



Avaya Solution & Interoperability Test Lab

Application Notes for TelStrat Engage 4.2.1 with Avaya Contact Center Select 6.4 and Avaya IP Office 9.1– Issue 1.0

Abstract

These Application Notes describe the configuration steps required for TelStrat Engage 4.2.1 to interoperate with Avaya Contact Center Select 6.4 and Avaya IP Office 9.1. TelStrat Engage is a call recording solution.

In the compliance testing, TelStrat Engage used the CCT interface from Avaya Contact Center Select and the TAPI interface from Avaya IP Office to monitor Avaya Contact Center Select agents, and the port mirroring method to capture media associated with the monitored agents for 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 TelStrat Engage 4.2.1 to interoperate with Avaya Contact Center Select 6.4 and Avaya IP Office 9.1 using. TelStrat Engage is a call recording solution.

In the compliance testing, TelStrat Engage used CCT .Net from Avaya Contact Center Select and TAPI 2 in third party mode from Avaya IP Office to monitor Avaya Contact Center Select agents. The TAPI events were used to determine when to start/stop call recordings, and the CCT events were used to obtain contact center information such as agent ID, skill and agent names.

The port mirroring method was used to capture media from the Avaya IP Deskphones that were associated with the monitored Avaya Contact Center Select agents for call recordings.

These Application Notes cover call recordings for Avaya Contact Center Select agents. For recording of other users on Avaya IP Office, refer to [3].

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 established CCT connectivity to Contact Center Select and TAPI connectivity to IP Office for monitoring of agents.

For the manual part of the testing, each call was handled manually on the agent desktop with generation of unique audio content for the recordings. Necessary agent actions such as hold and reconnect were performed from the agent desktops running the Avaya Aura® Agent Desktops application to test the different 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 calls.

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

2.1. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing.

The feature testing focused on verifying the following on Engage:

- Handling of CCT events.
- Handling of TAPI events.
- Proper recording, logging, and playback of calls for scenarios involving inbound, outbound, internal, external, personal, hold/reconnect, transfer, conference, multiple calls, multiple agents, long duration, observe, barge-in, emergency, join calls, G.711, G.729, and outbound campaign.

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

2.2. Test Results

All test cases were executed and verified. The following were observations on Engage from the compliance testing.

- In the current release, reporting of skill name is only supported by the web client, and reporting of agent name is only supported by the thick client. Furthermore, reporting of skill name is only applicable for inbound calls.
- In the current release, TAPI is used for reporting of dialed number, which will contain the answering agent as opposed to the original DNIS.
- In all conference scenarios, two recording entries were produced for the conference-from agent. One of the recording entries contained start of call up to conference complete action, and the other contained conversation post the conference complete action.
- Upon recovery from an Ethernet disruption, the reporting of skill name did not resume until the second inbound call.

2.3. Support

Technical support on Engage can be obtained through the following:

- **Phone:** (972) 633-4548
- **Email:** support@telstrat.com

3. Reference Configuration

The configuration used for the compliance testing is shown in **Figure 1**.

The detailed administration of basic connectivity between Contact Center Select and IP Office, and of contact center devices is not the focus of these Application Notes and will not be described. In addition, the port mirroring of the layer 2 switch is also outside the scope of these Application Notes and will not be described.

The contact center devices used in the compliance testing is shown in the table below. In the testing, Engage monitored all activities associated with the two agents. The RTP stream from the Avaya IP Deskphones associated with the agent extensions were mirrored from the layer 2 switch and replicated over to Engage.

Contact Center Devices	Values
CDN	30001
Supervisor	33887
Agent Extensions	30031, 30032
Agent Users	33888, 33889

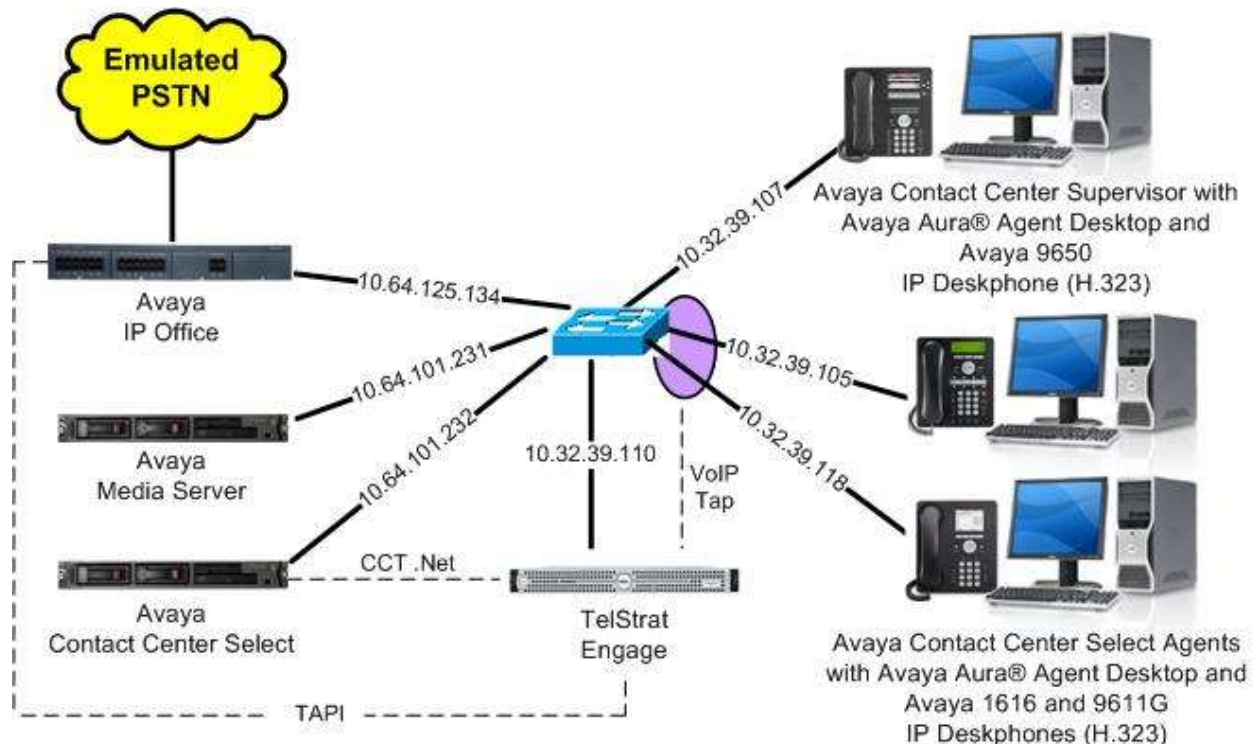


Figure 1: Compliance Testing Configuration

4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya Contact Center Select	6.4 SP 14
Avaya Media Server	7.6.0.957
Avaya IP Office on IP500 V2	9.1.0.437
Avaya 1616 IP Deskphone (H.323)	1.350B
Avaya 9611G IP Deskphone (H.323)	6.4014
Avaya 9650 IP Deskphone (H.323)	3.230A
TelStrat Engage on Windows Server 2012 <ul style="list-style-type: none">• VOIPEngine• Avaya TAPI (tspi2w.tsp)• Avaya CCT SDK (Nortel.CCT.dll & Nortel.CCT.WCF.dll)	4.2.1 R2 Standard 4.2.1.21 1.0.0.41 6.4 SP 13

Compliance Testing is applicable when the tested solution is deployed with a standalone IP Office 500 V2 only.

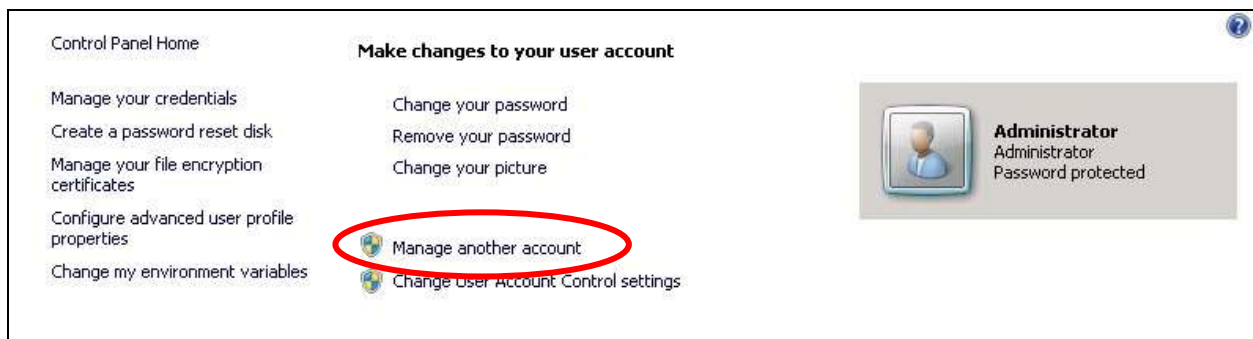
5. Configure Avaya Contact Center Select

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

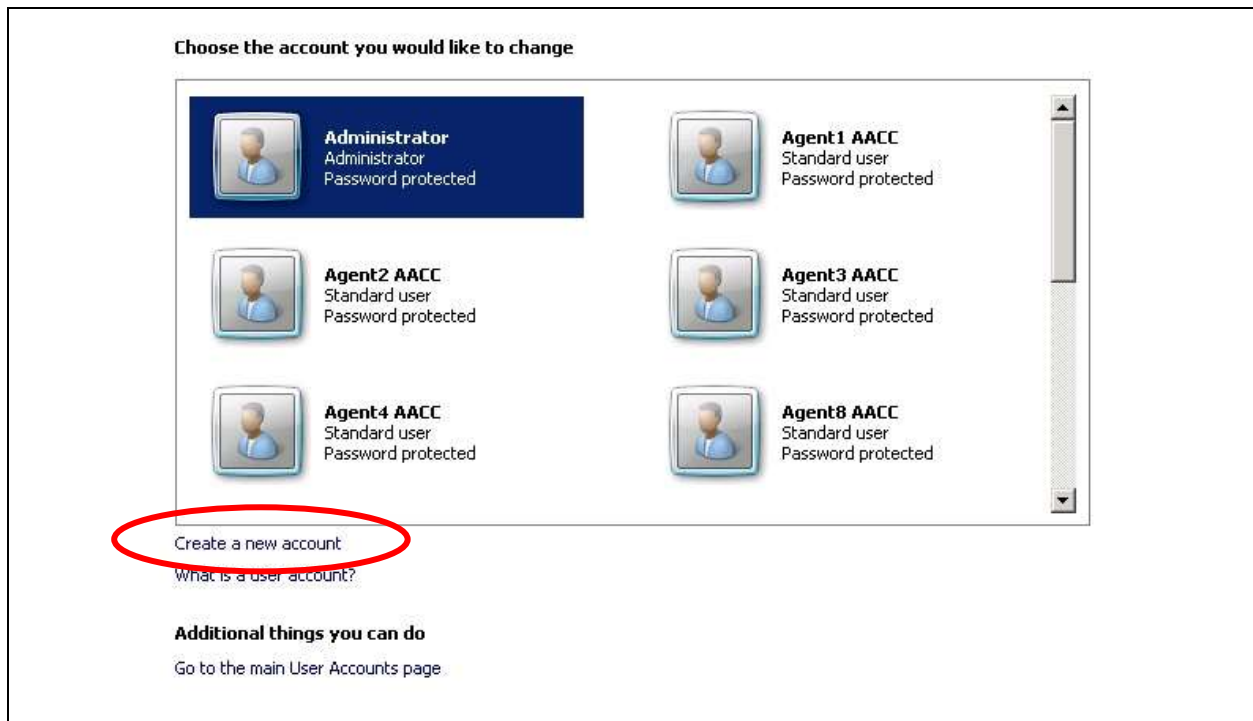
- Administer windows account
- Launch CCT Administration
- Administer CCT user

5.1. Administer Windows Account

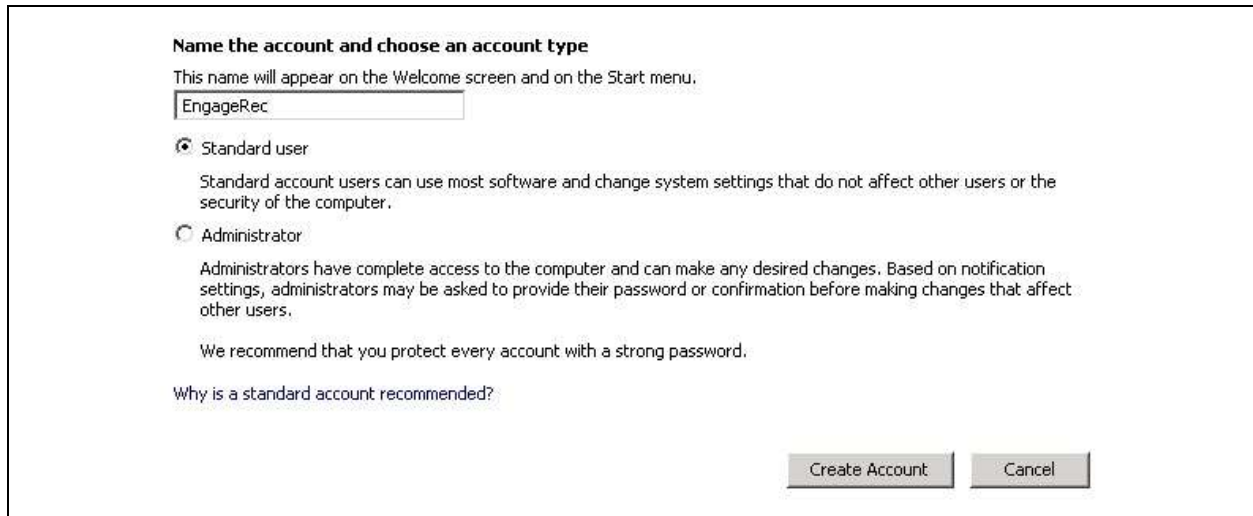
From the Engage server, select **Start → Control Panel**, and click on the **User Accounts** icon (not shown below). In the displayed screen below, select **Manage another account**.



A list of existing accounts is displayed, as shown below. Select **Create a new account**.



The screen below is displayed. Enter a desired name, in this case “EngageRec”, and select **Standard user**. Click **Create Account**.



Name the account and choose an account type

This name will appear on the Welcome screen and on the Start menu.

EngageRec

☒ Standard user

Standard account users can use most software and change system settings that do not affect other users or the security of the computer.

☐ Administrator

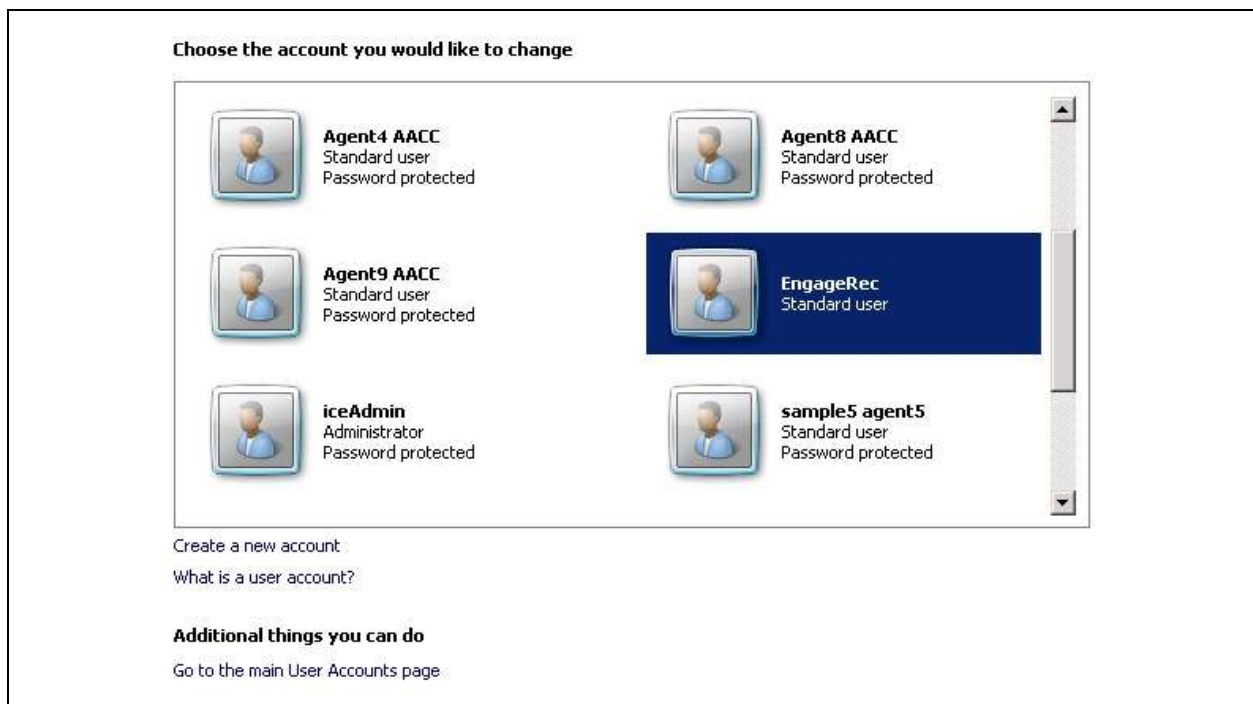
Administrators have complete access to the computer and can make any desired changes. Based on notification settings, administrators may be asked to provide their password or confirmation before making changes that affect other users.

We recommend that you protect every account with a strong password.

Why is a standard account recommended?

Create Account Cancel

A list of updated accounts is displayed next. Scroll the screen as necessary to locate and select the newly created account, in this case **EngageRec**.



Choose the account you would like to change

Agent4 AACC
Standard user
Password protected

Agent8 AACC
Standard user
Password protected

Agent9 AACC
Standard user
Password protected

EngageRec
Standard user

iceAdmin
Administrator
Password protected

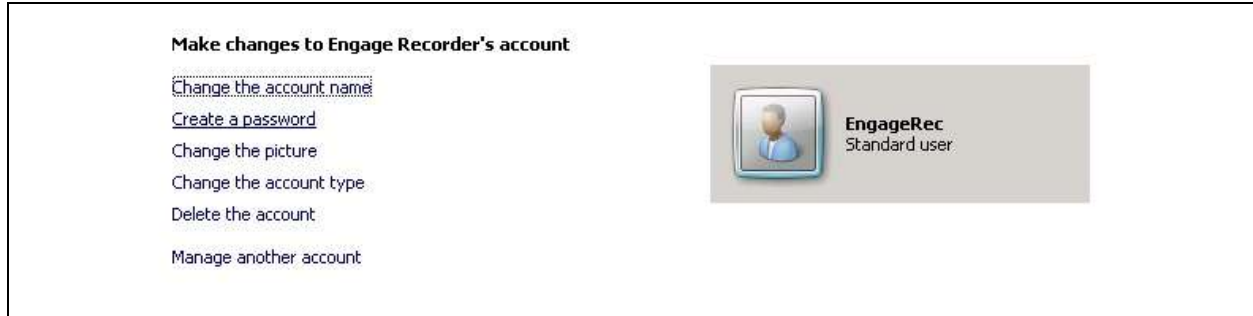
sample5 agent5
Standard user
Password protected

Create a new account
What is a user account?

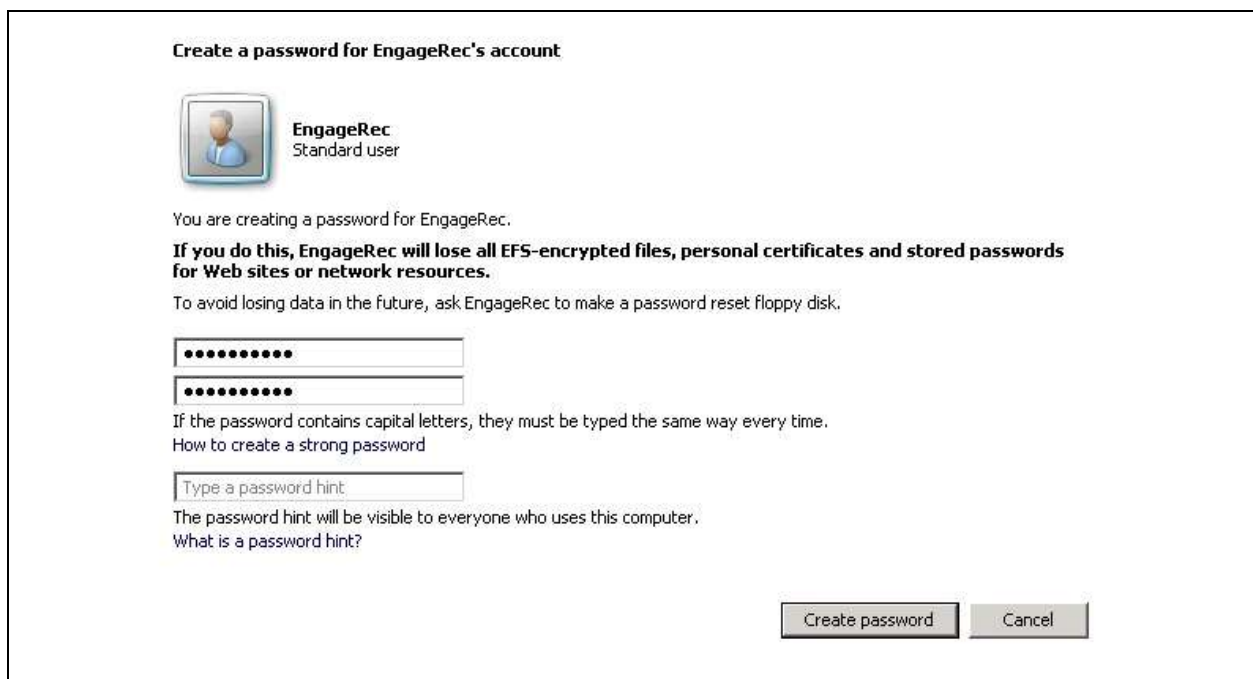
Additional things you can do

Go to the main User Accounts page

The screen below is displayed. Select **Create a password**.

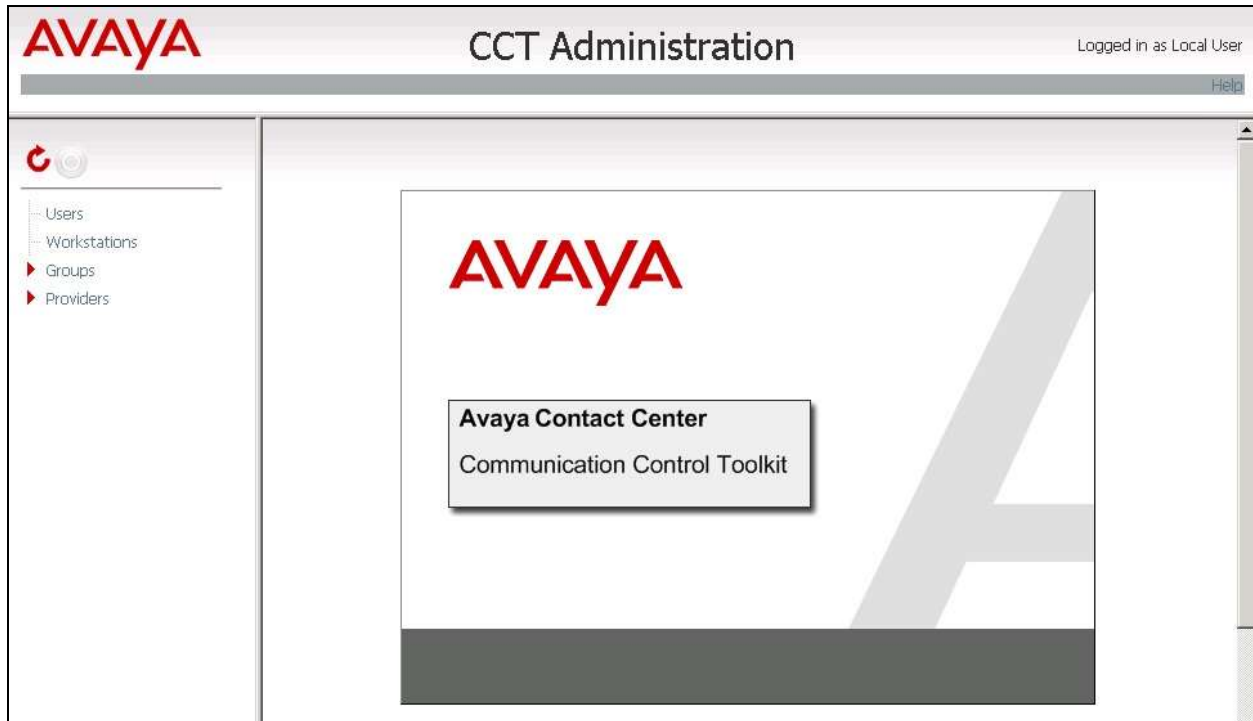


The screen below is displayed next. Enter desired password and click **Create password**.



5.2. Launch CCT Administration

From the Contact Center Select server, access the CCT Administration web interface by using the URL “http://localhost:8081/WebAdmin” in an Internet browser window. The screen below is displayed.



5.3. Administer CCT User

Right click on **Users** in the left pane, and select **Add new User** (not shown below). The **Update CCT User** screen is displayed in the right pane.

For **Login User Name**, enter a user name in the format “x\y”, where “x” is the hostname of the Contact Center Select server, and “y” is the newly created windows account from **Section 5.1**. Enter desired values for **First Name** and **Last Name**.

In the **Agent Assignments** sub-section, check the relevant agent users from **Section 3** in the left column, and use the arrow icon to move selected agents to the right. In the compliance testing, agent users “33888” and “33889” were assigned, as shown below.

AVAYA CCT Administration Logged in as Local User [Help](#)

Update CCT User

User Details

Login User Name: CCS-CCS\EngageRec

First Name: Recorder

Last Name: Engage

Address Assignments

Terminal Assignments

Terminal Group Assignments

Address Group Assignments

Agent Assignments

Agents available

Agents
<input type="checkbox"/>
33002
<input type="checkbox"/>
33004
<input type="checkbox"/>
33010
<input type="checkbox"/>
33881
<input type="checkbox"/>
33883
<input type="checkbox"/>
33884

9 Agents found. Page 1 / 1

Agents mapped

Agents
<input type="checkbox"/>
33888
<input type="checkbox"/>
33889

2 Agents found. Page 1 / 1

Save

6. Configure Avaya IP Office

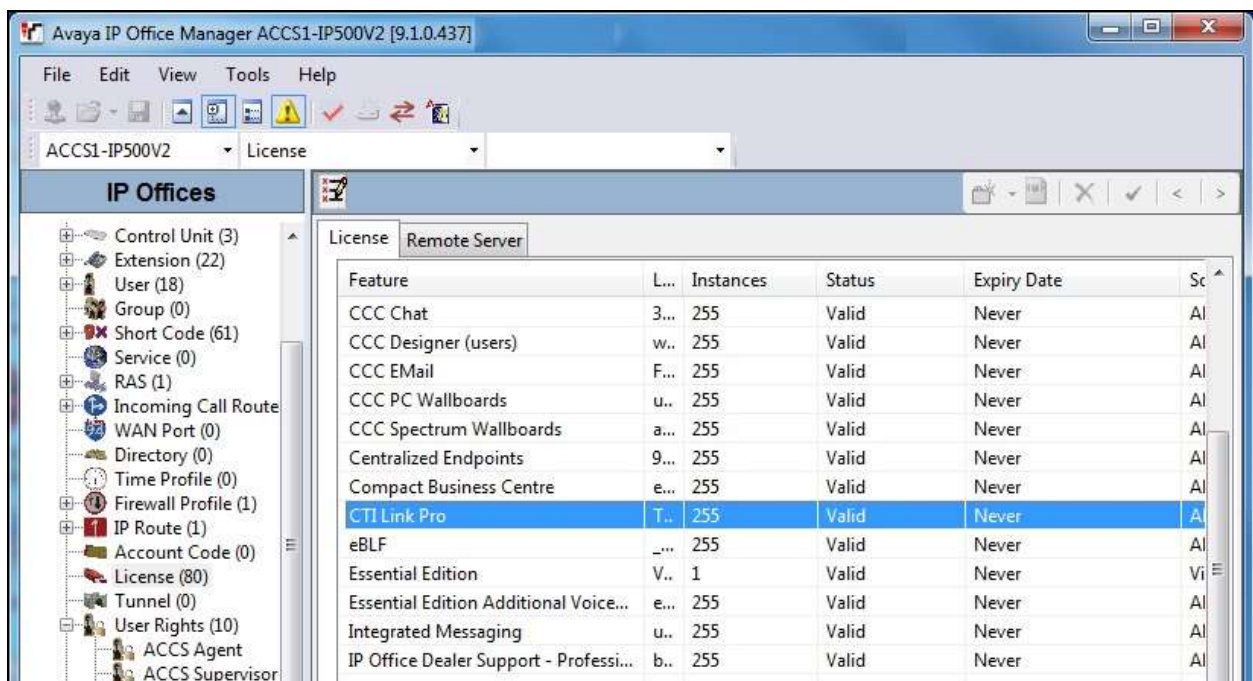
This section provides the procedures for configuring IP Office. The procedures include the following areas:

- Verify license
- Obtain telephone IP addresses

6.1. Verify License

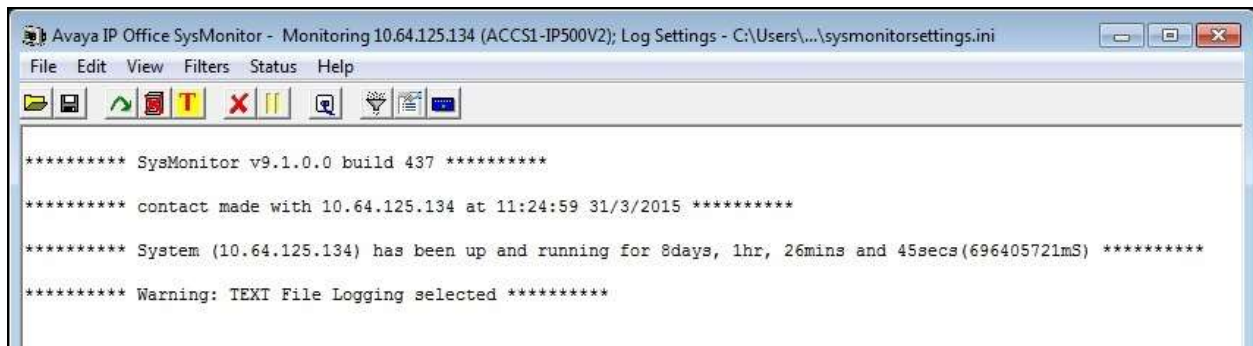
From a PC running the IP Office Manager application, select **Start → Programs → IP Office → Manager** to launch the application. Select the proper IP Office system, and log in using the appropriate credentials.

The **Avaya IP Office Manager** screen is displayed. From the configuration tree in the left pane, select **License** to display a list of licenses in the right pane. Verify that there is a license for **CTI Link Pro** and that the **Status** is “Valid”, as shown below.

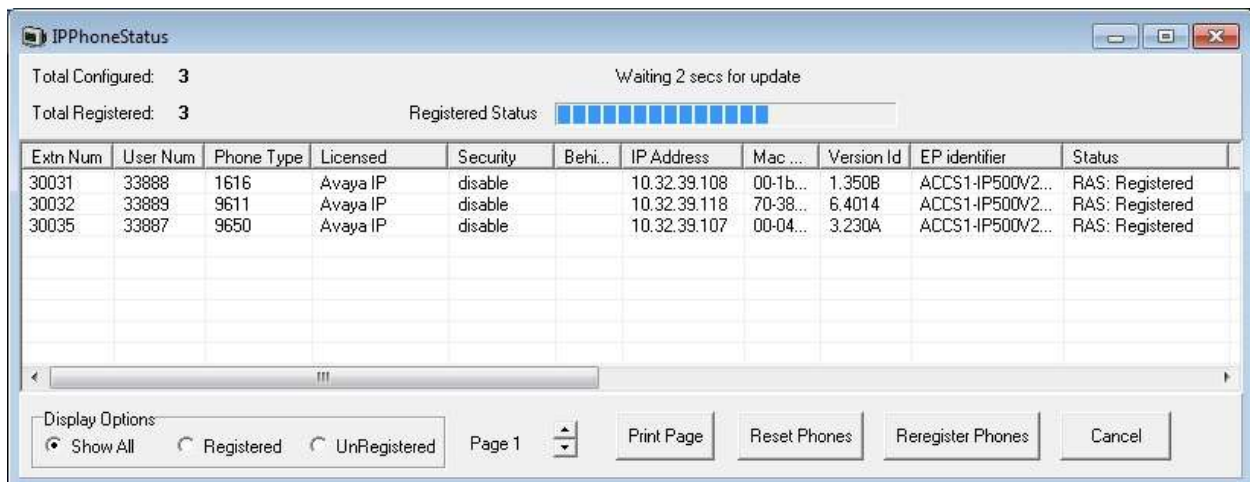


6.2. Obtain Telephone IP Address

From a PC running the IP Office Monitor application, select **Start → Programs → IP Office → Monitor** to launch the application. The **Avaya IP Office SysMonitor** screen is displayed, as shown below. Select **Status → H323 Phone Status** from the top menu.



The **IPPhoneStatus** screen is displayed. Make a note of the **IP Address** associated with each **Extn Num** that the agents may be using from **Section 3**.



7. Configure TelStrat Engage

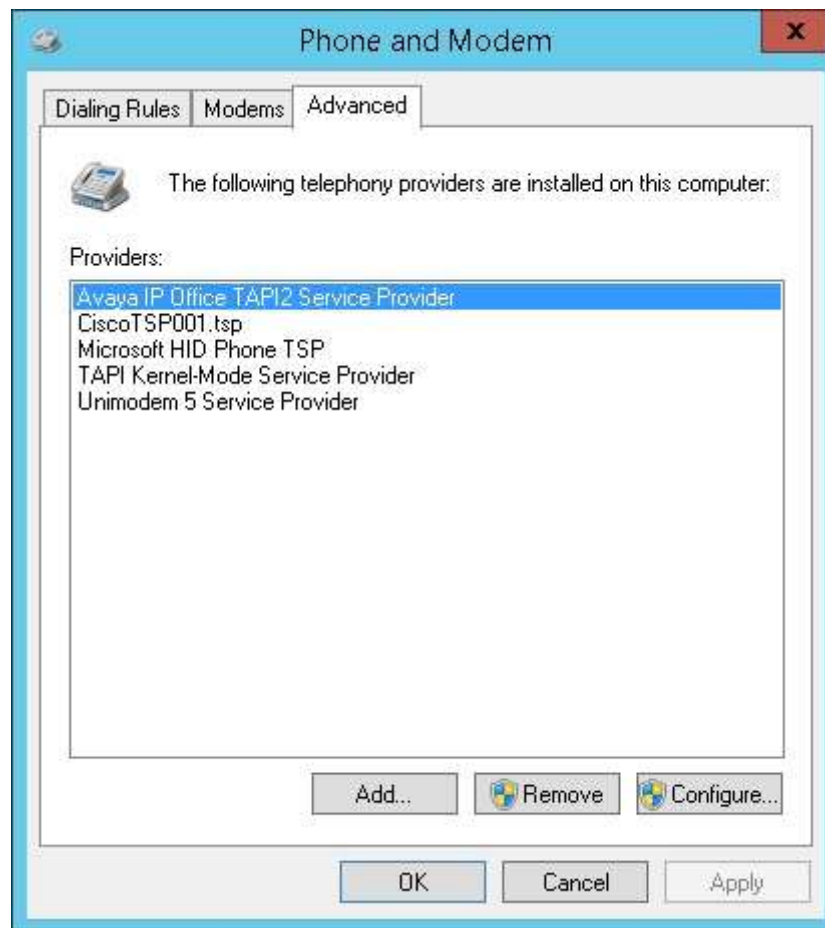
This section provides the procedures for configuring Engage. The procedures include the following areas:

- Administer TAPI driver
- Launch VoIP Engine Configuration
- Administer SPAN configuration
- Administer port mapping

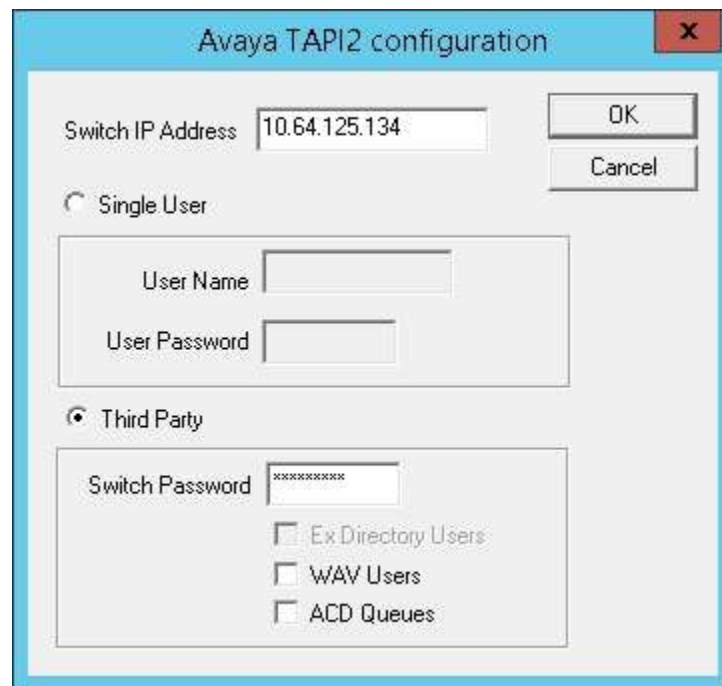
The configuration of Engage is typically performed by TelStrat installation personnel or resellers. The procedural steps are presented in these Application Notes for informational purposes. The Avaya TAPI 2 driver is assumed to be pre-installed on the Engage server.

7.1. Administer TAPI Driver

From the Engage server, select **Start → Control Panel**, and click on the **Phone and Modem** icon (not shown below). In the displayed **Phone and Modem Options** screen, select the **Advanced** tab. Select the **Avaya IP Office TAPI2 Service Provider** entry, and click **Configure**.



The **Avaya TAPI2 configuration** screen is displayed. For **Switch IP Address**, enter the IP address of IP Office. Select the radio button for **Third Party**, and enter the appropriate IP Office credential into the **Switch Password** field. Reboot the Engage server.

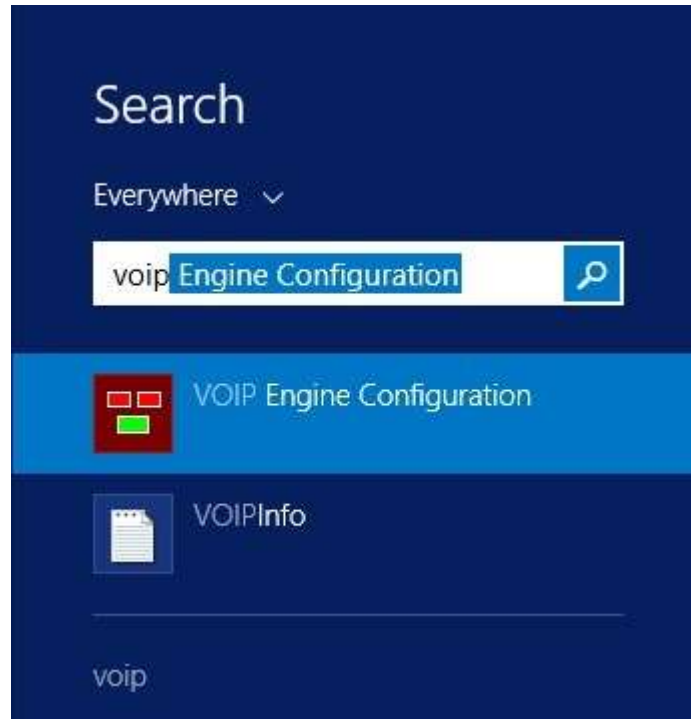


The image shows a Windows-style dialog box titled "Avaya TAPI2 configuration". It has a blue title bar with a red close button in the top right corner. The dialog contains the following elements:

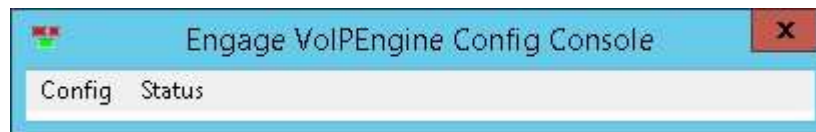
- A "Switch IP Address" label followed by a text input field containing "10.64.125.134".
- Two buttons on the right: "OK" and "Cancel".
- A radio button labeled "Single User" which is currently unselected.
- A group box containing "User Name" and "User Password" labels, each followed by an empty text input field.
- A radio button labeled "Third Party" which is currently selected.
- A group box containing a "Switch Password" label followed by a masked text input field (displaying "XXXXXXXXXX").
- Below the "Switch Password" field, there are three unchecked checkboxes: "Ex Directory Users", "WAV Users", and "ACD Queues".

7.2. Launch VoIP Engine Configuration

From the Engage server, enter “voip” anywhere on the desktop to locate **VOIP Engine Configuration**. Click on the pertinent entry from the result to launch the application.



The **Engage VoIP Engine Config Console** screen below is displayed. Click **Config**.

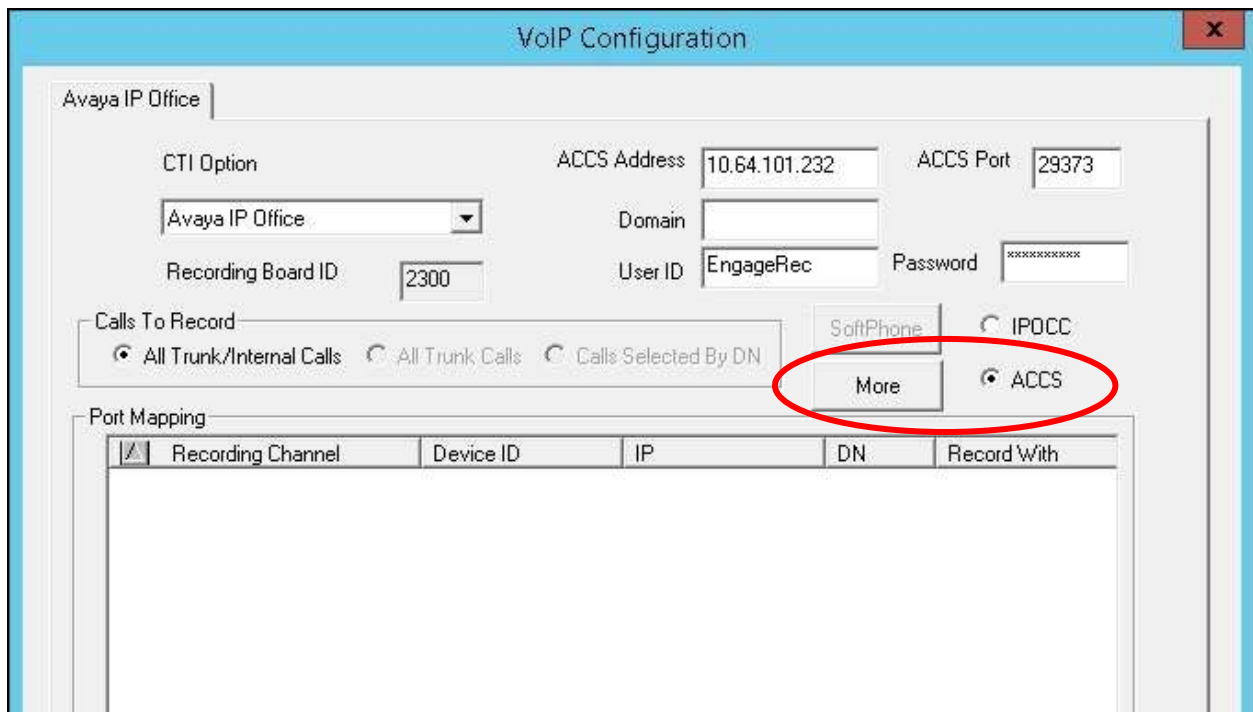


7.3. Administer SPAN Configuration

The **VoIP Configuration** screen is displayed. Select the **ACCS** radio button to enable ACCS related fields. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **CTI Option:** “Avaya IP Office”
- **ACCS Address:** The IP address of the Contact Center Select server.
- **ACCS Port:** “29373”
- **User ID:** The windows account credential from **Section 5.1**.
- **Password:** The windows account credential from **Section 5.1**.

Click **More**.



The screenshot shows the 'VoIP Configuration' window with the 'Avaya IP Office' tab selected. The 'Calls To Record' section has three radio buttons: 'All Trunk/Internal Calls' (selected), 'All Trunk Calls', and 'Calls Selected By DN'. The 'More' button is circled in red. The 'Port Mapping' section is visible below.

Recording Channel	Device ID	IP	DN	Record With
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The **Avaya SPAN Configuration** screen is displayed next. Check **Mirroring By IP** to enable device mapping by IP addresses.

If reporting of associated agent name is desired, then check **Populate Agent Name**.

If reporting of associated agent skill set is desired, then select an available **Target Fields**, followed by “Skillset” from **Mapped Source**, and click **Apply**.

The screenshot below shows the configuration used in the compliance testing.

The screenshot shows the 'Avaya SPAN Configuration' dialog box. It has a title bar with a close button (X). The main area is divided into several sections:

- Mirroring By IP:** A checkbox that is checked.
- Ports:** A section containing two input fields:
 - SIP Server IP Port:** A text box containing the value '5060'.
 - H.323 Server IP Port:** A text box containing the value '0'.
- Trace:** A section containing two checkboxes:
 - SIP Trace:** An unchecked checkbox.
 - H.323 Trace:** An unchecked checkbox.
- Fill Remark1 with UCID:** An unchecked checkbox.
- Populate Agent Name:** A checked checkbox.
- Additional Options:** A large empty text area.
- Generic Value Mapping:** A section on the right side containing:
 - Target Fields:** A dropdown menu showing 'Generic1'.
 - Mapped Source:** A list box showing 'Skillset' (highlighted in blue) and 'CallData'.
 - Apply:** A button at the bottom of the mapping section.

At the bottom of the dialog box are two buttons: 'OK' and 'Cancel'.

7.4. Administer Port Mapping

The **VoIP Configuration** screen is displayed again. Right click in the empty screen and select **ADD**.

The screenshot shows the 'VoIP Configuration' window. At the top, there's a tab labeled 'Avaya IP Office'. Below it, several fields are visible: 'CTI Option' set to 'Avaya IP Office', 'Recording Board ID' set to '2300', 'ACCS Address' set to '10.64.101.232', 'ACCS Port' set to '29373', 'Domain' (empty), 'User ID' set to 'EngageRec', and 'Password' (masked with 'XXXXXXXX').

Under 'Calls To Record', there are three radio buttons: 'All Trunk/Internal Calls' (selected), 'All Trunk Calls', and 'Calls Selected By DN'. To the right, there are buttons for 'SoftPhone', 'More', 'IPOCC', and 'ACCS' (selected).

The 'Port Mapping' section contains a table with the following headers: 'Recording Channel', 'Device ID', 'IP', 'DN', and 'Record With'. The table is currently empty. A context menu is open over the table, showing options: 'ADD', 'Delete', 'Modify', 'Import file', 'Export File', and 'Acquire via TAPI'.

At the bottom of the window, there are fields for 'No. of Log Files' (set to '10'), 'Config File Location', and 'Other Parameters', along with 'OK' and 'Cancel' buttons.

The **Device And CommSrv Port Mapping** screen is displayed. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **Device ID:** The first agent extension from **Section 3**.
- **IP:** The IP address associated with the extension from **Section 6.2**.
- **DN:** "*" as wild card to allow use of device by any agent user.
- **Recording Channel:** An available port.

Device And CommSrv Port Mapping

Device ID: 30031

IP: 10.32.39.108

DN: *

Recording Channel: 101

Calls To Record

☒ Trunk/Internal Calls ☐ Trunk Calls

Recording Stream

☒ Mirroring

Beep Tone: No

☐ HotDesk DN

Add Cancel

Repeat this section to create a port mapping for each agent extension from **Section 3**.

In the compliance testing, two entries were created, as shown below.

The image shows a 'VoIP Configuration' dialog box with a tab labeled 'Avaya IP Office'. The configuration includes:

- CTI Option:** A dropdown menu set to 'Avaya IP Office'.
- Recording Board ID:** A text box containing '2300'.
- ACCS Address:** A text box containing '10.64.101.232'.
- ACCS Port:** A text box containing '29373'.
- Domain:** A text box containing 'CCS-CCS'.
- User ID:** A text box containing 'EngageRec'.
- Password:** A text box containing '*****'.
- Calls To Record:** A group box with three radio buttons: 'All Trunk/Internal Calls' (selected), 'All Trunk Calls', and 'Calls Selected By DN'.
- Port Mapping:** A table with columns: Recording Channel, Device ID, IP, DN, and Record With. It contains two entries:

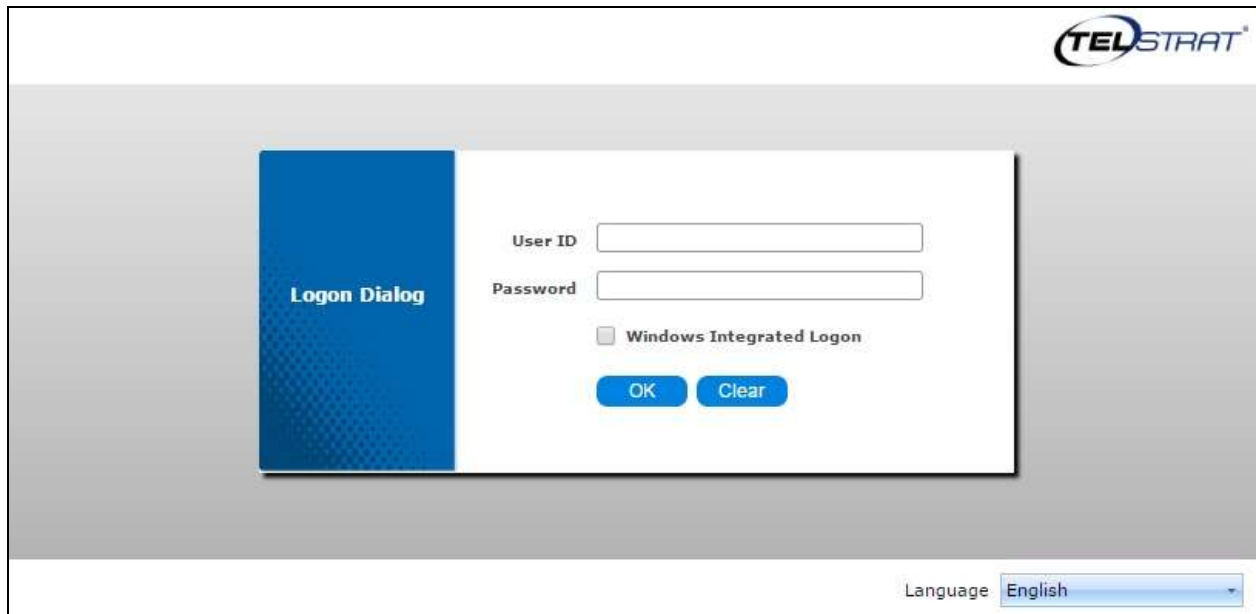
Recording Channel	Device ID	IP	DN	Record With
101	30031	10.32.39.108	*	Mirroring
102	30032	10.32.39.118	*	Mirroring
- Buttons:** 'SoftPhone', 'More', 'IPDCC', and 'ACCS' (selected).
- Footer:** 'No. of Log Files' (10), 'Config File Location', 'Other Parameters', 'OK', and 'Cancel'.

8. Verification Steps

This section provides the tests that can be performed to verify proper configuration of IP Office and Engage.

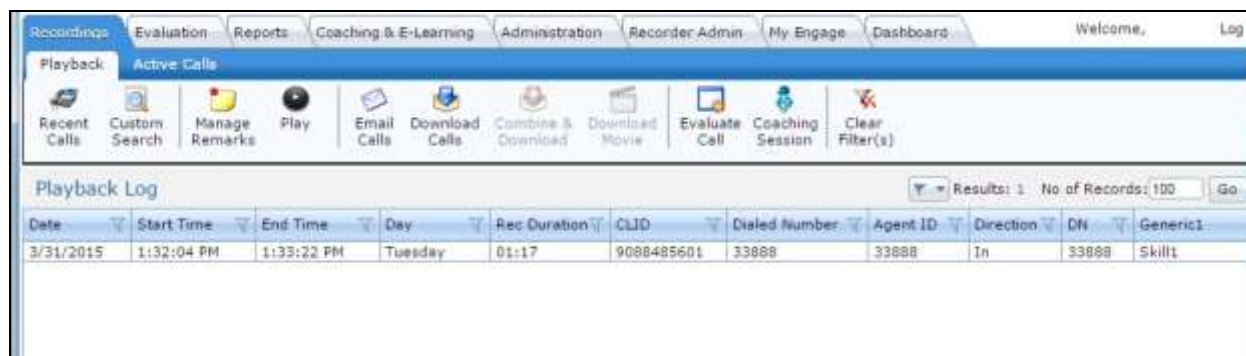
Log an agent in to handle and complete a contact center voice call. Access the Engage web-based interface by using the URL “http://ip-address/engage” in an Internet browser window, where “ip-address” is the IP address of the Engage server.

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



The screenshot displays the Logon Dialog interface for TELSTRAT. The dialog box is centered on a light gray background. It features a blue header bar with the text "Logon Dialog". Below the header, there are two input fields: "User ID" and "Password". A checkbox labeled "Windows Integrated Logon" is positioned below the password field. At the bottom of the dialog, there are two buttons: "OK" and "Clear". In the top right corner of the overall window, the TELSTRAT logo is visible. In the bottom right corner, there is a language selection dropdown menu currently set to "English".

The screen is updated with a list of call recordings. Verify that there is an entry reflecting the last call, with proper values in the relevant fields.



Double click on the entry and verify that the call recording can be played back.



9. Conclusion

These Application Notes describe the configuration steps required for TelStrat Engage 4.2.1 to successfully interoperate with Avaya Contact Center Select 6.4 and Avaya IP Office 9.1. All feature and serviceability test cases were completed with observations noted in **Section 2.2**.

10. Additional References

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

1. *Administering Avaya Contact Center Select*, Release 6.4, Issue 01.02, December 2014, available at <http://support.avaya.com>.
2. *Administering Avaya IP Office™ Platform with Manager*, Release 9.1.0, Issue 10.03, February 2015, available at <http://support.avaya.com>.
3. *Application Notes for TelStrat Engage 4.2.1 with Avaya IP Office 9.1 Using VoIP Recording*, Issue 1.0, available at <http://support.avaya.com>.
4. *Server Installation Guide Engage Voice Recorder*, Product Release 4.2, Issue 1.5, available on the installation CD.
5. *Configuration Requirements for Avaya IP Office (PBX only)*, Release 4.2, Issue 1.2, available on the installation CD.
6. *Configuration Requirements for Avaya IP Office - ACCS*, Release 4.2, Issue 1.2, available on the installation CD.

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