



Avaya Solution & Interoperability Test Lab

Application Notes for DuVoice 5.0 with Avaya IP Office 7.0 – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for the DuVoice 5.0 hospitality messaging system to interoperate with Avaya IP Office 7.0. In the compliance testing, DuVoice used the SIP User, TAPI, DevLink, and Configuration Web Service interfaces from Avaya IP Office, and the PUSH interface from Avaya 96xx IP Telephones to provide automated attendant, voicemail, wake-up call, do not disturb, name and user profile template change, room clean status, and 911 alerting features.

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 the DuVoice 5.0 hospitality messaging system to interoperate with Avaya IP Office 7.0. In the compliance testing, DuVoice used the SIP User, TAPI, DevLink, and Configuration Web Service interfaces from Avaya IP Office, and the PUSH interface from Avaya 96xx IP Telephones to provide automated attendant, voicemail, wake-up call, name and user profile template change, and 911 alerting features.

The SIP User and TAPI interfaces were used by DuVoice to provide basic hospitality features such as automated attendant, voicemail, wake-up call, do not disturb, and room clean status indication. In the compliance testing, DuVoice emulated two virtual SIP users on Avaya IP Office. The two virtual SIP users were registered with Avaya IP Office, and configured as members of a hospitality hunt group. DuVoice used the TAPI interface to monitor the virtual SIP users. Incoming calls to the hospitality hunt group were delivered over an available virtual SIP user to DuVoice. DuVoice used the TAPI events to determine the type of call and hence the service to provide, such as automated attendant for incoming trunk calls, voicemail coverage for redirected call, voicemail, do not disturb, room clean status, and wake-up call scheduling for internal calls.

For the voicemail coverage scenarios, voicemail messages were recorded and saved on DuVoice. The TAPI lineDevSpecific capability was used to activate/deactivate the Message Waiting Indicator (MWI), and to optionally set the divert setting for Do Not Disturb when requested manually by the guests.

DuVoice also has a Property Management System (PMS) application called InnDesk with a web-based interface. In the compliance testing, InnDesk was running on the DuVoice server and used for initiation of hospitality requests such as check-in and check-out. Two user rights templates were set up on Avaya IP Office for use with check-in and check-out guests, and DuVoice used the Configuration Web Service to send updates to Avaya IP Office on the guest name and user rights template as part of the check-in, check-out, and move process.

The DevLink and IP Telephone PUSH interfaces were used by DuVoice to send 911 alerting messages. Upon notified of any user dialing “911” on Avaya IP Office, DuVoice pushed a 911 alerting text message to the display of a predetermined list of Avaya 96xx IP Telephone users.

2. General Test Approach and Test Results

The feature test cases were performed manually. Calls were made from the PSTN and from local users to the hospitality hunt group, with different options selected for extension transfer, voice message retrieval, and wake-up call schedule. The DuVoice InnDesk was used to manually initiate check-in/check-out/move requests, to monitor the room and wake-up call status, and to set Do Not Disturb.

The serviceability test cases were performed manually by disconnecting and reconnecting the Ethernet cable to DuVoice.

2.1. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing.

The feature testing focused on verifying the following on DuVoice:

- Registration of emulated SIP users.
- Automated attendant navigation for incoming trunk calls, such as transfer to guests and staff.
- Handling of voicemail messages and message waiting lamps for check-out and move requests initiated via InnDesk.
- Voicemail recording, logging, and retrieval, with proper message waiting lamp activation/deactivation for users with analog, digital, and IP telephone types.
- Scheduling and delivering of wake-up call requests, including retried attempts and escalation to staff.
- Handling of TAPI events and messages for calls, and setting of MWI and do not disturb divert parameters.
- Handling of maid codes as indication of room clean status from the hospitality hunt group calls.
- Use of Configuration Web Services to update guest name and user rights template associated with check-in, check-out, and move requests from InnDesk.
- Use of real-time DevLink events to monitor “911” dialing, and push of 911 alerting text message to an Avaya 9620 IP Telephone user. The 911 alerting text message included the name and extension of the user making the “911” call.

The serviceability testing focused on verifying the ability of DuVoice to recover from adverse conditions, such as disconnecting and reconnecting the Ethernet cable to DuVoice.

2.2. Test Results

All test cases were executed.

The one observation on DuVoice from the compliance testing was that when the DNS server setting for the network card on the DuVoice server is left blank, then calls connected to the first couple of DuVoice ports will not have audio. The workaround is to always configure the DNS server setting on the network card, followed by a server reboot.

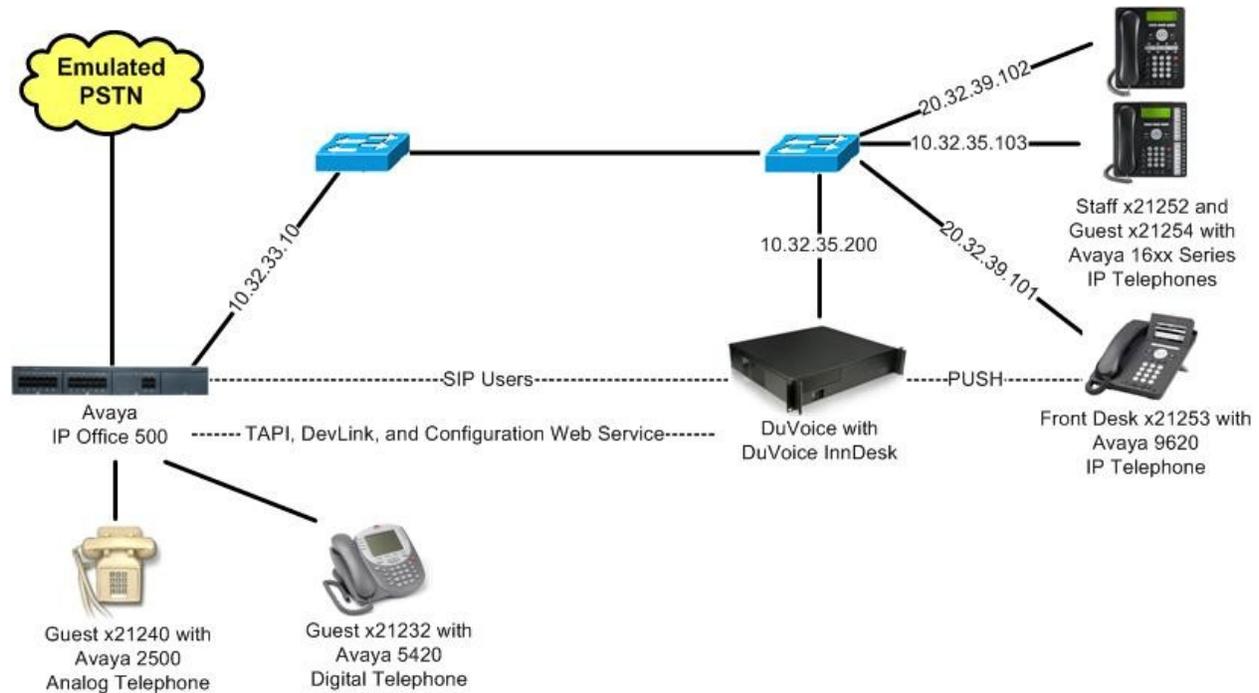
2.3. Support

Technical support on DuVoice can be obtained through the following:

- **Phone:** (425) 250-2393
- **Email:** support@duvoice.com

3. Reference Configuration

The configuration used for the compliance testing is shown below.



4. Equipment and Software Validated

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

Equipment	Software
Avaya IP Office 500	7.0
Avaya 16xx Series IP Telephones (H.323)	1.3
Avaya 9620 IP Telephone (H.323)	3.11
Avaya 5420 Digital Telephone	NA
Avaya 2500 Analog Telephone	NA
DuVoice on Microsoft Windows 7 Professional	5.00.025
• InnDesk	1.30
• Avaya TAPI (tspi2w.tsp)	1.0.0.35
• Avaya DevLink (devlink.dll)	1.0.0.5

5. Configure Avaya IP 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
- Administer hospitality hunt group
- Administer incoming call route
- Administer system voicemail
- Administer voicemail users
- Administer analog user MWI
- Administer user rights
- Administer security service

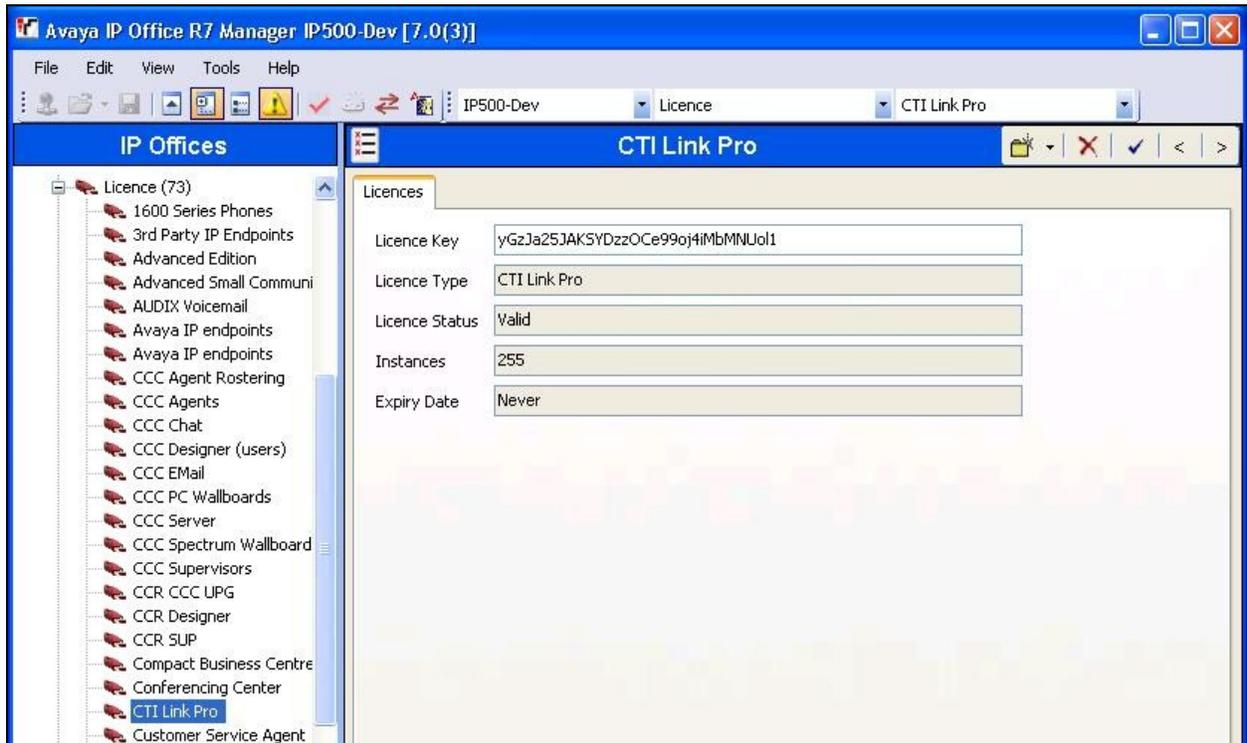
5.1. Verify IP Office License

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.

The **Avaya IP Office R7 Manager** screen is displayed. From the configuration tree in the left pane, select **Licence > 3rd Party IP Endpoints** to display the **3rd Party IP Endpoints** screen in the right pane. Verify that the **Licence Status** is “Valid”.

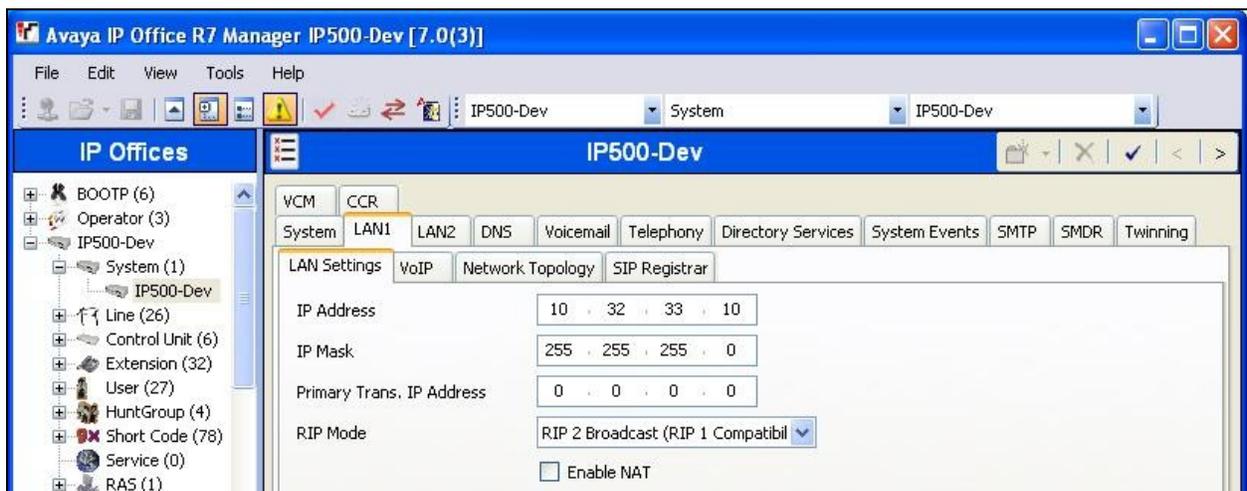


Scroll down the left pane and select **Licence > CTI Link Pro**, to display the **CTI Link Pro** screen in the right pane. Verify that the **Licence Status** is “Valid”.



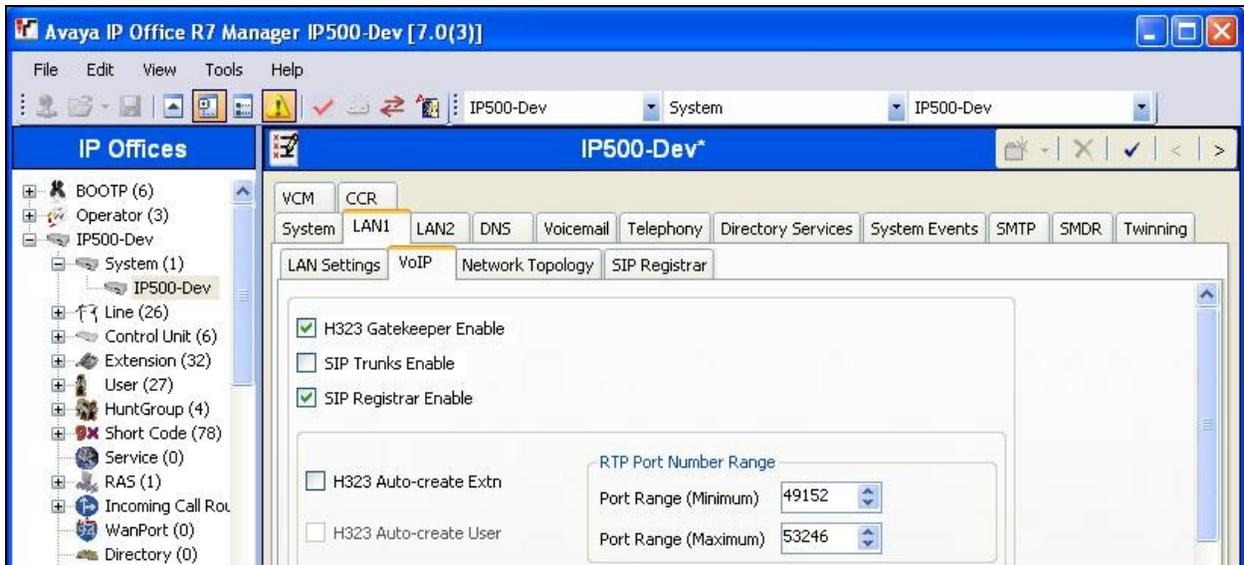
5.2. Obtain LAN IP Address

From the configuration tree in the left pane, select **System** to display the **IP500-Dev** 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 DuVoice. Note that IP Office can support SIP on the LAN1 and/or LAN2 interfaces, and the compliance testing used the LAN1 interface.

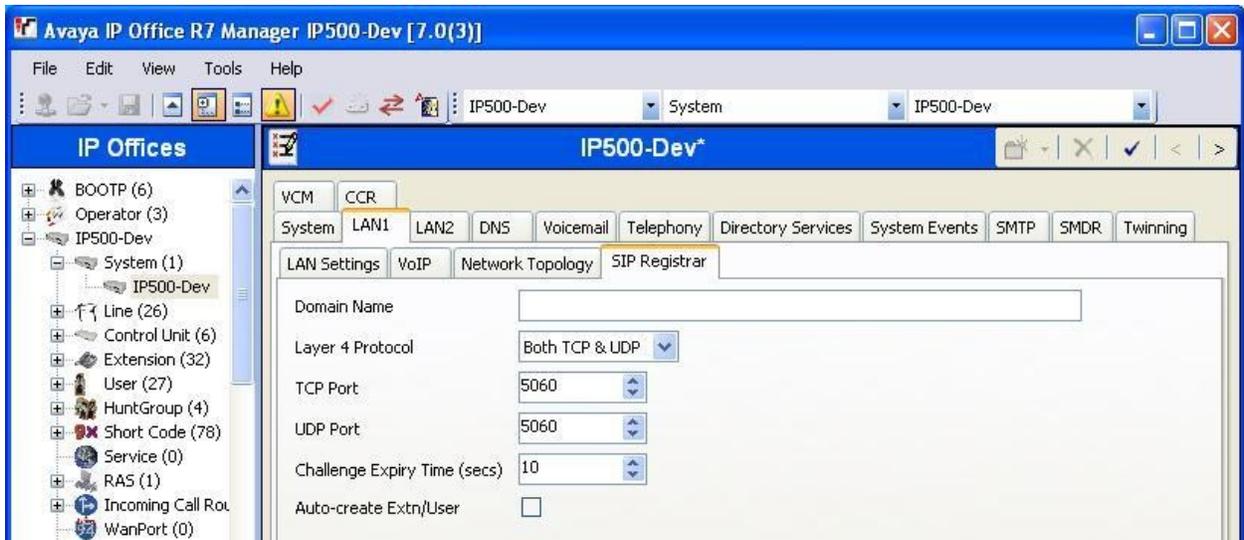


5.3. Administer SIP Registrar

Select the **VoIP** sub-tab. Make certain that **SIP Registrar Enable** is checked, as shown below.



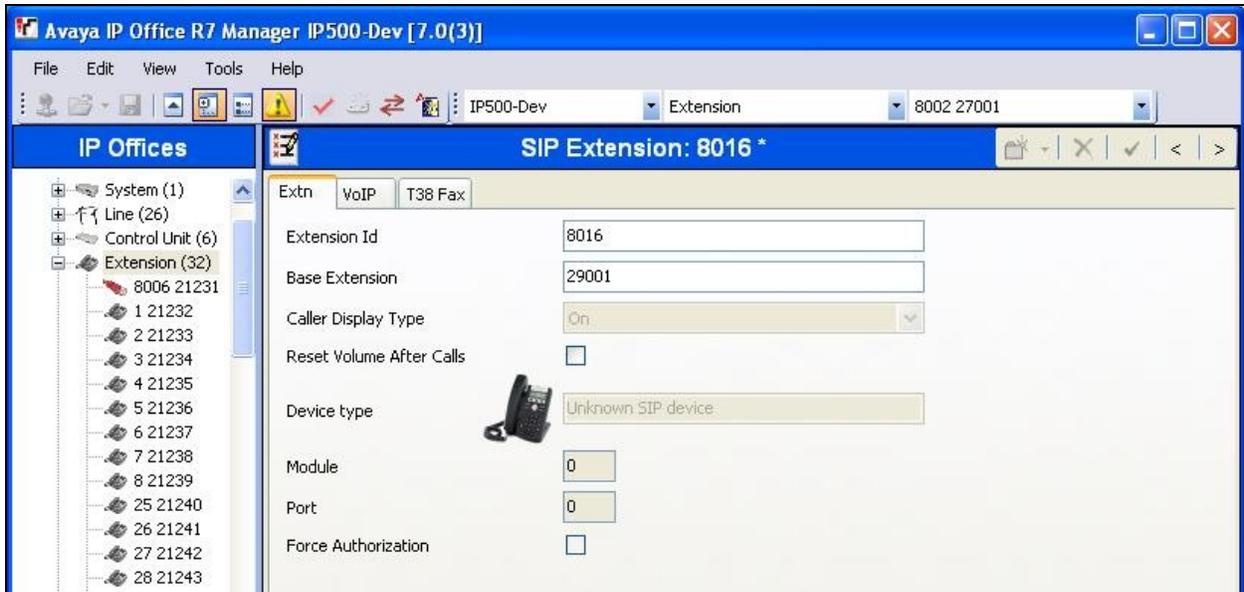
Select the **SIP Registrar** sub-tab, and enter a valid **Domain Name** for SIP endpoints to use for registration with IP Office. In the compliance testing, the **Domain Name** was left blank, so the LAN IP address was used for registration.



5.4. Administer SIP Extensions

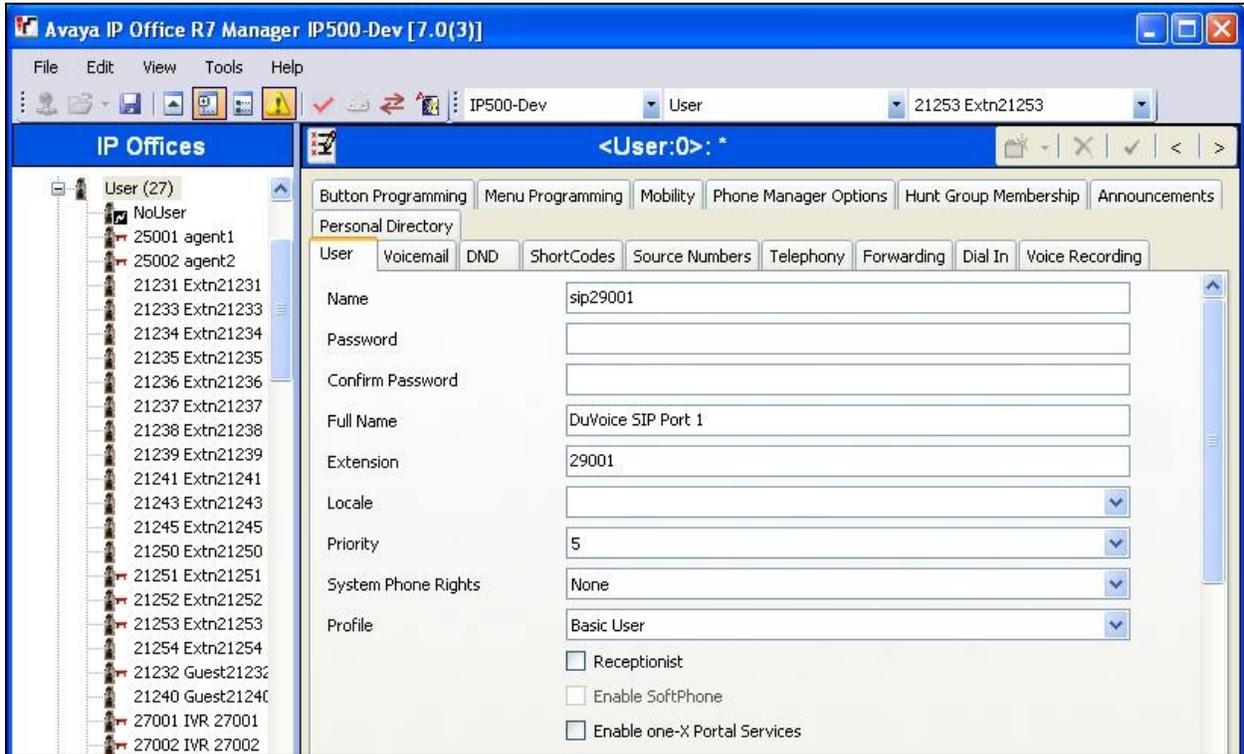
From the configuration tree in the left pane, right-click on **Extension**, and select **New > SIP Extension** from the pop-up list to add a new SIP extension. Enter the desired digits for **Base Extension**, and uncheck **Force Authorization**, as shown below.

Repeat this section to add the desired number of SIP extensions. In the compliance testing, two SIP extensions with base extensions of “29001” and “29002” were created.

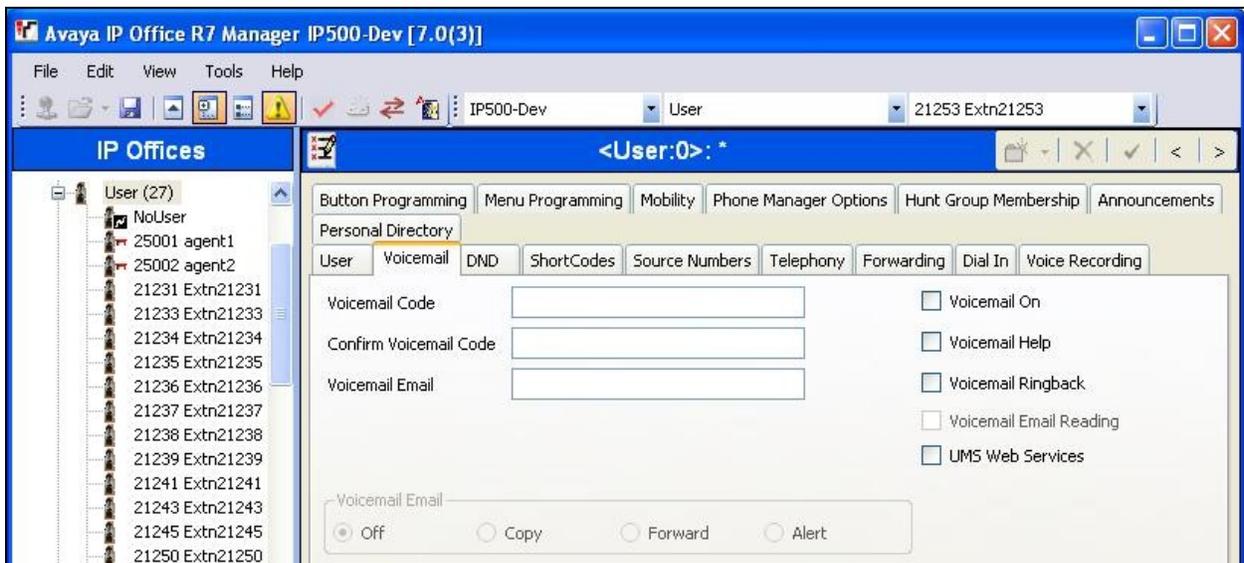


5.5. Administer SIP Users

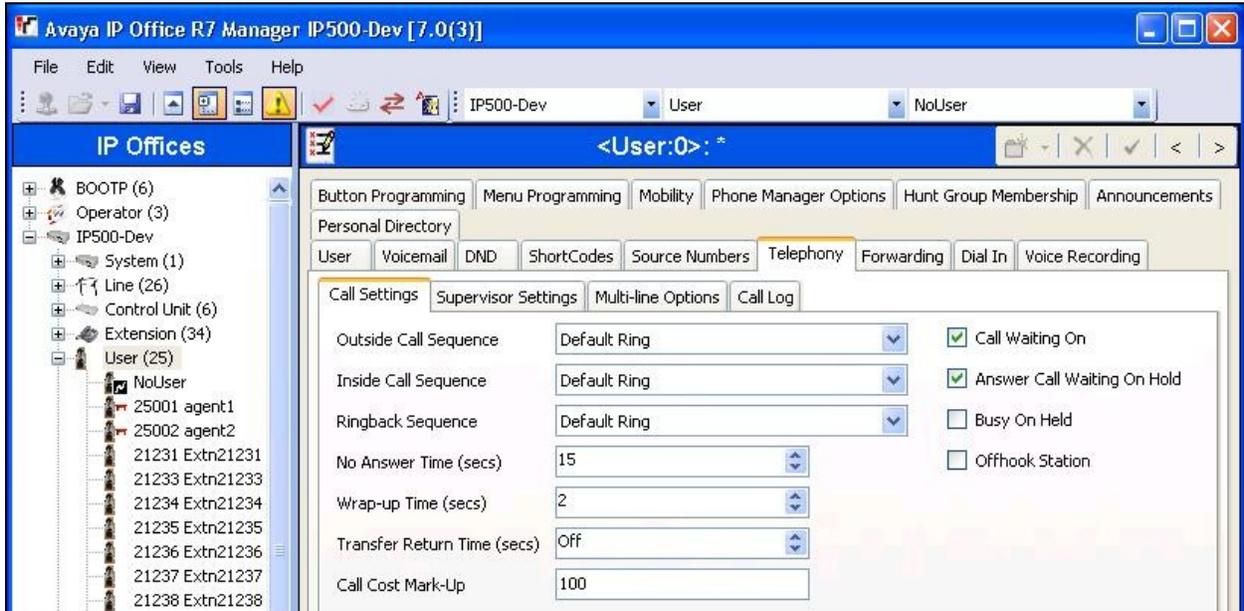
From the configuration tree in the left pane, right-click on **User**, and select **New** from the pop-up list. Enter desired values for **Name** and **Full Name**. For **Extension**, enter the first SIP base extension from **Section 5.4**.



Select the **Voicemail** tab, and uncheck **Voicemail On**, as shown below.

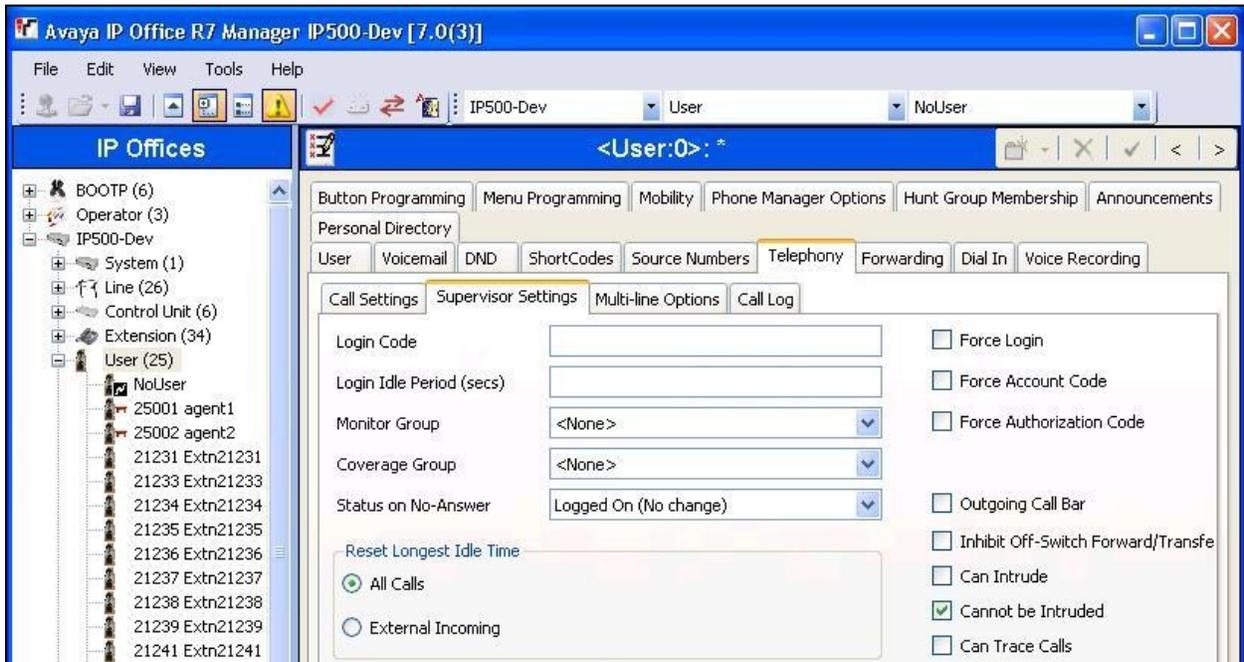


Select the **Telephony** tab, followed by the **Call Settings** sub-tab. Check **Call Waiting On**, as shown below.



Select the **Supervisor Settings** sub-tab. Check the **Cannot be Intruded** field, as shown below.

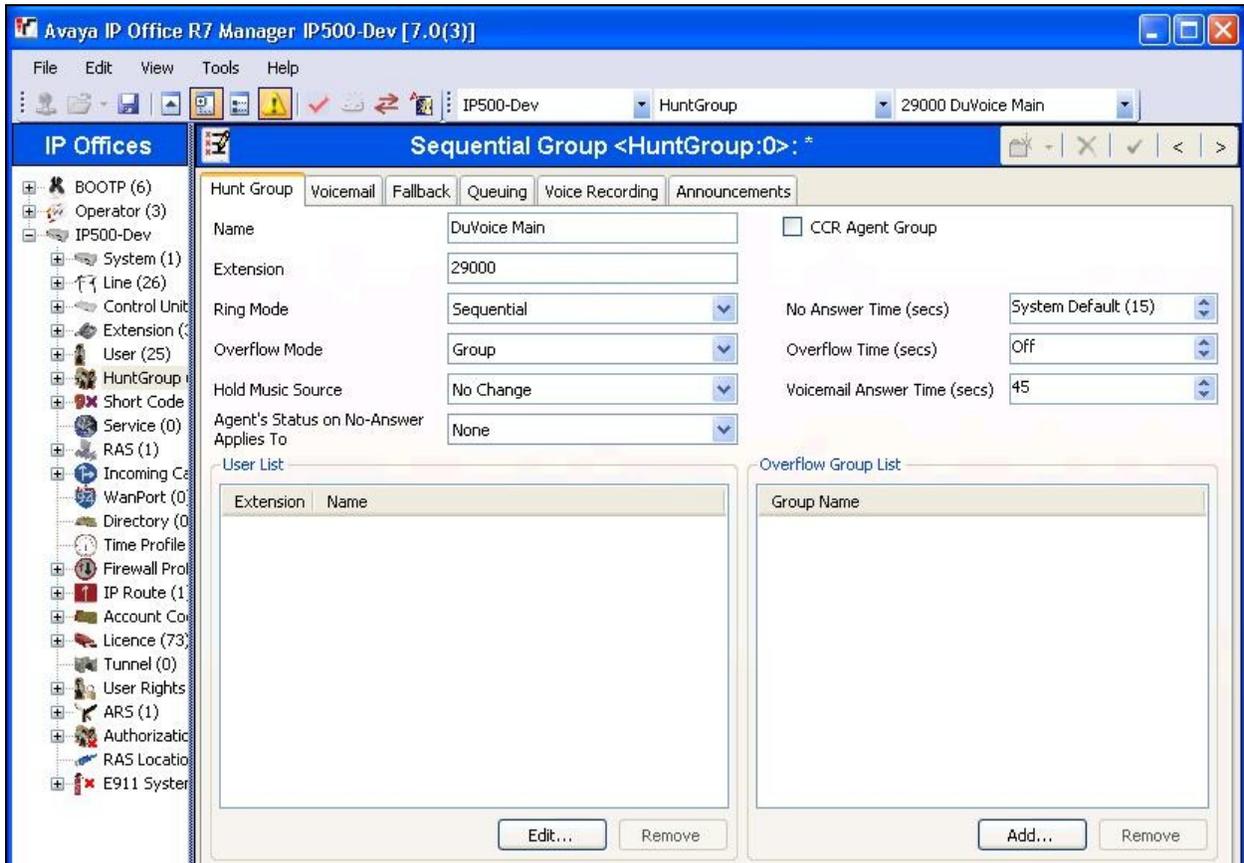
Repeat this section to add a new user for each SIP extension from **Section 5.4**. In the compliance testing, two users with names of “sip29001” and “sip29002” were created.



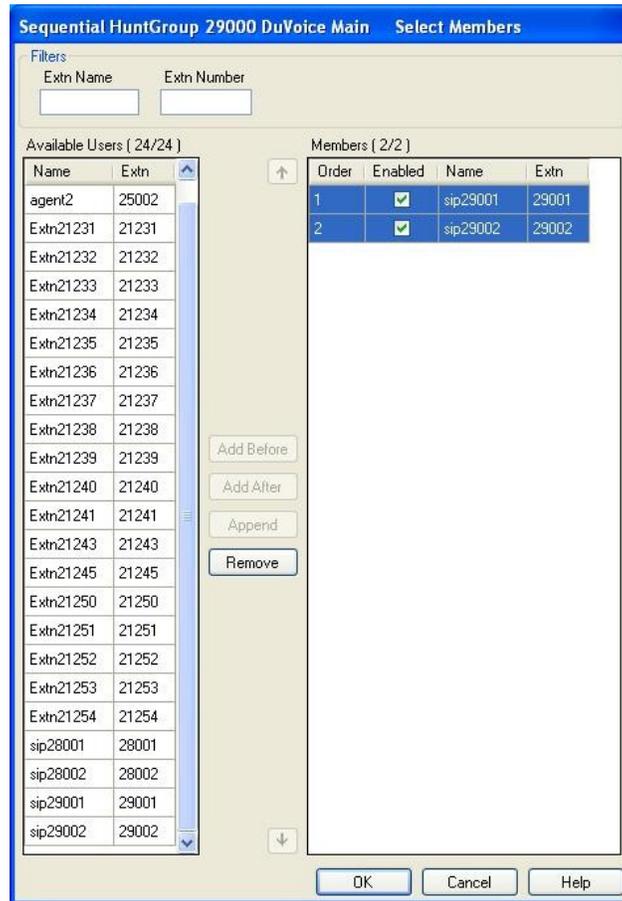
5.6. Administer Hospitality Hunt Group

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. This hunt group will be used to deliver calls to DuVoice for the hospitality features. Enter desired values for the **Name** and **Extension** fields, and retain the default values in the remaining fields.

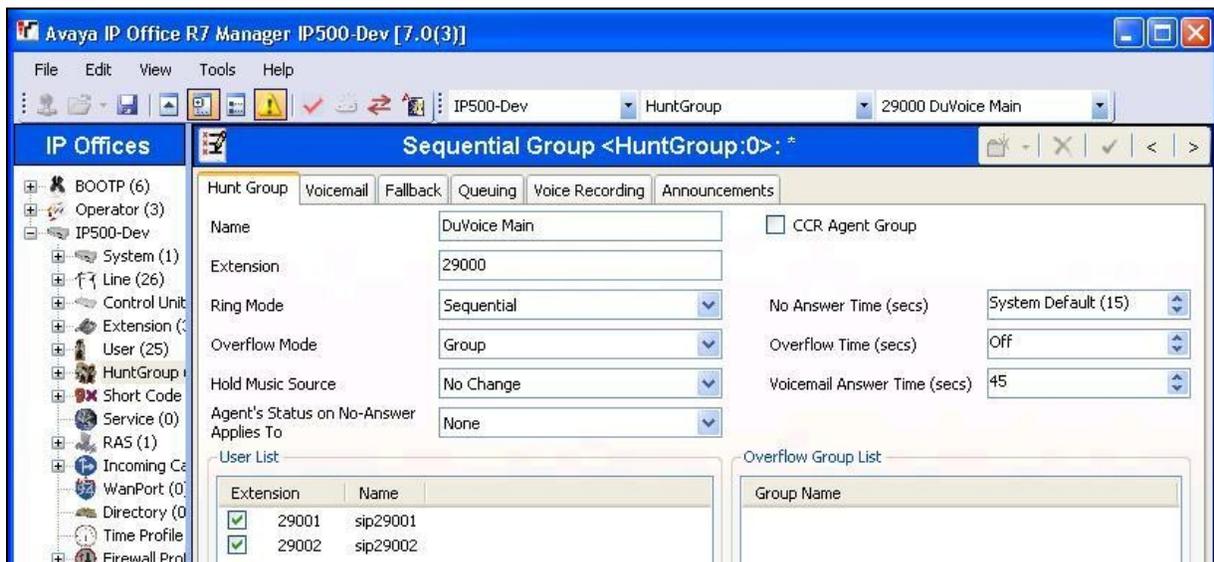
Click on **Edit** in the **User List** section to add members.



The **Select Members** screen is displayed. Select all SIP users from **Section 5.5**, and click the **Append** button to move the selected entries to the right.



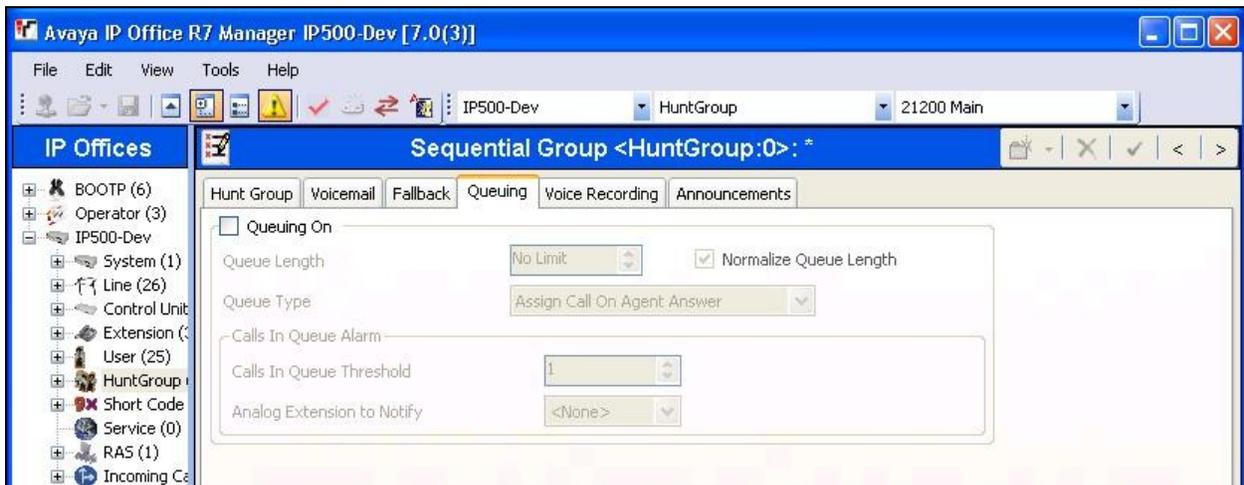
The **Sequential Group** screen is displayed again and updated with the selected members.



Select the **Voicemail** tab, and make sure **Voicemail On** is unchecked, as shown below.



Select the **Queuing** tab, and uncheck **Queuing On**, as shown below.



5.7. Administer Incoming Call Route

If necessary, create an incoming call route to route incoming calls to the hospitality hunt group. In the compliance testing, the existing incoming call route for the ISDN PRI line can route to any five digit extensions on IP Office.

As shown in the screen below, the **Incoming Number** for the ISDN PRI line “9” is “73285XXXXX”, which uses five single digit wildcards “X” allowing the last five digits to be any number.



In the **Destinations** tab, the use of “#” in the **Destination** field enables the routing to be based on the “XXXXX” from the **Incoming Number** field from above. Therefore, incoming calls to “7328529000” will be routed to the hospitality hunt group configured in **Section 5.6**.

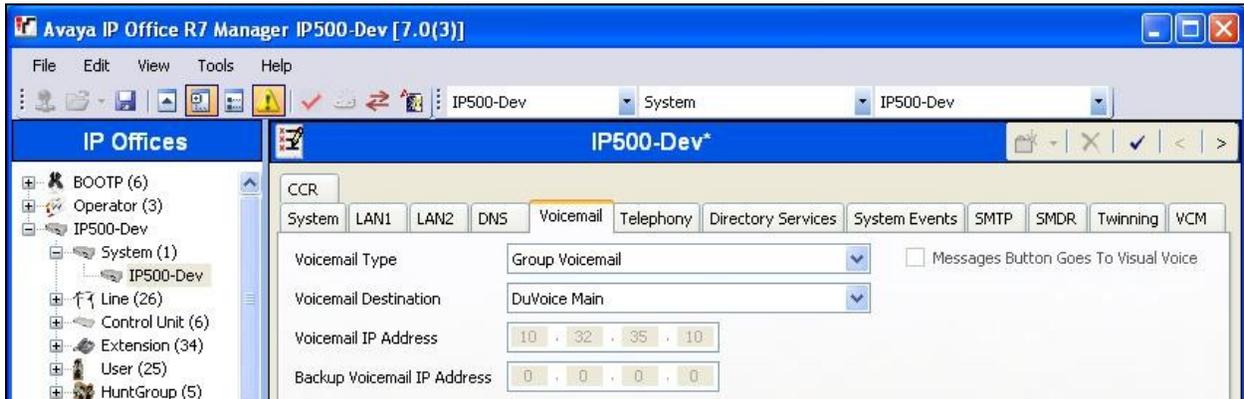
If desired, the hospitality hunt group can be selected from the **Destination** drop-down to route all incoming trunk calls to DuVoice.



5.8. Administer System Voicemail

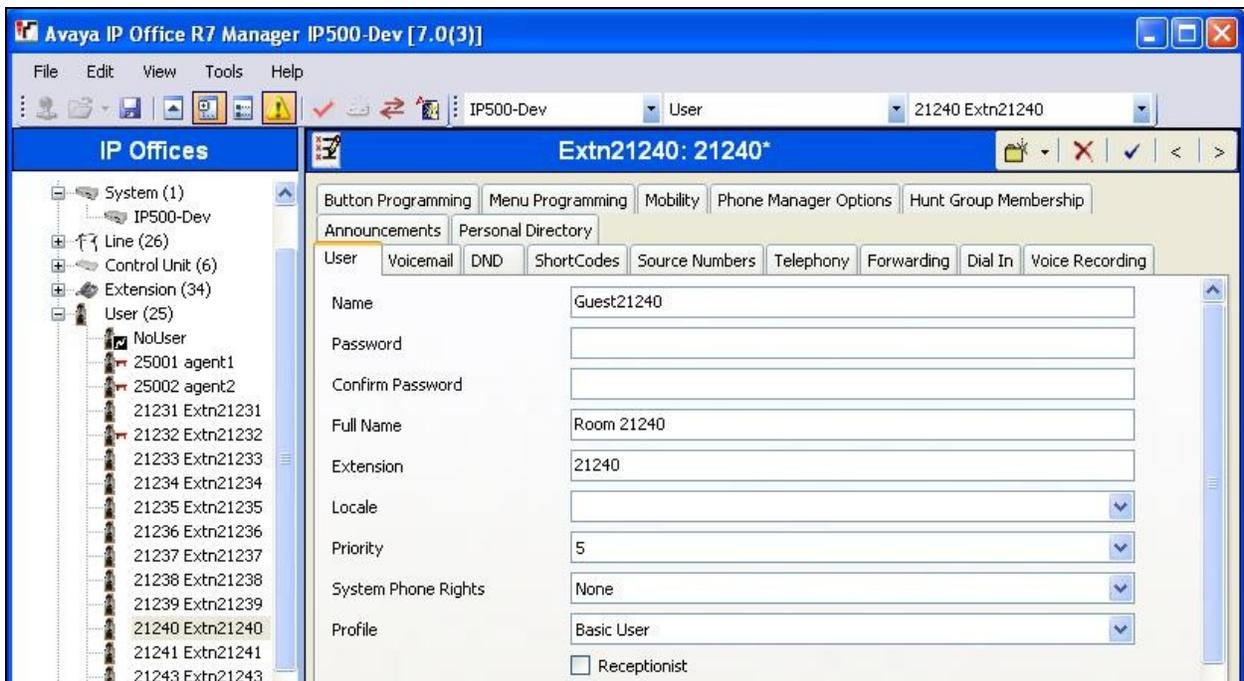
From the configuration tree in the left pane, select **System > IP500-Dev** to display the **IP500-Dev** screen in the right pane. Select the **Voicemail** tab in the right pane.

For **Voicemail Type**, select “Group Voicemail” from the field drop-down list. For **Voicemail Destination**, select the name of the hospitality hunt group from **Section 5.6**.

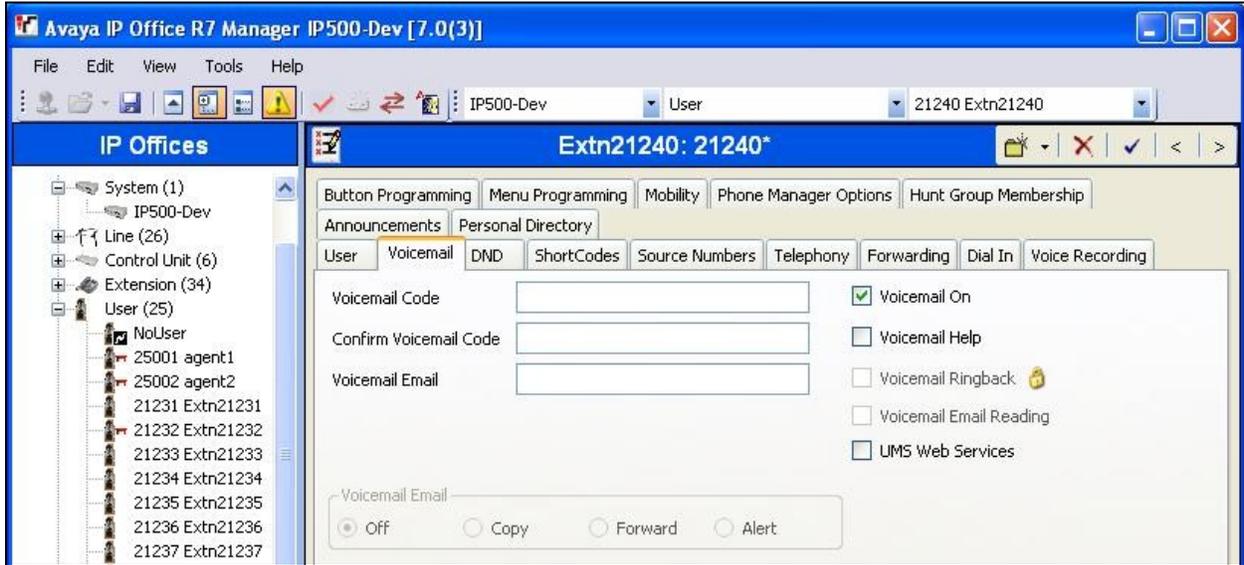


5.9. Administer Voicemail Users

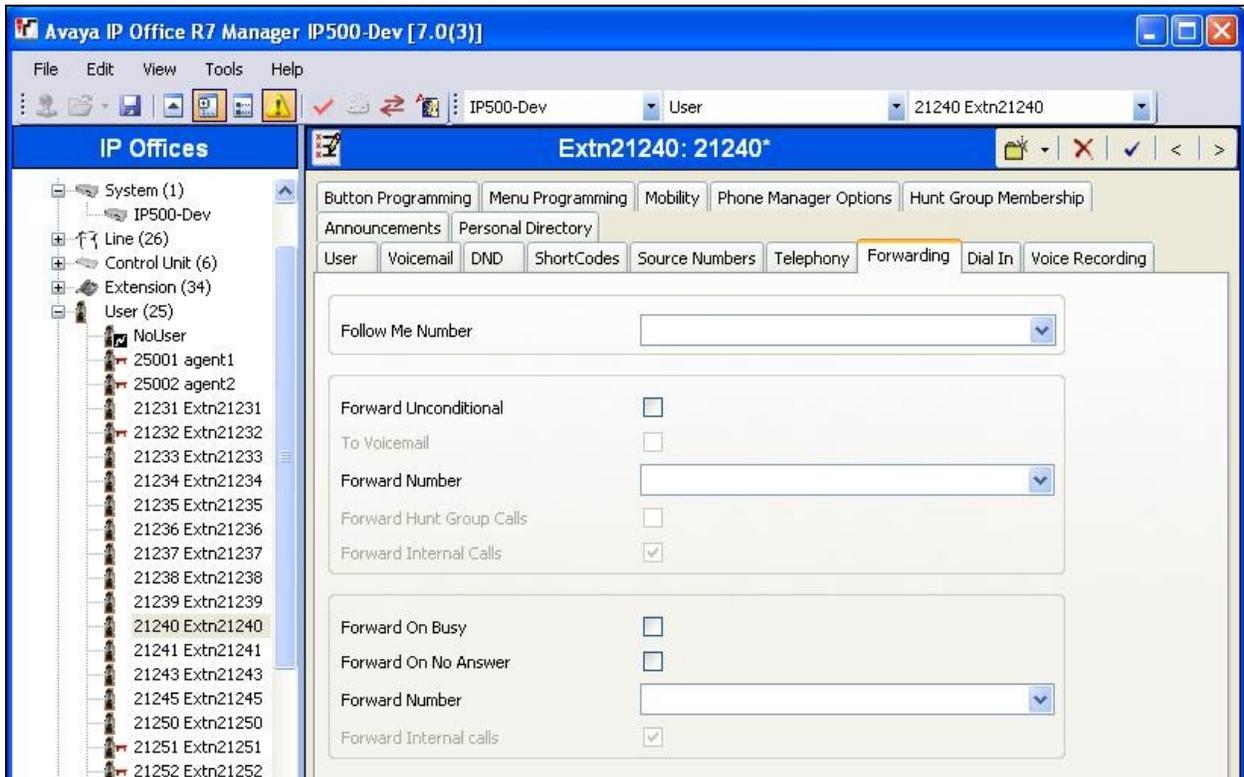
From the configuration tree in the left pane, select the first user that will be using DuVoice for voicemail. In this case, the user is “21240”. Enter a descriptive **Name**.



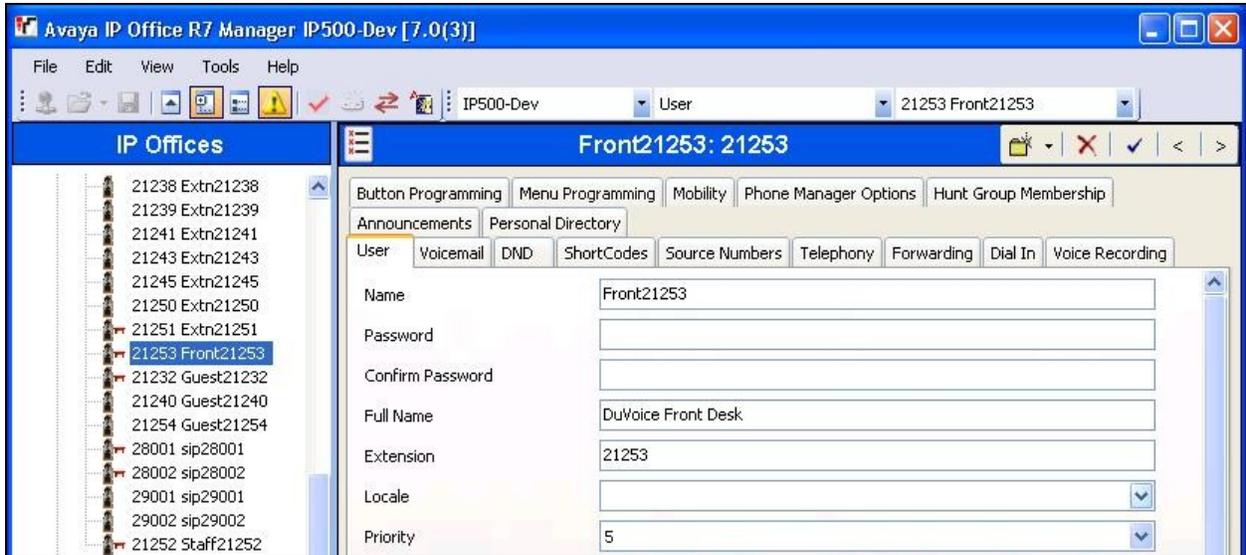
Select the **Voicemail** tab. Check **Voicemail On**, and uncheck **Voicemail Help**, as shown below.



Select the **Forwarding** tab. Uncheck and unselect all fields, as shown below.



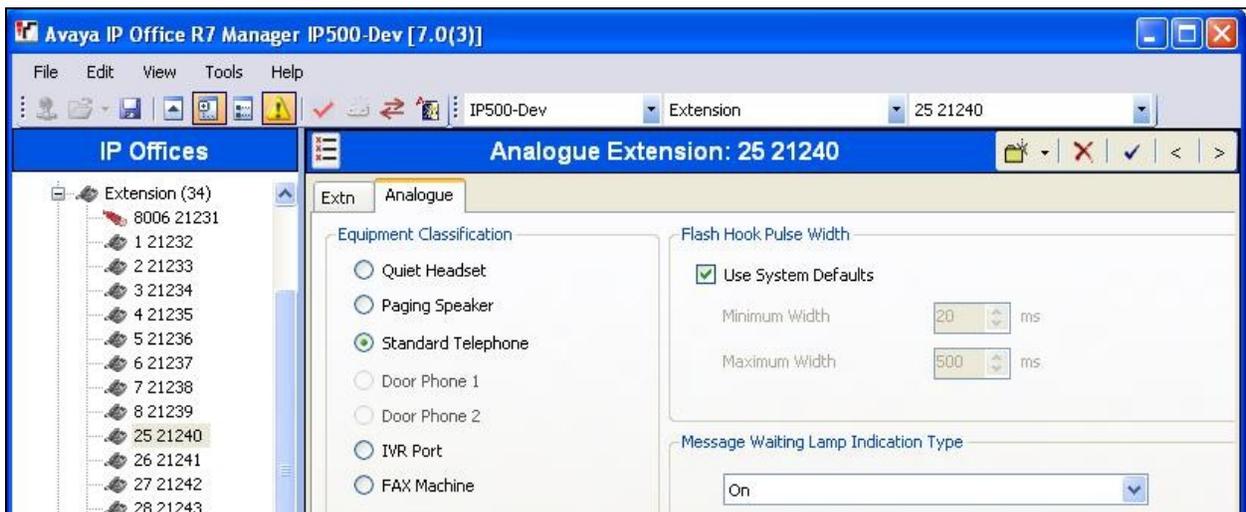
Repeat this section for all users using DuVoice for voicemail, including all guests, front desk, and staff. In the compliance testing, the voicemail users consisted of one front desk with extension “21253”, three guests with extensions “21232, 21240, and 21254”, and one staff with extension “21252”, as shown below in the left pane.



5.10. Administer Analog User MWI

For voicemail users with analog telephones, the MWI setting on the analog extension may need modification, depending on the type of analog telephone. Refer to [2] for details on the specific analog telephone types requiring the MWI setting. In the compliance testing, one guest had an analog telephone type 2500, which required an update to the MWI setting.

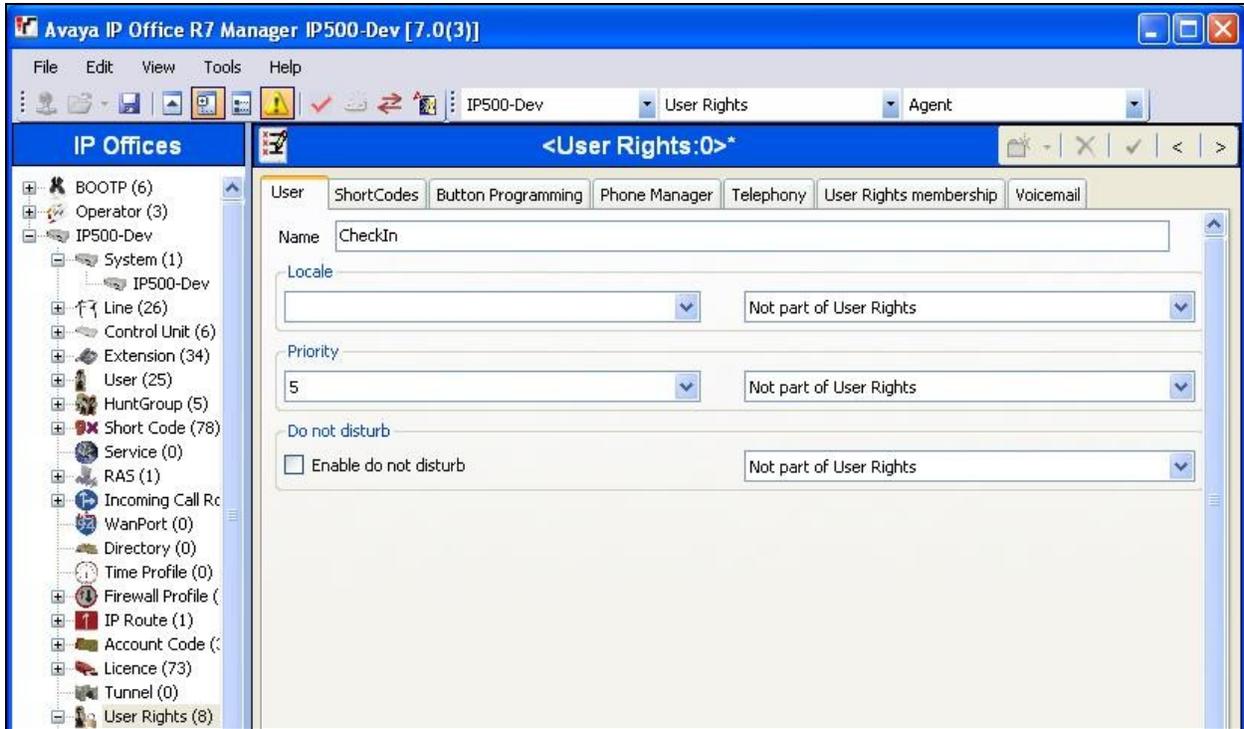
From the configuration tree in the left pane, select **Extension**, followed by the extension corresponding to the analog user. In this case, the extension is “21240”. In the **Message Waiting Lamp Indication Type** section, select “On” from the drop-down list, as shown below.



5.11. Administer User Rights

From the configuration tree in the left pane, right-click on **User Rights**, and select **New** to create a new user rights template. Enter a desired **Name** to designate user rights for guests in the check-in state.

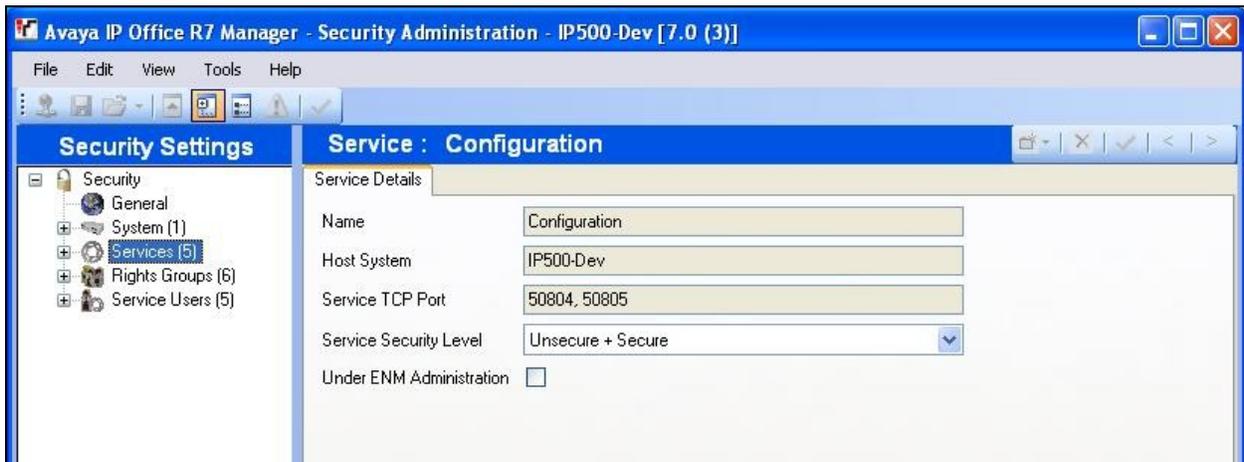
Repeat this section to create the desired number of user rights templates for guests in various states. In the compliance testing, two user rights templates with names of “CheckIn” and “CheckOut” were created.



5.12. Administer Security Service

From the **Avaya IP Office R7 Manager** screen, select **File > Advanced > Security Settings** from the top menu. Select the proper IP Office system, and log in with the appropriate security user credentials.

The **Avaya IP Office R7 Manager – Security Administration** screen is displayed. From the configuration tree in the left pane, select **Security > Services** to display the **Service : Configuration** screen in the right pane. For **Service Security Level**, select “Unsecure + Secure” as shown below. The additional “Secure” level is needed for the Configuration Web Service interface.



6. Configure Avaya 96xx IP Telephones

This section provides the procedures for configuring the Avaya 96xx IP Telephones to support the PUSH interface. The procedures include the following areas:

- Administer common parameters
- Administer specific phone parameters
- Reboot telephones

6.1. Administer Common Parameters

From the appropriate HTTP server serving the 96xx IP Telephones, locate the **46xxsettings.txt** file. Navigate to the **COMMON SETTINGS** section, under the **WML BROWSER SETTINGS** sub-section, set **WMLPORT** to “8090”. Navigate to the **PUSH INTERFACE SETTINGS** sub-section, and set the **TPSLIST** and **SUBSCRIBELIST** parameters as shown below, where “10.32.35.200” is the IP address of the DuVoice server.

```
#####
##                                     ##
##           COMMON SETTINGS           ##
##           Applies to all telephones  ##
##           .                          ##
##           .                          ##
##### WML BROWSER SETTINGS #####
##
## This section contains the common settings used to
## enable and administer the 'Web' application. These
## parameters are not supported on 16cc SIP phones.
##           .                          ##
##           .                          ##
## The TCP port number of your HTTP proxy server
## SET WMLPORT 8080
##
SET WMLPORT 8090
##           .                          ##
##### PUSH INTERFACE SETTINGS #####
##
## These settings are used to administer the Push interface.
## These parameters are not supported on 16cc SIP phones.
##
## The list of all the Trusted Push Servers.
## If set to "/", all servers are allowed.
## If set to null or blank, Push is disabled.
## SET TPSLIST 135.20.21.20
##
## The list of all the Subscription Servers.
## SET SUBSCRIBELIST http://135.20.21.21/subscribe
##
SET TPSLIST 10.32.35.200:8090
SET SUBSCRIBELIST http://10.32.35.200:8090/
```

6.2. Administer Specific Phone Parameters

Navigate to the relevant specific phone parameters section, in this case **SETTINGS9620**. Under the **WML BROWSER SETTINGS** subsection, set the **WMLHOME** parameter as shown below, where “10.32.35.200” is the IP address of the DuVoice server, and “8090” is the **WMLPORT** value from **Section 6.1**.

Repeat this section for all relevant 96xx IP Telephone types. In the compliance testing, the 9620 IP Telephone was used for testing the push of 911 alerting text message.

```
#####  
#  
# SETTINGS9620  
#  
.  
.  
##### WML BROWSER SETTINGS #####  
##  
## The WMLHOME setting is used to enable and  
## administer the 'Web' Application.  
##  
## The WMLIDLEURI setting acts as an idle screen when the  
## phone has been idle (see WMLIDLETIME value). By default  
## this URL is NULL ("") and this screen is not activated.  
##  
.  
.  
##  
## SET WMLHOME http://support.avaya.com/elmodocs2/avayaip/4620/home.wml  
## SET WMLIDLEURI http://support.avaya.com/elmodocs2/avayaip/4620/idle.wml  
##  
  
SET WMLHOME http://10.32.35.200:8090/  
  
GOTO END
```

6.3. Reboot Telephones

Manually reboot the 96xx IP Telephones to pick up the new settings.

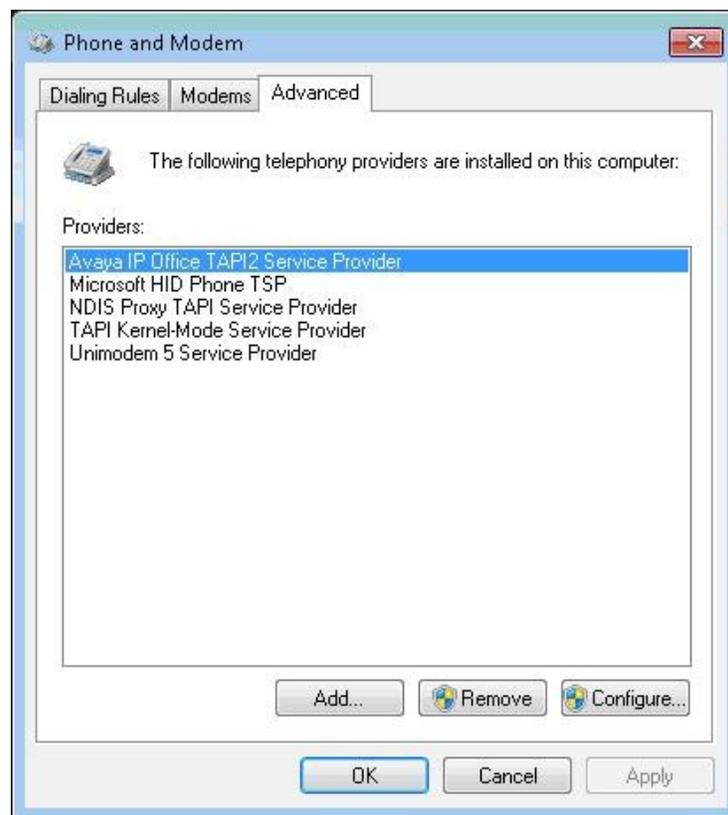
7. Configure DuVoice

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

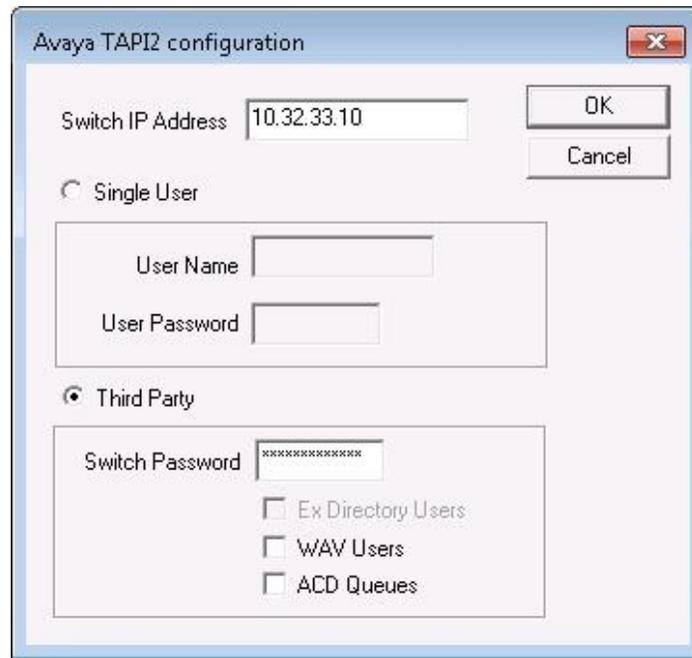
- Administer TAPI driver
- Administer setup wizard
- Administer TAPI integration
- Administer connectors
- Administer hospitality
- Administer push server
- Administer mailboxes
- Startup server

7.1. Administer TAPI Driver

From the DuVoice server, select **Start > Control Panel**, and click on the **Phone and Modem** icon (not shown below). In the **Phone and Modem** screen, select the **Advanced** tab. Select the **Avaya IP Office TAPI2 Service Provider** entry, and click **Configure**.

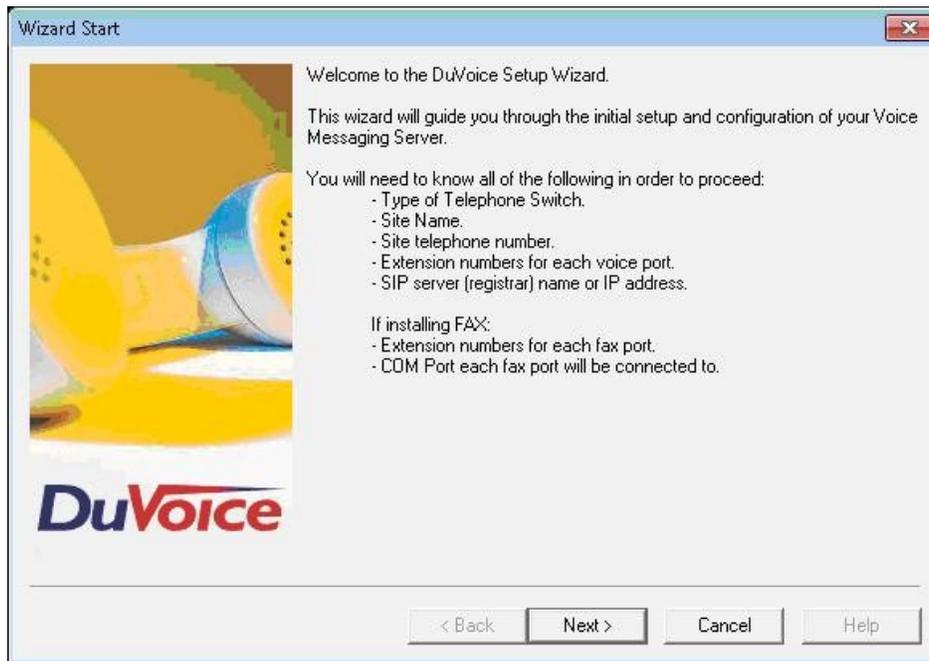


The **Avaya TAPI2 configuration** screen is displayed. For **Switch IP Address**, enter the IP address of Avaya IP Office. Select the radio button for **Third Party**, and enter the IP Office password into the **Switch Password** field. Reboot the DuVoice server.



7.2. Administer Setup Wizard

From the DuVoice server, select **Start > All Programs > DuVoice > System Configuration**. The **Wizard Start** screen is displayed upon initial access. Click **Next**.



The **Site Information** screen is displayed next. Enter desired values for **Name** and **Site telephone number**, and click **Next**.

Site Information

Enter the required site information. The optional information should be filled in if you are using any type of FAX application.

Required

Name: Avaya DevConnect Lab

Site telephone number: (908) - 8485601

Optional

Fax telephone number: () -

Address: City:

State or Province: Zip or Postal Code:

< Back Next > Cancel Help

The **SIP Information** screen is displayed. For **Server address**, enter the IP address of Avaya IP Office, and click **Next**.

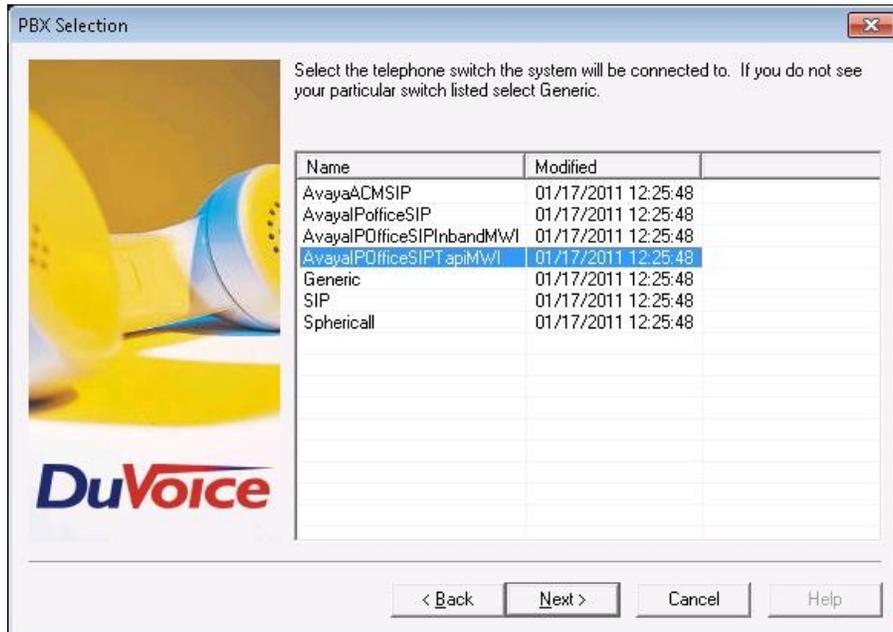
SIP Information

Enter the server name or IP address of the SIP registrar with which the SIP ports will be registered; this is optional but recommended. Typically, this will be the server name or IP address of the IP PBX.

Server address: 10.32.33.10

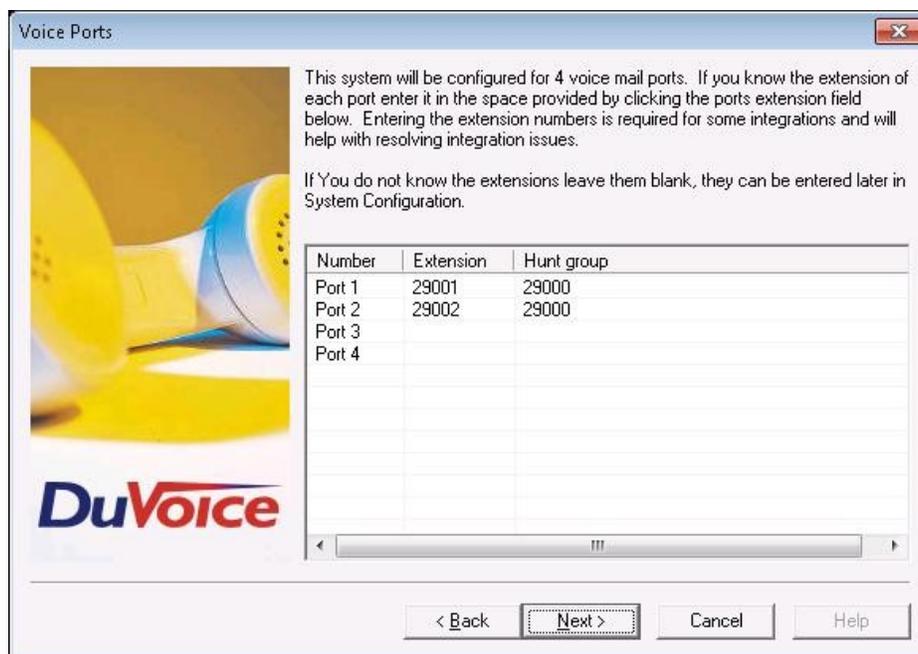
< Back Next > Cancel Help

The **PBX Selection** screen is displayed. Select the **AvayaIPOfficeSIPtapiMWI** entry, and click **Next**.



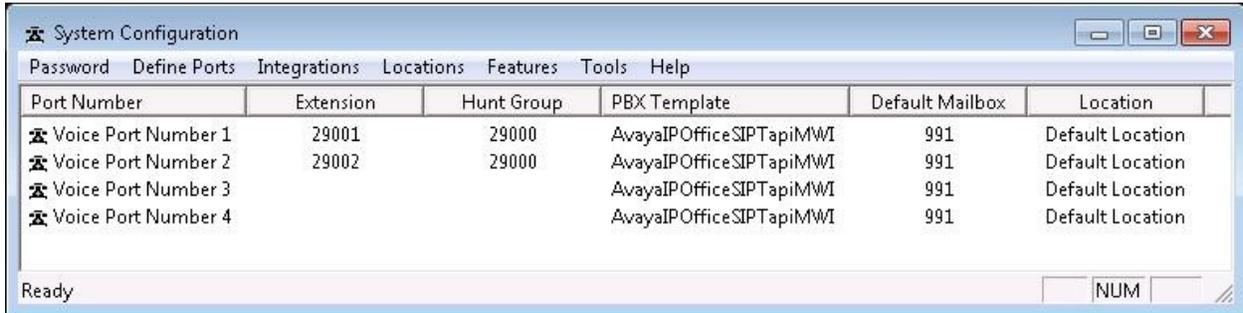
The **Voice Ports** screen is displayed. Assign each SIP base extension from **Section 5.4** to an available **Port**, and enter the hunt group extension from **Section 5.6**, as shown below. In the compliance testing, two DuVoice ports were configured to correspond to the two SIP extensions created on Avaya IP Office.

Click **Next**, followed by **Finish** in the subsequent screen to complete the wizard.



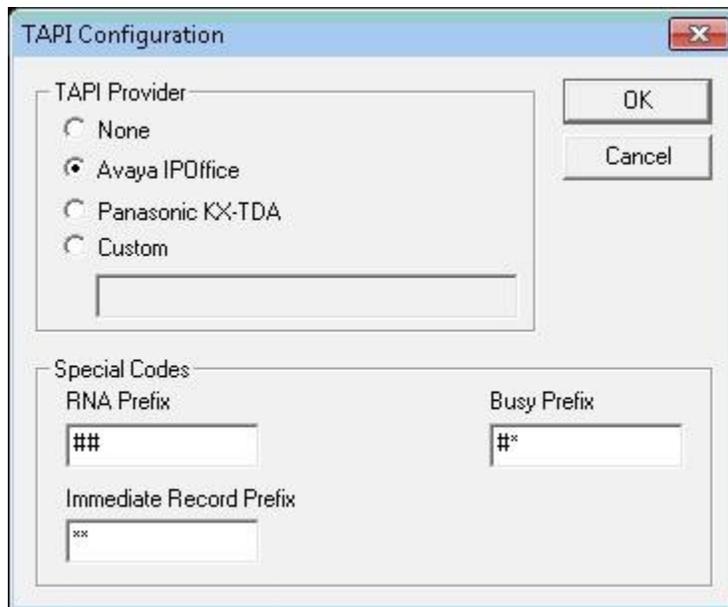
7.3. Administer TAPI Integration

From the DuVoice server, select **Start > All Programs > DuVoice > System Configuration**. The **System Configuration** screen is displayed. Select **Integrations > TAPI Integration** from the top menu.



Port Number	Extension	Hunt Group	PBX Template	Default Mailbox	Location
Voice Port Number 1	29001	29000	AvayaIPOfficeSIPtapiMWI	991	Default Location
Voice Port Number 2	29002	29000	AvayaIPOfficeSIPtapiMWI	991	Default Location
Voice Port Number 3			AvayaIPOfficeSIPtapiMWI	991	Default Location
Voice Port Number 4			AvayaIPOfficeSIPtapiMWI	991	Default Location

The **TAPI Configuration** screen is displayed. For **TAPI Provider**, select **Avaya IPOffice**. Retain the default values in the remaining fields.



TAPI Configuration

TAPI Provider

None

Avaya IPOffice

Panasonic KX-TDA

Custom

OK

Cancel

Special Codes

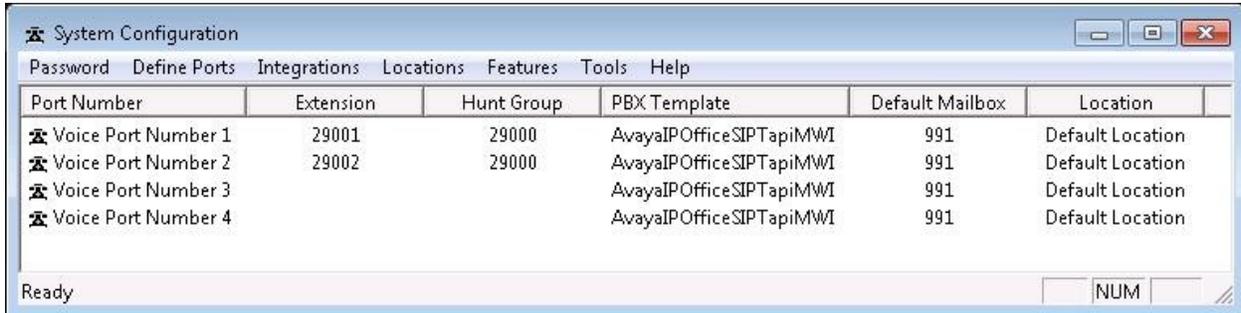
RNA Prefix: ##

Busy Prefix: #*

Immediate Record Prefix: ***

7.4. Administer Connectors

The **System Configuration** screen is displayed again. Select **Features > Connectors** from the top menu.

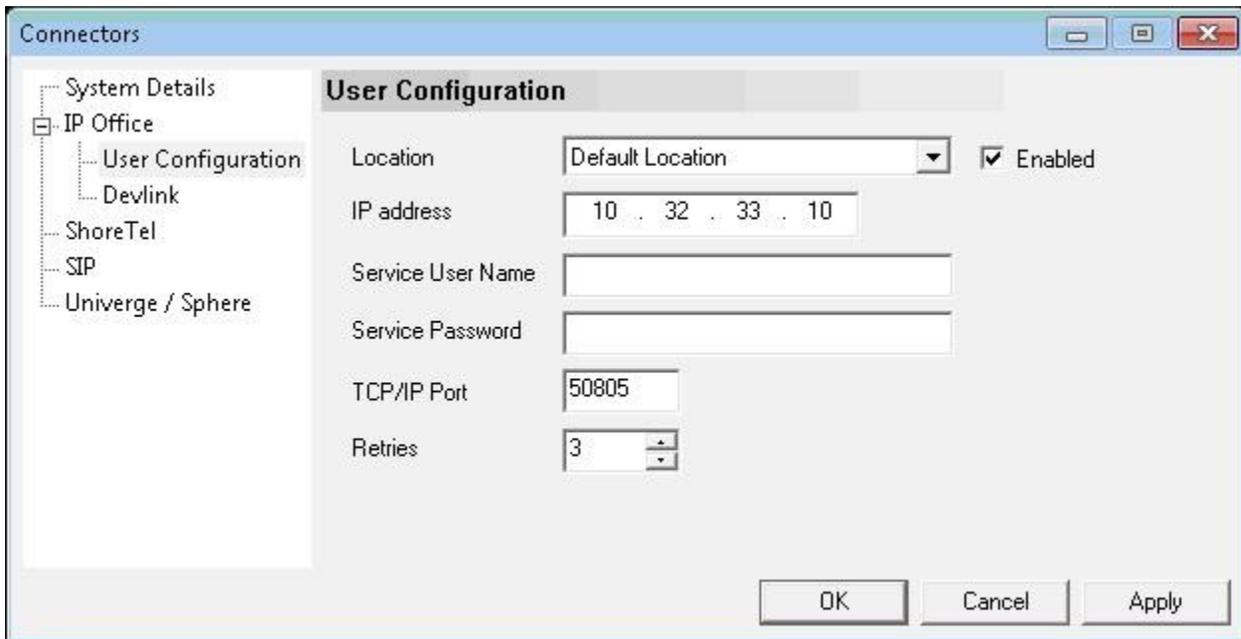


The screenshot shows the 'System Configuration' window with the 'Features' menu open. A table displays the configuration for four voice ports. The status bar at the bottom shows 'Ready' and a 'NUM' field.

Port Number	Extension	Hunt Group	PBX Template	Default Mailbox	Location
Voice Port Number 1	29001	29000	AvayaIPOfficeSIPtapiMWI	991	Default Location
Voice Port Number 2	29002	29000	AvayaIPOfficeSIPtapiMWI	991	Default Location
Voice Port Number 3			AvayaIPOfficeSIPtapiMWI	991	Default Location
Voice Port Number 4			AvayaIPOfficeSIPtapiMWI	991	Default Location

The **Connectors** screen is displayed. Select **IP Office > User Configuration** from the left pane, to display the **User Configuration** screen in the right pane. Check **Enabled**. For **IP address**, enter the IP address of Avaya IP Office. Enter the appropriate Avaya IP Office credentials for **Service User Name** and **Service Password**. Retain the default values in the remaining fields.

This connector is used to establish a Configuration Web Service connection to Avaya IP Office, for update of guest user names and user rights template.



The screenshot shows the 'Connectors' window with the 'User Configuration' dialog box open. The left pane shows a tree view with 'IP Office > User Configuration' selected. The right pane contains the following fields:

- Location: Default Location (dropdown)
- Enabled:
- IP address: 10 . 32 . 33 . 10
- Service User Name: (empty text box)
- Service Password: (empty text box)
- TCP/IP Port: 50805
- Retries: 3 (spin box)

Buttons at the bottom: OK, Cancel, Apply.

7.5. Administer Hospitality

From the **System Configuration** screen shown in **Section 7.4**, select **Features > Hospitality** from the top menu. The **Hospitality Configuration** screen is displayed. Select **Maid Codes** from the left pane, to display the **Maid Codes** screen in the right pane.

Check the desired **PMS Digit** to be used, and enter the desired **Display Text**. The digits can be used by the maids to indicate the room clean status, upon dialing into the hospitality hunt group and selecting the appropriate option.

Hospitality Configuration

General
Language
Maid Codes
Phone Control
PMS

Maid Codes

Valid codes:

PMS Digit	Display Text
<input checked="" type="checkbox"/> 0	Dirty
<input checked="" type="checkbox"/> 1	Clean
<input checked="" type="checkbox"/> 2	In progress
<input checked="" type="checkbox"/> 3	Maintenance
<input checked="" type="checkbox"/> 4	Out of service
<input type="checkbox"/> 5	
<input type="checkbox"/> 6	
<input type="checkbox"/> 7	
<input type="checkbox"/> 8	
<input type="checkbox"/> 9	

PMS Digit: Digit sent to the PMS to signify a specific room clean status. Maid can dial the code only if the box is checked.

Display Text: The text to use whenever the system displays the room clean status. Leave blank if not used.

Reset: Load the default display text for the active PMS protocol.

Current settings:

Automation

On check-out, set to: Notify PMS

Every night, set to: Notify PMS

Select **Phone Control** from the left pane, to display the **Phone Control** screen in the right pane. For **PBX Type**, select “Avaya IP Office”.

In the **User group restrictions / call restriction values** section (bottom half of screen), add an entry to match each user rights template in **Section 5.11**. Note that the **PBX Value** must match the user rights template name in **Section 5.11**. Enter desired names for **Display Text**. In the compliance testing, two entries were created to match the two user rights template in **Section 5.11**. Click **Apply**.

After clicking **Apply**, the new user group rights will show up in the field drop-down list for **Check-In** and **Check-out**. In the **Auto-set phone state on** section, check **Check-in** and **Check-out**, and select the corresponding drop-down values as shown below.

Retain the default values in the remaining fields.

Hospitality Configuration

Phone Control

PBX
Type: Avaya IP Office

Call accounting
Type: --none--
Enabled: --no change--
Disabled: --no change--

Auto-set phone state on
 Check-in: Check In
 Check-out: Check Out

Vodavi-specific settings
Outdial prefix: 470

User group restrictions / call restriction values
To edit an entry, left-click on it. For all other actions, right-click any row to display a menu.

Display Text	PBX Value	PMS Value
Check In	CheckIn	
Check Out	CheckOut	

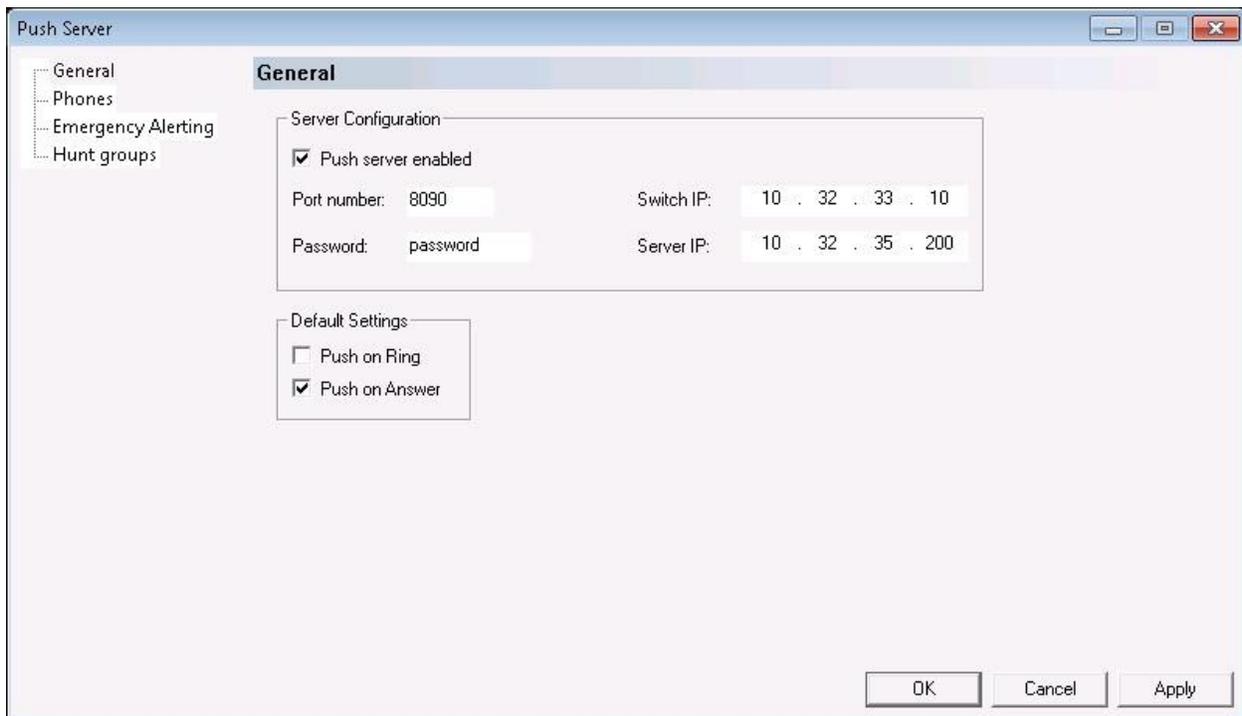
Active PMS: DuVoice IVMP (DUVOICEIVMP)

OK Cancel Apply

7.6. Administer Push Server

From the **System Configuration** screen shown in **Section 7.4**, select **Features > Push Server** from the top menu. The **Push Server** screen is displayed.

Select **General** from the left pane, to display the **General** screen in the right pane. For **Switch IP**, enter the IP address of Avaya IP Office. Retain the default values in the remaining fields.

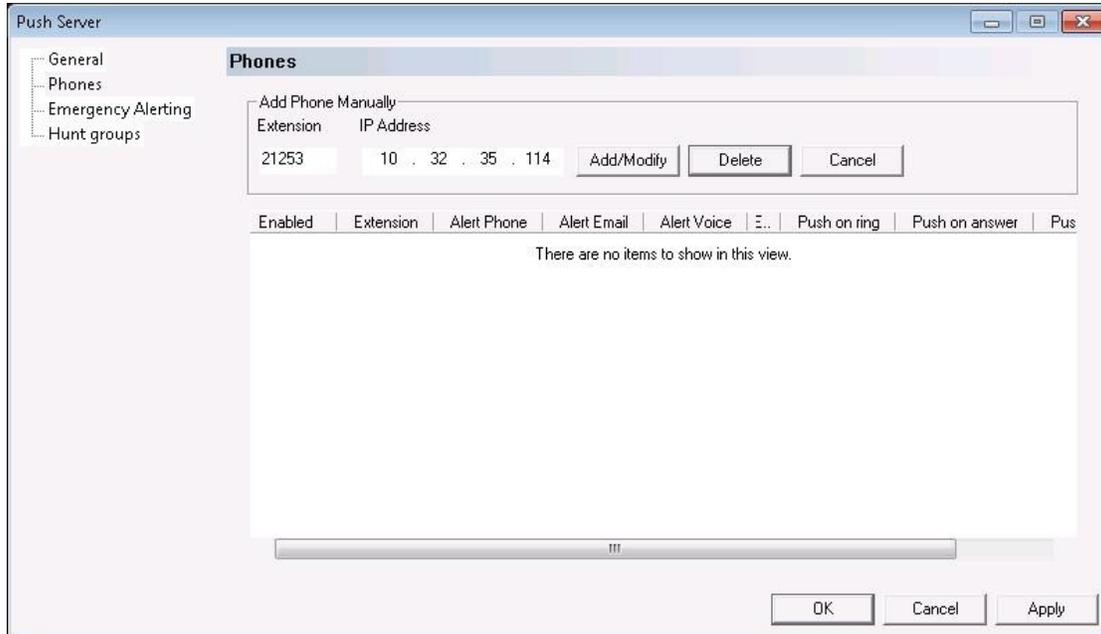


The screenshot shows the 'Push Server' configuration window with the 'General' tab selected. The left pane contains a tree view with 'General' selected. The main area is titled 'General' and contains two sections: 'Server Configuration' and 'Default Settings'. In the 'Server Configuration' section, 'Push server enabled' is checked. The 'Port number' is 8090, 'Password' is password, 'Switch IP' is 10.32.33.10, and 'Server IP' is 10.32.35.200. In the 'Default Settings' section, 'Push on Ring' is unchecked and 'Push on Answer' is checked. At the bottom right are 'OK', 'Cancel', and 'Apply' buttons.

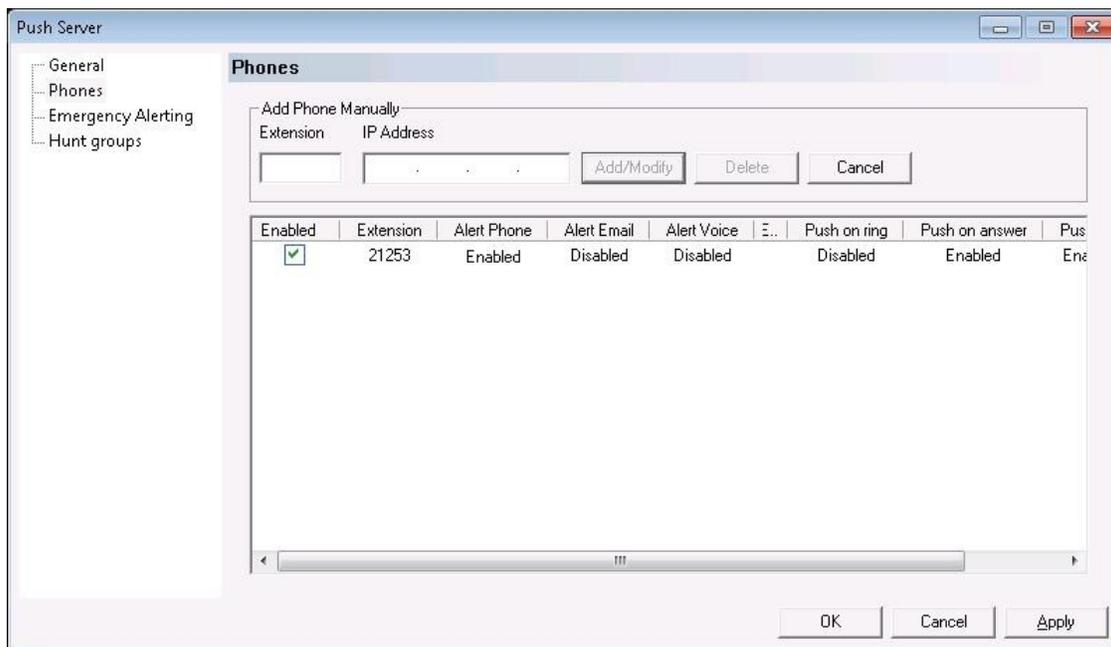
Server Configuration	
<input checked="" type="checkbox"/> Push server enabled	
Port number: 8090	Switch IP: 10 . 32 . 33 . 10
Password: password	Server IP: 10 . 32 . 35 . 200

Default Settings	
<input type="checkbox"/> Push on Ring	
<input checked="" type="checkbox"/> Push on Answer	

Select **Phones** from the left pane, to display the **Phones** screen in the right pane. For each Avaya 96xx IP Telephone that will be used for receiving 911 alerting text messages, enter the telephone extension and IP address in the **Extension** and **IP Address** fields respectively, and click **Add/Modify**.

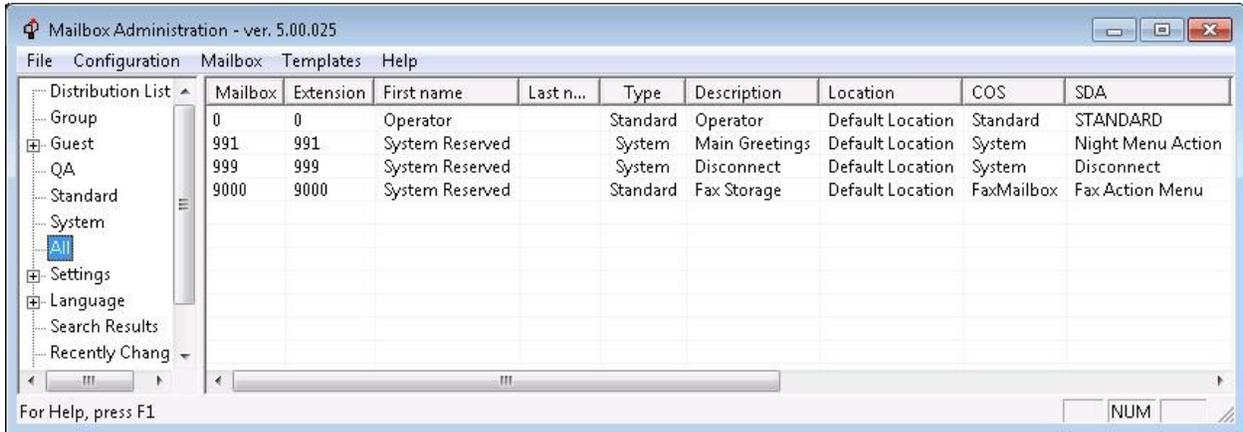


The screen is updated with an entry for each added phone. Click the **Alert Phone** field for each entry, and select “Enabled” as shown below. In the compliance testing, the 911 alerting test messages were pushed to an Avaya 9620 IP Telephone with extension “21253”.

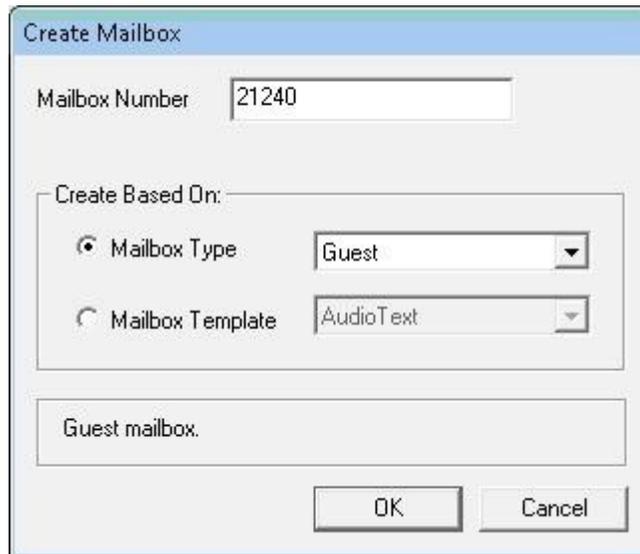


7.7. Administer Mailboxes

From the DuVoice server, select **Start > All Programs > DuVoice > Mailbox Administration**. The **Mailbox Administration** screen is displayed. Select **Mailbox > Create** from the top menu.



The **Create Mailbox** screen is displayed next. For **Mailbox Number**, enter the first voicemail user extension from **Section 5.9**, in this case “21240”. For **Mailbox Type**, select “Guest” for guest users, and “Standard” for front desk and staff users.



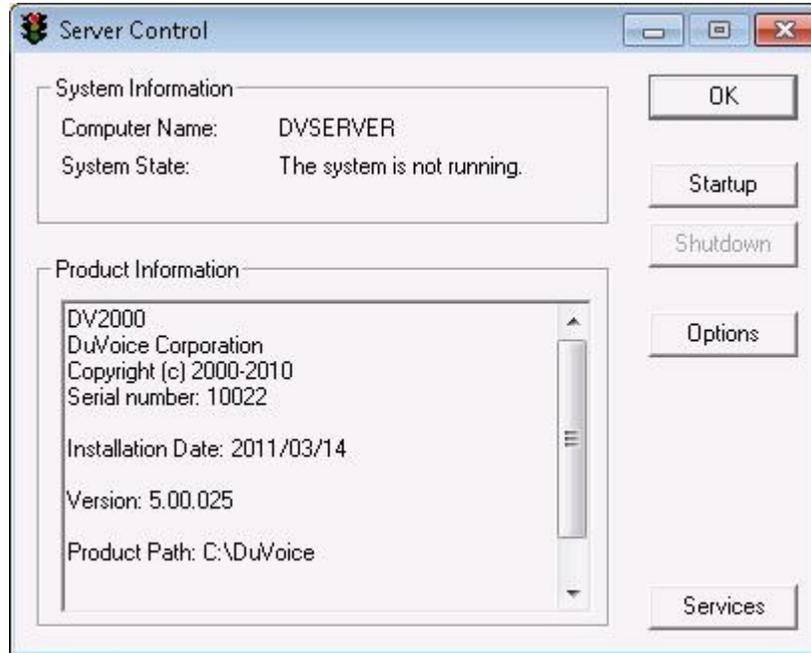
The **Create Mailbox 21240** screen is displayed next. Enter desired values for **Password**, **First Name**, and **Last Name**, and retain the default values in the remaining fields.

Repeat this section for all voicemail users from **Section 5.9**, as shown below.

Mailbox	Extension	First name	Last n...	Type	Description	Location	COS	SDA
0	0	Operator		Standard	Operator	Default Location	Standard	STANDARD
991	991	System Reserved		System	Main Greetings	Default Location	System	Night Menu.
999	999	System Reserved		System	Disconnect	Default Location	System	Disconnect
9000	9000	System Reserved		Standard	Fax Storage	Default Location	FaxMailbox	Fax Action M
21232	21232	Guest21232	DuVoice	Guest		Default Location	Guest	Standard
21240	21240	Guest21240	DuVoice	Guest		Default Location	Guest	Standard
21252	21252	Staff21252	DuVoice	Standard		Default Location	Standard	Standard
21253	21253	Front21253	DuVoice	Standard		Default Location	Standard	Standard
21254	21254	Guest21254	DuVoice	Guest		Default Location	Guest	Standard

7.8. Startup Server

From the DuVoice server, select **Start > All Programs > DuVoice > Server Control**. The **Server Control** screen is displayed. Select **Startup** to start the server.

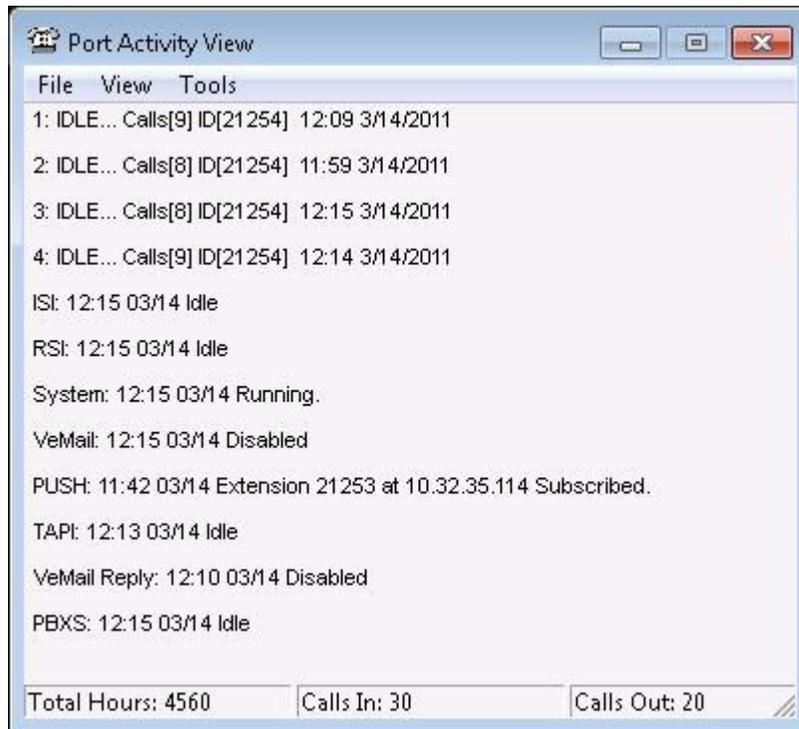


8. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Avaya IP Office and DuVoice.

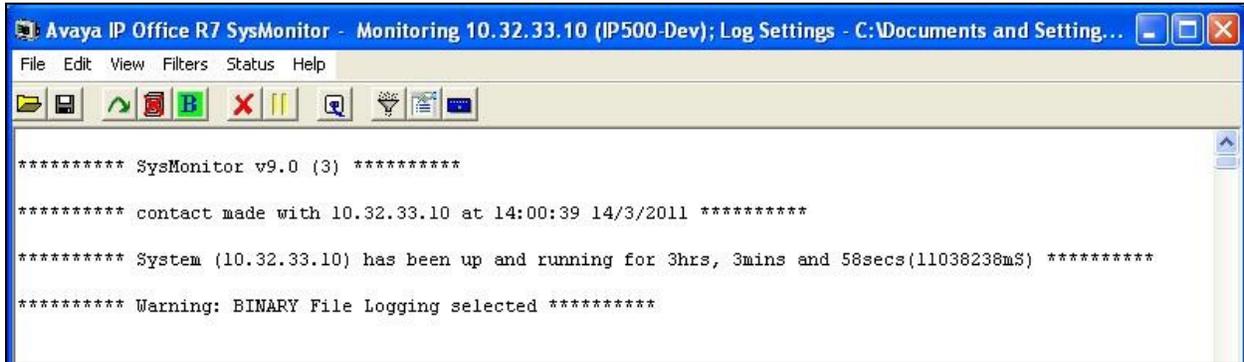
8.1. Verify DuVoice Port Activity

From the DuVoice server, select **Start > All Programs > DuVoice > Port Activity**. The **Port Activity View** screen is displayed. Verify that ports **1-4**, **TAPI**, and **PBXS** are all in the “Idle” state, as shown below. Verify that **PUSH** is either in the “Idle” or “Subscribed” state.

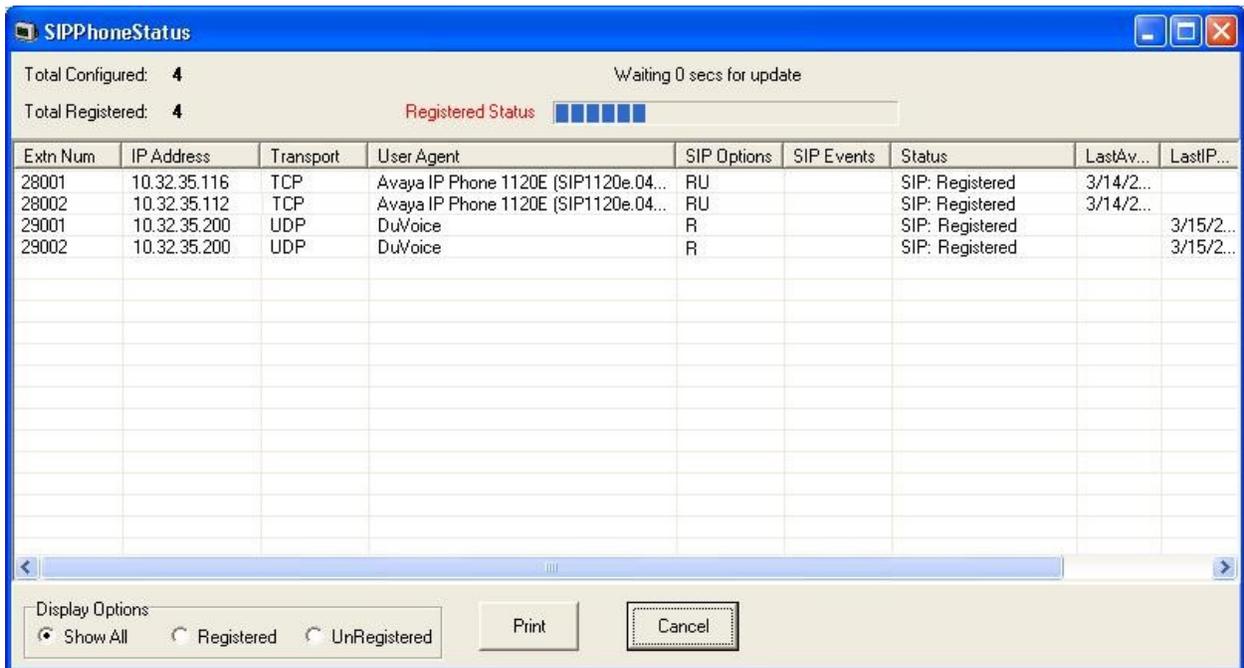


8.2. Verify SIP User Integration

From a PC running the Avaya IP Office Monitor application, select **Start > Programs > IP Office > Monitor** to launch the application. The **Avaya IP Office R7 SysMonitor** screen is displayed, as shown below. Select **Status > SIP Phone Status** from the top menu.



The **SIPPhoneStatus** screen is displayed. Verify that there is an entry for each SIP extension from **Section 5.4**, and that the **User Agent** is “DuVoice”, and the **Status** is “SIP: Registered”, as shown below.



Place an incoming call from the PSTN to the hospitality hunt group. Verify that the calling party hears the greeting announcement from DuVoice. Enter the extension of a guest user, and verify that the call is transferred to the guest user.

8.3. Verify TAPI Integration

Place an incoming call from the PSTN to the hospitality hunt group, and leave a voice message for a guest user. Verify that the MWI is turned on for the guest user.

Place a call from the guest user to the hospitality hunt group. Verify that DuVoice recognizes the calling party as a voicemail user. Verify that the voice message can be retrieved, and that the MWI is turned off.

8.4. Verify Configuration Web Service Integration

Use InnDesk to perform a guest check-in. Verify that the guest name and user rights template is updated automatically on Avaya IP Office as part of the check-in process.

8.5. Verify PUSH Integration

Dial “911” from any guest user on Avaya IP Office. Verify that a 911 alerting text message is pushed to the Avaya 9620 IP Telephone user configured in **Section 7.6**.

9. Conclusion

These Application Notes describe the configuration steps required for DuVoice 5.0 to successfully interoperate with Avaya IP Office 7.0. All feature and serviceability test cases were completed.

10. Additional References

This section references the product documentation relevant to these Application Notes.

1. *IP Office 7.0 Documentation CD*, March 2011, available at <http://support.avaya.com>.
2. *System Reference Guide*, 3rd Edition, Version 5.00.023, December 2010, available on the DuVoice server as part of the installation.

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