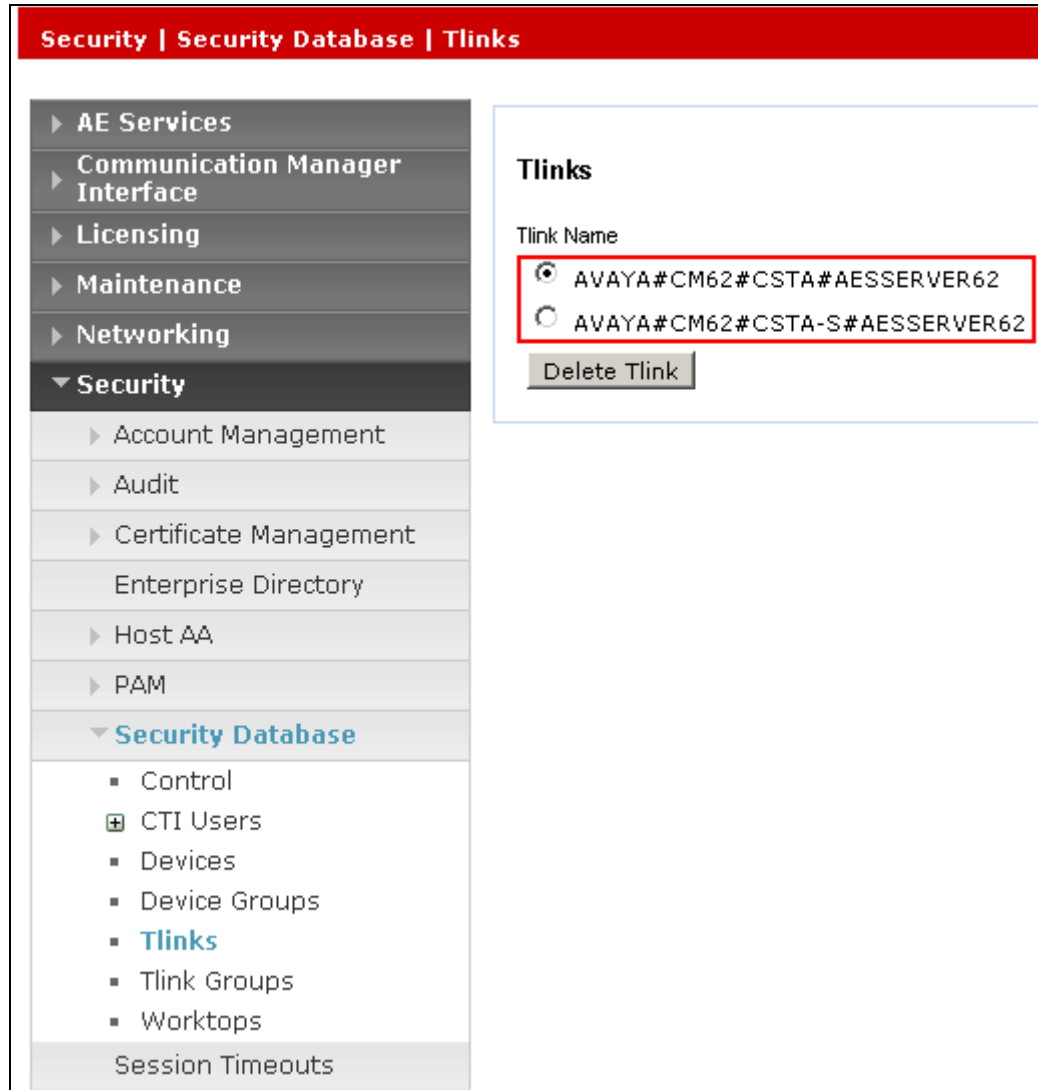
Service	Controller Status
<input type="checkbox"/> ASAI Link Manager	Running
<input type="checkbox"/> DMCC Service	Running
<input type="checkbox"/> CVLAN Service	Running
<input type="checkbox"/> DLG Service	Running
<input type="checkbox"/> Transport Layer Service	Running
<input checked="" type="checkbox"/> TSAPI Service	Running

Below the table, there is a text prompt: "For status on actual services, please use [Status and Control](#)". At the bottom of the main area, there is a row of buttons: "Start", "Stop", "Restart Service" (which is highlighted with a red border), "Restart AE Server", "Restart Linux", and "Restart Web Server".

6.5. Obtain Tlink Name

Select **Security** → **Security Database** → **Tlinks** from the left pane. The **Tlinks** screen shows a listing of the Tlink names. Locate the Tlink name associated with the relevant switch connection, which would use the name of the switch connection as part of the Tlink name.

Note: The encrypted TSAPI link is used by Proactive Contact and the unencrypted one is used by the GeoCCI Service.



6.6. Administer Avaya Proactive Contact and Geomant User

A user must be configured for both Geomant and the Proactive Contact. Select **User Management** → **User Admin** → **Add User** from the left pane to display the **Add User** screen in the right pane. Enter desired values for **User Id**, **Common Name**, **Surname**, **User Password** and **Confirm Password**. For **CT User**, select **Yes** from the drop-down list. Retain the default value in the remaining fields. Click Apply at the bottom of the screen (not shown below).

User Management | User Admin | Add User

▶ AE Services

▶ Communication Manager Interface

▶ Licensing

▶ Maintenance

▶ Networking

▶ Security

▶ Status

▼ User Management

▶ Service Admin

▼ User Admin

▪ Add User

▪ Change User Password

▪ List All Users

▪ Modify Default Users

▪ Search Users

▶ Utilities

▶ Help

Add User

Fields marked with * can not be empty.

* User Id

pc501

* Common Name

pc501

* Surname

pc501

* User Password

.....

* Confirm Password

.....

Admin Note

Avaya Role

None

Business Category

Car License

CM Home

Css Home

CT User

Yes

Department Number

Repeat the steps above to create the Geomant user. Enter desired values for **User Id**, **Common Name**, **Surname**, **User Password**, and **Confirm Password**. For **CT User**, select **Yes** from the drop-down list. Retain the default value in the remaining fields. Click **Apply** at the bottom of the screen (not shown below).

User Management | User Admin | Add User

▶ AE Services

▶ Communication Manager Interface

▶ Licensing

▶ Maintenance

▶ Networking

▶ Security

▶ Status

▼ User Management

▶ Service Admin

▼ User Admin

▪ Add User

▪ Change User Password

▪ List All Users

▪ Modify Default Users

▪ Search Users

▶ Utilities

▶ Help

Add User

Fields marked with * can not be empty.

* User Id

geomant

* Common Name

geomant

* Surname

geomant

* User Password

.....

* Confirm Password

.....

Admin Note

Avaya Role

None

Business Category

Car License

CM Home

Css Home

CT User

Yes

Department Number

In addition, the user which will be used by Proactive Contact and Geomant should be configured as an unrestricted user. Select **Security**→ **Security Database** → **CTI Users** → **List All Users** from the left pane, click on the radio button beside the user created above, in this case, **pc501** and click **Edit**. Place a tick in the box next to **Unrestricted Access**, as shown in the image below. Click **Apply Changes** when done.

The screenshot shows the 'Edit CTI User' window with the following configuration:

Security Security Database CTI Users List All Users		
Edit CTI User		
User Profile:	User ID	pc501
	Common Name	pc501
	Worktop Name	NONE
	Unrestricted Access	<input checked="" type="checkbox"/>
Call and Device Control:	Call Origination/Termination and Device Status	None
Call and Device Monitoring:	Device Monitoring	None
	Calls On A Device Monitoring	None
	Call Monitoring	<input type="checkbox"/>
Routing Control:	Allow Routing on Listed Devices	None
<input checked="" type="button" value="Apply Changes"/> <input type="button" value="Cancel Changes"/>		

Repeat the process for the Geomant user.

Security | Security Database | CTI Users | List All Users

AE Services
Communication Manager Interface
Licensing
Maintenance
Networking
Security
Account Management
Audit
Certificate Management
Enterprise Directory
Host AA
PAM
Security Database
Control

Edit CTI User

User Profile: User ID: geomant
Common Name: geomant
Worktop Name: NONE
Unrestricted Access: ☒

Call and Device Control: Call Origination/Termination and Device Status: None

Call and Device Monitoring: Device Monitoring: None
Calls On A Device Monitoring: None
Call Monitoring: ☐

Routing Control: Allow Routing on Listed Devices: None

Apply Changes Cancel Changes

7. Configure Avaya Proactive Contact

This section provides the procedures for configuring Proactive Contact. The procedures include the following areas:

- Configure CTI Parameters
- Configure Proactive Agent Blend Domains
- Configure master.cfg
- Configure number format
- Configure the calling list
- Configure Avaya Proactive Contact Administration Software

7.1. Configure CTI Parameters

In order to establish the TSAPI link between Proactive Contact and AES for Proactive Agent Blend enter the following command at the Proactive Contact shell. This will create a `cti_passwd.cfg` file in `/opt/avaya/pab/config/`

- **cti_passwd -b** (b denotes the blend option).

When prompted for the password, enter the password administered to the CTI user configured for Proactive Contact earlier on Application Enablement Services, and hit return, re-enter as requested.

For the purposes of Agent Blending, copy the **.tslibrc** file to the **/opt/avaya/pab/config/** directory by entering the command **cp /opt/avaya/pds/config/.tslibrc /opt/avaya/pab/config/.tslibrc**. Edit the newly copied **.tslibrc** file with the IP address of Application Enablement Services.

```
[Telephony Servers]
; This is a list of the servers offering Telephony Services via TCP/IP.
; Either domain name or IP address may be used; default port number is 450
; The form is: host_name=port_number    For example:
;
; tserver.mydomain.com=450
10.10.16.96
;

; This file should be copied to CONFIG directory as .tslibrc.
; See master.cfg for the directory name.

; This entry overrides the [Telephony Servers] section, if any.
```

Navigate to **/opt/avaya/pds/config** – edit **opmon.cfg** as shown below:

```
CFGTIME:15
DIALBACK:1-15:15:1::
DIALBACKNUM:ALL
```

Edit **dgswitch.cfg** as shown below. The format used is based on the location of the ports in the PG230 Digital Switch; therefore Proactive Contact is configured with the same number of Inbound Ports as the number of inbound lines on the PG230 Digital Switch. The inbound ports configured on Proactive Contact correspond to the ports of the inbound trunk group configured on Communication Manager in **Section 5.6**, the same is true for Headset, Outbound and Transfer trunk ports.

```
# Headset Ports
H:1:361:1::#H:15:1:1-1-21-4-2
H:2:362:1::#H:15:1:1-1-21-4-3
H:3:363:1::#H:15:1:1-1-21-4-4
H:4:364:1::#H:15:1:1-1-21-4-5
H:5:365:1::#H:15:1:1-1-21-4-6

# Normal Outbound Trunks
N:1:366:1::#O:10:1:1-1-21-4-7
N:2:367:1::#O:10:1:1-1-21-4-8
N:3:368:1::#O:10:1:1-1-21-4-9
N:4:369:1::#O:10:1:1-1-21-4-10
N:5:370:1::#O:10:1:1-1-21-4-11
N:6:371:1::#O:10:1:1-1-21-4-12
N:7:372:1::#O:10:1:1-1-21-4-13
N:8:373:1::#O:10:1:1-1-21-4-14
N:9:374:1::#O:10:1:1-1-21-4-15
N:10:375:1::#O:10:1:1-1-21-4-16

# Normal Inbound Trunks

N:11:377:1::#I:11:1:1-1-21-4-18
N:12:378:1::#I:11:1:1-1-21-4-19
N:13:379:1::#I:11:1:1-1-21-4-20
N:14:380:1::#I:11:1:1-1-21-4-21
N:15:381:1::#I:11:1:1-1-21-4-22

# Transfer-thru Trunks
T:1:12:1::#T:12:1:1-1-21-4-1
```

Edit only the last 4 lines of **voicemsg.cfg**, this file refers to the announcements recorded on the PG230.

```
250:greeting:1027:Female:Folder4:Voice:Message27
251:inbound:1028:Female:Folder4:Voice:Message28
252:outbound:1029:Female:Folder4:Voice:Message29
253:notLoggedIn:1030:Female:Folder4:Voice:Message30
```

Navigate to the **/opt/avaya/pds/scripts** directory and copy the telephny_hd.spt file to the telephny.spt file using the following command **cp telephny_hd.spt telephny.spt**. This file defines Hard Dialer specific parameters.

Navigate to the **/opt/avaya/pab/config/** directory. Copy and rename the **ctirc.cvct** file, by typing **cp ctirc.cvct ctirc1**. Edit **ctirc1** as shown below.

```
#####
#
# LAST REVISION $Date: 2002/02/20 16:24:55 $
#####
#
# The only configurable line is the 14th line after the comments (third from
# the bottom). There are five fields in this line:
# Field 1: TLINK
# Field 2: Login name for CVCT (run "cti_passwd -b" to setup the encrypted
password)
# Field 3: Application Name (PDS)
# Field 4: TS2 - This is the library version that we used. Do no change.
0                                # CVCT CEP (switch type)
0x11                             # CEP CHGSVR
0x2015A                          # Supported Events
0                                # Stats and Counts (No MIS for Aspect)
0                                # Appear and Vanish (No LM for Aspect)
0                                # Agent Available, Login, Logout
0                                # per-outstanding-move (N/A for Aspect)
0                                # seconds added to LM (N/A for Aspect)
0                                # seconds added to LC (N/A for Aspect)
Port SupId SupPass
NotUsed
AVAYA#CM62#CSTA-S#AESSERVER62:pc501:PDS:TS2
chgsvr
cep pway
```

Copy and rename the CBA_procs.example file, type **cp CBA_procs.example CBA_procs** and press **Enter**. Edit **CBA_procs** as shown below with the Proactive Contact server hostname:

```
#####
#                                     |Max Wait|Max Wait|Max Wait|Max Wait|Kill
#                                     | Before | Before | Before | Before |Cfg-
# Process|Startup|Shutdown|Shutdown|  Abort  | SIGTERM| SIGKILL|Only
#   Type | Order | Order  | Message| Message| Signal | Signal |Mode
#-----
# NOTE - Startup Order and Shutdown Order MUST start at the value one(1) and
#        increment WITHOUT any sequence gaps
PROCESS_CONTROL
SOE| 1 | 5 | -1 | -1 | -1 | 25 | 0
USR| 2 | 4 | -1 | -1 | 21 | 24 | 0
CTI| 3 | 3 | 11 | 15 | 24 | 35 | 1
ACD| 4 | 2 | 0  | 5  | 10 | 11 | 1
MSC| 5 | 1 | -1 | -1 | -1 | 25 | 0

#####
# Process | Host | Path | Binary | Parameters
#   Type  | Name |      | Name   |
#-----
PROCESS_INSTANCE
USR|devconhd501|/opt/avaya/pab/bin/|cbauser|1
CTI|devconhd501|/opt/avaya/pab/bin/|cti|1
ACD|devconhd501|/opt/avaya/pab/bin/|acdmon|1 nocancel min_asa 2sec gen_rel
MSC|devconhd501|/opt/avaya/pab/scripts/|acdsnap_mon|
```

Copy and rename the CBA_cfg.example file, type **cp CBA_cfg.example CBA_cfg** and press **Enter**. This establishes the Application, PBX and Gateway IDs used by Agent Blending.

7.2. Configure Proactive Agent Blend Domains

Proactive Contact needs to be configured with the inbound VDN to be monitored and the acquire VDN for acquiring agents in order to handle calls from the outbound job. The Proactive Contact name for a VDN is Domain. Configured in **/opt/avaya/pab/config/dom_group.data** – this defines an outbound only Domain Group called **NORTH_USA**, an **IB** (inbound) Domain called **5812** with specific reference to **VDN 5812**, and a **TEAM** (acquire) Domain called **5811** with specific reference to **VDN 5811**. Both of these Domains have a Domain Group ID of **NORTH_USA**.

```
*VERSION | 1
##### Defined Domains Groups #####
# Domain Group Record Layout - To Create a new domain group copy the template
#   below and replace all field holders with appropriate values.
#   NOTE - All fields that retain their place holder values (TR, TT, etc)
#           will be assumed to be empty.
#   NOTE - Line breaks may happen between any fields but not within a field
#   NOTE - Do not change lower case field holders
#
#   WARNING - Remove the "#" comment field indicator to activate the template
#
# TEMPLATE
# -----
---
# *DG | DG_NM | dg_id | RTI | CM | MAAS | SC | DSL | MSL |
#   AUT | MAO | TR | TT | ACWT | MQR | afi | rti |
# -----
---
#
# Description of fields within a Domain Group
# -----
# *          - Start Of New Record { MUST be in first column of record}
# DG         - Domain Group Record Key   { Always DG}
# DG_NM      - Domain Group Name {Descriptive name use by UI to specify a domain}
# dg_id      - Domain Group ID { FILLED IN BY SYSTEM}
# RTI        - Time Interval (hours)
# CM         - Control Method {ASA-Avg.Spd Answered,SL-Sevice Lvl,OB_ONLY-
Outbound}
# MAAS       - [Target] Average Speed to Answer (seconds)
# SC         - Service Criterion (seconds)
# DSL        - Desired Service Level (%)
# MSL        - Abatement Service Level (%)
# AUT        - Traffic Intensity Threshold (%)
# MAO        - Minimum # of Agents on Outbound (# agents)
# TR         - Initial Traffic Rate (calls/second)
# TT         - Minimum Talk Time (seconds)
# ACWT       - Minimum After Call Work Time (seconds)
# MQR        - Minimum Queued for Release (OB_ONLY groups)
# afi        - Acquisitions From Inbound { FILLED IN BY SYSTEM }
# rti        - Releases To Inbound      { FILLED IN BY SYSTEM }
#
#
# *DG | NORTH_USA | 1 | RTI | OB_ONLY | MAAS | SC |
```

```

DSL | MSL | AUT | MAO | TR | TT |
ACWT | 0 | afi | rti |

##### Defined Domains #####
# Domain Record Layout - To Create a new domain copy the template below
# and replace all field holders with appropriate values.
# NOTE - All notes/warnings from domain group field still apply.
#
# TEMPLATE
# -----
# *DM | DM_ADRS | DM_EXT | DG_NM | dg_id | AP_ID | PBX_ID | GW_ID | DM_TYP |
# -----
#
# Description of fields within a Domain
# -----
# * - Start Of New Record {MUST be in first column of record}
# DM - Domain Record Keyword {Always DM}
#
# DM_ADRS- Domain Address
# DM_EXT - Domain Phone Number
# DG_NM - Domain Group Name {Descriptive name use by UI to specify a D.G.}
# Use TRANS if defining a floating transient domain.
# dg_id - Domain Group ID {FILLED IN BY SYSTEM}
# AP_ID - PDS ID
# PBX_ID - PBX ID
# GW_ID - Gateway ID
# DM_TYP - Domain Type -- one of:
# IB - Inbound,
# TRANS - Transient Acquire,
# TEAM - Team Acquire,
# OV_FLOW - Overflow
#
*DM | 5811 | 5811 | NORTH_USA | 1 | 1 | 1 |
1 | TEAM |

*DM | 5812 | 5812 | NORTH_USA | 1 | 1 | 1 |
1 | IB |

```

Edit **acd_ext.cfg** – this contains the Communication Manager extension number into which Proactive Agent Blend agents will be logging in, as show below, extension **6000** is the extension onto which agents are logged into in this case:

```
1:6000
```

Agent Blend is a feature add-on for Proactive Contact. Ensure that the PDS service is stopped and as root, enter the command **menu install** which will run a script. When prompted select option **2. Value added products**, and then **2** again for **Install Predictive Agent Blend**. Follow the instructions prompted on screen as shown below. The information presented will display some of that configured previously in this Section.

```
Have you stopped PDS processes: y
Following AES servers are configured:
10.10.16.96 Do you want to add another AES server: n
CTI password seems to be already set in /opt/avaya/pab/config/cti_passwd.cfg
Do you wish to change the CTI password? n
AES_LINK set to AVAYA#CM62#CSTA-S#AESSEVER62
Do you want to change it now?: n
AES_USER set to pc501
Do you want to change it now?: n
Do you wish to configure Domains now?: n
Do you wish to change number of users that can be acquired for outbound
calling now?: n
Now we'll install ACD extensions
Enter q to quit
When prompted, press any key to continue.
Enter 0 to exit, and 0 again
```

7.3. Configure master.cfg

Amendments to the master.cfg file, located in /opt/avaya/pds/etc were made as follows.

```
CALL_BLENDING: YES
DBKGROUP: 15,1,1
DBSERVERIP: 10.10.16.95
IICB_HOST: devconhd501
INBNDSYS: YES
LINEASSIGN: REG,O=1-10;INB,I=11-15
NAMESERVICEHOST: devconhd501
OPERATORS: 5
OPLIMIT: I=5,O=5,B=5,P=5,M=5
PORTS: 15
PRIMARY: YES
SWITCHNAME: switch1
SWITCHTESTMODE: NO
SWITCHTYPE: DIGITAL
VISUAL_CPA: YES
WEBLMURL: http://10.10.16.95,8080/WebLM/LicenseServer:
```

Note: INBNDSYS was set to **YES** for the purposes of NVDT testing.

7.4. Configure Number Format

The `phonefmt.cfg` file located in `/opt/avaya/pds/config` contains details of how Proactive Contact needs to manipulate numbers in the calling list in order to successfully place them. The final line in the file is configured as follows:

```
STD TO DIALFMT:*:ALLTYPES:0:::
```

In this instance, of the digits dialed, **0** are deleted and the call is routed to Communication Manager. It is assumed Communication Manager has the necessary configuration required to route the call accordingly.

Proactive Contact is delivered with default calling lists. The author assumes an inbound and outbound calling list is created in Proactive Contact Editor. The administration of calling lists is outside of the scope of this document. For the purposes of the compliance test, calling list 4 (list4) was used.

7.5. Configure Avaya Proactive Contact Supervisor Software

In order for the Proactive Contact Editor application to communicate with the Proactive Contact Server, the PC on which it resides must be configured.

7.5.1. Configure Windows Host File

Edit `%WINDIR%\system32\drivers\etc\hosts` to include the hostname and IP address of the Proactive Contact Server, as follows.

```
10.10.16.95 devconhd501
```

7.5.2. Check Avaya Proactive Contact Services

Ensure all necessary services are running on the Proactive Contact Server. The following commands start, check and stop the db, mts, and pds services, which must be stopped and started in the order shown. All services must be started before proceeding.

```
start_db
start_mts
start_pds
check_db
check_mts
check_pds
stop_pds
stop_mts
stop_db
```

7.5.3. Configure Avaya Proactive Contact Supervisor Software

Double click on the Health Manager icon on the desktop. The Screen below will be presented, complete it as shown with the Proactive Contact IP address and hostname

The screenshot shows a Windows-style dialog box titled "Configurator". Inside, there is a text box with the instruction: "You can specify the Primary Dialer, Email Server and the Database Server details." Below this, there are three sections, each with a title and two input fields: "Name:" and "IP Address:". The first section, "Primary Proactive Contact Details", has "devconhd501" in the Name field and "10 . 10 . 16 . 95" in the IP Address field. The second section, "Email Server Details", also has "devconhd501" in the Name field and "10 . 10 . 16 . 95" in the IP Address field. The third section, "Database Server Details", has the same values. A checkbox labeled "Use primary server for email and database" is checked. At the bottom are "OK" and "Cancel" buttons.

You can specify the Primary Dialer, Email Server and the Database Server details.

Primary Proactive Contact Details

Name: devconhd501

IP Address: 10 . 10 . 16 . 95

☒ Use primary server for email and database

Email Server Details

Name: devconhd501

IP Address: 10 . 10 . 16 . 95

Database Server Details

Name: devconhd501

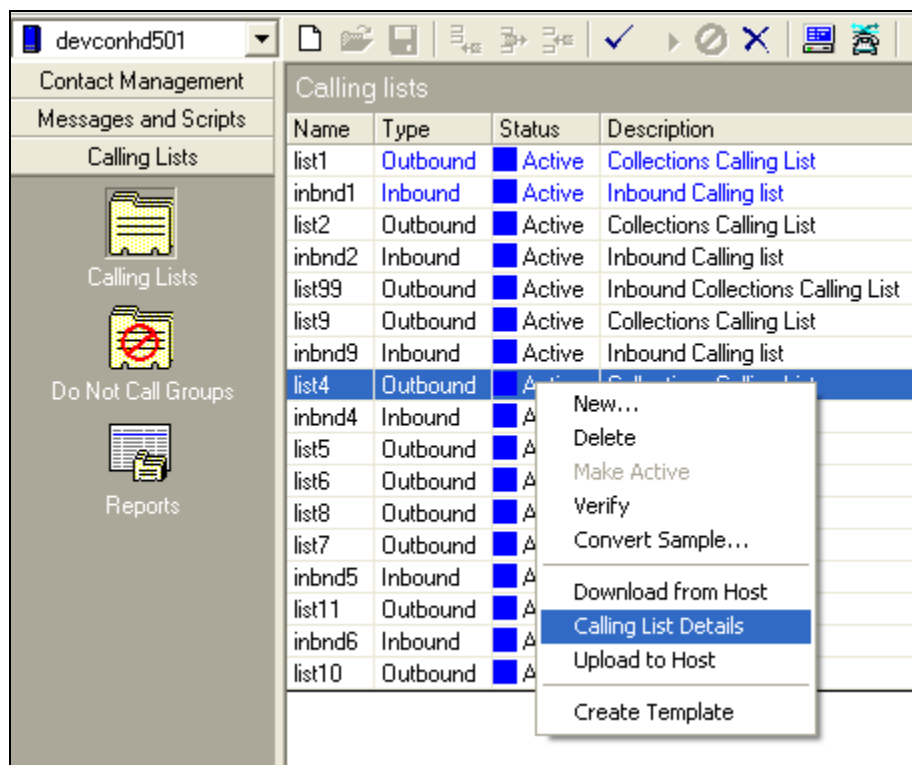
IP Address: 10 . 10 . 16 . 95

OK Cancel

It is now possible to log in to the Health Manager with the sysadm login credentials. Close Health Manager and double click on the Editor icon on the desktop. Log in with the sysadm login credentials.

7.5.4. Configure Native Voice and Data Transfer Parameters (NVDT)

NVDT is the feature used when transferring caller details from the outbound job to the inbound job. In this instance, an agent logged into the inbound job will receive the account number as well as the voice path. These parameters are configured in the calling list, as shown below. In the left hand pane click **Calling Lists** → **Calling Lists**, right click on **list4** and select **Calling List Details**.



Click to place a tick in the field to enable NVDT (**Native Voice and Data Transfer**).

The screenshot shows the 'Calling lists: Active list4' window. The 'list4' row is selected. The 'Native Voice and Data Transfer' checkbox is checked.

Name	Type	Status	Description
list1	Outbound	Active	Collections Calling List
inbnd1	Inbound	Active	Inbound Calling list
list2	Outbound	Active	Collections Calling List
inbnd2	Inbound	Active	Inbound Calling list
list99	Outbound	Active	Inbound Collections Calling List
list9	Outbound	Active	Collections Calling List
inbnd9	Inbound	Active	Inbound Calling list
list4	Outbound	Active	Collections Calling List
inbnd4	Inbound	Active	Inbound Calling list
list5	Outbound	Active	Collections Calling List
list6	Outbound	Active	Collections Calling List
list8	Outbound	Active	Collections Calling List
list7	Outbound	Active	Collections Calling List
inbnd5	Inbound	Active	Inbound Calling list
list11	Outbound	Active	Collections Calling List
inbnd6	Inbound	Active	Inbound Calling list
list10	Outbound	Active	Collections Calling List

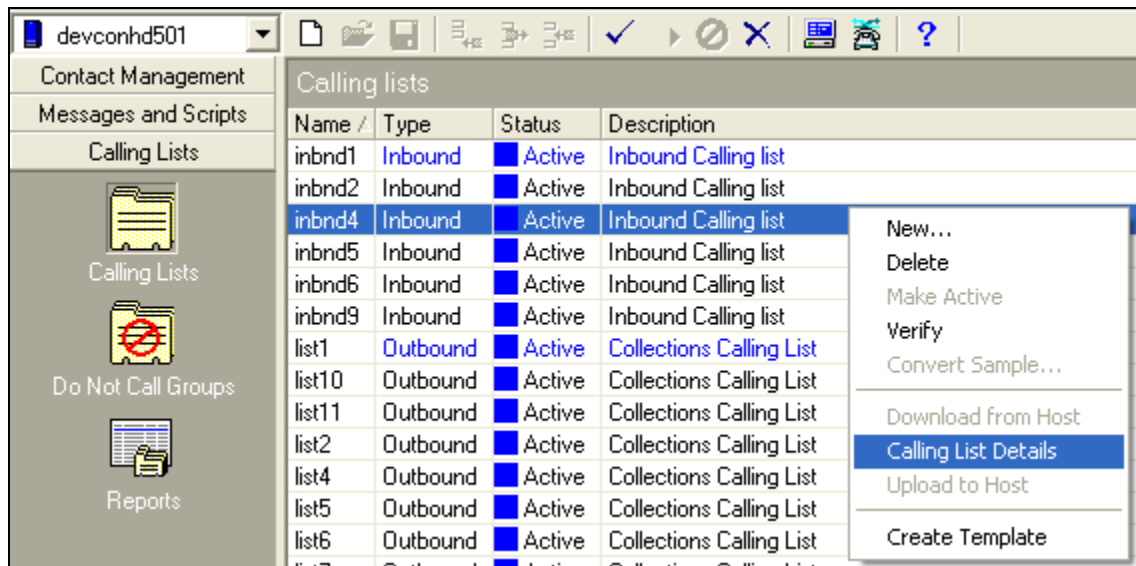
Name	Details
General	
Number of phone fields	2
List is part of Do Not Call group	<input type="checkbox"/>
Post Update	
Number of phones to update	2
Number of call attempts to keep	5
Maintain history of attempts	Keep i
Update record codes	2,3,11
Infinite Job	
Key for removing duplicate records	<input type="checkbox"/>
Key for indexing records	<input type="checkbox"/>
Key for indexing Do Not Call proces	<input type="checkbox"/>
LATELIST	
Match compcodes	<input type="checkbox"/>
Sort newly downloaded records	
Key for sorting	<input type="checkbox"/>
Campaign Update	
Update Mode	<input type="checkbox"/>
Native Voice and Data Transfer	<input checked="" type="checkbox"/>
Sales Verification	<input checked="" type="checkbox"/>

Click on the **Calling List Dictionary** Tab, and click to place a tick in the **NVDT** column next to **ACCTNUM**. Ensure the **Length** field is set to **25**. Save when completed.

The screenshot shows the 'Calling List Dictionary' tab. The 'ACCT' row is selected. The 'NVDT' checkbox is checked.

Field	Data Type	Length	Description	NVDT	RSM	Latelist
ACCT	Character	25	ACC NUMB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
BALA	Currency	20	BALANCE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TOTA	Currency	10	TOTAL DUE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NAME	Character	25	NAME LINE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NAME	Character	25	NAME LINE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CITY	Character	25	City	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
STAT	Character	2	State	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ZIPCO	Numeric	5	ZIPCODE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PHON	Character	12	HOME PHO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The same needs to be performed for the **inbnd4** list. Right click on **inbnd4** and select **Calling List Details**.




Click to place a tick in the **NVDT** column next to **ACCTNUM**. Ensure the **Length** field is set to **25**. Save when completed.

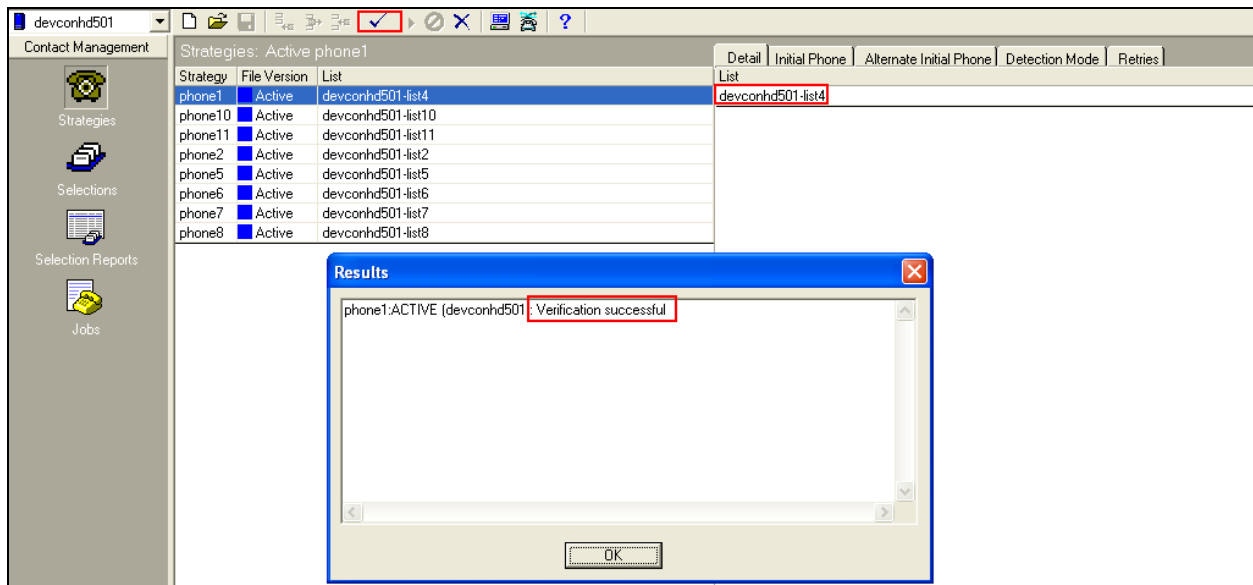
The screenshot shows the 'Contact Management' application interface. On the left is a sidebar with 'Messages and Scripts' and 'Calling Lists' (selected). The main window is titled 'Calling lists: Active inbound4'. It contains a table of calling lists and a 'Calling List Dictionary' table.

Name /	Type	Status	Description
inbnd1	Inbound	Active	Inbound Calling list
inbnd2	Inbound	Active	Inbound Calling list
inbnd4	Inbound	Active	Inbound Calling list
inbnd5	Inbound	Active	Inbound Calling list
inbnd6	Inbound	Active	Inbound Calling list

Field	Data Type	Length	Description	NVDT
ACCT	Character	25	Account	<input checked="" type="checkbox"/>
AGE	Character	8	Agent ID	<input type="checkbox"/>
DTE	Date	10	System date	<input type="checkbox"/>
TME	Time	8	System time	<input type="checkbox"/>
COD	Character	3	System	<input type="checkbox"/>

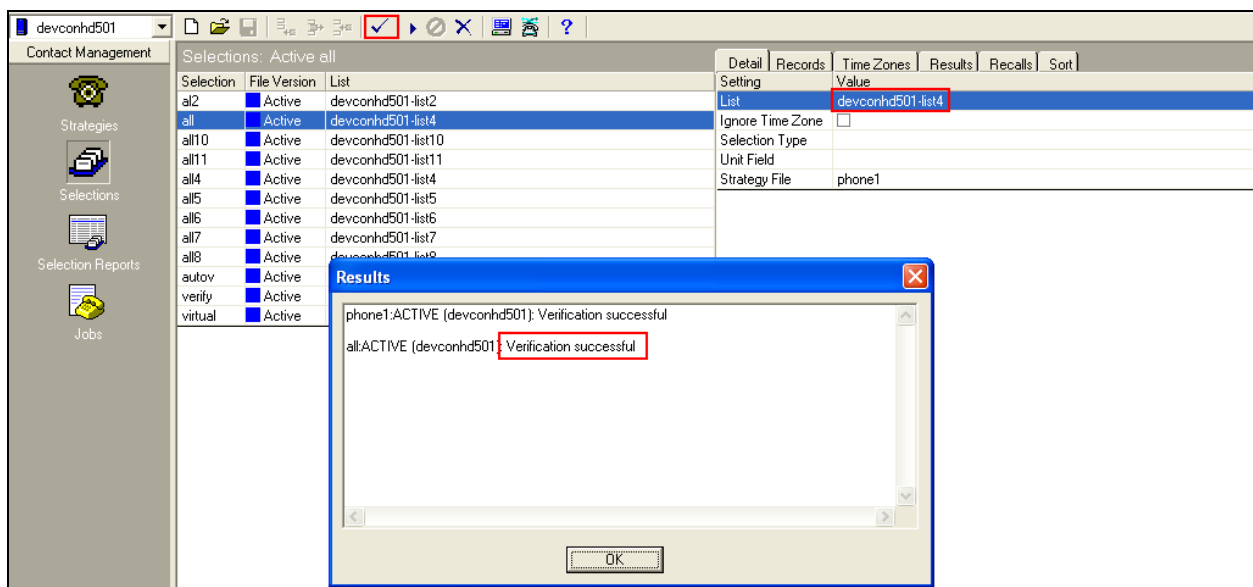
7.5.5. Configure Strategy


Assuming that strategy **phone1** and calling list **list4** (as specified in the previous section), are being used, configure editor as shown below. Click verify  and ensure verification is successful.

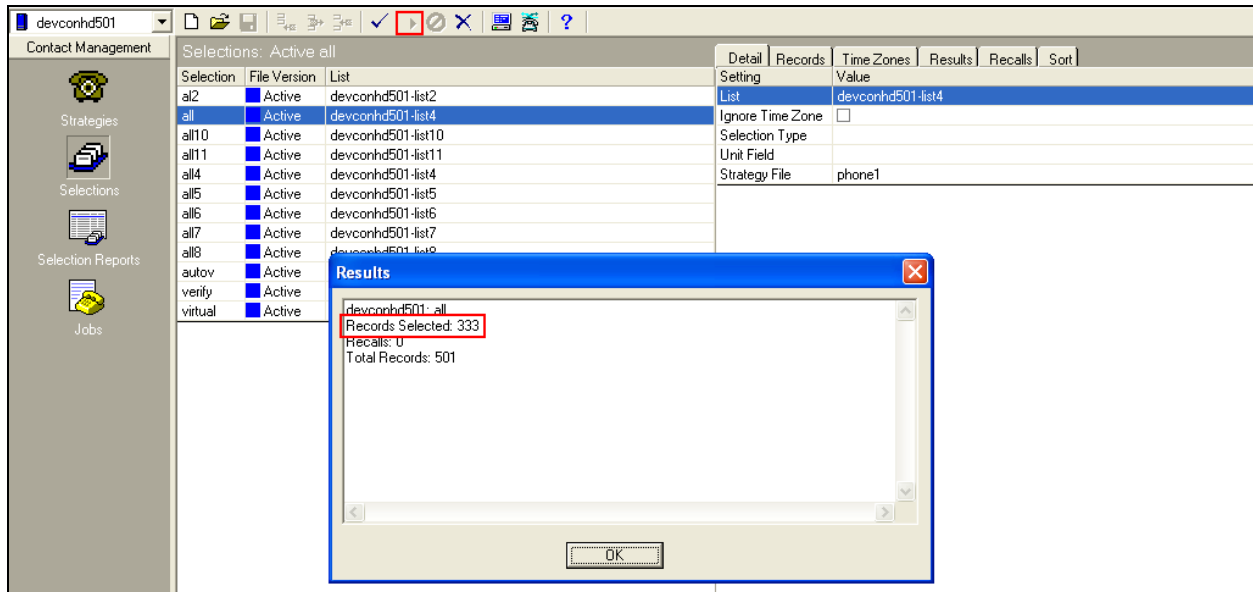


7.5.6. Configure Selections

Click **Selections**, select **all**, and specify calling list **list4**, click verify and ensure verification is successful.

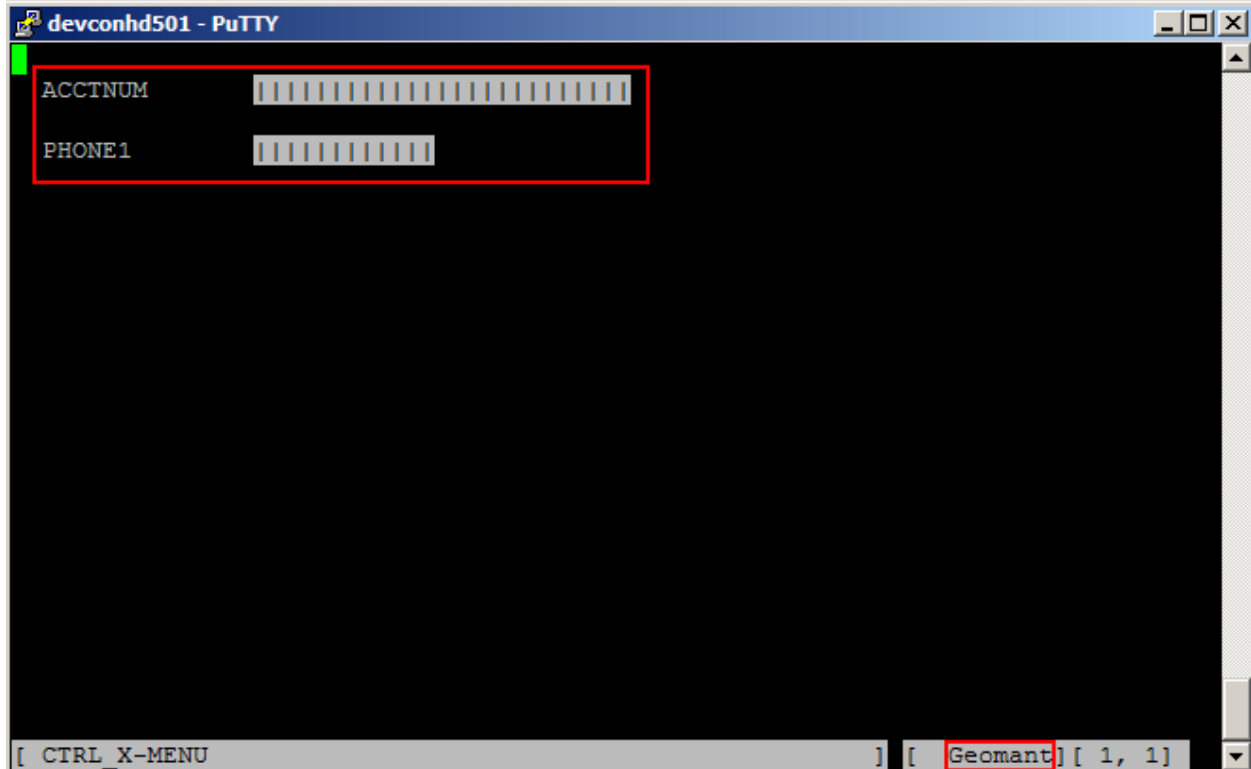


Click run , and ensure that the selection selected includes some records.



7.5.7. Configure Agent Screen

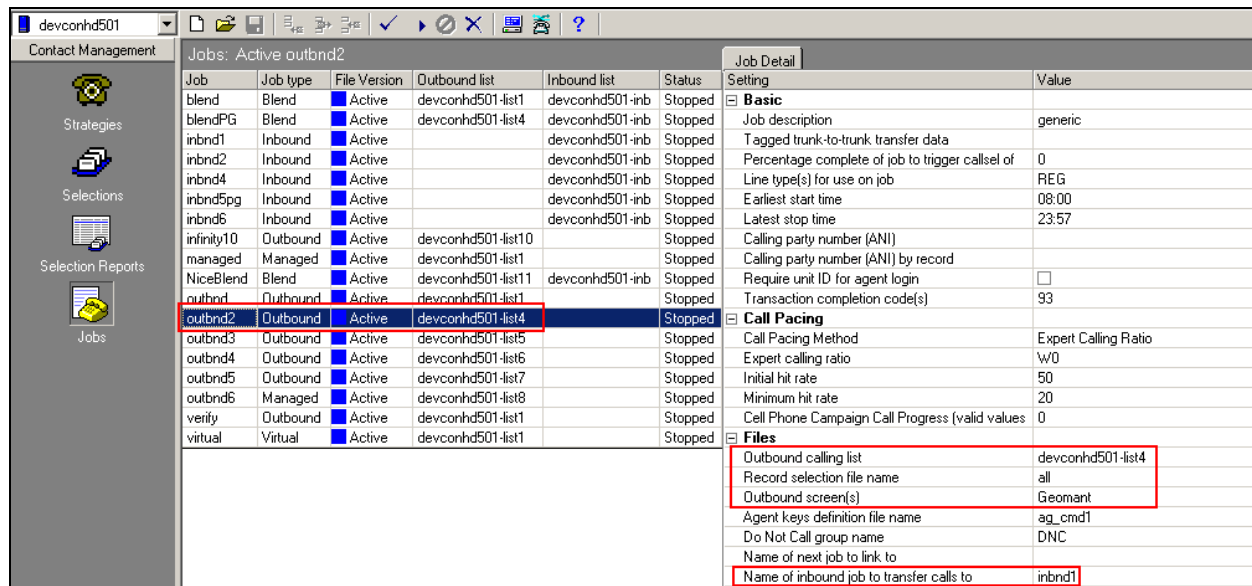
An agent screen must be configured. This defines the information presented to the agent from the calling list when an outbound call is delivered to an agent. From the Proactive Contact command line enter the command **menu system**, choose option **2. Calling lists** followed by option **6. Build screens** to build a screen with the required information to be presented to the agent. In the screenshot shown below the **ACCTNUM** and **PHONE1** fields have been chosen and the screen is named as **Geomant**.



7.5.8. Configure Outbound Job

Click **Jobs**, select **outbnd2** and configure as shown with **Outbound calling list list4**. Set the **Record selection file name** to **all** and the **Outbound screen(s)** to **Geomant**.

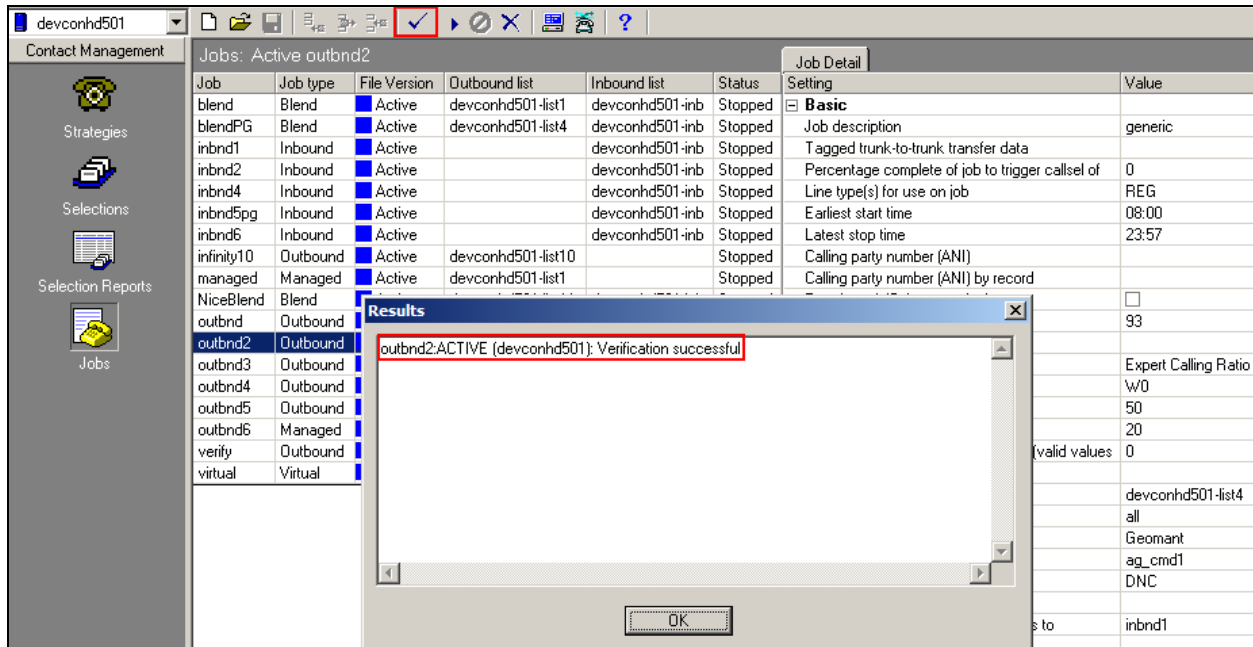
Note: Name of inbound job to transfer calls to is set to **inbnd1** - this relates to the NVDT feature.



Job	Job type	File Version	Outbound list	Inbound list	Status
blend	Blend	Active	devconhd501-list1	devconhd501-inb	Stopped
blendPG	Blend	Active	devconhd501-list4	devconhd501-inb	Stopped
inbnd1	Inbound	Active		devconhd501-inb	Stopped
inbnd2	Inbound	Active		devconhd501-inb	Stopped
inbnd4	Inbound	Active		devconhd501-inb	Stopped
inbnd5pg	Inbound	Active		devconhd501-inb	Stopped
inbnd6	Inbound	Active		devconhd501-inb	Stopped
infinity10	Outbound	Active	devconhd501-list10		Stopped
managed	Managed	Active	devconhd501-list11		Stopped
NiceBlend	Blend	Active	devconhd501-list11	devconhd501-inb	Stopped
outbnd	Outbound	Active	devconhd501-list11		Stopped
outbnd2	Outbound	Active	devconhd501-list4		Stopped
outbnd3	Outbound	Active	devconhd501-list5		Stopped
outbnd4	Outbound	Active	devconhd501-list6		Stopped
outbnd5	Outbound	Active	devconhd501-list7		Stopped
outbnd6	Managed	Active	devconhd501-list8		Stopped
verify	Outbound	Active	devconhd501-list1		Stopped
virtual	Virtual	Active	devconhd501-list1		Stopped

Setting	Value
Basic	
Job description	generic
Tagged trunk-to-trunk transfer data	
Percentage complete of job to trigger callset of	0
Line type(s) for use on job	REG
Earliest start time	08:00
Latest stop time	23:57
Calling party number (ANI)	
Calling party number (ANI) by record	
Require unit ID for agent login	<input type="checkbox"/>
Transaction completion code(s)	93
Call Pacing	
Call Pacing Method	Expert Calling Ratio
Expert calling ratio	w/0
Initial hit rate	50
Minimum hit rate	20
Cell Phone Campaign Call Progress (valid values)	0
Files	
Outbound calling list	devconhd501-list4
Record selection file name	all
Outbound screen(s)	Geomant
Agent keys definition file name	ag_cmd1
Do Not Call group name	DNC
Name of next job to link to	
Name of inbound job to transfer calls to	inbnd1

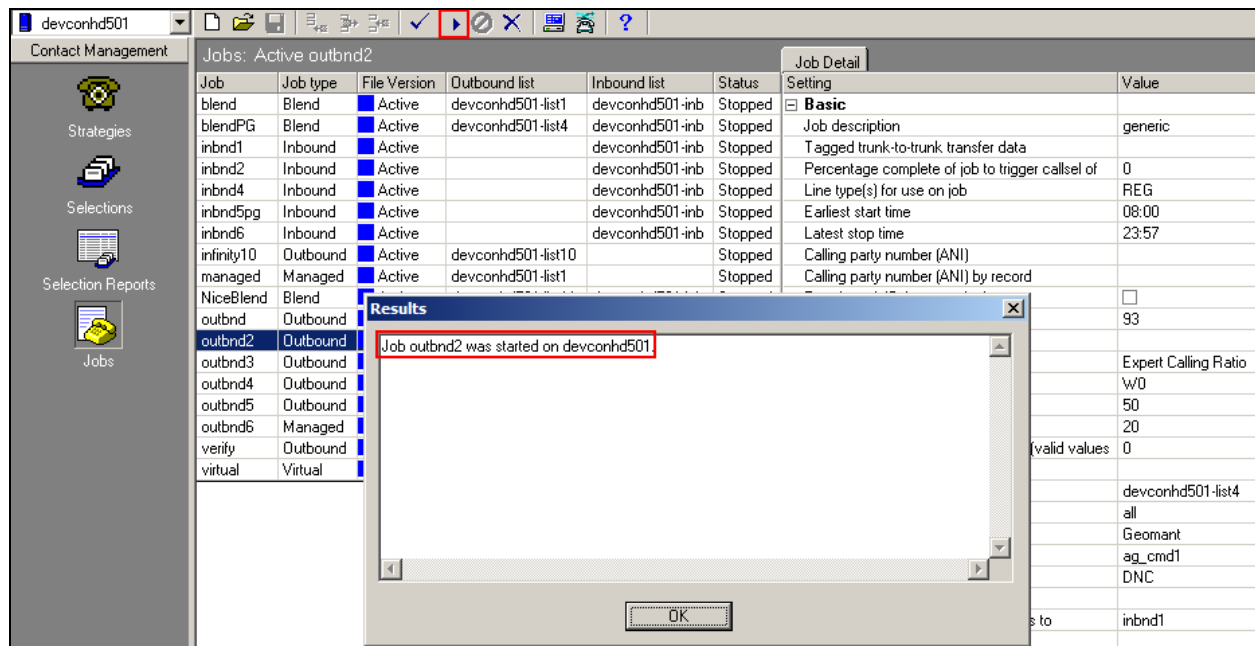
Click verify  and ensure verification completes successfully.



The screenshot displays the Avaya Contact Management application window. The main window has a sidebar with icons for 'Strategies', 'Selections', 'Selection Reports', and 'Jobs'. The 'Jobs' section is active, showing a list of jobs under the 'Active outbnd2' tab. The 'Jobs' list includes columns for Job, Job type, File Version, Outbound list, Inbound list, and Status. A 'Results' dialog box is open, displaying the message 'outbnd2:ACTIVE (devconhd501): Verification successful'. The dialog box has an 'OK' button at the bottom.

Job	Job type	File Version	Outbound list	Inbound list	Status
blend	Blend	Active	devconhd501-list1	devconhd501-inb	Stopped
blendPG	Blend	Active	devconhd501-list4	devconhd501-inb	Stopped
inbnd1	Inbound	Active		devconhd501-inb	Stopped
inbnd2	Inbound	Active		devconhd501-inb	Stopped
inbnd4	Inbound	Active		devconhd501-inb	Stopped
inbnd5pg	Inbound	Active		devconhd501-inb	Stopped
inbnd6	Inbound	Active		devconhd501-inb	Stopped
infinity10	Outbound	Active	devconhd501-list10		Stopped
managed	Managed	Active	devconhd501-list1		Stopped
NiceBlend	Blend				
outbnd	Outbound				
outbnd2	Outbound				
outbnd3	Outbound				
outbnd4	Outbound				
outbnd5	Outbound				
outbnd6	Managed				
verity	Outbound				
virtual	Virtual				

Start the job by clicking .



The screenshot shows the Proactive Contact Management console. The 'Jobs: Active outbnd2' window is open, displaying a list of jobs. The 'Results' dialog box is open, showing the message 'Job outbnd2 was started on devconhd501'.

Job	Job type	File Version	Outbound list	Inbound list	Status	Setting	Value
blend	Blend	Active	devconhd501-list1	devconhd501-inb	Stopped	Basic	
blendPG	Blend	Active	devconhd501-list4	devconhd501-inb	Stopped	Job description	generic
inbnd1	Inbound	Active		devconhd501-inb	Stopped	Tagged trunk-to-trunk transfer data	
inbnd2	Inbound	Active		devconhd501-inb	Stopped	Percentage complete of job to trigger callset of	0
inbnd4	Inbound	Active		devconhd501-inb	Stopped	Line type(s) for use on job	REG
inbnd5pg	Inbound	Active		devconhd501-inb	Stopped	Earliest start time	08:00
inbnd6	Inbound	Active		devconhd501-inb	Stopped	Latest stop time	23:57
infinity10	Outbound	Active	devconhd501-list10		Stopped	Calling party number (ANI)	
managed	Managed	Active	devconhd501-list1		Stopped	Calling party number (ANI) by record	
NiceBlend	Blend						
outbnd	Outbound						93
outbnd2	Outbound						Expert Calling Ratio
outbnd3	Outbound						w/0
outbnd4	Outbound						50
outbnd5	Outbound						20
outbnd6	Managed						(valid values
verify	Outbound						0
virtual	Virtual						devconhd501-list4
							all
							Geomant
							ag_cmd1
							DNC
							s to
							inbnd1

The outbound job is now running, and Proactive Contact will be initiating outbound calls to Proactive Contact Agents, once logged in.

7.5.9. Configure Inbound Job

7.5.10. Configure Inbound Job

Click **Jobs** select **inbnd1** and configure as shown. This is the job used to for the NVDT feature as noted above.

The screenshot shows the 'Jobs: Active inbnd1' window. The 'Jobs' list on the left includes 'inbnd1' (Inbound, Active). The 'Job Detail' pane on the right shows the configuration for 'inbnd1'.

Job	Job type	File Version	Outbound list	Inbound list	Status
blend	Blend	Active	devconhd501-list1	devconhd501-inbnd1	Stopped
blendPG	Blend	Active	devconhd501-list4	devconhd501-inbnd5	Stopped
inbnd1	Inbound	Active		devconhd501-inbnd4	Stopped
inbnd2	Inbound	Active		devconhd501-inbnd2	Stopped
inbnd4	Inbound	Active		devconhd501-inbnd6	Stopped
inbnd5pg	Inbound	Active		devconhd501-inbnd5	Stopped
inbnd6	Inbound	Active		devconhd501-inbnd6	Stopped
infinity10	Outbound	Active	devconhd501-list10		Stopped
managed	Managed	Active	devconhd501-list1		Stopped
NiceBlend	Blend	Active	devconhd501-list11	devconhd501-inbnd6	Stopped

Setting	Value
Basic	
Job description	Inbound Only Job
Line type(s) for use on job	INB
Earliest start time	00:01
Latest stop time	23:59
Transaction completion code(s)	93
Files	
Inbound calling list	devconhd501-inbnd4
Inbound screen(s)	inbnd1
Agent keys definition file name	ag_cmd1

Click verify  and ensure verification completes successfully.

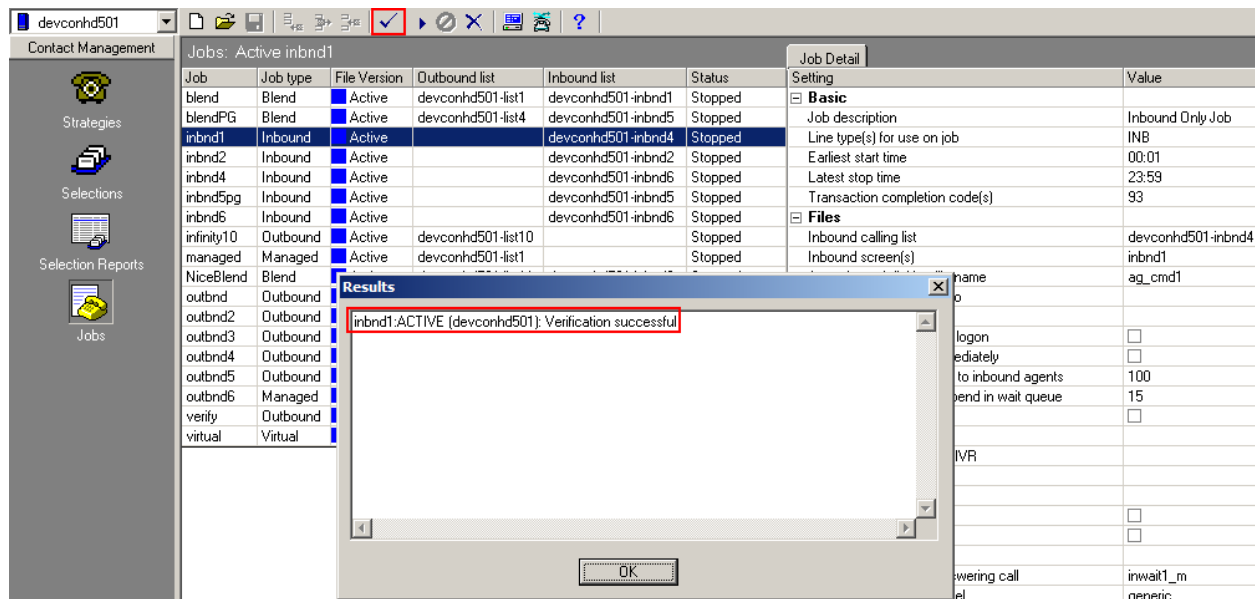
The screenshot shows the 'Jobs: Active inbnd1' window with the 'verify' button highlighted. A 'Results' dialog box is open, displaying the message: 'inbnd1:ACTIVE (devconhd501): Verification successful'.

Job	Job type	File Version	Outbound list	Inbound list	Status
blend	Blend	Active	devconhd501-list1	devconhd501-inbnd1	Stopped
blendPG	Blend	Active	devconhd501-list4	devconhd501-inbnd5	Stopped
inbnd1	Inbound	Active		devconhd501-inbnd4	Stopped
inbnd2	Inbound	Active		devconhd501-inbnd2	Stopped
inbnd4	Inbound	Active		devconhd501-inbnd6	Stopped
inbnd5pg	Inbound	Active		devconhd501-inbnd5	Stopped
inbnd6	Inbound	Active		devconhd501-inbnd6	Stopped
infinity10	Outbound	Active	devconhd501-list10		Stopped
managed	Managed	Active	devconhd501-list1		Stopped
NiceBlend	Blend	Active	devconhd501-list11	devconhd501-inbnd6	Stopped

Setting	Value
Basic	
Job description	Inbound Only Job
Line type(s) for use on job	INB
Earliest start time	00:01
Latest stop time	23:59
Transaction completion code(s)	93
Files	
Inbound calling list	devconhd501-inbnd4
Inbound screen(s)	inbnd1
Agent keys definition file name	ag_cmd1

Setting	Value
name	
logon	
mediately	
to inbound agents	100
pend in wait queue	15
IVR	
lowering call	inwait1_m
el	generic

Start the job by clicking .



If the job fails to run as expected, ensure the job file within the **/opt/avaya/pds/job/** directory has the following parameters set:

TESTMODE :
TESTOPER :

8. Configure Geomant Unified Agent

The installation, configuration and commissioning of Unified Agent is managed and facilitated by the Geomant Delivery team and involves the full installation, configuration and deployment of all components of the Unified Agent solution.. This section provides the procedures for configuring Unified Agent to interoperate with the Avaya solution. The process can be summarized as follows:

- Configure CTI Connection
- Configure Dialer Connection
- Configure Acquire VDN

8.1. Configure CTI Connection

Unified Agent uses the Geomant CCI service to connect with Application Enablement Services using a TSAPI connection. Using an appropriate text editor to open the **GeoCCISrv.exe.properties** file, which by default is located in the **C:\Program Files\GeoCCI** directory on the Unified Agent server and configure the following:

- **JTAPIServer** – enter IP address of Application Enablement Services
- **JTAPILink** – enter the Tlink name obtained in **Section 6.5**
- **JTAPIUser** – enter the CTI User configured for Geomant in **Section 6.6**
- **JTAPIPassword** – enter the CTI User password configured for Geomant in **Section 6.6**

As shown in the extract below.

```
#Service specific configuration
#JTAPI config
JTAPIServer=10.10.16.96
JTAPIPort=450
JTAPILink=AVAYA#CM62#CSTA#AESERVER62
JTAPIUser=geomant
JTAPIPassword=Geomant123!
```

8.2. Configure Dialer Connection

Unified Agent uses the Geomant APC service to connect with the Proactive Contact Agent API. Using an appropriate text editor to open the **GeoCCIAPCServer.exe.config** file, which by default is located in the **C:\Program Files\GeoCCIAPC** directory on the Unified Agent server and configure the following:

- **Dialer.[number].Address** – enter IP address of Proactive Contact
- **Dialer.[number].Port** – enter the port the Proactive Contact Agent API uses (default 22700)

As shown in the extract below.

```
<add key="Dialer.0.Name" value="LAB_DIALLER"/>
<add key="Dialer.0.Address" value="10.10.16.95"/>
<add key="Dialer.0.Port" value="22700"/>
```

The **apcdialer.properties** file contains the settings for the Unified Agent Tomcat Application auto-update functionality. The Unified Agent Tomcat Application performs a daily download of the .job and .ky files located on the dialer at a defined time. The download process involves the use of SFTP protocol to perform this transfer. The user configured in this file needs to have privileges for remote file transfer, in this instance the admin user was used. Using an appropriate text editor to open the **apcdialer.properties** file, the location of which depends on the implementation, and configure the following:

- DialerIP – IP address of Proactive Contact
- DialerPort – SSH port for connection to Proactive Contact for SFTP transfer
- DialerUser – username for SSH connection
- DialerPass – password for user.

```
Dialer=LAB_DIALLER
DialerIP=10.10.16.95
DialerPort=22
DialerUser=admin
DialerPass=xxxxx
DialerPath=/opt/avaya/pds/
```

8.3. Configure Acquire VDN

The **ctiagent.properties** file contains settings related to the Unified Agent Tomcat Application CTI integration, including the address and port used for internal communication with the Geomant CCI Server, extension number ranges and length, the prefix for external dialing and the Acquire VDN to be monitored for the PAB feature. Using an appropriate text editor to open the **ctiagent.properties** file, the location of which depends on the implementation, and configure the following:

- OutsideNumPrefix – set this to the number used to dial externally
- InsideNumLength – set this according to the extension number and length used by agents
- BlendSkills - set this to the VDN of the acquire skill used by PAB as configured in **Section 5.3**

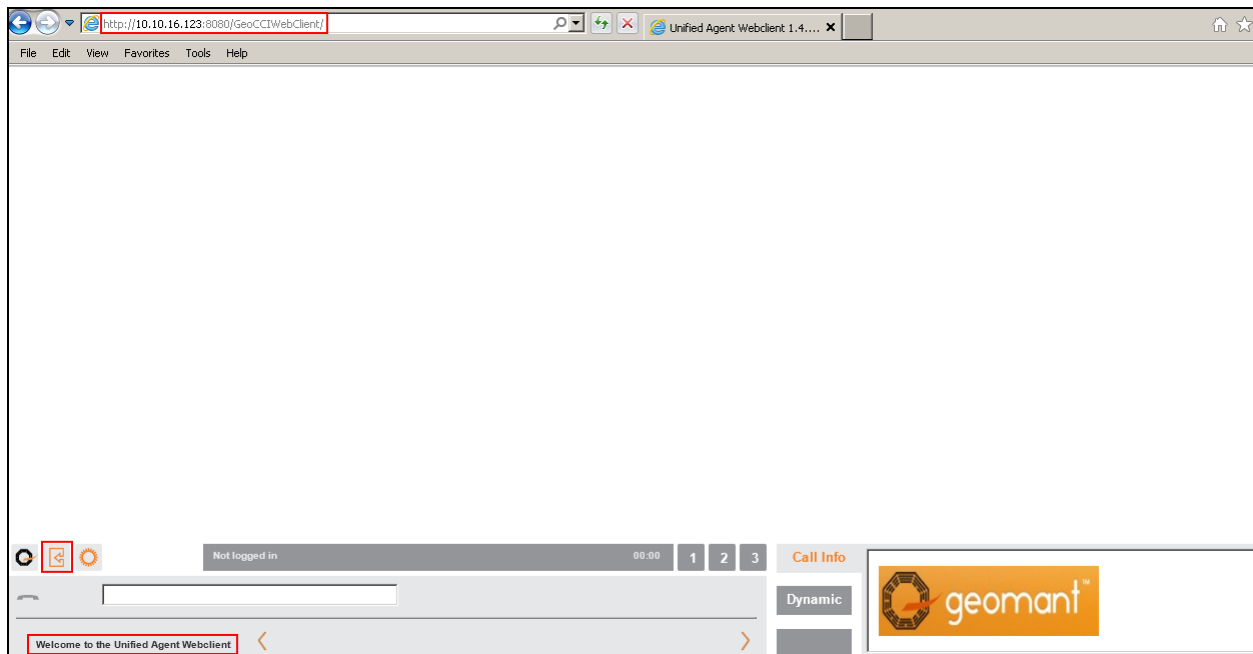
```
OutsideNumPrefix=9
InsideNumLength=4|6
ReasonCodes=1|Away from Desk;2|In a Meeting;3|At Lunch;4|Do not disturb;5|On
a break;6|Manual Outbound;7|At a training session;8|Post
#ForceAccept values: empty, autoaccept, manualaccepty
ForceAccept=
#ConferenceEnabled values: 1 - enabled, 0 - disabled
ConferenceEnabled=1
ClientTimeout=30000
BlendSkills=5811
```

9. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Unified Agent, Proactive Contact, and Application Enablement Services. Prior to verification, start an outbound job on Proactive Contact.

9.1. Verify Geomant Unified Agent

From the agent PC navigate to the URL of the Unified Agent web client, in this case <http://10.10.16.123:8080/GeoCCIWebClient/>, the info area will display a welcome message, click the **login** icon.



Click the **Agent Type** tab and enter the agent type as required. In the example below, **Outbound** is selected from the drop down list, and the **Avaya Dialler**, **PAB** and **Avaya ACD** tick boxes are checked – this configuration pertains to logging in an agent for a Proactive Agent Blend scenario.



Click on the **Dialler Login** tab and enter the Proactive Contact **AgentID** and **Password**. Enter the **Extension** number for the endpoint on which calls will be handled.



Click the **ACD Login** tab and enter the **AgentID** and **Password** configured on Communication Manager. The **Extension** number is auto-populated with what is entered on the **Dialer Login** tab. Click the orange tick when done.

If the login is successful, the **Login successful** message will appear in the info area.

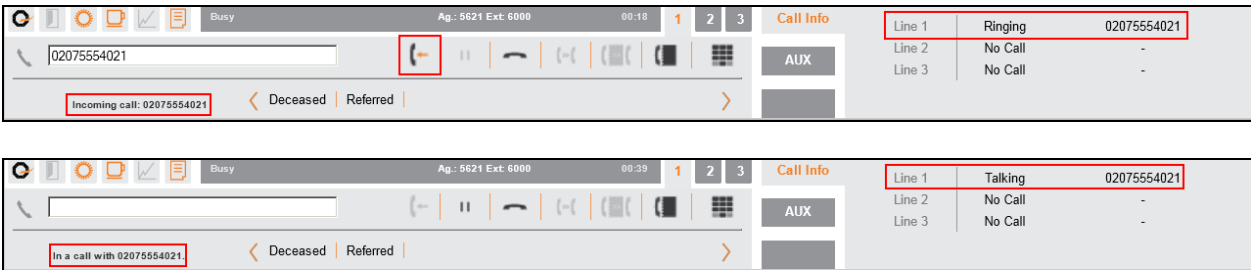
Click the **Join Job** icon and select the job to be joined on the right hand side of the screen, click the orange tick to join the job.

The acquire call will be placed to the agent extension, in this case 6000. Once answered the agent will be acquired for the outbound dialer job. The info area will update with a message to this affect. The status bar will show **On Break**. Click the **off break** button to begin handling outbound calls.

Outbound calls will be placed by the dialer. Once an outbound call is answered verify that the call is connected to the agent, the record information will appear in the **Call Info** area, the info area will update with **Received a call** and the status bar will update with **In call**.

Note: the information displayed in the **Call Info** area matches the fields configured in the Agent Screen in **Section 7.5.7**.

Place a call to the inbound VDN configured in **Section 5.2**. Once the outbound call has been completed, verify that the agent is moved to inbound mode and the inbound call can be answered using the Unified Agent web client.



9.2. Verify Avaya Aura® Communication Manager Trunks

Following on from the previous section, handle an outbound call using the Unified Agent web client, and enter the command **status trunk x** where **x** is the Outbound or Headset trunk shown in **Section 5.6**. Verify that the **Service State** of the trunk members are **in-service**. In the example below where an outbound call is connected to an agent, the **Service State** of the trunk member is **in-service/active**.

status trunk 8					
TRUNK GROUP STATUS					
Member	Port	Service State	Mtce	Connected	Ports
			Busy		
0008/001	001V806	in-service/idle	no		
0008/002	001V807	in-service/idle	no		
0008/003	001V808	in-service/idle	no		
0008/004	001V809	in-service/idle	no		
0008/005	001V810	in-service/idle	no		
0008/006	001V811	in-service/idle	no		
0008/007	001V812	in-service/idle	no		
0008/008	001V813	in-service/active	no	S00041	S00007
0008/009	001V814	in-service/idle	no		
0008/010	001V815	in-service/idle	no		

9.3. Verify Proactive Contact Job Status

From Proactive Contact shell, type the command **jobmon** to verify an agent is logged into the job outbnd2 and handling a call:

[STANDARD]		Job Activity							
[ALLID]									
		Summary Statistics							
		Job: [outbnd2][1478]							
		Start time: 07.45.02				Current time: 14.58.49			
Agent Activity		Line Usage							

	All	Outb	ACD	PTP	Outbound Lines	Cur	Avg	Peak	
Logged in:	1	1	0	0	Demand :	1	0	1	
Assigned :	1	1			Available :	9			
On Phone :	1	1			Total Lines :	10			
Calling Activities									

Outbound Phone Calls									
Records Selected:			419						
Phone Calls made:			6						
Cur/Run Hit Rate:			65/66 %						
Agent Connects :			3						
Queue :			0						
Recalls :			0						
Phone Calls Left:			305						

9.4. Verify Avaya Aura® Application Enablement Services

On Application Enablement Services, verify the status of the TSAPI link by selecting **Status** → **Status and Control** → **TSAPI Service Summary** from the left pane. The **TSAPI Link Details** screen is displayed. Verify the **Status** is **Talking** for the TSAPI link administered in **Section 6.3**, as shown below.

The screenshot shows the 'TSAPI Link Details' screen. The left navigation pane is expanded to 'Status and Control', with 'TSAPI Service Summary' selected. The main content area displays a table of TSAPI link details. The 'Status' column for the link with ID 1 is 'Talking'. Below the table are buttons for 'Online' and 'Offline'. At the bottom, there are tabs for 'TSAPI Service Status', 'TLink Status', and 'User Status'.

Link	Switch Name	Switch CTI Link ID	Status	Since	State	Switch Version	Associations	Msgs to Switch	Msgs from Switch	Msgs Period
1	CM62	1	Talking	Fri Jan 4 11:20:29 2013	Online	16	7	387	426	30

Click on **User Status** and select the configured Geomant CTI user from the **CTI Users** drop down list and click **Submit**. Verify an Open Stream is displayed against the Geomant CTI user with the Tlink name configured in **Section 8.1**.

The screenshot shows the 'CTI User Status' screen. The left navigation pane is expanded to 'Status and Control', with 'User Status' selected. The main content area displays a form with a 'CTI Users' dropdown menu set to 'geomant' and a 'Submit' button. Below the form, it shows 'Open Streams: 1' and 'Closed Streams: 0'. A table titled 'Open Streams' displays the details of the open stream for the 'geomant' user.

Name	Time Opened	Time Closed	Tlink Name
geomant	Thu 10 Jan 2013 12:12:08 PM GMT		AVAYA#CM62#CSTA#AESERVER62

10. Conclusion

These Application Notes describe the configuration steps required for Geomant Unified Agent to successfully interoperate with Avaya Aura® Communication Manager, Avaya Aura® Application Enablement Services and Avaya Proactive Contact with Avaya PG230 Digital Switch. All feature test cases were completed successfully with observations note in **Section 2.2**.

11. Additional References

This section references the product documentation relevant to these Application Notes.

1. *Administering Avaya Proactive Contact*, Release 5.0, April 2012, available at <http://support.avaya.com>.
2. *Geomant Unified Agent Implementation Guide*, Version 1.4.0, November 2012

©2013 Avaya Inc. All Rights Reserved.

Avaya and the Avaya Logo are trademarks of Avaya Inc. All trademarks identified by ® and ™ are registered trademarks or trademarks, respectively, of Avaya Inc. All other trademarks are the property of their respective owners. The information provided in these Application Notes is subject to change without notice. The configurations, technical data, and recommendations provided in these Application Notes are believed to be accurate and dependable, but are presented without express or implied warranty. Users are responsible for their application of any products specified in these Application Notes.

Please e-mail any questions or comments pertaining to these Application Notes along with the full title name and filename, located in the lower right corner, directly to the Avaya DevConnect Program at devconnect@avaya.com.