IP Office™ Platform

TAPI Link Installation

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Contents

1. CTI TAPI Installation

2. Installing the Wave Driver

3. Document History

Chapter 1.
CTI TAPI Installation

1. CTI TAPI Installation

IP Office CTI Link is available in Lite and Pro versions, which provide run-time interfaces for applications to use. The Software Development Kit (SDK) provides documentation on both Lite and Pro interfaces for software developers.

Both the Lite and Pro versions are the same program. The additional functionality provided by IP Office CTI Link Pro is enabled when the CTI Link Pro licence key is installed.

This guide covers the installation and configuration of the TAPI driver. Installation of the DevLink files are also detailed. For programming details, refer to the TAPI Link Developer's Guide and the DevLink Programmer's Guide, respectively.

IP Office CTI Link Lite

IP Office CTI Link Lite is a free of charge application and contains the following component:

- TAPILink Lite
  This component implements Microsoft TAPI and allows programs to control one telephone line per PC. It provides simple CTI, including answer, hangup, make-call, transfer and screen-popping functionality. See the TAPILink Developers Guide for more details on TAPILink Lite and TAPILink Pro.

IP Office CTI Link Pro

IP Office CTI Link Pro includes all of the Lite functionality and the following components:

- TAPILink Pro
  This component provides both first-party and third-party TAPI control of telephony devices. In addition to the functionality provided by TAPILink Lite, it also adds the ability to receive information on ACD queues, hunt groups and provides additional advanced functionality. Please see the TAPILink Developers Guide for more details on TAPILink Lite and TAPILink Pro.

- DevLink Pro
  This component provides a real-time event stream. The real-time event stream provides information on telephone activity as and when that activity occurs and also provides information on trunk activity.

1.1 IP Office CTI Licenses

You do not need a license in order to use the TAPI driver in first party mode. However, licenses are required for third-party mode.

- CTI Link Pro :
  Enables support for third-party TAPI mode (TAPI Link Pro and DEVLink Pro).

- Wave User :
  Allows streaming of WAV files, using TAPILink Pro, for 3rd party voice applications. This is a per user license. Note that TAPI WAV calls use system data channels taken from the same pool used for voicemail ports.

1.2 Enabling IP Office TAPI Support

Support for TAPI is controlled as part of the IP Office system security settings. From IP Office Release 9.1 onwards, TAPI support is off by default.

To check the TAPI support setting:

1. Start IP Office Manager.

2. Select File | Advanced | Security Settings.

3. Select the IP Office system and click OK.

4. Enter a user name and password of a user account with security configuration access.

5. Click System and select the Unsecured Interfaces tab.

6. In the list of Application Controls, select the TAPI/DevLink3 option.

   - The TAPI software installation also uses the TFTP Directory Read option to obtain a list of users from the IP Office system. If not enabled the installation displays "Failed to retrieve user list from IP Office". However, the user details can still be entered manually. If you enable TFTP Directory Read to simplify TAPI installation you should disable the option afterwards unless it is also specifically required by the TAPI application being supported.

7. Click OK.

8. Click 💾 to save the updated security settings.

1.3 Installing the Software

The IP Office TAPI Service Provider and the DevLink files are both installed from the IP Office User CD.

Perform the following:

1. Insert the IP Office User CD and select setup.exe.

2. Select the language you want the installer to use and click Next.

3. When the welcome menu is displayed, click Next.

4. Enter a user and company name for the installation. These are used for information only.

5. Select whether you are installing the software for all user's of the PC or only the current user. Click Next.

6. Select the destination folder for the installation. Unless specifically required accept the default as this eases later maintenance. Click Next.

7. From the Setup Type menu, select Custom and click Next.

8. Select the components to install:

   - TAPI 2
     Installs the files for support of TAPI 2.1.

   - TAPI 3
     Installs the files for support of TAPI 3.0.

   - DEV Link
     DevLink is installed and used in conjunction with some 3rd party applications. For more information, refer to the "IP Office CTI Link DevLink Programmer's Guide".

9. Click Next.

10. If the error message *"Failed to retrieve user list from IP Office"* appears, click OK and enter the required details manually. Otherwise select the IP Office system and enter the user name and password. Click Next.

11. A summary of what will be installed is displayed. Click Next. The software installation proceeds.

12. Select whether you want to restart the PC now or later and click Finish.

1.4 Configuring the TAPI Driver

TAPI Service Providers are configured using a Windows Control Panel applet.

To configure IP Office TAPI:

1. Start the Control Panel.

2. Select Phone and Modem.

3. Select the Advanced tab.

4. Select the Avaya IP Office TAPI Service Provider and click Configure. Separate service providers are shown for TAPI2 and TAPI3, however they share the same IP Office settings.
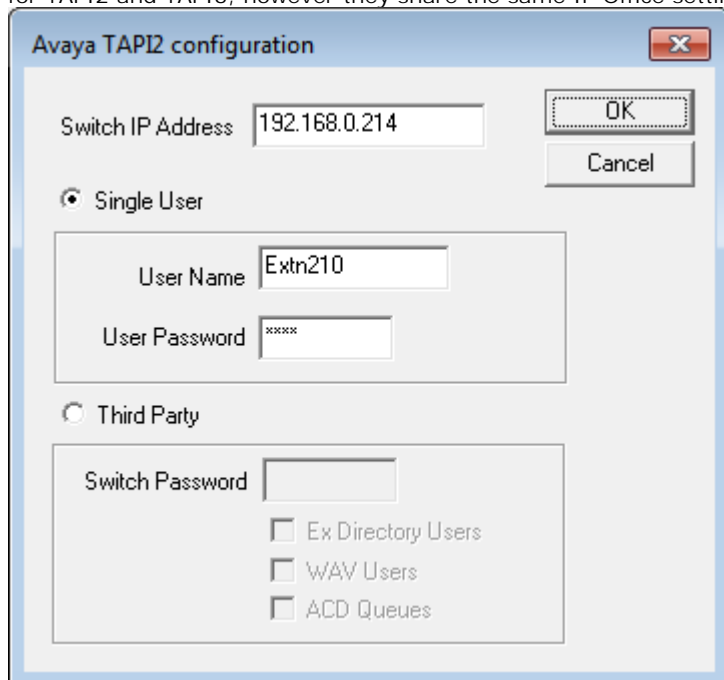
5. Enter the details for how the TAPI service should operate:

- **Switch IP Address**
  Enter the IP address of the IP Office control unit.

- **Single User Mode**
  In this mode the TAPI application on the PC can control and monitor just a single telephony device. Enter the user name and password for the extension that is to be monitored and controlled by TAPI.

- **Third Party Mode**
  In this mode the TAPI application on the PC can control and monitor all telephony devices on the IP Office system. Enter the system password as set in the IP Office systems security settings. Third party mode requires the IP Office system to contain the appropriate TAPI licenses 10 in order to operate.

  - **Ex Directory Users**
    If selected, TAPI control can be used for users set as ex-directory in the IP Office configuration.

  - **WAV Users**
    Users with a user name prefixed with *TAPI:* are WAV user. During calls, the IP Office system streams audio to WAV users. This audio streaming requires a wave driver licence instance per user. During use, the TAPI WAV audio stream uses an IP Office data channel taken from the same pool of data channels as used for voicemail ports.

  - **ACD Queues**
    The IP Office can be configured to queue incoming group calls waiting to be answered. Checking ACD Queues allows TAPI to monitor and/or control the queue of calls against a group.

6. Click OK.

7. Click Close.

1.5 Configuring IP Office Users for TAPI

This section describes the configuration of the IP Office using Manager. There are two ways in which you can use TAPI with IP:

Configuration for TAPI Monitoring

If your application monitors telephones but does not control them, then there is no configuration necessary.

Configuration for TAPI Control

If your application controls telephones, you should configure all users that will be controlled as an off-hook stations. This will cause the user's phone to return to the idle state when a call is hung up using TAPI. Without this option set, the phone will remain in a disconnected state until the phone is hung up manually. The off-hook station check box can be found on the Telephony tab of the User settings in Manager.

Chapter 2.
Installing the Wave Driver

2. Installing the Wave Driver

The wave driver is not plug-and-play as there is no associated hardware. It is a software emulation and so must be installed manually.

The wave driver is called *"nawave32.drv"*. During the installation of TAPI, the appropriate version for the PC's operating system is copied to the PC but it is not installed.

2.1 Windows XP

1. From the Control Panel, select Add Hardware. You have to wait for your PC to do a Search for new Devices, which takes about 30 seconds.

2. Select Yes, I have already connected the hardware.

3. Select Add a new hardware device.

4. Select Install the hardware that I manually select from a list (Advanced).

5. Select Sound, video and game controllers.

6. Press the Have Disk button.

7. Navigate to the folder *C:\Program Files (x86)\Avaya\IP Office\TAPI2\wave32* or *C:\Program Files (x86)\Avaya\IP Office\TAPI3\wave32*. and select the file *oemsetup.inf*.

Once the wave driver is installed, you must ensure that it is only used by TAPI, otherwise the system will start using it inappropriately, like playing "ding.wav" when you receive e-mail. This will cause problems.

1. From the Control Panel, select Sounds and Audio Devices. Ensure that no preferred devices use the *WIDWOD32* driver.

2. You also need to prevent the drivers use explicitly.

   a. Go to *Sounds and Audio Devices/Hardware/Avaya IP400 32 bit WIDWOD Driver/ Properties/ Properties/Properties*.

   b. Check Do not map through this device.

2.2 Windows 2000

1. From the Control Panel, select Add/Remove Hardware. Wait for your PC to do a search for new devices.

2. Select Add New Device.

3. Select No I want to select hardware from a list.

4. Navigate to the folder *C:\Program Files (x86)\Avaya\IP Office\TAPI2\wave32* or *C:\Program Files (x86)\Avaya\IP Office\TAPI3\wave32*. and select the file *oemsetup.inf*.

Once the wave driver is installed, you must ensure that it is only used by TAPI, otherwise the system will start using it inappropriately, like playing "ding.wav" when you receive e-mail. This will cause problems.

1. From the Control Panel, select Sounds and Audio Devices. Ensure that no preferred devices use the *WIDWOD32* driver.

2. You also need to prevent the drivers use explicitly.

   a. Go to *Sounds and Audio Devices/Hardware/Avaya IP400 32 bit WIDWOD Driver/ Properties/ Properties/Properties*.

   b. Check Do not map through this device.

Chapter 3.
Document History

3. Document History

Date	Issue	Changes
6th October 2014	12b	Document refresh to match IP Office User CD 4.2.56 build.
4th March 2015	12c	General update.
2nd June 2015	12d	Minor typo in license description corrected.
8th July 2015	12e	Added the need to enable TAPI support [10] in security settings (now off by default). [97173]

Index

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C

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TAPI Link Installation   **Page 22**
IP Office™ Platform   **15-601034 Issue 12e (08 July 2015)**
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