



Avaya Solution & Interoperability Test Lab

Application Notes for Configuring Objectworld CallAttendant Office – Analog Integration with Avaya IP Office - Issue 1.0

Abstract

These Application Notes describe the procedure for configuring Objectworld CallAttendant Office – Analog Integration 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 *DeveloperConnection* Program at the Avaya Solution and Interoperability Test Lab.

1. Introduction

These Application Notes focus on the steps required for configuring Objectworld CallAttendant Office – analog integration to work with Avaya IP Office.

Objectworld CallAttendant Office (CAO) works with integrated e-mail systems such as Microsoft Exchange, Lotus Notes and IMAP Compliant E-mail systems to provide users with a single storage and access point for voice, fax, and e-mail messages. Support for non-integrated e-mail systems is also supported through an integrated messaging client to allow users to visually manage their voice and fax messages. CAO provides full fax server capabilities including management of incoming and outgoing faxes.

Users can retrieve and manage messages either over the telephone or directly from the desktop. Using text to speech technology, CAO allows reading of e-mails over the telephone. While listening to e-mail messages, a user can simply respond with a wave file attachment to the original sender of the e-mail.

CallAttendant Office users can be configured in one of two available modes: personal assistant or personal business assistant mode. Personal business assistant mode provides users with a simple user interface that allows configuration and management of greetings, one-time messages, services, announcements, fax cover pages, and faxes. Personal assistant mode provides users with the ability to route specific callers to one-time messages and to filter calls to their extensions by activating call transfer, active message delivery, and pager notification based on Caller ID, Outlook Contact, and/or Time of Day. In addition to unified communications features, CAO provides seamless Active Directory (AD) Integration for user management. CAO users can be linked to AD users via the CAO administration user interface or via a Microsoft Management Console (MMC) snap-in visible in the AD user dialog. User details like first/last/display name and state (enabled/disabled) are synchronized automatically with AD on a continual basis. The snap-in also provides mechanisms for modifying CAO-specific details like extensions and message store. AD linked users are automatically authenticated when they log into the CAO server using the CAO client. CAO supports different/multiple messages stores, in addition to the option to not use Active Directory. The steps outlined in these Application Notes address one possible configuration available with CAO.

CallAttendant Office – analog integration interacts with IP Office via analog station integration for the media, and TAPI third party for the control. The analog integration provides media for both voice and fax messages.

Analog station ports on IP Office are connected to analog station ports in the Intel Dialogic D/4PCIUF cards in the CAO server. The IP Office TAPI interface is used by CAO during a call to gather caller and called telephone number information as well as call reason information. The call reason gives CAO the ability to determine how calls are answered. For example, as an automated attendant, prompt for a mailbox password or prompt the callers to leave a message in a mailbox. Message waiting indication is set and cleared via TAPI.

The configuration in **Figure 1** shows a network consisting of an Avaya IP Office 406v2 with Avaya IP400 Phone Module, Avaya IP Office Manager PC, Objectworld CAO server, Avaya 6408D+ digital telephones, Avaya 4600-series IP telephones and analog telephones and a Microsoft Active Directory and Exchange server. Avaya IP Office has T1/PRI and analog trunks to the central office.

The Avaya IP Office TAPI driver must be installed on the CAO server to establish a TAPI 3rd party call control connection to Avaya IP Office. A CAO hunt group was created and configured as the system voicemail on Avaya IP Office. The hunt group was made up of the analog station ports connecting IP Office to the CAO server.

The tested configuration is shown in **Figure 1**.

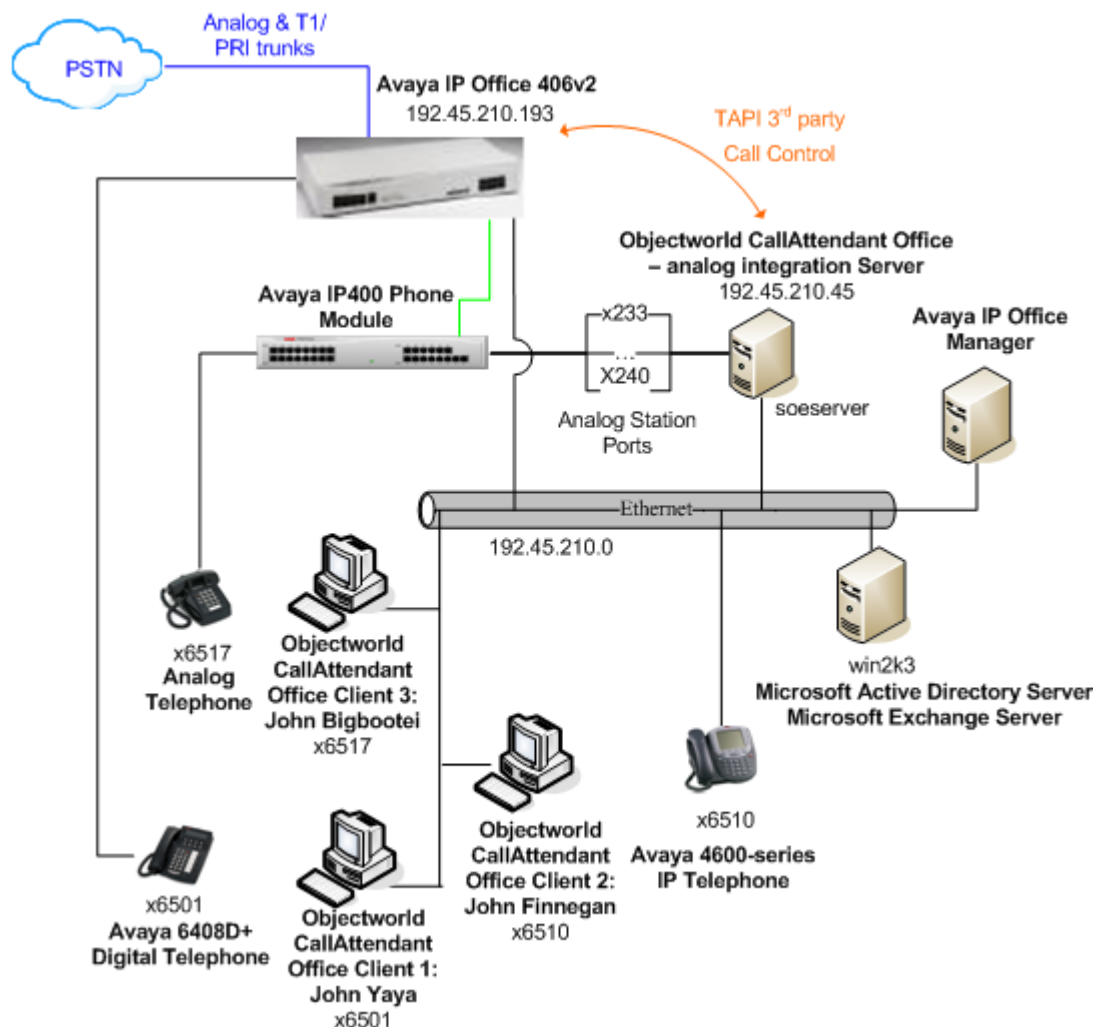


Figure 1 – Network Configuration Diagram

Note: For security purposes, Avaya IP Office does not support nested forwarding. In the event CAO becomes unavailable, calls to extensions, which are forwarded to the CAO hunt group as coverage calls, will not be routed to the CAO hunt group's overflow or fallback path. If such a scenario occurs, the administrator must make alternate call routing arrangements until the CAO becomes available.

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

End User Name	Extension
John Yaya	6501
John Finnegan	6510
John Bigbootei	6517
CAO Hunt Groups	
cao vm	6599
cao auto aa	6570
CAO Ports	
cao port 1	233
cao port 2	234
cao port 3	235
cao port 4	236

Table 1 – User to Extension Mapping

2. Equipment and Software Validated

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

Equipment	Software/Firmware
Avaya IP Office 406v2	3.2(17)
Avaya IP400 Phone Module	5.2(17)
Avaya IP Office Manager	5.2(17)
Avaya IP Office TAPI Driver	1.0.0.27
Avaya 4600-series IP Telephones (4610SW, 4620SW)	2.3
Avaya 6408D+ Digital Telephones	-
Objectworld CallAttendant Office – analog integration Server	4.0.2
Intel Dialogic card(s) – D/4PCIUF	SR 6.0


Table 2 – Equipment and Software / Firmware Versions Validated

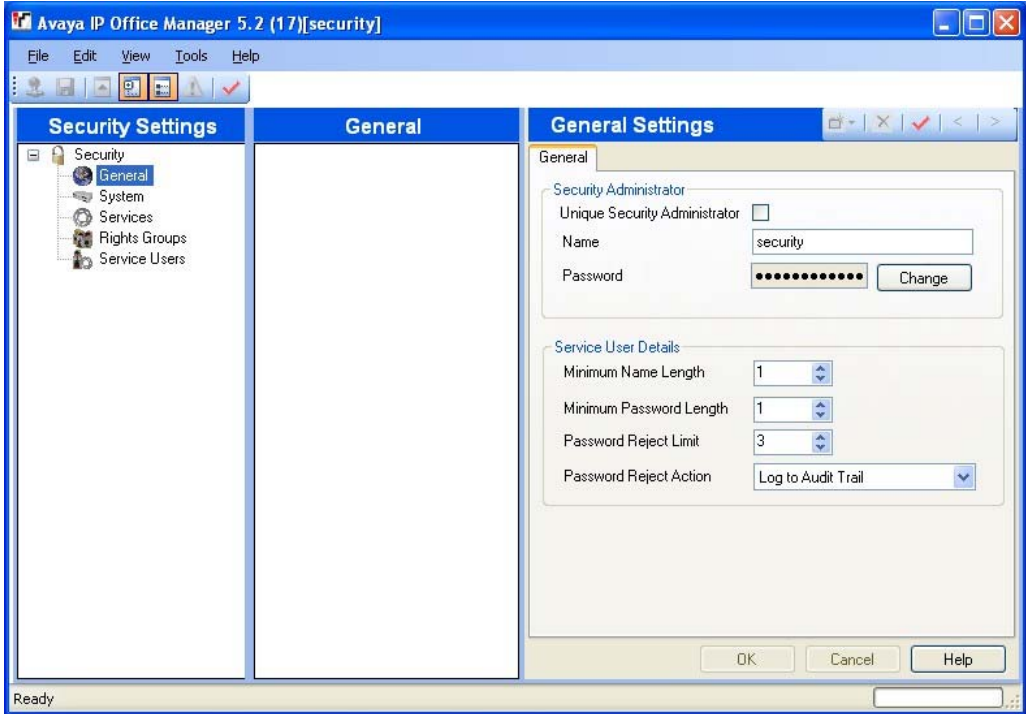
3. Configure Avaya IP Office

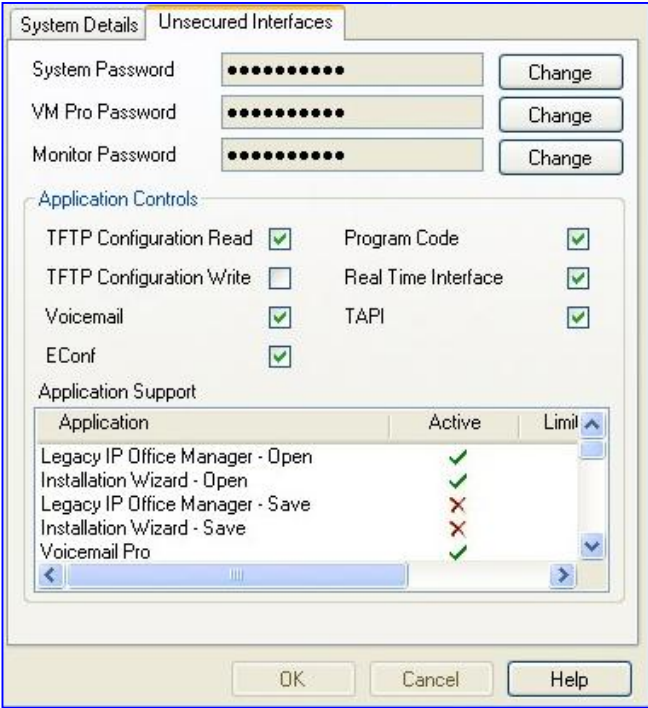
The configuration information provided in this section describes the steps required to set up Avaya IP Office for this solution.

*Be sure to have the **Avaya IP Office CTI Link Pro** license key on hand as it will be required as part of this configuration.*

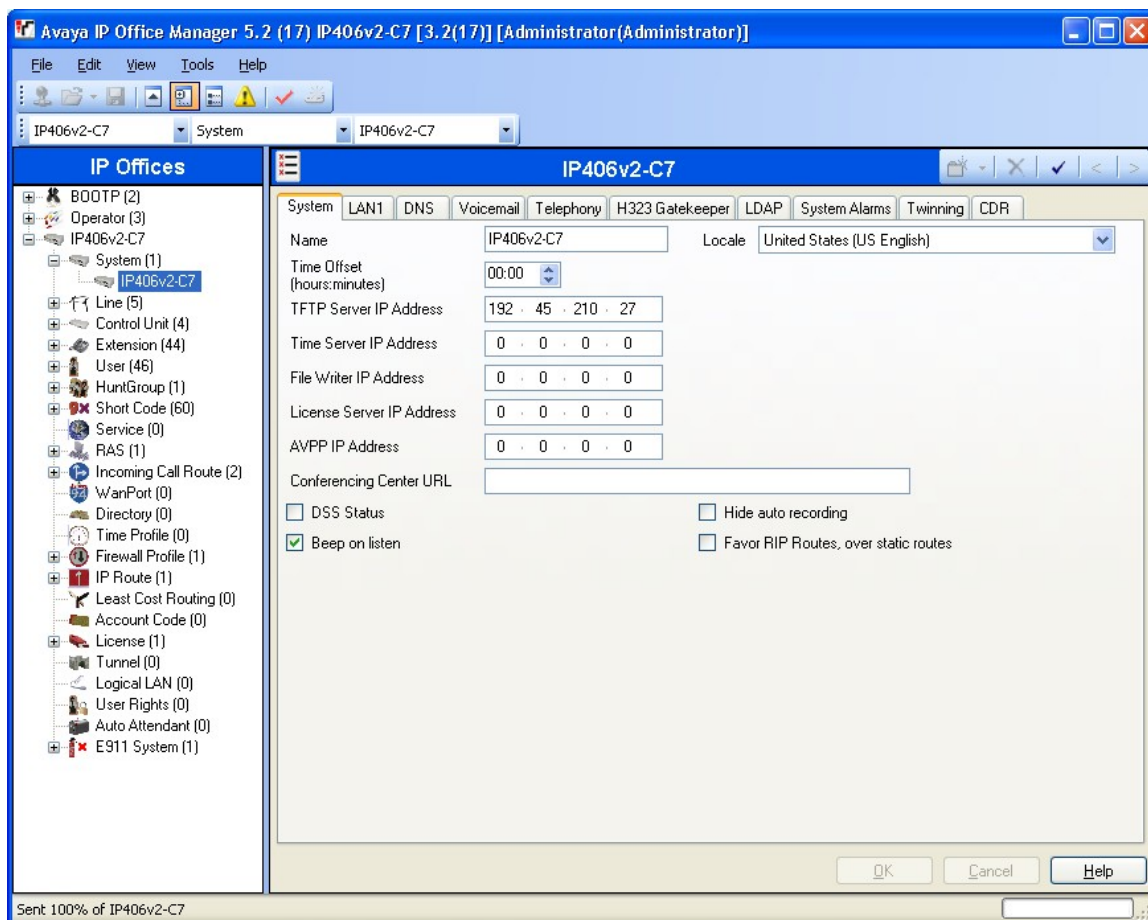
For all other provisioning information, such as Avaya IP Office installation and configuration, please refer to Avaya IP Office product documentation in reference [1].

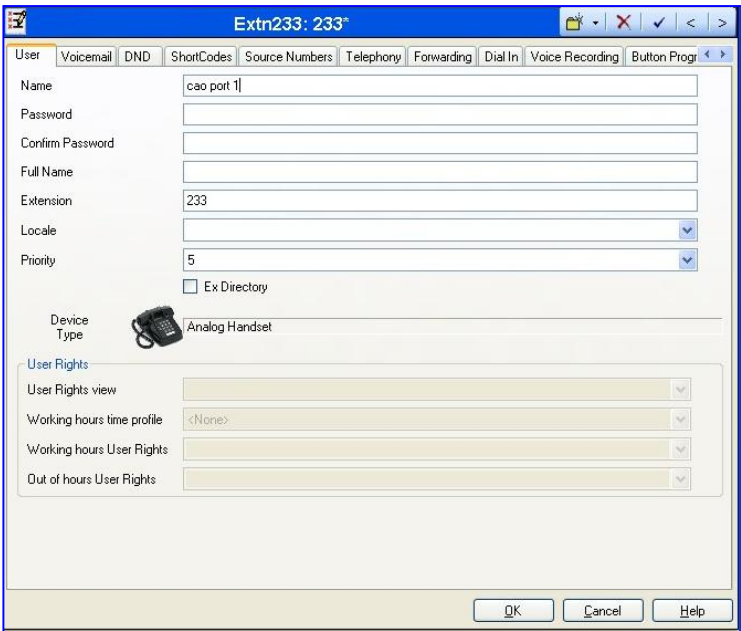
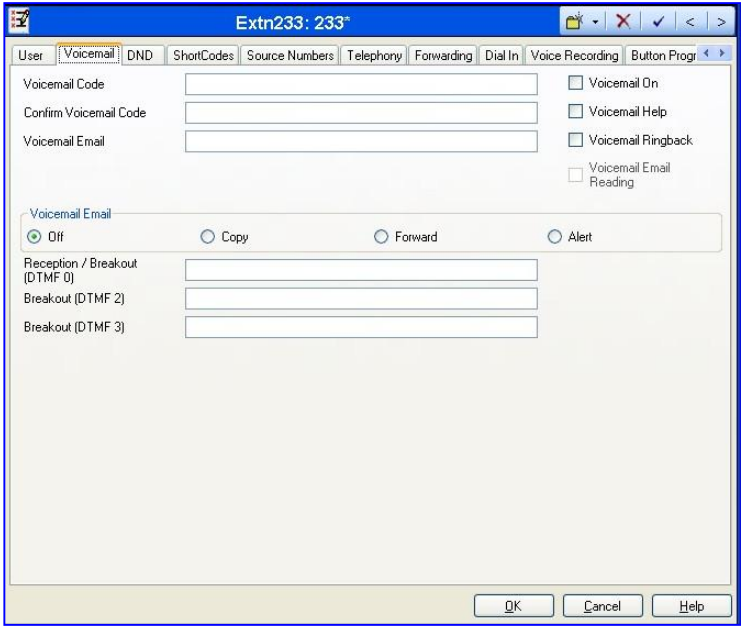
Step	Description
1.	Log into the IP Office Manager PC and go to Start → Programs → IP Office → Manager to launch the IP Office Manager application.
Configure system password for TAPI applications in Security Settings	
2.	In the Manager window that appears, select File → Advanced → Security Settings... to search for IP Office in the network. <div data-bbox="443 848 1373 1467"></div>
3.	Log into IP Office using the appropriate Security Service User Login credentials to receive its security settings.

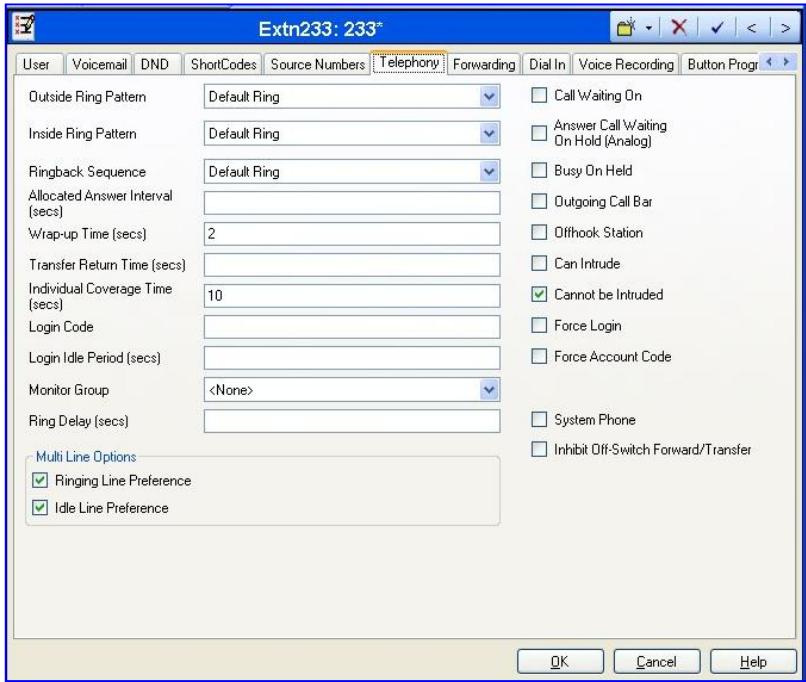
Step	Description
4.	<p>In the Security Settings window that appears, click System in the left pane.</p> 

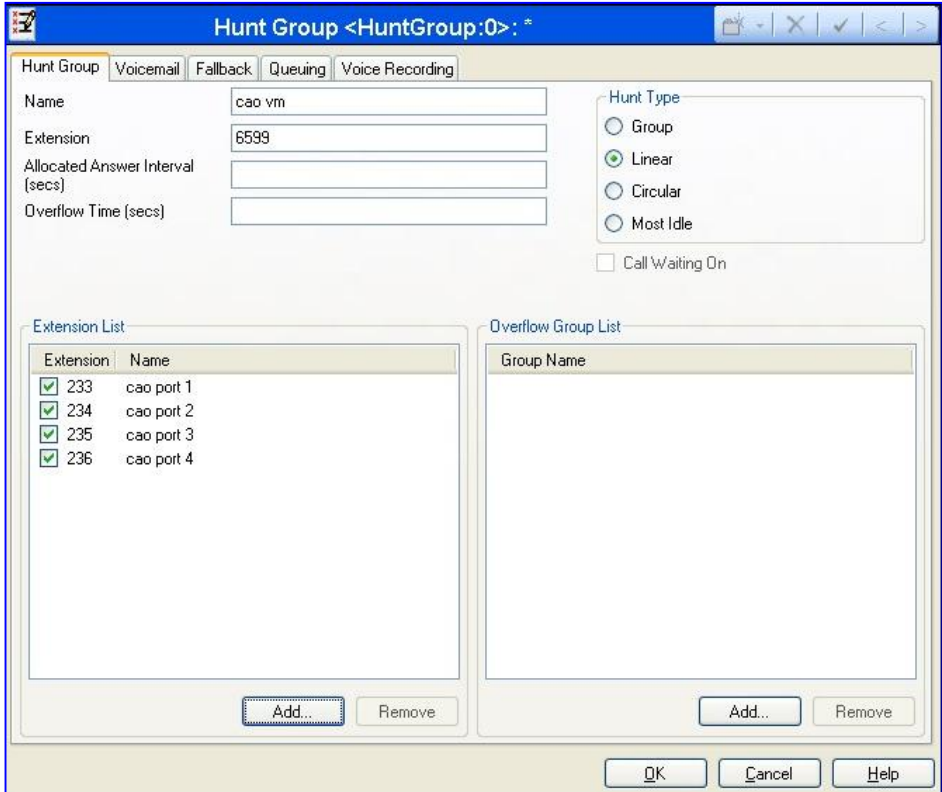
Step	Description
5.	<p>In the System window that appears, select the Unsecured Interfaces tab. In the Unsecured Interfaces tab that appears, make a note of the password used for System Password, as it will be required in Section 4.1 Step 7. Please review reference [1] for more information on Security Settings and System Password.</p> <div></div>
6.	In the Manager window, select File → Close Security Settings .
7.	In the Manager window, select File → Configuration .
	Open IP Office configuration
8.	In the Manager window, select File → Open Configuration to search for IP Office in the network.
9.	Log into IP Office using the appropriate login credentials to receive its configuration.
	Configure CAO Ports
10.	Select an analog station port on the IP400 Phone Module in Figure 1 that will be connected to a CAO port and note the corresponding extension number. Verify the extension number is correct by first attaching a phone to the port, placing a call to the extension number, and confirming the phone rings.

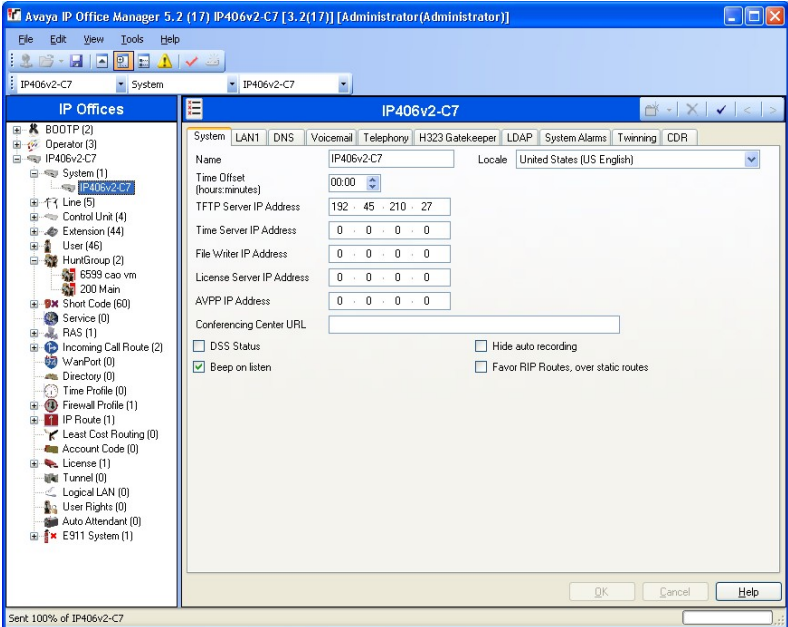
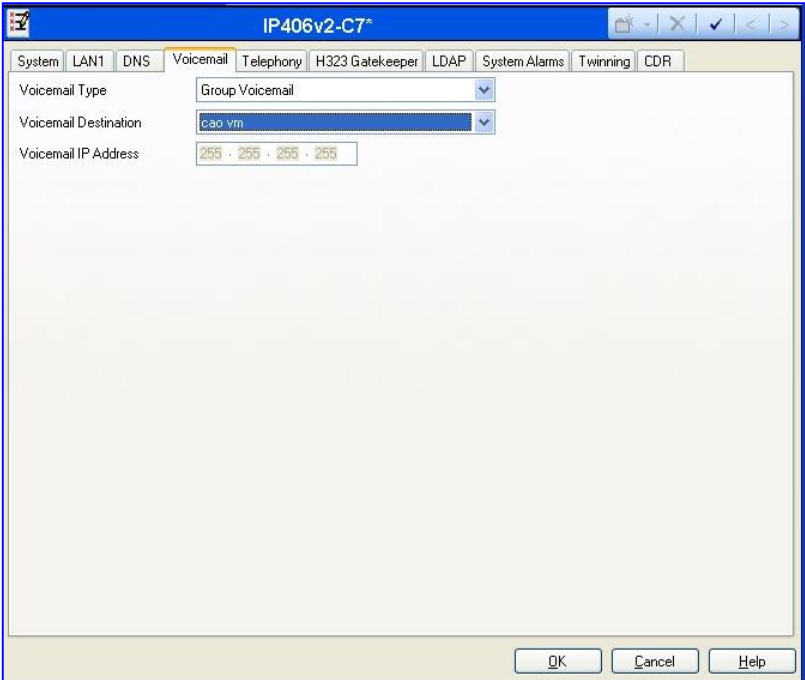
Step	Description
11.	<p>In the Manager window, go to the Configuration Tree and click User. In the right pane, select the extension number noted in Step 10 and double-click it.</p>

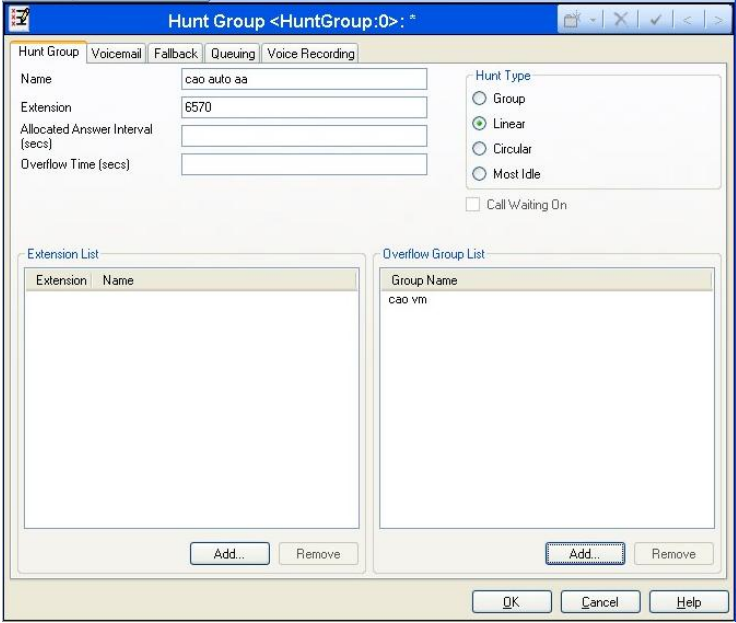


Step	Description
12.	<p>In the User window that appears, set Name to the name of the first CAO port listed in Table 1 and verify Extension is set to the extension number of the first CAO port listed in Table 1. Select the Voicemail tab.</p> 
13.	<p>In the Voicemail tab, uncheck Voicemail On. Select the Telephony tab.</p> 

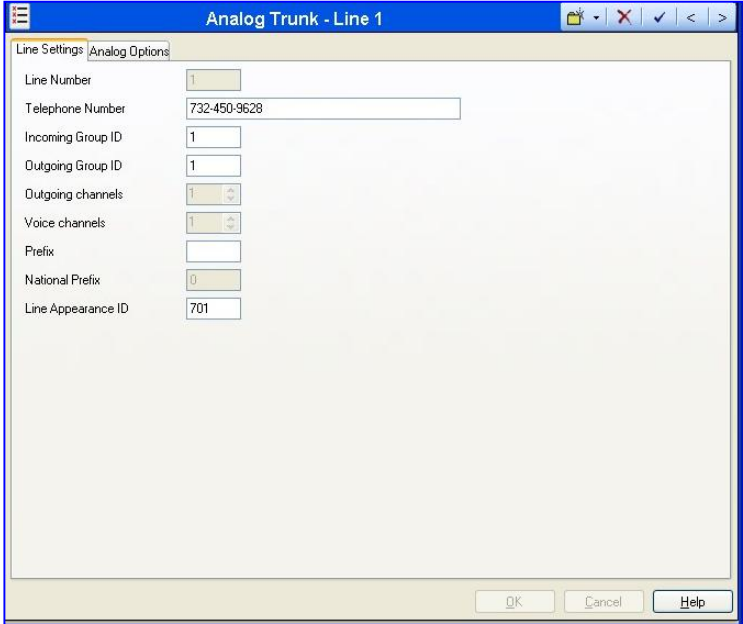
Step	Description
14.	<p>In the Telephony tab, uncheck Call Waiting On, uncheck Answer Call Waiting On Hold (Analog), and click OK.</p> 
15.	<p>Repeat Steps 10 – 14 for each CAO port listed in Table 1. For the purposes of these Application Notes, CAO ports 233 - 236 were configured.</p>

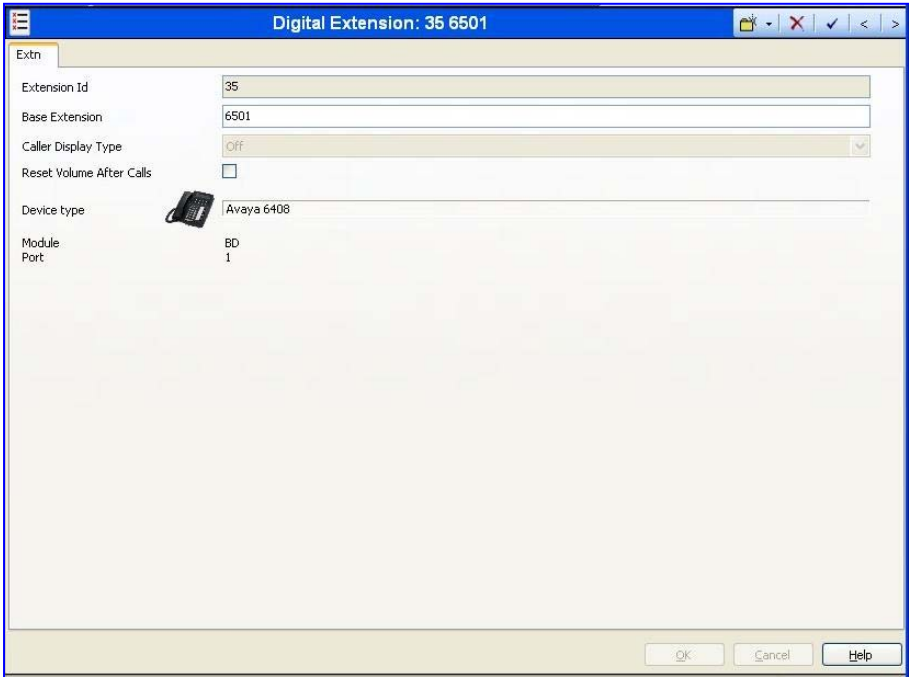
Step	Description
	Configure cao vm hunt group
16.	In the Manager window, go to the Configuration Tree and click Hunt Group . Right-click New to add a hunt group.
17.	<p>In the hunt group window that appears, set Name to the name of the CAO vm hunt group listed in Table 1, set Extension to the extension number listed for the CAO vm hunt group in Table 1, add all the CAO ports listed in Table 1 to the Extension List, and select Linear for Hunt Type. Click OK.</p> 

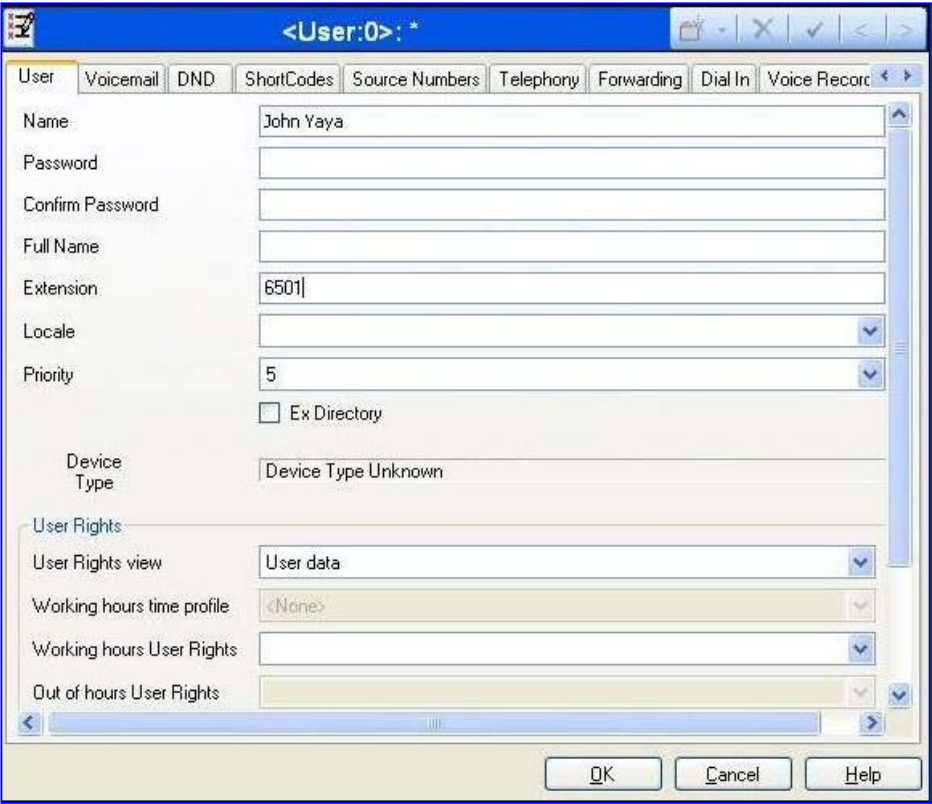
Step	Description
	Configure cao vm hunt group as system voicemail
18.	<p>In the Manager window, go to the Configuration Tree and click System → IP406v2-C7. In the right pane, select the Voicemail tab.</p> 
19.	<p>In the Voicemail tab that appears, set Voicemail Type to <i>Group Voicemail</i> and set Voicemail Destination to <i>cao vm</i>. Click OK.</p> 

Step	Description
	Configure cao auto aa hunt group
20.	In the Manager window, go to the Configuration Tree and click Hunt Group . Right-click New to add a hunt group.
21.	<p>In the hunt group window that appears, set Name to the name of the CAO auto aa hunt group listed in Table 1, set Extension to the extension number listed for the CAO auto aa hunt group in Table 1, set Overflow Group List to <i>cao vm</i>, and select Linear for Hunt Type. Click OK.</p> 

Step	Description
	Configure incoming call route
22.	In the Manager window, go to the Configuration Tree and click Incoming Call Route . In the right hand pane, right-click New to add an incoming call route.
23.	<p>In the Incoming Call Route window that appears, set Line Group Id to a unique number, set Destination to <i>6570 cao auto aa</i>. Click OK.</p> <div data-bbox="540 472 1271 1123" data-label="Form"> </div> <p>Note: Make sure no other incoming call route with Bearer Capability set to <i>Any Voice</i> is configured with the same Line Group Id.</p>

Step	Description
	Assign incoming call route to inbound trunks being used
24.	In the Manager window, go to the Configuration Tree and click Line . In the list of lines that appear, click the line (analog or digital) whose incoming calls are to be routed to the CAO Automated Attendant hunt group extension.
25.	<p>In the window that appears, set Incoming Group ID to the value used for Line Group Id in Step 23. A similar procedure is used on the T1/PRI lines. Click OK. Note: The Telephone Number field is optional.</p> 
26.	Repeat Steps 24 – 25 for each line (trunk) assigned to the Incoming Call Route.

Step	Description
	Configure user extensions
27.	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 .
28.	<p>In the Extension window that appears, set Extension to the extension number of the first end user in Table 1. Click OK.</p> 
29.	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.

Step	Description
30.	<p>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. Click OK.</p> 
31.	Repeat Steps 27 – 30 for each end user extension listed in Table 1 . For the purposes of these Application Notes, end user extensions 6501, 6510, and 6517 were created.
	Install CTI Link Pro license
32.	In the Manager window, go to the Configuration Tree and click System → IP406v2-C7 . In the right pane, verify License Server IP Address is set to the IP address of the machine to which the Avaya Software Sentinel key (dongle) is connected. If the dongle is connected to Avaya IP Office directly, it should be set to 0.0.0.0 .
33.	In the Manager window, go to the Configuration Tree and double-click License . In the right-hand pane, right-click New in the popup that appears.
34.	In the License popup that appears, enter the license string for the CTI Link Pro license and click OK .
35.	In the Manager window, select File → Save to push the configuration to IP Office, select Immediate for reboot option (not shown), and wait for the system to update. This completes configuration of Avaya IP Office for this solution.

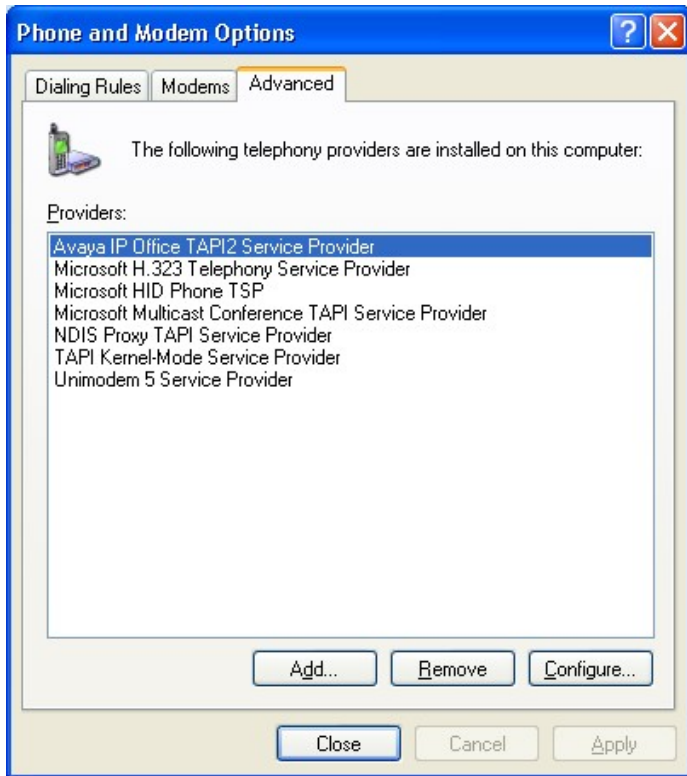
4. Configure Objectworld CallAttendant Office PC

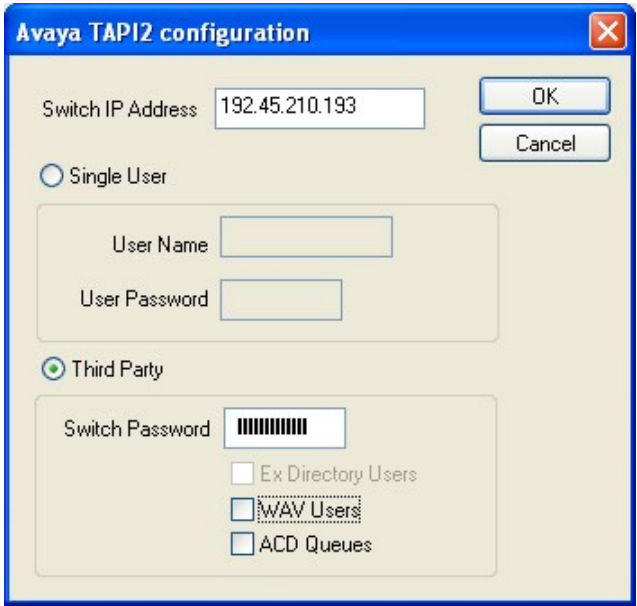
The configuration information provided in this section describes the steps used to configure Objectworld CallAttendant Office to work with Avaya IP Office for this solution.

For all other provisioning information, such as software installation, Windows domain administration and configuration for Objectworld, installation of optional components, and/or the configuration of CAO, please refer to the Objectworld product documentation in reference [3].

4.1. Install and Configure Avaya IP Office TAPI Driver

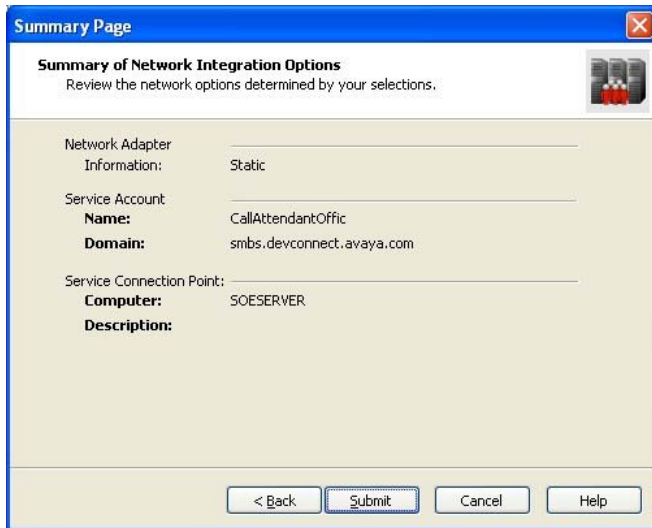
Step	Description
1.	From the CAO PC, launch the Avaya IP Office User Suite setup.exe in the CDROM drive from an account with administrative privileges.
2.	Click Custom in the InstallShield wizard. Uncheck Phone Manager and check TAPI to install the IP Office TAPI driver on the PC.
3.	Click Next to complete 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...

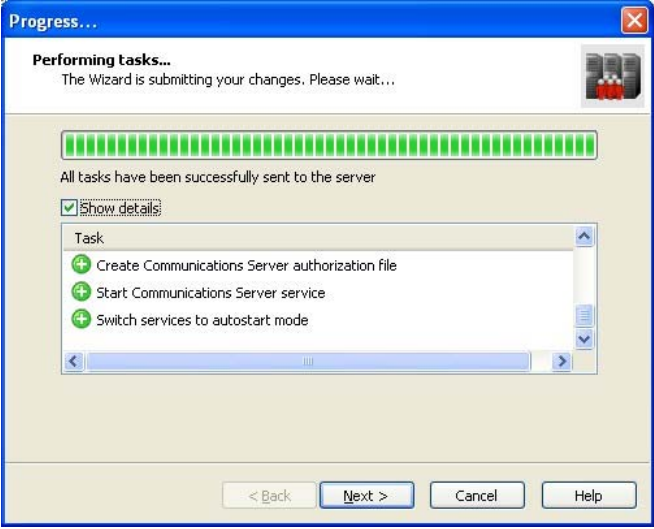
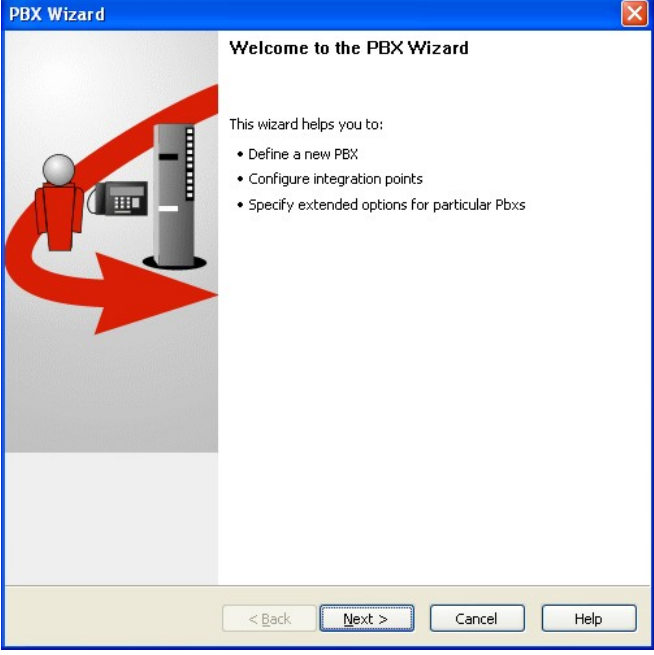


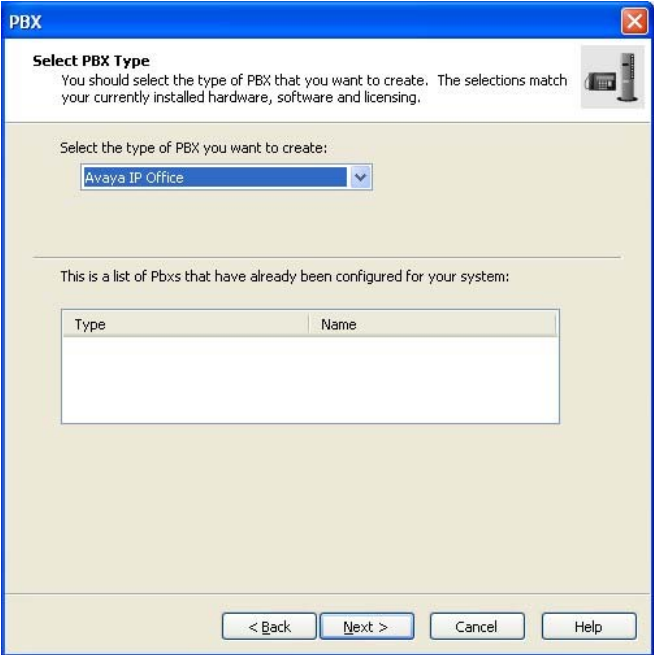
Step	Description
7.	<p>In the Avaya TAPI2 configuration window that appears, set Switch IP Address to the IP address of Avaya IP Office, select Third Party, set Switch Password to the IP Office system password referenced in Section 3 Step 6, uncheck WAV Users, and uncheck ACD Queues. Click OK.</p> 
8.	In the Phone and Modem Options window, click OK .
9.	Reboot the PC for the changes to take effect. This completes configuration of the Avaya IP Office TAPI Driver on the CAO PC for this solution.

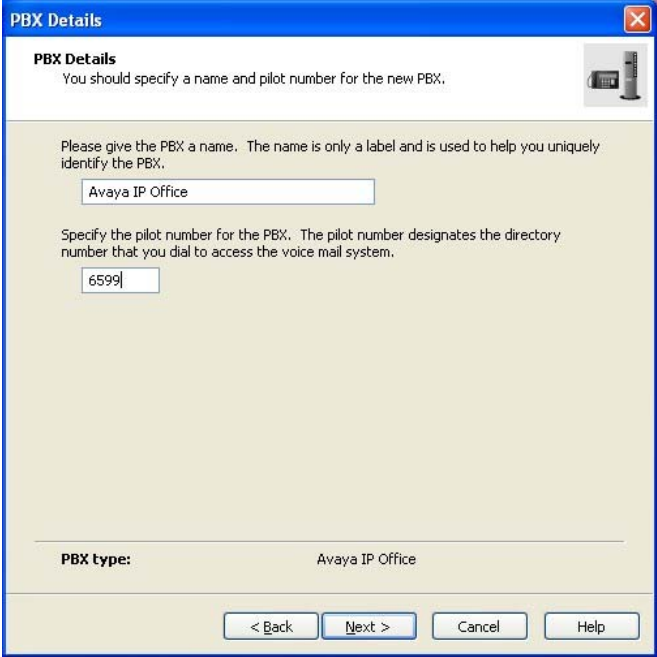
4.2. Configure CallAttendant Office

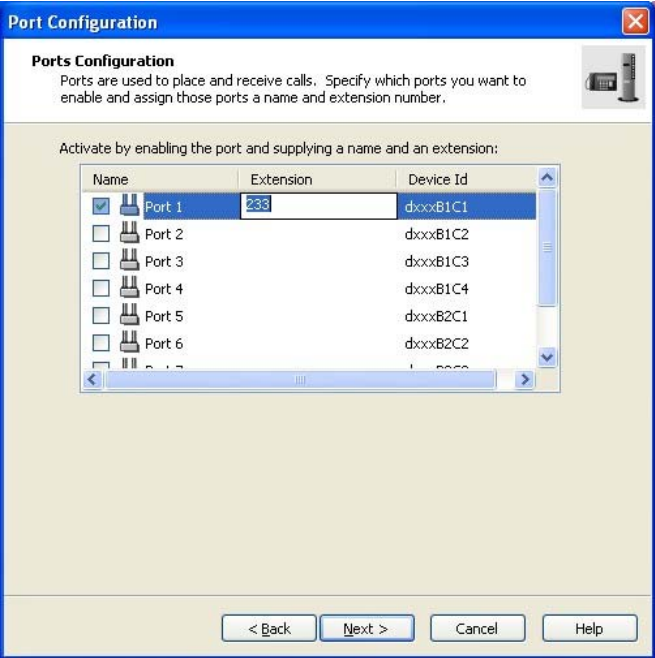
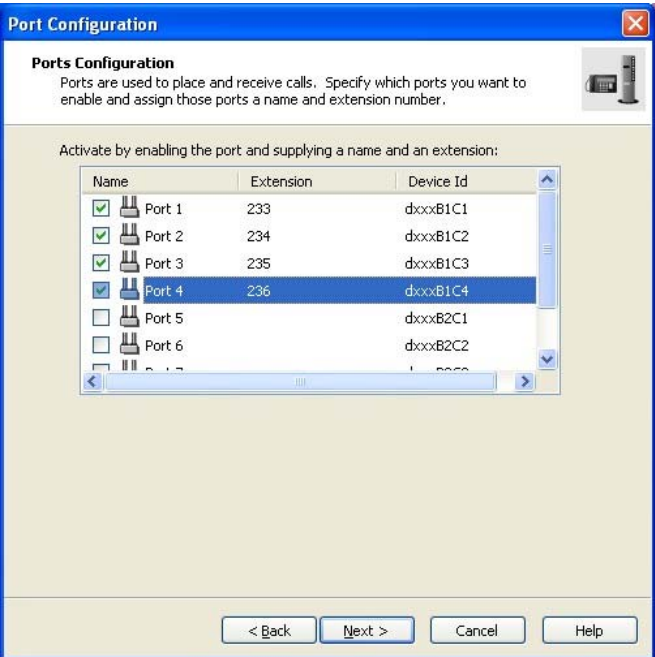
Step	Description
	First Time Configuration
1.	Log into the CAO PC as a domain user with domain administrator privileges. Go to Start → Programs → Objectworld CallAttendant Office → Server Configuration Wizard .
2.	In the CallAttendant Office Server Configuration Wizard window that appears, click Product Licensing for the Product Licensing wizard.
3.	Click through the Product Licensing wizard windows, making selections appropriate for the configuration.
4.	In the CallAttendant Office Server Configuration Wizard window, click Windows Network Integration for the Windows Network Integration wizard.
5.	In the Windows Network Wizard window that appears, click Next .

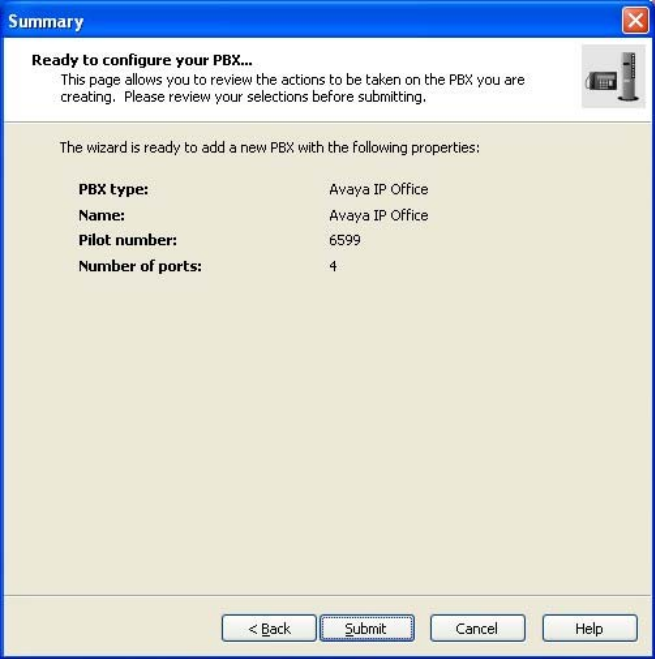
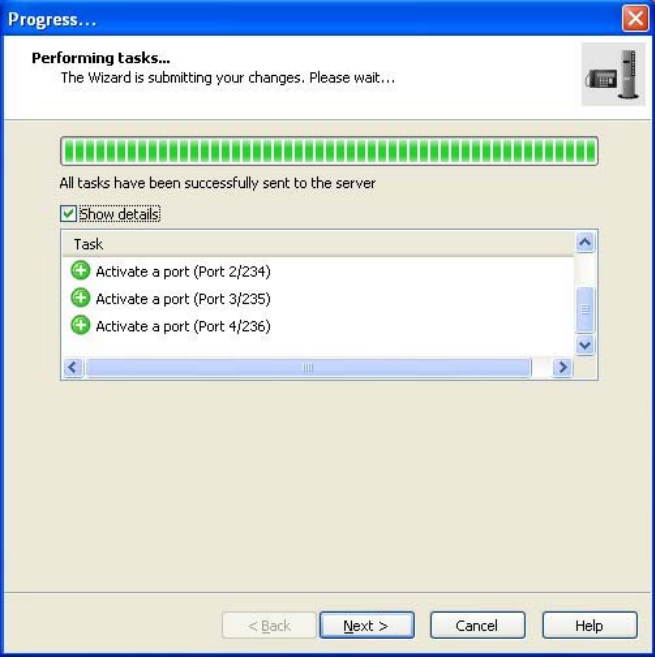
Step	Description
6.	<p>In the Configure the Network Connection window that appears, uncheck Automatically configure Windows Firewall for server requests. Click Next.</p> <p>Note: Automatically configure Windows Firewall for server requests was unchecked because the tested configuration had Windows Firewall turned off. For information on alternate configurations, please review reference [3].</p>
7.	In the Configure the Service Account window that appears, select Use or create a service account within Windows Active Directory and click Next .
8.	In the Select Service Account window that appears, select Create a new account and click Next .
9.	In the next window that appears, set Service Account Name to the service name desired, e.g., <i>CallAttendantOffice</i> , set Domain to the domain of the network, e.g., <i>smbs.devconnect.avaya.com</i> , set Service Connection Point Computer to the name of the CAO PC, e.g., <i>SOESERVER</i> . Click Next .
10.	<p>In the Summary Page window that appears, click Submit.</p>  <p>The screenshot shows a window titled "Summary Page" with a subtitle "Summary of Network Integration Options". Below the subtitle is a line of text: "Review the network options determined by your selections." The window contains three sections of configuration data:</p> <ul style="list-style-type: none"> Network Adapter Information: Static Service Account: <ul style="list-style-type: none"> Name: CallAttendantOffice Domain: smbs.devconnect.avaya.com Service Connection Point: <ul style="list-style-type: none"> Computer: SOESERVER Description: <p>At the bottom of the window are four buttons: "< Back", "Submit", "Cancel", and "Help".</p>

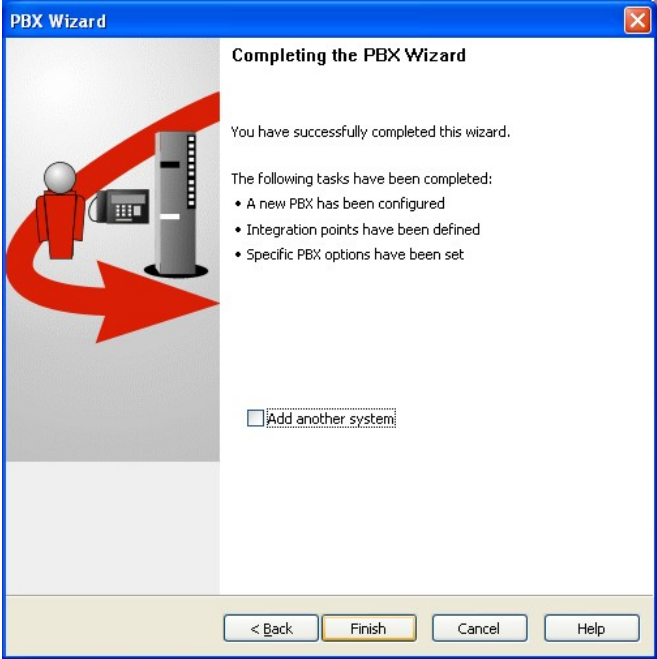
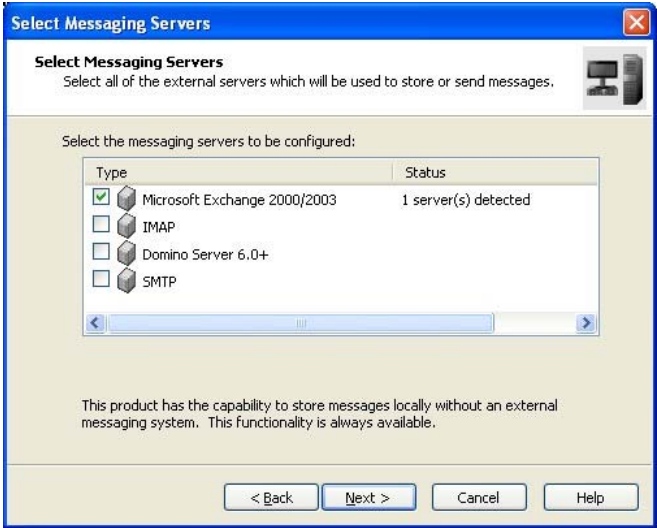
Step	Description
11.	<p>In the Progress... window that appears, click Next.</p> 
12.	<p>In the Windows Network Wizard window that appears, click Finish.</p>
13.	<p>In the CallAttendant Office Server Configuration Wizard window, click PBXs for the PBXs wizard.</p>
14.	<p>In the PBX Wizard window that appears, click Next.</p> 

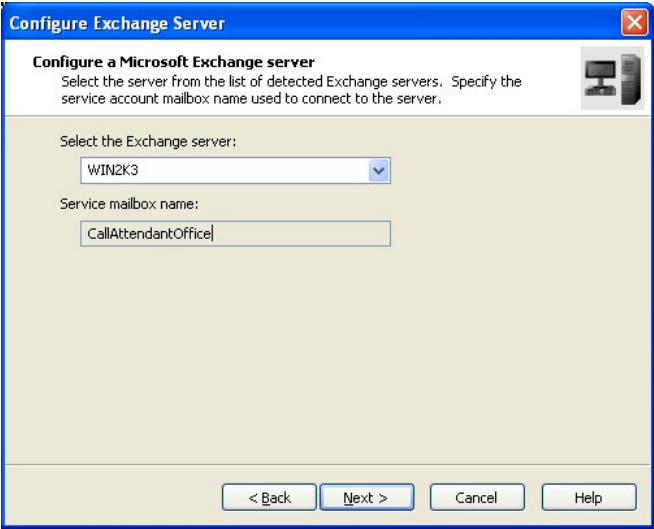
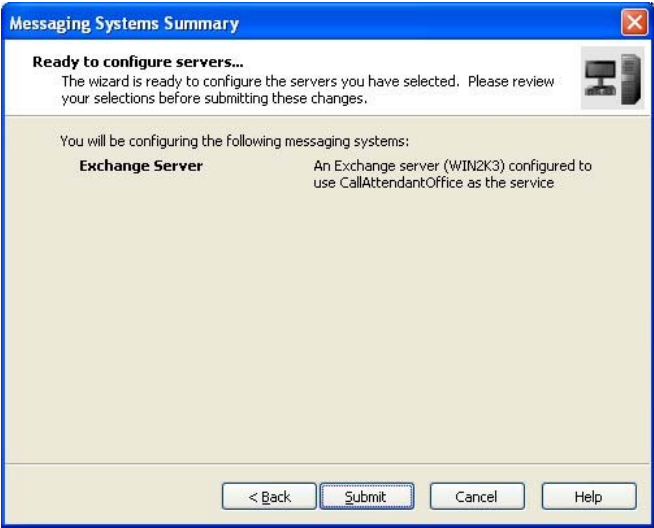
Step	Description
15.	<p>In the PBX window that appears, select <i>Avaya IP Office</i> for Select the type of PBX you want to create and click Next.</p> 

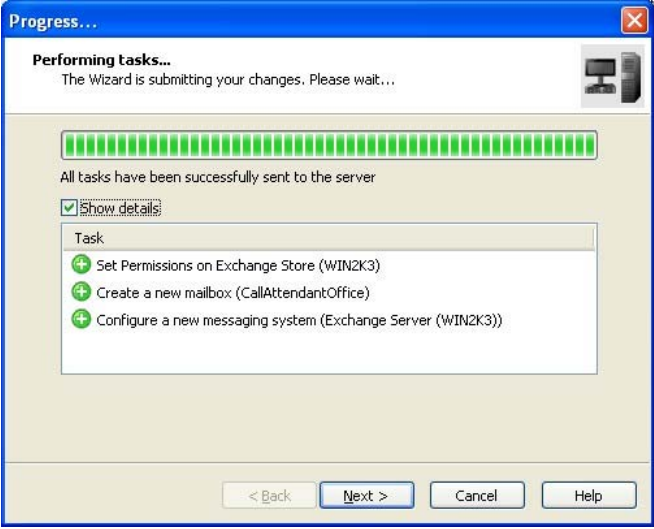

Step	Description
16.	<p>In the PBX Details window that appears, set Please give the PBX a name. The name is only a label and used to help you uniquely identify the PBX. to <i>Avaya IP Office</i>. Set Specify the pilot number for the PBX. The pilot number designates the directory number that you dial to access the voice mail system. to the CAO vm hunt group number defined in Table 1. Click Next.</p> 



Step	Description
17.	<p>In the Port Configuration window that appears, set Port 1 Extension to the extension number defined for cao port 1 in Table 1.</p> 
18.	<p>Repeat Step 17 for the remaining CAO ports defined in Table 1. For the purposes of these Application Notes, Ports 1 through 4 were configured. Click Next.</p> 


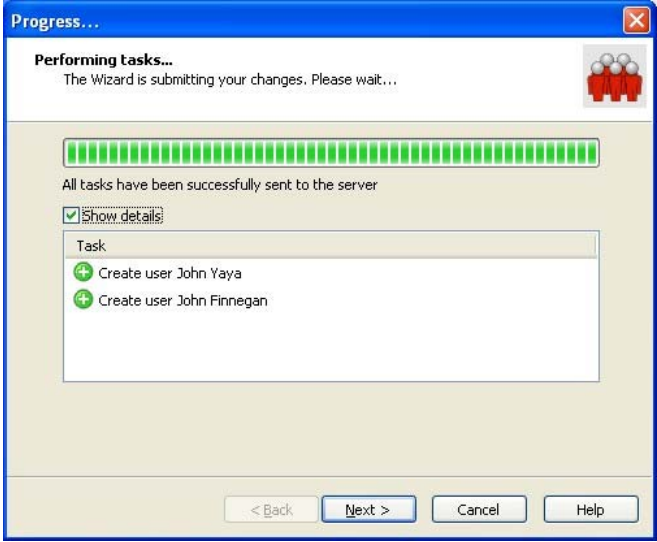
Step	Description
19.	<p>In the Summary window that appears, click Submit.</p> 
20.	<p>In the Progress window that appears, click Next.</p> 



Step	Description
21.	<p>In the PBX Wizard window that appears, click Finish.</p> 
22.	<p>In the CallAttendant Office Server Configuration Wizard window that appears, click Messaging Systems for the Messaging Systems wizard.</p>
23.	<p>In the Messaging Systems Wizard window that appears, click Next.</p>
24.	<p>In the Select Messaging Servers window that appears, check Microsoft Exchange 2000/2003 and click Next.</p> 


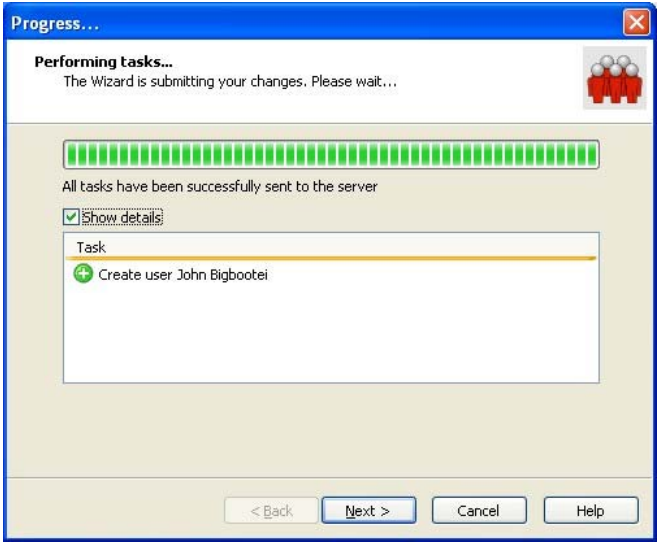
Step	Description
25.	<p>In the Configure Exchange Server window that appears, set Select the Exchange server: to the name of the Exchange Server listed in Figure 1, set Service mailbox name: to the name of the service mailbox defined in Step 9, e.g., <i>CallAttendantOffice</i> and click Next.</p> 
26.	<p>In the Messaging Systems Summary window that appears, click Submit.</p> 

Step	Description
27.	<p>In the Progress... window that appears, click Next.</p> 
28.	In the Messaging Systems Wizard window that appears, click Finish .
29.	In the CallAttendant Office Server Configuration Wizard window that appears, click Users for the Users wizard.
30.	In the Users Wizard window that appears, click Next .
31.	<p>In the next Users Wizard window that appears, select Import from Active Directory and click Next.</p> 

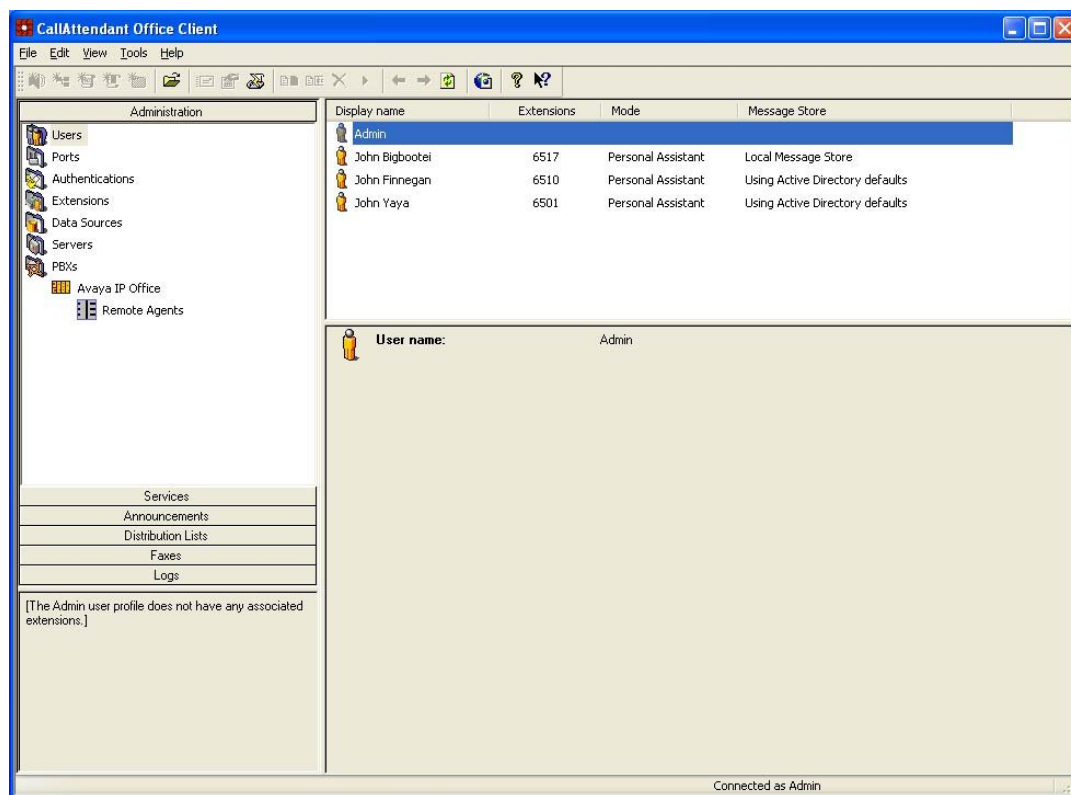
Step	Description
32.	<p>In the next Users Wizard window that appears, select <i>smba.devconnect.avaya.com</i> for the Active Directory domain, check Create “Windows-enabled” Active Directory users, check Use Active Directory for messaging configuration, and click Next.</p> 
33.	<p>In the next Users Wizard window that appears, check John Yaya, set John Yaya’s Extension to 6501, check John Finnegan, and set John Finnegan’s Extension to 6510. Click Next.</p>  <p>NOTE: It is beyond the scope of these Application Notes to describe how to create domain user accounts John Yaya and John Finnegan. Please refer to Microsoft Windows documentation for further information.</p>

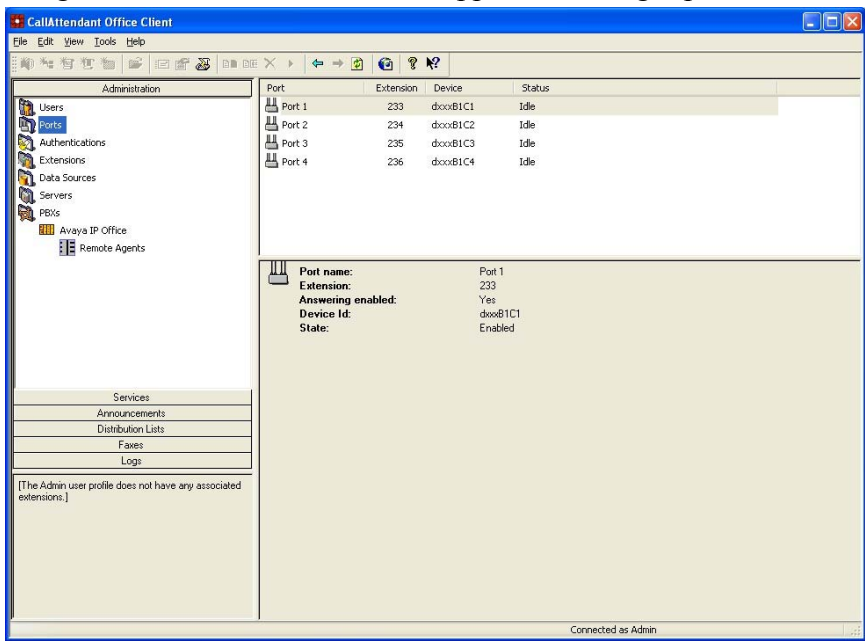
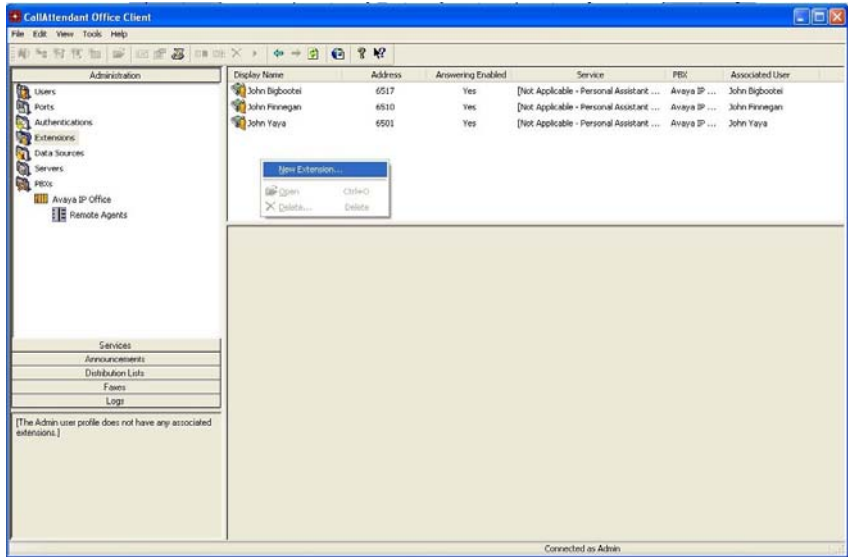
Step	Description
34.	<p>In the next Users Wizard window that appears, click Submit.</p> 
35.	<p>In the Progress... window that appears, click Next.</p> 
36.	In the Users Wizard window that appears, click Finish .
37.	In the CallAttendant Office Server Configuration Wizard window that appears, click Users for the Users wizard.
38.	In the Users Wizard window that appears, click Next .


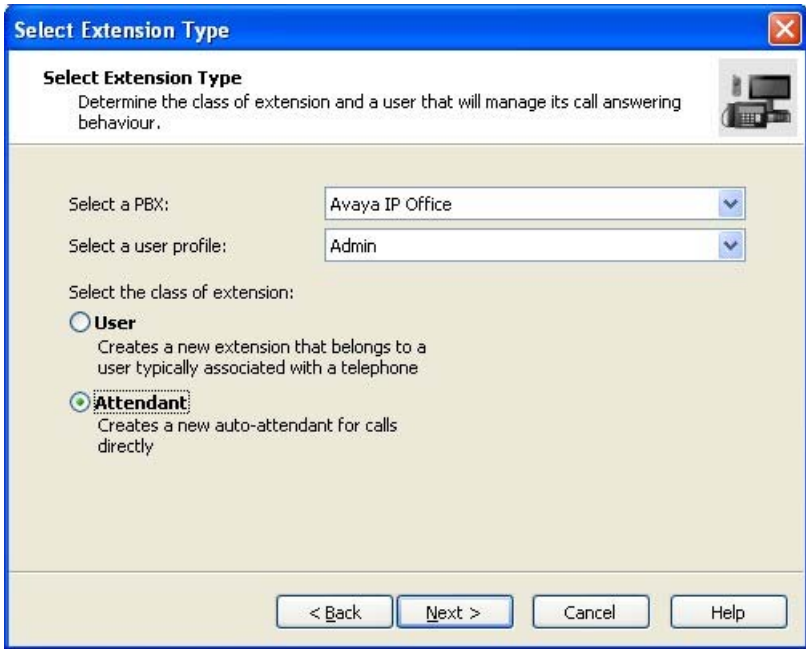
Step	Description
39.	<p>In the next Users Wizard window that appears, select Manual entry of new users and click Next.</p> 
40.	<p>In the next Users Wizard window that appears, click Add User, set Display Name to <i>John Bigbootei</i> and set Extension to <i>6517</i>. Click Next.</p> 

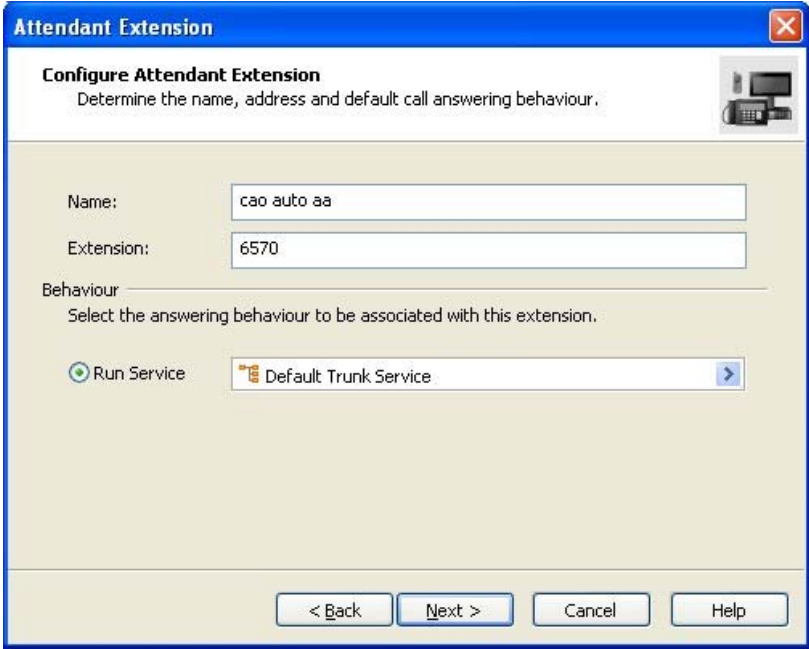
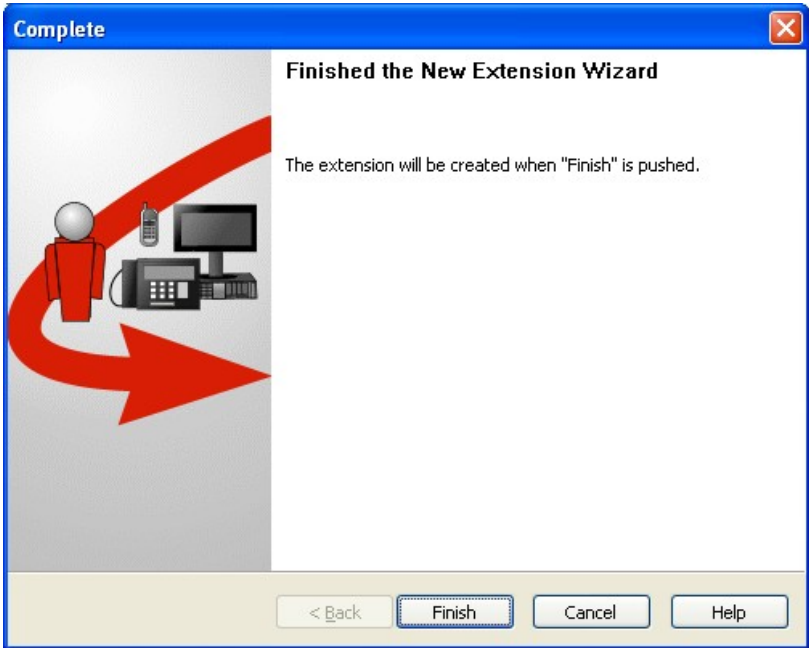
Step	Description
41.	<p>In the next Users Wizard window that appears, click Submit.</p> 
42.	<p>In the Progress... window that appears, click Next.</p> 
43.	In the Users Wizard window that appears, click Finish .
44.	In the CallAttendant Office Server Configuration Wizard window that appears, click Final System Configuration for the Final System Configuration wizard.
45.	In the Final System Configuration window that appears, click Next .
46.	In the Admin Password window that appears, set Password to the password that will be used to log into the CAO to perform administrative tasks, set Confirm password to the same value. Click Next .
47.	In the Dialing Properties window that appears, set Country/region to <i>United States (1)</i> , set Area Code to 732 , check Enable 10-digit dialing for my area code , and click Next .

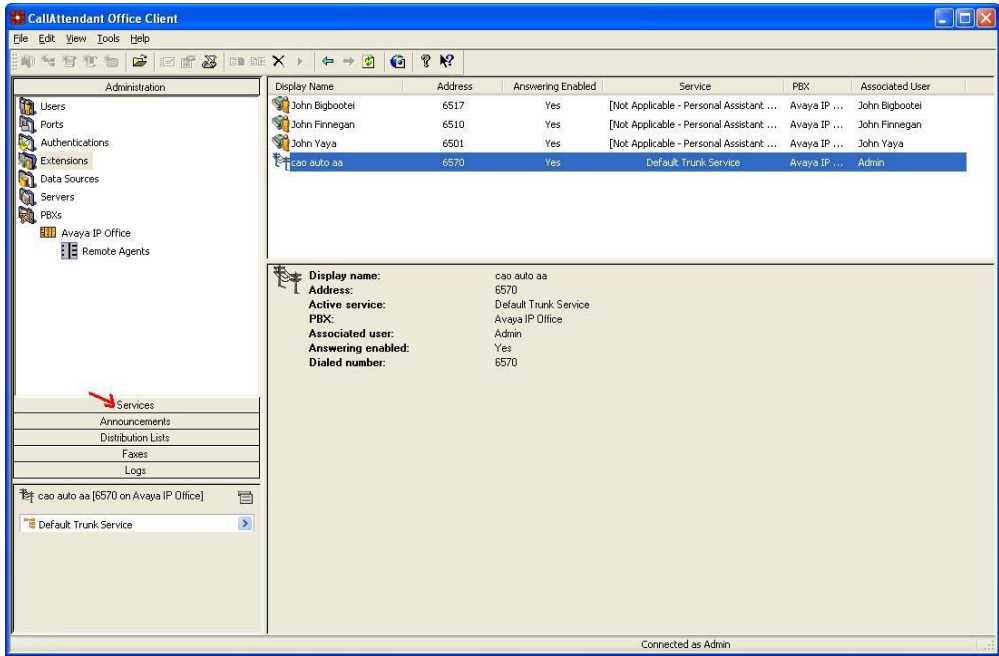
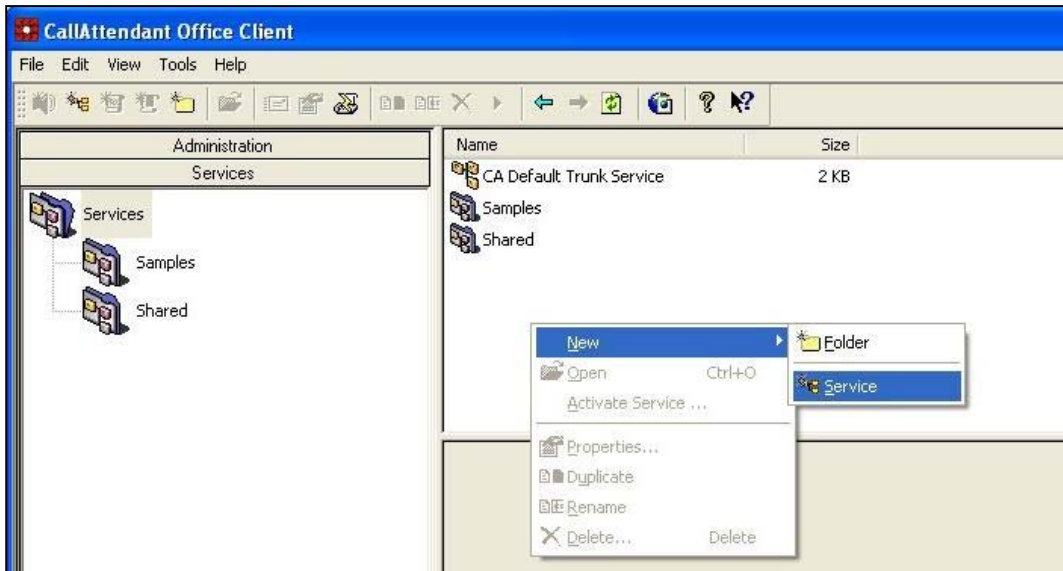
Step	Description
48.	In the Mailbox Defaults window that appears, check Enable support for callers to transfer to an operator during voicemail service , set Operator extension to 6501 , set Default mailbox to John Yaya . Click Next .
49.	In the Notification email server window that appears, set Send e-mail using to Exchange Server (WIN2K3) and click Next .
50.	In the Summary window that appears, click Submit .
51.	In the Progress... window that appears, click Next .
52.	In the Final System Configuration window that appears, click Finish .
53.	In the CallAttendant Office Server Configuration Wizard window that appears, click Exit to exit the wizard.
	Verify Wizard Configuration
54.	Go to Start → Programs → Objectworld CallAttendant Office → CallAttendant Office Client and login using the appropriate administrative privileges.
55.	In the CallAttendant Office Client window that appears, click Users in the left pane and verify the end user names and corresponding extensions listed in Table 1 appear in the right pane.

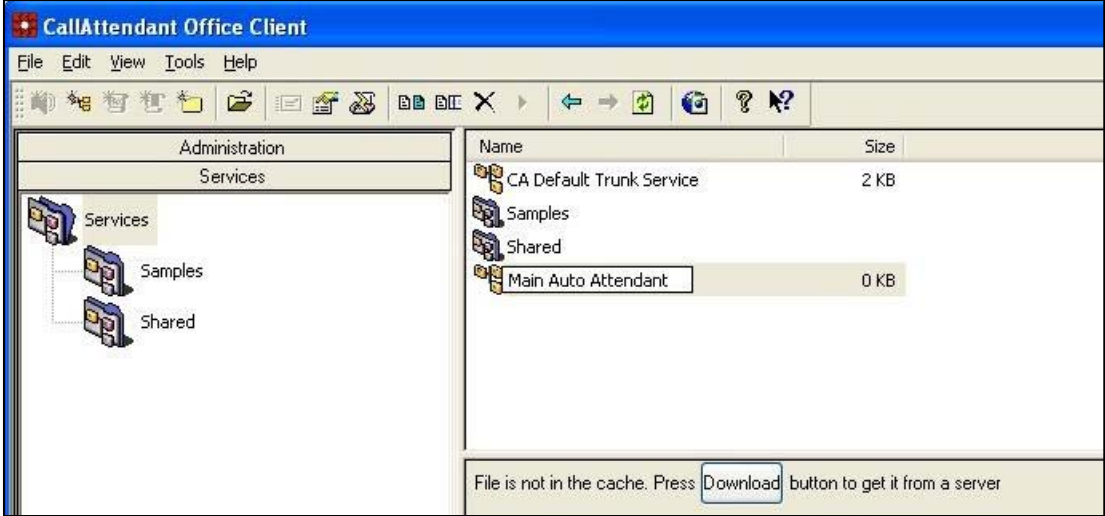
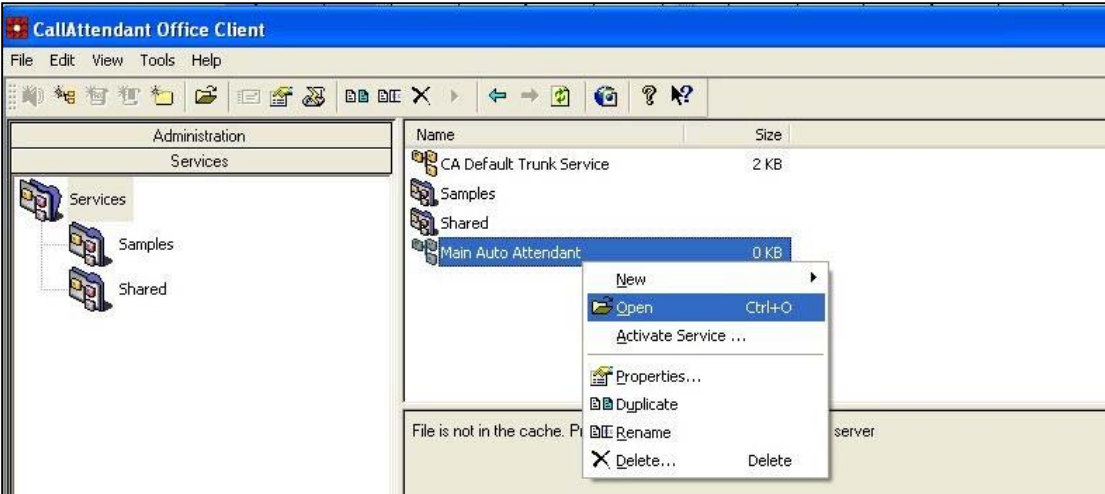


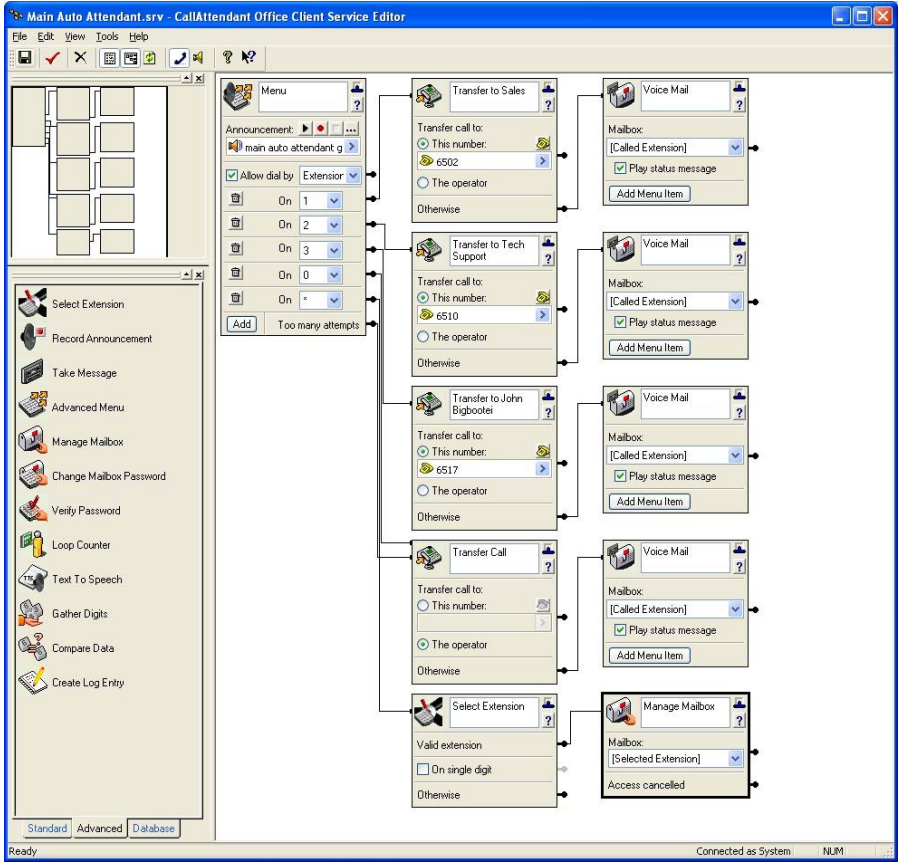
Step	Description
56.	<p>In the CallAttendant Office window, click Ports in the left pane and verify the CAO ports and corresponding extensions listed in Table 1 appear in the right pane.</p> <div></div>
57.	<p>To verify proper function, place a call to extension 233 from an IP Office telephone extension. Verify that CallAttendant Office Voicemail answers. Repeat for each CAO extension configured, e.g., 234– 236.</p>
	<p>Configure CAO Auto Attendant</p>
58.	<p>In the CallAttendant Office window, click Extensions in the left pane and verify the end user extensions listed in Table 1 appear in the right pane. Right-click the right pane and select New Extension... in the popup menu that appears.</p> <div></div>

Step	Description
59.	<p>In the Welcome window that appears, click Next.</p> 
60.	<p>In the Select Extension Type window that appears, set Select a PBX to <i>Avaya IP Office</i>, set Select a user profile to <i>Admin</i>, select <i>Attendant</i> for Select the class of extension. Click Next.</p> 

Step	Description
61.	<p>In the Attendant Extension window that appears, set Name to <i>cao auto aa</i>, set Extension to <i>6570</i> and set Run Service to <i>Default Trunk Service</i>. Click Next.</p> 
62.	<p>In the Complete window that appears, click Finish.</p> 

Step	Description																														
63.	<p>In the CallAttendant Office Client window, click Services in the left pane.</p>  <table><thead><tr><th>Display Name</th><th>Address</th><th>Answering Enabled</th><th>Service</th><th>PBX</th><th>Associated User</th></tr></thead><tbody><tr><td>John Bigbootel</td><td>6517</td><td>Yes</td><td>[Not Applicable - Personal Assistant ...</td><td>Avaya IP ...</td><td>John Bigbootel</td></tr><tr><td>John Finnegan</td><td>6510</td><td>Yes</td><td>[Not Applicable - Personal Assistant ...</td><td>Avaya IP ...</td><td>John Finnegan</td></tr><tr><td>John Yaya</td><td>6501</td><td>Yes</td><td>[Not Applicable - Personal Assistant ...</td><td>Avaya IP ...</td><td>John Yaya</td></tr><tr><td>cao auto aa</td><td>6570</td><td>Yes</td><td>Default Trunk Service</td><td>Avaya IP ...</td><td>Admin</td></tr></tbody></table> <p>Below the table, the details for the selected service 'cao auto aa' are shown:</p> <ul style="list-style-type: none">Display name: cao auto aaAddress: 6570Active service: Default Trunk ServicePBX: Avaya IP OfficeAssociated user: AdminAnswering enabled: YesDialed number: 6570	Display Name	Address	Answering Enabled	Service	PBX	Associated User	John Bigbootel	6517	Yes	[Not Applicable - Personal Assistant ...	Avaya IP ...	John Bigbootel	John Finnegan	6510	Yes	[Not Applicable - Personal Assistant ...	Avaya IP ...	John Finnegan	John Yaya	6501	Yes	[Not Applicable - Personal Assistant ...	Avaya IP ...	John Yaya	cao auto aa	6570	Yes	Default Trunk Service	Avaya IP ...	Admin
Display Name	Address	Answering Enabled	Service	PBX	Associated User																										
John Bigbootel	6517	Yes	[Not Applicable - Personal Assistant ...	Avaya IP ...	John Bigbootel																										
John Finnegan	6510	Yes	[Not Applicable - Personal Assistant ...	Avaya IP ...	John Finnegan																										
John Yaya	6501	Yes	[Not Applicable - Personal Assistant ...	Avaya IP ...	John Yaya																										
cao auto aa	6570	Yes	Default Trunk Service	Avaya IP ...	Admin																										
64.	<p>In the Services window that appears, right-click the right pane and select New → Service in the popup menu that appears.</p> 																														

Step	Description
65.	<p>In the new entry that appears in the right pane, set Name to <i>Main Auto Attendant</i>.</p>  <p>The screenshot shows the 'CallAttendant Office Client' window. The left pane shows a tree view with 'Administration' and 'Services'. The right pane shows a list of services with columns 'Name' and 'Size'. The 'Main Auto Attendant' entry is highlighted, showing a size of 0 KB. A status bar at the bottom indicates 'File is not in the cache. Press Download button to get it from a server'.</p>
66.	<p>Right-click Main Auto Attendant in the right pane and select Open in the popup menu that appears.</p>  <p>The screenshot shows the same 'CallAttendant Office Client' window. The 'Main Auto Attendant' entry is right-clicked, and a context menu is displayed. The 'Open' option is highlighted, and the keyboard shortcut 'Ctrl+O' is shown next to it. Other options in the menu include 'New', 'Activate Service ...', 'Properties...', 'Duplicate', 'Rename', and 'Delete...'. The status bar at the bottom still indicates 'File is not in the cache. Press Download button to get it from a server'.</p>

Step	Description
67.	<p>In the Main Auto Attendant.srv – CallAttendant Office Client Service Editor window that appears, define an automated attendant menu to use for incoming calls. When done, select File → Save to save the Auto Attendant call flow. This completes configuration of the CallAttendant Office.</p> 

5. Interoperability Compliance Testing

Interoperability compliance testing examined the ability of Objectworld CallAttendant Office to work with Avaya IP Office. The following CAO features were verified with IP Office: automated attendant, voicemail, transfer, assisted transfer, receiving fax, sending fax, pager notification, active message delivery, one-time message.

5.1. General Test Approach

Feature functionality testing was performed manually. Inbound calls were made to Avaya IP Office through analog and T1/PRI trunks, as well as from internal extensions (analog, digital and IP Telephone). For automated attendant functionality, IP Office routed inbound calls to the CAO auto aa hunt group, which transferred calls, based on caller DTMF input. For voicemail

functionality, CAO treated covered calls according to the settings defined by the extension owner via CAO's Personal Voicemail or Personal Auto Attendant interfaces. CAO emailed voice and fax messages to the extension owner's messaging server. Extension owners would then review messages using a messaging client (Outlook or CAO).

A load test was performed using a call generator to generate inbound calls over eight channels on a PRI trunk to Avaya IP Office. Eight client PCs were configured with CAO client software and messaging clients. For the load test, a call generator script would navigate the CAO automated attendant and select a transfer to a destination extension, which would not answer. Upon being routed to coverage, the call generator script would leave a voicemail message and hang up. The voicemail message would then be emailed to the CAO user's messaging server and would appear in the CAO user's messaging client. A second script was then used to place another inbound call over the PRI trunk to Avaya IP Office, navigate the CAO automated attendant, log into the called extension's voicemail, retrieve the voicemail, delete it and hang up. The deleted message would also disappear from the CAO user's messaging client.

5.2. Test Results

All executed test cases were completed successfully. A load test with a call rate of ~844 call attempts per hour using 8 PRI trunk channels and calls averaging 28.44 seconds in length was run for one hour. The call generator was limited to placing no more than 8 calls at a time. The call generator reported 852 calls, which matched the number of calls reported by CAO. At the conclusion of the load test, all message-waiting lamps on the telephone extensions used for the load test were off as expected. All but one voicemail account was empty. This was attributed to the Windows client used for the test, as it was noticeably slower than the other clients and may have impacted its ability to remain in sync for the test.

6. Verification Steps

The following steps may be used to verify the configuration:

- To verify TAPI is enabled on Avaya IP Office, confirm the CTI Link Pro and Wave User licenses are installed and valid via Avaya IP Office Manager (Section 3).
- To verify the CAO PC is TAPI enabled, confirm the Avaya TAPI driver is installed and configured on the CAO PC (Section 4.1).
- To verify the CAO System Auto Attendant is operating properly: place a call to the CAO auto aa hunt group. Verify the CAO Welcome greeting plays and enter a valid extension number on the IP Office system. Verify the call is transferred to the correct extension.
- To verify the CAO Personal Voicemail is operating properly: place a call to an extension and do not answer it. Verify the call is routed to the CAO Voicemail and leave a message. Verify the voice message is emailed to the user's messaging client (Outlook or CAO provided client), and the user can play back the message via telephone or PC.

- To verify the CAO Personal Auto Attendant is operating properly: place a call to an extension number configured to use CAO Personal Auto Attendant and do not answer the call. Verify the call is treated according to the treatment defined by the user

7. Support

For technical support on CallAttendant Office, consult Objectworld at www.objectworld.com or contact the Objectworld Technical Support at:

- Phone: 613-599-9698 (Option 5)
- E-mail: CAOSupport@objectworld.com

8. Conclusion

These Application Notes describe the steps for configuring Objectworld CallAttendant Office to work with Avaya IP Office. 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 3.2 Manager, Issue 18g, 28th June 2006

[2] Avaya IP Office CTI Link Installation Manual, 40DHB0002UKAB – Issue 11a, 22nd September 2005

Product documentation for Objectworld products may be found at <http://www.objectworld.com>.

[3] Objectworld CallAttendant Office Administration Guide, CAO-1011-003

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