Avaya Solution & Interoperability Test Lab

Application Notes for Configuring vTechnologies vCTISuite with Avaya IP Office - Issue 1.0

Abstract

These Application Notes describe the procedure for configuring vTechnologies vCTISuite to work with Avaya IP Office. Information in these Application Notes has been obtained through compliance testing and additional technical discussions. Testing was conducted via the Developer*Connection* Program at the Avaya Solution and Interoperability Test Lab.

1. Introduction

These Application Notes focus on the steps required for configuring vTechnologies vCTISuite to work with Avaya IP Office.

vTechnologies vCTISuite is an easy to use Contact Center Automation Tool that integrates IP Office, CRM applications and Contact Center applications. vCTISuite is a synergistic application suite that acts as a "glue" to decrease Agent Time per Call by increasing access to Caller Information as well allowing On-Demand modification to the Call Routing List. In other words, vCTISuite presents Caller information to Contact Center Agents as the Caller is routed to the Agent's extension. vCTISuite also automates such time consuming tasks as Call Tracking and Outbound Calling as well as offering a secure Notepad feature for Supervisors.

These Application Notes focus on the screen pop capability of vTechnologies vCTISuite for incoming calls to Avaya IP Office. It was beyond the scope of this compliance test to verify vCTISuite integration with CRM or Contact Center applications or outbound calling.

The tested configuration of **Figure 1** consists of an Avaya IP Office, Avaya IP Office Manager and Avaya IP Office Voicemail Pro PC, vTechnologies vCTISuite client PCs, Avaya 2420 and 5420 digital telephones, Avaya 4600-series IP telephones and an analog telephone. Avaya IP Office has T1/PRI and analog trunks to the central office.

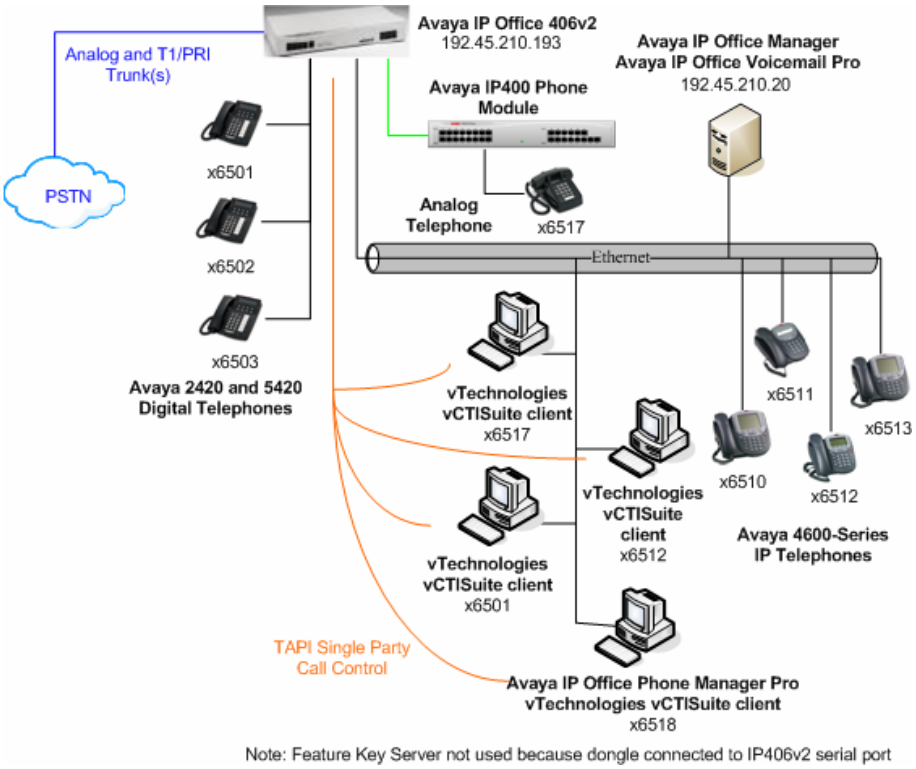


Figure 1 – Network Configuration Diagram

Table 1 lists all users and associated extension numbers for **Figure 1**.

End User Name	Extension	Password
Operator	6501	
Kit Tankhiwale	6502	
John Yaya	6503	
Marketing	6510	
Tech Support	6511	
John Finnegan	6512	
Khoa Bui	6513	
Returns	6517	
John Bigbootei	6518	

Table 1 – User to Extension Mapping

2. Equipment and Software Validated

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

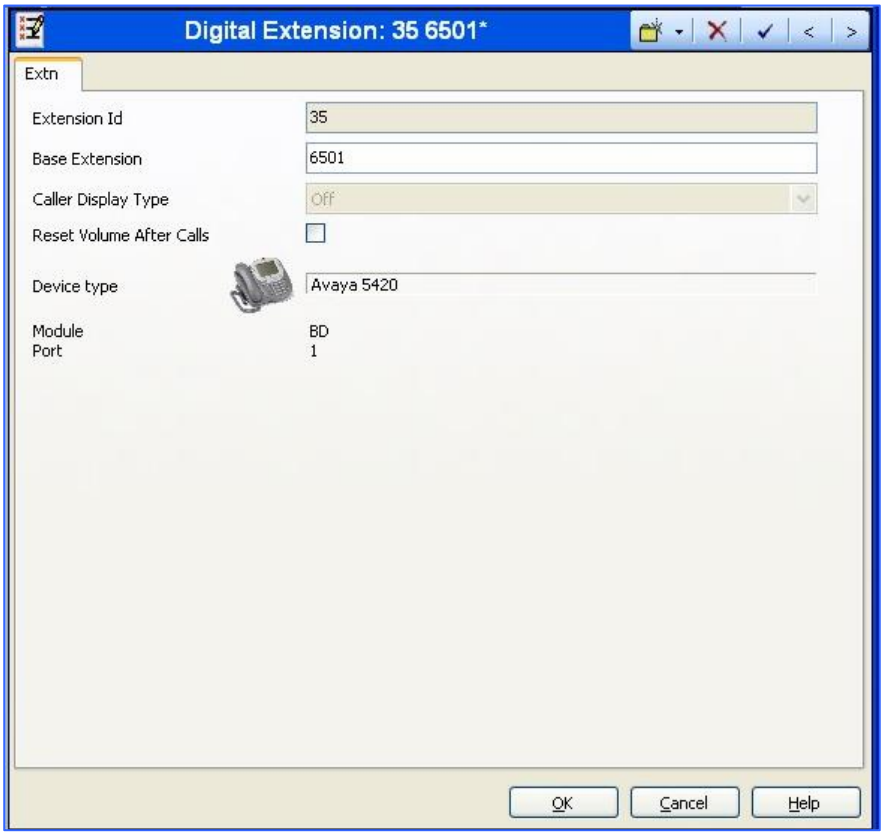
Equipment	Software/Firmware
Avaya IP Office 406v2	3.2(54)
Avaya IP400 Office Phone Module	5.2(54)
Avaya IP Office Manager	5.2(54)
Avaya IP Office Phone Manager Pro	3.2(28)
Avaya IP Office TAPI driver	1.0.0.27
Avaya 2420 Digital Telephone	4.00
Avaya 5420 Digital Telephone	4.00
Avaya 4600-Series IP Telephones (4610SW, 4620SW)	2.3
Avaya Analog Telephone	-
vTechnologies vCTISuite	2.1.1

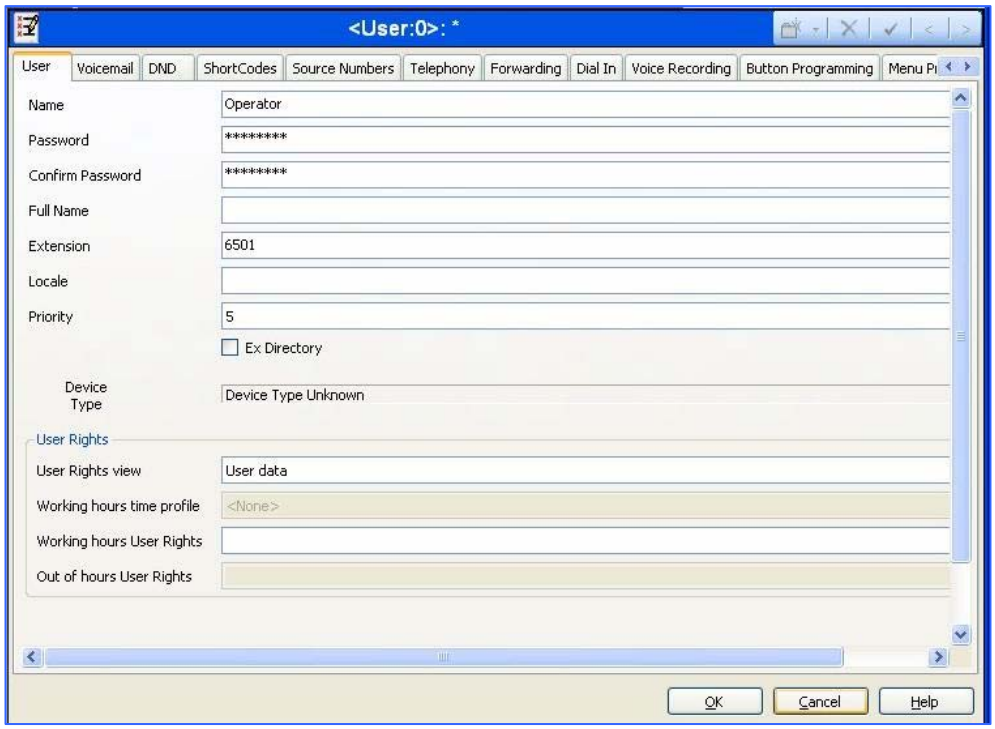
Table 2 – Equipment and Software / Firmware Versions Validated

3. Configure Avaya IP Office

The configuration information provided in this section describes the steps required to set up Avaya IP Office for this solution.

For all other provisioning information, such as Avaya IP Office installation and configuration, please refer to Avaya IP Office product documentation in reference [1].

Step	Description
1.	Log into the IP Office Manager PC and go to **Start → Programs → IP Office → Manager** to launch the Manager application.
2.	In the Manager window, select **File → Open** to search for IP Office in the network.
3.	Log into IP Office using the appropriate login credentials to receive its configuration.
	Configure user extensions
4.	In the Manager window, go to the Configuration Tree and click **Extension.** In the list of extensions that appear, click the **Id** that will be associated with the first end user listed in **Table 1**.
5.	In the Digital Extension window that appears, set **Base Extension** to the extension number of the first end user in **Table 1**. Click **OK**. 

Step	Description
6.	In the Manager window, go to the Configuration Tree and double-click **User**. In the right hand pane, right-click **New** to add a user.
7.	In the User window that appears, set **Name** to the name of the first end user listed in **Table 1**, set **Extension** to the extension number associated with the first end user in **Table 1**, and set **Password** and **Confirm Password** to the desired password. Make a note of the password in **Table 1**, as it will be required in **Section 4.1**, **Step 7**. Click **OK**. 
8.	Repeat **Steps 4 – 7** for each end user extension listed in **Table 1**. For the purposes of these Application Notes, end user extensions 6501 – 6503, 6510 – 6513, and 6517 – 6518 were created. This completes configuration of Avaya IP Office for this solution.

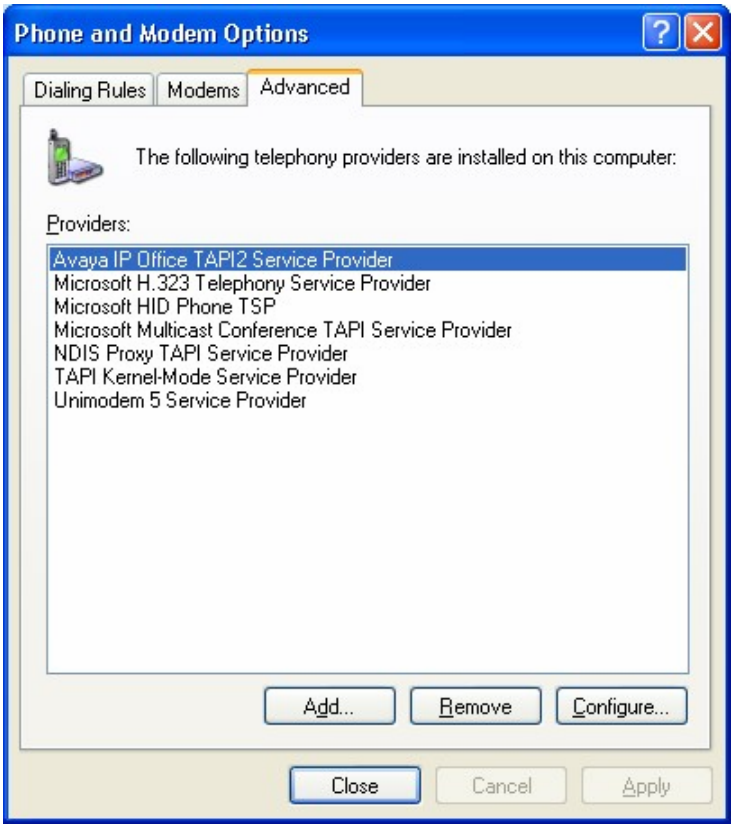
4. Configure vTechnologies vCTISuite Client PC

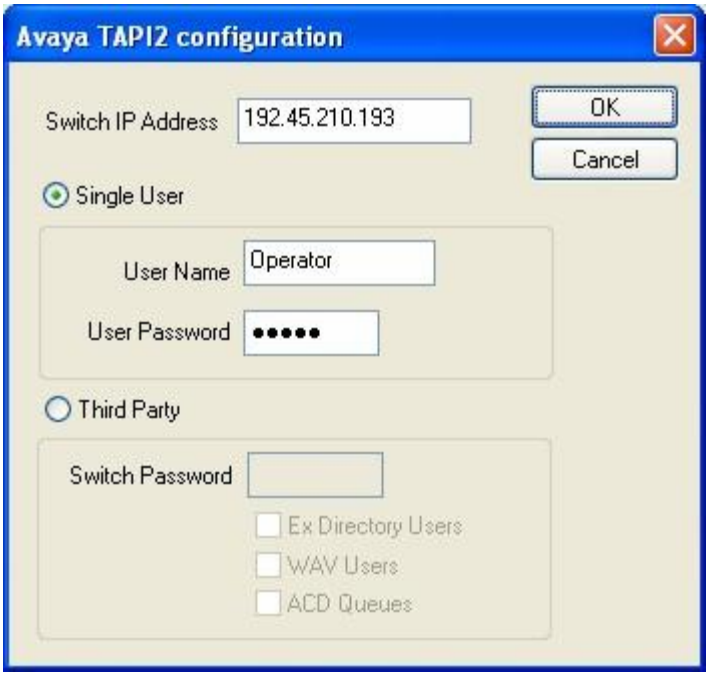
The configuration information provided in this section describes the steps required to configure a vTechnologies vCTISuite client to work with Avaya IP Office for this solution. **Note**: The steps described in this section must be repeated for each end user extension listed in **Table 1**. For the purposes of these Application Notes, this configuration was performed on the client PCs of end user extensions 6501 – 6503, 6510 – 6513, and 6517 – 6518.

*Be sure to have the **Avaya IP Office TAPI driver** on hand as it will be required as part of this configuration.*

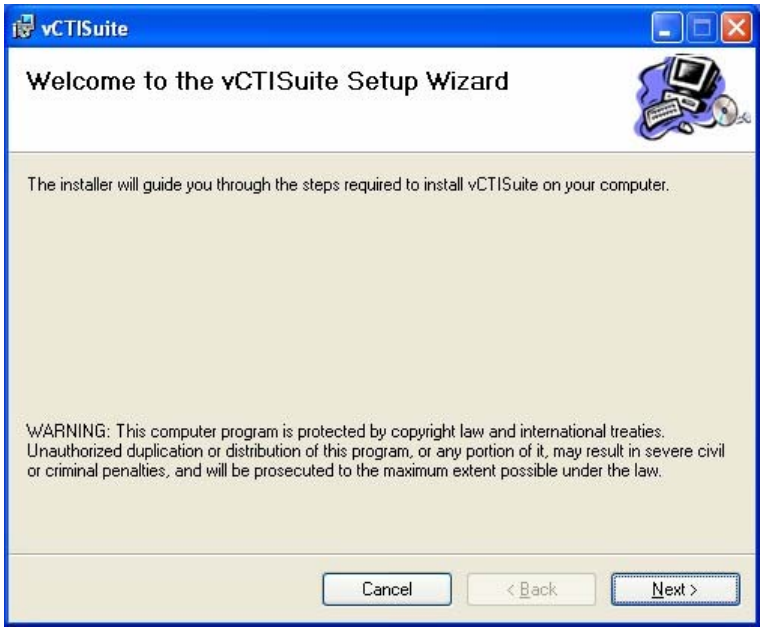
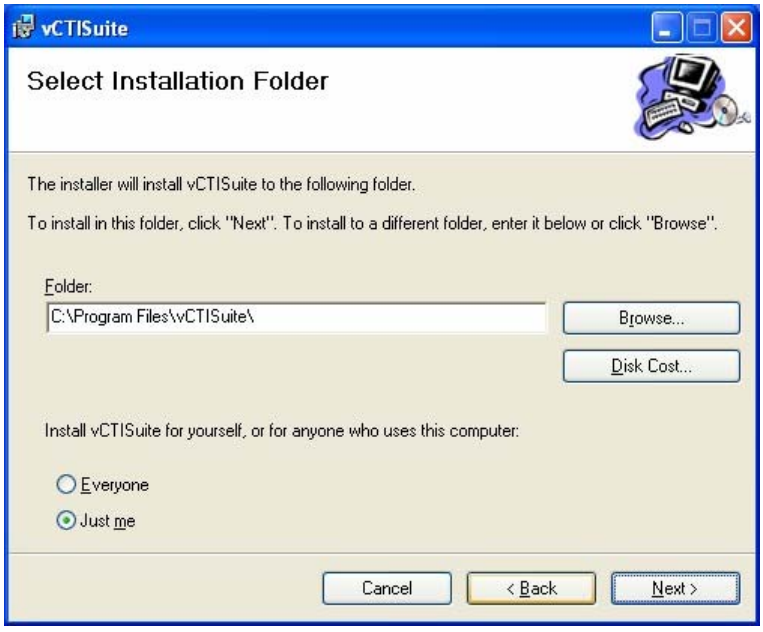
For all other provisioning information, such as software installation, installation of optional components, etc., please refer to the product documentation in reference [2].

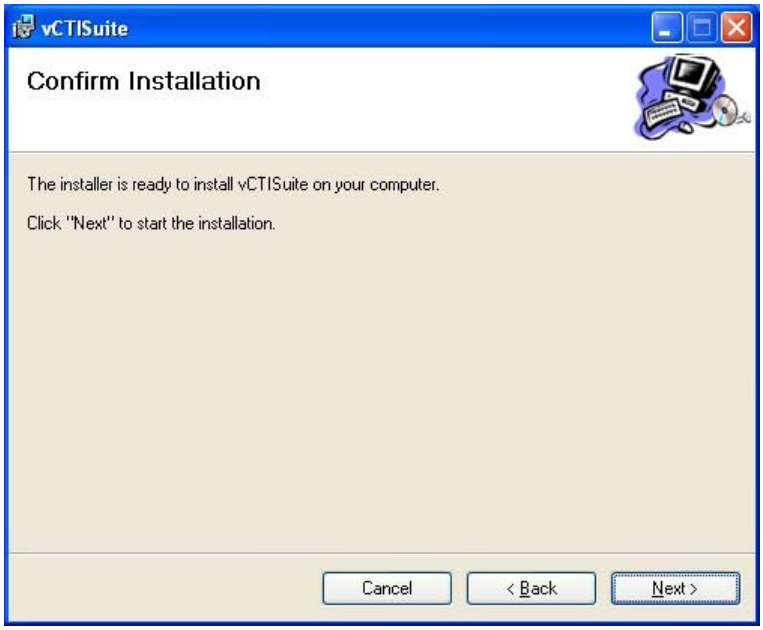
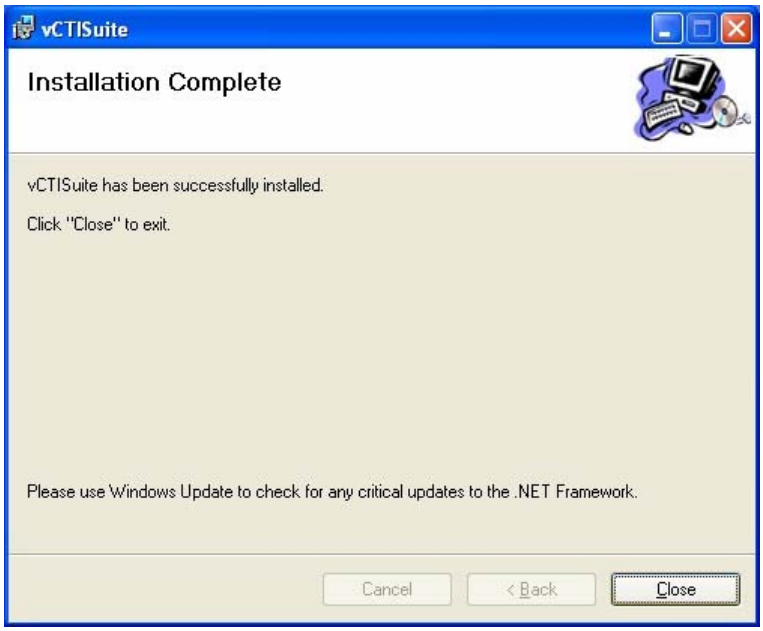
4.1. Install and Configure Avaya IP Office TAPI Driver

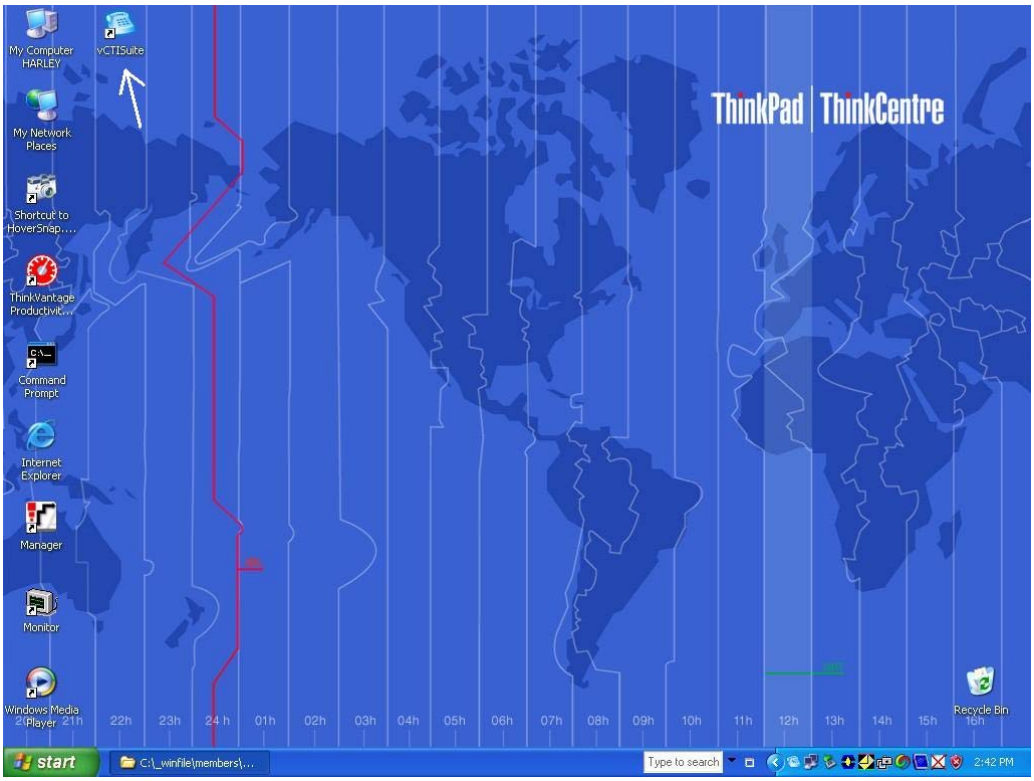
Step	Description
1.	From the vCTISuite client PC for the first end user listed in **Table 1**, launch the Avaya IP Office User Suite **setup.exe** in the CDROM drive from an account with administrative privileges.
2.	Click **Custom** in the InstallShield wizard. Uncheck **Phone Manager** and check **TAPI** to install the IP Office TAPI driver on the PC.
3.	Click **Next** to complete the installation of the Avaya IP Office User Suite. At the InstallShield Wizard Complete window, click **Finish**.
4.	Go to **Start → Control Panel** and double-click the **Phone and Modem Options** icon in the Control Panel window that appears.
5.	In the Phone and Modem Options window that appears, select the **Advanced** tab.
6.	In the Advanced tab window that appears, highlight **Avaya IP Office TAPI2 Service Provider** and click **Configure…** 

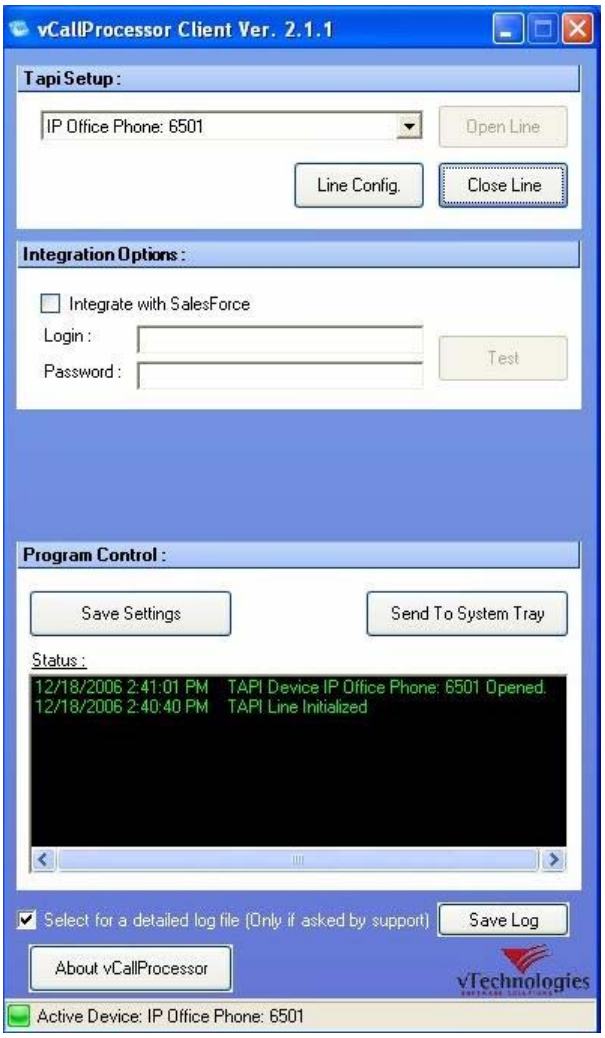
Step	Description
7.	In the Avaya TAPI2 configuration window that appears, set **Switch IP Address** to the IP address of Avaya IP Office, select **Single User**, set **User Name** to the name of the first end user listed in **Table 1**, and set **User Password** to the password defined for the end user in **Table 1**. Click **OK**. **Note:** This configures the Avaya TAPI driver for single-party call control, which does not require the Avaya CTI Link Pro license be installed in Avaya IP Office. 
8.	In the Phone and Modem Options window, click **Close**.
9.	Reboot the PC for the changes to take effect. This completes configuration of the Avaya IP Office TAPI Driver on the vCTISuite client PC.

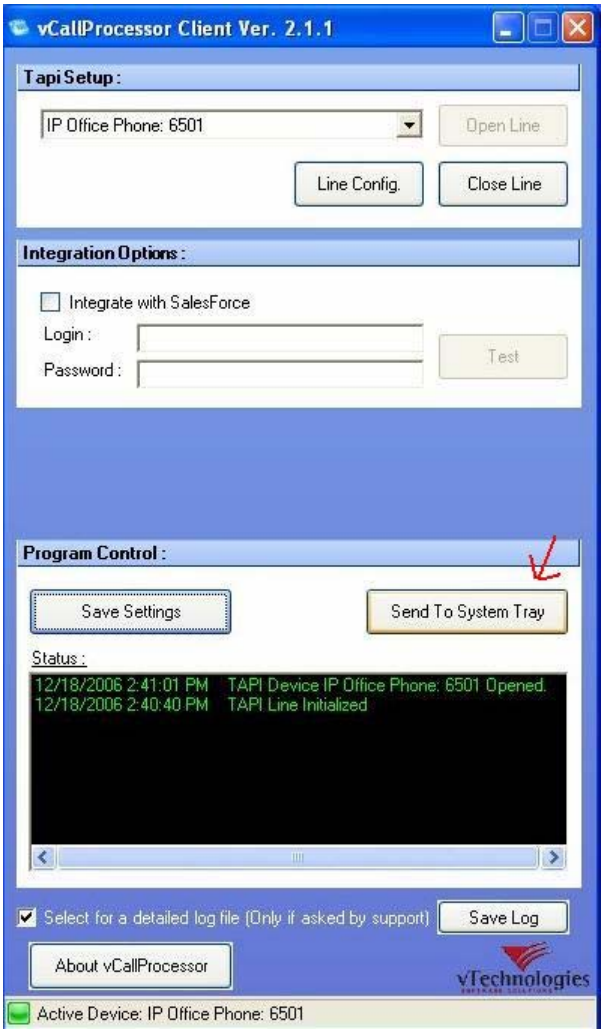
4.2. Install and Configure vTechnologies vCTISuite

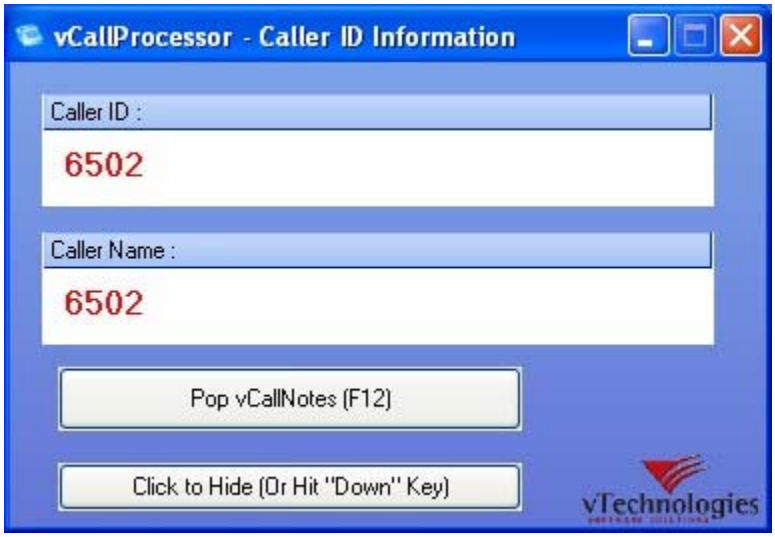
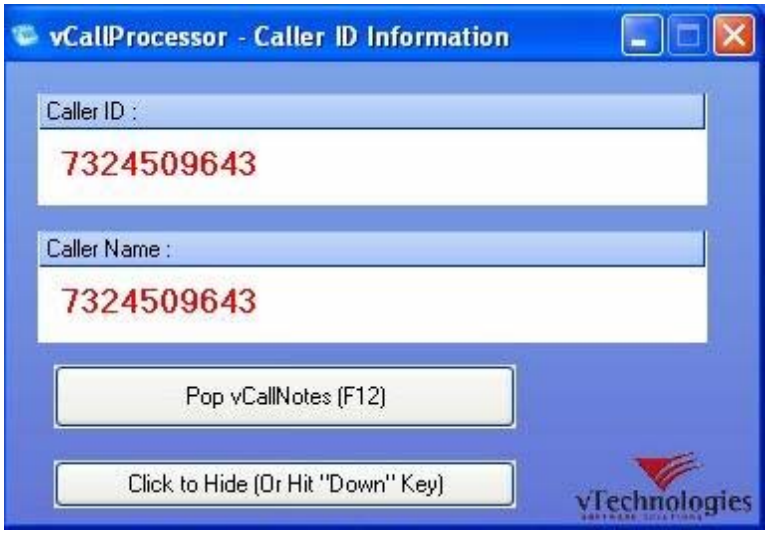
Step	Description
1.	From the vCTISuite client PC for the first end user listed in **Table 1**, launch the vCTISuite **setup.exe** in the CDROM drive from an account with administrative privileges.
2.	In the vCTISuite window that appears, click **Next**. 
3.	In the next vCTISuite window that appears, click **Next**. 

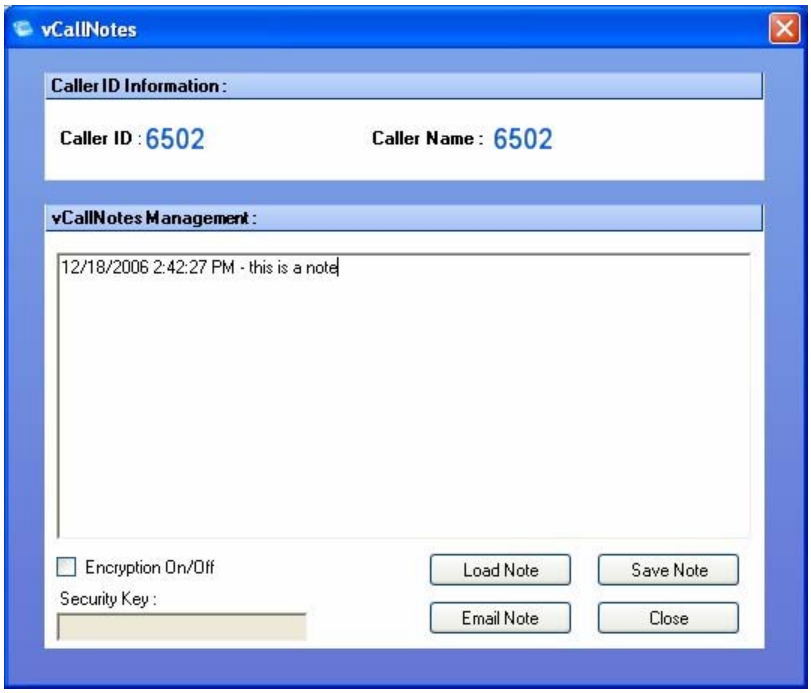
Step	Description
4.	In the next vCTISuite window that appears, click **Next**. 
5.	In the next vCTISuite window that appears, click **Close.** 

Step	Description
6.	Double-click the vCTISuite icon () on the desktop to launch vCTISuite. 

Step	Description
7.	In the vCallProcessor Client Ver. 2.1.1 window that appears, select the first end user extension number listed in **Table 1** for **Tapi Setup**, click **Open Line**, and then click **Save Settings**. This completes configuration of vCTISuite for the end user extension. 
8.	In the Settings Saved popup that appears, click **OK**. 

Step	Description
	To minimize vCTISuite client
9.	In the vCallProcessor Client Ver. 2.1.1 window, click **Send to System Tray**. 
10.	The vCTISuite icon ( ) now appears in the System Tray and may be accessed using right-click on the icon. 

Step	Description
	To verify vCTISuite screen pops properly
11.	Place an internal extension call from end user extension 6502 to end user extension 6501. A screen pop such as the one listed below should appear on the receiving extension's PC. **Note**: The screen pop remains on the desktop until either party in the call hangs up or the user clicks **Click to Hide**. 
12.	Place an inbound trunk call to IP Office that is answered using end user extension 6501. A screen pop such as the one listed below should appear on the extension's PC. **Note**: The screen pop remains on the desktop until either party in the call hangs up or the user clicks **Click to Hide**. 

Step	Description
	To save notes about the call using vCallNotes
13.	Place an internal extension call from end user extension 6502 to end user extension 6501. In the screen pop that appears, click **Pop vCallNotes (F12)**. 
14.	In the vCallNotes window that appears, notes about the call can be logged by typing in the **vCallNotes Management Pane**. To save the note, click **Save Note**. When done, click **Close**. 

5. Interoperability Compliance Testing

Interoperability compliance testing examined the ability of vTechnologies vCTISuite to work with Avaya IP Office. The following vTechnologies vCTISuite features were tested with Avaya IP Office: screen pop capability for internal and inbound calls as well as during calls involving transfers, conference, hold and park.

5.1. General Test Approach

Feature functionality testing was performed manually. Internal extension calls, as well as calls through analog and T1/PRI trunks, were placed to extensions on Avaya IP Office and screen pops were verified. Additionally, call transfers, conference, hold and park were also placed to verify screen pop functionality during these call scenarios.

A load test was performed using a call generator to generate inbound calls over four channels on a PRI trunk to Avaya IP Office. Four client PCs were configured with vCTISuite client software, Avaya IP Office Phone Manager Pro and test automation software. For the load test, a call generator script was written to place a call to Avaya IP Office, which routed the call to a hunt group made up of vCTISuite end user extensions. Test automation software scripts were written to count and log the number of screen pops generated by vCTISuite and cause Avaya IP Office Phone Manager Pro at each client PC to answer the incoming calls.

5.2. Test Results

All executed test cases were completed successfully except for the serviceability issue described below.

- **The vCTISuite screen pop does not go away if the TAPI connection to Avaya IP Office is disrupted due to either loss of network connection or power loss** – all that is required is a restart of the vCTISuite client.

- **Load Test**: A load test with a call rate of ~965 call attempts per hour using 4 PRI trunk channels and calls averaging 9 seconds in length was run for two hours. The call generator was limited to placing no more than 4 calls at a time. At the conclusion of the load test, the call generator reported 1916 call attempts. This matched the sum total of the number of screen pops reported on each client PC.

- **Blind Transfer not recommended for use with this solution** – In a call scenario where A calls B and B blind transfers call to C, C's vCTISuite client gets a screen pop with A's Caller ID as expected; however, as soon as B hangs up after performing the blind transfer, the screen pop that appears on C's vCTISuite client goes away. Since blind transfers are inherently fast, it is likely that anyone receiving a blind transfer will miss the screen pop. The same occurs for supervised transfers; however, since more time goes by before B hangs up, the screen pop will be visible for a longer interval.

6. Verification Steps

The following steps may be used to verify the configuration:

- To verify a vCTISuite client PC is enabled for TAPI first party call control, confirm the Avaya TAPI driver is installed and configured as described in **Section 4.1**.

- To verify vCTISuite is operating properly: place a call to a vCTISuite end user extension and verify a screen pop is generated as described in **Section 4.2**, **Steps 4 – 7**.

7. Support

For technical support on the vTechnologies vCTISuite, consult vTechnologies at http://www.vtechnet.com/support or contact vTechnologies Technical Support at:

- Phone: 800-782-6171
- E-mail: support@vtechnet.com

8. Conclusion

These Application Notes describe the steps for configuring vTechnologies vCTISuite to work with Avaya IP Office. Except for the serviceability issue described in Section 5.2, all test cases completed successfully.

9. Additional References

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

[1] "Avaya IP Office Manager, Issue 18h", 14th December 2006

Product documentation for vTechnologies vCTISuite is provided on the Installation CD.

[2] vCTISuite Help File

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 Developer*Connection* Program at devconnect@avaya.com.