IP Office

TAPI Link Installation

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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 Installing TAPILink and DevLink

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

Perform the following:

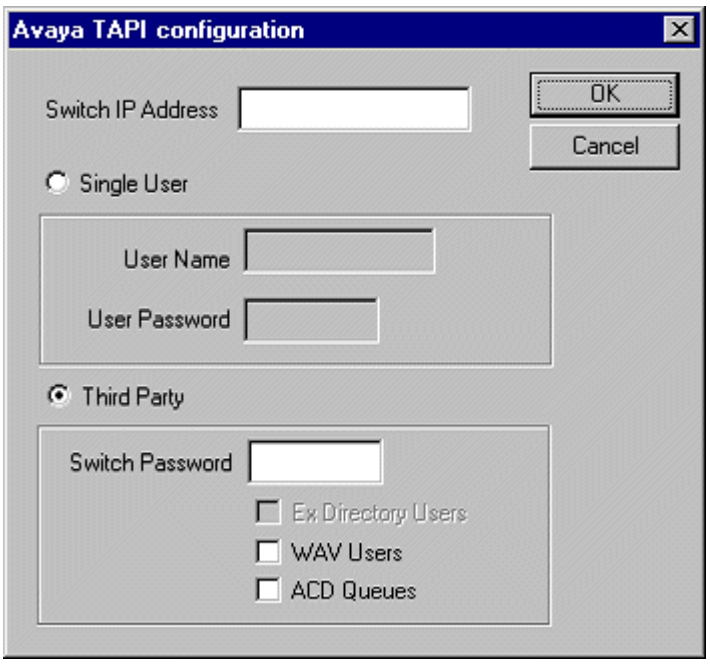
1. Insert IP Office User CD. The Workstation Installation Wizard - Welcome screen is displayed.
2. Click Next. The Identifying Your Unit screen is displayed.
   Enter both your User Name (or select from existing) and User Password.
3. Click Next. The Ready to Install screen is displayed.
4. Click Finish. A progress bar is displayed and on completion the Welcome to the InstallShield Wizard for IP Office User Suite screen is displayed.
5. Click Next. The Choose Destination screen is displayed. Either accept the default or click Browse and select your own destination folder.
6. Click Next. On the Select Components screen, tick the TAPI box and, if required, the DevLink box. DevLink is installed and used in conjunction with 3rd party applications, e.g. Call Costing software. For more information, refer to the IP Office CTI Link DevLink Programmer's Guide. Do not change any other settings.
7. The Select Program Folder screen is displayed. Either accept the default or enter a new folder name.
8. Click Next. A progress bar is displayed and on completion the InstallShield Wizard Complete screen is displayed.
9. To exit from the install routine, click Finish.

1.2 Configuring the TAPI Driver

TAPI Service Providers are configured using a Windows Control Panel applet. The name of the applet is not the same across all versions of Windows. The following table indicates the name of the applet and the tab that must be selected within the applet:

Windows	Control Panel Applet	Tab
XP Pro	Network and Internet Connections, Phone and Modem Options	Advanced
2000	Phone and Modem Options	Advanced

Run the appropriate applet for your version of Windows and select the tab indicated above. You will be presented with the list of TAPI Service Providers that you have installed. The IP Office TAPI Service Provider will be in the list of installed TAPI Service Providers. Select Avaya IP Office TAPI Service Provider and press Configure. You will be presented with the Avaya TAPI Configuration menu screen.



The IP Office TAPI Service Provider can operate in Single User mode or Third Party mode. A license must be purchased to enable the Third Party mode. Note that the unlicensed version will not prevent you from selecting this option but it will not work.

Single User mode means that the TAPI application can control and/or monitor a single telephony device. Third Party mode means that the TAPI application can control and/or monitor all telephony devices on a particular IP Office Control Unit.

- Note
  On some versions of Windows it will be necessary to reboot the PC (or just restart the telephony service) in order for configuration changes to take effect.

Single User Mode

Enter the IP address of the IP Office unit in the box labeled Switch IP Address. Select the Single User option. Enter the user name and password for the extension that is to be monitored and/or controlled by TAPI. Normally, the user name will be the name of a person associated with a physical telephone extension.

Third Party Mode

Enter the IP address of the IP Office unit in the box labeled Switch IP Address. Select the Third Party option. Enter the system password of the IP Office. By default, Third Party mode will provide a TAPI line for every physical extension attached to the IP Office. The check boxes associated with Third Party mode enable additional entities to be monitored and/or controlled by TAPI.

WAV Users

If a user has a user name that begins with "TAPI:" it is a WAV user. The IP Office switch will attempt to stream audio to WAV users when they are involved in calls.

This audio streaming requires the IP Office wave driver to be installed on the PC and requires a wave driver licence instance per user. If the wave driver is not installed, you may still have the WAV Users tick box checked and will still receive WAV user events without the need for a licence.

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. The maximum number of data channels available for simultaneous voicemail and TAPI WAV calls depends on the IP Office Control Unit type;

Control Unit	Data Channels	Channels usable for Voicemail/TAPI WAV
Small Office Edition	–	10
IP403	18	10
IP406 V1	24	20
IP406 V2	50	20
IP412	108	30
IP500	48	40
IP500 V2	48	40

ACD Queues

The IP Office can be configured to queue incoming calls that are being presented to a group of internal users. For example, if your IP Office was configured with a group of call center agents, you would want to queue an incoming call until an agent becomes available to take the call.

Checking the ACD Queues check box provides lines to monitor and/or control the queue of calls against a group.

1.3 Configuring IP Office 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:

- If your application monitors telephones but does not control them, then there is no configuration necessary.
- If your application controls telephones, you should configure all users that will be controlled as an off-hook station. 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.

1.4 Installing the CTI TAPILink Pro and Wave Licenses

You do not need a license in order to use the TAPI driver, however the license provides the following additional functionality:

- Third Party mode
- ACD Queue monitoring
- lineDevSpecific function enabled

These are described in Configuring the TAPI Driver 9.

In addition, to use the Wave functionality you need to install a Wave User's Licence for each Wave user.

To install the TAPI licenses:

1. Run IP Office Manager. This is installed from the IP Office Admin CD.
2. Load the configuration file for your IP Office.
3. On the tree in the left hand window, select License.
4. Right-click in the right hand window and select New.
5. Type in the 32 character license key. IP Office Manager will indicate the licenses function.
6. Send the configuration back to IP Office and select Reboot.
7. Following the reboot, reload the configuration and check that the new license is shown as Valid.

Chapter 2.
Installing the Wave Driver

2. Installing the Wave Driver

The IP400 wave driver is called "nawave32.drv". It is in the "wave32" directory on the User CD. It is a 32bit WAVE driver, and therefore only works on Windows 2000, 2003 and XP.

Wave Driver is software emulation (not plug-and-play as there is no associated hardware) and must be installed manually.

- Note
  Before you install the Wave Driver, ensure that you have a sound card installed on your PC.

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 "wave32" directory on the CDROM and select the oemsetup.inf file.

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. This is not sufficient on its own, therefore you need to prevent its use explicitly.
2. Go to Sounds and Audio Devices/Hardware/Avaya IP400 32 bit WIDWOD Driver/ Properties/Properties/Properties.
3. 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 "wave32" directory on the CDROM and select the oemsetup.inf file.

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 email. This will cause problems.

1. From the Control Panel, select Sounds and Multimedia. Ensure that no preferred devices use the WIDWOD32 driver. This is not sufficient on its own, therefore, you need to prevent its use explicitly.
2. Go to Sounds and Multimedia Properties/Hardware/IP400 32 bit WIDWOD Driver/ Properties/Properties.
3. Check Do not map through this device.

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