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Avaya Solution & Interoperability Test Lab

Application Notes for Presence Technology Presence Suite with Avaya Communication Manager and Avaya Application Enablement Services – Issue 1.0

Abstract

These Application Notes describe the configuration steps for provisioning Presence Suite to interoperate with Avaya Communication Manager and Avaya Application Enablement Services. Presence Suite is a multi-channel contact management suite able to handle voice, text chat, e-mail and web contact mechanisms. Avaya Telephony Service API (TSAPI) interface is used to monitor and control agent stations, and handle routing of external calls.

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.

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Presence_ACM

1. Introduction

These Application Notes describe the compliance tested configuration using Presence Suite and Avaya Communication Manager with Avaya Application Enablement Services.

Presence Suite is a multi-channel contact management suite able to handle voice, e-mail and web chat contact mechanisms. Avaya's Telephony Service API (TSAPI) interface is used to monitor and control agent stations, generate phantom calls for non-voice contacts, and handle routing of external calls. Presence Suite consists of a number of modules. Only the following modules were compliance tested.

- Presence Voice Outbound
- Presence Voice Inbound
- Presence Messaging
- Presence Internet

Upon starting the Presence Voice application, the application automatically queries Avaya Application Enablement Services (AES) for device status and requests monitoring. The Presence Voice specifies where to route each call and hence what call treatments to provide, based on agent status information that the application tracks, based on CTI device query results and event reports received from AES.

Figure 1 show the test configuration used during compliance testing. An Avaya S8500 Server running Avaya Communication Manager 4.0.1 with an Avaya G650 Media Gateway was used as the hosting PBX. Presence Suite, including Presence Agent PC's, were connected to the LAN and controlled the Avaya IP phones via AES using TSAPI.
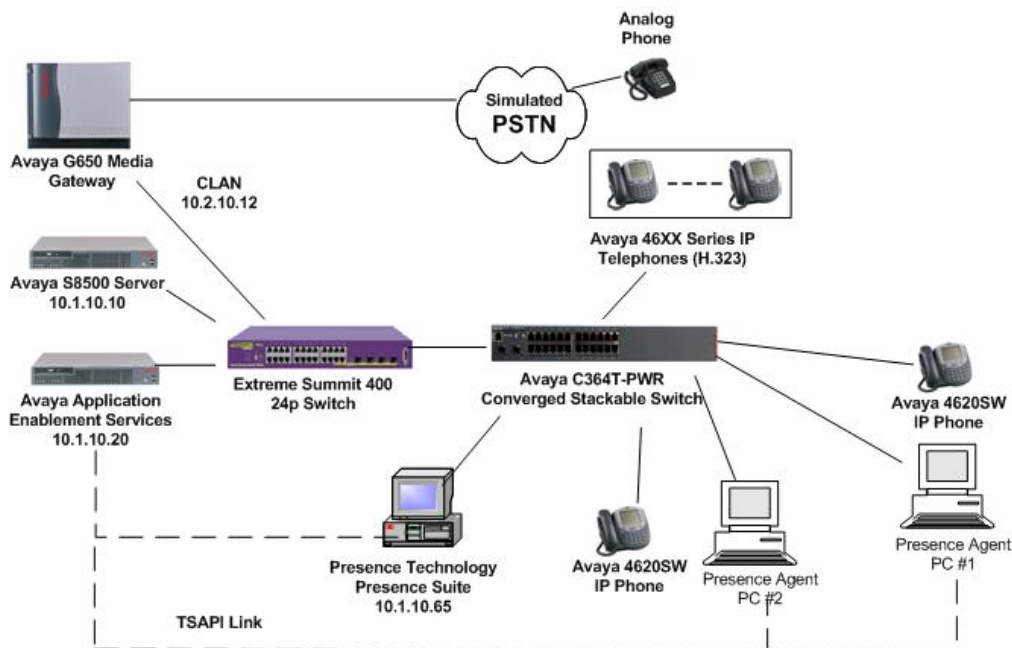

Figure 1: Test Configuration

Presence Voice Outbound

The Presence Voice Outbound has three outbound modes of dialing.

Preview –The agent receives data for the outbound call record and the outbound call is made by the agent clicking the "Call" button. This outbound mode is useful when an agent needs to consult the data or history of the outbound record before calling the contact.

Progressive – The call is generated after a contact has been finalized and the agent is available to take further calls. The calls-to-agent relationship is one-to-one, and as such, the number of calls in a service is always less than or equal to the number of agents.

Predictive – The call is anticipated before an agent finalizes a contact and becomes available, meaning that the number of calls may be higher than the number of agents in the service.

Presence Voice Inbound

The Presence Voice inbound service allows calls to be routed to available agents. The following inbound options were tested.

Direct Agent Transfer – This option enables the voice and data transfer to agents of this service from the Presence Agent softphone. When this option is selected, agents from this or another service can check the current status of agents (such as 'Available', Speaking', etc.) and then transfer the call and data to any agent of the service.

Call Capturing – When this option is enabled, an agent can mark a contact from the service as 'Captured' for a specific period of time. This way the call will automatically be transferred to the capturing agent if the customer calls the service again within the specified time and the agent who captured the contact is available.

Malicious calls – Malicious phone numbers are included in a list of telephone numbers from which a malicious call has been received and which has been classified as malicious. Such phone numbers are added to this list and are handled differently to other calls.

Presence Messaging

The e-mails which are downloaded from POP3 servers are routed via Presence Messaging to available agents (on stand-by) and are dealt with immediately. The Presence mail server uses Avaya Communication Manager ACD functions to route the e-mail to the most suitable agent.

Presence Internet

Web Chat – The customer can request from a web page, to be taken care of by an agent in a chat session.

Web Call back – The customer can request from a Web page, to be taken care of by an agent on the telephone.

Web Collaboration – This functionality, present both in the Chat sessions and in Web Collaboration, allows the Web pages to be synchronized between agent and customer, including frames and content of forms pertaining to them.

When such a request arrives at the Presence server, the Presence Internet module uses Avaya Communication Manager ACD functions to route the Chat to the most suitable agent.

2. Equipment and Software Validated

Equipment	Software
Avaya S8500 Server running Avaya Communication Manager	4.0.1 (R014x.00.0.731.2)

Avaya G650 Media Gateway
    C-LAN TN799DP
    Medpro TN2302AP
	
	HW 1, FW24
	HW 20, FW116

Avaya Application Enablement Services	4.0.1, build 51
Avaya C364T-PWR Converged Stackable Switch	4.3.12
Avaya 46XX Series IP Telephones (H.323)	2.8
Extreme Summit 400 24p Switch	Extremeware 7.5e.2.8
Presence Suite Server	6.5
Operating System for Presence Agent PC's	Windows XP

3. Configure Avaya Communication Manager

Basic configuration of Avaya Communication Manager and Avaya Application Enablement Services Server are beyond the scope of these Application Notes. See Section 10 for Avaya documentation details.

3.1. Verify Avaya Communication System parameters

Log into Avaya Communication Manager via System Access Terminal (SAT) to verify that Avaya Communication Manager has proper permissions for features illustrated in these Application Notes. On Page 3 of the system-parameters customer-options form verify the following options are set to "yes", as shown below.

- **Answer Supervision by Call Classifier** to "y"
- **Computer Telephony Adjunct Links**? y

```
display system-parameters customer-options                    Page   3 of  11
                            OPTIONAL FEATURES

     Abbreviated Dialing Enhanced List? n          Audible Message Waiting? n
          Access Security Gateway (ASG)? n              Authorization Codes? n
          Analog Trunk Incoming Call ID? n Backup Cluster Automatic Takeover? n
 A/D Grp/Sys List Dialing Start at 01? n                        CAS Branch? n
Answer Supervision by Call Classifier? y                         CAS Main? n
                                  ARS? y             Change COR by FAC? n
                ARS/AAR Partitioning? y  Computer Telephony Adjunct Links? y
        ARS/AAR Dialing without FAC? y  Cvg Of Calls Redirected Off-net? n
           ASAI Link Core Capabilities? n                       DCS (Basic)? n
           ASAI Link Plus Capabilities? n                  DCS Call Coverage? n
```

On Page 6 of the system-parameters customer-options form, verify the following customer options are set to "yes" as shown below.

- **ACD** to "y"
- **Vectoring (Basic)** to "y"
- **Expert Agent Selection (EAS)** to "y"

```
display system-parameters customer-options                    Page   6 of  11
                        CALL CENTER OPTIONAL FEATURES

                         Call Center Release: 3.0

                                  ACD? y                         Reason Codes? n
                          BCMS (Basic)? n              Service Level Maximizer? n
           BCMS/VuStats Service Level? n             Service Observing (Basic)? y
BSR Local Treatment for IP & ISDN? n         Service Observing (Remote/By FAC)? y
                  Business Advocate? n              Service Observing (VDNs)? y
                   Call Work Codes? n                             Timed ACW? n
      DTMF Feedback Signals For VRU? n               Vectoring (Basic)? y
                  Dynamic Advocate? n                Vectoring (Prompting)? y
      Expert Agent Selection (EAS)? y            Vectoring (G3V4 Enhanced)? n
                          EAS-PHD? n              Vectoring (3.0 Enhanced)? n
                 Forced ACD Calls? n      Vectoring (ANI/II-Digits Routing)? n
              Least Occupied Agent? n      Vectoring (G3V4 Advanced Routing)? n
          Lookahead Interflow (LAI)? n                     Vectoring (CINFO)? n
Multiple Call Handling (On Request)? n    Vectoring (Best Service Routing)? n
     Multiple Call Handling (Forced)? n                Vectoring (Holidays)? n
 PASTE (Display PBX Data on Phone)? n                  Vectoring (Variables)? n
```

On Page 11 of the system-parameters features form verify the following option is set to "yes" as shown below.

- **Expert Agent Selection (EAS) Enabled** to "y"

```
display system-parameters features                            Page  11 of  16
                     FEATURE-RELATED SYSTEM PARAMETERS


CALL CENTER SYSTEM PARAMETERS
  EAS
         Expert Agent Selection (EAS) Enabled? y
      Minimum Agent-LoginID Password Length:
        Direct Agent Announcement Extension:                      Delay:
    Message Waiting Lamp Indicates Status For: station
```

On Page 12 of the system-parameters features form, verify the following option is set to "yes" as shown below.

- **Call Classification After Answer Supervision** to "y"

```
display system-parameters features                         Page  12 of  16
                       FEATURE-RELATED SYSTEM PARAMETERS

  AGENT AND CALL SELECTION
                            MIA Across Splits or Skills? n
                             ACW Agents Considered Idle? y
                             Call Selection Measurement: current-wait-time
     Service Level Supervisor Call Selection Override? n
                                     Auto Reserve Agents: none
  ASAI
             Copy ASAI UUI During Conference/Transfer? n
         Call Classification After Answer Supervision? y
                                     Send UCID to ASAI? n
```

3.2. Administer CTI Link with TSAPI Service

Enter **add cti-link n** command, where "n" is an available CTI link number. Enter an available extension number in the **Extension** field. The **Type** must be set to "ADJ-IP" and enter a descriptive name in the **Name** field.

```
add cti-link 3                                             Page   1 of   2
                                  CTI LINK
 CTI Link: 3
Extension: 13000
     Type: ADJ-IP
                                                                    COR: 1
     Name: TSAPI link 3
```

3.3. Administer Trunk for Inbound and Outbound Campaign Calls

Enter **change trunk group <xxx>** where xxx is the trunk group number for the pre-configured ISDN trunk which will be used for inbound and outbound campaign calls. It is assumed that the ISDN trunk and the corresponding signaling group are already configured.

Set the following values: **UUI IE Treatment** to "shared" and **Maximum Size of UUI IE Contents** to "32". Default values may be used in the remaining fields.

```
change trunk-group 73                                       Page   2 of  21
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: public
Outgoing Channel ID Encoding: preferred     UUI IE Treatment: shared
                                            Maximum Size of UUI IE Contents: 32
                                              Replace Restricted Numbers? n
                                             Replace Unavailable Numbers? n
                                                Send Connected Number: y
```

3.4. Administer SIT Treatment for Call Classification

This form is used to specify the treatment of Special Information Tones (SITs) used for Outbound Call Management type calls with USA tone characteristics.
Enter the **change sit-treatment** command. Set the **Pause Duration** to "0.8" and **Talk Duration** to "3.0". Note the values are in seconds.

Note: Answering Machine Detected (AMD) - An ASAI adjunct can request AMD for a call. If Answering Machine is detected, one of two treatments is specified. Valid entries are dropped and answered. Default is dropped.

```
change sit-treatment                                       Page   1 of   1
                    SIT TREATMENT FOR CALL CLASSIFICATION


                    SIT Ineffective Other: dropped
                            SIT Intercept: answered
                         SIT No Circuit: dropped
                              SIT Reorder: dropped
                          SIT Vacant Code: dropped
                              SIT Unknown: dropped

                          AMD Treatment: dropped
                 Pause Duration (seconds): 0.8
                   Talk Duration (seconds): 3.0
```

3.5. Administer Class of Restriction

Enter the **change cor 1** command. Set the **Direct Agent Calling** to "y". This will allow agent login id's to be called directly.

```
change cor 1                                              Page   1 of   4
                            CLASS OF RESTRICTION

                COR Number: 1
          COR Description: Main COR

                      FRL: 0                                  APLT? y
  Can Be Service Observed? y          Calling Party Restriction: none
Can Be A Service Observer? y           Called Party Restriction: none
 Partitioned Group Number: 1      Forced Entry of Account Codes? n
         Priority Queuing? n              Direct Agent Calling? y
     Restriction Override: none     Facility Access Trunk Test? n
      Restricted Call List? n              Can Change Coverage? n


            Access to MCT? y          Fully Restricted Service? n
Group II Category For MFC: 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
                                 Group Controlled Restriction: inactive
```

3.6. Administer Hunt Groups, Call Vectors and VDNs

Administer a set of hunt groups, vectors and Vector Directory Numbers (VDNs) per Presence Suite installation documentation. VDNs and vectors were created to allow external calls to be handled by the Presence Suite server. These hunt groups, vectors and VDNs provide:

- Outbound Service (Progressive, Predictive)
  Progressive: In this outbound service mode, the Presence Server generates the calls through progressive dialing via the specified CTI link. The call is generated only when the contact handling has been finished and the agent status is back to available, so that a one-to-one relationship between an agent and a call is possible in this mode.
  Predictive: In this outbound service mode, the Presence Server generates the calls through predictive dialing via the specified CTI link. The call is anticipated before the contact handling has been finished and the agent status is back to available, so that a higher number of calls than the number of agents available for the service is possible in this mode.
- Outbound Service (Preview)
  Preview: In the preview mode, an agent working for an outbound service will receive a notification (through a phantom call) when the system detects that a call to an outbound record is due. Once the outbound record data have been retrieved, the agent will generate the call by clicking the Call button.
- Inbound Services

Below is a table of the configuration of the VDNs, Vectors, Hunt groups and Agent Login IDs configured for the different campaigns tested during compliance testing.

	Predictive/Progressive	Preview	Inbound1	Inbound2
VDN	17001	17002	17003	17004
Vector	1	2	3	3
Skill Ext/ Huntgroup	16001 / 1	16002 / 2	16003 / 3	16004 / 4
Agent Login ID	15001	15002	15003	15004

Enter the **add hunt-group n** command, where "n" is an unused hunt group number. On page 1 of the **hunt group** form, assign a **Group Name** and **Group Extension** valid under the provisioned dial plan. Set the following options to "yes" as shown below.

- **ACD** to "y"
- **Queue** to "y"
- **Vector** to "y"

```
add hunt-group 1                                          Page   1 of   3
                             HUNT GROUP

          Group Number: 1                              ACD? y
            Group Name: Predictive/Progressive       Queue? y
       Group Extension: 16001                        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 of the hunt group form set the **Skill** to "y" as shown below.

```
add hunt-group 1                                          Page   2 of   3
                             HUNT GROUP

                    Skill? y
                      AAS? n
                 Measured: none
      Supervisor Extension:
       Controlling Adjunct: none
                                              Redirect to VDN:
            Forced Entry of Stroke Counts or Call Work Codes? n
```

Repeat the above step and create three more hunt groups with hunt-group extensions 16002 to 16004. The following figure lists the hunt-groups after the four hunt-groups are administered.

```
list hunt-group                                              Page   1

                          HUNT GROUPS
Grp  Grp
No.  Name/            Grp    ACD/            No. Cov  Notif/ Dom   Message
     Ext              Type   MEAS Vec MCH  Que Mem Path Ctg Adj Ctrl  Center

1    Predictive/Progressive
     16001            ucd-mia y/N  SK   none y   0         n           n
2    Preview
     16002            ucd-mia y/N  SK   none y   0         n           n
3    Inbound
     16003            ucd-mia y/N  SK   none y   0         n           n
4    Inbound2
     16004            ucd-mia y/N  SK   none y   0         n           n
```

Enter the **change vector n** command, where "n" is associated to hunt group 1. Enter the vector steps to queue to the 1st skill on the VDN as shown below.

```
change vector 1                                           Page   1 of   3
                          CALL VECTOR

    Number: 1                     Name: Predic/Progress
                 Attendant Vectoring? n    Meet-me Conf? n         Lock? N
     Basic? y   EAS? y   G3V4 Enhanced? n    ANI/II-Digits? n    ASAI Routing? Y
Prompting? y   LAI? n  G3V4 Adv Route? n    CINFO? n   BSR? n   Holidays? N
Variables? n   3.0 Enhanced? n
01 queue-to     skill 1st  pri m
02 wait-time    5    secs hearing silence
03 disconnect   after announcement none
04 stop
05
```

Repeat the above step and configure two more vectors. These vectors will queue the agents to the skills described earlier. The following figure lists the vector after the three vectors are administered.

```
List vector
                          CALL VECTORS

                          Number       Name

                          1            Predic/Progress
                          2            Out Preview
                          3            Inbound
```

Enter the **add vdn n** command, where "n" is an unused VDN number. On Page 1 of the vector
directory number form, assign a **Name** for the VDN and enter **Vector Number** "1" related to
vector 1 and **1st Skill** to "1".

```
Add vdn 17001                                              Page   1 of   2
                         VECTOR DIRECTORY NUMBER


                           Extension: 17001
                                Name: Predictive/Progressive
                       Vector Number: 1
                   Attendant Vectoring? N
                  Meet-me Conferencing? N
                   Allow VDN Override? N
                                 COR: 1
                                  TN: 1
                            Measured: none

                             1st Skill: 1
                            2nd Skill:
                            3rd Skill:
```

Repeat the above step and create three more VDNs with extensions 17002 to 17004 and their
corresponding vector and skill from the table above. These VDNs, vectors and skills created
were used for the different types of campaigns during compliance testing. The following figure
lists the VDNs after the above administration is completed.

```
list vdn                                                  Page   1

                        VECTOR DIRECTORY NUMBERS
                                                              Evnt
                                VDN         Vec       Orig    Noti
Name (22 characters)  Ext/Skills  Ovr COR TN  Num  Meas Annc   Adj

Predictive/Progressive 17001        n   1   1   1    none
                       1
Preview                17002        n   1   1   2    none
                       2
Inbound1               17003        n   1   1   3    none
                       3
Inbound2               17004        n   1   1   3    none
                       4
```

3.7. Administer Agent Logins

Enter the **add agent-loginID n** command, where "n" is a valid extension under the provisioned dial plan. Enter a descriptive name for the agent in the **Name** field. Ensure the **COR** field is set to "1" related to the COR configured in Section 3.5. The default value for **Auto Answer** is set to "station", except for those logins that will be used for progressive/predictive outbound services. In this case, the parameter value must be set to "all".

```
Add agent-loginID 15001                                      Page   1 of   2
                             AGENT LOGINID

            Login ID: 15001                                      AAS? N
                Name: Pred/Prog Outbound Agent                 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 Display? N
                                                          Password:
                                          Password (enter again):
                                                     Auto Answer: all
                                            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
```

On Page 2 of the agent loginID form, specify the list of skills assigned to the login and the skill level for each of them in the **SN/SL** field as shown below.

```
Add agent-loginID 15001                                      Page   2 of   2
                             AGENT LOGINID
      Direct Agent Skill:
Call Handling Preference: skill-level              Local Call Preference? n

    SN       SL          SN     SL          SN     SL          SN       SL
  1: 1       1        16:              31:                   46:
  2:                  17:              32:                   47:
  3:                  18:              33:                   48:
```

Four hunt agent loginID's with extension from 15001 to 15004 were created for the different types of campaigns during compliance testing. This can be shown by entering a **list agent-loginID** command as shown below.

```
list agent-loginID                                              Page   1
                          AGENT LOGINID

Login          Name/            Dir Agt COR Ag SO Skil/Lv Skil/Lv Skil/Lv
Skil/Lv
ID             Extension        AAS/AUD    Pr

15001          Pred/Prog Outbo   1   1   lvl     1/01     /       /       /
               unstaffed                          /       /       /       /
15002          Preview Agent     2   1   lvl     2/01     /       /       /
               unstaffed                          /       /       /       /
15003          Inbound Agent 1   3   1   lvl     3/01    4/01     /       /
               unstaffed                          /       /       /       /
15004          Inbound Agent 2   3   1   lvl     3/01    4/01     /       /
               unstaffed                          /       /       /       /
```

3.8. Administer Agent Phone's

Extension 10000 and 10001 were used as agent phones during the compliance testing. It is assumed that stations are already administered on the Avaya Communication Manager. The following buttons were assigned to each phone as shown below. Enter the **change station n** where "n" is the agent phone extension. On page 3 of the station form configure the following button assignments.

- **aux-work** – Agent is logged on to the phone but not available
- **auto-in** – Agent goes available to accept ACD calls
- **after-call** – Agent state after the ACD call is completed ends the call; and is not available
- **release** – To drop the call

```
change station 10000                                       Page   3 of   4
                              STATION
 SITE DATA
      Room:                                     Headset? n
      Jack:                                     Speaker? n
     Cable:                                     Mounting: d
     Floor:                                  Cord Length: 0
  Building:                                    Set Color:


ABBREVIATED DIALING
    List1:                 List2:                    List3:


BUTTON ASSIGNMENTS
 1: call-appr                        5: aux-work    RC:    Grp:
 2: call-appr                        6: auto-in            Grp:
 3: call-appr                        7: after-call         Grp:
 4: call-fwd    Ext:                 8: release
```

3.9. Administer Phantom Extensions

Extensions 10500 and 10501 were created as phantom extensions for Outbound Preview campaign calls. The configuration for the first of these stations is shown below using the **add station n** command.

- **Type**: CTI
- **Port**: X (indicates that this is a virtual port)
- **COR**: 1

```
add station 10500                                          Page   1 of   4
                                  STATION

Extension: 10500                      Lock Messages? n         BCC: 0
    Type: CTI                         Security Code:           TN: 1
    Port: X                          Coverage Path 1:          COR: 1
    Name: Phantom 1                   Coverage Path 2:         COS: 1
                                      Hunt-to Station:


STATION OPTIONS
              Loss Group: 2           Personalized Ringing Pattern: 1
             Data Module? n                     Message Lamp Ext: 10500
            Speakerphone: 2-way              Mute Button Enabled? y
        Display Language: english


                                      Media Complex Ext:
                                         IP SoftPhone? n
```

3.10. Administration for Direct transfer to Agents and Call Capturing

An additional vector and VDN is created for two additional Presence features; Direct transfer to agents and Call capturing, configured in Section 5.8. The Direct Agent Calling (DAC) is an Expert Agent Selection (EAS) feature within Avaya Communication Manager that lets a caller call the ACD agent directly.

- Contact a specific agent instead of a skill hunt group
- Queue for the agent if the agent is on a call
- Use Agent LoginID for callbacks and transfers

Enter the **change vector 4** command. The CTI link configured in Section 3.2 used by the Presence Server needs to be specified in the vector line 1. The command running in this line provides control over the call to the Presence Server so that the Presence Server may transfer it to a specific agent. Lines 3, 4 and 5 provide treatment to the call in case of an unsuccessful routing of the call by the adjunct link.

```
change vector 4                                               Page   1 of   3
                               CALL VECTOR

  Number: 4                     Name: CallCapture/DirectTransfer
                Attendant Vectoring? n    Meet-me Conf? n           Lock? N
    Basic? y   EAS? y   G3V4 Enhanced? n   ANI/II-Digits? n   ASAI Routing? Y
Prompting? y   LAI? n  G3V4 Adv Route? n   CINFO? n  BSR? n   Holidays? n
Variables? n   3.0 Enhanced? n
01 adjunct        routing link 3
02 wait-time      10   secs hearing silence
03 queue-to       skill 1st  pri m
04 wait-time      10   secs hearing silence
05 disconnect     after announcement none
06 stop
```

Enter the **add vdn 17005** command. On Page 1 of the vector directory number form, assign a **Name** for the VDN and enter **Vector Number** "4" related to vector 4 and **1st Skill** to "3". Set the **Allow VDN Override** to "y". This VDN is used to configure the Direct Agent transfer in Section 5.8.

```
add vdn 17005                                              Page   1 of   2
                          VECTOR DIRECTORY NUMBER

                          Extension: 17005
                               Name: Routing
                      Vector Number: 4
                 Attendant Vectoring? n
                Meet-me Conferencing? n
                   Allow VDN Override? y
                                COR: 1
                                 TN: 1
                           Measured: none


                          1st Skill: 3
                          2nd Skill:
                          3rd Skill:
```

Enter the **change agent-loginID 15004** command. On Page 2 of the agent loginID form, set the **Direct Agent Skill** to "3".

```
change agent-loginID 15004                                Page   2 of   2
                             AGENT LOGINID
        Direct Agent Skill: 3
Call Handling Preference: skill-level              Local Call Preference? n

     SN       SL          SN      SL           SN       SL          SN       SL
 1: 3        1      16:                   31:                  46:
 2: 4        1      17:                   32:                  47:
 3:                 18:                   33:                  48:
 4:                 19:                   34:                  49:
```

4. Configure Avaya Application Enablement Services Server

This section provides the procedures for configuring Avaya Application Enablement Services. The procedures fall into the following areas:

- Verify Avaya Application Enablement Services License
- Administer TSAPI link
- Administer Presence Suite user

4.1. Verify Avaya AES Licensing

Initialise the AES OAM web interface by browsing to "http://x.x.x.x:8443/MVAP/index.jsp", where "x.x.x.x" is the IP address of the AES, and log in (not shown). From the OAM Home screen select **CTI OAM Admin** (not shown) to bring up the CTI OAM Home menu. Verify the TSAPI service is licensed at the Welcome to CTI OAM Screens screen by ensuring that "TSAPI" is in the list of services in the License Information section.

4.2.   Administer TSAPI link

From the CTI OAM Home menu, select **Administration → CTI Link Admin → TSAPI Links**. On the TSAPI Links screen (not shown), select **Add Link**. On the Add/Edit TSAPI Links screen, enter the following values:

- **Link:** Use the drop-down list to select an unused link number.
- **Switch Connection:** Choose the switch connection already configured from the drop-down list.
- **Switch CTI Link Number:** Corresponding CTI link number configured in **Section 3.2**.

Once completed, select **Apply Changes**.

The AES must be restarted to effect the changes made in this section. From the CTI OAM Home menu, select **Maintenance → Service Controller**. On the Service Controller screen, select **Restart AE Server**.

On the Restart AE Server screen (not shown), select **Restart**. Wait at least 10 minutes and select **Maintenance → Service Controller**. On the Service Controller screen, verify that all services are showing "Running" in the **Controller Status** column.

Navigate to the Tlinks screen by selecting **Administration → Security Database → Tlinks**. Note the value of the **Tlink Name**, as this will be needed for configuring the Presence Suite server in Section 5.1. The **Tlink Name** shown below is automatically created by the AES server.
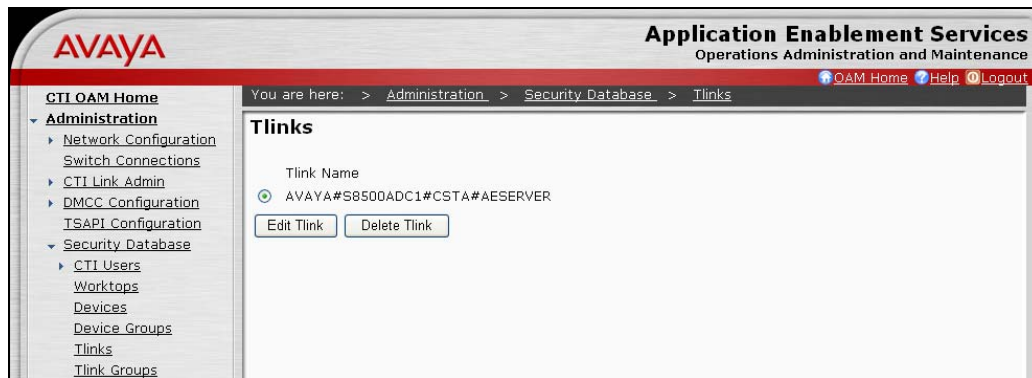
4.3. Administer Presence Suite User

A User Id and password needs to be configured for the Presence Suite server to communicate as a TSAPI Client with the AES server. Click on **OAM Home → User Management** and log into the User Management pages. Note that the user will be prompted with the User Management user name and password. Click on **User Management** and then **Add User**. In the **Add User** screen shown below, enter the following values:

- **User Id –** This will be used by the Presence Suite Server in Section 5.1
- **Common Name and Surname –** A descriptive names need to be entered
- **CT User –** Select "Yes" from the dropdown menu.
- **New Password and Confirm Password –** This will be used with the User Id in Section 5.1

5. Configure the Presence Suite Server
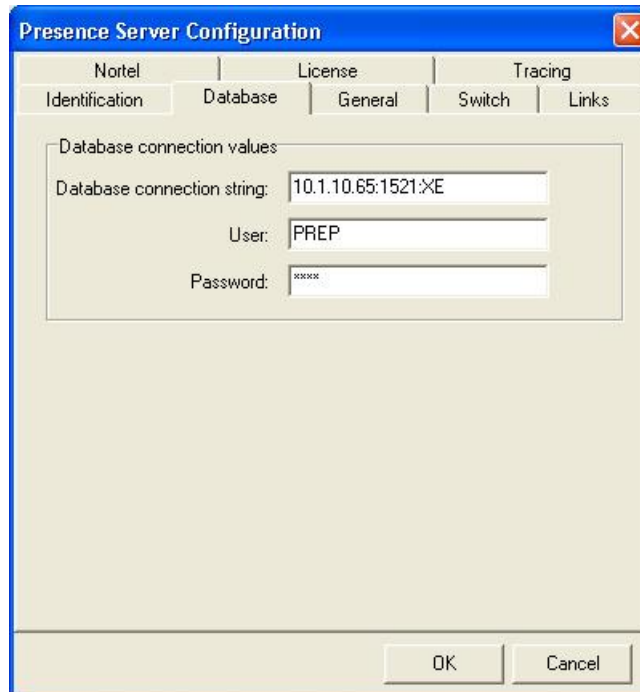
The Presence server and Oracle database was pre-installed on the same machine for convenience, during the compliance testing. The standard practice would be to install the Oracle database on a separate machine.

5.1. Presence Server Configuration

Launch the Presence Server configuration application by double clicking the **pcoservercfg.exe** located in the Presence folder on the Presence Server. In the **Identification** tab, enter the **Server name**. The server name entered is for identification of the server configuration. The **Port** can be left as the default value "6100". Note that, the actual value for server port can vary.
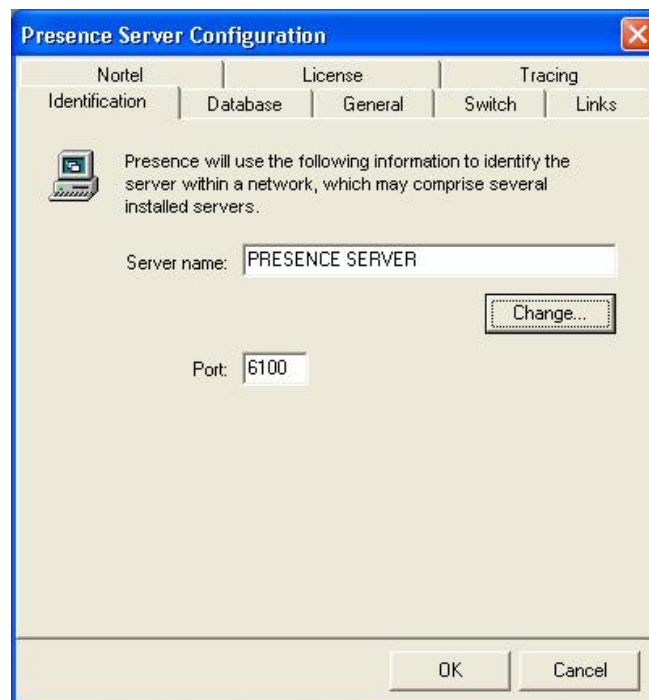
Select the **Database** tab. In the **Database connection string** field, enter the IP address of the Oracle server followed by a colon and then the default port number for the Oracle database "1521"followed by another colon and then the pre-administered Oracle instance "XE". Enter the appropriate user and password credentials for the Oracle database. Customer calling records were pre-configured on the Presence server for convenience during compliance testing.
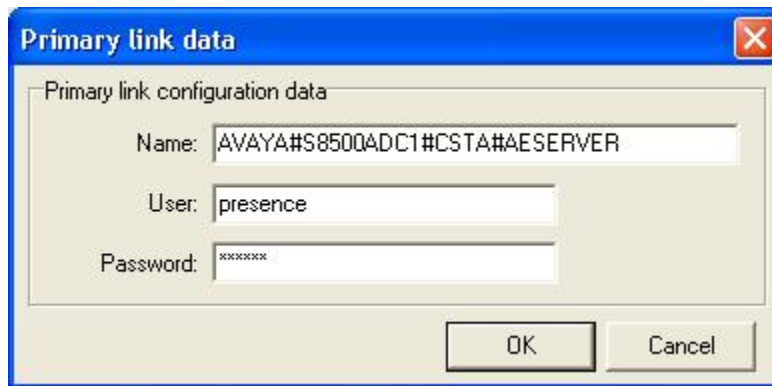
Select the **Switch** tab. The default values are kept on this tab for the Switch configuration values. Enter a tick in the **Specify phantom extension for preview mode** checkbox and enter the phantom extensions configured in Section 3.9.

Select the **Links** tab, click the **Enable links** check box, then click the **Edit** button in the **Primary** section.

In the **Name** field enter the Tlink name from Section 4.2 and the user name and password configured in Section 4.3 on the Avaya AES. Click **OK**.

Click on the **License** tab, and enter a license key. Note a temporary license key was provided by Presence Technology for the duration of the compliance test. Click **OK**.

5.2. Presence Administrator Configuration

Launch the Presence Administrator Configuration application by double clicking the **pcoadmincfg.exe** located in the Presence folder. For testing convenience, the Presence Administrator Configuration Application was also located on the Presence Server machine. Click the **Add** button in the Presence Administrator Configuration screen.
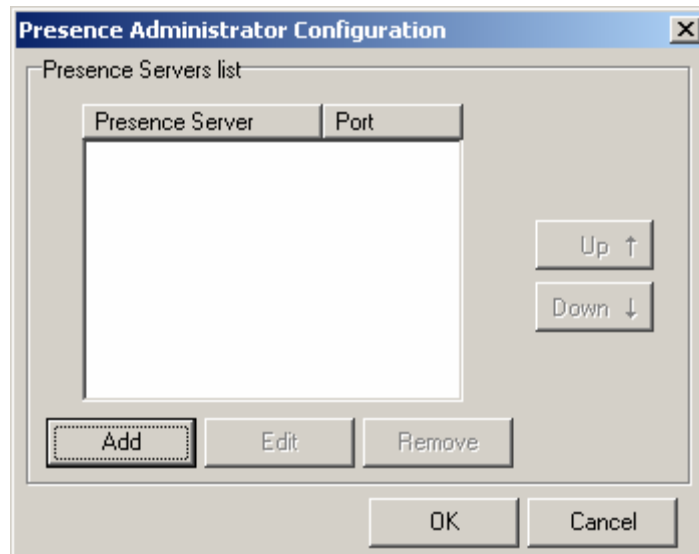
Enter the **Presence Server IP address**. Ensure the **Presence Server port** default value "6100", matches the default value in Section 5.1. Click **OK**.
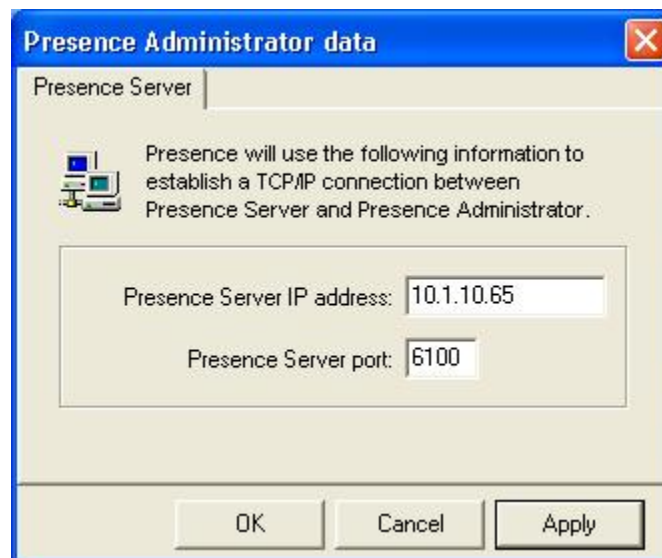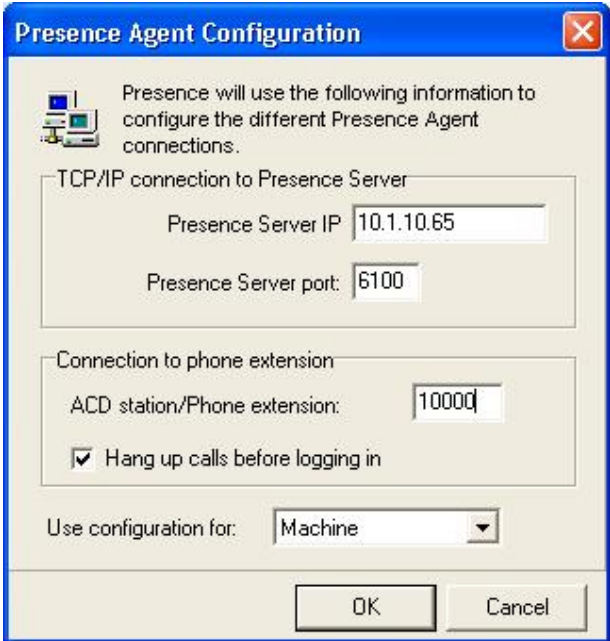
Launch the Presence Administrator application by double clicking the **pcoadmin.exe** located in the Presence folder. The username and password that appear in the User and Password field are created during the Presence Server installation. The following services were configured via the Presence Administrator and were tested during compliance tested. Please refer to Section 10 for detailed configuration of the following services.

- Agent Login IDs
- Outbound Predictive or Preview Campaign
- Inbound Campaign
- Email
- Web Call Back
- Web Collaboration
- Presence Agent Logins
- Direct Agent Transfer
- Call Capturing
- Malicious calls

5.3. Presence Agent Configuration

Launch the Presence agent configuration application by double clicking the **pcoagentcfg.exe** located in the Presence folder. Enter the **Presence Server IP address**. The **Presence Server port** can be left as the default value of "6100". Enter the Agent phone extension in the **ACD/Phone extension** field configured Avaya Communication Manager in Section 3.8. Check the **Hang up calls before logging in** check box. In the **Use configuration for field** choose "Machine" from the drop down menu. Click **OK**. This step is needed for every agent; only the ACD station/Phone extension will vary.

5.4. Presence Agent Application

Ensure the dpexpoda.dll is located in the C:\Windows\System32 directory. The DBExpress driver (dbexpoda.dll) allows the agent application to communicate with the Oracle database. Installing this driver eliminates the need to install the Oracle client. Launch the Presence agent configuration application by double clicking the **pcoagent.exe** located in the Presence folder. Enter agent login Id configured in Section 3.7 and Section 5.2 click on **OK**.

In the screen below click on the **Blending service** button in the task bar. Compliance testing was only carried for blending service.
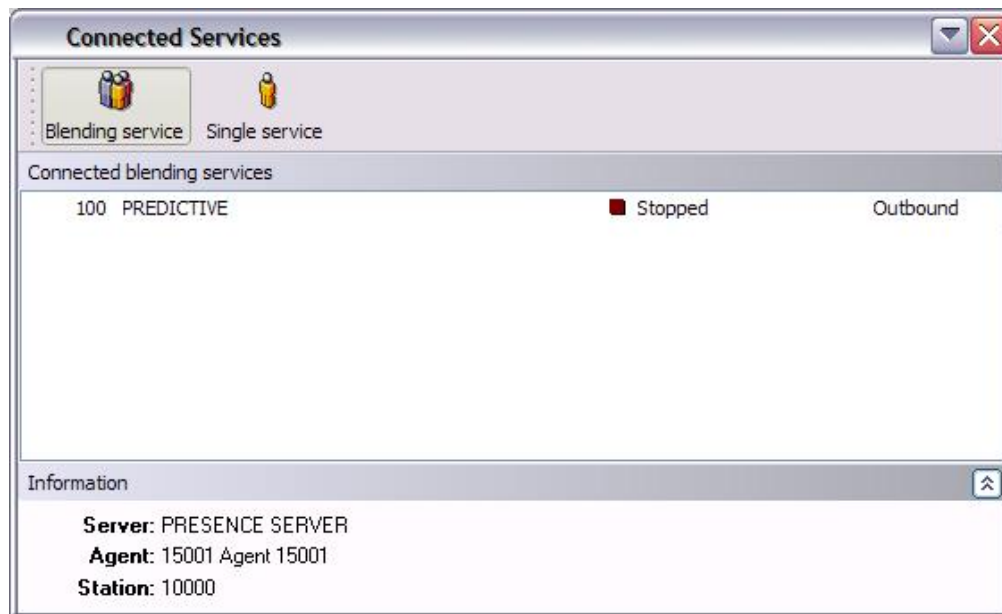
A task bar is present at the top of the Agent PC. Click on the green arrow to make the agent in an available state.

The information status on the task bar goes to available indicating the agent is ready to receive calls.

6. Interoperability Compliance Testing

The Interoperability compliance test included both feature functionality and serviceability testing. The feature functionality testing focused on verifying Presence Suite handling of TSAPI messages in the areas of routing, call control and event notification. The serviceability testing focused on verifying the Presence Suite ability to recover from adverse conditions, such as busying out the CTI link and disconnecting the Ethernet cable for the CTI link.

6.1. General Test Approach

Testing included validation of correct operation of typical contact centre functions including, inbound voice calls and outbound campaign calls both in preview and predictive modes. Functionality testing included basic telephony operations such as answer, hold/retrieve, transfer, and conference exercised from both the agent telephones and the agent softphones for the inbound and outbound campaign calls. Email, Web call back and Web collaboration were also tested. Additional features such as call capturing, direct agent transfer calls and malicious calls were tested. The serviceability test cases were performed manually by busying out and releasing the CTI link, and by disconnecting and reconnecting the LAN cables.

6.2. Test Results

In the situation where the connection has been lost by the Presence Agent application then it is necessary to restart the Presence application. All other test cases passed successfully.

7. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Avaya Communication Manager, Avaya Application Enablement Services, and Presence Suite.

7.1. Verify Avaya Communication Manager

The following steps can ensure that the communication between Avaya Communication Manager and the Avaya Application Enablement Services server is working.

Verify that the service state of the TSAPI link is established.

```
status aesvcs cti-link

                    AE SERVICES CTI LINK STATUS

CTI    Version   Mnt    AE Services        Service        Msgs    Msgs
Link             Busy   Server             State          Sent    Rcvd

1      4         no     AEServer           established    15      15
3      4         no     AEServer           established    15      15
```

7.2. Verify Avaya Enablement Services

Verify the status of the TSAPI link by selecting **Status and Control → Services Summary**. Select **TSAPI Service** (not shown), followed by **Details**. The TSAPI Link Details screen is displayed as shown below.
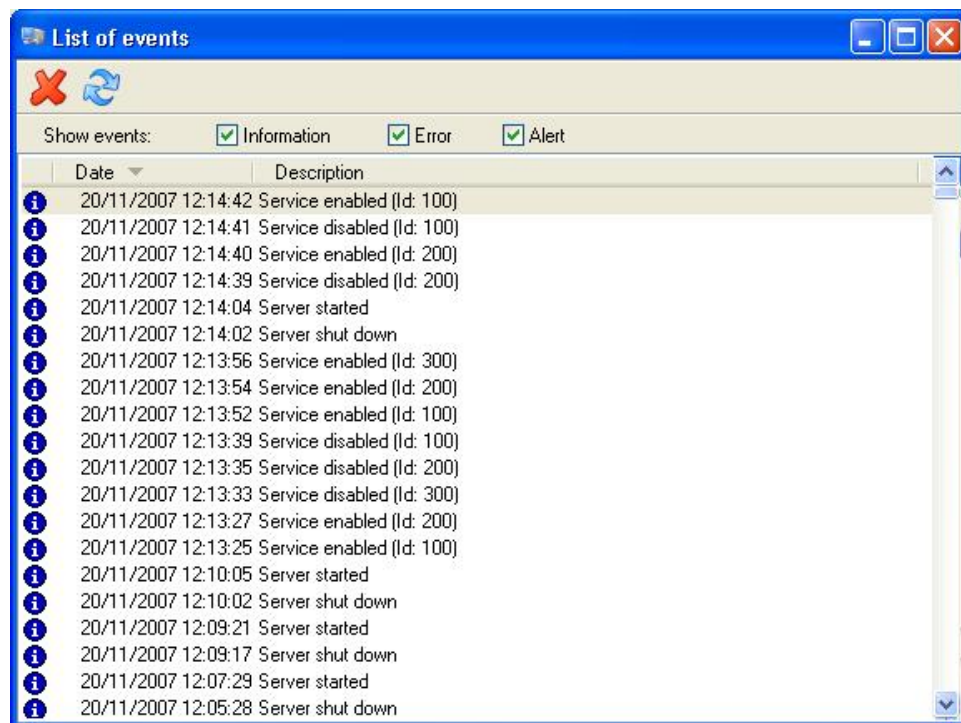
7.3. Presence Suite

Presence Suite has a CTI Message tracing capability to aid fault diagnosis in the field.
A startup log is started when the Presence Server is trying to load and connect to the Avaya AES.
The screen below indicates the server has started.
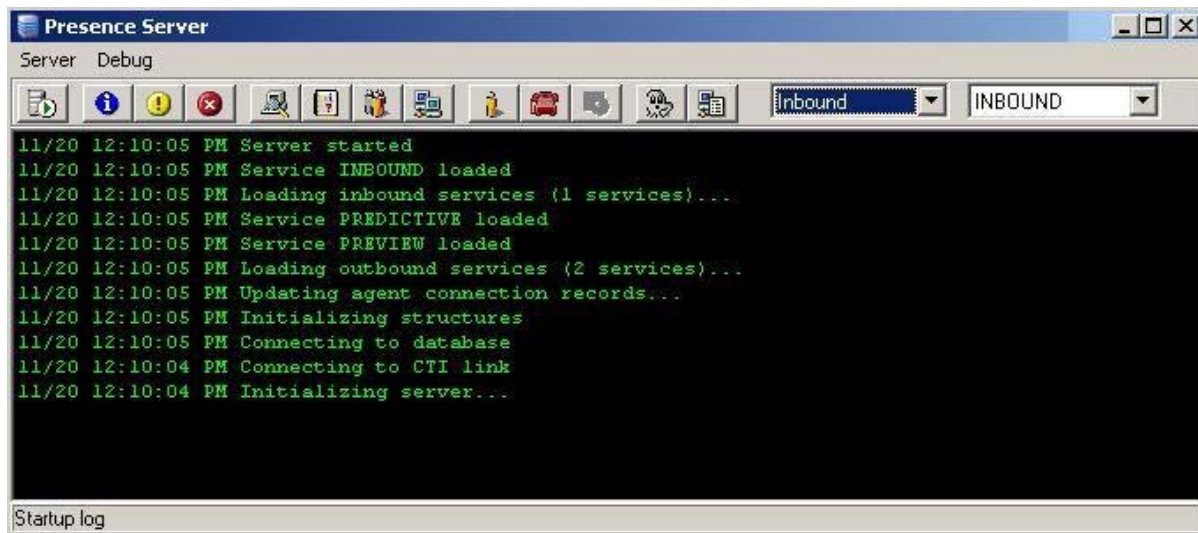
The Presence Suite system maintains a log of the events that have occurred in the system. The
Events command is located in the Utilities menu in the main administration menu and is used to
display and delete the system event log.

8. Support

If technical support is required for Presence Technology Presence Suite, contact Technical Support.

Email: support@presenceco.com

Phone: +34 93 10 10 300

9. Conclusion

These Application Notes describe the configuration steps required for Presence Suite 6.5 to successfully interoperate with Avaya Communication Manager 4.0.1 using Avaya Application Enablement Services 4.0.1. All functionality and serviceability test cases were completed successfully.

10.   Additional References

This section references the Avaya and Presence Suite product documentation that are relevant to these Application Notes.

- *Documentation for Avaya Communication Manager (4.0), Media Gateways and Servers,* Document ID 03-300151, Issue 6, February 2007, available at: http://support.avaya.com.
- *Avaya Application Enablement Services 4.0 Administration and Maintenance Guide*, Document ID 02-300357, Issue 6, February 2007, available at: http://support.avaya.com.

The following documentation is available on request from Presence: www.presenceco.com

- *ACD System Administration Guide (Avaya) Presence Suite*
- *Presence Administrator Manual Presence Suite*
- Presence Installation Guides Presence Software
- PBX/ACD Requirements Presence Software

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