Abstract

These Application Notes describe the configuration steps required for NICE Engage Platform 6.15 to interoperate with Avaya Proactive Contact 5.2 with CTI and Avaya Aura® Application Enablement Services 8.1. NICE Engage Platform is a call recording solution.

In the compliance testing, NICE Engage Platform used the Event Services interface from Avaya Proactive Contact to obtain information on calls and agent states, and used the Multiple Registration feature from the Avaya Aura® Application Enablement Services Device, Media, and Call Control interface to capture media associated with the agent stations for call recording.

Readers should pay attention to Section 2, in particular the scope of testing as outlined in Section 2.1 as well as any observations noted in Section 2.2, to ensure that their own use cases are adequately covered by this scope and results.

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 NICE Engage Platform (Engage) 6.15 to interoperate with Avaya Proactive Contact 5.2 with CTI and Avaya Aura® Application Enablement Services 8.1. Engage is a call recording solution.

In the compliance testing, Engage used the Event Services interface from Proactive Contact to obtain information on calls and agent states, and used the Multiple Registration feature from the Application Enablement Services Device, Media, and Call Control (DMCC) XML interface to capture media associated with the agent stations for call recording.

The DMCC interface is used by Engage to register a virtual IP softphone against each agent station to pick up the media for call recording. When there was an active call at the agent station, Engage is informed of the call via events from the Event Services interface and starts the call recording by use of media from the associated virtual IP softphone. The Event Services events are also used to determine when to stop the call recordings.

Engage can be deployed with distributed components across multiple servers. The compliance testing used two Engage servers in the test configuration – one server running the Application Server, Database Server, and Interactions Center components, and the other server running the Advanced Interaction Recorder component. The Application Server component is responsible for the Engage web interface, the Interactions Center component is responsible for Event Services connection with Proactive Contact, and the Advanced Interaction Recorder component is responsible for DMCC connection with Application Enablement Services.

The compliance testing covered the recording of outbound calls that were delivered by Proactive Contact for the CTI deployment option. The recording of inbound calls delivered by Communication Manager under the agent blending mode is outside the scope of this compliance test.
2. General Test Approach and Test Results

The feature test cases were performed both automatically and manually. Upon start of the Engage application, the application automatically established Event Services connection with Proactive Contact and DMCC connection with Application Enablement Services.

For the manual part of testing, each call was handled manually at the agent with generation of unique audio content for recording. Necessary agent actions such as release line and finish work were performed from the Proactive Contact Agent application running on the agent desktops to test various call scenarios.

The serviceability test cases were performed manually by disconnecting/reconnecting the Ethernet connection to Engage.

The verification of tests included use of Engage logs for proper message exchanges and use of Engage web interface for proper logging and playback of call recordings.

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.

Avaya recommends our customers implement Avaya solutions using appropriate security and encryption capabilities enabled by our products. The testing referenced in these DevConnect Application Notes included the enablement of supported encryption capabilities in the Avaya products. Readers should consult the appropriate Avaya product documentation for further information regarding security and encryption capabilities supported by those Avaya products.

Support for these security and encryption capabilities in any non-Avaya solution component is the responsibility of each individual vendor. Readers should consult the appropriate vendor-supplied product documentation for more information regarding those products.

For the testing associated with these Application Notes, the interfaces between Engage and Avaya products included encrypted Event Services and DMCC connections.
2.1. Interoperability Compliance Testing
The interoperability compliance test included feature and serviceability testing.

The feature testing focused on verifying the following on Engage:

- Handling of Event Services agent states and call events.
- Use of DMCC registration services to register virtual IP softphones.
- Use of DMCC device services and media control events to obtain media from the virtual IP softphones.
- Proper recording, logging, and playback of calls for scenarios involving agent drop, customer drop, hold, reconnect, long duration, multiple agents, and outbound agent blending scenarios.

The serviceability testing focused on verifying the ability of Engage to recover from adverse conditions, such as disconnecting and reconnecting the Ethernet connection to Engage.

2.2. Test Results
All test cases were executed and verified.

2.3. Support
Technical support on Engage can be obtained through the following:

- Web:  http://nice.com/support
3. Reference Configuration

The configuration used for the compliance testing is shown in Figure 1. The detailed administration of basic connectivity between Communication Manager and Proactive Contact, between Communication Manager and Application Enablement Services, and of call center devices are not the focus of these Application Notes and will not be described.

The agent station extensions used in the compliance testing are shown in the table below.

<table>
<thead>
<tr>
<th>Device Type</th>
<th>Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agent Station</td>
<td>65001 (H.323), 66006 (SIP)</td>
</tr>
</tbody>
</table>

Figure 1: Compliance Testing Configuration
## 4. Equipment and Software Validated

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

<table>
<thead>
<tr>
<th>Equipment/Software</th>
<th>Release/Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avaya Aura® Communication Manager in Virtual Environment</td>
<td>8.1.1 (8.1.0.1.1.890.25763)</td>
</tr>
<tr>
<td>Avaya G650 Media Gateway</td>
<td>NA</td>
</tr>
<tr>
<td>Avaya Aura® Media Server in Virtual Environment</td>
<td>8.0.1.121</td>
</tr>
<tr>
<td>Avaya Aura® Application Enablement Services in Virtual Environment</td>
<td>8.1.1 (8.1.1.0.1.8-0)</td>
</tr>
<tr>
<td>Avaya Aura® Session Manager in Virtual Environment</td>
<td>8.1.1 (8.1.1.0.811021)</td>
</tr>
<tr>
<td>Avaya Aura® System Manager in Virtual Environment</td>
<td>8.1.1 (8.1.1.0.0310912)</td>
</tr>
<tr>
<td>Avaya Proactive Contact</td>
<td>5.2.0.1</td>
</tr>
<tr>
<td>Avaya Proactive Contact Agent</td>
<td>5.2.0.1</td>
</tr>
<tr>
<td>Avaya 9611G IP Deskphone (H.323)</td>
<td>6.8202</td>
</tr>
<tr>
<td>Avaya 9641G IP Deskphone (SIP)</td>
<td>7.1.6.1.3</td>
</tr>
<tr>
<td>NICE Engage Platform on Windows Server 2016</td>
<td>6.15.0001.77 Standard</td>
</tr>
<tr>
<td>• Application Server</td>
<td></td>
</tr>
<tr>
<td>• Interactions Center</td>
<td></td>
</tr>
<tr>
<td>• Database Server</td>
<td></td>
</tr>
<tr>
<td>• Avaya Proactive Contact Event SDK</td>
<td>5.1.2</td>
</tr>
<tr>
<td>NICE Engage Platform on Windows Server 2016</td>
<td>6.15.0001.77 Standard</td>
</tr>
<tr>
<td>• Advanced Interaction Recorder</td>
<td></td>
</tr>
<tr>
<td>• Avaya DMCC XML</td>
<td>7.0.0.38</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5. Configure Avaya Aura® Communication Manager

This section provides the procedures for configuring Communication Manager. The procedures include the following areas:

- Administer IP codec set
- Administer agent station

5.1. Administer Codec Set

Use the “change ip-codec-set n” command, where “n” is an existing codec set number used for integration with Engage. For Audio Codec, enter the relevant codec.

In the compliance testing, “G.711MU” and “G.729” were configured, and this codec set was used by the agent stations.

<table>
<thead>
<tr>
<th>Codec Set: 1</th>
<th>IP MEDIA PARAMETERS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Audio Codec</strong></td>
<td>Suppression</td>
</tr>
<tr>
<td>1: G.711MU</td>
<td>n</td>
</tr>
<tr>
<td>2: G.729</td>
<td>n</td>
</tr>
<tr>
<td>3:</td>
<td></td>
</tr>
<tr>
<td>4:</td>
<td></td>
</tr>
<tr>
<td>5:</td>
<td></td>
</tr>
<tr>
<td>6:</td>
<td></td>
</tr>
<tr>
<td>7:</td>
<td></td>
</tr>
</tbody>
</table>

Media Encryption: Encrypted SRTCP: best-effort

1: 1-srtp-aescm128-hmac80
2: aes
3: none
4: 
5.2. Administer Agent Station

Use the “change station n” command, where “n” is the first non-SIP agent station extension from Section 3. Enable IP SoftPhone to allow a virtual IP softphone to be registered against the station. Note the value of Security Code, which will be used later to configure Engage.

Repeat this section to administer all non-SIP agent stations from Section 3. In the compliance testing, one agent station was administered.

<table>
<thead>
<tr>
<th>STATION</th>
<th>Page 1 of 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extension: 65001</td>
<td>Security Code: 65001</td>
</tr>
<tr>
<td>Type: 9611</td>
<td>TN: 1</td>
</tr>
<tr>
<td>Port: S000103</td>
<td>Coverage Path 1: 1</td>
</tr>
<tr>
<td>Name: CM Station 1</td>
<td>Coverage Path 2:</td>
</tr>
<tr>
<td>Unicode Name? n</td>
<td>COS: 1</td>
</tr>
<tr>
<td>STATION OPTIONS</td>
<td></td>
</tr>
<tr>
<td>Loss Group: 19</td>
<td>Personalized Ringing Pattern: 1</td>
</tr>
<tr>
<td>Speakerphone: 2-way</td>
<td>Message Lamp Ext: 65001</td>
</tr>
<tr>
<td>Display Language: english</td>
<td>Mute Button Enabled? y</td>
</tr>
<tr>
<td>Survivable GK Node Name:</td>
<td>Button Modules: 0</td>
</tr>
<tr>
<td>Survivable COR: internal</td>
<td>Media Complex Ext:</td>
</tr>
<tr>
<td>Survivable Trunk Dest? y</td>
<td>IP SoftPhone? y</td>
</tr>
<tr>
<td>Time of Day Lock Table:</td>
<td>IP Video Softphone? n</td>
</tr>
<tr>
<td>Short/Prefixed Registration Allowed: default</td>
<td></td>
</tr>
<tr>
<td>Customizable Labels? y</td>
<td></td>
</tr>
</tbody>
</table>
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
- Verify license
- Administer H.323 gatekeeper
- Administer NICE user
- Administer security database
- Administer ports
- Restart services
- Export CA certificate

6.1. Launch OAM Interface

Access the OAM web-based interface by using the URL “https://ip-address” in an Internet browser window, where “ip-address” is the IP address of the Application Enablement Services server.

The screen below is displayed. Log in using the appropriate credentials.

![Application Enablement Services Management Console](image)
The Welcome to OAM screen is displayed next.

6.2. Verify License
Select Licensing ➔ WebLM Server Access in the left pane, to display the applicable WebLM server log in screen (not shown). Log in using the appropriate credentials and navigate to display installed licenses (not shown).
Select **Licensed products → APPL_ENAB → Application_Enablement** in the left pane, to display the **Application Enablement (CTI)** screen in the right pane.

Verify that there is sufficient license for **Device Media and Call Control** as shown below.
6.3. Administer H.323 Gatekeeper

Select Communication Manager Interface → Switch Connections from the left pane. The Switch Connections screen shows a listing of the existing switch connections.

Locate the connection name associated with the relevant Communication Manager, in this case “cm7”, and select the corresponding radio button. Click Edit H.323 Gatekeeper.

The Edit H.323 Gatekeeper screen is displayed next. Enter the IP address of a C-LAN circuit pack or the Processor C-LAN on Communication Manager to use as the H.323 gatekeeper, in this case “10.64.101.236” as shown below. Click Add Name or IP.
6.4. Administer NICE User

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.
6.5. Administer Security Database

Select Security → Security Database → Control from the left pane, to display the SDB Control for DMCC, TSAPI, JTAPI and Telephony Web Services screen in the right pane.

Make certain both parameters are unchecked, as shown below.

In the event that the security database is used by the customer with parameters already enabled, then follow reference [2] to configure access privileges for the NICE user from Section 6.4.
6.6. Administer Ports

Select Networking → Ports from the left pane, to display the Ports screen in the right pane.

In the DMCC Server Ports section, select the radio button for Encrypted Port under the Enabled column, as shown below. Retain the default values in the remaining fields.
6.7. Restart Services

Select **Maintenance → Service Controller** from the left pane, to display the **Service Controller** screen in the right pane.

Check **DMCC Service** and select **Restart Service**.
6.8. Export CA Certificate

Select Security → Certificate Management → CA Trusted Certificates from the left pane, to display the CA Trusted Certificates screen in the right pane.

Select the pertinent CA certificate, in this case “SystemManagerCA”, and click Export.
The **Trusted Certificate Export** screen is displayed. Select and copy everything from the **BEGIN CERTIFICATE** to the **END CERTIFICATE** (not shown) lines. Paste the copied content to a Notepad file and save with a desired file name such as “caSMGR.crt”.

This CA certificate needs to be installed on Engage for establishment of encrypted DMCC connection with Application Enablement Services.
7. Configure Avaya Aura® Session Manager

This section provides the procedures for configuring Session Manager, which is performed via the web interface of System Manager. The procedures include the following areas:

- Launch System Manager
- Administer users

7.1. Launch System Manager

Access the System Manager web interface by using the URL “https://ip-address” in an Internet browser window, where “ip-address” is the IP address of System Manager. Log in using the appropriate credentials.

7.2. Administer Users

In the subsequent screen (not shown), select Users → User Management from the top menu. Select User Management → Manage Users (not shown) from the left pane to display the screen below.

Select the entry associated with the first SIP agent station from Section 3, in this case “66006”, and click Edit.
The **User Profile | Edit** screen is displayed. Select the **Communication Profile** tab, followed by **CM Endpoint Profile** to display the screen below.

For **Security Code**, enter a desired code, in this case “123456”. This security code is used for multiple registration authentication against a SIP endpoint when the security database is disabled in **Section 6.5**.

Click on the editor icon highlighted below.
The popped-up screen below is displayed. Select the **General Options** tab, and set **Type of 3PCC Enabled** to “Avaya”.

Select the **Feature Options** tab, and check **IP Softphone**.

Repeat this section to administer all SIP agent user from **Section 3**. In the compliance testing, one agent user was administered.
8. Configure Avaya Proactive Contact

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

- Obtain host name
- Obtain permission files

8.1. Obtain Host Name

Log in to the Linux shell of the Proactive Contact server. Use the “hostname” command to obtain the host name, which will be used later to configure Engage.

In the compliance testing, the host name of the Proactive Contact server is “lzpds4”, as shown below.

```
$ hostname
lzpds4
```

8.2. Obtain Permission Files

Use a tool such as WinSCP, to copy the following permission files from the Proactive Contact server, which will be used later to configure Engage.

- /opt/avaya/pds/openssl/certificate/corbaServer_cert.pem
- /opt/avaya/pds/openssl/cacertificate/ProactiveContactCA.pem
- /opt/avaya/pds/openssl/private/corbaServer_key.pem
9. Configure NICE Engage Platform

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

- Launch Engage web interface
- Administer CTI for PC
- Administer CTI for AES
- Administer Interactions Center
- Administer certificates
- Restart services
- Administer system mapping
- Administer agent users

The configuration of Engage is performed by NICE engineers. The procedural steps are presented in these Application Notes for informational purpose.

Prior to configuration, a pertinent interactions center is assumed to be pre-configured, and with TLS 1.2 enabled on the server running the Advanced Interaction Recorder component.

9.1. Launch Engage Web Interface

Access the Engage web interface by using the URL “http://hostname/nice” in an Internet Explorer browser window, where “hostname” is the host name of the Engage server with the Application Server component. The Welcome screen below is displayed. Log in using the appropriate credentials.
The NICE screen below is displayed next. Select **Administration → System Administrator** followed by **Settings → Technician Mode** from the top menu.

![NICE screen](image1.png)

### 9.2. Administer CTI for PC

Expand **Organization → Master Site** as shown below. Right click on **CTI Integrations** and select **New CTI Connection** to add a connection with Proactive Contact.

![NICE screen](image2.png)
The New CTI Connection pop-up screen is displayed. Click Next (not shown).

The Stage 2 screen is displayed as shown below.

For Regular Interactions Center, select the pertinent center, in this case “IC_on_AppServer (NiceApp)” which was pre-configured.

For Switch Type, select “Avaya PC/ POM”, which auto populates Switch Name with the same value.
Proceed to **Stage 3.** Retain “Event Service” as the default value for **Avaya PC/ POM CTI Interface** as shown below.

![New CTI Connection](image)

Proceed to **Stage 4.** Enter the following values for the specified fields and retain the default values for the remaining fields.

- **AvayaPD Version:** The closest version number, in this case “PC512”.
- **Event Service Host Name:** The Proactive Contact host name from Section 8.1.
- **Naming Service Host Name:** The Proactive Contact host name from Section 8.1.
- **AvayaPD Client Username:** The Proactive Contact Event Service client credentials.
- **AvayaPD Client Password:** The Proactive Contact Event Service client credentials.

![New CTI Connection](image)
Proceed to **Stage 11**. Select **Add** to add a device entry for each agent station extension from **Section 3**. Set **Device Number** to the agent station extension and **Type** to “Extension” as shown below.

![New CTI Connection](image)

Proceed to **Stage 13**, and check **Call Flow Analysis**.

Proceed to complete the wizard.

![New CTI Connection](image)
9.3. Administer CTI for AES

The NICE screen is updated to reflect the newly added CTI connection as shown below. Right click on CTI Integrations again and select New CTI Connection to add a connection with Application Enablement Services.

The New CTI Connection pop-up screen is displayed as shown below. Click Next (not shown).
The **Stage 2** screen is displayed. For **Regular Interactions Center**, select the pertinent center, in this case “IC_on_AppServer (NiceApp)” which was pre-configured.

For **Switch Type**, select “Avaya CM”, which auto populates **Switch Name** with the same value.

![Set New CTI Connection Wizard Stage 2 of 17](image)

Proceed to **Stage 3**. For **Avaya CM CTI Interface**, select “AES TSAPI”.

Check **Active Recording** and select “DMCC (Advanced Interaction Recorder)” as shown below.

![Set New CTI Connection Wizard Stage 3 of 17](image)
Proceed to **Stage 4**. Enter desired strings for **ServerName**, **LoginID**, and **Password**. These parameters are not pertinent to the integration but are required to be configured.

![Set New CTI Connection Wizard Stage 4 of 17](image)

Proceed to **Stage 9**. Enter the following values for the specified fields and retain the default values for the remaining fields.

- **PrimaryAESServerAddress**: IP address of the Application Enablement Services server.
- **PrimaryAESUserName**: The NICE user credentials from **Section 6.4**.
- **PrimaryAESPassword**: The NICE user credentials from **Section 6.4**.

![Set New CTI Connection Wizard Stage 9 of 17](image)
Expand Media Provider Controllers – Location toward bottom of screen. Enter host name of the Engage server with the Advanced Interaction Recorder component, in this case “niceair”, and click the add icon. The resultant screen is shown below.

Proceed to Stage 11. Select Add to add a device entry for each agent station extension from Section 3. Enter the following values for the specified fields (not shown) and retain the default values for the remaining fields.

- **Device Type**: “Extension”
- **Device Number**: The agent station extension from Section 3.
- **Observation Type**: “Non-Resource-Based”
- **SymbolicName**: The switch connection name from Section 6.3, in this case “cm7”.
- **CodecsList**: Check pertinent codec, which were G711U and G729 in the testing.
- **EncAlgList**: Check “AES_128_HMAC”.

In the compliance testing, two entries were created as shown below.
Proceed to **Stage 12**. Select all pertinent devices from the left pane and move to the right. The screen below shows the result of the move.

![Set New CTI Connection Wizard Stage 12 of 17](image1)

Proceed to **Stage 16**. For **Port**, select an available port number, in this case “62095” as shown below. Proceed and complete the wizard.

![Set New CTI Connection Wizard Stage 16 of 17](image2)
9.4. Administer Interactions Center

From the NICE screen, expand Master Site → Interactions Center and select the pertinent center, in this case “IC_on_AppServer”, which was pre-configured.

Select the General tab in the right pane, and check Voice as shown below.

![Image showing NICE screen with General tab selected and Voice checked]

Select the Configuration tab and expand RCM in the right pane. Locate the Support Switch Id parameter and set it to “No” as shown below.

![Image showing NICE screen with Configuration tab expanded and Support Switch Id set to No]
9.5. Administer Certificates

From the Engage server running the Interactions Center component, navigate to the D:\Program files\NICE Systems\CTI\AvayaPDCTILink\Certificates directory.

Rename the three Proactive Contact permission files obtained from Section 8.2 to end with the configured AvayaPD version from Section 9.2 and paste into the directory as shown below.

From the Engage server running the Advanced Interaction Recorder component, copy the CA certificate from Section 6.8 to a desired directory.

Double click on the certificate and install onto the server.
9.6. Restart Services
From the Engage server running the Interactions Center component, navigate to **Windows → Nice Systems** and launch **Nice Service Configuration Manager**. The **NICE Services Configuration Manager** screen below is displayed. Restart the **IntegrationsDispatch** service.

```
<table>
<thead>
<tr>
<th>Name</th>
<th>Display Name</th>
<th>Description</th>
<th>State</th>
<th>Start Mode</th>
<th>Log On</th>
</tr>
</thead>
<tbody>
<tr>
<td>AASSearchController</td>
<td>NICE AA Search Controller</td>
<td>Auto Analyze Streams</td>
<td>Running</td>
<td>Automatic</td>
<td>Administrator</td>
</tr>
<tr>
<td>AuditTrailService</td>
<td>NICE Audit Trail Service</td>
<td>Enables adding message</td>
<td>Running</td>
<td>Automatic</td>
<td>Administrator</td>
</tr>
<tr>
<td>CLSCoreService</td>
<td>NICE Interactions Center Core</td>
<td>Acts as the entrance...</td>
<td>Running</td>
<td>Automatic</td>
<td>Administrator</td>
</tr>
<tr>
<td>CLSDBService</td>
<td>NICE Interactions Center DB</td>
<td>Manages the Interactions Center DB</td>
<td>Running</td>
<td>Automatic</td>
<td>Administrator</td>
</tr>
<tr>
<td>CLS MonitorService</td>
<td>NICE Interactions Center Monitor</td>
<td>Report follows/OK</td>
<td>Running</td>
<td>Automatic</td>
<td>Administrator</td>
</tr>
<tr>
<td>CLSRM Service</td>
<td>NICE Interactions Center RCM</td>
<td>Responsible for allocating resources</td>
<td>Running</td>
<td>Automatic</td>
<td>Administrator</td>
</tr>
<tr>
<td>CoachingServerService</td>
<td>NICE Coaching Server</td>
<td>Manages Coaching</td>
<td>Running</td>
<td>Automatic</td>
<td>Administrator</td>
</tr>
<tr>
<td>EnrollmentService</td>
<td>NICE Enrollment Service</td>
<td>NICE Enrollment Service</td>
<td>Running</td>
<td>Automatic</td>
<td>Administrator</td>
</tr>
<tr>
<td>EvaluationServerService</td>
<td>NICE Evaluation Forms Server</td>
<td>Manages Evaluation Forms Service</td>
<td>Running</td>
<td>Automatic</td>
<td>Administrator</td>
</tr>
<tr>
<td>PLM</td>
<td>NICE Mod Provider Control Manager</td>
<td>An online repository</td>
<td>Running</td>
<td>Automatic</td>
<td>Administrator</td>
</tr>
<tr>
<td>FTPQueryService</td>
<td>NICE FTP Query Server</td>
<td>Performs queries for FTP</td>
<td>Running</td>
<td>Automatic</td>
<td>Administrator</td>
</tr>
<tr>
<td>IntegrationsDispatch</td>
<td>NICE Integration Dispatch Service</td>
<td>Launches and maint.</td>
<td>Running</td>
<td>Automatic</td>
<td>Administrator</td>
</tr>
<tr>
<td>InvestigationsService</td>
<td>NICE Investigations Server</td>
<td>Manages and pre...</td>
<td>Running</td>
<td>Automatic</td>
<td>Administrator</td>
</tr>
<tr>
<td>LogService</td>
<td>NICE Logging Service</td>
<td>A service designated</td>
<td>Running</td>
<td>Automatic</td>
<td>Administrator</td>
</tr>
</tbody>
</table>
```

From the Engage server running the Advanced Interaction Recorder component, navigate to **Windows → Windows System → Windows Administrative Tools → Services** to display the **Services** screen below.

Restart the **NICE Connection Manager** and **NICE IP Capture** services shown below.
9.7. Administer System Mapping
From the NICE screen, select Master Site → System Mapping.

9.7.1. Recorder Pool
The screen below is displayed. In the right pane, select + Recorder Pool.

The New Advanced Interaction Recorder Pool Wizard pop-up screen is displayed as shown below. Click Next (not shown).
The screen below is displayed next. Enter a descriptive **Name** and retain the default values in the remaining fields.

![Define Recorder Pool](image)

In the next screen, select the relevant and pre-existing recorder from the left pane and move to the right. The screenshot below shows the result of the move.

Proceed to complete the wizard.
9.7.2. Source Pool

The NICE screen is updated as shown below. Select + Source Pool to add a source pool.

The New Source Pool Wizard pop-up screen is displayed. Click Next (not shown).
The screen below is displayed next. Enter a descriptive **Name**. For **Switch**, select the switch name from **Section 9.3**.

![New Source Pool Wizard](image)

Define the source pool details. After completing this wizard, the media type, switch, and source type cannot be changed.

**Name:** DevConnect Source Pool  
**Media type:** Audio  
**Switch:** Avaya CM (ID = 75)  
**Source type:** Device

In the next screen, select the relevant device entries as shown below.

Proceed to complete the wizard.

![New Source Pool Wizard](image)
9.7.3. Recording Profile

The NICE screen is updated as shown below. Drag the created source pool below and drop on top of the created recorder pool, in this case DevConnect Source and DevConnect Pool respectively.

The **New Recording Profile Wizard** pop-up screen is displayed. Click **Next** (not shown).
The screen below is displayed next. Enter a descriptive **Name**.

![New Recording Profile Wizard](Image)

**Define the Recording Profile Name**

Enter a meaningful recording profile name. After completing this wizard, the mapping and the recording type cannot be changed.

**Name:** DevConnect Recording Profile

In the next screen, enter the following values for the specified fields and retain the default values for the remaining fields.

- **Recording type:** “Total”
- **Capture type:** “Active DMCC MR”
- **Audio Compression:** Check this option.

Proceed to complete the wizard.
9.8. Administer Agent Users
The NICE screen is displayed again. Select Administration → User Administrator from the top menu, followed by New User.

The Create New User Wizard pop-up screen is displayed. Click Next (not shown).
The Step 1 screen displayed next. Enter pertinent values for **First Name**, **Last Name**, and **Windows User Name** for the first agent user from **Section 3**. Retain the default values in the remaining fields.

![Step 1 of 8](image)

Proceed to **Step 4** and check the **Agent** user type shown below.

![Step 4 of 8](image)
Proceed to **Step 5** and click **Add**.

The **Agent Identity Dialog** pop-up box is displayed. For **Switch**, select the switch name from **Section 9.2**. Select **Extension** and enter the first agent user extension from **Section 3**. Retain the default values in the remaining fields and proceed to complete the Wizard.

Repeat this section to add an agent user for each agent station extension in **Section 3**. In the compliance testing, two agent users were created as shown below.
10. Verification Steps
This section provides the tests that can be performed to verify proper configuration of Communication Manager, Application Enablement Services, Proactive Contact, and Engage.

10.1. Verify Avaya Aura® Communication Manager
On Communication Manager, verify the registration status of virtual IP softphones by using the “list registered-ip-stations” command. Verify that there is an entry for each agent station extension from Section 3 along with the IP address of the Application Enablement Services server, as shown below.

```
list registered-ip-stations

REGISTERED IP STATIONS
Station Ext      Set Type/ Prod ID/ Station IP Address/ or Orig Port Net Rgn Release Gatekeeper IP Address
65001            9611      IP_Phone    192.168.200.217
tls             1  6.8202    10.64.101.236
65001            9611      IP_API_A    10.64.101.239
tcp             1  3.2040    10.64.101.236
66006          9641SIPCC IP_API_A    10.64.101.239
tcp             1  3.2040    10.64.101.236
```
10.2. Verify Avaya Aura® Application Enablement Services

On Application Enablement Services, verify status of the DMCC link by selecting Status → Status and Control → DMCC Service Summary from the left pane. The DMCC Service Summary – Session Summary screen is displayed.

Verify the User column shows an active session with the NICE user name from Section 6.4, and that the # of Associated Devices column reflects the number of agent users in Section 3, in this case “2”.

10.3. Verify Avaya Proactive Contact

Log in to the Linux shell of Proactive Contact and issue the “netstat | grep enserver” command. Verify that there is an entry showing an ESTABLISHED connection with the IP address of the Engage server running the Interactions Center component, in this case “10.64.101.207”, as shown below.
10.4. Verify NICE Engage Platform

Start a job on Proactive Contact and log an agent in to handle and complete an outbound call. From the NICE screen, select Business Analyzer from the top menu to display the screen below. Select Queries → Public → Complete – Last 2 hours from the left pane.

![Business Analyzer Screenshot]

Verify that there is an entry in the right pane reflecting the last call, with proper values in the relevant fields. Double click on the entry.

![Business Analyzer Screenshot]

Verify that the pop-up screen below is displayed and that the recording can be played back.
11. Conclusion
These Application Notes describe the configuration steps required for NICE Engage Platform 6.15 to successfully interoperate with Avaya Proactive Contact 5.2 with CTI and Avaya Aura® Application Enablement Services 8.1. All feature and serviceability test cases were completed.

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


