



Avaya Solution & Interoperability Test Lab

Application Notes for Configuring CyTrack CyCC Multi-Media Contact Centre Solution with Avaya IP Office - Issue 1.0

Abstract

These Application Notes describe the procedures for configuring CyTrack CyCC Multi-Media Contact Centre Solution with Avaya IP Office. CyTrack CyCC Multi-Media Contact Centre Solution is an enabling modular suite of products that provide business benefits and functionalities such as call control, call recording, queue management, call detail record reporting, interactive voice response and telemarketing call management.

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 CyTrack CyCC Multi-Media Contact Centre Solution to successfully interoperate with Avaya IP Office.

The following CyTrack CyCC Multi-Media Contact Centre Solution products were tested:

- CyTrack® CyDesk™ - Telephone Unified Communications & CTI
- CyTrack® CyRecord™ - Integrated & Flexible Voice Recording
- CyTrack® CyCall™ - Multi-Media Outbound & Tele-Marketing Call Centre
- CyTrack® CyReport™ - Call Accounting & Business Intelligence Reporting
- CyTrack® CyQ™ - Multi-Media Super Highway Inbound Call Centre
- CyTrack® CyLive™ - Intelligent Interactive Voice Response (IVR) Server

CyTrack CyCC Multi-Media Contact Centre Solution is integrated with Avaya IP Office by the Microsoft Telephony Application Programmer Interface (TAPI).

2. General Test Approach and Test Results

For feature testing, the general test approach was to use CyTrack CyQ to queue incoming calls to the agents and use CyTrack CyCall to place outgoing campaign calls. To manage the calls, the agents used CyTrack CyDesk on the agent PCs. CyTrack CyRecord was also configured to record the agent's incoming and outgoing calls. At the same time, a script was also deployed in CyTrack CyLive to provide IVR features. Finally, CyTrack CyReport was used to collect Station Message Detail Reporting (SMDR) for various types of calls which include intra-switch calls, inter-switch calls, inbound and outbound PSTN trunk calls. For serviceability testing, failures such as reboot of the CyTrack Server and the Avaya IP Office were applied.

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 both feature and serviceability testing.

The feature testing focused on verifying CyTrack CyCC Multi-Media Contact Centre Solution's handling of TAPI messages to request and respond to Avaya IP Office features. The feature testing also evaluated the ability of CyTrack CyCC Multi-Media Contact Centre Solution to collect and process SMDR for various types of calls.

The serviceability testing introduced failure scenarios to verify CyTrack CyCC Multi-Media Contact Centre Server could resume operation after failure recovery.

2.2. Test Results

All feature and serviceability tests passed. Note that for TAPI control, the agent cannot reject incoming calls and hence this feature is not supported.

2.3. Support

For technical support on CyTrack CyCC Multi-Media Contact Centre Solution, contact the CyTrack support team at:

- Phone: +61 1300 CYHELP (1300 294357)
- Fax: +61 1300 788791
- Email: support@cytrack.com

3. Reference Configuration

Figure 1 illustrates the test configuration used to verify the CyTrack CyCC Multi-Media Contact Centre Solution. The setup of this compliance testing comprised of an Avaya IP Office 500 which has connections to the following: Avaya 9621 IP Telephone, Avaya 9630 IP Telephone, Avaya 1608 IP Telephone, Avaya 2420 Digital Telephone, Avaya analog telephone and an ISDN-PRI trunk to the PSTN.

CyTrack CyCC Multi-Media Contact Centre Solution is installed on a server running Microsoft Windows 7 Ultimate with Service Pack 1. In short, it is termed as CyTrack Server. It has connections to the IP Office 500 via four SIP extensions for queuing of calls and playing announcements. CyTrack CyDesk is installed on desktop PCs running Microsoft Windows XP Professional Service Pack 3 and is used to control the IP, Digital and analog telephones respectively.

In this compliance testing, IP Office manager is installed on the CyTrack Server for managing the setup of the phones and hunt group. The Avaya 5520-48T-PWR Ethernet Routing Switch provides Ethernet connectivity to the servers and IP telephones and Layer 3 IP routing between the two sites.

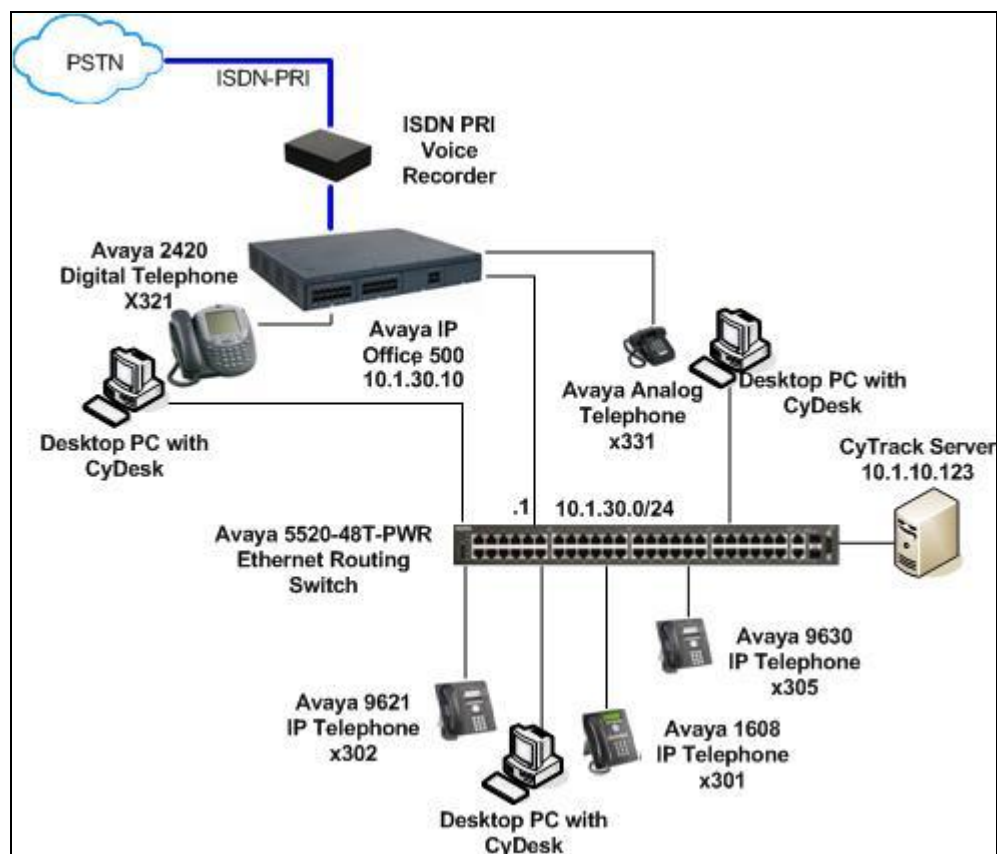


Figure 1: Test Configuration

4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya IP Office 500	8.1 (43)
Avaya IP Office Manager	10.1 (43)
Avaya H323 IP Telephones (9621)	6.2 SP2
Avaya H323 IP Telephone (9630)	3.1 SP3
Avaya H323 IP Telephones (1608)	1.32
Avaya 2420 Digital Telephone	R6
Avaya Analog Telephone	-
Avaya 5520-48T-PWR Ethernet Routing Switch	V5.6.1.052
CyTrack CyCC Multi-Media Contact Centre Server on Windows 7 Ultimate SP1	5.8 SP4
CyDesk Client PCs on Windows XP Professional with Service Pack 3	5.8 SP4

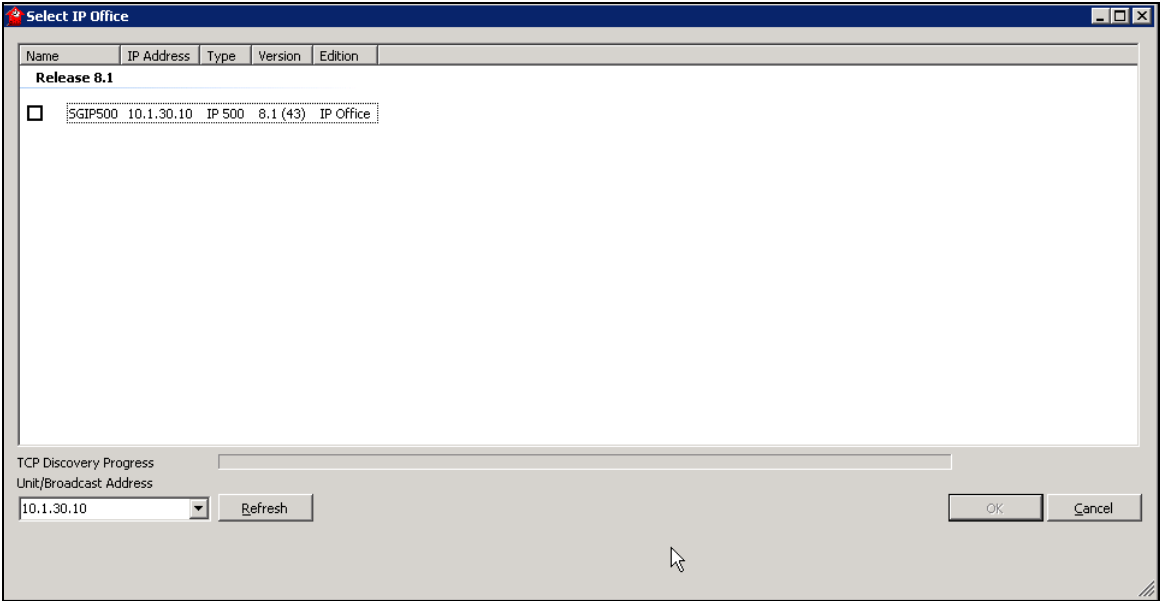
5. Configure Avaya Office

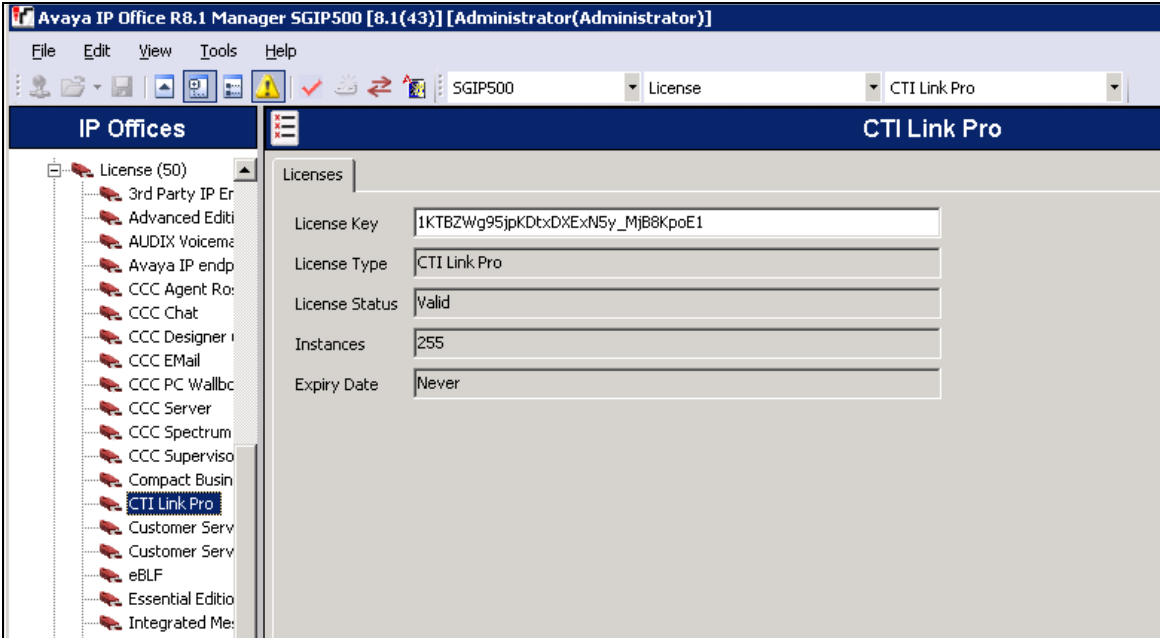
This section provides the procedures for configuring Avaya IP Office. The procedures include the following areas:

- Verify IP Office license
- Obtain LAN IP address
- Administer SIP Registrar
- Administer SIP extensions
- Administer SIP users
- Configuring analog user as a member of Hunt Group
- Configuring Call Center Hunt Group
- Administer incoming call route
- Administer SMDR

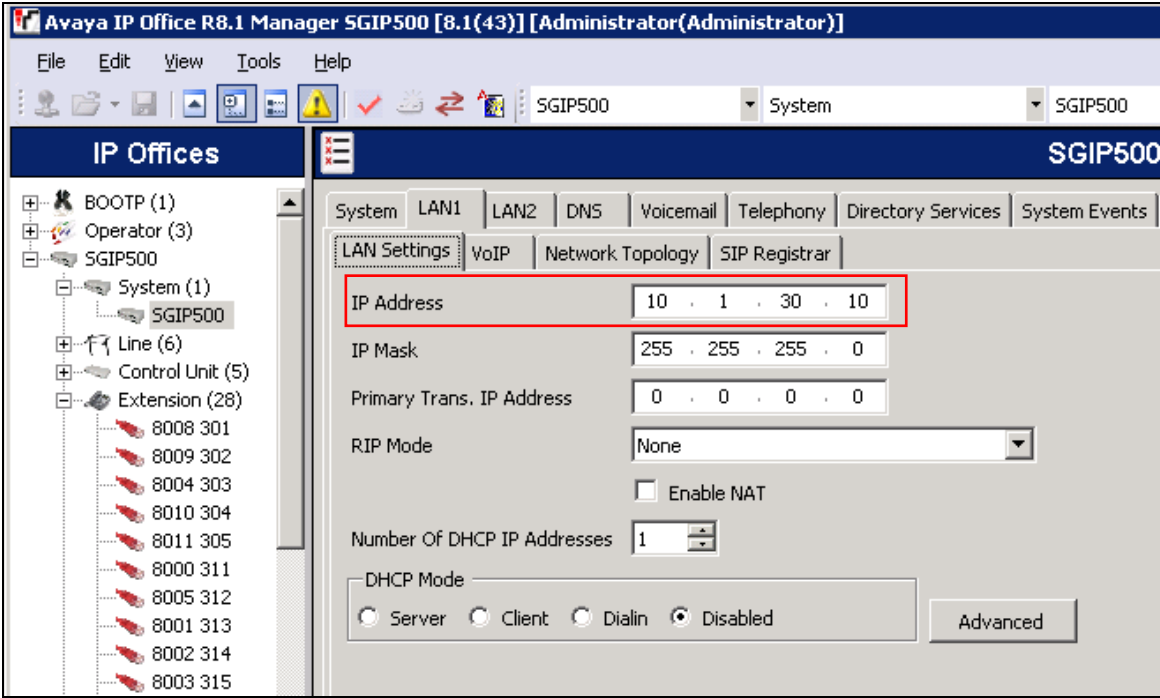
It is expected that the installer is familiar with configuring users, hunt groups, short codes, etc. on Avaya IP Office as the focus of these Application Notes is on the configuration of the TAPI interface only. For all other provisioning information, such as software installation, installation of optional components, basic configuration of Avaya IP Office, etc., refer to the Avaya IP Office product documentation in reference [1] of **Section 9**.

5.1. Verify IP Office License

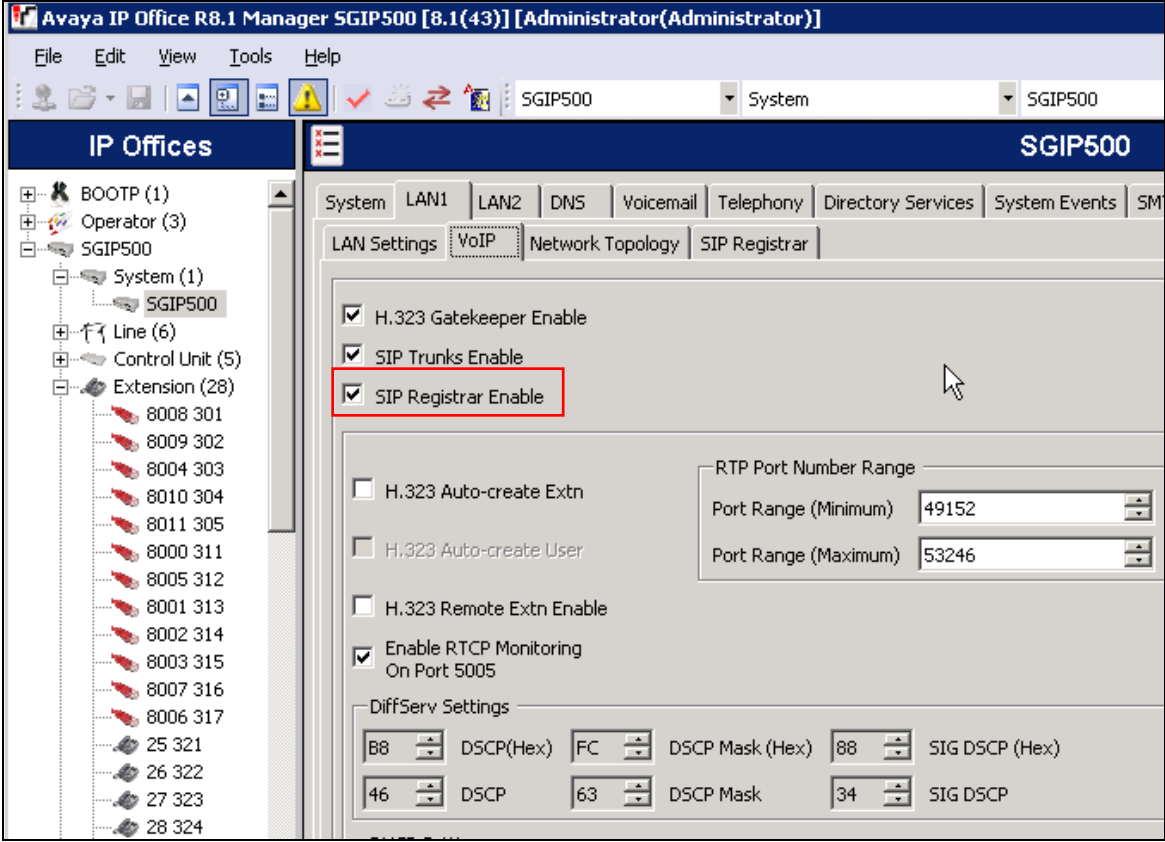
Step	Description
1.	<p>From a PC running the Avaya IP Office Manager application, select Start → Programs → IP Office → Manager to launch the Manager application. Select the proper IP Office system, and log in with the appropriate credentials.</p>  <p>Log into the Avaya IP Office Manager application by using the appropriate user name and password (not shown).</p>

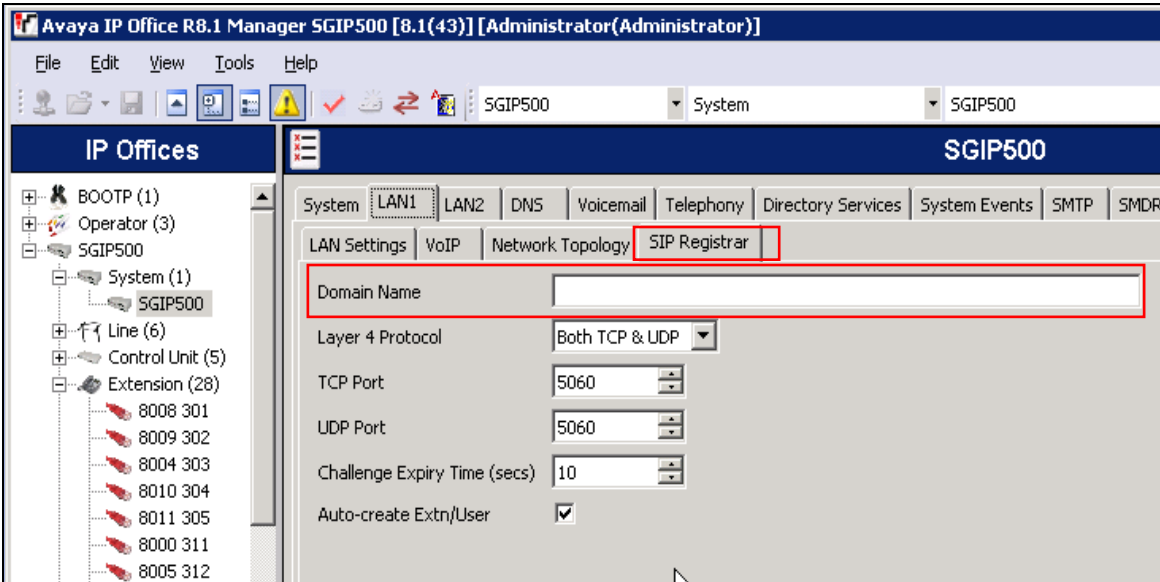
Step	Description												
2.	<p>The CTI Link Pro license is required for CyTrack Server to connect to Avaya IP Office via TAPI. Scroll down the left pane and select License → CTI Link Pro, to display the CTI Link Pro screen in the right pane. Verify that the License Status is “Valid”. This license is required for CyTrack Server to use third-party TAPI control mode on IP Office.</p>  <p>The screenshot displays the Avaya IP Office R8.1 Manager SGIP500 [8.1(43)] [Administrator/Administrator] interface. The left pane shows a tree view under 'IP Offices' with 'License (50)' expanded, and 'CTI Link Pro' selected. The right pane shows the 'CTI Link Pro' configuration screen with the following fields:</p> <table border="1"> <thead> <tr> <th>Field</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>License Key</td> <td>1KT8ZWg95jpKDtxDXExN5y_MjB8KpoE1</td> </tr> <tr> <td>License Type</td> <td>CTI Link Pro</td> </tr> <tr> <td>License Status</td> <td>Valid</td> </tr> <tr> <td>Instances</td> <td>255</td> </tr> <tr> <td>Expiry Date</td> <td>Never</td> </tr> </tbody> </table>	Field	Value	License Key	1KT8ZWg95jpKDtxDXExN5y_MjB8KpoE1	License Type	CTI Link Pro	License Status	Valid	Instances	255	Expiry Date	Never
Field	Value												
License Key	1KT8ZWg95jpKDtxDXExN5y_MjB8KpoE1												
License Type	CTI Link Pro												
License Status	Valid												
Instances	255												
Expiry Date	Never												

5.2. Obtain LAN IP address

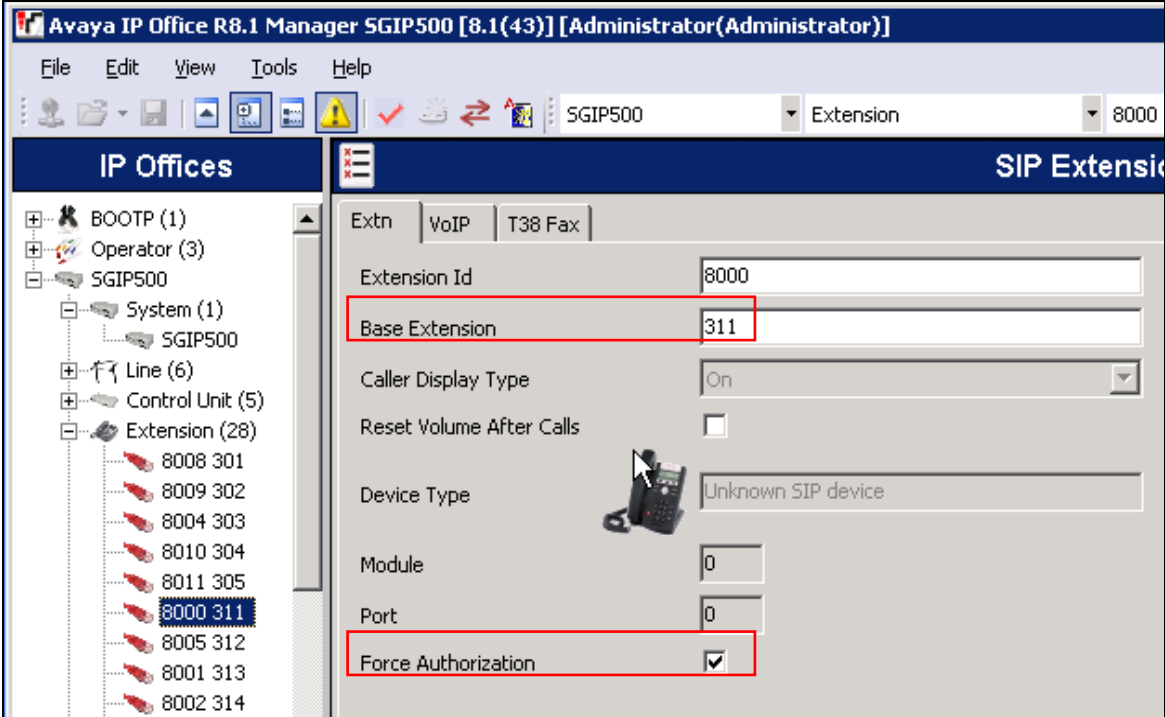
Step	Description
1.	<p>From the configuration tree in the left pane, select System to display the SGIP500 screen in the right pane. Select the LAN1 tab, followed by the LAN Settings sub-tab in the right pane. Make a note of the IP Address, which will be used later to configure CyTrack Server. Note that IP Office can support SIP on the LAN1 and/or LAN2 interfaces, and the compliance testing used the LAN1 interface.</p> 

5.3. Administer SIP Registrar

Step	Description
1.	<p>Select the VoIP sub-tab. Make certain that SIP Registrar Enable is checked, as shown below.</p>  <p>The screenshot shows the Avaya IP Office R8.1 Manager SGIP500 [8.1(43)] [Administrator/Administrator] interface. The 'VoIP' sub-tab is selected, and the 'SIP Registrar Enable' checkbox is checked and highlighted with a red box. Other settings visible include H.323 Gatekeeper Enable, SIP Trunks Enable, H.323 Auto-create Extn, H.323 Auto-create User, H.323 Remote Extn Enable, Enable RTCP Monitoring On Port 5005, and DiffServ Settings.</p>

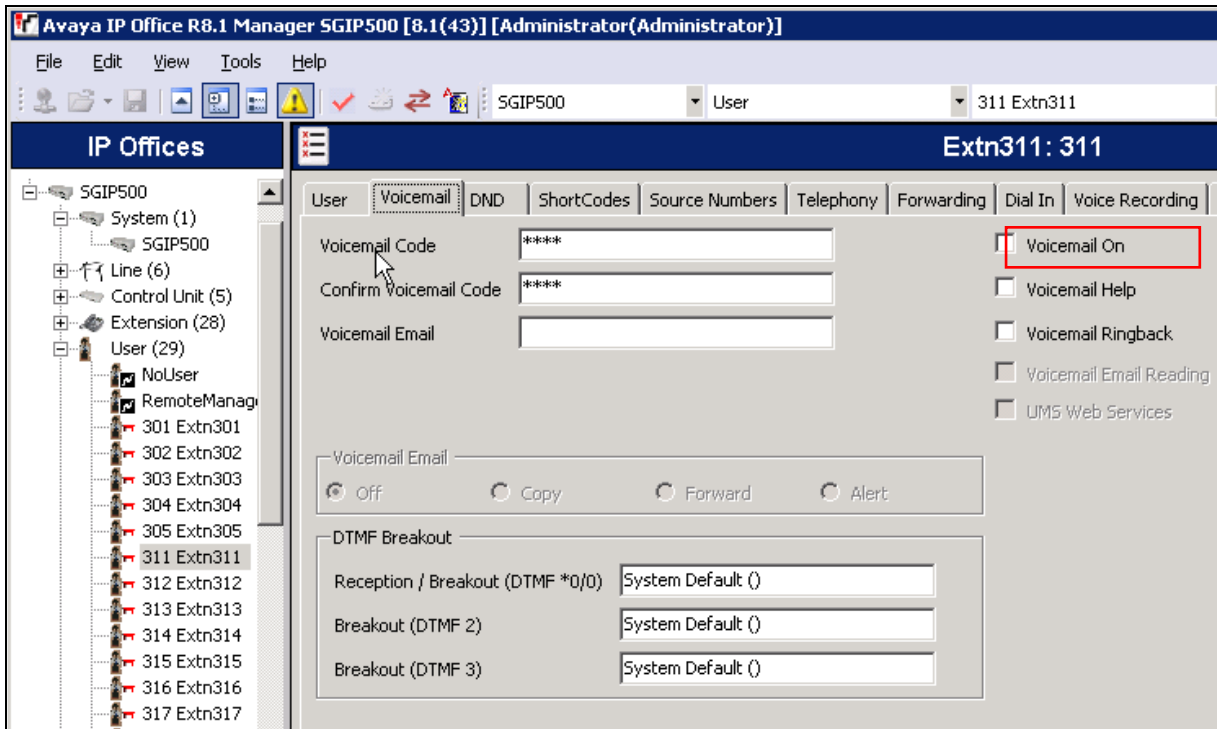
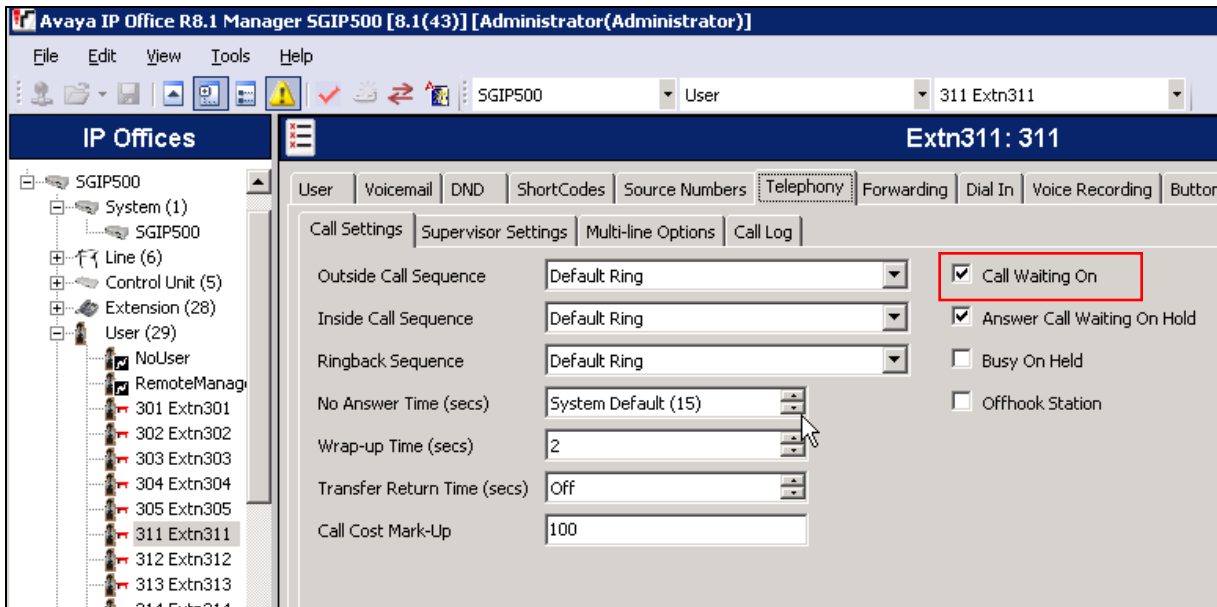
Step	Description
2.	<p>Select the SIP Registrar sub-tab, and enter a valid Domain Name for SIP endpoints to use for registration with IP Office. In the compliance testing, the Domain Name was left blank, so the LAN IP address was used for registration.</p> 

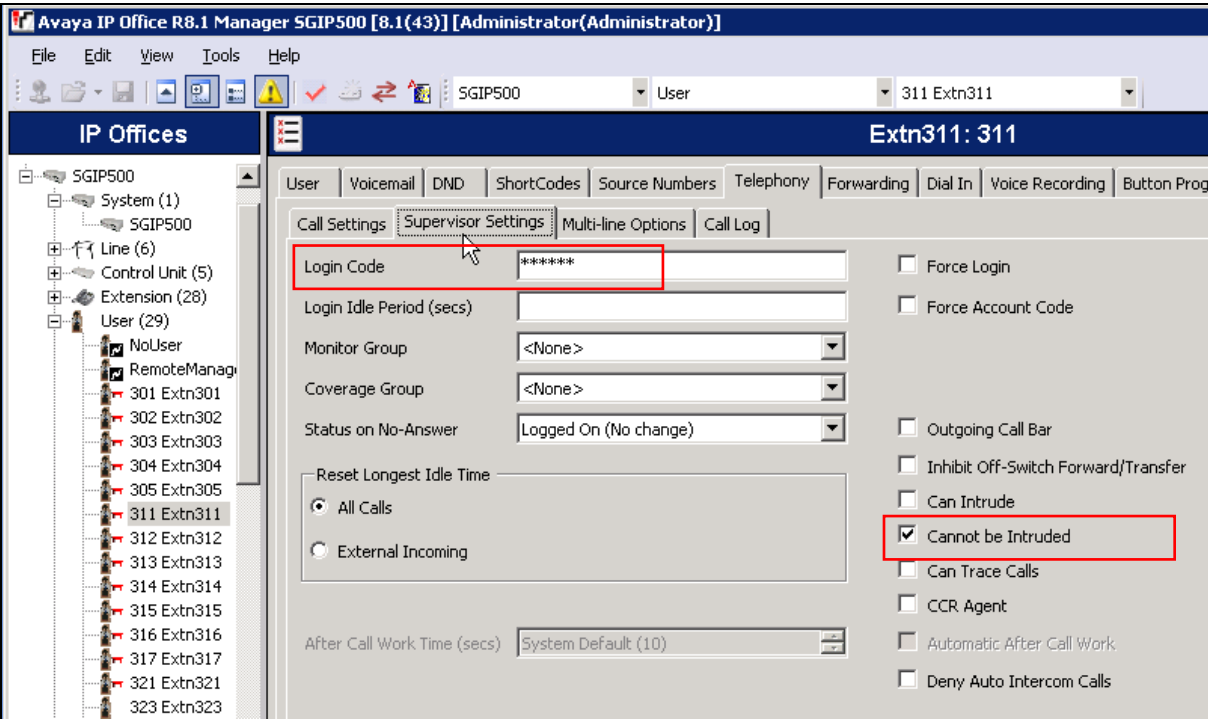
5.4. Administer SIP extensions

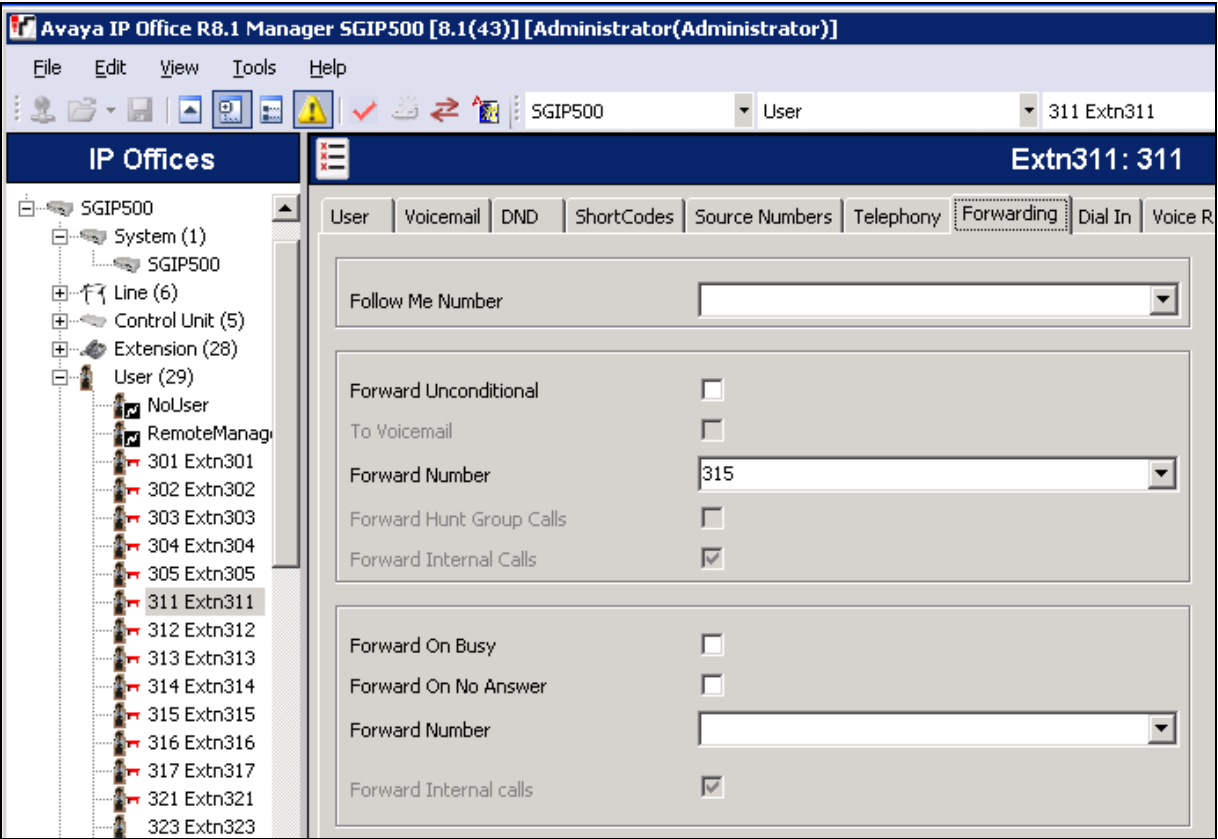
Step	Description
1.	<p>From the configuration tree in the left pane, right-click on Extension and select New → SIP Extension from the pop-up list to add a new SIP extension. Enter the desired digits for Base Extension, and check Force Authorization, as shown below. In this case, “311”. Repeat for extensions “312-314”.</p> 

5.5. Administer SIP users

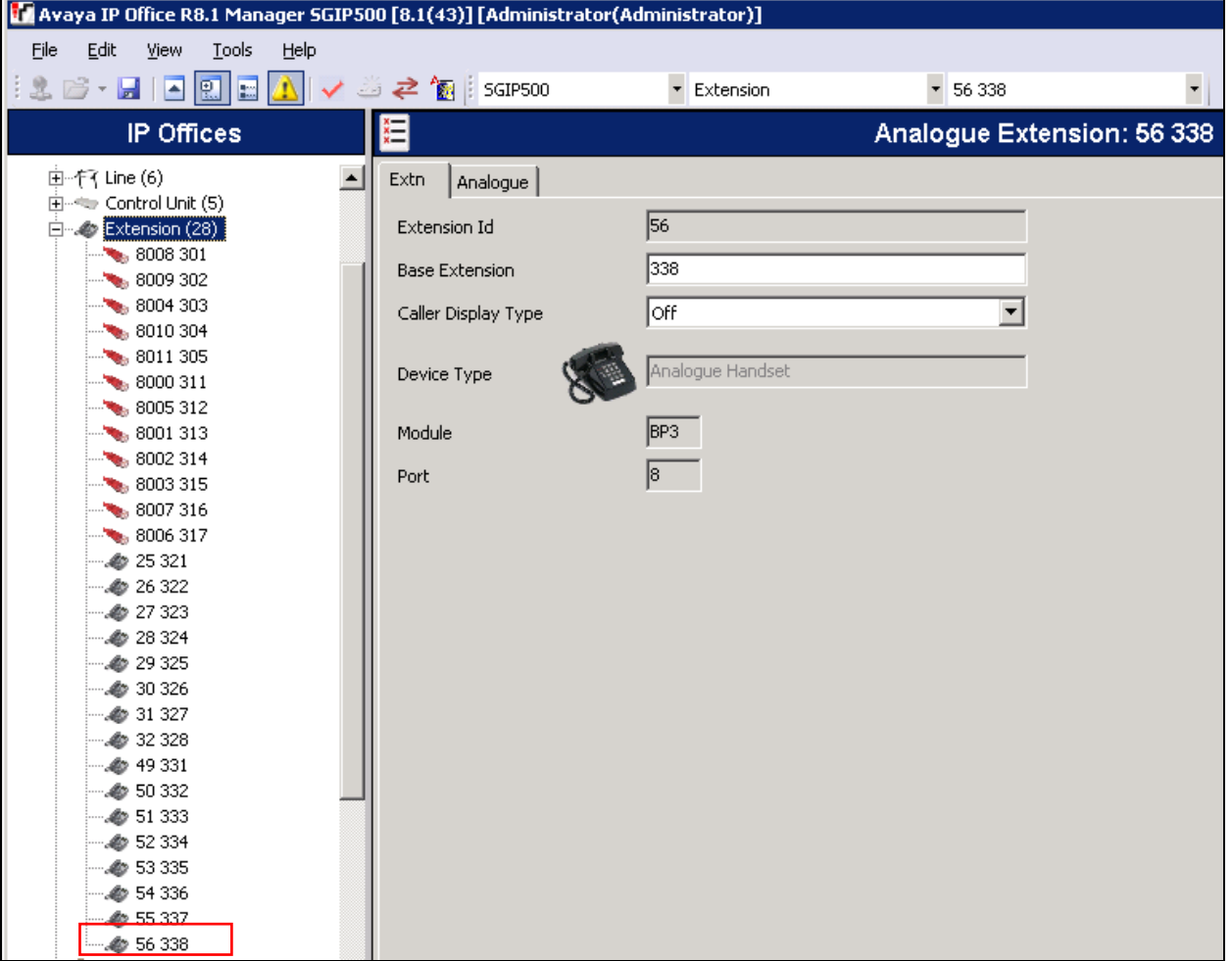
Step	Description
1.	<p>CyTrack Server registers with the SIP User which is used to queue calls redirected from incoming call hunt group by TAPI control. From the configuration tree in the left pane, right-click on User and select New from the pop-up list (not shown). Enter desired values for Name and Full Name. For Extension, enter the first Base Extension from Section 5.4. Enter desired Password and Confirm Password.</p>

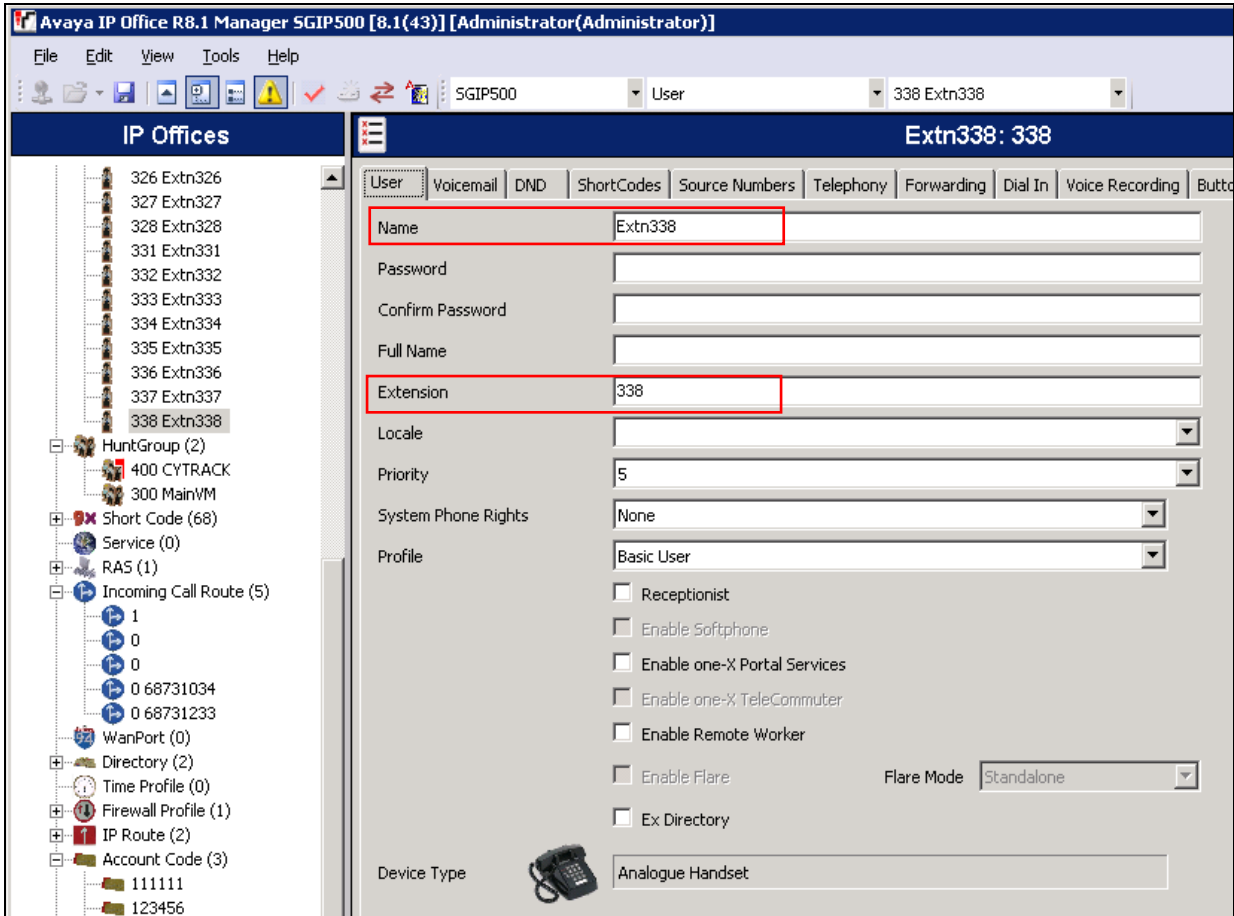
Step	Description
2.	<p>Select the Voicemail tab, and uncheck Voicemail On, as shown below.</p> 
3.	<p>Select the Telephony tab; followed by the Call Settings sub-tab. Check Call Waiting On, as shown below.</p> 

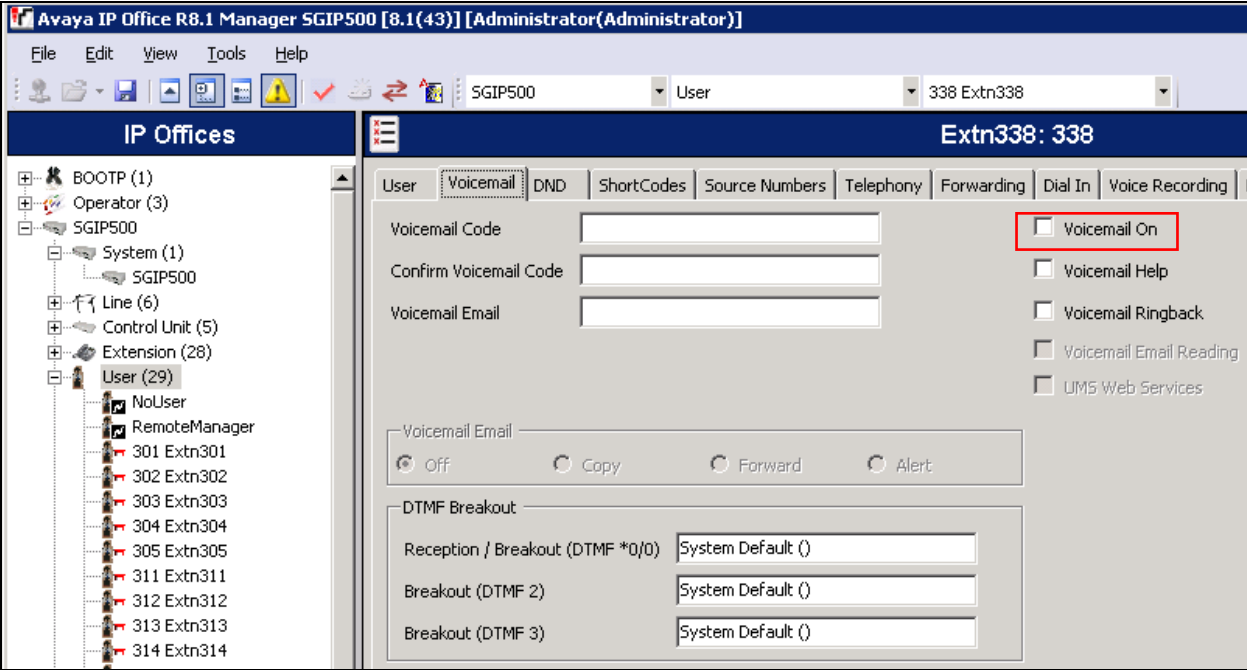
Step	Description
4.	<p>Select the Supervisor Settings sub-tab. Check the Cannot be Intruded field, as shown below. Specify the Login Code field, which will be used by CyTrack Server to log in the SIP User. This login code should be the same as the password set in Step 1 of this section.</p> 

Step	Description
5.	<p>Select the Forwarding tab, check that no forwarding or follow me feature is enabled or configured.</p>  <p>The screenshot shows the Avaya IP Office R8.1 Manager SGIP500 [8.1(43)] [Administrator/Administrator] interface. The 'Forwarding' tab is selected for extension 311. The 'Follow Me Number' field is empty. The 'Forward Unconditional' checkbox is unchecked. The 'Forward Number' is set to 315. The 'Forward Internal Calls' checkbox is checked. The 'Forward On Busy' and 'Forward On No Answer' checkboxes are unchecked. The 'Forward Number' field is empty. The 'Forward Internal calls' checkbox is checked.</p>

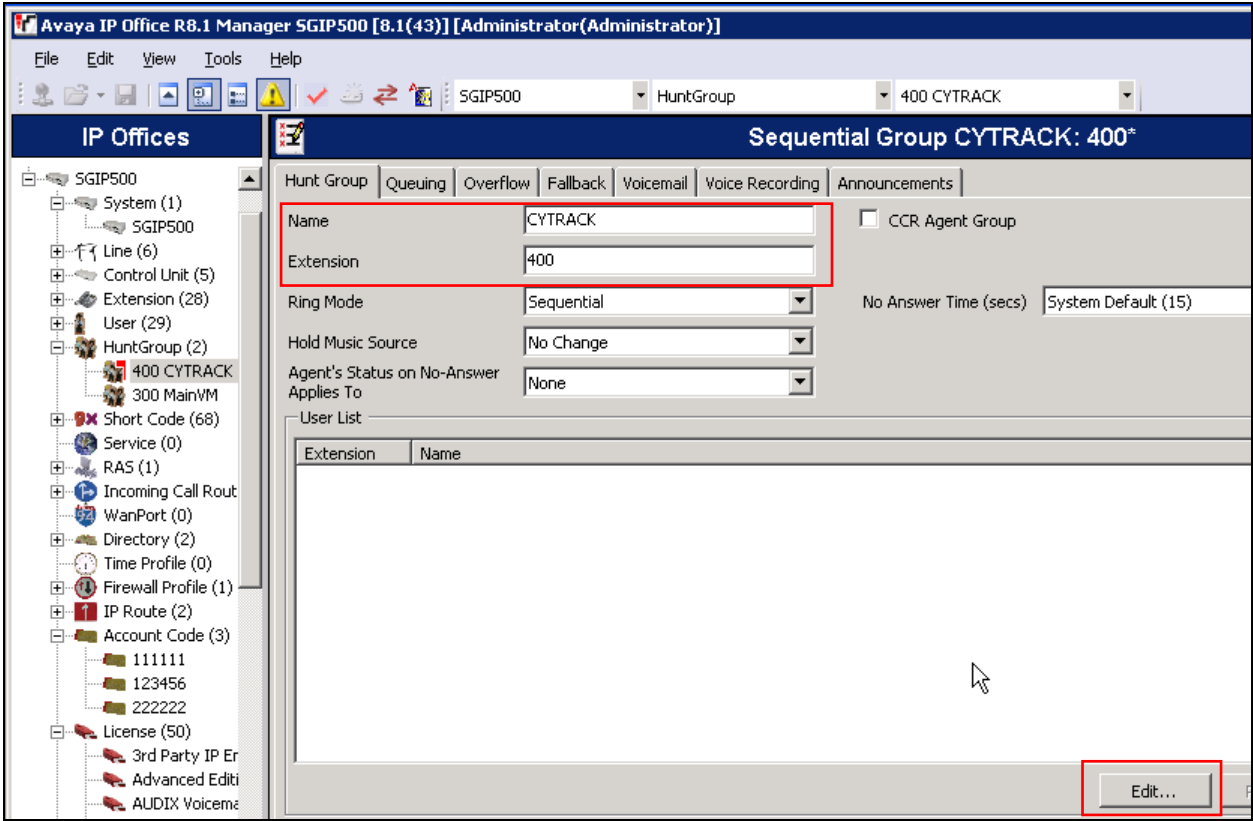
5.6. Configuring analog user as a member of Hunt Group

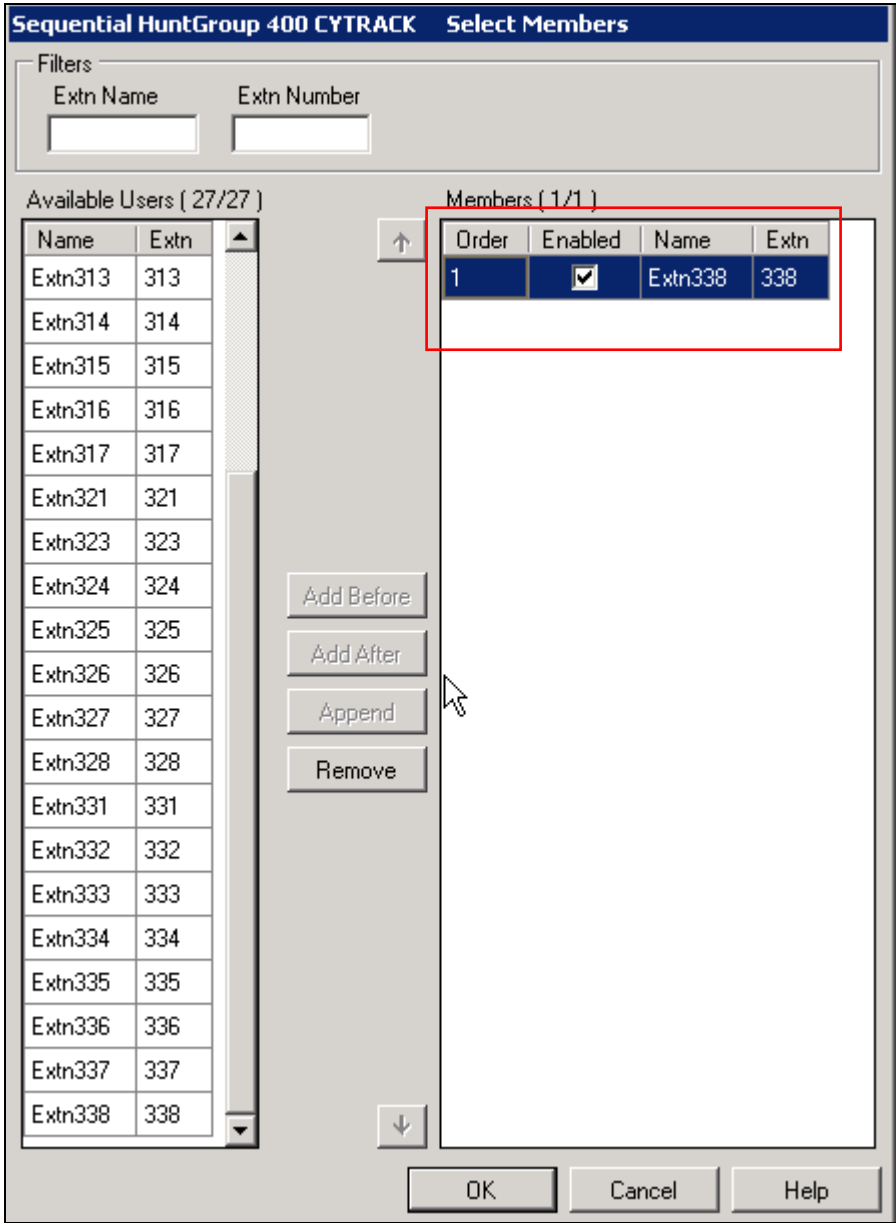
Step	Description
1.	<p>From the configuration tree in the left pane, select an analog extension which will be use as a member of call center hunt group. In this case, “338” and the settings are left as default.</p>  <p>The screenshot displays the Avaya IP Office R8.1 Manager SGIP500 [8.1(43)] [Administrator/Administrator] interface. The left pane, titled 'IP Offices', shows a configuration tree with 'Line (6)' expanded, revealing 'Control Unit (5)' and 'Extension (28)'. Under 'Extension (28)', a list of extensions is shown, with '56 338' selected and highlighted by a red rectangular box. The right pane, titled 'Analogue Extension: 56 338', shows the configuration for this extension. The 'Extn' tab is active, displaying fields for 'Extension Id' (56), 'Base Extension' (338), 'Caller Display Type' (Off), 'Device Type' (Analogue Handset), 'Module' (BP3), and 'Port' (8).</p>

Step	Description
2.	<p>From the configuration tree in the left pane, right click on Users and select New from the pop-up list to add a new user. Enter the desired values for the Name and Extension fields and retain the default values in the remaining fields.</p> 

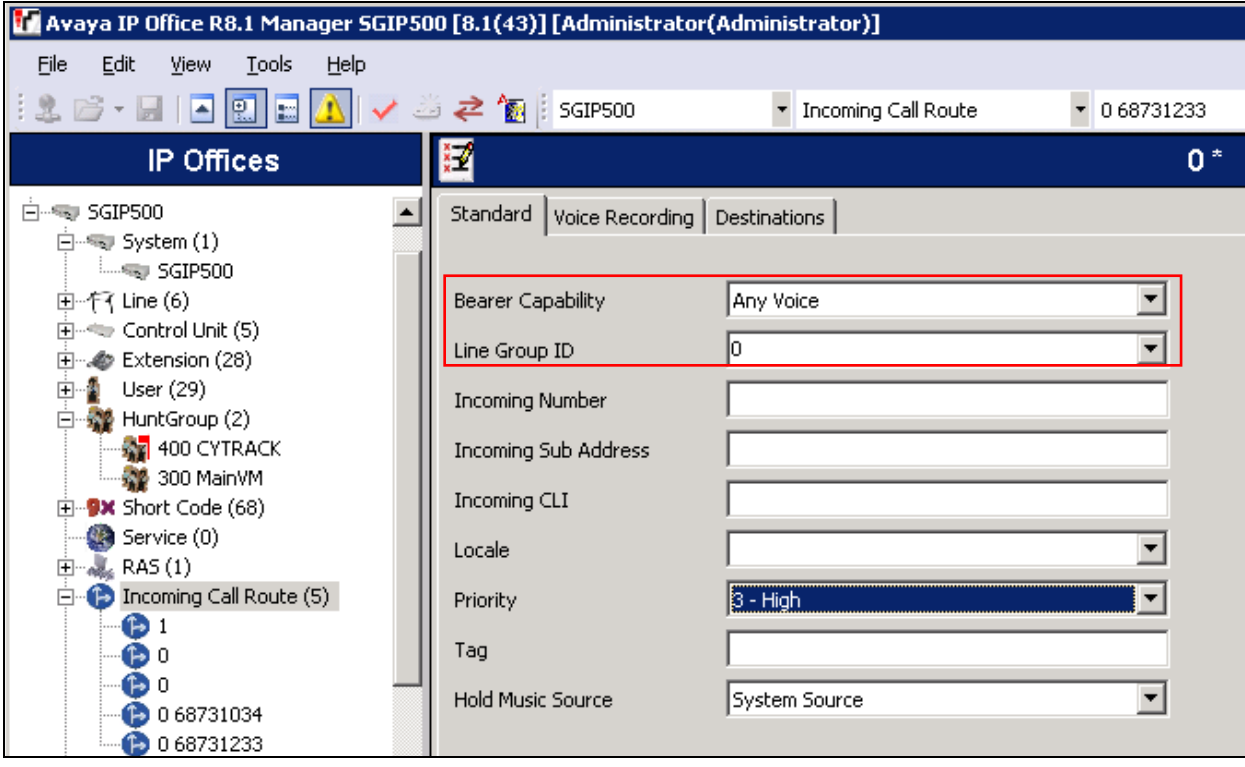
Step	Description
3	<p>In the Voicemail tab, ensure that the Voicemail on is unchecked.</p> 

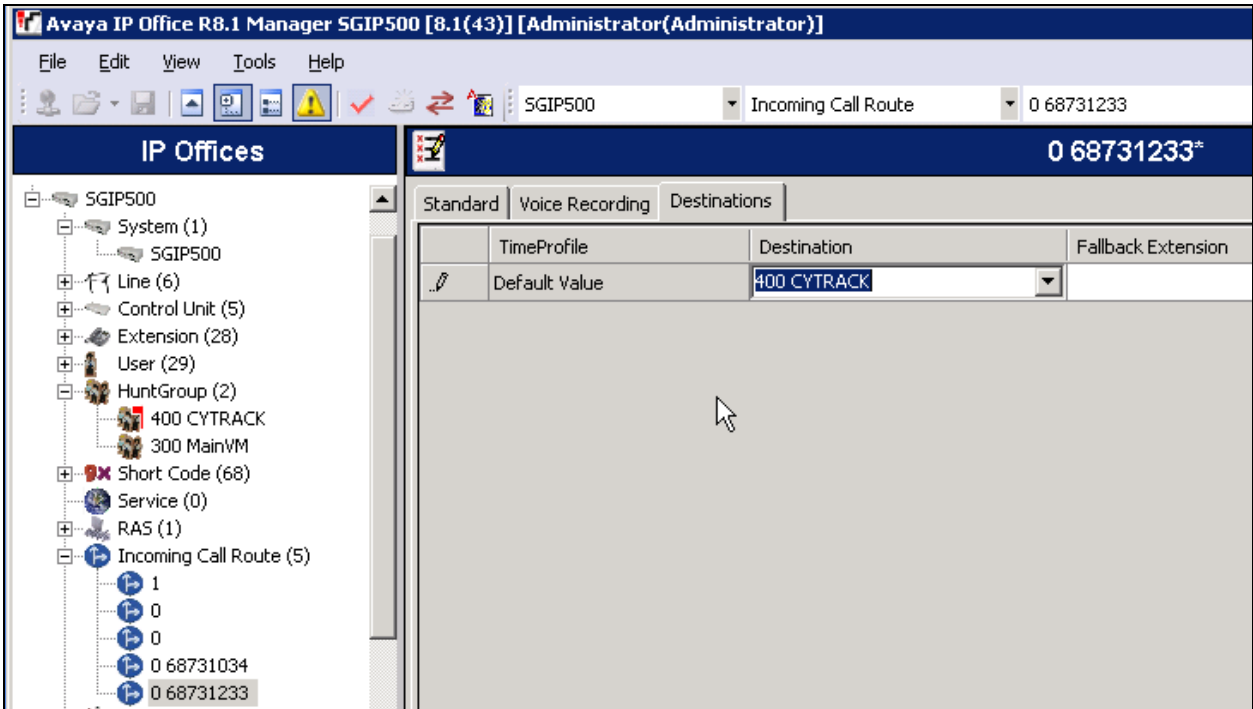
5.7. Configuring Call Center Hunt Group

Step	Description
1.	<p>This hunt group will be used to receive inbound calls to call queuing for a typical call center environment. From the configuration tree in the left pane, right-click on HuntGroup and select New from the pop-up list to add a new hunt group. Enter desired values for the Name and Extension fields, and retain the default values in the remaining fields. Click on Edit in the User List section to add members.</p> 

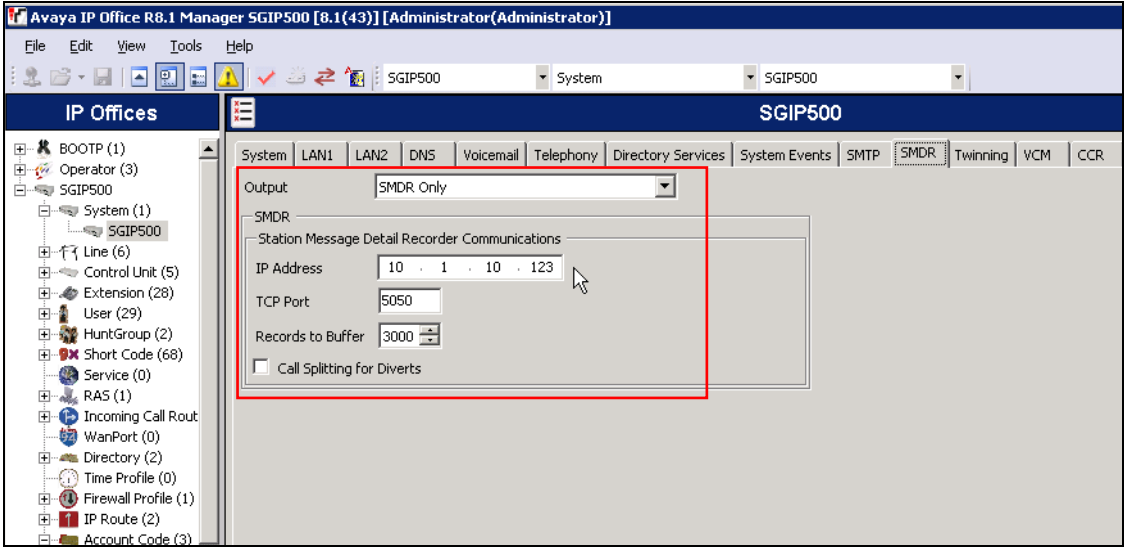
Step	Description
2.	<p>Select an analog extension 338 and Append to the Members list.</p>  <p>The screenshot shows a dialog box titled "Sequential HuntGroup 400 CYTRACK Select Members". It has a "Filters" section with "Extn Name" and "Extn Number" input fields. Below this is a list of "Available Users (27/27)" with columns "Name" and "Extn". The list includes extensions from 313 to 338. To the right of this list are buttons: "Add Before", "Add After", "Append", and "Remove". Further right is a "Members (1/1)" list with columns "Order", "Enabled", "Name", and "Extn". This list contains one entry: Order 1, Enabled (checked), Name Extn338, and Extn 338. At the bottom of the dialog are "OK", "Cancel", and "Help" buttons. A mouse cursor is pointing at the "Append" button.</p>

5.8. Administer incoming call route

Step	Description
1.	<p>From the configuration tree in the left pane, right-click on Incoming Call Route and select New from the pop-up list to add a new incoming call route. Select Any Voice for the Bearer Capability and Priority to be 3-High as this is incoming trunk for receiving service calls. The Line Group ID will depend on what trunk is setup for receiving incoming calls. In this case, ISDN PRI trunk (Line Group ID 0) is selected and assumed to be configured.</p>  <p>The screenshot shows the Avaya IP Office R8.1 Manager SGIP500 [8.1(43)] [Administrator(Administrator)] interface. The left pane displays the configuration tree with the following structure:</p> <ul style="list-style-type: none"> SGIP500 <ul style="list-style-type: none"> System (1) <ul style="list-style-type: none"> SGIP500 Line (6) Control Unit (5) Extension (28) User (29) HuntGroup (2) <ul style="list-style-type: none"> 400 CYTRACK 300 MainVM Short Code (68) Service (0) RAS (1) Incoming Call Route (5) <ul style="list-style-type: none"> 1 0 0 0 68731034 0 68731233 <p>The right pane shows the configuration for a new incoming call route. The 'Bearer Capability' is set to 'Any Voice' and 'Line Group ID' is set to '0'. The 'Priority' is set to '3 - High'. Other fields include 'Incoming Number', 'Incoming Sub Address', 'Incoming CLI', 'Locale', 'Tag', and 'Hold Music Source' (System Source).</p>

Step	Description
2.	<p>Select Destinations tab and pick the hunt group 400 created in Section 5.7 as the Destination.</p>  <p>The screenshot shows the Avaya IP Office R8.1 Manager interface. The title bar indicates the system is SGIP500 [8.1(43)] and the user is Administrator/Administrator. The menu bar includes File, Edit, View, Tools, and Help. The toolbar contains various icons for system management. The main window is divided into two panes. The left pane, titled 'IP Offices', displays a hierarchical tree view of the system components. The right pane, titled 'Destinations', shows a table with columns for TimeProfile, Destination, and Fallback Extension. The 'Destination' dropdown menu is open, and '400 CYTRACK' is selected. The 'Fallback Extension' field is empty. The 'Default Value' row is highlighted.</p>

5.9. Administer SMDR

Step	Description
1.	<p>From the configuration tree in the left pane, expand System on the left navigation menu. Select the SGIP500 system and click the SMDR tab on the right panel and configure the settings as follows:</p> <ul style="list-style-type: none"> • Output: SMDR Only • IP Address: IP address of the CyTrack Server • TCP Port: 5050 (default). This must agree with the settings on CyReport in Section 6.2 Step 21. • Records to Buffer: 3000 • Call Splitting for Diverts: Unchecked in this case 

6. Configure CyTrack CyCC Multi-Media Contact Centre Solution

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

- Install and configure Avaya TAPI driver
- Configure CyTrack Server
- Configure CyTrack CyDesk on the PCs

Please note that not all the configured details are mentioned. Only those essential for setup and interface with Avaya are stated. 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 9**.

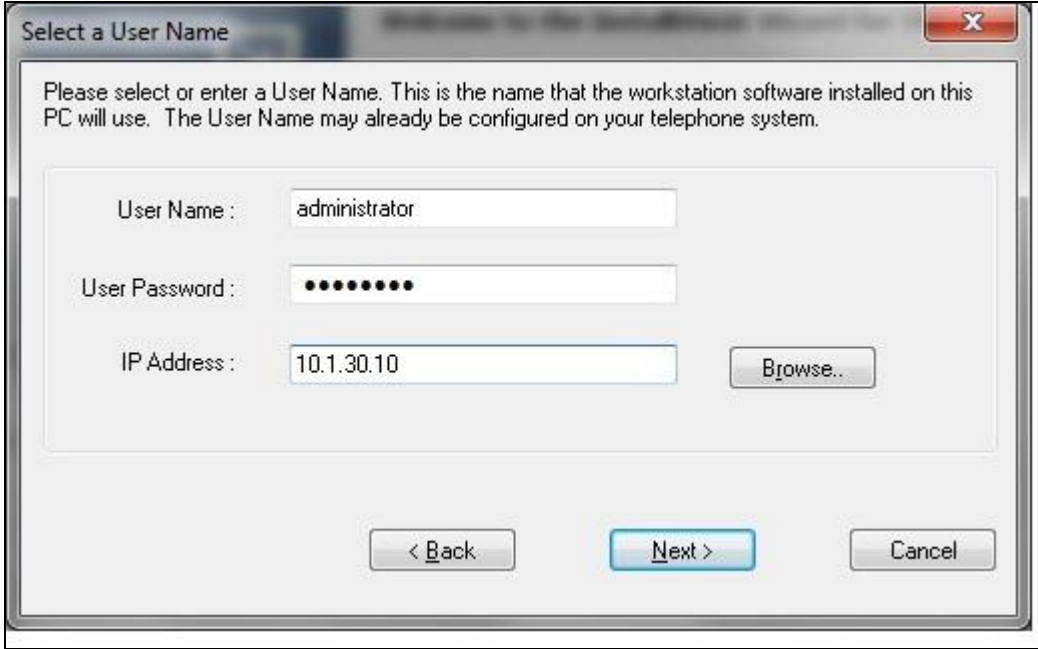
6.1. Install and configure Avaya TAPI Driver

This section provides the procedures for configuring the Avaya TAPI Driver on the CyTrack Server. The procedures include the following areas:

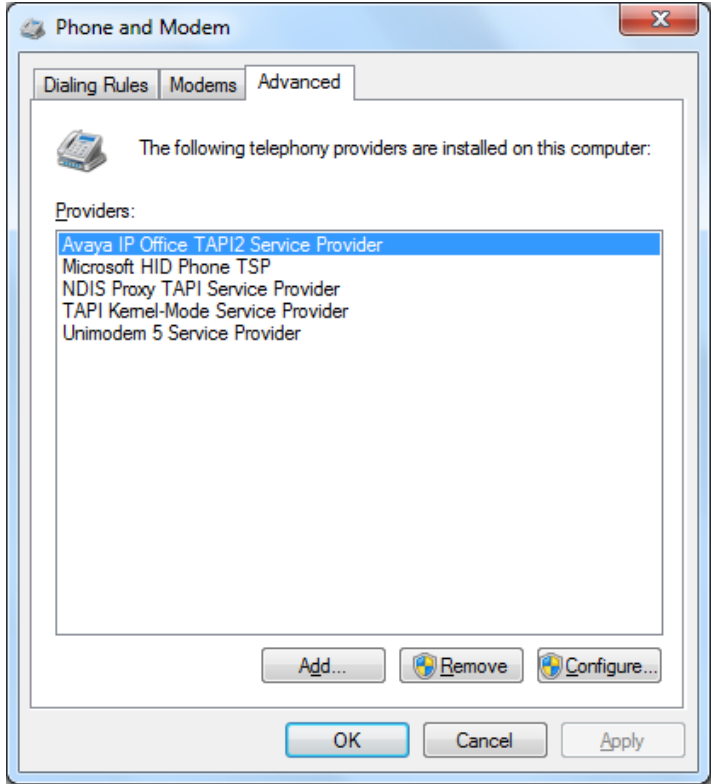
- Install Avaya TAPI driver
- Configure Avaya TAPI driver

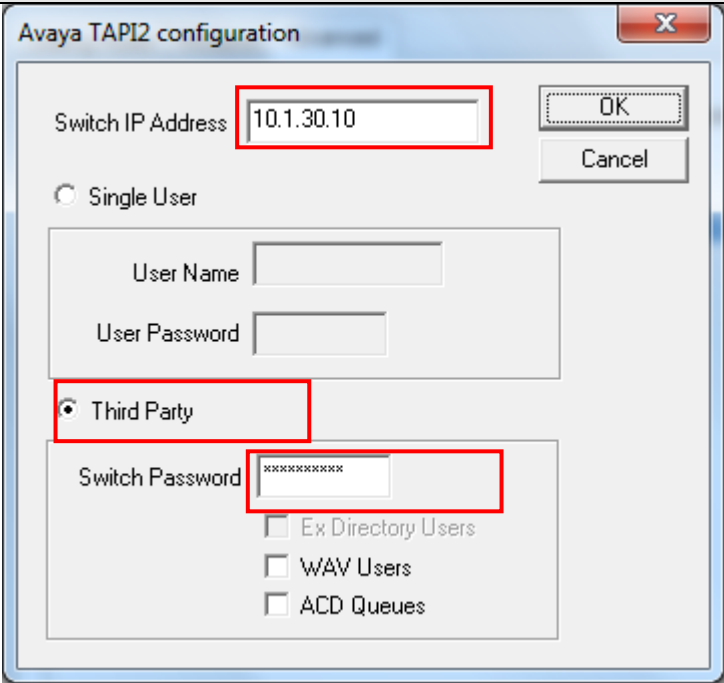
6.1.1. Install Avaya TAPI Driver

Avaya TAPI driver can be obtained from the IP Office User CD which is also available on Avaya Support portal at <http://support.avaya.com/>. The latest driver is used for installation on the CyTrack Server in this compliance testing.

Step	Description
1.	<p>Log into the CyTrack Server with administrative privileges and double click the driver installation program “tapiQ2Maint2012.exe”. You may need to enter the following information if the IP Office is not detected. Click Next to complete the installation of the TAPI driver. At the InstallShield Wizard Complete window, click Finish (not shown).</p> 

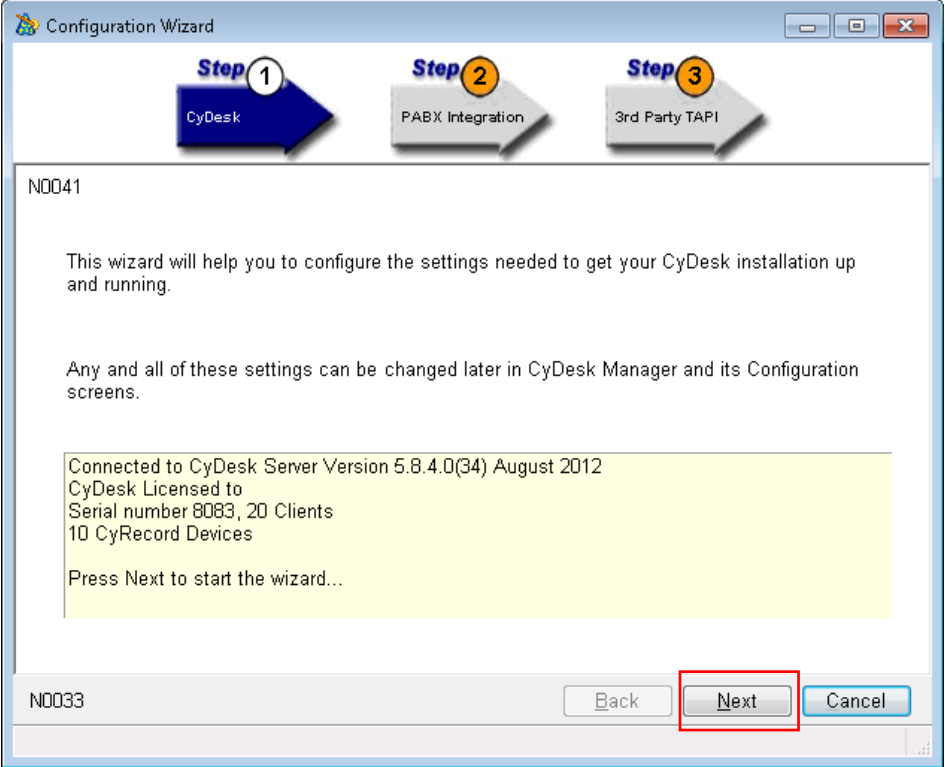
6.1.2. Configure Avaya TAPI Driver

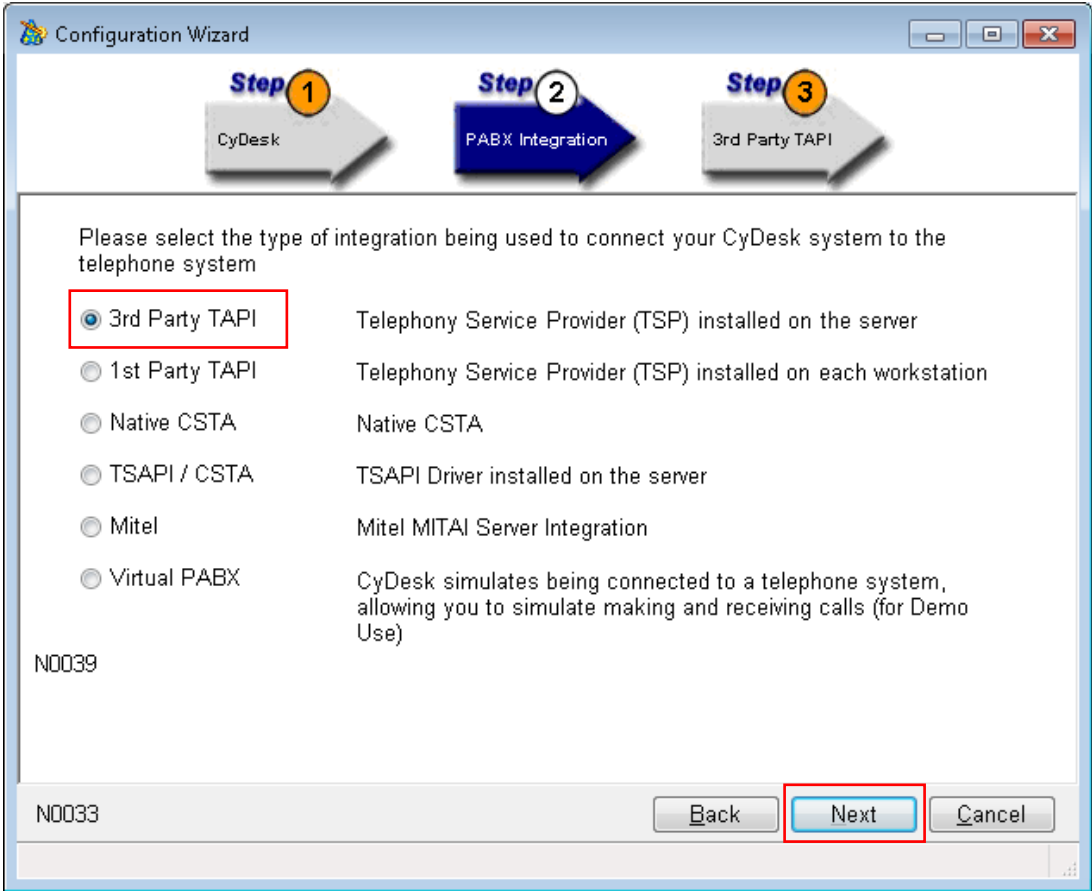
Step	Description
1.	<p>Go to the Windows Control Panel and open Phone and Modem Options. Click the Advanced tab, select Avaya IP Office TAPI2 Service Provider and click Configure....</p> 
2.	<p>In the Avaya TAPI2 configuration window that is displayed, set Switch IP Address to the IP address of Avaya IP Office, select Third Party and set Switch Password to the IP Office System password provided by the administrator. Click OK.</p>

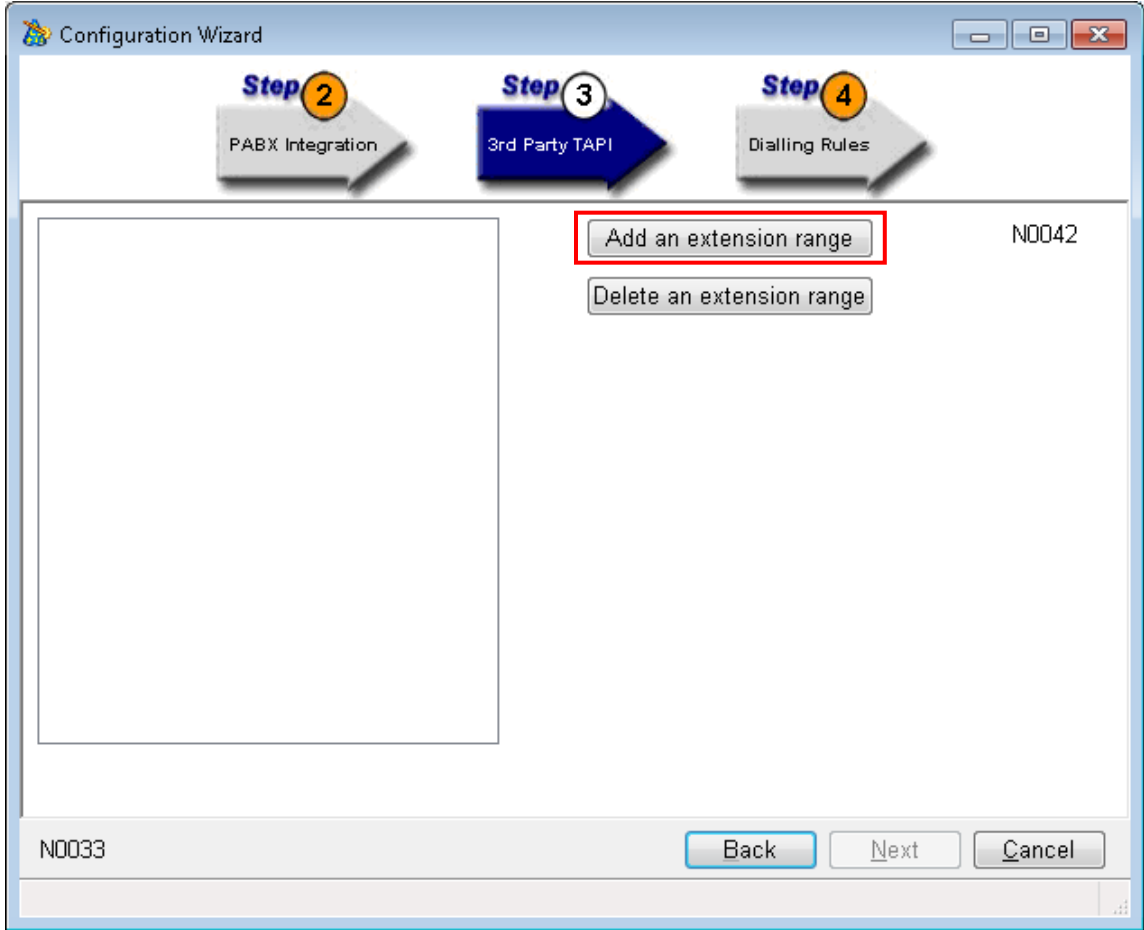
Step	Description
	
3.	In the Phone and Modem Options window, click OK . Reboot the server for the new changes to take effect.

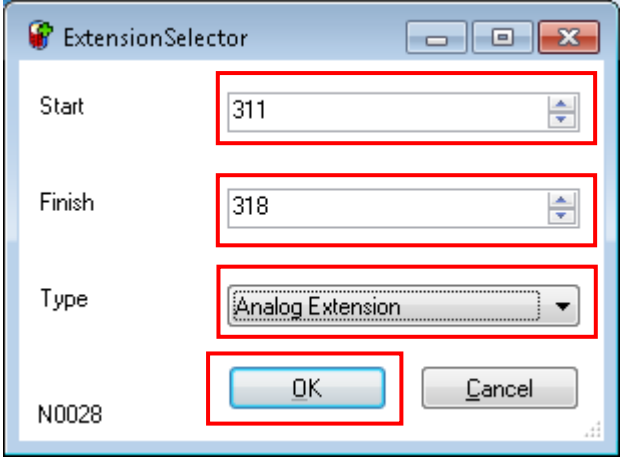
6.2. Configure CyTrack Server

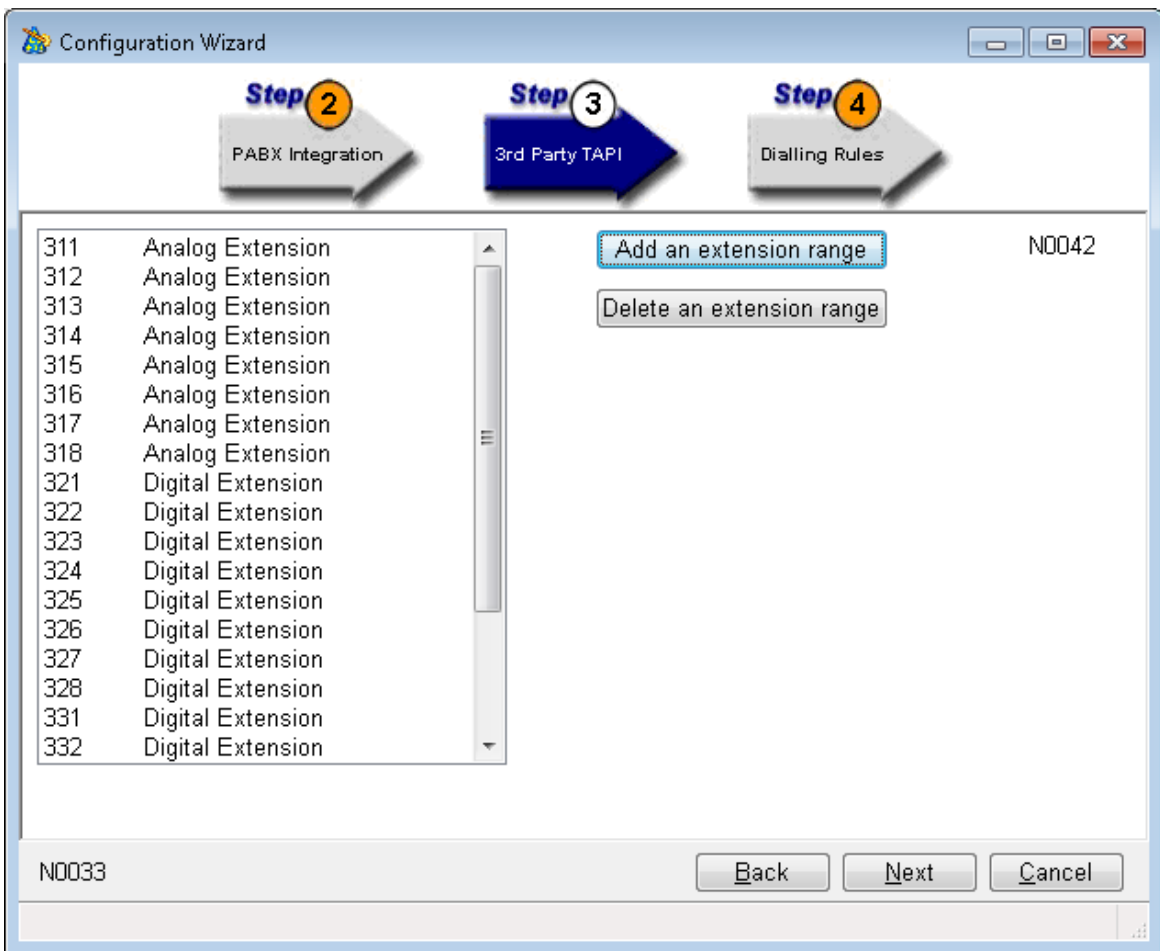
The initial configuration of the CyTrack Server is done using the configuration wizard. The complete steps required to configure CyTrack Server for service is beyond the scope of this document. Refer to CyTrack documentation in reference [2] in **Section 9** for details.

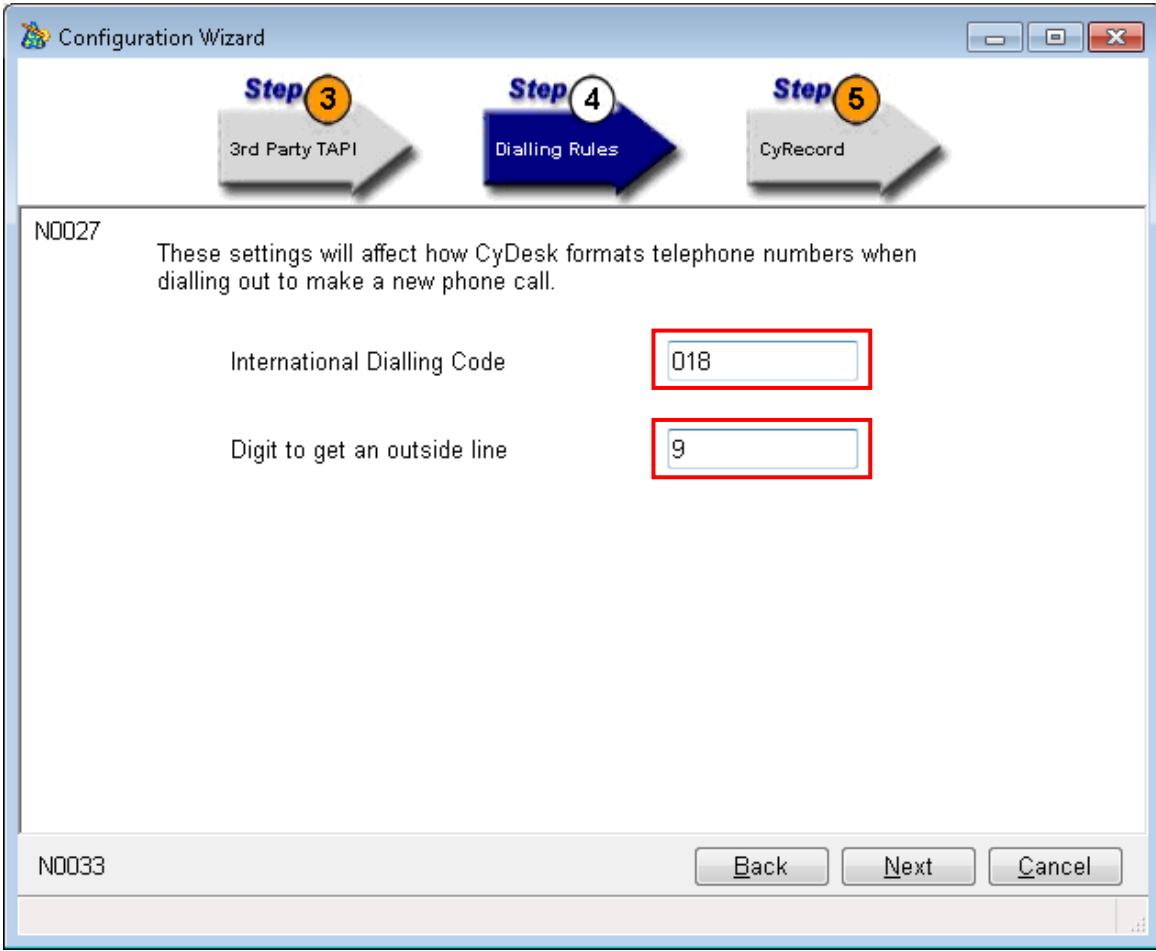
Step	Description
1.	<p>Log into the CyTrack Server with administrative privileges. Browse to the folder which the installation software is located and double-click CyDesk 5.8 SP4.exe to launch the configuration wizard and select “Server” installation type. Click Next to continue.</p> 

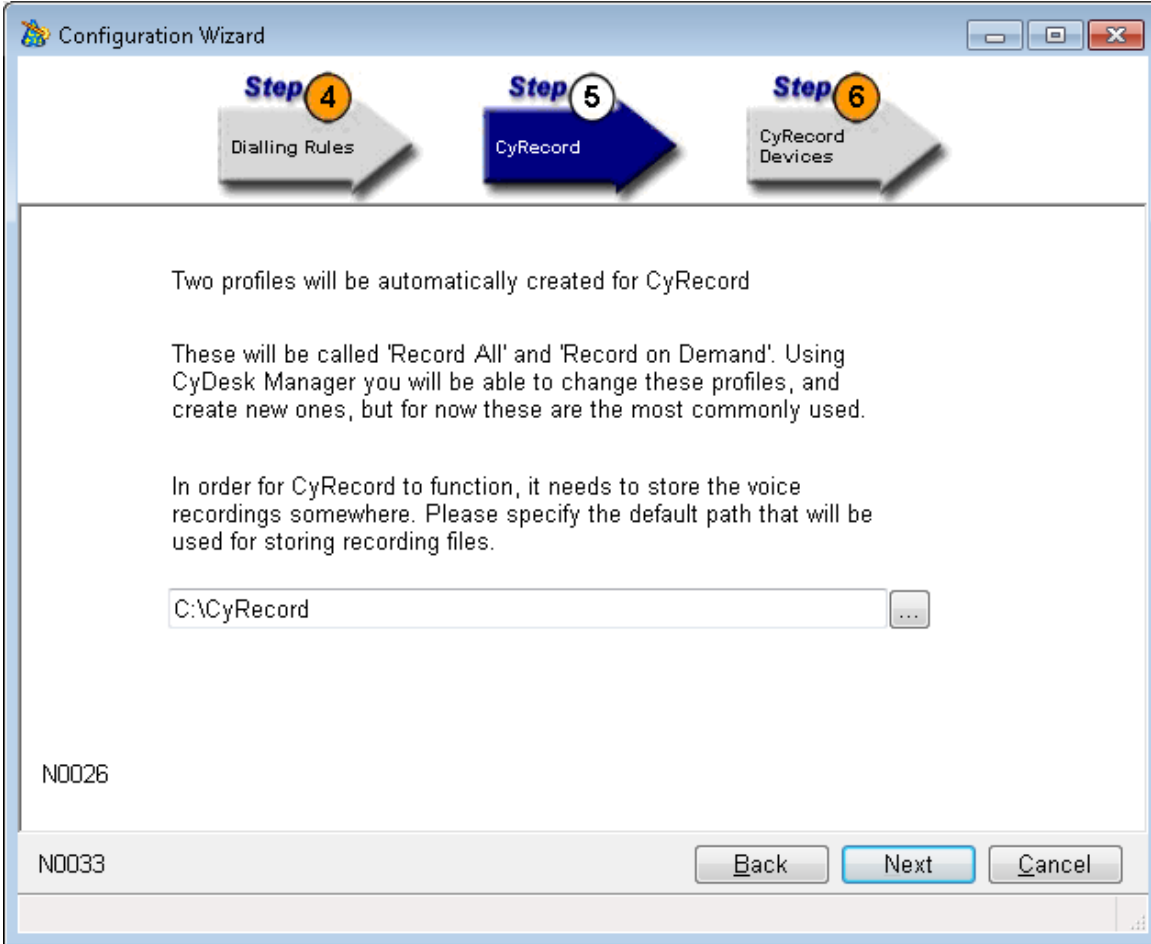
Step	Description
2.	<p>Select 3rd Party TAPI as the type of integration and click Next to continue.</p>  <p>Please select the type of integration being used to connect your CyDesk system to the telephone system</p> <ul style="list-style-type: none"> <input checked="" type="radio"/> 3rd Party TAPI Telephony Service Provider (TSP) installed on the server <input type="radio"/> 1st Party TAPI Telephony Service Provider (TSP) installed on each workstation <input type="radio"/> Native CSTA Native CSTA <input type="radio"/> TSAPI / CSTA TSAPI Driver installed on the server <input type="radio"/> Mitel Mitel MITAI Server Integration <input type="radio"/> Virtual PABX CyDesk simulates being connected to a telephone system, allowing you to simulate making and receiving calls (for Demo Use) <p>N0039</p> <p>N0033 Back Next Cancel</p>

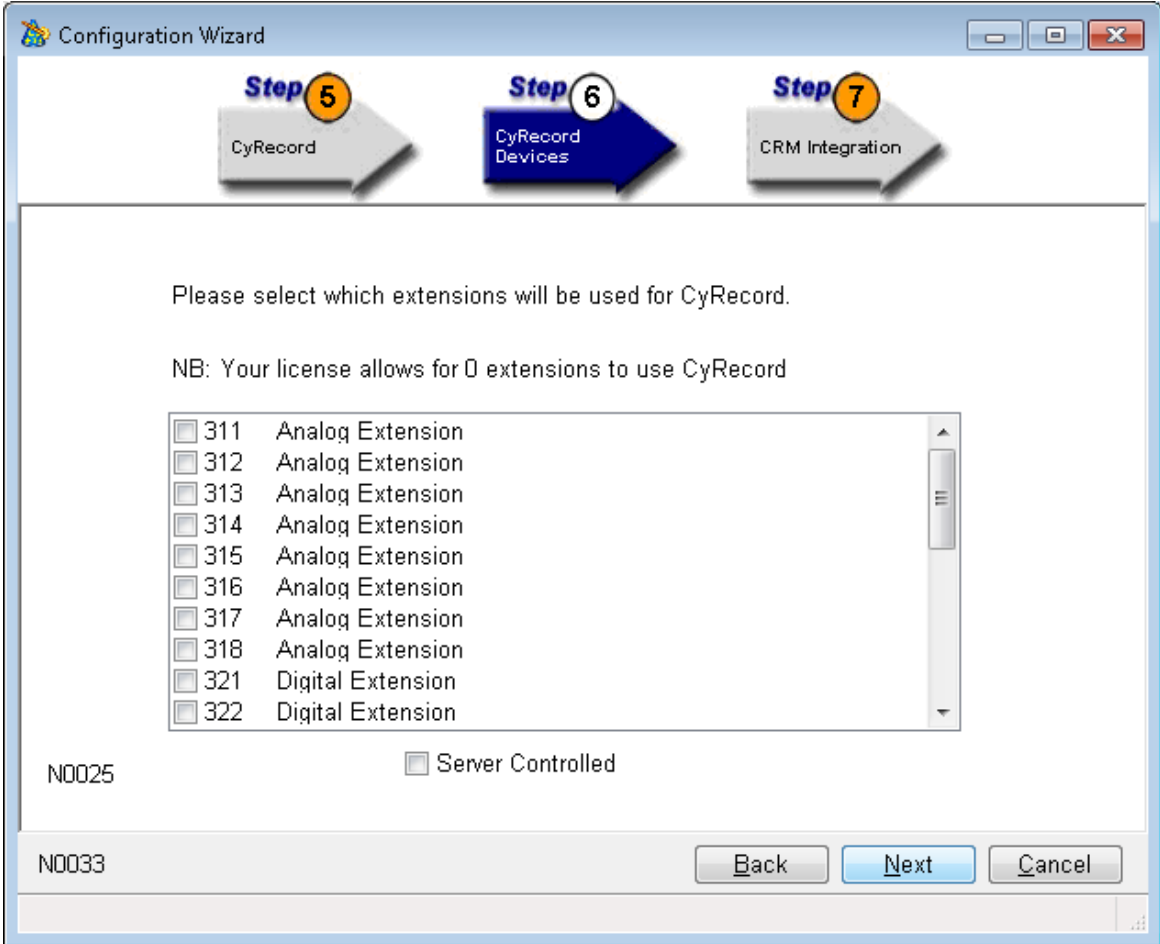
Step	Description
3.	<p>To define the range of extensions that CyTrack Server will use, click Add an extension range.</p> 

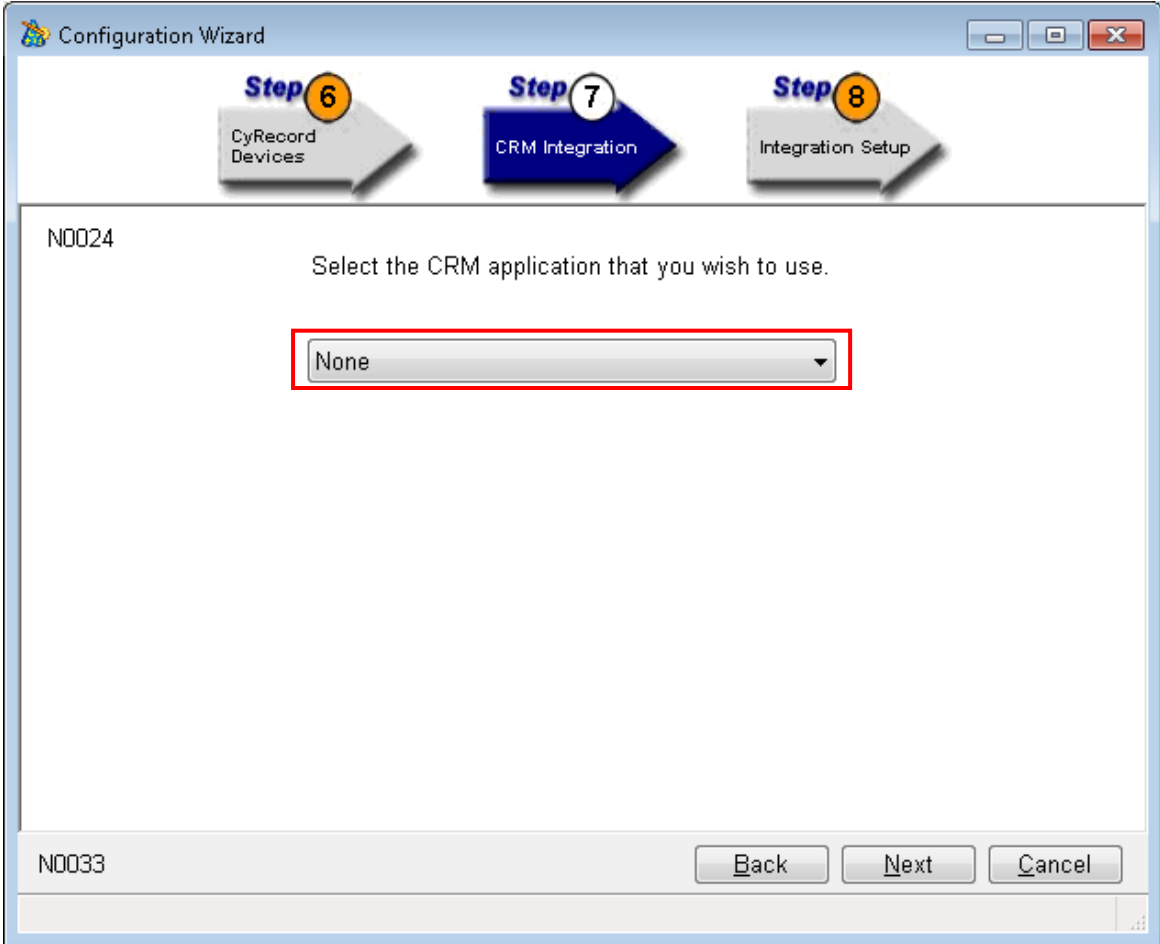
Step	Description
4.	<p>Enter the range of extensions by entering the appropriate values for Start and Finish. Note that for both the Avaya H.323 and Digital telephones, the Type field should be set to Digital Extension. Click OK.</p> <p>Repeat Steps 3 and 4 to add another extension with the Type set to Analog Extension. Note that SIP extensions are treated as analog extensions in the configurations.</p> 

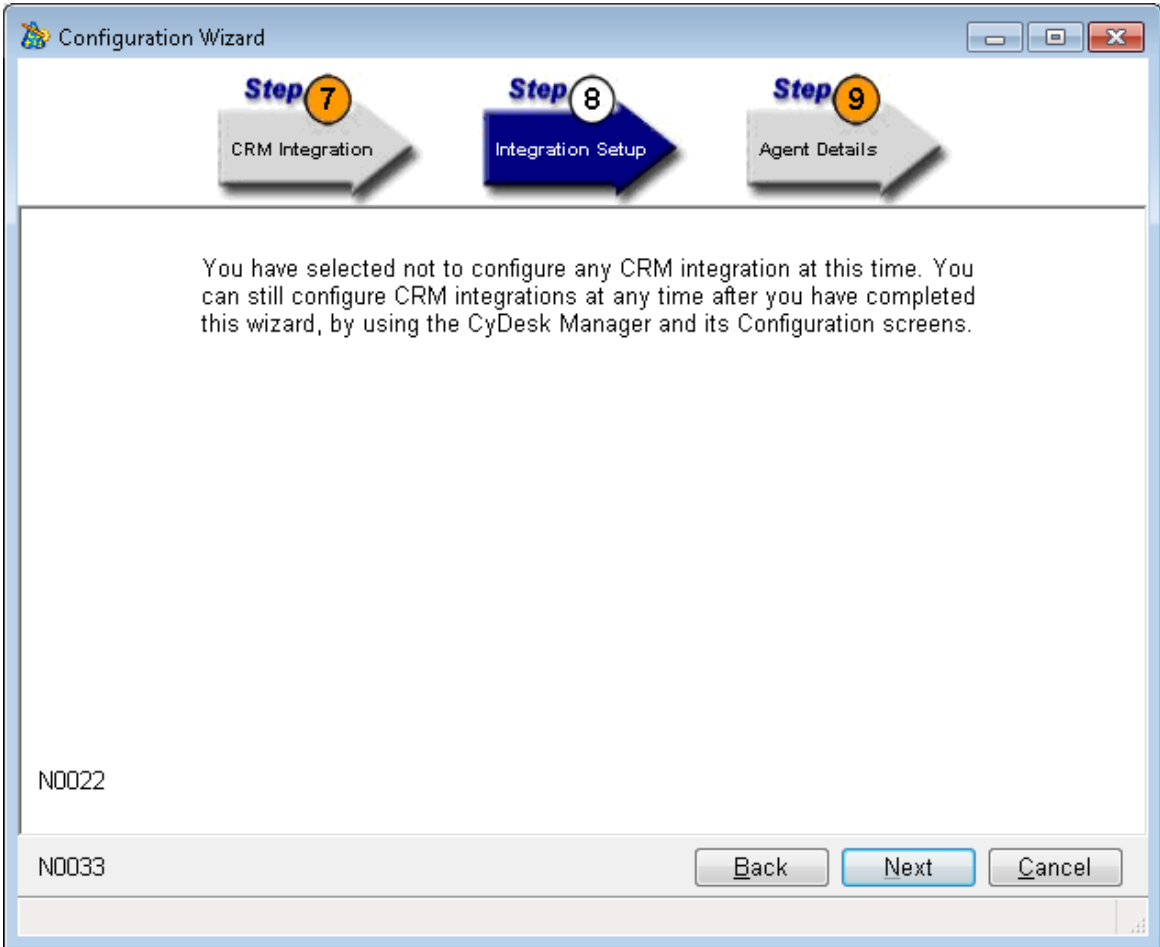
Step	Description
5.	<p>In this configuration, the following extensions are defined. Click Next to continue.</p>  <p>The screenshot shows the 'Configuration Wizard' window at Step 3, '3rd Party TAPI'. The window has a title bar with standard Windows controls. Below the title bar, there are three steps represented by arrows: Step 2 'PABX Integration' (grey), Step 3 '3rd Party TAPI' (blue and active), and Step 4 'Dialling Rules' (grey). The main area is divided into two sections. The left section contains a list of extensions: 311 Analog Extension, 312 Analog Extension, 313 Analog Extension, 314 Analog Extension, 315 Analog Extension, 316 Analog Extension, 317 Analog Extension, 318 Analog Extension, 321 Digital Extension, 322 Digital Extension, 323 Digital Extension, 324 Digital Extension, 325 Digital Extension, 326 Digital Extension, 327 Digital Extension, 328 Digital Extension, 331 Digital Extension, and 332 Digital Extension. The right section has two buttons: 'Add an extension range' (highlighted with a blue border) and 'Delete an extension range'. To the right of these buttons is the text 'N0042'. At the bottom of the window, there is a text field containing 'N0033' and three buttons: 'Back', 'Next', and 'Cancel'.</p>

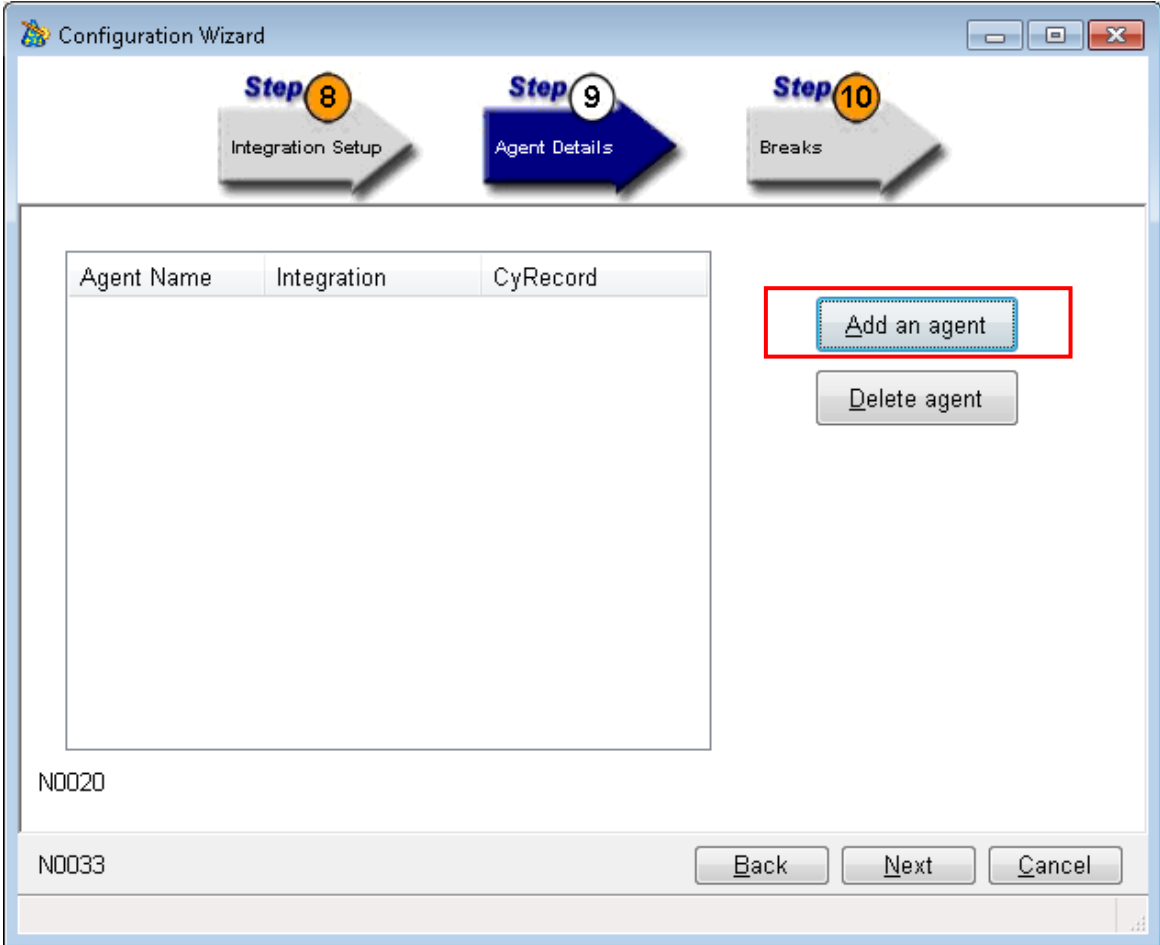
Step	Description
6.	<p>Enter the values for the fields International Dialling Code and Digit to get an outside line. Consult the Avaya IP Office administrator for the appropriate values. Click Next to continue.</p>  <p>Configuration Wizard</p> <p>Step 3 3rd Party TAPI Step 4 Dialling Rules Step 5 CyRecord</p> <p>N0027</p> <p>These settings will affect how CyDesk formats telephone numbers when dialling out to make a new phone call.</p> <p>International Dialling Code 018</p> <p>Digit to get an outside line 9</p> <p>N0033 Back Next Cancel</p>

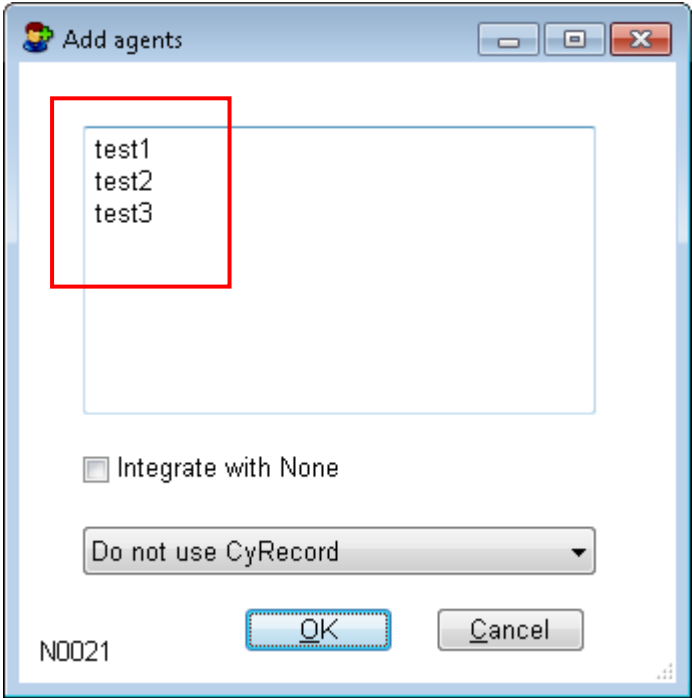
Step	Description
7.	<p>For the configuration of CyRecord, accept the default path for the storing of recording files and click Next to continue.</p>  <p>Configuration Wizard</p> <p>Step 4 Dialling Rules Step 5 CyRecord Step 6 CyRecord Devices</p> <p>Two profiles will be automatically created for CyRecord</p> <p>These will be called 'Record All' and 'Record on Demand'. Using CyDesk Manager you will be able to change these profiles, and create new ones, but for now these are the most commonly used.</p> <p>In order for CyRecord to function, it needs to store the voice recordings somewhere. Please specify the default path that will be used for storing recording files.</p> <p>C:\CyRecord</p> <p>N0026</p> <p>N0033</p> <p>Back Next Cancel</p>

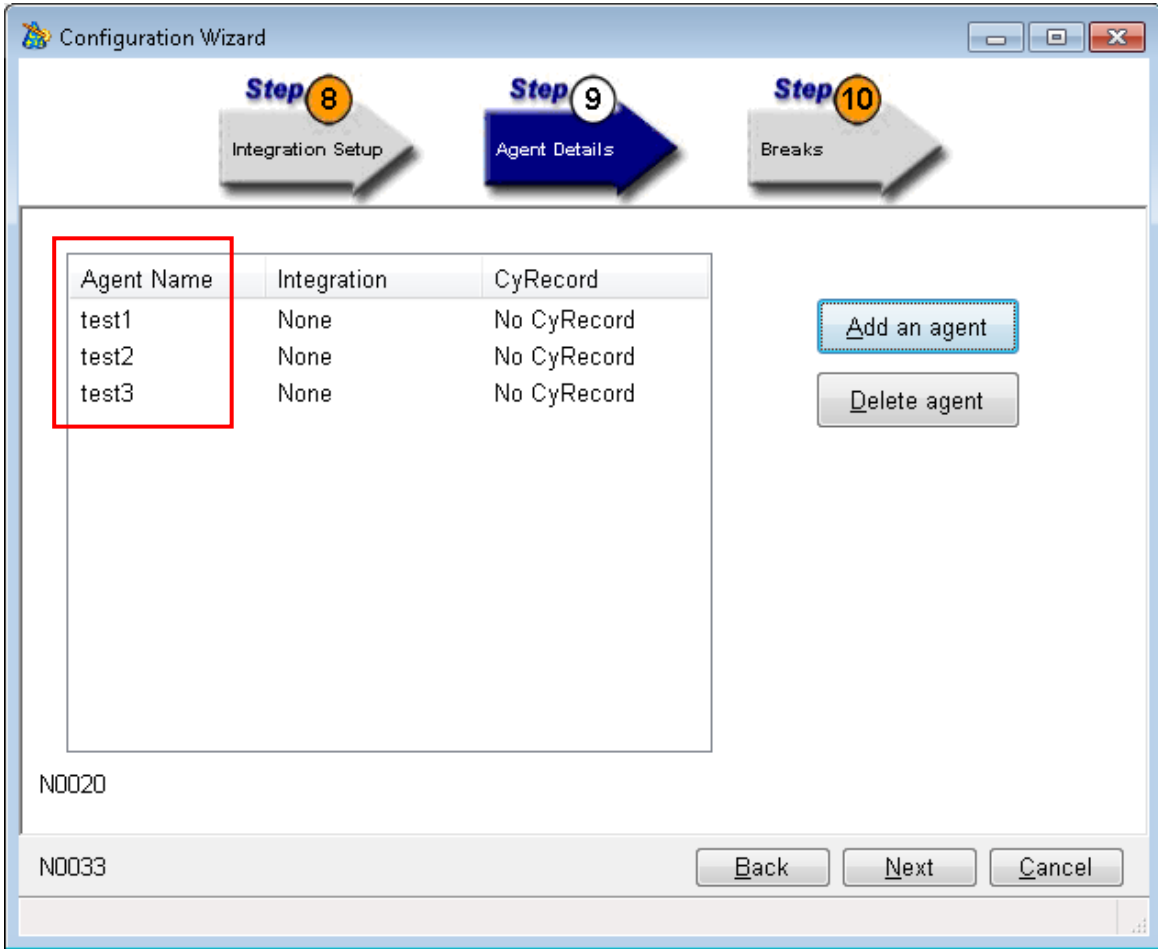
Step	Description
8.	<p>Select the extensions that will be used for CyRecord (not shown). These extensions can be used once the license has been loaded. Click Next to continue.</p> 

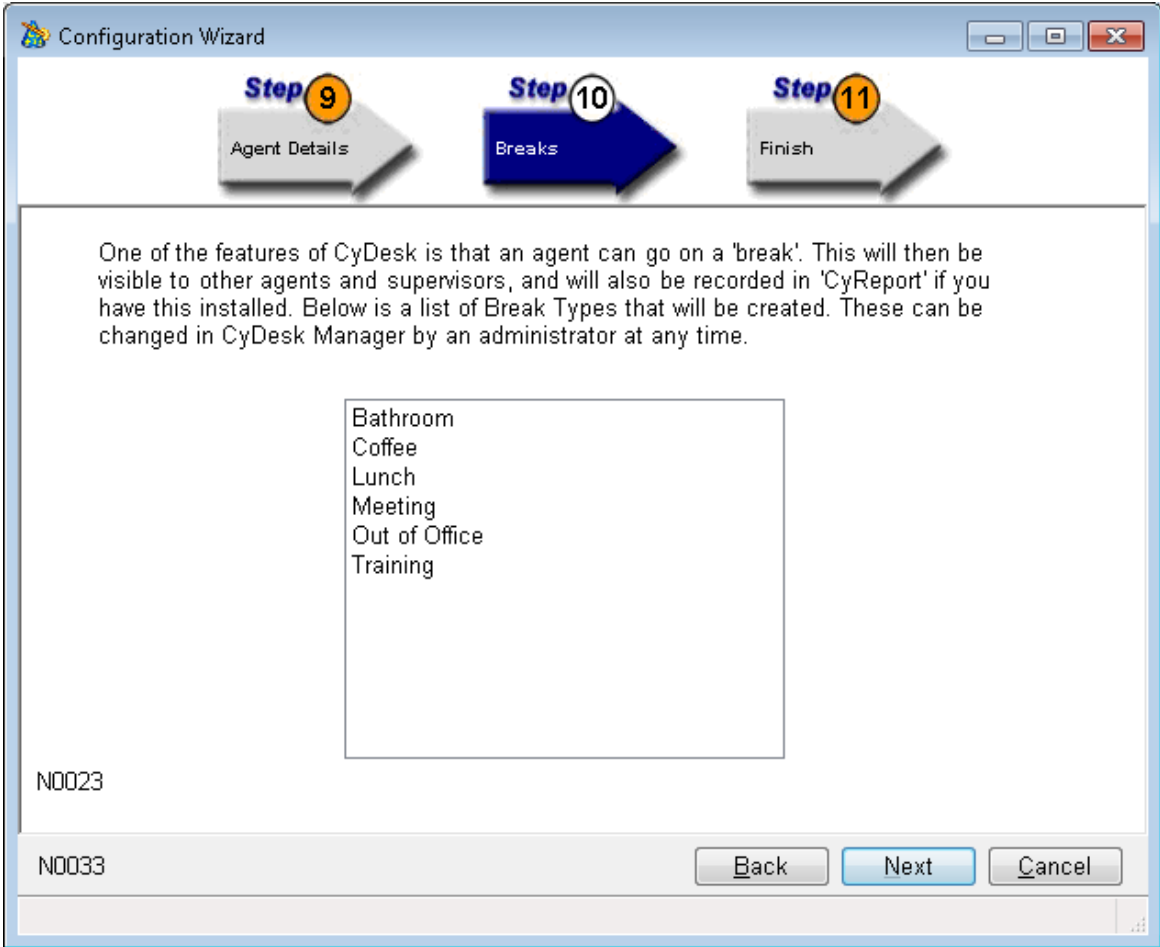
Step	Description
9.	<p data-bbox="293 233 1403 302">CyTrack Server supports integration with several CRM applications out of the box. As this is not the focus of the testing, select None. Click Next to continue.</p> 

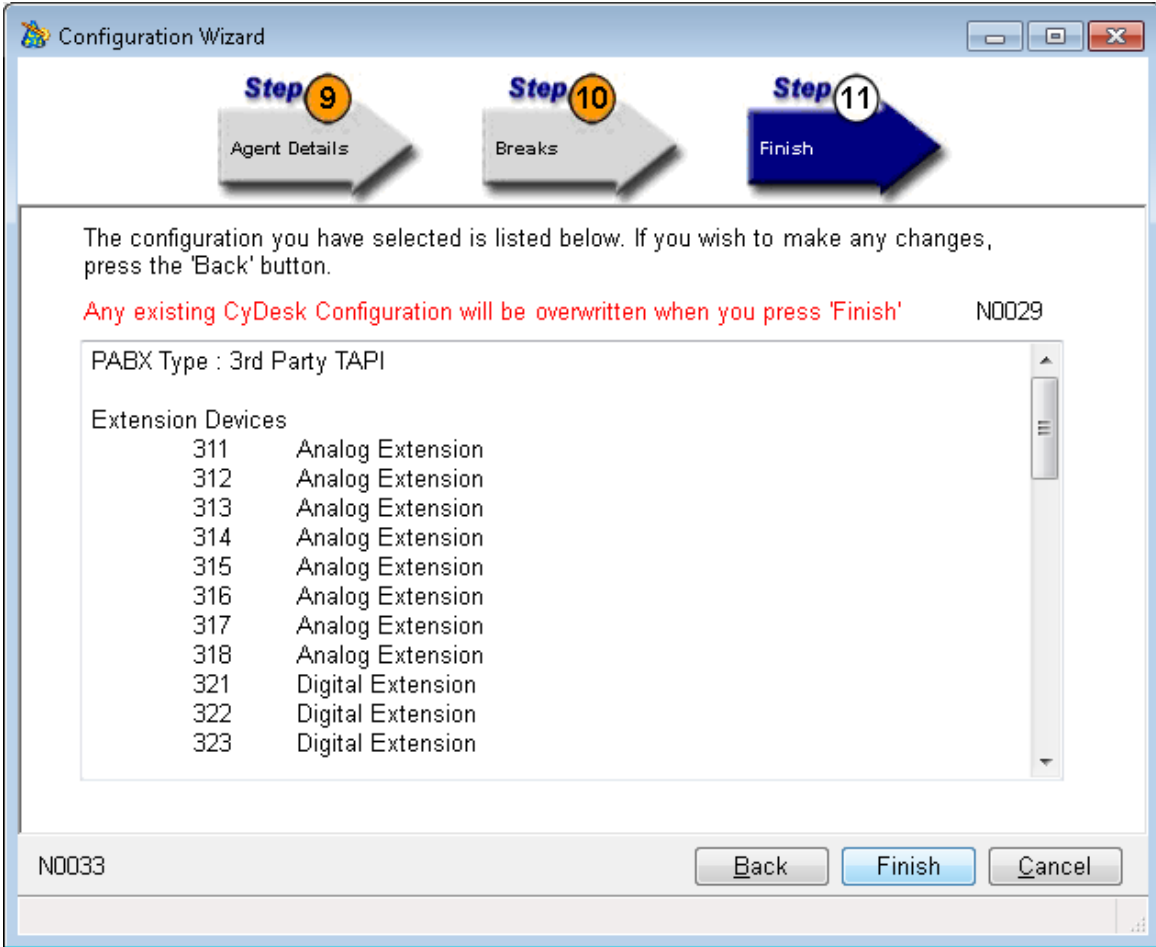
Step	Description
10.	<p>Click Next to continue.</p>  <p>The screenshot shows a 'Configuration Wizard' window. At the top, there are three steps represented by arrows: 'Step 7 CRM Integration', 'Step 8 Integration Setup' (which is highlighted in blue), and 'Step 9 Agent Details'. Below the steps, a text box contains the message: 'You have selected not to configure any CRM integration at this time. You can still configure CRM integrations at any time after you have completed this wizard, by using the CyDesk Manager and its Configuration screens.' At the bottom of the window, there are three buttons: 'Back', 'Next' (which is highlighted with a blue border), and 'Cancel'. The window title bar says 'Configuration Wizard'.</p>

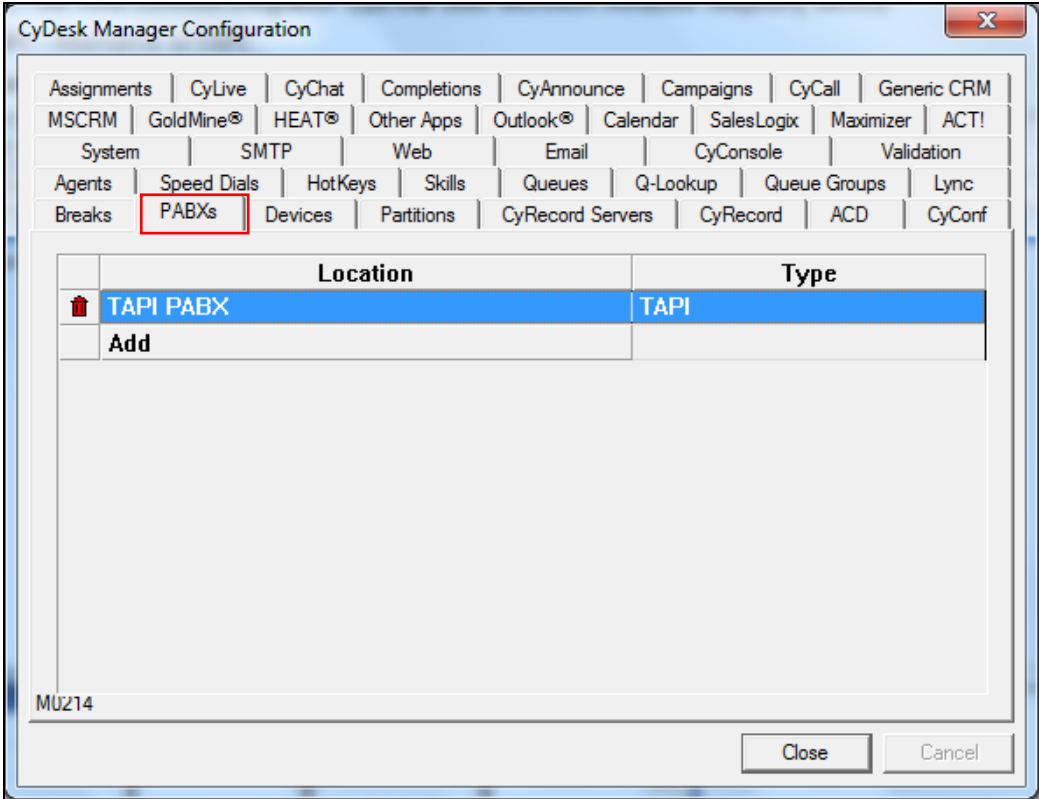
Step	Description
11.	<p>To configure the agents that will log in to CyTrack Server, click Add an agent.</p>  <p>The screenshot shows the 'Configuration Wizard' window. At the top, there's a progress bar with three steps: Step 8 (Integration Setup), Step 9 (Agent Details), and Step 10 (Breaks). Step 9 is currently selected and highlighted in blue. Below the progress bar, there's a table with three columns: 'Agent Name', 'Integration', and 'CyRecord'. The table is empty. To the right of the table, there are two buttons: 'Add an agent' (highlighted with a red box) and 'Delete agent'. At the bottom of the window, there are three buttons: 'Back', 'Next', and 'Cancel'.</p>

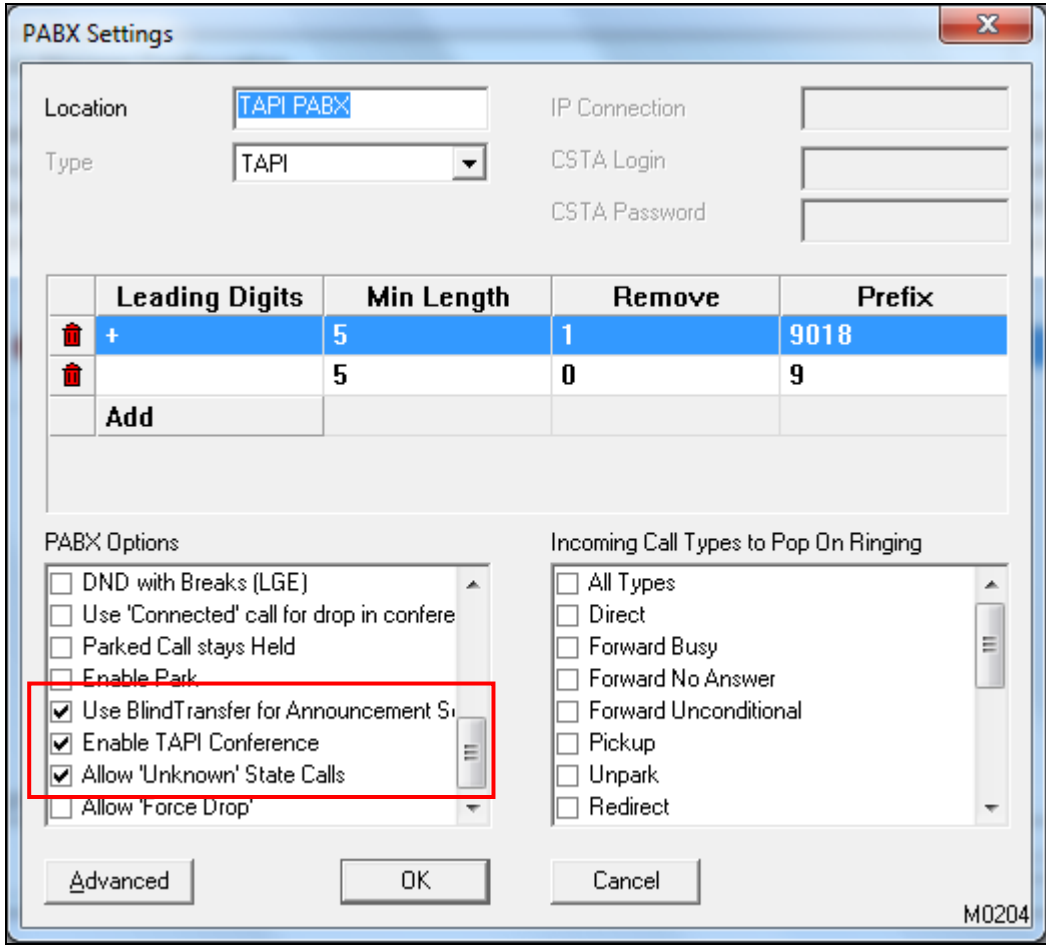
Step	Description
12.	<p>In the Add agents window, enter the name of each agent on a separate line. In this configuration, test1, test2 and test3 are created. Click OK.</p> 

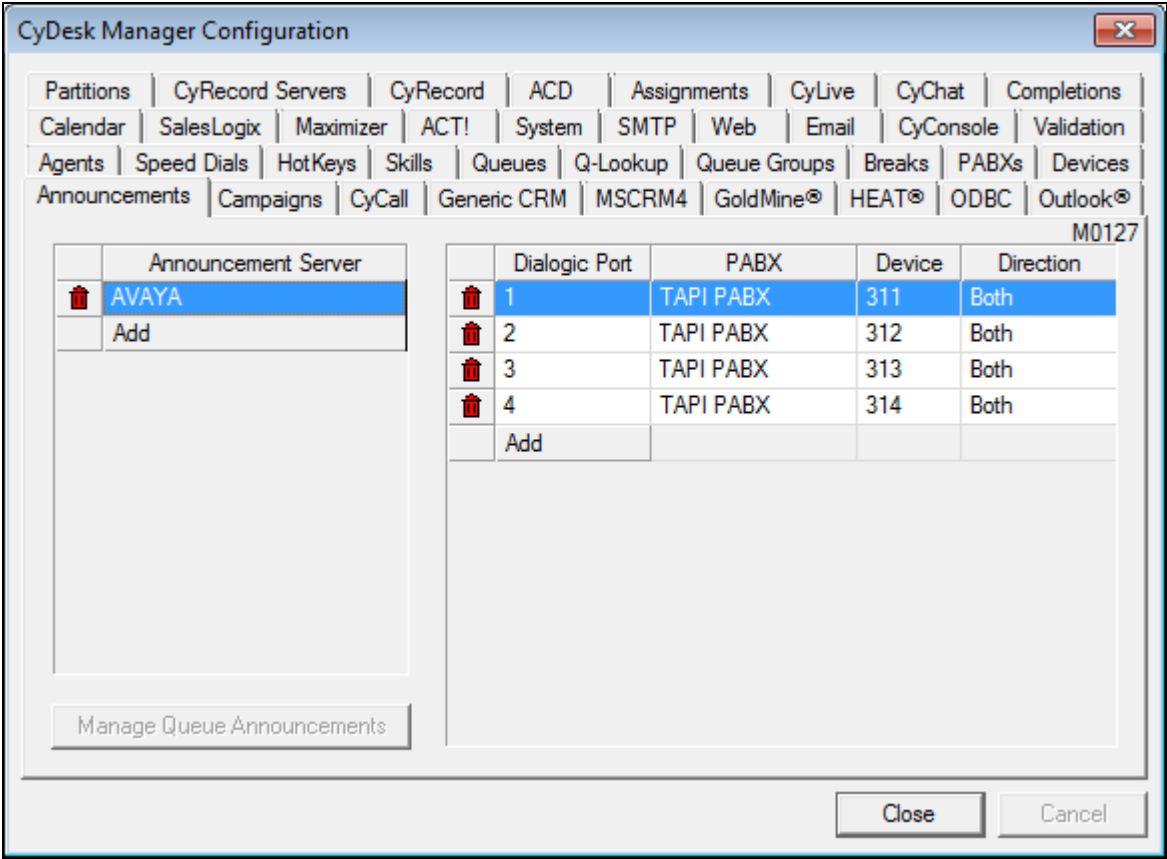
Step	Description												
13.	<p>Click Next to continue.</p>  <p>The screenshot shows the 'Configuration Wizard' window at Step 9, 'Agent Details'. The wizard has three steps: Step 8 (Integration Setup), Step 9 (Agent Details), and Step 10 (Breaks). Step 9 is the current step. A table lists three agents: test1, test2, and test3, all with 'None' integration and 'No CyRecord'. A red box highlights the 'Agent Name' column. To the right of the table are 'Add an agent' and 'Delete agent' buttons. At the bottom are 'Back', 'Next', and 'Cancel' buttons.</p> <table data-bbox="341 546 997 1043"><tr><th>Agent Name</th><th>Integration</th><th>CyRecord</th></tr><tr><td>test1</td><td>None</td><td>No CyRecord</td></tr><tr><td>test2</td><td>None</td><td>No CyRecord</td></tr><tr><td>test3</td><td>None</td><td>No CyRecord</td></tr></table>	Agent Name	Integration	CyRecord	test1	None	No CyRecord	test2	None	No CyRecord	test3	None	No CyRecord
Agent Name	Integration	CyRecord											
test1	None	No CyRecord											
test2	None	No CyRecord											
test3	None	No CyRecord											

Step	Description
14.	<p>Accept the default Break Types to be created and click Next to continue.</p>  <p>The screenshot shows the 'Configuration Wizard' window at Step 10, 'Breaks'. The window has a title bar with standard Windows controls. Below the title bar is a progress bar with three steps: Step 9 'Agent Details' (grey arrow), Step 10 'Breaks' (blue arrow), and Step 11 'Finish' (grey arrow). The main content area contains a paragraph explaining that breaks are a feature of CyDesk and will be visible to other agents and supervisors, and recorded in 'CyReport'. Below this is a list of default break types: Bathroom, Coffee, Lunch, Meeting, Out of Office, and Training. At the bottom of the window, there are three buttons: 'Back', 'Next', and 'Cancel'. The 'Next' button is highlighted in blue.</p>

Step	Description																								
15.	<p>Click Finish to accept the configuration and allow the wizard to save the changes.</p>  <p>The screenshot shows the 'Configuration Wizard' window at Step 11, 'Finish'. At the top, three steps are shown as arrows: Step 9 'Agent Details', Step 10 'Breaks', and Step 11 'Finish' (highlighted in blue). Below the steps, a message states: 'The configuration you have selected is listed below. If you wish to make any changes, press the 'Back' button.' A red warning message follows: 'Any existing CyDesk Configuration will be overwritten when you press 'Finish'' with the ID 'N0029'. Below this is a list box titled 'PABX Type : 3rd Party TAPI' containing a table of 'Extension Devices':</p> <table border="1"> <thead> <tr> <th>Extension Number</th> <th>Extension Type</th> </tr> </thead> <tbody> <tr><td>311</td><td>Analog Extension</td></tr> <tr><td>312</td><td>Analog Extension</td></tr> <tr><td>313</td><td>Analog Extension</td></tr> <tr><td>314</td><td>Analog Extension</td></tr> <tr><td>315</td><td>Analog Extension</td></tr> <tr><td>316</td><td>Analog Extension</td></tr> <tr><td>317</td><td>Analog Extension</td></tr> <tr><td>318</td><td>Analog Extension</td></tr> <tr><td>321</td><td>Digital Extension</td></tr> <tr><td>322</td><td>Digital Extension</td></tr> <tr><td>323</td><td>Digital Extension</td></tr> </tbody> </table> <p>At the bottom left of the window is the ID 'N0033'. At the bottom right are three buttons: 'Back', 'Finish' (highlighted in blue), and 'Cancel'.</p>	Extension Number	Extension Type	311	Analog Extension	312	Analog Extension	313	Analog Extension	314	Analog Extension	315	Analog Extension	316	Analog Extension	317	Analog Extension	318	Analog Extension	321	Digital Extension	322	Digital Extension	323	Digital Extension
Extension Number	Extension Type																								
311	Analog Extension																								
312	Analog Extension																								
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314	Analog Extension																								
315	Analog Extension																								
316	Analog Extension																								
317	Analog Extension																								
318	Analog Extension																								
321	Digital Extension																								
322	Digital Extension																								
323	Digital Extension																								

Step	Description
16.	<p>Click Start → All Programs → CyTrack → CyDesk Manager to launch the CyDesk Manager program. Click Options → Configure (not shown) to open the CyDesk Manager Configuration window. Click the PABXs tab and then double-click TAPI PABX to configure additional options required for Avaya IP Office.</p> 

Step	Description
17.	<p>In the PABX Settings window, check the option Use BlindTransfer for Annoucement Server, Enable TAPI conference and Allow 'Unknown' State Calls. Click OK to close the window.</p> 

Step	Description
18.	<p>Click Start → All Programs → CyTrack → CyDesk Manager to launch the CyDesk Manager program. Click Options → Configure (not shown) to open the CyDesk Manager Configuration window. Click the Announcements tab and then Add under Announcement Server to configure the Dialogic Port for the SIP users created in Section 5.5.</p> <p>Click on Add and enter the Name AVAYA (not shown).</p> <p>Configure the Dialogic Port on the right pane by clicking the Add button. The following parameters must be configured for this test configurations :</p> <ul style="list-style-type: none"> • Dialogic Port: 1 • PABX: TAPI PABX [As configured in this section Step 17] • Device: 311 [User Extension] • Direction: Both • Number of Sequential Ports to Add: 4 ports [to automatically create 312-314] 

Step	Description
19.	Double click on the AVAYA announcement server and enable the HMP SIP Ports option. The list will be auto-populated as per configuration in the previous step.

Announcement Server Configuration

Name

AVAYA

Call Pickup Mode Parameters

Use Call Pickup Mode

☐

Call Pickup Code

Disconnection Tone Detection

Tone 1 (Hz)

425

Tone 1 Dev (Hz)

30

Dual-Tone Disconnect Tone

☐

Tone 2 (Hz)

-1

Tone 2 Dev (Hz)

-1

Tone On Time

50

(x10ms)

Tone Off Time

250

(x10ms)

Port Selection Method

Incoming Calls

Top Down

Outgoing Calls

Top Down

Dialling Parameters

DTMF On Time

140ms

Flash Time

100ms

Transfer String

&,%s

Pause Time

1000ms

In-Band Signalling

First Digit Time

1000ms

Inter-Digit Time

200ms

Total DTMF Time

2.5 seconds

Default Queue

No Default C

Disconnect Code

Miscellaneous

Allow Non-CTI Calls (1st Party Mode)

☐

Number of Rings

1 Ring

Call Reconnect

Reconnect Code

Callback in Queue Settings

First Digit Time

5 secs

Inter-Digit Time

3 secs

Total Time

10 secs

Volume

Default

HMP

☒ HMP SIP Ports

☐ Requires Spare Channel

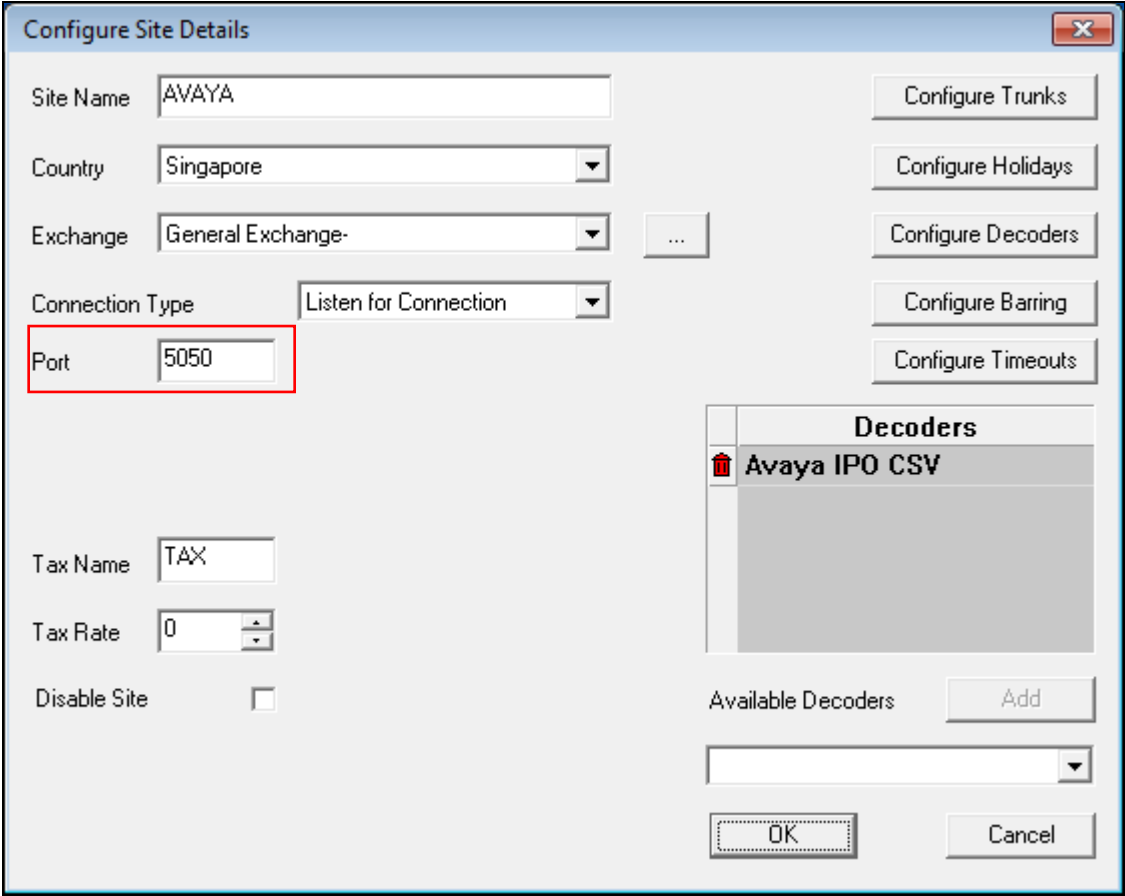
Port	Number	Spare
1	311	No
2	312	No
3	313	No
4	314	No

OK

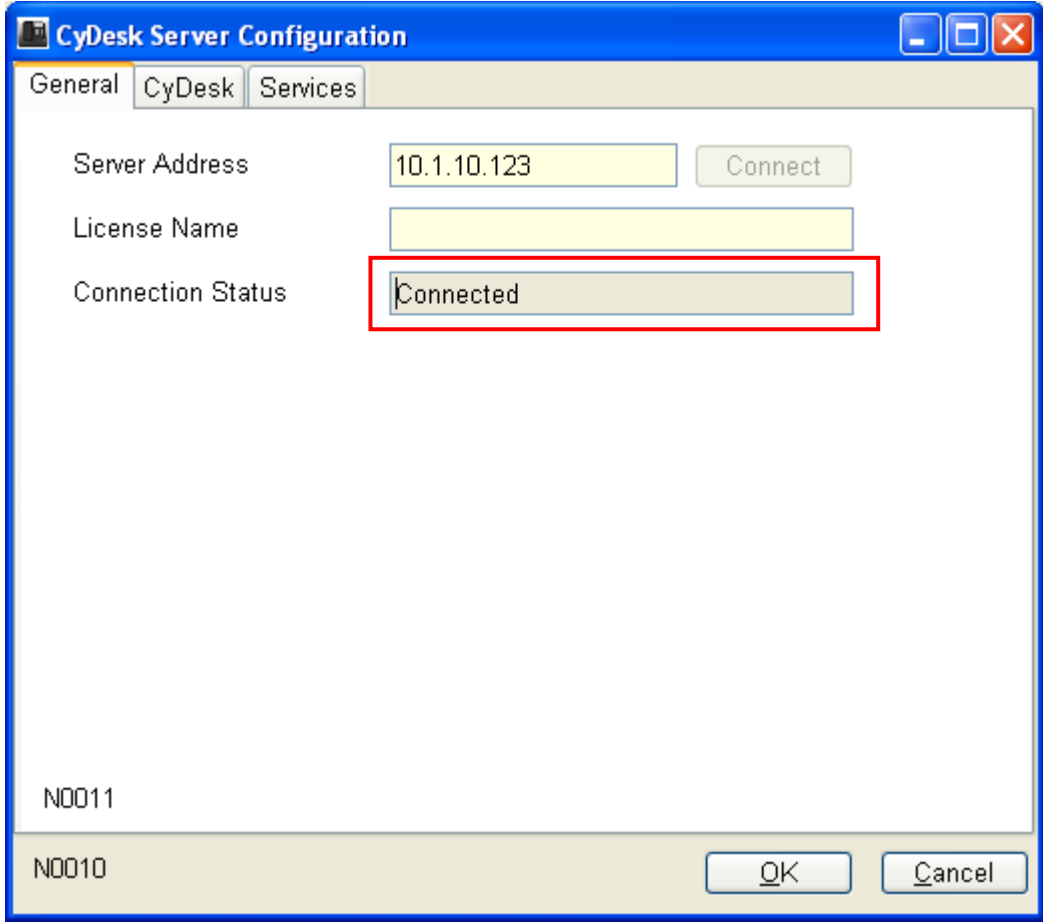
Cancel

M0129

Step	Description
20.	<p>To configure the SIP Ports double click each port for configurations. The following parameters are setup for this test configurations:</p> <ul style="list-style-type: none"> • SIP Server: 10.1.30.10 [IP Office 500] • SIP Device: 311 [User extension] • SIP Username: 311 [User extension] • SIP Password: [As configured in Section 5.5 Step 4] <p>Repeat for the other SIP users 312-314.</p> <div data-bbox="548 602 1177 1106" data-label="Form"> </div>

Step	Description
21.	<p>Click Start → All Programs → CyTrack → CyReport manager (not shown) to configure the CyReport. Click View → Configuration and double click on the registered site (already configured). Enter the Port to 5050 corresponding to the port set on SMDR in Section 5.9. This completes the initial configuration of CyTrack Server and the services can be started.</p> 

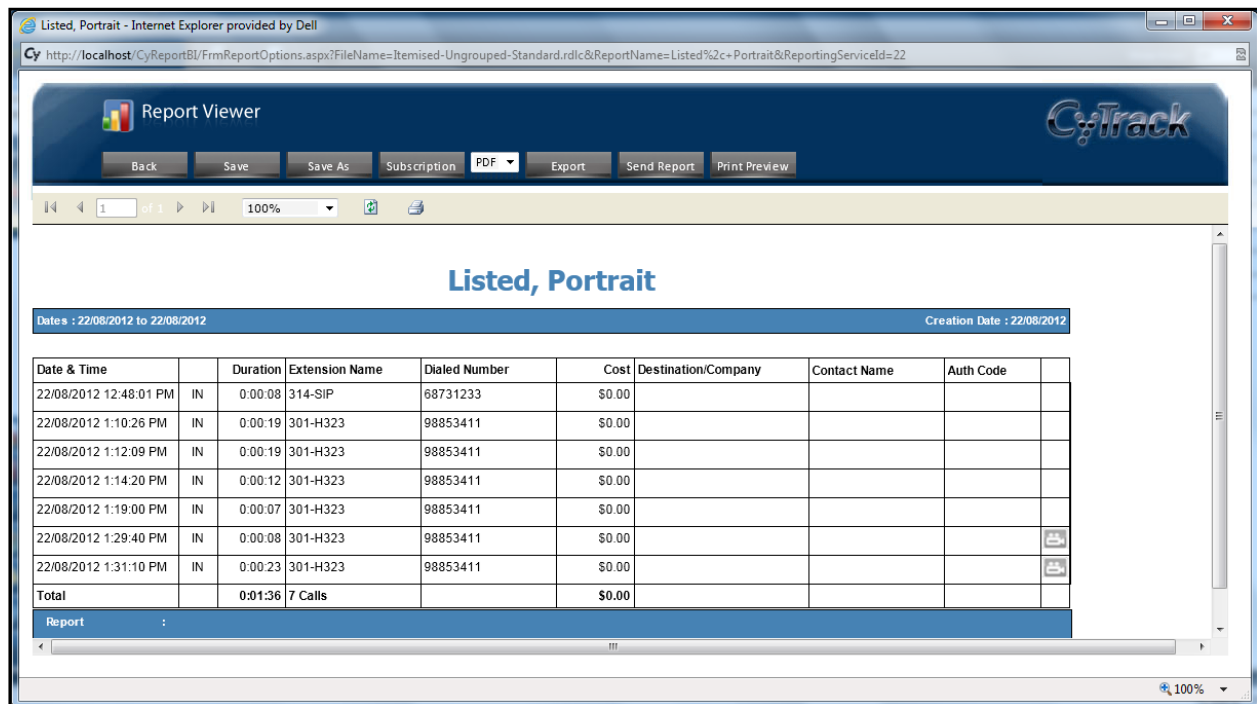
6.3. Configure CyTrack CyDesk on the PCs

Step	Description
1.	<p>Log into the PC running CyTrack CyDesk with administrative privileges. Click Start → All Programs → CyTrack → CyDesk Config to configure CyDesk. Enter the IP address of the CyTrack Server for Server Address and click Connect. Click OK (not shown). The Connection Status will show Connected once connection is successful.</p> 

7. Verification Steps

The following steps may be used to verify the configuration.

- Verify the CTI Link Pro license is enabled on Avaya IP Office (see **Section 5.1**).
- Assign an agent to an inbound queue. Log in and make the agent available. Place an incoming call to the inbound queue. Verify that the agent's phone rings and the agent is able to answer the call with CyTrack CyDesk.
- Assign an agent to an outbound campaign. Log in and make the agent available. Verify that an outbound call is placed. When the call is delivered to the agent, verify that the agent's phone rings and the agent is able to answer the call using CyTrack CyDesk.
- Using the CyReport, verify that Call Detail Records were generated after call completion.



The screenshot shows the CyTrack Report Viewer interface. The title bar indicates the browser is Internet Explorer provided by Dell, and the address bar shows a URL for a report. The interface includes a 'Report Viewer' header with the CyTrack logo and a navigation bar with buttons: Back, Save, Save As, Subscription, PDF (selected), Export, Send Report, and Print Preview. Below the navigation bar is a toolbar with navigation icons and a 100% zoom level. The main content area displays the report title 'Listed, Portrait' and the date range 'Dates : 22/08/2012 to 22/08/2012' with a 'Creation Date : 22/08/2012'. A table of call detail records is shown with the following columns: Date & Time, Duration, Extension Name, Dialed Number, Cost, Destination/Company, Contact Name, and Auth Code. The table contains 8 rows of data, including a total row at the bottom. The 'Report' button is visible at the bottom left of the table area.

Date & Time	Duration	Extension Name	Dialed Number	Cost	Destination/Company	Contact Name	Auth Code
22/08/2012 12:48:01 PM	IN 0:00:08	314-SIP	68731233	\$0.00			
22/08/2012 1:10:26 PM	IN 0:00:19	301-H323	98853411	\$0.00			
22/08/2012 1:12:09 PM	IN 0:00:19	301-H323	98853411	\$0.00			
22/08/2012 1:14:20 PM	IN 0:00:12	301-H323	98853411	\$0.00			
22/08/2012 1:19:00 PM	IN 0:00:07	301-H323	98853411	\$0.00			
22/08/2012 1:29:40 PM	IN 0:00:08	301-H323	98853411	\$0.00			
22/08/2012 1:31:10 PM	IN 0:00:23	301-H323	98853411	\$0.00			
Total	0:01:36	7 Calls		\$0.00			

8. Conclusion

These Application Notes describe the compliance-tested configuration used to validate Avaya IP Office 8.1 with CyTrack CyCC Multi-Media Contact Centre Solution. All test cases were completed successfully with a note indicated in **Section 2.2** test results.

9. Additional References

The following documents are available at <http://support.avaya.com>.

[1] *Avaya IP Office Knowledgebase CD*, Release 8.1, Build: 04, 30th July 2012

The following documents are available from CyTrack upon request:

[2] *CyDesk™ Telephony Suite Administration and User guide*

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