AVAYA

Avaya Solution & Interoperability Test Lab

Application Notes for Configuring LightNet Complex IPO InPhoneMachine with Avaya IP Office - Issue 1.0

Abstract

These Application Notes describe the procedures for configuring LightNet Complex IPO InPhoneMachine to use Avaya IP Office to place notification calls to both internal and external users. IPO InPhoneMachine is an application designed for the automated delivery of voice messages to a group of users in a minimal period of time without the need for a human operator.

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.

JC; Reviewed:
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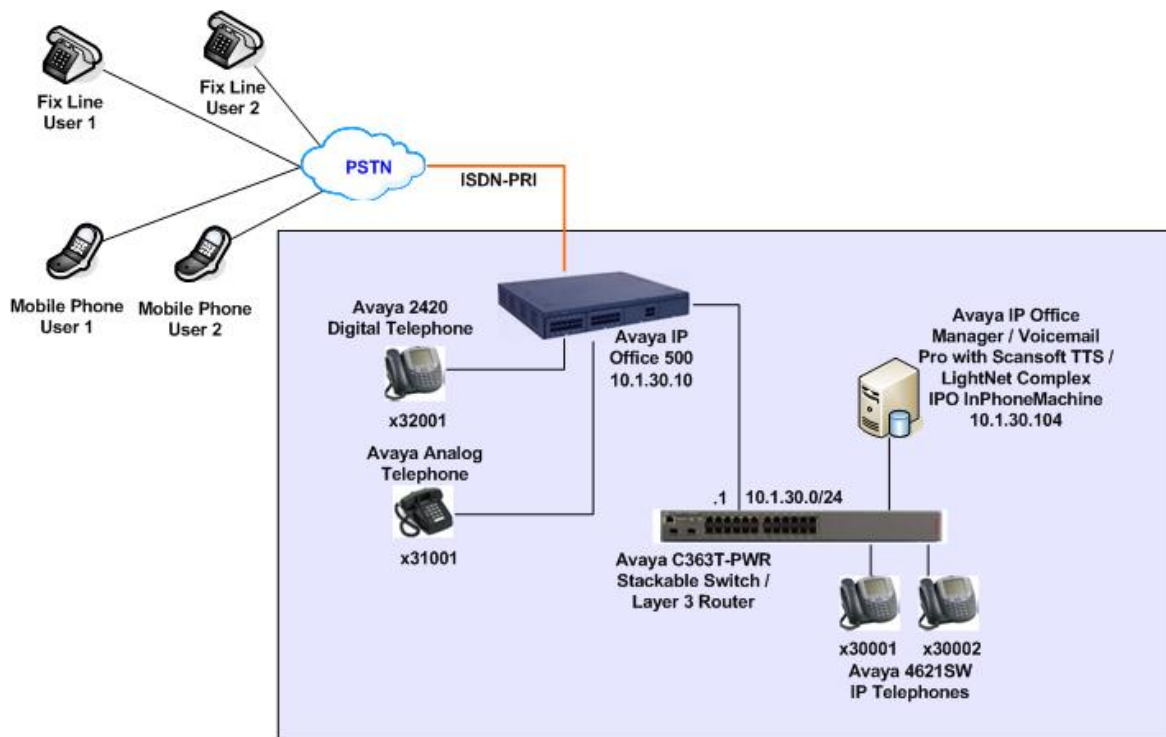©2008 Avaya Inc. All Rights Reserved.

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1. Introduction

LightNet Complex IPO InPhoneMachine is an application designed for the automated delivery of voice messages to a group of users in a minimal period of time without the need for a human operator.

IPO InPhoneMachine may be applicable in:

- Banks for notification of date of payment or backlogs
- Insurance companies for notification of insurance policy expiration
- Schools for notification of parents and school children
- Hospitals for notification of patients about schedules for inspection or consultation
- Any organization for notification of a users group about an urgent meeting or emergency alert

Figure 1 illustrates the network configuration used to verify IPO InPhoneMachine with Avaya IP Office. The configuration consists of an Avaya IP Office 500 with an Avaya 2420 digital telephone, an Avaya 2500 analog telephone, Avaya 4621SW IP telephones, and a Windows 2000 server running Avaya IP Office Manager, Voicemail Pro, and LightNet Complex IPO InPhoneMachine. Avaya IP Office 500 has ISDN-PRI trunks to the PSTN. Two Fixed Line users and two Mobile Phone users were used for testing. The Avaya C363T-PWR Converged Stackable Switch provides Ethernet connectivity to the servers and IP telephones.

Figure 1: Network Configuration

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2. Equipment and Software Validated

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

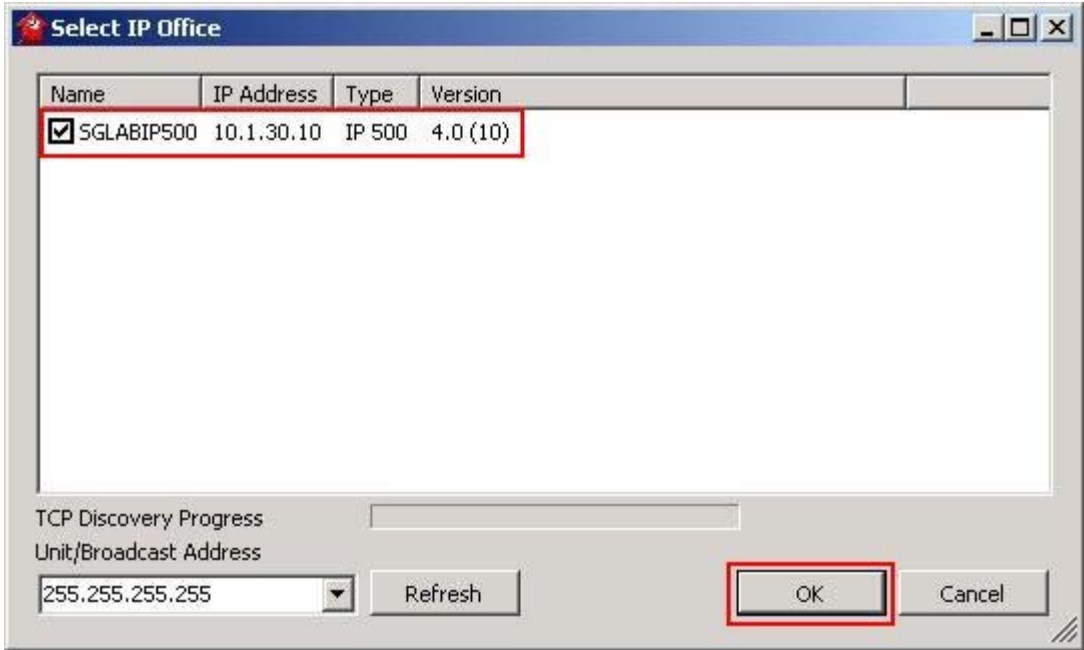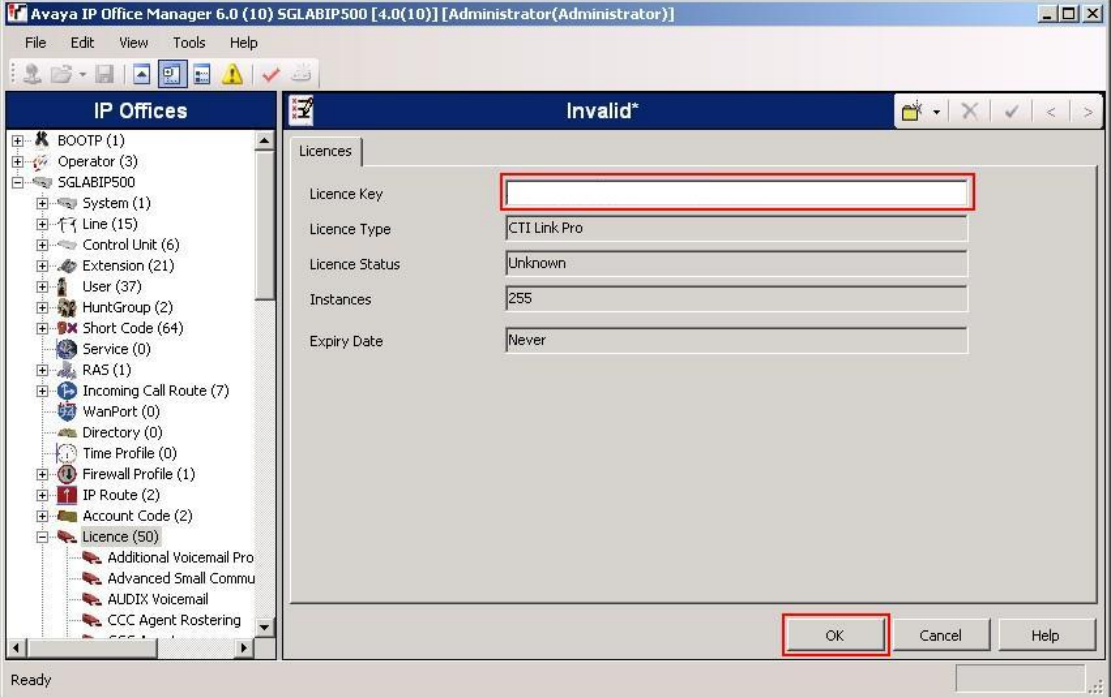| Equipment	Software
Avaya IP Office 500	4.0 (10)
Avaya 2420 Digital Telephone	5.0
Avaya 2500 Analog Telephone	-
Avaya 4621SW IP Telephones	2.8.3 (H.323)
Avaya IP Office Manager	6.0 (10)
Avaya IP Office Voicemail Pro	4.0 (18)
Avaya IP Office TAPI Driver	1.0.0.17
Avaya IP Office Wave Driver	2.0.0.0
Avaya C363T-PWR Converged Stackable Switch	4.5.18
LightNet Complex IPO InPhoneMachine running on Dell PowerEdge 850 server	1.2.0 Windows Server 2000, Service Pack 4

3. Configure Avaya IP Office

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

- Licensing Avaya IP Office
- Configuring TAPI Wave ports
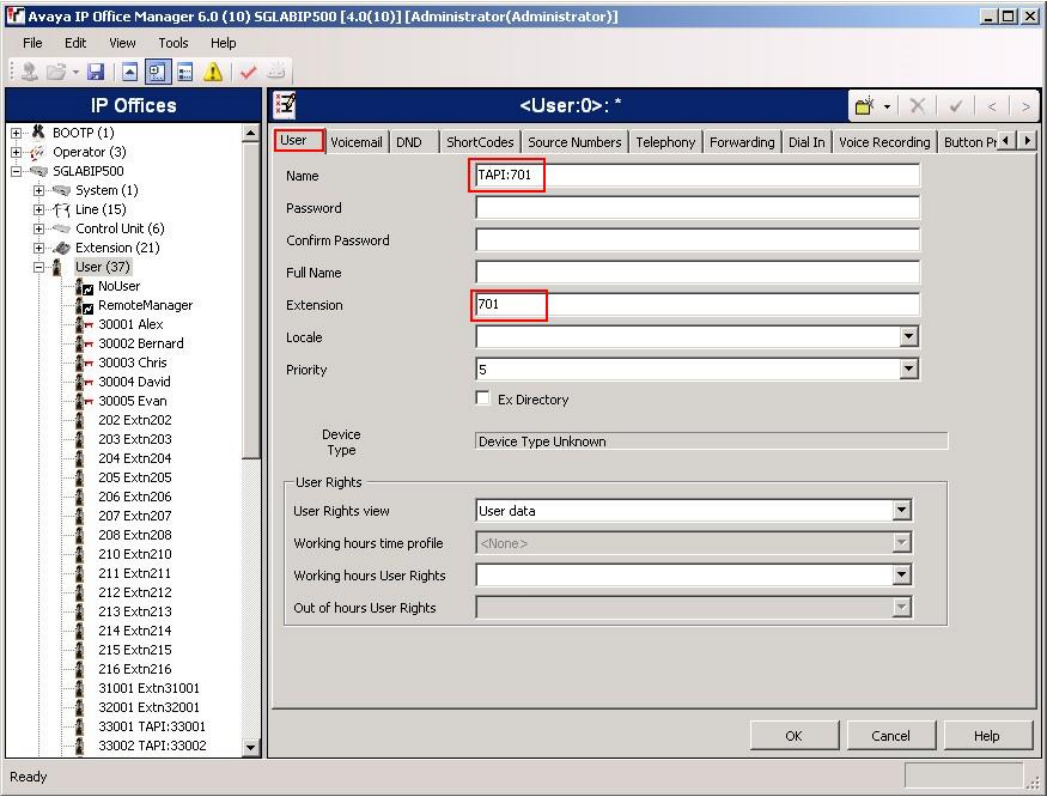- Saving the Avaya IP Office configuration

It is expected that the installer is familiar with configuring users, hunt groups, short codes, etc. on Avaya IP Office as the focus of these Application Notes is on the configuration of the TAPI interface only. For all other provisioning information, such as software installation, installation of optional components, basic configuration of Avaya IP Office, etc., refer to the Avaya IP Office product documentation in reference [1] of **Section 10**.
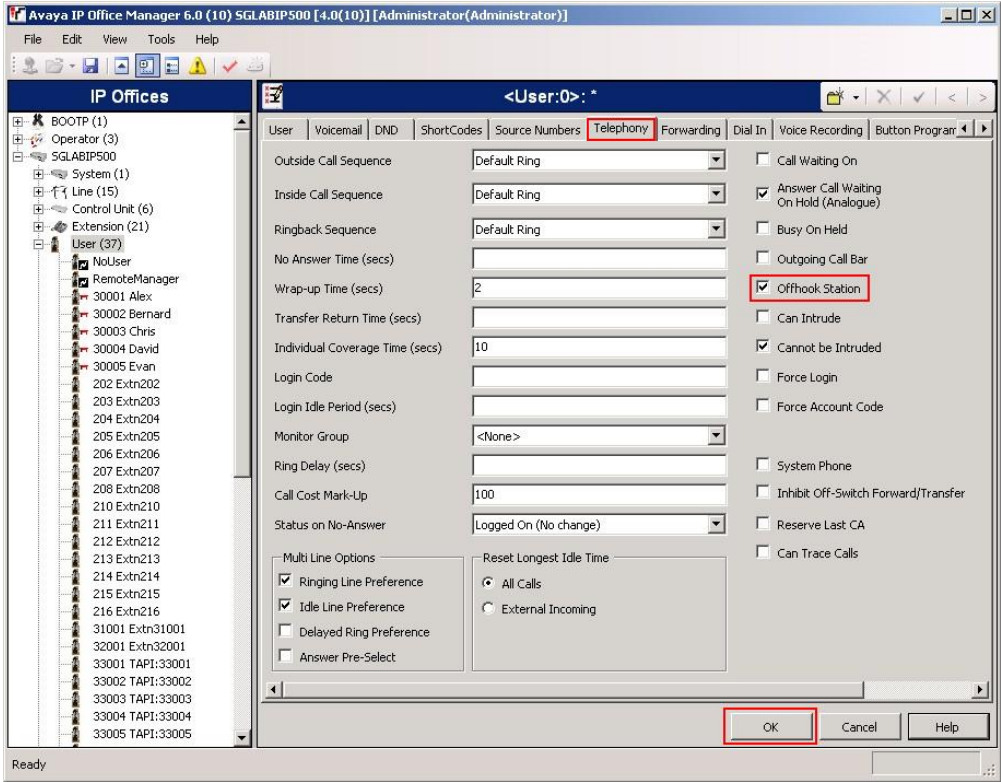
3.1. License Avaya IP Office

Step	Description
1.	Log into the IP Office Manager PC and go to **Start > Programs > IP Office > Manager** to launch the Avaya IP Office Manager application. Go to **File > Open Configuration** to bring up the **Select IP Office** dialog box. Select the IP Office system by checking the system name as seen below and click **OK**. Log into the Avaya IP Office Manager application by using the appropriate user name and password (not shown).

Step	Description
2.	Three Avaya IP Office licenses are required to interoperate with IPO InPhoneMachine: • **CTI Link Pro:** This license allows IPO InPhoneMachine to connect to Avaya IP office via TAPI. • **Wave User:** This license allows the creation of TAPI Wave ports, which enable IPO InPhoneMachine to play media streams to the notified parties. • **VMPro TTS (Scansoft):** This optional license allows IPO InPhoneMachine to use Scansoft Text-to-Speech (TTS) to announce a text string retrieved from the database to a notified party. To add a license, in the Avaya IP Office Manager window, go to the Configuration Tree, right-click **License** and select **New** from the drop-down menu (not shown). Enter the license code into the **License Key** field and click **OK**.

3.2. Configure TAPI Wave Ports

Step	Description
1.	TAPI Wave ports should be configured in consecutive ranges. To add a TAPI Wave port, in the Avaya IP Office Manager window, go to the Configuration Tree, right-click **User** and select **New** from the drop-down menu (not shown). Click the **User** tab on the right panel and configure the fields as follows: • **Name**: Enter "TAPI:x" where "x" is a valid and unused extension number to identify the TAPI Wave port. • **Extension**: Enter the same extension number "x" above. The remaining fields may be left at their default values.

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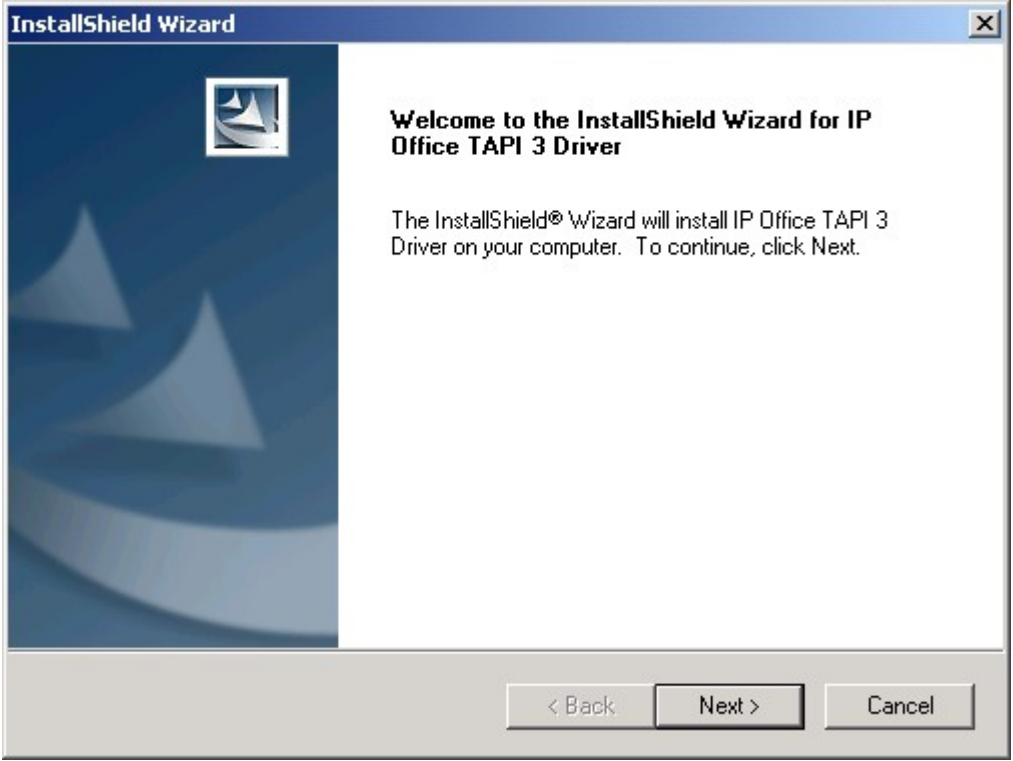| Step	Description
2.	Click the **Telephony** tab on the right panel and check the **Offhook Station** field. The remaining fields may be left at their default values. Click **OK**.
3.	Repeat **Steps 1** and **2** for each TAPI Wave port required. In this configuration, TAPI Wave port extensions 701 to 704 were created for the compliance testing.

3.3. Save the Avaya IP Office Configuration

In the Avaya IP Office Manager window select **File > Save Configuration**. The configuration is saved to Avaya IP Office at this point and will require a reboot of Avaya IP Office. This completes the configuration of Avaya IP Office.
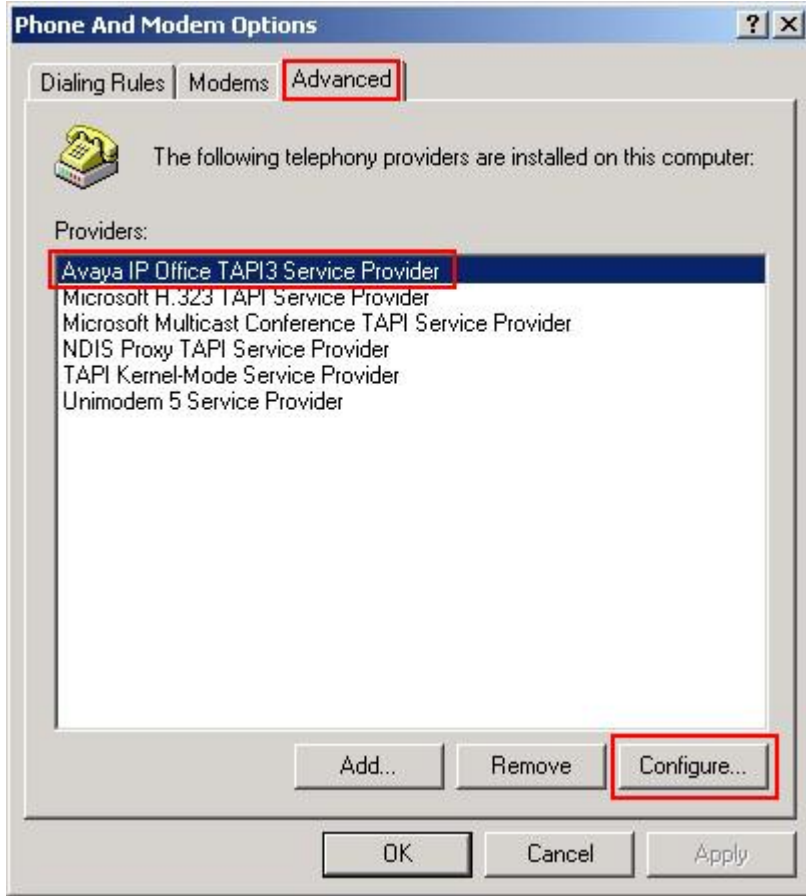
4. Configure Avaya TAPI Driver

This section provides the procedures for configuring the Avaya TAPI Driver on the LightNet Complex IPO InPhoneMachine server. The procedures include the following areas:
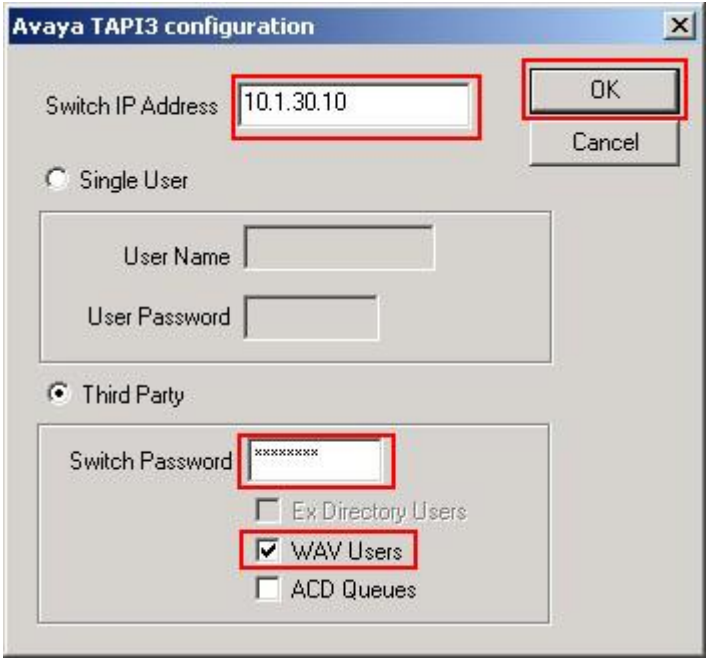
- Install Avaya TAPI driver
- Configure Avaya TAPI driver
- Install and Configure Avaya TAPI WAVE Driver

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4.1. Install Avaya TAPI Driver

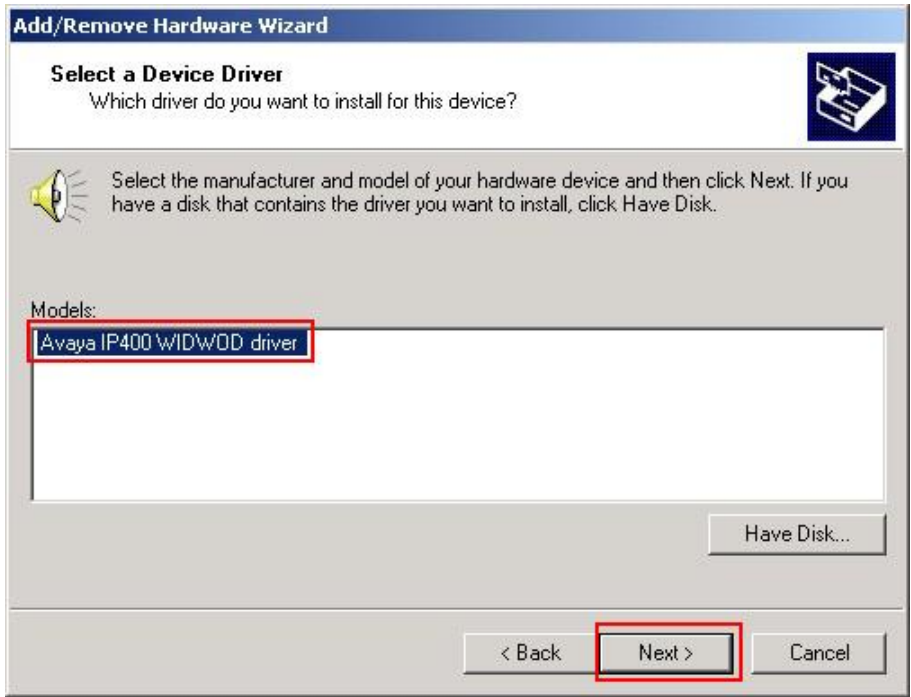| Step	Description
1.	Log into the IPO InPhoneMachine server with administrative privileges and insert the IPO InPhoneMachine CDROM. Browse to the **TAPI3** folder on the CDROM and double-click the file **TAPI3Install.exe** to start the Avaya IP Office TAPI3 driver installation. From the InstallShield Wizard Welcome window, click **Next** to continue.
2.	The TAPI Driver Installer window will be shown to show the result of the installation. Click **OK**. At the InstallShield Wizard Complete window (not shown), click **Finish**. **Note**: Do not reboot as mentioned in the popup until instructed to in **Section 4.2**.

4.2. Configure Avaya TAPI Driver

Step	Description
1.	Go to the Windows Control Panel and open the **Phone and Modem Options**. Click the **Advanced** tab and select **Avaya IP Office TAPI3 Service Provider** and click the **Configure…** button.

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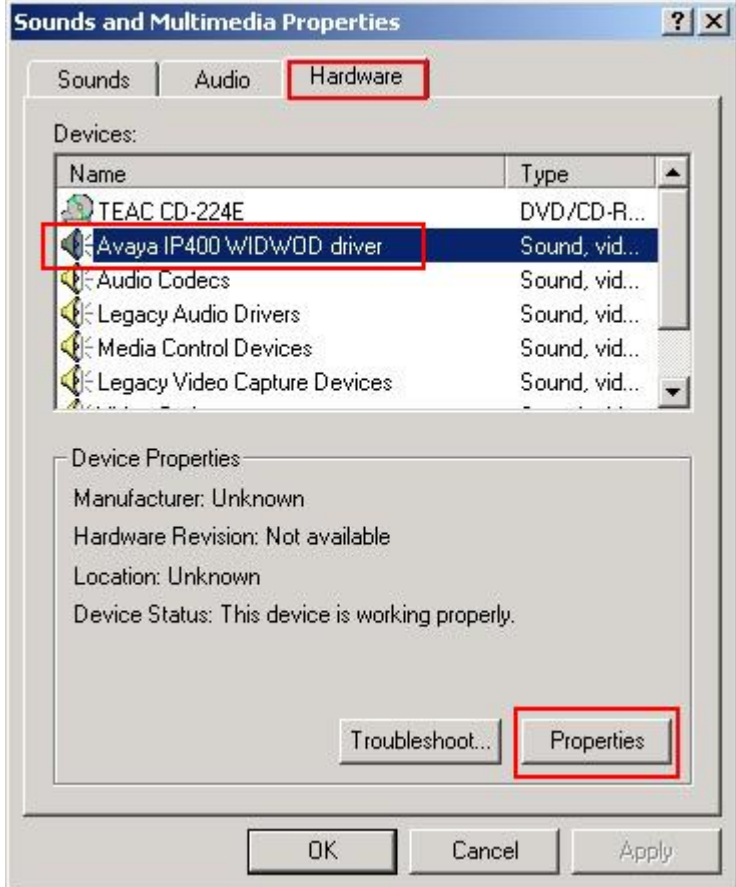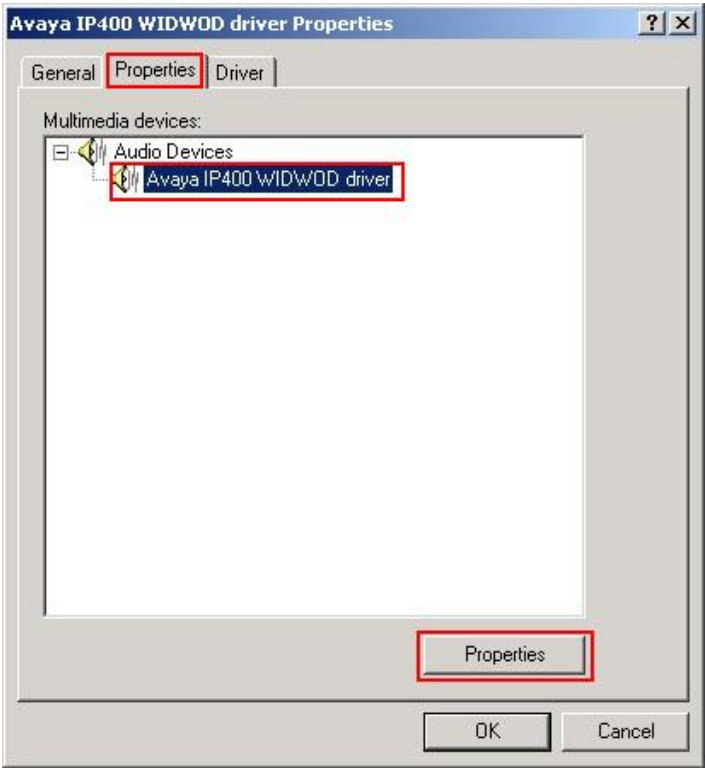| Step	Description
2.	In the Avaya TAPI3 configuration window that is displayed, set **Switch IP Address** to the IP Address of Avaya IP Office, select **Third Party**, set **Switch Password** to the IP Office System password, and check **WAV Users**. Click **OK**. Refer to Page 77 of [2] in **Section 10** to set the System password. In the Phone and Modem Options window, click **OK**. Reboot the PC for the new changes to take effect. This completes the configuration of the Avaya TAPI driver on the IPO InPhoneMachine server.

4.3. Install and Configure Avaya TAPI WAVE Driver

The steps provided in this section assume a copy of the Avaya TAPI WAVE driver has been placed in a folder on the IPO InPhoneMachine server. The TAPI WAVE Driver is not generally available and must be obtained from the DevConnect member.

Step	Description
1.	Log into the IPO InPhoneMachine server with administrative privileges and go to **Start > Control Panel** and double-click the **Add Hardware** icon in the Control Panel window that appears.
2.	In the Add Hardware Wizard window that appears, click **Next**.
3.	In the next Add Hardware Wizard window that appears, select **Yes, I have already connected the hardware**. Click **Next**.

Step	Description
4.	In the next Add Hardware Wizard window that appears, select **Add a new hardware device** for **Installed hardware**. Click **Next**.
5.	In the next Add Hardware Wizard window that appears, select **Install the hardware that I manually select from a list (Advanced)**. Click **Next**.
6.	In the next Add Hardware Wizard window that appears, select **Sound, video and game controllers**. Click **Next**.
7.	In the next Add Hardware Wizard window that appears, select **Legacy Audio Drivers** in the **Model** panel and click the **Have Disk…** button.
8.	In the Install From Disk window that appears, click the **Browse…** button.
9.	In the Locate File popup that appears, navigate to the location where the Avaya IP Office TAPI WAVE driver has been placed and select the **oemsetup.inf** file. Click **Open**.
10.	In the Install From Disk window, click **OK**.
11.	In the Software Installation window that appears, click **Continue Anyway**.
12.	In the next Add Hardware Wizard window that appears, **Avaya IP400 WIDWOD driver** should be listed as the device driver to be installed. Click **Next**.

Step	Description
13.	In the next Add Hardware Wizard window that appears, click **Next**.
14.	In the Hardware Installation popup that appears, click **Continue Anyway**.
15.	In the next Add Hardware Wizard window that appears, click **Finish**.
16.	In the System Settings Change window that appears, click **Yes** to reboot the computer.
17.	Following the system reboot, log into the IPO InPhoneMachine server with administrative privileges. Go to **Start > Control Panel** and double-click the **Sounds and Audio Devices** icon in the Control Panel window that appears.
18.	In the Sounds and Audio Devices Properties window that appears, click the **Hardware** tab. Select **Avaya IP400 WIDWOD driver** from the Devices list and click **Properties**.

Step	Description
19.	In the Avaya IP400 WIDWOD driver Properties window that appears, click the **Properties** tab. Select **Avaya IP400 WIDWOD driver** and click the **Properties…** button.

Step	Description
20.	In the Avaya IP400 WIDWOD driver Properties window that appears, check **Do not map through this device**. Click **OK**. ![Avaya IP400 WIDWOD driver Properties window showing General tab with "Do not map through this device" checked and OK button highlighted]
21.	Reboot the IPO InPhoneMachine for the changes to take effect. This completes the installation and configuration of the Avaya TAPI Wave Driver.

5. Configure LightNet Complex IPO InPhoneMachine

This section provides the procedures for configuring LightNet Complex IPO InPhoneMachine. The procedures include the following areas:

- Licensing the product
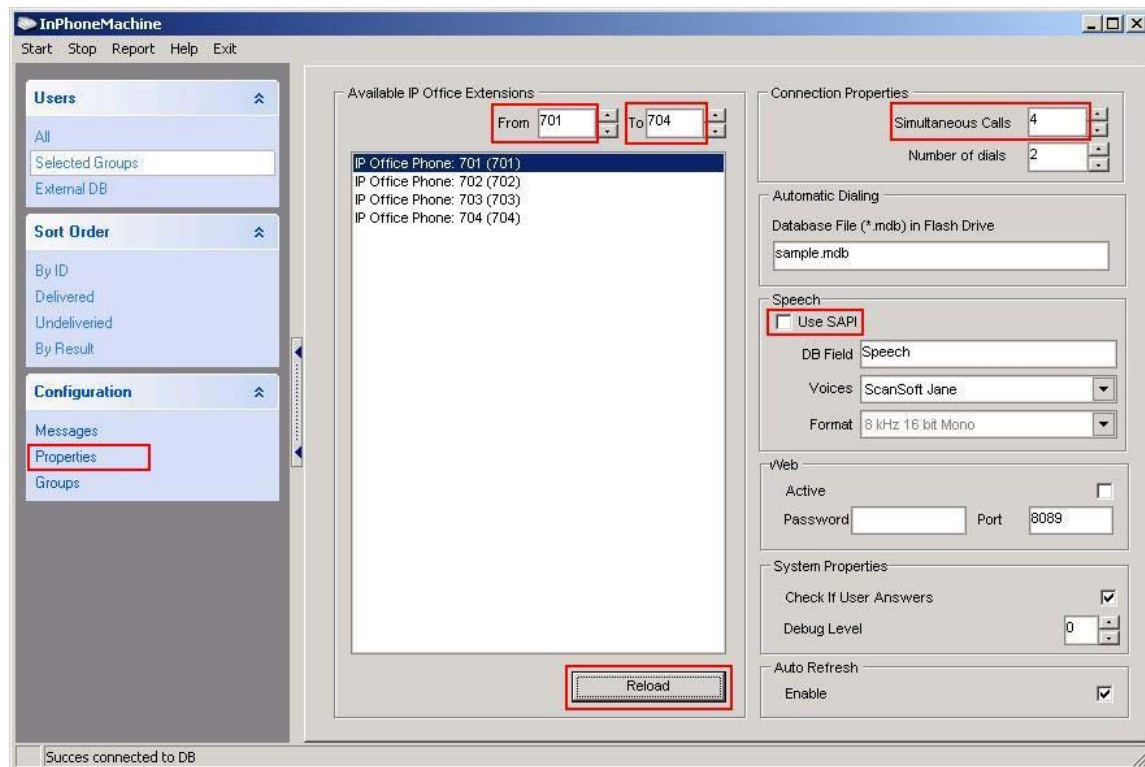- Configure TAPI Wave Ports

5.1. Licensing the Product

Log into the IPO InPhoneMachine server with administrative privileges and go to **Start > Programs > InPhoneMachine > InPhoneMachine** to launch the IPO InPhoneMachine application. The About the Program window, including an activation code, will be displayed. IPO InPhoneMachine requires a valid license key to start the application. Send the activation code to LightNet Complex, which is required for the generation of the license key. Input the license key and click **OK**.

5.2. Configure TAPI Wave Ports

From the InPhoneMachine window that appears, click **Properties** from the left panel. In the **Available IP Office Extensions** section, enter the starting TAPI WAVE Port extension in the **From** field and the ending extension in the **To** field. Use the TAPI WAVE Ports range defined in **Section 3.2**. Click **Reload** to list the available TAPI WAVE Ports to be used by IPO InPhoneMachine. Enter the number of calls that IPO InPhoneMachine should dial simultaneously in the **Simultaneous Calls** field. Optionally, check the **Use SAPI** field to enable IPO InPhoneMachine to use TTS to announce a text string retrieved from the database to the notified party. This completes the configuration necessary for LightNet Complex IPO InPhoneMachine to interoperate with Avaya IP Office.

6. Interoperability Compliance Testing

The interoperability compliance testing included both feature and serviceability testing.

The feature testing focused on verifying IPO InPhoneMachine's ability to place notification calls to internal IP telephones, digital and analog telephones users and external fixed line and mobile users.

The serviceability testing focused on verifying IPO InPhoneMachine's ability to recover from an outage condition, such as network disconnection and server resets.

6.1. General Test Approach

The feature functionality testing was performed manually. Groups of users to be notified were created and notification calls were placed to these users. Upon answering the calls, the recorded or TTS messages were played back and verified to be correct. Features such as the transferring of the user to an internal extension and the recording of voice messages from the users were also verified.

For serviceability testing, failures such as disconnecting the Ethernet connection to the IPO InPhoneMachine server and rebooting the IPO InPhoneMachine server were introduced.

6.2. Test Results

All test cases passed successfully. IPO InPhoneMachine successfully placed notification calls to the various types of users discussed in **Section 6**. For serviceability testing, IPO InPhoneMachine was able to resume operation after restoration of network connectivity to the IPO InPhoneMachine server, and after resets of the IPO InPhoneMachine server.

7. Verification Steps

The following steps may be used to verify the configuration.

- Verify the CTI Link Pro, Wave User and optionally the VMPro TTS (Scansoft) licenses are enabled on Avaya IP Office (see **Section 3.1**).
- Verify that the TAPI Wave Ports configured in **Section 3.2** are displayed in the InPhoneMachine window (see **Section 5.2**).
- Verify that the InPhoneMachine application can be used to initiate notification calls to both internal and external users.

8. Support

Technical support for IPO InPhoneMachine can be obtained by contacting LightNet Complex Support at +7 (495) 2324848 or by sending e-mail to avaya@lnc.ru.

9. Conclusion

These Application Notes describe the procedures for configuring LightNet Complex IPO InPhoneMachine to use the Avaya IP Office place notification calls to both internal and external users. LightNet Complex IPO InPhoneMachine successfully passed the compliance testing.

10. Additional References

Product documentation for Avaya products may be found at http://support.avaya.com.

[1] *IP Office 4.0 Installation Manual*, Document ID 15-601042, Issue 15e, January 2007
[2] *Avaya IP Office Release 4.0, Manager: 01, Using Manager*, Issue 19(k), January 2007
[3] *Avaya IP Office Release 4.0, Manager: 02, Configuration Settings*, Issue 19(k), January 2007

Information on IPO InPhoneMachine can be obtained from LightNet Complex's website
http://avaya.lnc.ru/eng/cti/ipm/.

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