Abstract

These Application Notes describe the configuration steps required for Verint Systems Audiolog 4.0 Service Pack 2 to successfully interoperate with Avaya Communication Manager 5.0 using Avaya Application Enablement Services. Information in these Application Notes was obtained through compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.
1. Introduction

Verint Systems Audiolog is a contact center specific call recording application that features improvements to an agent’s performance by asserting quality monitoring assessment software. Archived voice recordings can be stored using almost any third-party media, and can be retrieved using the browser-based Audiolog Interaction Review software. Additionally, supervisors can retrieve and play back recordings and evaluate agent performance either on site or remotely.

Verint Systems Audiolog utilizes the Computer Telephony Integration (CTI) event reports achieved through the Avaya Application Enablement Services (AES) Telephony Services Application Programming Interface (TSAPI) service, as illustrated in Figure 1.

![Figure 1: Verint Systems Audiolog with Avaya Communication Manager using AES](image-url)
Compliance testing was performed on Verint Systems hardware platform running the latest Audiolog GA software version. In addition, compliance testing only used Digital, IP, IP Softphone (Road Warrior) and SIP telephones, although analog telephones are also supported.

2. Equipment and Software Validated
The following equipment and software were used for the sample configuration provided:

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avaya S8500 Server</td>
<td>Communication Manager 5.0.0, load 825.4</td>
</tr>
<tr>
<td>Avaya G650 Media Gateway</td>
<td></td>
</tr>
<tr>
<td>• TN799DP C-LAN Circuit Pack</td>
<td>HW01 FW015</td>
</tr>
<tr>
<td>• TN2302AP IP Media Processor Circuit Pack</td>
<td>HW13 FW095</td>
</tr>
<tr>
<td>Avaya Application Enablement Services</td>
<td>R4.1.31.2.0</td>
</tr>
<tr>
<td>Avaya Session Enablement Services</td>
<td>SES-5.0.0.0-825.31</td>
</tr>
<tr>
<td>Avaya C363T-PWR Converged Stackable Switch</td>
<td>4.3.12</td>
</tr>
<tr>
<td>Avaya 4610SW IP Telephone</td>
<td>2.3</td>
</tr>
<tr>
<td>Avaya 4625 Series IP Telephone</td>
<td>2.8.3</td>
</tr>
<tr>
<td>Avaya 9650 IP Telephones</td>
<td>2.21</td>
</tr>
<tr>
<td>Avaya 16CC SIP Telephone</td>
<td>1.0.11.2</td>
</tr>
<tr>
<td>Avaya 1616 IP Telephone</td>
<td>1.11</td>
</tr>
<tr>
<td>Verint Systems Audiolog Server</td>
<td>Release 4.0 Service Pack 2</td>
</tr>
</tbody>
</table>

3. Configure Avaya Communication Manager
This section provides the procedures for configuring Avaya Communication Manager. The procedures fall into the following areas:

- Administer C-LAN for AES connectivity
- Administer transport link for AES connectivity
- Administer CTI link with TSAPI service

The detailed administration of contact center devices, such as VDN, Skill, Split, Logical Agents and Station Extensions are assumed to be in place and are not covered in these Application Notes.
3.1. Administer C-LAN for AES Connectivity

The C-LAN administration procedure will involve adding an IP node name, an IP interface, and a data module.

1. Add an entry for the C-LAN in the node-names form. Use the “change node-names ip” command, as shown in Figure 2. In this case, “Clan-1” and “192.2.5.6” are entered as Name and IP Address for the C-LAN that will be used for connectivity to the AES server. The actual node name and IP address may vary. Submit these changes.

<table>
<thead>
<tr>
<th>change node-names ip</th>
<th>IP NODE NAMES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>IP Address</td>
</tr>
<tr>
<td>Clan-1</td>
<td>192.2.5.6</td>
</tr>
<tr>
<td>Prowler-1</td>
<td>192.2.5.7</td>
</tr>
<tr>
<td>default</td>
<td>0.0.0.0</td>
</tr>
<tr>
<td>procr</td>
<td>192.2.5.4</td>
</tr>
</tbody>
</table>

Figure 2: IP Node Names

2. Add the C-LAN to the system configuration using the “add ip-interface 01a03” command. Note that the actual slot number may vary. In this case, “01a03” is used as the slot number, as shown in Figure 3 below. Enter the node name assigned from Figure 2 above into the Node Name field, and then the IP address will be populated automatically.

Enter proper values for the Subnet Mask and Gateway Address fields. In this case, “255.255.255.0” and “192.2.5.2” are used to correspond to the network configuration in these Application Notes. Set the Enable Ethernet Port field to “y”, and the Network Region for the C-LAN dedicated for AES connectivity. Default values may be used in the remaining fields. Submit these changes.

<table>
<thead>
<tr>
<th>add ip-interface 01a03</th>
<th>Page 1 of 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type: C-LAN</td>
<td></td>
</tr>
<tr>
<td>Slot: 01A03</td>
<td></td>
</tr>
<tr>
<td>Code/Suffix: TN799 D</td>
<td></td>
</tr>
<tr>
<td>Node Name: Clan-1</td>
<td></td>
</tr>
<tr>
<td>IP Address: 192.2.5.6</td>
<td></td>
</tr>
<tr>
<td>Subnet Mask: 255.255.255.0</td>
<td></td>
</tr>
<tr>
<td>Gateway Address: 192.2.5.2</td>
<td></td>
</tr>
<tr>
<td>Enable Ethernet Port? y</td>
<td></td>
</tr>
<tr>
<td>Network Region: 1</td>
<td></td>
</tr>
<tr>
<td>VLAN: n</td>
<td></td>
</tr>
<tr>
<td>Target socket load and Warning level: 400</td>
<td></td>
</tr>
<tr>
<td>Receive Buffer TCP Window Size: 8320</td>
<td></td>
</tr>
<tr>
<td>Ethernet Options</td>
<td></td>
</tr>
<tr>
<td>Auto? y</td>
<td></td>
</tr>
</tbody>
</table>

Figure 3: IP Interface
3. Add a new data module using the “add data-module n” command, where “n” is an available extension. Enter the following values as shown in Figure 4:

- **Name:** A descriptive name.
- **Type:** “ethernet”
- **Port:** Same slot number from Figure 3 and port “17”.
- **Link:** A link number not previously assigned on this switch.

```
add data-module 60000
```

**Figure 4: Data Module**

### 3.2. Administer Transport Link for AES Connectivity

Administer the transport link to Avaya Application Enablement Services (AES) with the “change ip-services” command.

1. Add an entry with the following values for fields on Page 1, as shown in Figure 5 below:

- **Service Type:** “AESVCS”
- **Enabled:** “y”
- **Local Node:** Node name for the Clan-1 assigned in Figure 2.
- **Local Port** Retain the default of “8765”.

```
change ip-services
```

**Figure 5: IP Services Page 1**
2. Go to Page 4 of the IP Services form, and enter the following values as shown in Figure 6:
   - **AE Services Server**: Name obtained from the AES server, in this case “AES-Test”.
   - **Password**: Same password to be administered on the AES server.
   - **Enabled**: “y”

Note that the name and password entered for the AE Services Server and Password fields must match the name and password on the AES server. The administered name for the AES server is created as part of the AES installation, and can be obtained from the AES server by typing “uname –n” at the Linux command prompt. The same password entered in Figure 6 below will need to be set on the AES server using Administration > Switch Connections > Edit Connection > Set Password as shown in Figure 14.

<table>
<thead>
<tr>
<th>Server ID</th>
<th>AE Services Server</th>
<th>Password</th>
<th>Enabled</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:</td>
<td>AES-Test</td>
<td>***</td>
<td>y</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Server ID</th>
<th>AE Services Server</th>
<th>Password</th>
<th>Enabled</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:</td>
<td>AES-Test</td>
<td>***</td>
<td>y</td>
<td></td>
</tr>
</tbody>
</table>

Figure 6: IP Services Page 3

3.3. Administer CTI Link with TSAPI Service

Add a CTI link and set the values as shown in Figure 7 below using the “add cti-link n” command, where “n” is an available CTI link number.

1. Enter an available extension number in the **Extension** field. Note that the CTI link number and extension number may vary. Enter “ADJ-IP” in the **Type** field, and a descriptive name in the **Name** field. Default values may be used in the remaining fields. Submit these changes.

<table>
<thead>
<tr>
<th>CTI Link</th>
<th>Extension</th>
<th>Type</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>60100</td>
<td>ADJ-IP</td>
<td>TSAPI Link</td>
</tr>
</tbody>
</table>

Figure 7: CTI Link

3.4. Administer Virtual Station and COR for Single Step Conference

Each channel Verint Systems Audiolog server uses for Single Step Conference requires a virtual softphone in Avaya Communication Manager.
1. Add station entries with the following values for fields as shown in Figure 8 below:
   - **Type:** “4620”
   - **IP SoftPhone?** “y”
   - **Security Code:** “xxxx” – **Note:** 4 to 8 digits
   - **COR:** “N” - **Note:** Proper permission must be set, see Figure 9
   - **Auto Answer:** “all”

<table>
<thead>
<tr>
<th>Extension: 60601</th>
<th>Lock Messages? n</th>
<th>BCC: 0</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type:</strong> 4620</td>
<td><strong>Security Code:</strong> xxxx</td>
<td><strong>TN:</strong> 1</td>
</tr>
<tr>
<td><strong>Port:</strong> S00140</td>
<td><strong>Coverage Path 1:</strong></td>
<td><strong>COR:</strong> 1</td>
</tr>
<tr>
<td><strong>Name:</strong> V-4620-1</td>
<td><strong>Coverage Path 2:</strong></td>
<td><strong>CGS:</strong> 1</td>
</tr>
<tr>
<td><strong>Hunt-to Station:</strong></td>
<td><strong>Message Lamp Ext:</strong> 60601</td>
<td><strong>Expansion Module?</strong> n</td>
</tr>
<tr>
<td><strong>Survivable GK Node Name:</strong></td>
<td><strong>Speakerphone:</strong> 2-way</td>
<td><strong>Mute Button Enabled?</strong> y</td>
</tr>
<tr>
<td><strong>Survivable COR:</strong> internal</td>
<td><strong>Display Language:</strong> english</td>
<td><strong>Media Complex Ext:</strong></td>
</tr>
<tr>
<td><strong>Survivable Trunk Dest?</strong> y</td>
<td><strong>Lamp Ext:</strong> 60601</td>
<td><strong>IP SoftPhone?</strong> y</td>
</tr>
<tr>
<td><strong>Lamp Ext:</strong> 60601</td>
<td><strong>Auto Select Any Idle Appearance?</strong> n</td>
<td><strong>Coverage Msg Retrieval?</strong> y</td>
</tr>
<tr>
<td><strong>Customizable Labels?</strong> y</td>
<td><strong>Auto Answer:</strong> all</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 8: Virtual Station**

2. Verify that the COR associated with the Single Step Conference virtual stations has the **Can Be A Service Observer?** value set to “y” as displayed in Figure 9 below.

<table>
<thead>
<tr>
<th>COR Number: 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COR Description:</strong></td>
</tr>
<tr>
<td><strong>FRL:</strong> 0</td>
</tr>
<tr>
<td><strong>APLT?</strong> y</td>
</tr>
<tr>
<td><strong>Can Be Service Observed?</strong> n</td>
</tr>
<tr>
<td><strong>Can Be A Service Observer?</strong> y</td>
</tr>
<tr>
<td><strong>Calling Party Restriction:</strong> none</td>
</tr>
<tr>
<td><strong>Called Party Restriction:</strong> none</td>
</tr>
</tbody>
</table>

**Figure 9: Class of Restriction**
4. Configure Avaya Application Enablement Services

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 local IP
- Administer switch connections
- Administer TSAPI link
- Administer security database
- Administer Verint Systems Audiolog user

4.1. Verify Avaya Application Enablement Services License

From the WEB browser, enter the IP address of the AES. For example enter http://10.30.1.1. The Avaya Application Enablement Services screen should display. At this point, either the AE Server Administration or the WebLM Administration can be selected (not shown). Select AE Server Administration and log into AES with the correct credentials.
1. The **Welcome to OAM** screen will be displayed as shown in **Figure 10**. From the left panel, initially select **CTI OAM Administration**. **Note:** **User Management** is covered in a later step.

![Welcome to OAM Screen](image)

**Figure 10: Welcome to OAM**
2. The **License Information** must be visible as displayed in the **Welcome to CTI OAM Screens** as in **Figure 11**. Verify that the Avaya Application Enablement Services license has proper permissions for the features illustrated in these Application Notes by ensuring the TSAPI service is licensed. If the TSAPI service is not licensed, then contact the Avaya sales team or business partner for a proper license file.

![Welcome to CTI OAM Screens](image)

**Figure 11: Welcome to CTI OAM Screens**
4.2. Administrer Local IP

From the menu column, select Administration → Network Configuration → Local IP.

1. As shown in Figure 12, in the Client Connectivity field, select the AES server IP address that will be used to connect to Verint Systems Audiolog. In the Switch Connectivity field, select the AES server IP address that will be used to connect to Avaya Communication Manager. Click on Apply Changes.

![Figure 12: Local IP](https://10.30.1.1:8443/AVAMAP/formsfilt/localip.jsp)

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4.3. Administer Switch Connections

1. From the CTI OAM Home menu, select Administration → Switch Connections. As shown in Figure 13, enter a descriptive name for the switch connection and click on Add Connection. In this case, the name S8500 is used, and the actual switch connection name will vary.

![Figure 13: Switch Connections](image_url)
2. The **Set Password** screen is displayed. As shown in **Figure 14**, enter the same password that was administered in Avaya Communication Manager using the IP Services form in **Figure 6**. Re-enter the same password in the **Confirm Switch Password** field. Note that the default value of checked may be retained for the **SSL** field. Had the switch been an Avaya DEFINITY Server G3csi, the **SSL** field would need to be unchecked. Click on **Apply**.

![Set Password Screen](image)

**Figure 14: Set Password**
3. The S8500 entry is created as shown in Figure 15. Click on Edit CLAN IPs if you need to change the password.

Figure 15: Configured Switch Connections
4. In the Edit CLAN IPs – S8500 screen, enter the host name or IP address of the C-LAN used for AES connectivity as shown in Figure 16. In this case, 192.2.5.6 is used, which corresponds to the C-LAN administered on Avaya Communication Manager in Figure 2. Click on Add Name or IP.

![Figure 16: Edit CLAN IPs](image-url)
4.4. Administer TSAPI Service

1. To administer a TSAPI link on AES, select **Administration > CTI Link Admin > TSAPI Links** from the CTI OAM Home menu as shown in **Figure 17** below. Click on **Add Link**.

![Figure 17: TSAPI Links](image)
2. In the Add/Edit TSAPI Links screen, select the following values as shown in Figure 18:

- **Switch Connection**: Administered switch connection configured in Figure 13.
- **Switch CTI Link Number**: Corresponding CTI link number configured in Figure 7.

**Note**: The actual values for both fields may vary. Click on **Apply Changes**.

![Figure 18: Add/Edit TSAPI Links](image-url)
3. Enable the security database on AES, as this functionality is utilized by Verint Systems Audiolog. From the CTI OAM Home menu, select Administration > TSAPI Configuration to display the TS Configuration screen shown in Figure 19 below. For TCP Preferred Naming Format select IP Address followed by Apply Changes.

![Figure 19: TSAPI Configuration](image-url)
4. Navigate to the Tlinks screen by selecting **Administration > Security Database > Tlinks** from the CTI OAM Home menu. Note the value of the **Tlink Name**, as this will be needed for configuring Verint Systems Audiolog.

In this case, the **Tlink Name** is **AVAYA#S8500#CSTA#AES-TEST**, which is automatically created by the AES server and shown in **Figure 20**.

![Figure 20: TSAPI Links](image)

**4.5. Administer Security Database**

All devices that are monitored by Verint Systems Audiolog need to be configured in the AES security database. This includes the virtual stations setup within Avaya Communication Manager for Single Step Conference.
1. From the CTI OAM Home menu, select **Administration > Security Database > Devices**, and add each device by entering the device extension and clicking on **Add Device**. A sample listing of the configured devices used for compliance testing is shown in **Figure 21**. Note that the total number of devices may vary, as this depends on the number of extensions to be recorded and monitored.

**Figure 21: Devices**
2. The associated field values for each device are entered in the Add / Edit Device screen shown in Figure 22. The following is a description of the device types that can be monitored by Verint Systems Audiolog:

- **PHONE:** Station extensions.
- **VDN:** Vector Directory Number extensions.
- **AGENT ID:** Logical agent extensions.
- **ACD:** ACD split or Skill group extensions.

![Figure 22: Add/Edit Devices](https://i10.glancecdn.com/ad770d5c-5a92-4884-890a-2a7136073e15/AES41-Verint_Solution-Interoperability-Test-Lab-Application-Notes.png)

4.6. **Administer An AES Verint Systems Audiolog User**

Select OAM Home -> User Management to display the AES login screen. Log in using the User Management user name and password, and the same Welcome To OAM screen from Figure 10 is displayed.
1. To create the Verint user on AES, select **OAM Home > User Management > Add User** from the User Management Home menu. In the **Add User** screen shown in Figure 23, enter the following values:

- **User Id:** A meaningful user id.
- **Common Name:** A descriptive name.
- **Surname:** A descriptive surname.
- **User Password:** Password for the Verint user.
- **Confirm Password:** Re-enter the same password for the Verint user.
- **Avaya Role:** Retain the default of “None”.
- **CT User:** Select “Yes” from the dropdown menu.

Click on **Apply** at the bottom of the screen (not shown in Figure 23).

![Figure 23: Add User](image-url)
2. Select **OAM Home** then **CTI OAM Administration** from the Home menu. From the CTI OAM Home menu, select **Administration -> Security Database -> CTI Users -> List All Users** to get a listing of all CTI users, as shown in Figure 24. Select the “verint” user created in Figure 23 and click on **Edit**.

![Figure 24: CTI Users](image)

SVS; Reviewed: Solution & Interoperability Test Lab Application Notes SPOC 6/13/2008 ©2008 Avaya Inc. All Rights Reserved. AES41-Verint
3. The Edit CTI User screen is displayed, as shown in Figure 25. Select Any from the drop down menu for the Call Origination and Termination, Device / Device, Call / Device, and Allow Routing on Listed Device fields. Enable (check mark) the Call / Call, followed by Apply Changes.

Figure 25: Edit CTI User
5. Configure Verint Systems Audiolog

The Verint Systems Audiolog Server should be pre-installed with the latest Audiolog software and Service Pack, and the TSAPI Client software is operational. This section provides only a guideline for administering the Verint Systems Audiolog application to function with Avaya Application Enablement Services. For a complete administrative overview, please consult Reference [1] when administering Verint Systems Audiolog and TSAPI Client with Avaya Application Enablement Services.

Note, the setting used for the compliance test with Verint Systems Audiolog and Avaya Application Enablement Services will vary based on system configurations and customer needs.

Start the Verint Systems Audiolog Server console, and the initial Manager screen in Figure 26 should be displayed. On the left side, click on the center button [ ]. The Configuration Manager screen should be displayed. See Figure 27.

![Figure 26: Manager](image-url)
5.1. Verint Systems Audiolog Configuration Manager Elements

1. The Configuration Manager displayed in Figure 27 is the place from which all administration is performed. Select and click the Components button from Configuration Manager.

![Configuration Manager](image-url)

**Figure 27: Employee Management Screen**
2. The **Components** screen in **Figure 28** should be displayed. Verify the **Enable CTILink Miscellaneous** parameter is checked.

![Figure 28: Components](image)

3. From the **Configuration Manager** displayed in **Figure 27**, select and click the **VoIP Configuration** button. The **VoIP Configuration** screen in **Figure 29** should be displayed. Administrer the following fields:

- **RTP Driver:** AVAYA CMAPI SSC
- **Use Compression:** G723 MONO
- **CMAPI Capture IP:** IP Address of the Audiolog Server
- **CMAPI Codec:** CM Audio G711U
- **CMAPI Packet Size:** 0
- **CMAPI Password:** Password assigned in Section 4.6, Step 1.
- **CMAPI PBX IP:** IP Address of CLAN in Section 3.1.
- **CMAPI Server IP:** IP Address of the Avaya Enablement Services Server
- **CMAPI Server Port:** 4721
- **CMAPI Soft Phone Extension Base:** Starting extension number of the virtual soft phone extensions administered as in Section 3.4, Step 1.
- **CMAPI Number of Soft Phones:** 8
- **CMAPI Start Port Range:** 8000
Figure 29: VoIP Configuration

Click **Apply** when completed. Click **VoIP NIC Manager** button displayed on Figure 29.
4. From the **VoIP NIC Manager** screen displayed in **Figure 30**, select and click the **Network Adapter** for **Capture NIC** (only one NIC board installed). Refer to **Reference [1]** and complete the **Capture NIC** setup.

![VoIP NIC Manager](image)

**Figure 30: VoIP NIC Manager**

5. From the **Configuration Manager** displayed in **Figure 27**, select and click the **CTILink Configuration** button. The **CTILink Configuration** screen in **Figure 31** should be displayed. On the **General Link** tab, administer the following:

- **Server Name 1:** 127.0.0.1
- **Link Type Protocol:** INTELLILINK

Click **Apply**. Click the **Options / Devices** tab.
Figure 31: CTILink Configuration
6. The **Options / Devices** screen in **Figure 32** should be displayed. Enable (check mark) the following **Misc Options**:
   - Enable Enhanced Call Tracking:
   - Enable Free Seating:
   - Enable Service Observe:

   Click **Apply**. Click the **CT Server** tab.

![Figure 32: Options / Devices Configuration](image)
7. The **CT Server** screen in **Figure 33** should be displayed. Enable (check mark) the following:
   - **Enable Login:**
   - **Enable Logoff:**
   - **Enable Private Data:**
   - **Switch ID:** 1 (default)

Click **Apply**. Click the **IntelliLink Configuration Utility**.

---

**Figure 33**: CT Server Configuration
8. From the **Recording Mode** drop-down list box on the **General** displayed in **Figure 34**, select **Station Side**. Then right-click on the **IntelliLink** empty left panel.

![IntelliLink Configuration Utility](image)

**Figure 34: IntelliLink Configuration Utility**

9. From the **Switch Type** list displayed as in **Figure 35**, select **Avaya Communication Manager** and click **Next**.

![Switch Selection](image)

**Figure 35: Switch Selection**
10. From the **Protocol** list displayed in Figure 36, select **TSAPI** and click Next.

![Figure 36: Protocol Selection](image)

11. A **Confirmation** dialog box should be displayed (not shown) confirming the switch and protocol selected followed by the information provided in Figure 37.

![Figure 37: Selected Parameters](image)
12. Click on the TSAPI node on the left panel and enter the **Server Name** as in **Section 4.4, Step 4** and the **Login ID** and **Password** administered in **Section 4.6, Step 1** as displayed in **Figure 38**. Click **Save Changes** when completed and then on the left panel once again, click on the **IntelliLink** node.

![Figure 38: TSAPI Information](image-url)
13. Click on the **Advanced** tab on the **IntelliLink Configuration Utility** displayed in **Figure 39** and enable **Use Dynamic channel allocation** and **Renew Recordings** and select **Switch1** for **Switch number for active CTI requests**: as displayed in **Figure 39**. **Save Changes** when completed.

![IntelliLink Configuration Utility](image)

**Figure 39: Additional Information**

### 5.2. Add Station Extensions Verint Systems Audiolog

From the **Configuration Manager** displayed in **Figure 27**, select and click the **Integration** button. The **Integration** screen in **Figure 40** should be displayed.
1. Select the **Type** field under **Device Maintenance** and select the 📞 (telephone) icon. Enter the **DeviceID** corresponding to each Avaya Communication telephone device used for the compliance test. In this case, extension **60201** has been added. Click **Enable** and **PM**.

![Figure 40: Integrating Devices](image)

2. Repeat **Step 1** for all telephone devices. Include administered Automatic Call Distribution (ACD) telephone number(s) administered within Avaya Communication Manager, and do not enable the **PM** check-box for the ACD, as was compliance tested. This is applicable if the Verint Systems Audiolog **Free Seating** option is selected (**Figure 32**) and the customer wants Audiolog to keep track of logon and logoff events, and assign agents to stations accordingly.

### 6. Interoperability Compliance Testing

The Interoperability compliance test included selected feature functionality, load, and serviceability testing.

The feature functionality testing focused on verifying Verint Systems Audiolog voice recording and archiving of simple telephone conversations, along with more complicated conversations that involved incoming and outgoing Transferring, Conferencing, and placed and release calls from Hold. In addition, playback of archived conversations was continually used during the compliance test to verify the previous telephone conversation. Monitoring the **Caller/Called Number**, among many other parameters, were also displayed during the compliance test.
The load testing focused on verifying the ability of Verint Systems Audiolog to record conversation to six (6) user extensions over a period of time from a moderate traffic load.

The serviceability testing focused on verifying the ability of Verint Systems Audiolog 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

Compliance testing took on a three phase approach that was comprised of the following:
- Installation and configuration of the Verint Systems Audiolog solution
- Interoperability feature test cases between Verint Systems Audiolog and Avaya Communication Manager
- Serviceability and performance tests of the Verint Systems Audiolog solution

Verint Systems Audiolog hardware server platform is pre-loaded prior to the compliance test. Configuring the appropriate system parameters to operate with the Avaya Application Enablement Services was setup on site, and was performed by the Verint test engineer without difficulty.

The verification of all interoperability feature test cases included manually checking proper states at the telephone sets, and monitoring the report logs on the Verint Systems Audiolog application.

The performance test cases were performed by generating ~ 720 calls over a 60 minute period to 6 available agents, and by verify accuracy of various real-time and historical analysis reports using the Verint Systems Audiolog application.

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

There was an issue getting G.729 functioning. This was rectified by changing the CMAPI Packet Size from 172 to 0. See Figure 29.

There was an issue logging in using the Verint credentials created with Avaya Enablement Services. A fixed to Verint Systems Service Pack 2 was applied.

During serviceability testing, disconnecting / reconnecting the Verint Systems Audiolog server from the network caused call cataloging to stop occurring. A Registry parameter required being changed as a result.

All test cases have 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 Verint Systems Audiolog.

7.1. Verify Avaya Communication Manager

Verify the status of the administered CTI link by using the status aesvcs cti-link command as shown in Figure 41.

```
status aesvcs cti-link
```

<table>
<thead>
<tr>
<th>CTI Link</th>
<th>Version</th>
<th>Mnt</th>
<th>AE Services</th>
<th>Service State</th>
<th>Msgs Sent</th>
<th>Msgs Rcvd</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
<td>no</td>
<td>AES-Test</td>
<td>established</td>
<td>186</td>
<td>48</td>
</tr>
</tbody>
</table>

**Figure 41: Status Aesvcs CTI-link**
7.2. Verify Avaya Enablement Services

1. From the Avaya Application Enablement Services CTI OAM Home menu, verify the status of the switch connection by selecting Status and Control > Switch Conn Summary, as shown in Figure 42.

Figure 42: Switch Connections Summary
2. Verify the status of the TSAPI link by selecting **Status and Control > Services Summary** from the Avaya Application Enablement Services **CTI OAM Home** menu shown in **Figure 43**. Click on **TSAPI Service**, followed by **Details**.

![Figure 43: Services Summary](image-url)
3. The TSAPI Link Details screen is displayed, as shown in **Figure 44**.

![Figure 44: TSAPI Link Details](image-url)
4. Verify the status of **DMCC Service** by selecting **Status and Control > Services Summary** from the Avaya Application Enablement Services **CTI OAM Home** menu shown in **Figure 45**.

![Figure 45: DMCC Service](image-url)

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5. Select DMCC Services click on Details. Figure 46 displays the active session ID with Verint. Click on the Session ID number.

Figure 46: Active Session
6. The DMCC Summary displayed in Figure 47 shows a list of virtual stations configured in Section 3.4, Step 1 for Single Step Conferencing, and are registered by Verint Systems Audiolog software. For each User / Agent extension being recorded, one of these registered DeviceID is assigned.

Figure 47: Virtual Device Registered
7.3. Verint Systems Audiolog Monitoring

1. Verify monitoring on the Verint Systems Audiolog application; activate the Manager and CTILink applications. **Figure 48** displays information regarding the previous call in terms of channel utilized, duration, etc.

![Figure 48: Verint Systems Audiolog User Application](image)

2. Click the **(middle)** button on the Player application as in **Figure 49**.

![Figure 49: Play Application](image)
7.4. Verint Systems Audiolog Reports

Details relating to any recorded call can be located within the Player application.

1. Many details related to a call can be located and categorized within this application. Listening to details of any call can also be performed.

![Image of Report and Results]

Figure 50: Report and Results

8. Support

Verint Systems Audiolog systems are sold through system resellers. For technical support, the reseller should be first contacted. For other Verint Systems information, contact the following:

- Call the Verint Systems technical support at 1(866) 787-2020.
- Submit a questionnaire to Verint Systems technical support at ESSupport@verint.com.
- For more information visit http://www.verint.com.

9. Conclusion

These Application Notes describe the configuration steps required for Verint Systems Audiolog Release 4.0 Service Pack 2 to successfully interoperate with Avaya Communication Manager 5.0.0 using Avaya Application Enablement Services 4.1. All feature functionality and serviceability test cases were completed successfully.
10. Additional References
This section references the product documentation relevant to these Application Notes.

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