Avaya Solution & Interoperability Test Lab

Application Notes for TelStrat Engage 4.2.1 with Avaya IP Office 9.1 Using Trunk Tap – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for TelStrat Engage 4.2.1 to interoperate with Avaya IP Office 9.1 using trunk tap. TelStrat Engage is a call recording solution.

In the compliance testing, TelStrat Engage used the TAPI interface from Avaya IP Office to monitor hunt group users on Avaya IP Office, and the trunk tap method to capture media associated with the monitored users 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 IP Office 9.1 using VoIP recording. TelStrat Engage is a call recording solution.

In the compliance testing, TelStrat Engage used TAPI 2 in third party mode from Avaya IP Office to monitor hunt group users on Avaya IP Office. The trunk tap method was used to capture media from the PSTN PRI trunk that were associated with the monitored users for call recordings.

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 TAPI connectivity to IP Office for monitoring of extensions that can be used by the monitored users.

For the manual part of the testing, each call was handled manually on the user with generation of unique audio content for the recordings. Necessary user actions such as hold and reconnect were performed from the user telephones 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 TAPI events.
- Proper recording, logging, and playback of calls for scenarios involving inbound, outbound, internal, external, hunt group, personal, hot desking, non-hot desking, hold/reconnect, transfer, conference, multiple calls, multiple users, long duration, G.711, G.729, call park, forwarding, music on hold, and mute/unmute.

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 conference scenarios, two recording entries were produced for the conference-from user. One of the recording entries contained zero length audio, and the other contained conversations involving the conference-from user.
- In the unattended conference scenarios, the joint conversation involving both users with the PSTN was only captured for the conference-from user.
- In the attended conference scenarios, the conversation involving both users with the PSTN was only captured for the conference-to user.

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 RTP streams for monitored users were captured using a PRI splitter that replicated all conversations with the PSTN to the Ai_logix SmartTAP card on Engage.

The detailed administration of IP Office resources 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 IP Office resources used in the compliance testing is shown in the table below. In the testing, Engage monitored all activities from three extensions that can be used by two users. User 20031 did not use hot desking, whereas user 20032 used hot desking and can login from either extension 20051 or 20052.

Resources	Values
Hunt Groups	29000, 29001
Supervisor	20035
Extensions	20031, 20051, 20052
Users	20031, 20032

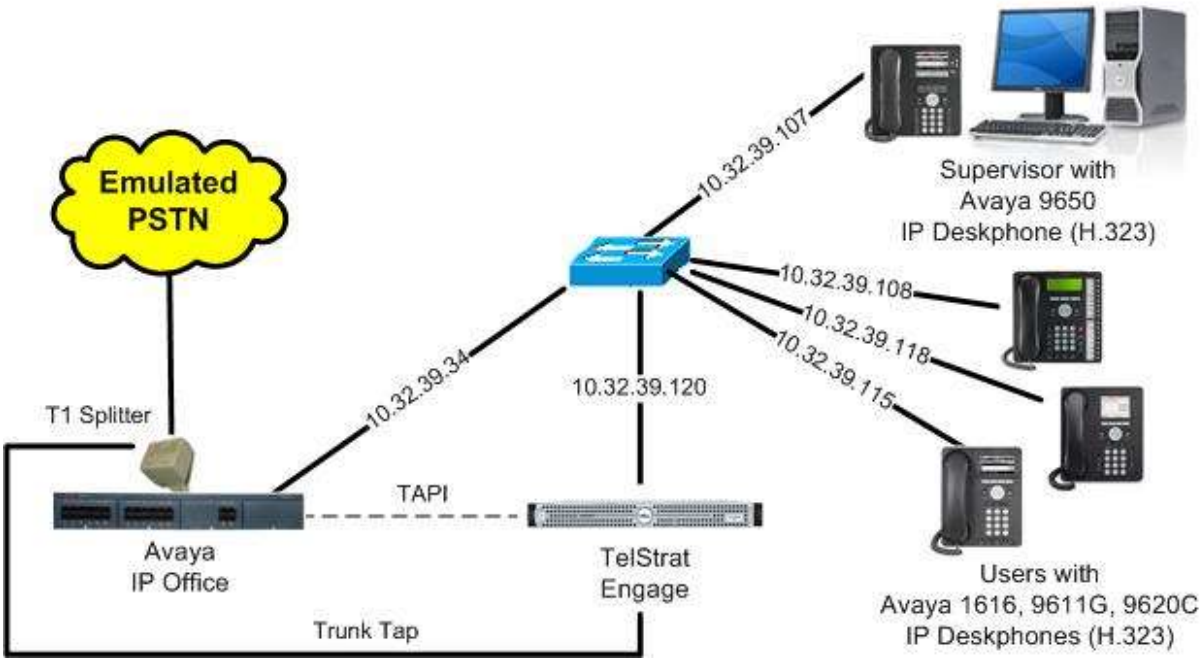


Figure 1: Compliance Testing Configuration

4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya 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 9620C IP Deskphone (H.323)	3.230A
Avaya 9650 IP Deskphone (H.323)	3.230A
TelStrat Engage on Windows Server 2008 • Ai-Logix SmartTAP DP3209 PCI • IPOEngine • IPOEngineController • Avaya TAPI (tspi2w.tsp)	4.2.1 R2 Standard SP 1 5.9.0.1038 4.2.1.22 4.2.1.22 1.0.0.41

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

5. Configure Avaya IP Office

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

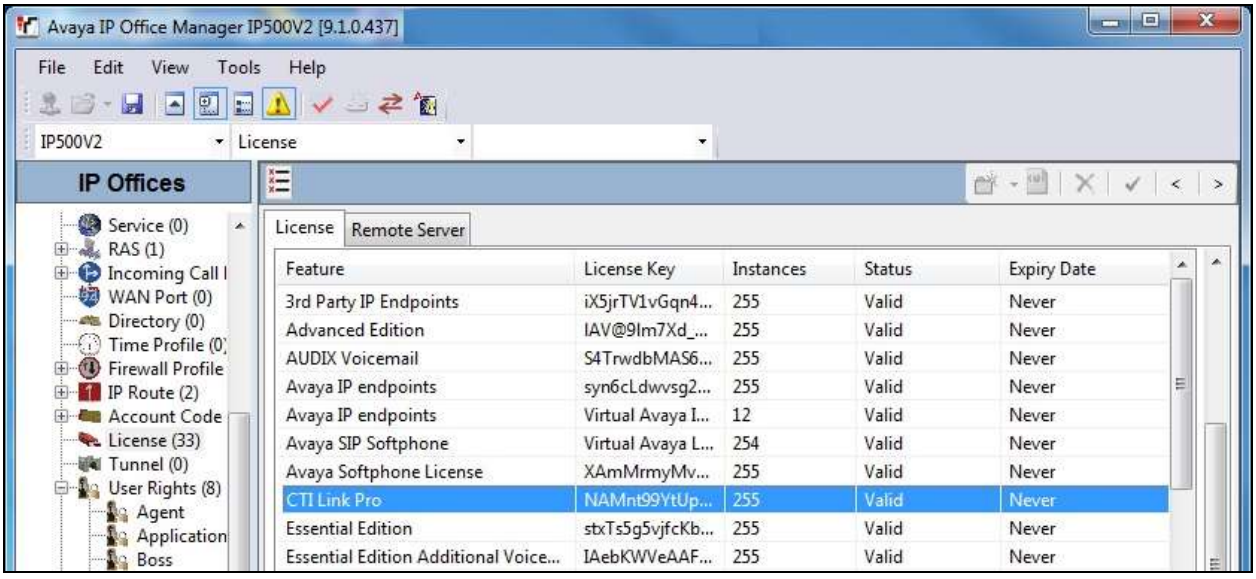
- Verify license
- Obtain PRI line settings

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.

5.1. 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.

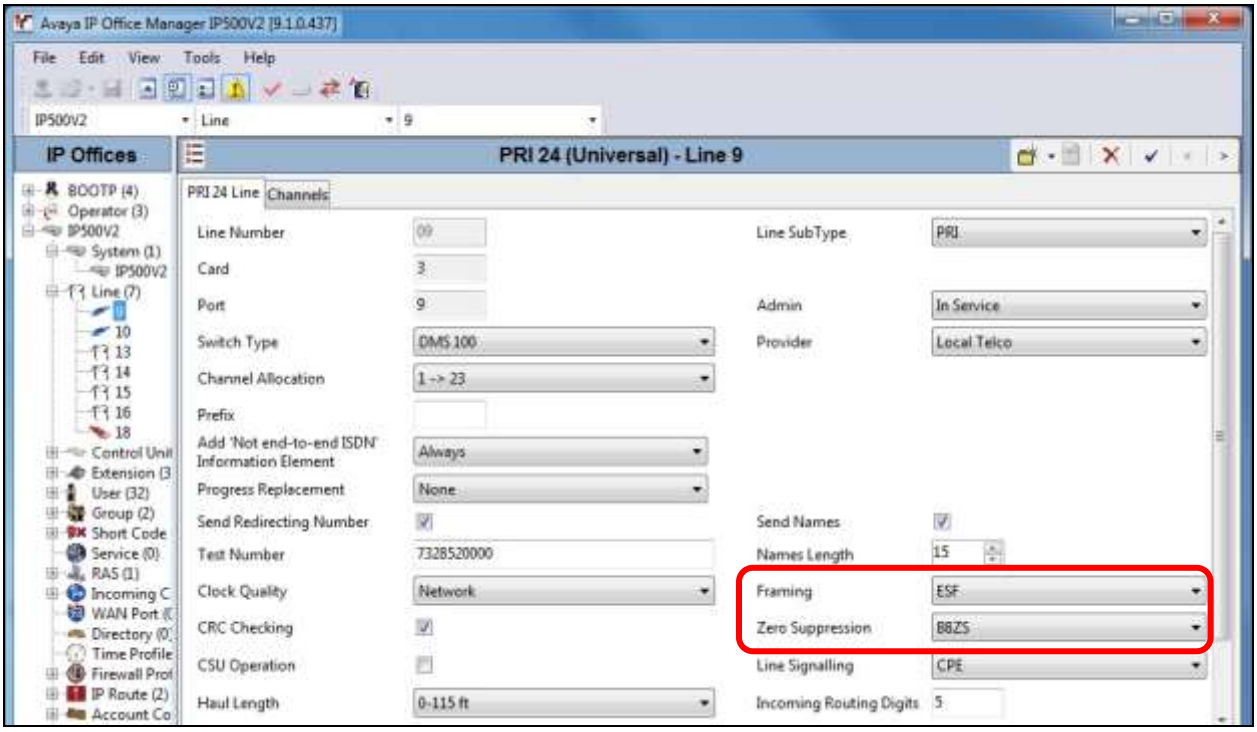
The **Avaya IP Office Manager** screen is displayed. From the configuration tree in the left pane, select **License** to display a list of licenses in the right pane. Verify that there is a license for **CTI Link Pro** and that the **Status** is "Valid", as shown below.



5.2. Obtain PRI Line Settings

From the configuration tree in the left pane, select **Line**, followed by the PRI line number used for connectivity to the PSTN, in this case "9".

In the right pane, make a note of the **Framing** and **Zero Suppression** settings, which will be used later to configure Engage.



6. Configure TelStrat Engage

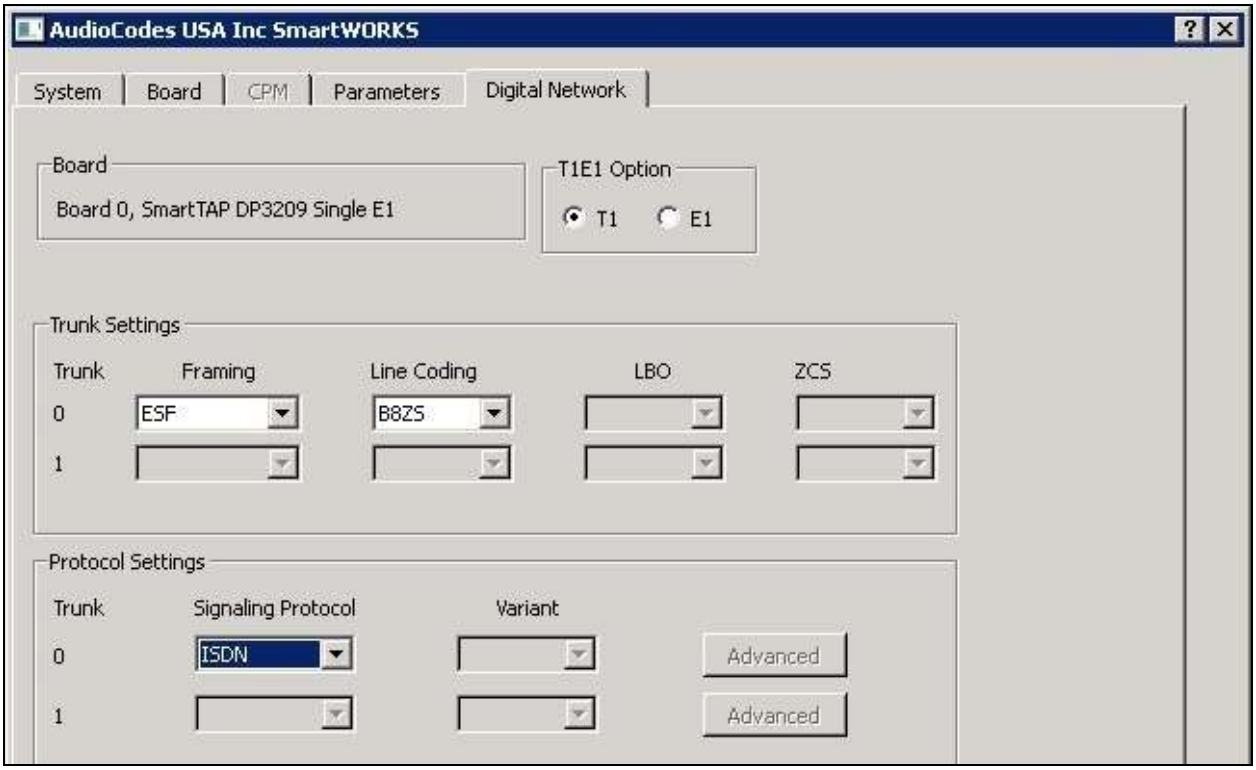
This section provides the procedures for configuring Engage. The procedures include the following areas:

- Administer SmartTAP
- Administer TAPI driver
- Launch IPO controller
- Administer channel mapping
- Administer IPO devices
- Restart service

6.1. Administer SmartTAP

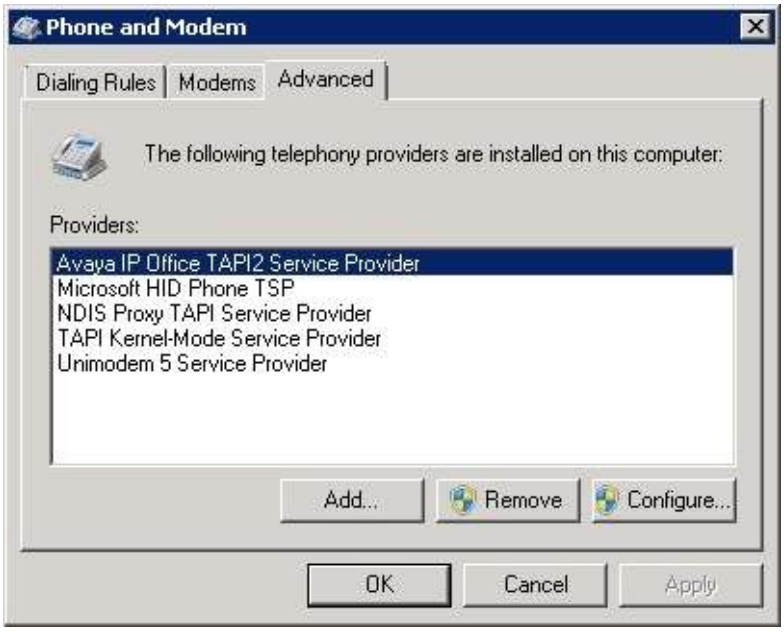
From the Engage server, select **Start → Control Panel**, and click on the **SmartControl** icon (not shown below). The **AudioCodes USA Inc SmartWORKS** screen is displayed. Enter the following values for the specified fields.

- **T1E1 Option:** The relevant setting for the PRI line, in this case **T1**.
- **Framing:** The PRI line framing setting from **Section 5.2**.
- **Line Coding:** The PRI line zero suppression setting from **Section 5.2**.
- **Signaling Protocol:** "ISDN"

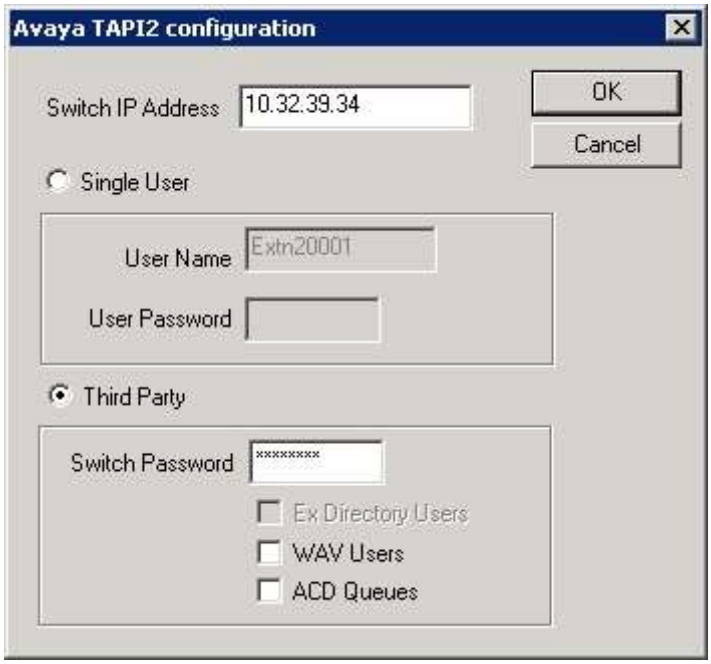


6.2. Administer TAPI Driver

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**.

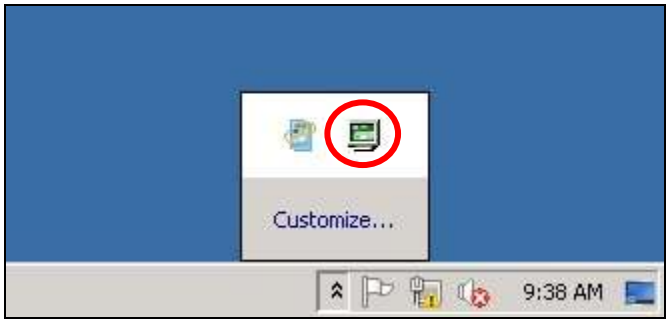


The **Avaya TAPI2 configuration** screen is displayed. For **Switch IP Address**, enter the IP address of IP Office. Select the radio button for **Third Party**, and enter the appropriate IP Office credential into the **Switch Password** field. Reboot the Engage server.



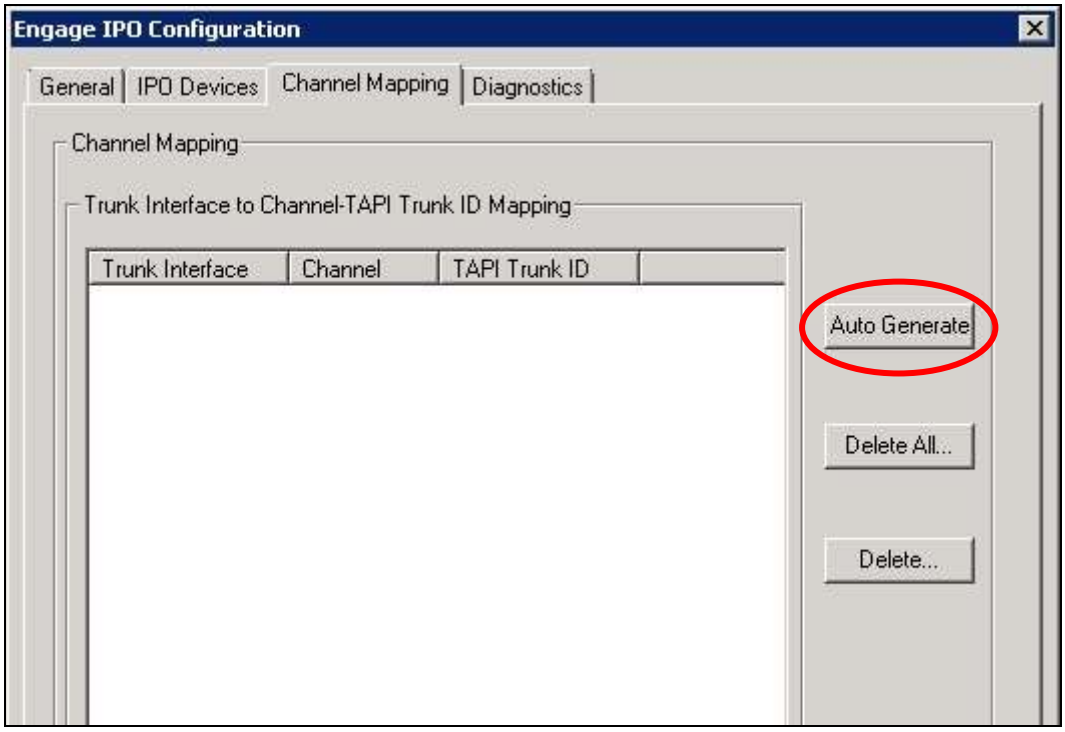
6.3. Launch IPO Controller

From the Engage server, select **Start → All Programs → TelStrat Engage → Avaya IPOffice** to start the Engage IPO Controller. Right click on the **Engage IPO Controller** icon from the system tray shown below, and select **Configuration** (not shown).



6.4. Administer Channel Mapping

The **Engage IPO Configuration** screen is displayed. Select the **Channel Mapping** tab, followed by **Auto Generate**.

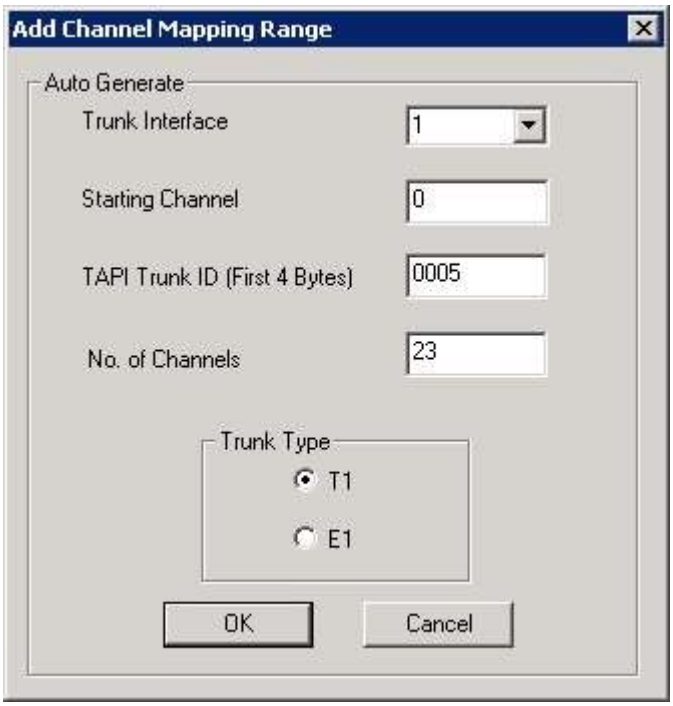


The **Add Channel Mapping Range** screen is displayed. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **Trunk Interface:** The relevant trunk interface, in this case "1".
- **Starting Channel:** "0"
- **TAPI Trunk ID:** The value corresponding to the physical PRI trunk on IP Office.
- **No. of Channels:** The number of voice channels, in this case "23".
- **Trunk Type:** The applicable trunk type, in this case "T1".

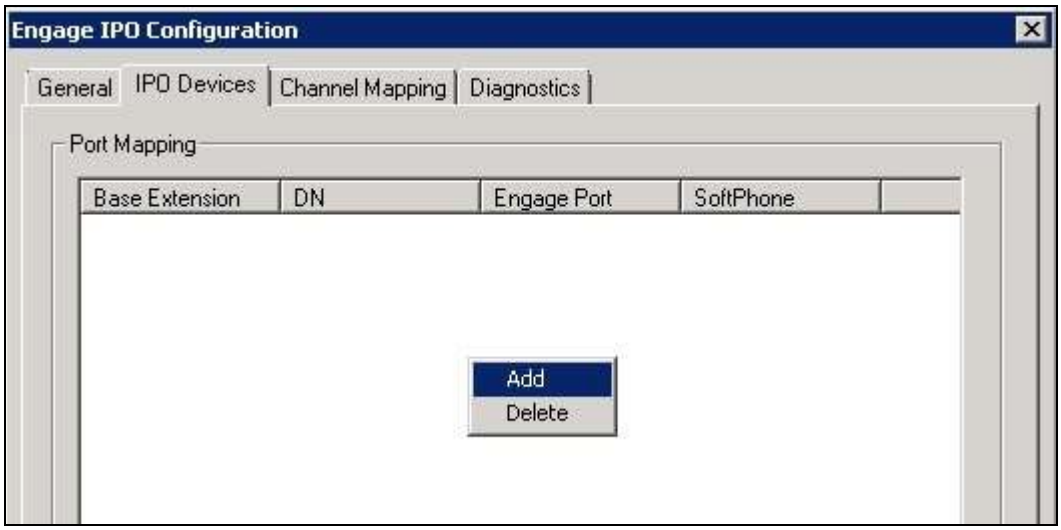
Note that the parameter values may vary, depending on the network configuration. Below is a screenshot of the settings used in the compliance test.

Also note that TelStrat can assist in determining the value to use for **TAPI Trunk ID**.



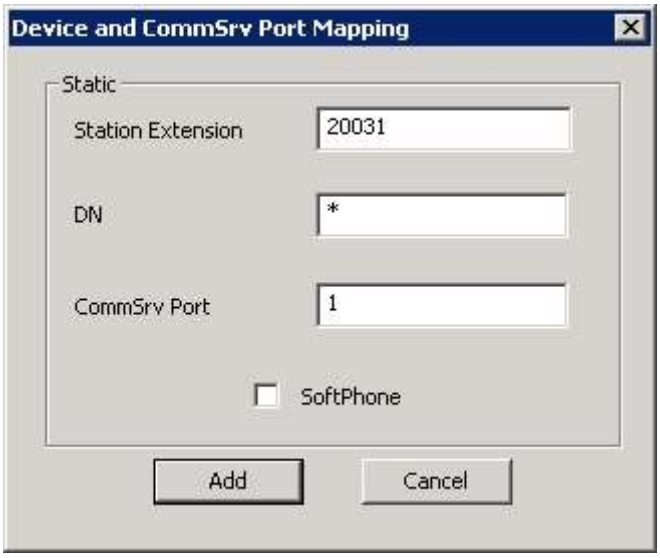
6.5. Administer IPO Devices

The **Engage IPO Configuration** screen is displayed again. Select the **IPO Devices** tab. Right click in the empty screen and select **ADD**.



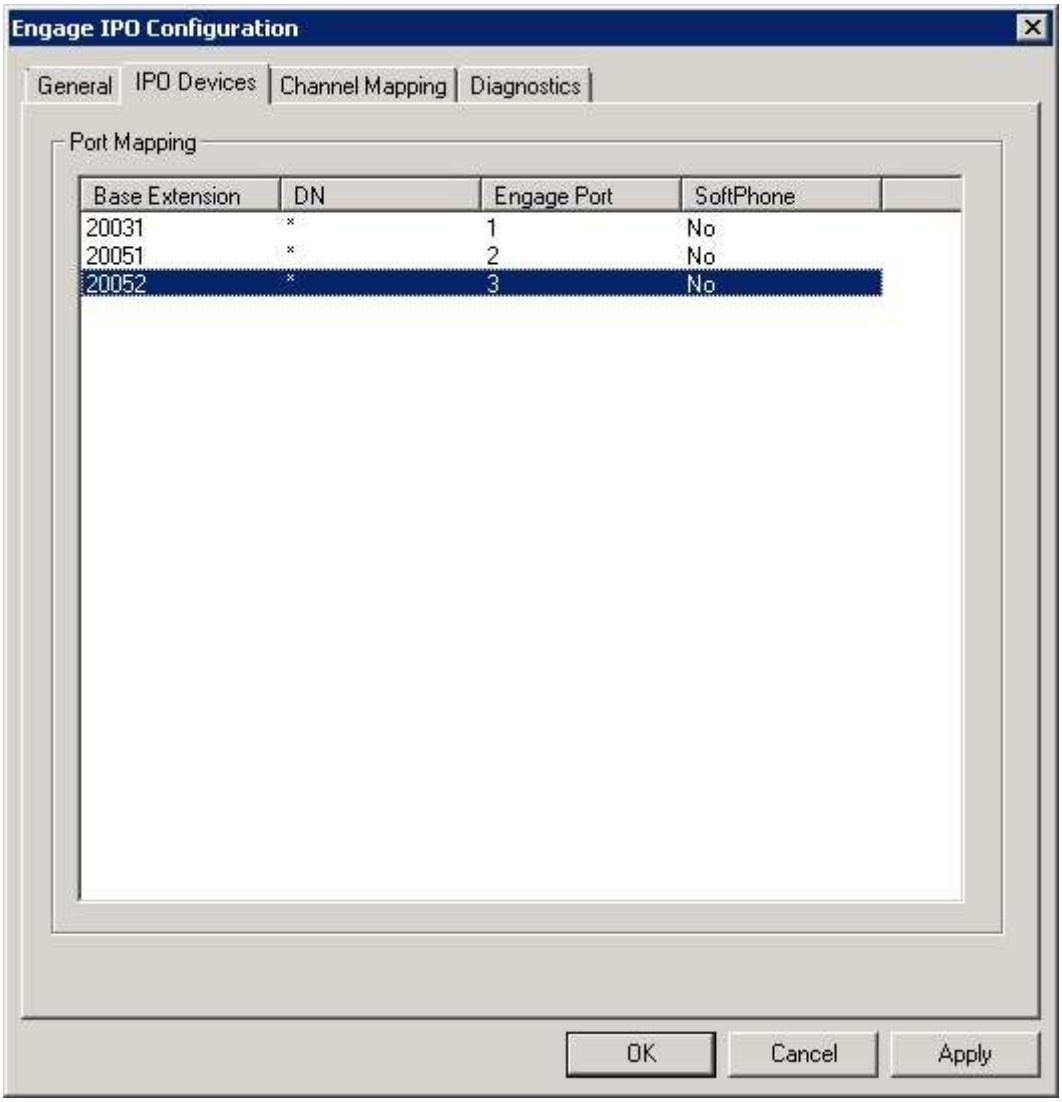
The **Device and CommSrv Port Mapping** screen is displayed. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **Station Extension:** The first extension from **Section 3**.
- **DN:** "*" as wild card to allow use of device by any user.
- **CommSrv Port:** An available port.



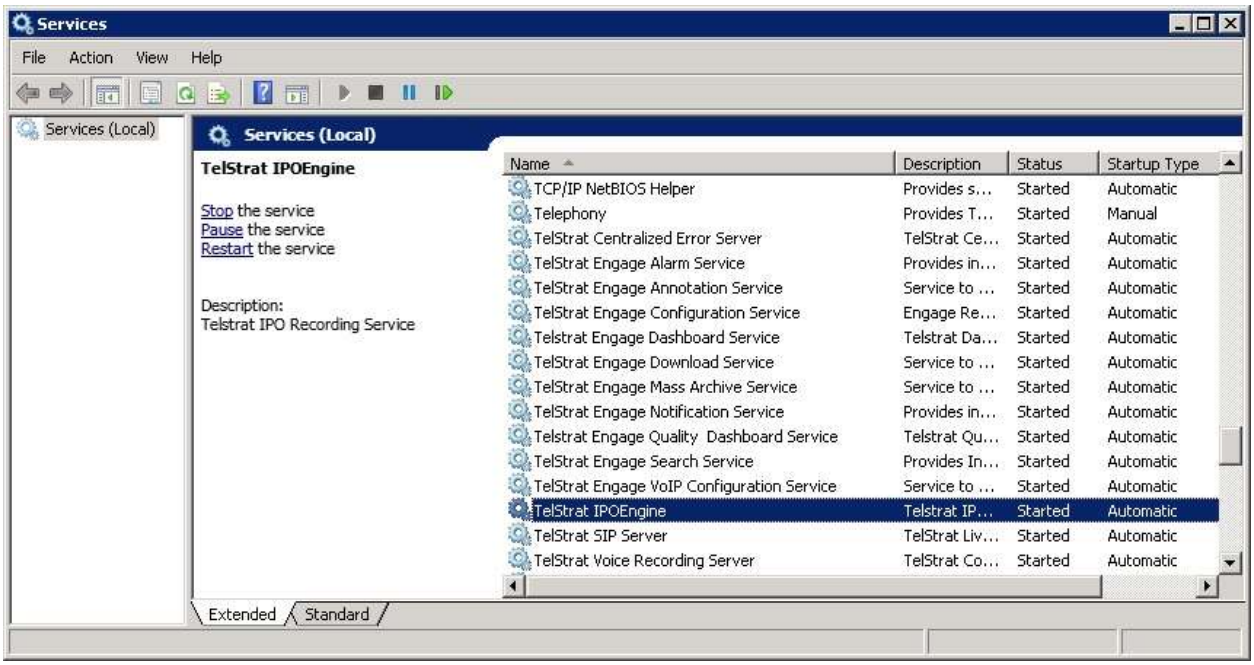
Repeat this section to create a port mapping for each extension from **Section 3**.

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



6.6. Restart Service

Select **Start → Control Panel → Administrative Tools → Services** to display the **Services** screen. Restart the **TelStrat IPOEngine** service, as shown below.

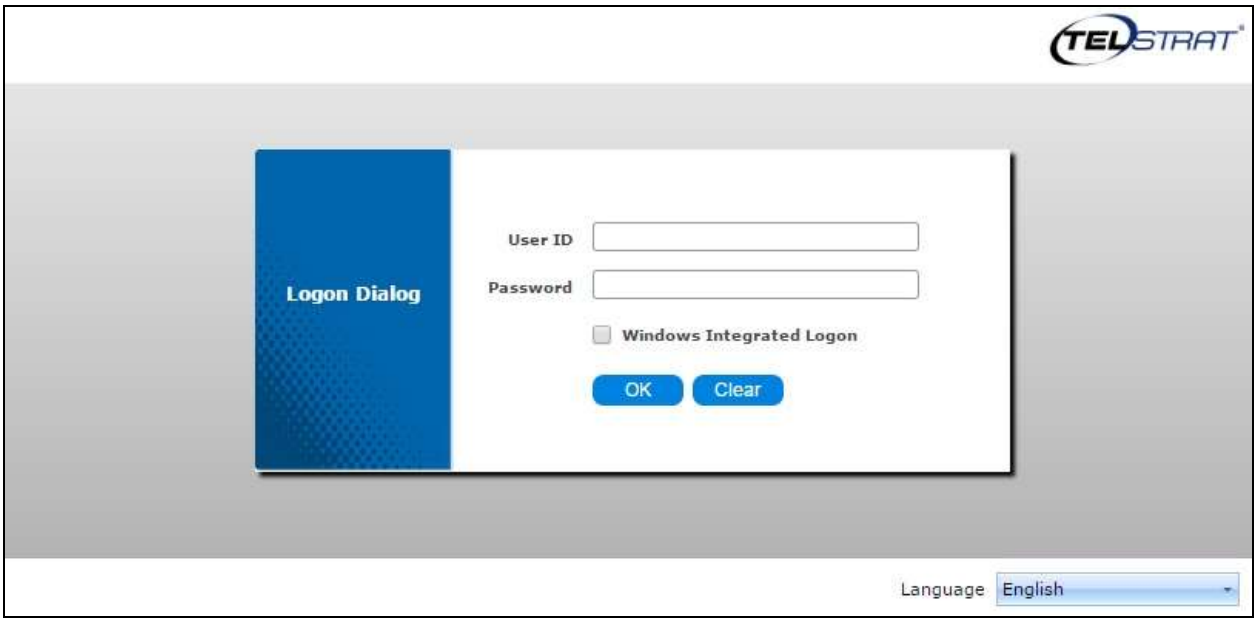


7. Verification Steps

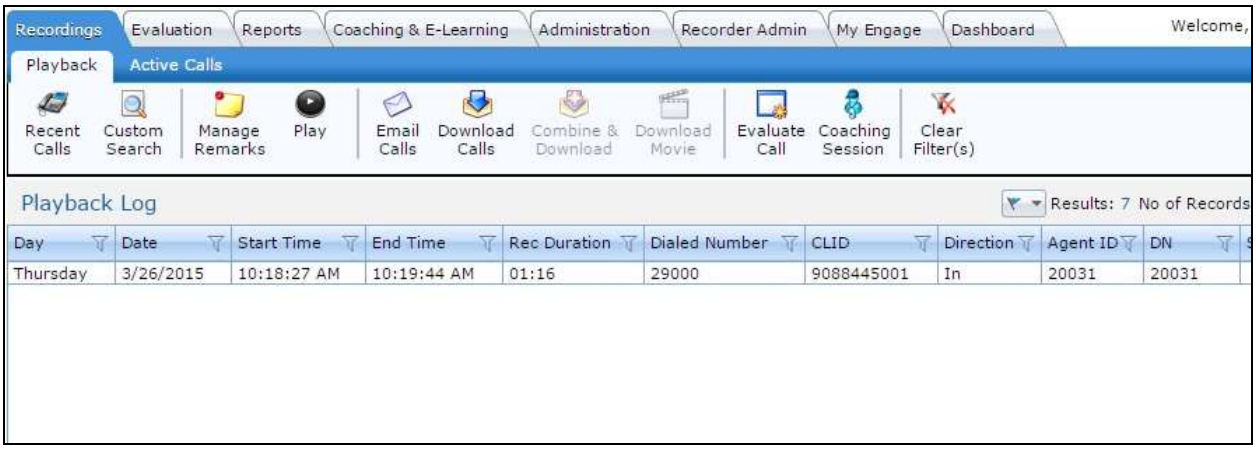
This section provides the tests that can be performed to verify proper configuration of IP Office and Engage.

Log a user in to handle and complete a hunt group 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.

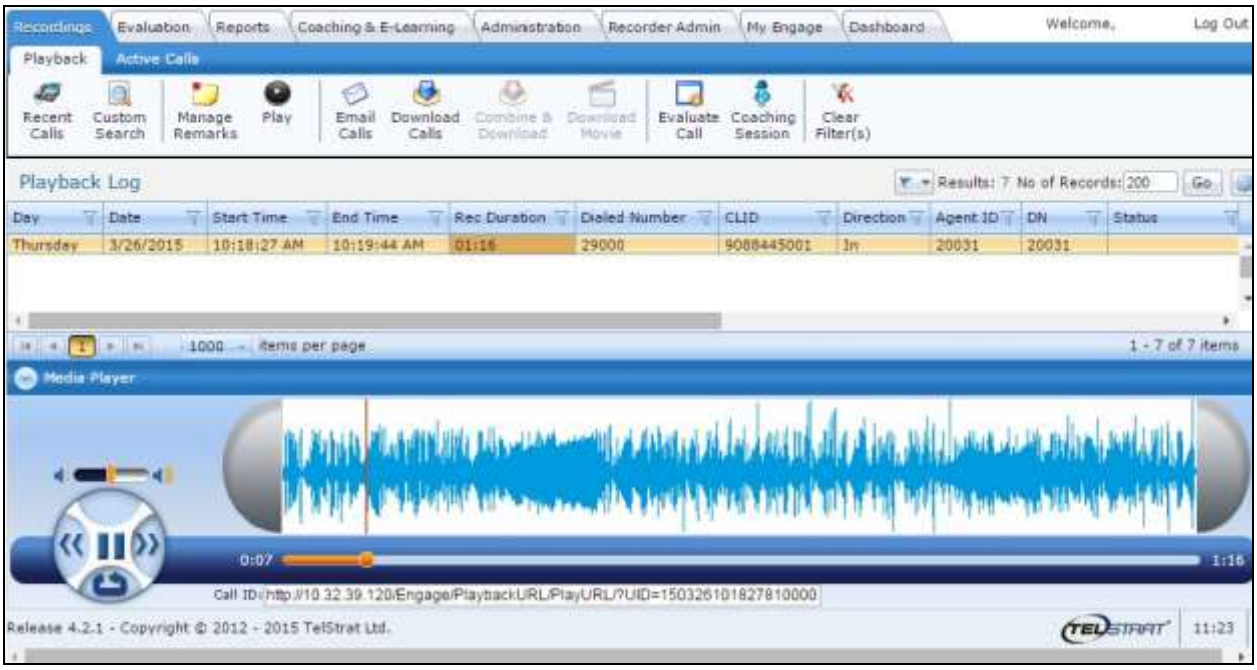
The **Logon Dialog** screen below is displayed. Log in using the appropriate credentials.



The 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.



8. Conclusion

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

9. Additional References

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

1. *Administering Avaya IP Office™ Platform with Manager*, Release 9.1.0, Issue 10.03, February 2015, available at http://support.avaya.com.

2. *Server Installation Guide Engage Voice Recorder*, Product Release 4.2, Issue 1.5, available on the installation CD.

3. *Configuration Requirements for Avaya IP Office (PBX only)*, Release 4.2, Issue 1.2, available on the installation CD.

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