



Avaya Solution & Interoperability Test Lab

Application Notes for DuVoice 5.0 with Avaya IP Office 6.1 – 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 6.1. 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.

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 6.1. 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) interface, and a PMS simulator was used in the compliance testing to initiate the room check-in, check-out, and move requests to DuVoice. In the compliance testing, two user rights templates were set up on Avaya IP Office for use with check-in and check-out guests. 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.

1.1. 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 the PMS simulator.
- 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 the PMS simulator.
- Use of real-time DevLink events to monitor “911” dialing, and push of 911 alerting text message to an Avaya 9630 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.

1.2. Support

Technical support on DuVoice can be obtained through the following:

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

The configuration used for the compliance testing is shown below.

The diagram illustrates a VoIP system architecture. At the top left, a yellow cloud labeled "Emulated PSTN" is connected to a black "Avaya IP Office 500" device. A solid line labeled "10.32.33.10" connects the IP Office to a blue switch. This switch is connected to another blue switch, which is then connected to a server labeled "DuVoice with DuVoice InnDesk and PMS Simulator" (IP: 10.32.35.210). The DuVoice server is connected to a third blue switch, which is connected to three IP telephones: "Staff x21252 and Guest x21254 with Avaya 16xx Series IP Telephones" (IPs: 20.32.39.102 and 10.32.35.103), and a "Front Desk x21253 with Avaya 9630 IP Telephone" (IP: 20.32.39.101). A dashed line labeled "SIP Users" connects the Avaya IP Office to the DuVoice server. A dashed line labeled "TAPI, DevLink, and Configuration Web Service" connects the Avaya IP Office to a "Guest x21240 with Avaya 2500 Analog Telephone" and a "Guest x21232 with Avaya 5420 Digital Telephone".

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

Equipment	Software
Avaya IP Office 500	6.1 (5)
Avaya 16xx Series IP Telephones (H.323)	1.3
Avaya 9630 IP Telephone (H.323)	3.11
Avaya 5420 Digital Telephone	NA
DuVoice on Microsoft Windows 7 Professional	5.00.021
• InnDesk	1.23
• PMS Simulator	1.0.0.1
• Avaya TAPI (tspi2w.tsp)	1.0.0.35
• Avaya DevLink (devlink.dll)	1.0.0.5

4. Configure Avaya IP Office

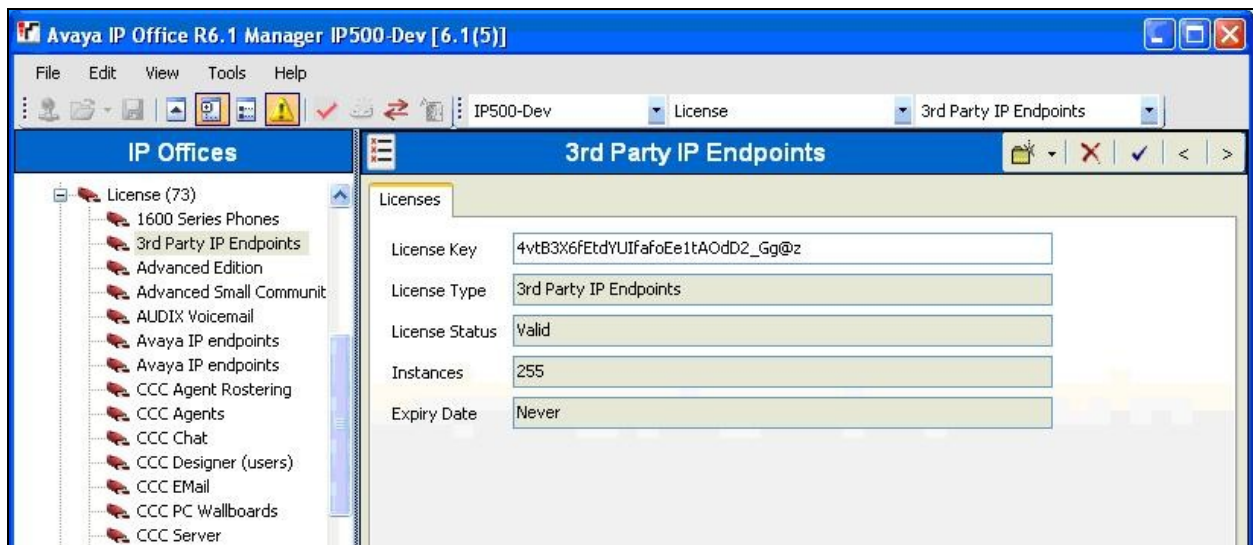
This section provides the procedures for configuring Avaya IP Office. The procedures include the following areas:

- 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

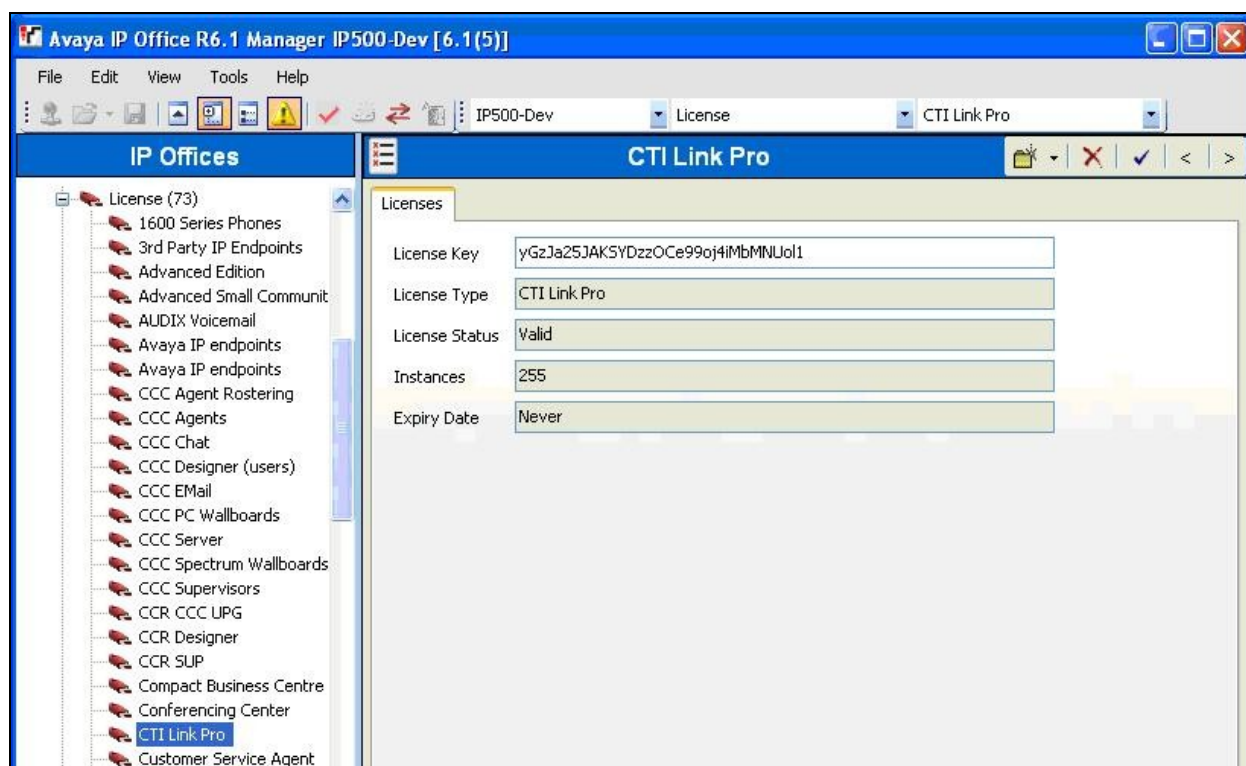
4.1. Verify IP Office License

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 Manager** screen is displayed. From the configuration tree in the left pane, select **License > 3rd Party IP End-points** to display the **3rd Party IP End-points** screen in the right pane. Verify that the **License Status** is “Valid”.

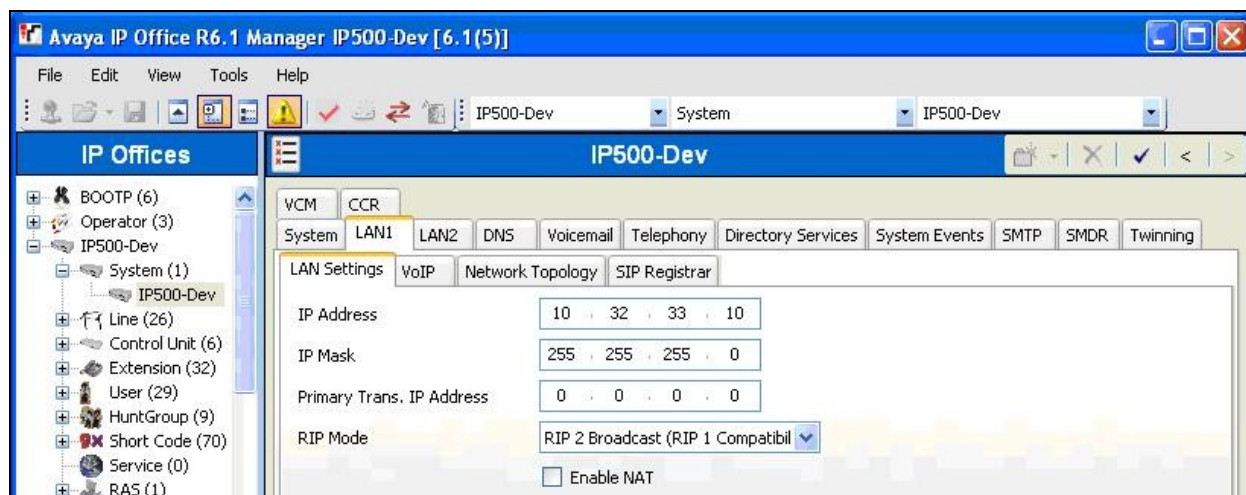


Scroll down the left pane and select **License > CTI Link Pro**, to display the **CTI Link Pro** screen in the right pane. Verify that the **License Status** is “Valid”.



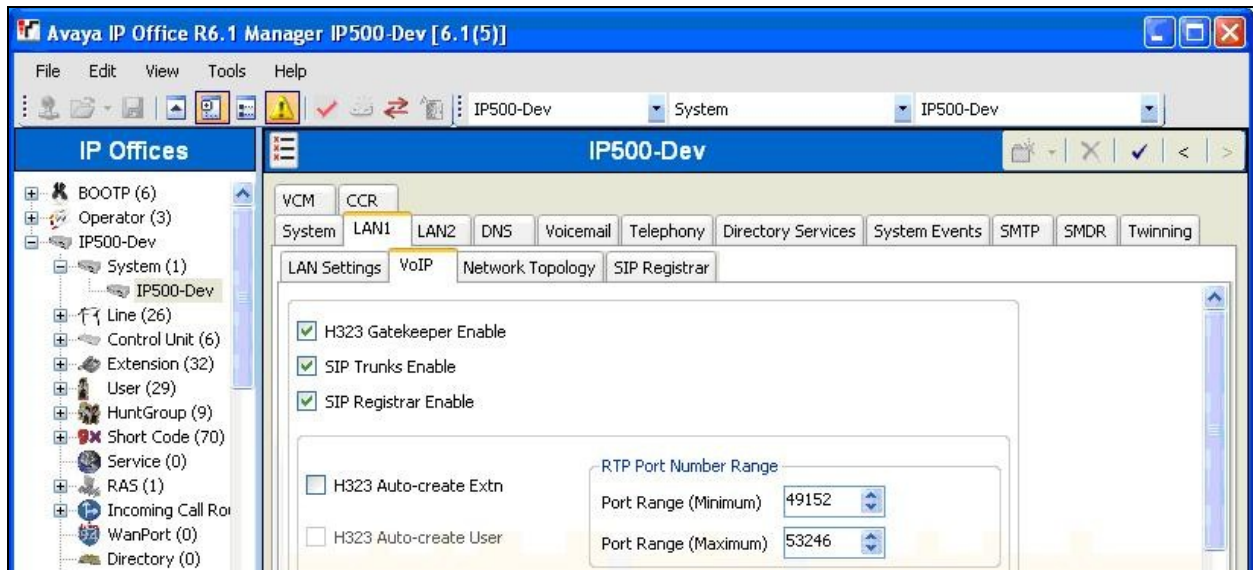
4.2. Obtain LAN IP Address

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.

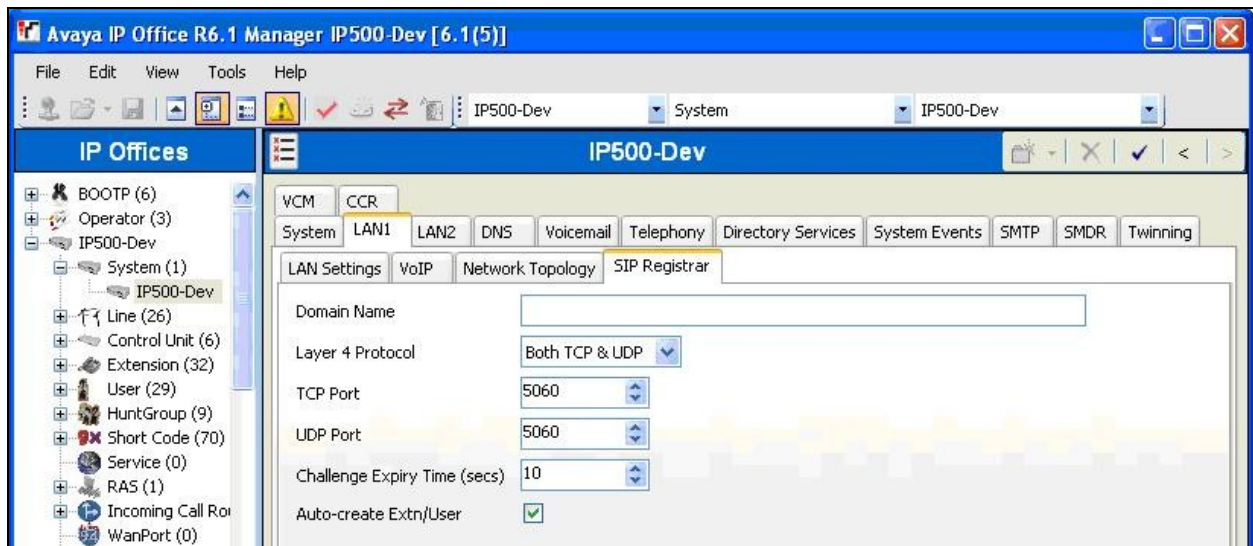


4.3. Administer SIP Registrar

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



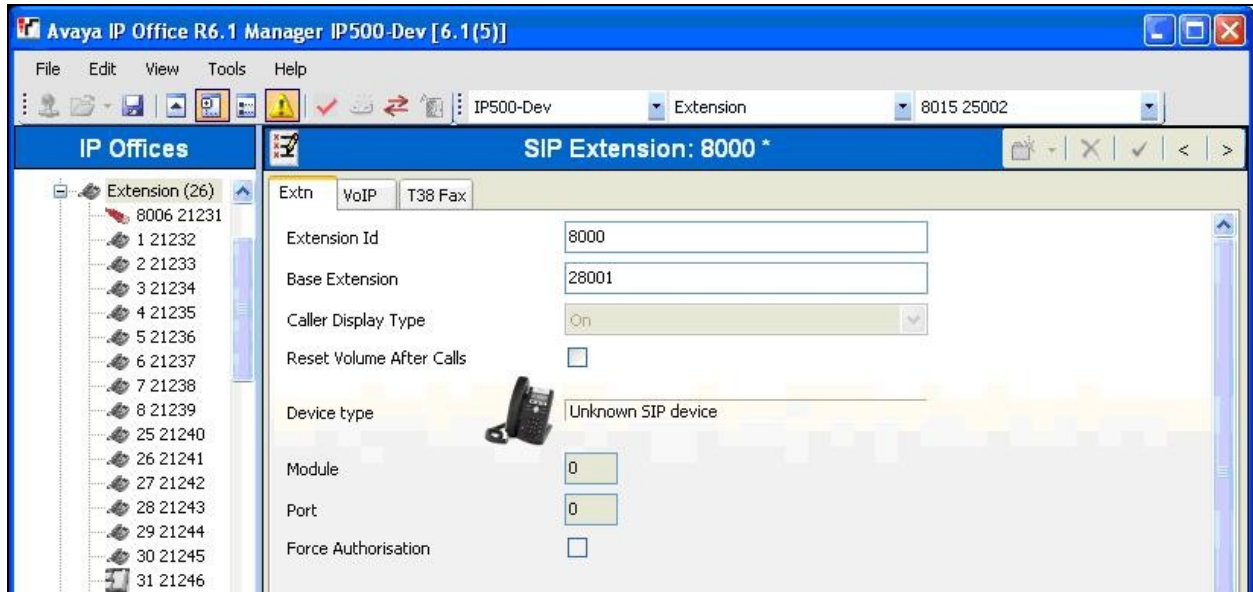
Select the **SIP Registrar** sub-tab, and enter a valid **Domain Name** for SIP endpoints to use for registration with IP Office. In the compliance testing, the **Domain Name** was left blank, so the LAN IP address was used for registration.



4.4. 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 Authorisation**, 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 “28001” and “28002” were created.



4.5. 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 4.4**.

The screenshot shows the Avaya IP Office R6.1 Manager IP500-Dev [6.1(5)] interface. The left pane displays the configuration tree with 'User (21)' selected. The right pane shows the 'User' configuration window with the following fields and values:

Field	Value
Name	sip28001
Password	
Confirm Password	
Full Name	DuVoice SIP Port 1
Extension	28001
Locale	
Priority	5
System Phone Rights	None
Profile	Basic User

There are also checkboxes for 'Receptionist', 'Enable SoftPhone', and 'Enable one-X Portal Services'.

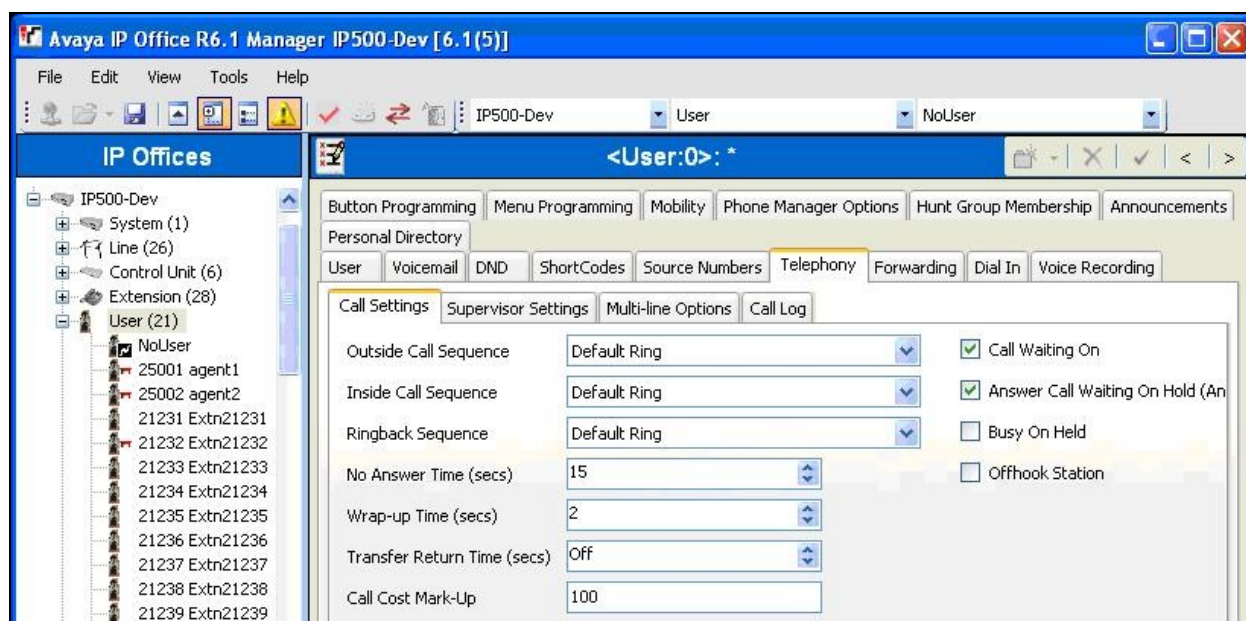
Select the **Voicemail** tab, and uncheck **Voicemail On**, as shown below.

The screenshot shows the Avaya IP Office R6.1 Manager IP500-Dev [6.1(5)] interface with the 'Voicemail' tab selected. The left pane displays the configuration tree with 'User (21)' selected. The right pane shows the 'Voicemail' configuration window with the following fields and values:

Field	Value
Voicemail Code	
Confirm Voicemail Code	
Voicemail Email	

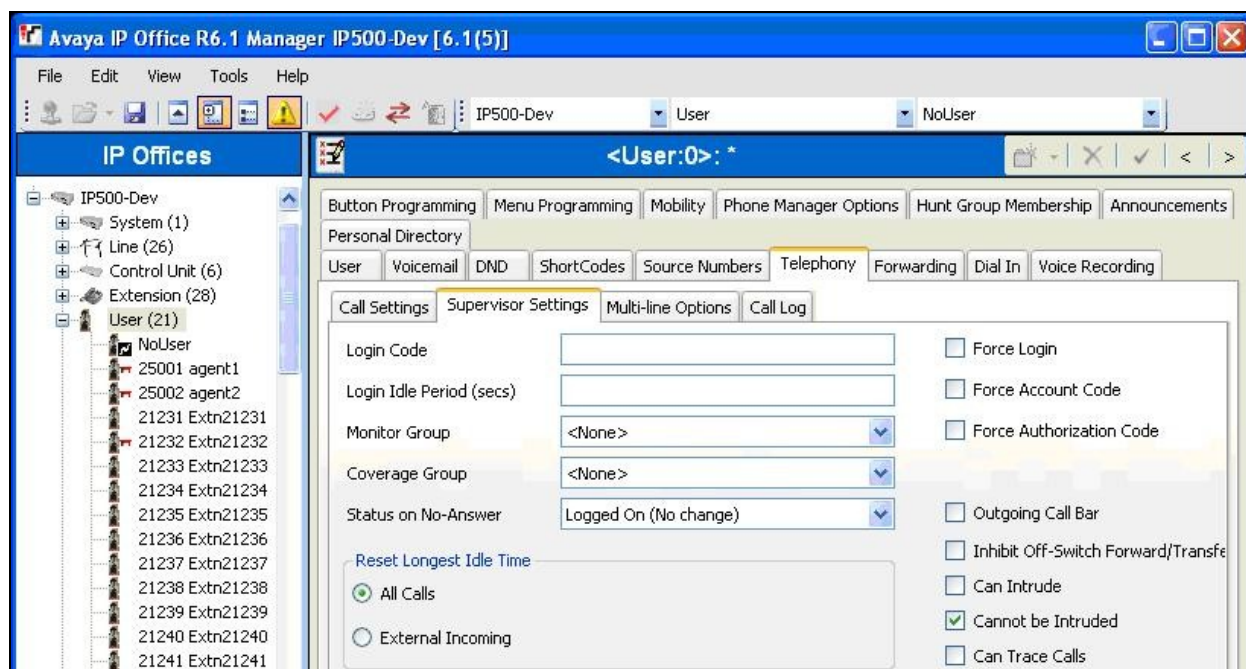
There are checkboxes for 'Voicemail On', 'Voicemail Help', 'Voicemail Ringback', 'Voicemail Email Reading', and 'UMS Web Services'. At the bottom, there are radio buttons for 'Voicemail Email': Off, Copy, Forward, and Alert.

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.

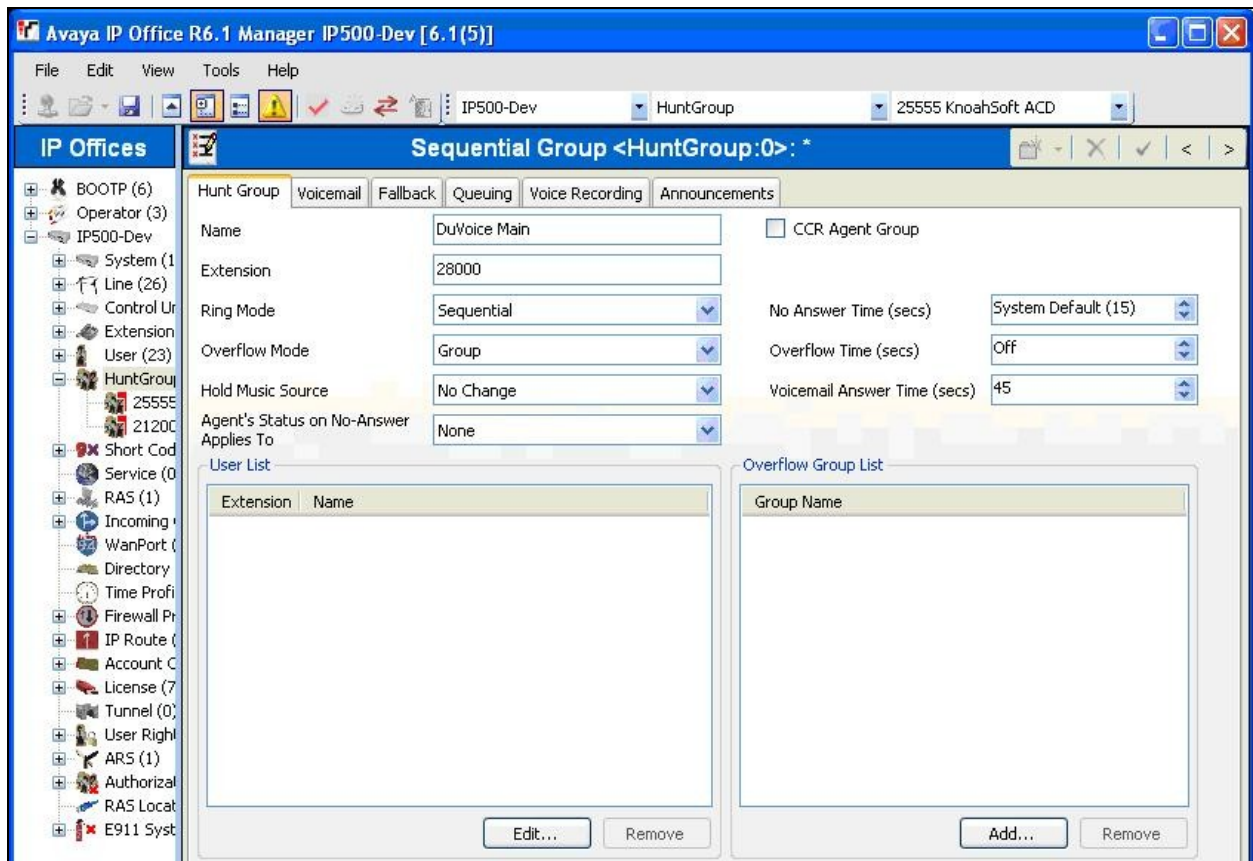
Repeat this section to add a new user for each SIP extension from **Section 4.4**. In the compliance testing, two users with names of “sip28001” and “sip28002” were created.



4.6. 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 4.5**, and click the **Append** button to move the selected entries to the right.

Sequential HuntGroup 28000 DuVoice Main - Select Members

Filters
Extn Name: Extn Number:

Available Users (22/22)

Name	Extn
agent1	25001
agent2	25002
ExtN21231	21231
ExtN21232	21232
ExtN21233	21233
ExtN21234	21234
ExtN21235	21235
ExtN21236	21236
ExtN21237	21237
ExtN21238	21238
ExtN21239	21239
ExtN21240	21240
ExtN21241	21241
ExtN21243	21243
ExtN21245	21245
ExtN21250	21250
ExtN21251	21251
ExtN21252	21252
ExtN21253	21253
ExtN21254	21254
sip28001	28001
sip28002	28002

Members (2/2)

Order	Enabled	Name	Extn
1	<input checked="" type="checkbox"/>	sip28001	28001
2	<input checked="" type="checkbox"/>	sip28002	28002

Buttons: Add Before, Add After, Append, Remove

Buttons: OK, Cancel, Help

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

Avaya IP Office R6.1 Manager IP500-Dev [6.1(5)]

File Edit View Tools Help

IP500-Dev HuntGroup 25555 KnoahSoft ACD

Sequential Group <HuntGroup:0>: *

Hunt Group Voicemail Fallback Queuing Voice Recording Announcements

Name: DuVoice Main ☐ CCR Agent Group

Extension: 28000

Ring Mode: Sequential

Overflow Mode: Group

Hold Music Source: No Change

Agent's Status on No-Answer Applies To: None

No Answer Time (secs): System Default (15)

Overflow Time (secs): Off

Voicemail Answer Time (secs): 45

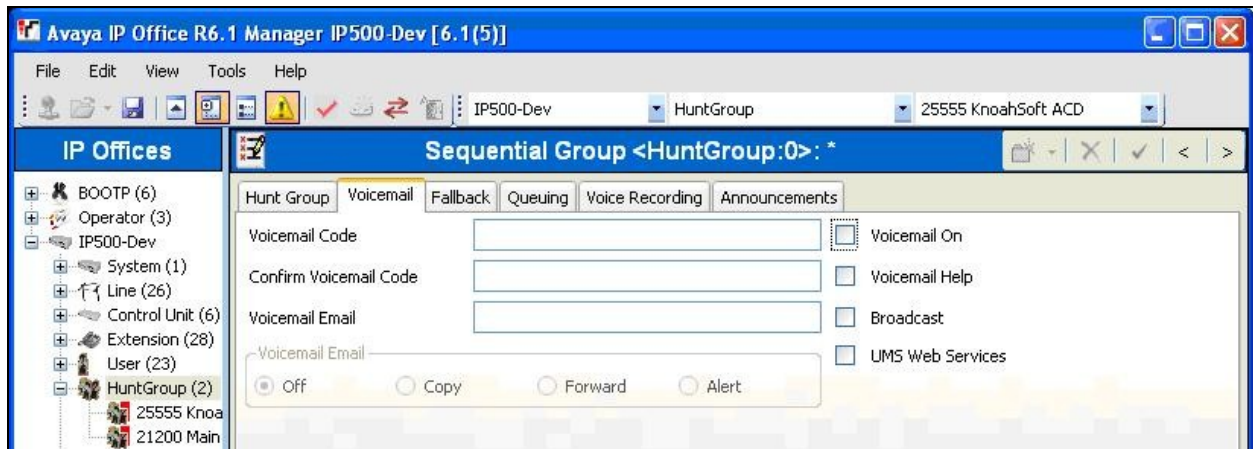
User List

Extension	Name
<input checked="" type="checkbox"/> 28001	sip28001
<input checked="" type="checkbox"/> 28002	sip28002

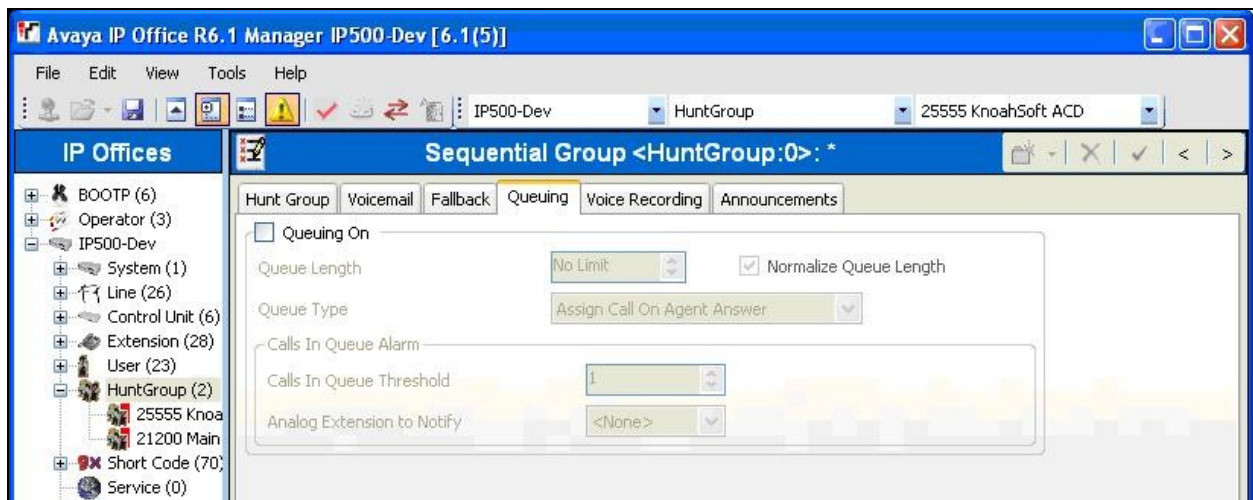
Overflow Group List

Group Name

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



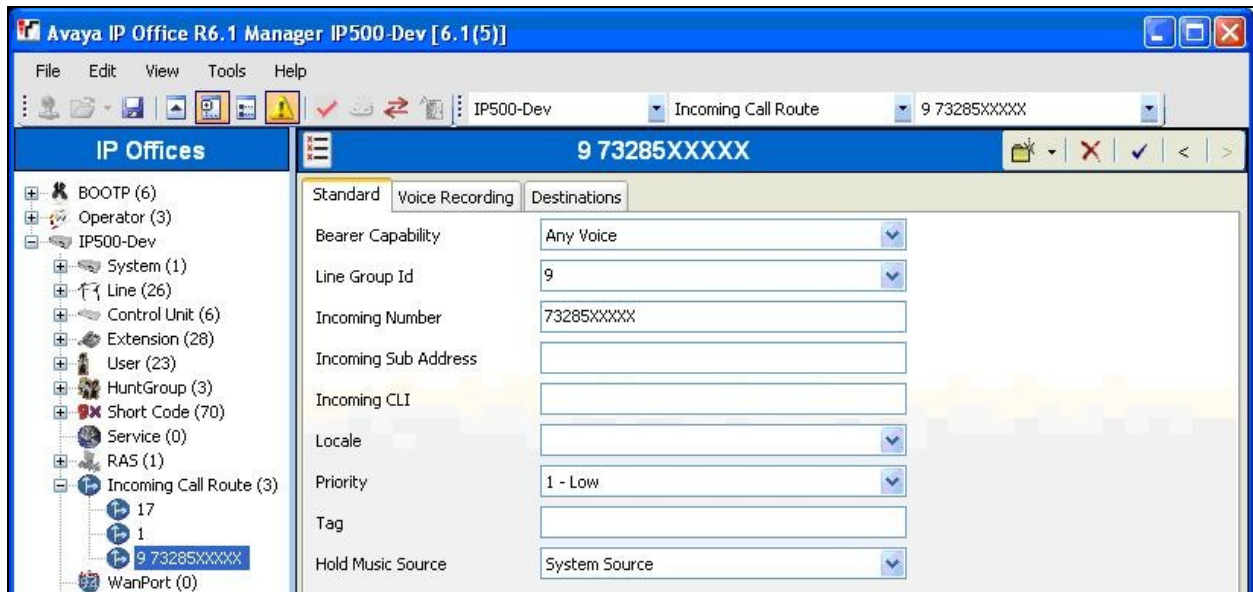
Select the **Queuing** tab, and uncheck **Queuing On**, as shown below.



4.7. Administer Incoming Call Route

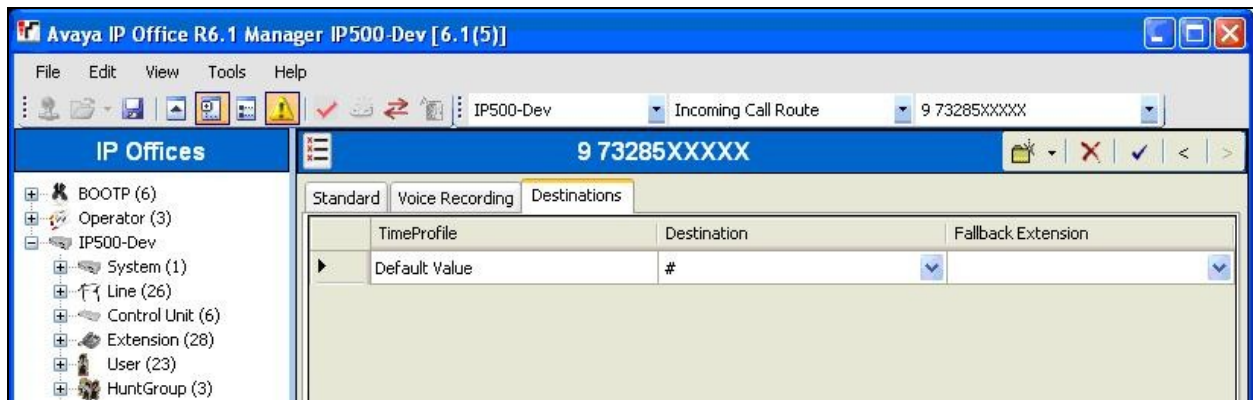
If necessary, create an incoming call route to route incoming calls to the hospitality hunt group. In the compliance testing, the existing incoming call route for the ISDN PRI line can route to any five digit extensions on IP Office.

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 “XXXXXX” from the **Incoming Number** field from above. Therefore, incoming calls to “7328528000” will be routed to the hospitality hunt group configured in **Section 4.6**.

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



4.8. Administer System Voicemail

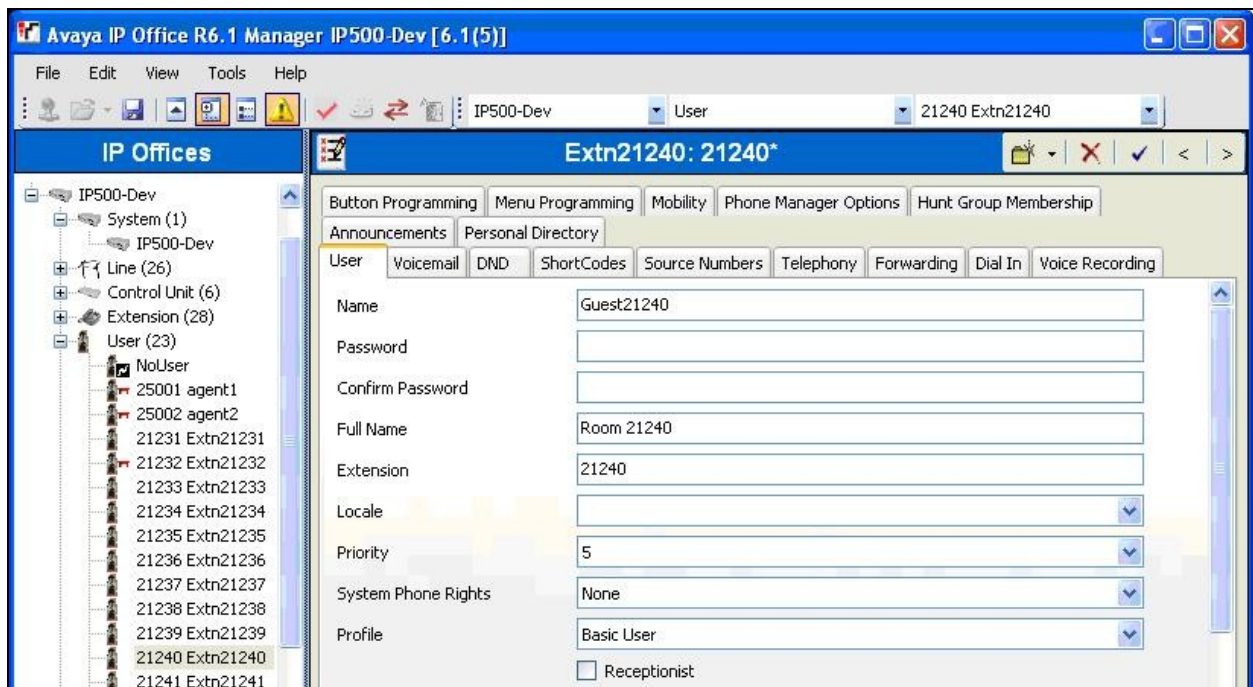
From the configuration tree in the left pane, select **System > IP500-Dev** to display the **IP500-Dev** screen in the right pane. Select the **Voicemail** tab in the right pane.

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 4.6**.

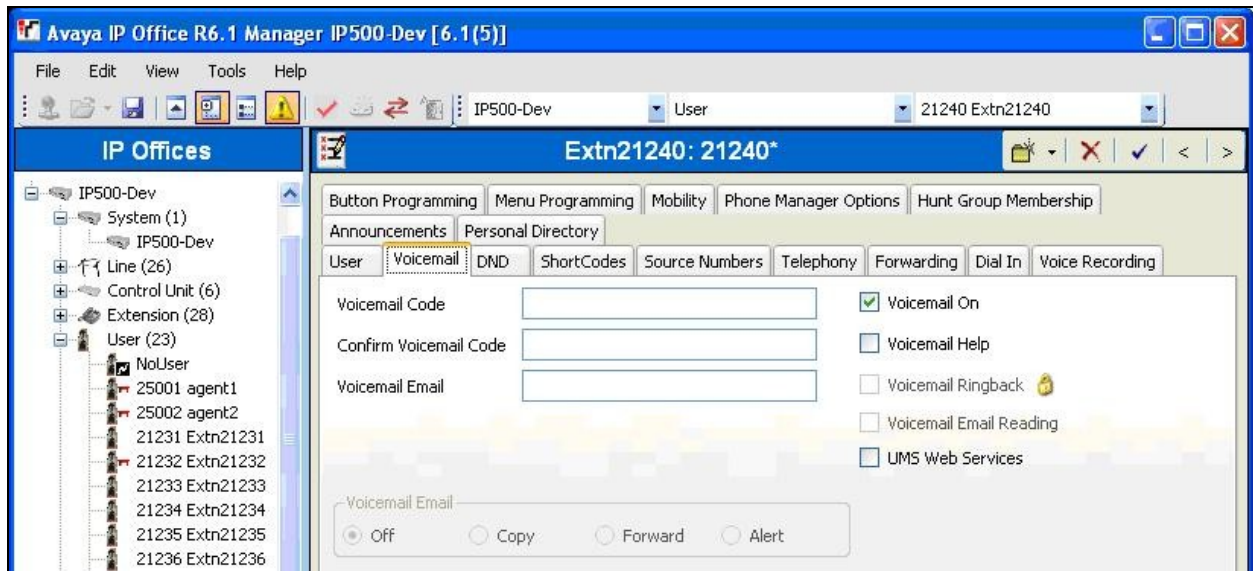


4.9. Administer Voicemail Users

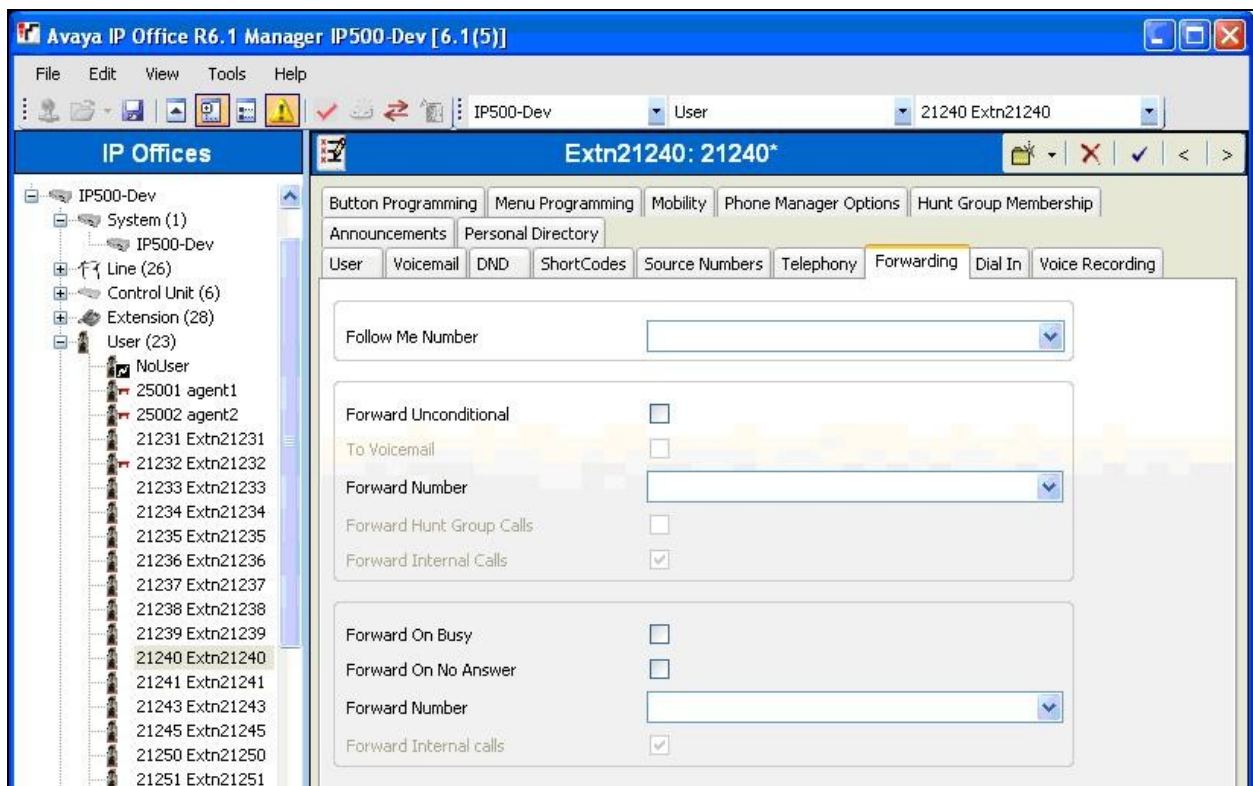
From the configuration tree in the left pane, select the first user that will be using DuVoice for voicemail. In this case, the user is “21240”. Enter a descriptive **Name**.



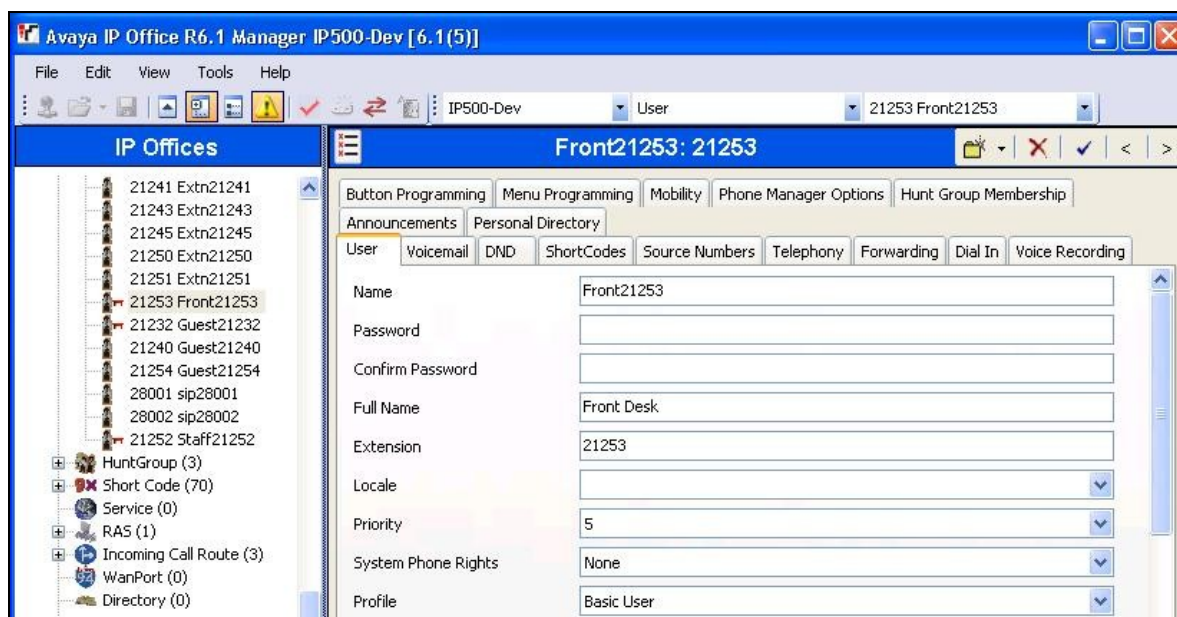
Select the **Voicemail** tab. Check **Voicemail On**, and uncheck **Voicemail Help**, as shown below.



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



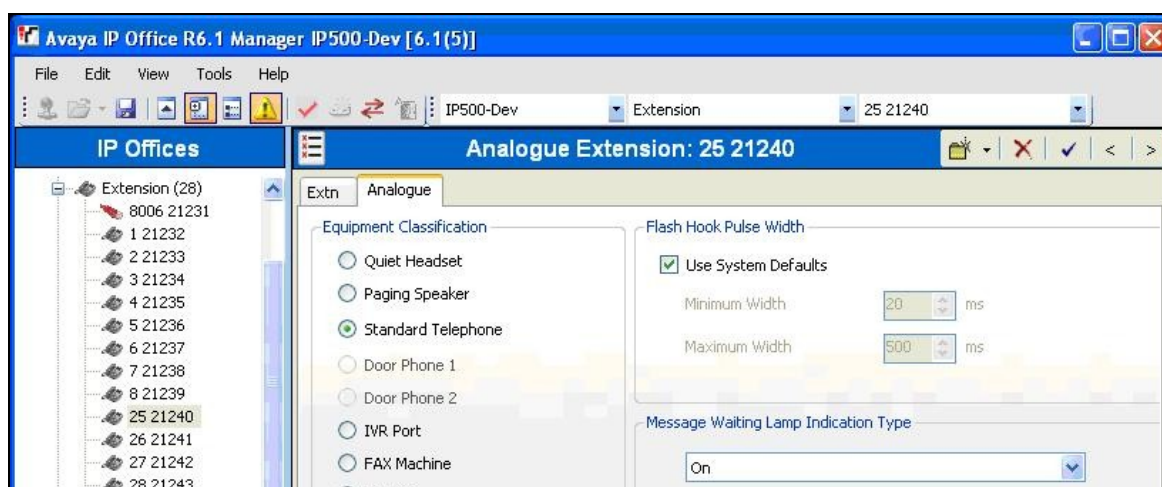
Repeat this section for all users using DuVoice for voicemail, including all guests, front desk, and staff. In the compliance testing, the voicemail users consisted of one front desk with extension “21253”, three guests with extensions “21232, 21240, and 21254”, and one staff with extension “21252”,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



4.10. Administer Analog User MWI

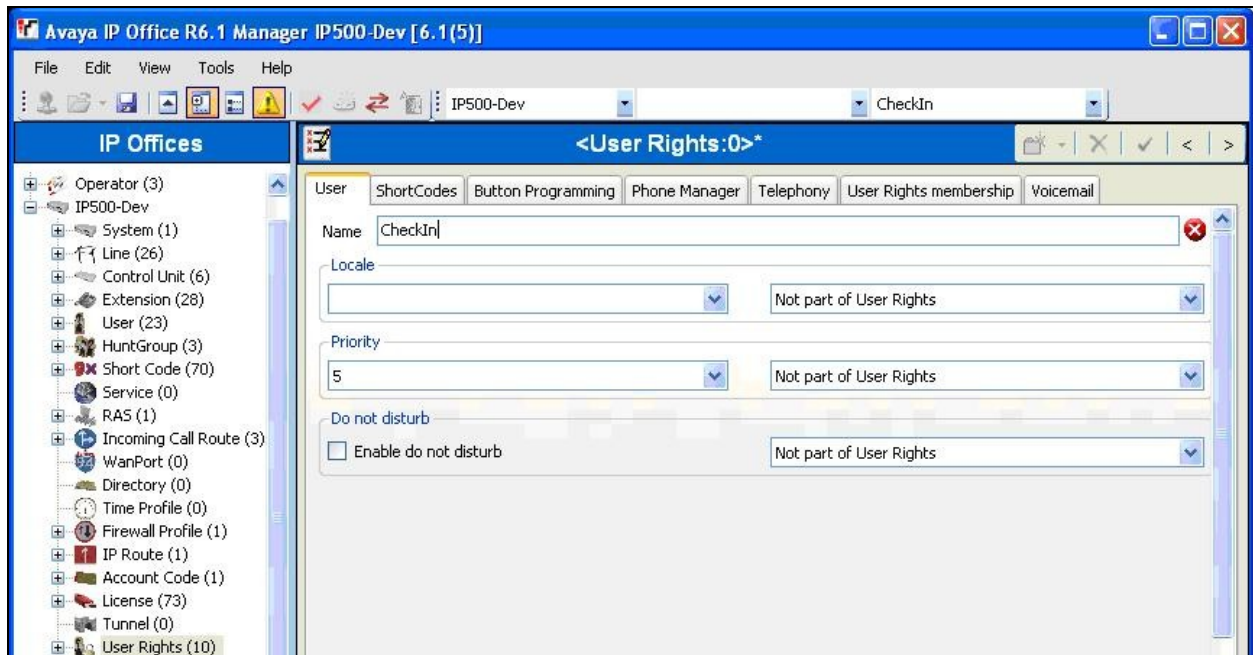
For voicemail users with analog telephones, the MWI setting on the analog extension may need modification, depending on the type of analog telephone. Refer to [2] for details on the specific analog telephone types requiring the MWI setting. In the compliance testing, one guest had an analog telephone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

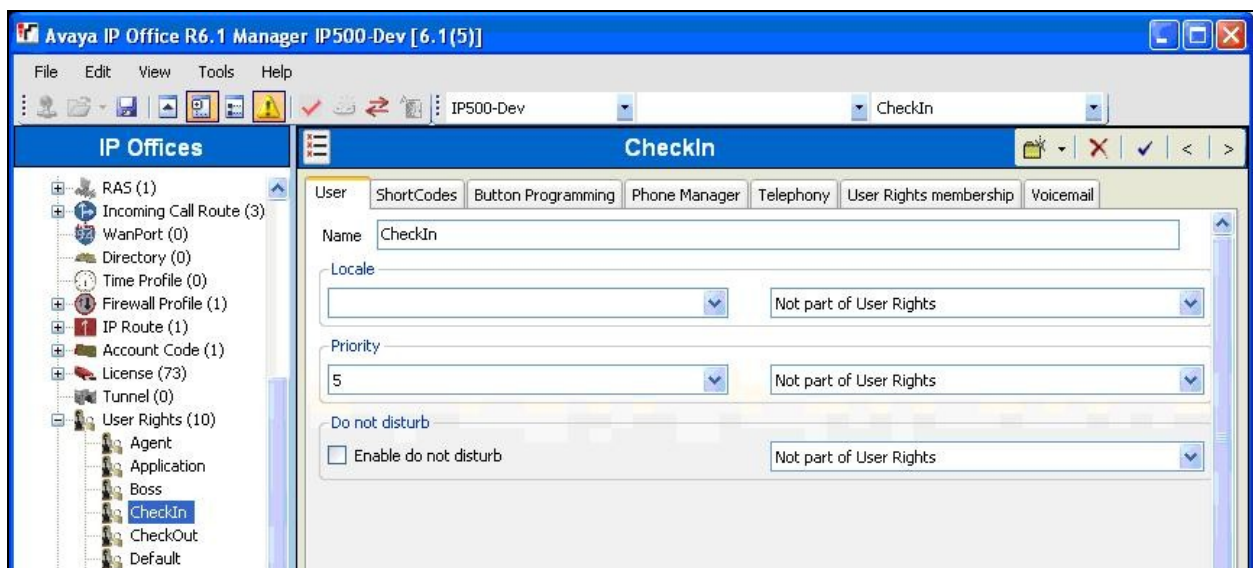


4.11. Administer User Rights

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.



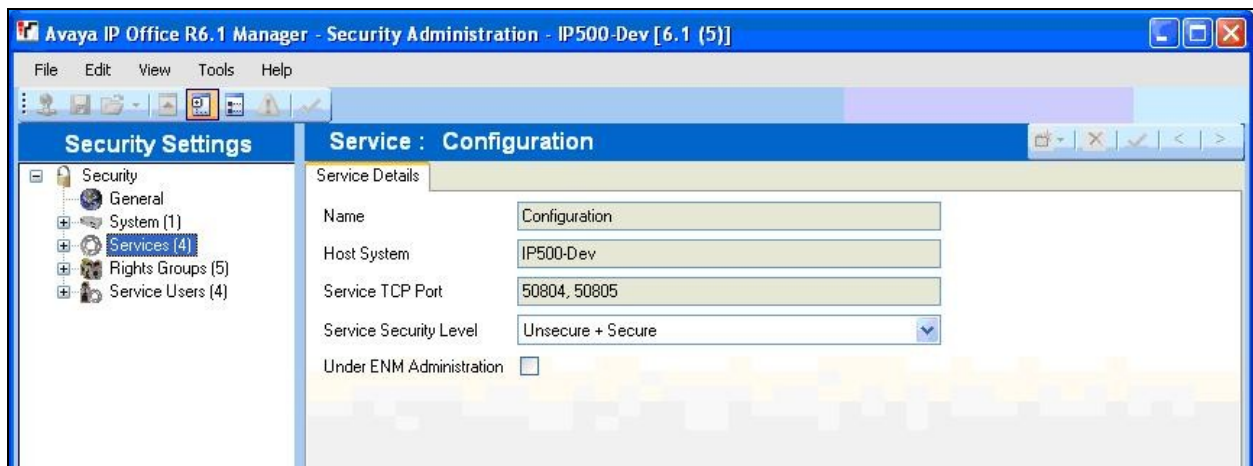
Repeat this section to create the desired number of user rights templates for guests in various states. In the compliance testing, two user rights templates with names of “CheckIn” and “CheckOut” were created, as shown below in the left pane.



4.12. Administer Security Service

From the **Avaya IP Office R6 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 R6 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.



5. 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

5.1. 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 “10.32.35.210” 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 10.32.35.210:8090
SET SUBSCRIBELIST http://10.32.35.210:8090/
```

5.2. Administer Specific Phone Parameters

Navigate to the relevant specific phone parameters section, in this case **SETTINGS9630**. Under the **WML BROWSER SETTINGS** subsection, set the **WMLHOME** parameter as shown below, where “10.32.35.210” is the IP address of the DuVoice server, and “8090” is the **WMLPORT** value from **Section 5.1**.

Repeat this section for all relevant 96xx IP Telephone types. In the compliance testing, the 9630 IP Telephone was used for testing the push of 911 alerting text message.

```
#####  
#  
# SETTINGS9630  
#  
.  
.  
##### 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://10.32.35.210:8090/  
  
GOTO END
```

5.3. Reboot Telephones

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

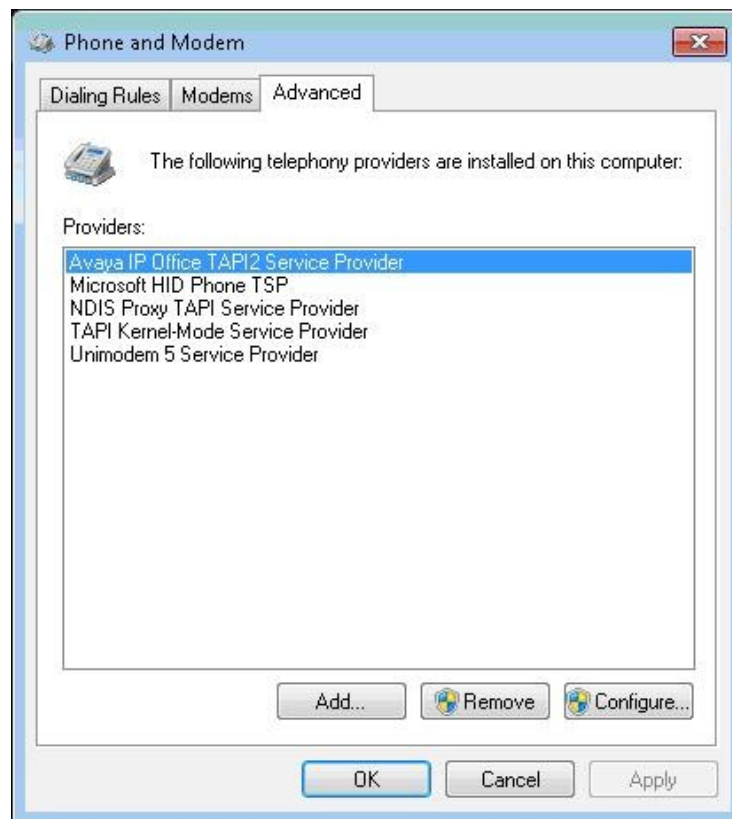
6. Configure DuVoice

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

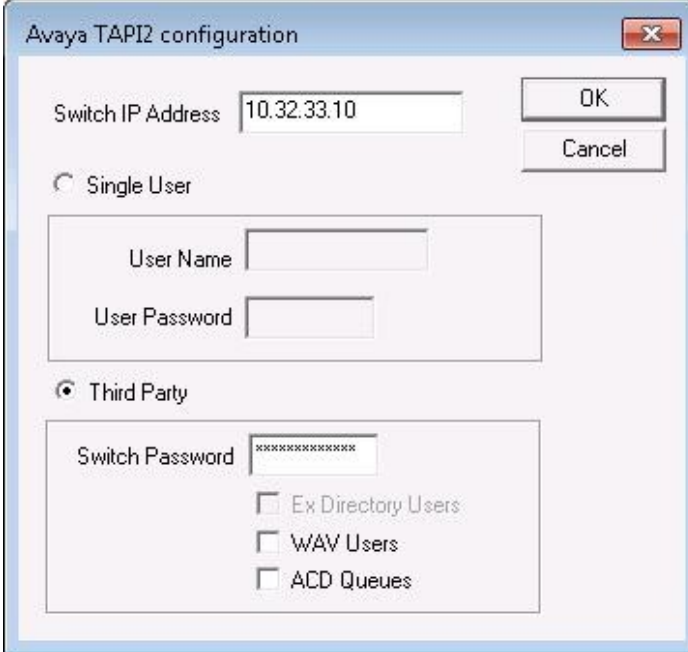
- Administer TAPI driver
- Shutdown server
- Administer setup wizard
- Administer TAPI integration
- Administer connectors
- Administer hospitality
- Administer push server
- Administer mailboxes
- Startup server

6.1. 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.

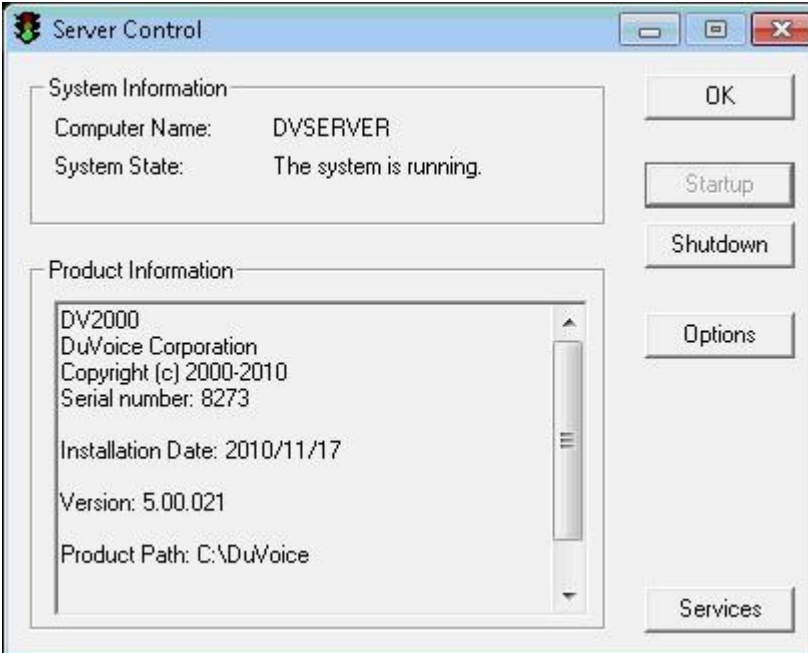


The image shows a Windows-style dialog box titled "Avaya TAPI2 configuration". It has a standard Windows window frame with a title bar, maximize, minimize, and close buttons. The dialog contains the following elements:

- A text field for "Switch IP Address" containing the value "10.32.33.10".
- Two buttons on the right: "OK" and "Cancel".
- Two radio buttons for user selection:
 - "Single User" (unselected)
 - "Third Party" (selected)
- Under "Single User", there are two text fields: "User Name" and "User Password".
- Under "Third Party", there is a text field for "Switch Password" containing a series of asterisks.
- Below the "Switch Password" field are three unchecked checkboxes:
 - "Ex Directory Users"
 - "WAV Users"
 - "ACD Queues"

6.2. Shutdown Server

From the DuVoice server, select **Start > All Programs > DuVoice > Server Control**. The **Server Control** screen is displayed. If the server is already running, then select **Shutdown** to stop the server, in order to make subsequent configuration changes.



The image shows a Windows-style window titled "Server Control". It has a standard Windows window frame with a title bar, maximize, minimize, and close buttons. The window contains the following elements:

- A "System Information" section with two labels and values:
 - "Computer Name: DVSERVER"
 - "System State: The system is running."
- A "Product Information" section with a list of details:
 - DV2000
 - DuVoice Corporation
 - Copyright (c) 2000-2010
 - Serial number: 8273
 - Installation Date: 2010/11/17
 - Version: 5.00.021
 - Product Path: C:\DuVoice
- On the right side, there are five buttons:
 - "OK"
 - "Startup"
 - "Shutdown"
 - "Options"
 - "Services"

6.3. Administer Setup Wizard

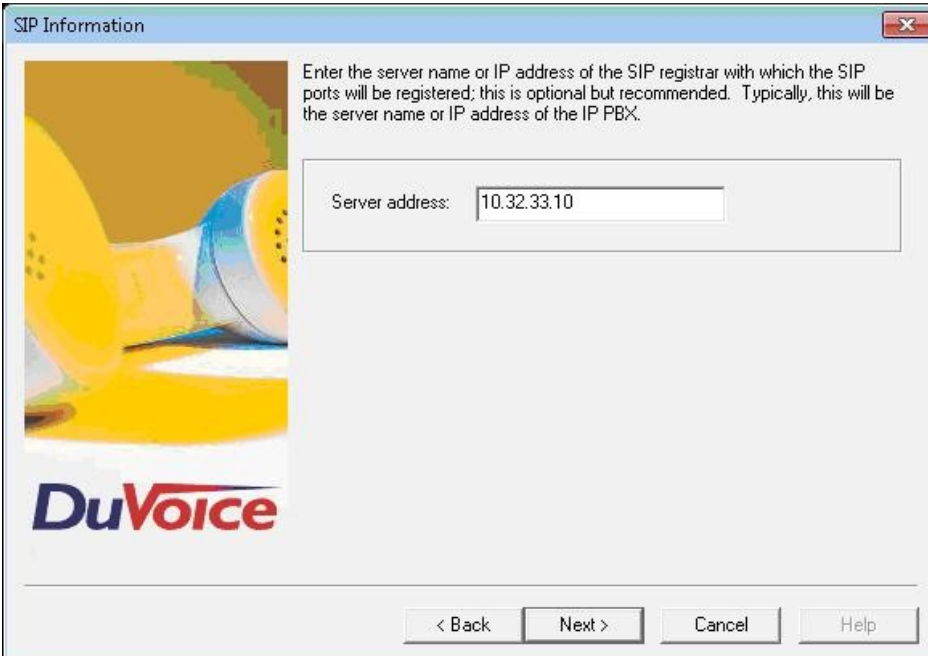
From the DuVoice server, select **Start > All Programs > DuVoice > System Configuration**. The **Wizard Start** screen is displayed upon initial access. Click **Next**.



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

The screenshot shows the 'Site Information' window. It has the same DuVoice logo on the left. The main area is divided into 'Required' and 'Optional' sections. The 'Required' section has fields for 'Name' (filled with 'Avaya DevConnect Lab') and 'Site telephone number' (filled with '(908) - 8485601'). The 'Optional' section has fields for 'Fax telephone number', 'Address', 'City', 'State or Province', and 'Zip or Postal Code'. At the bottom are four buttons: '< Back', 'Next >', 'Cancel', and 'Help'.

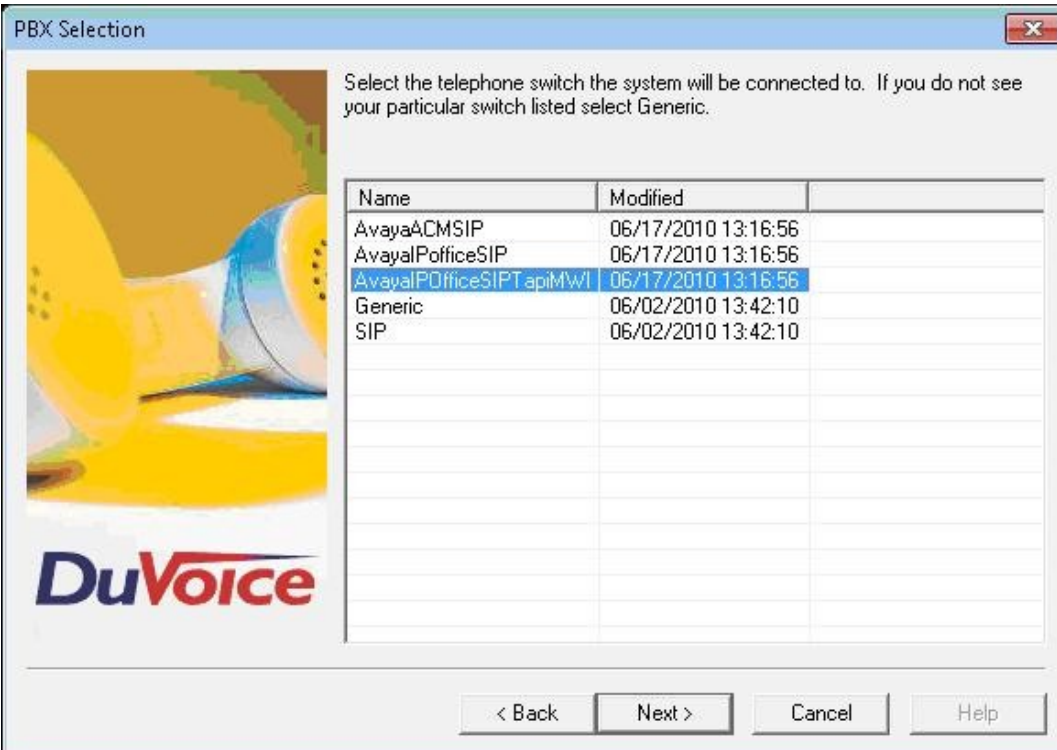
The **SIP Information** screen is displayed. For **Server address**, enter the IP address of Avaya IP Office, and click **Next**.



The SIP Information dialog box features a DuVoice logo on the left and instructional text on the right: "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." Below the text is a text field labeled "Server address:" containing the value "10.32.33.10". At the bottom are four buttons: "< Back", "Next >", "Cancel", and "Help".

Name	Modified
AvayaACMSIP	06/17/2010 13:16:56
AvayaIPofficeSIP	06/17/2010 13:16:56
AvayaIPofficeSIPapiMWI	06/17/2010 13:16:56
Generic	06/02/2010 13:42:10
SIP	06/02/2010 13:42:10

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

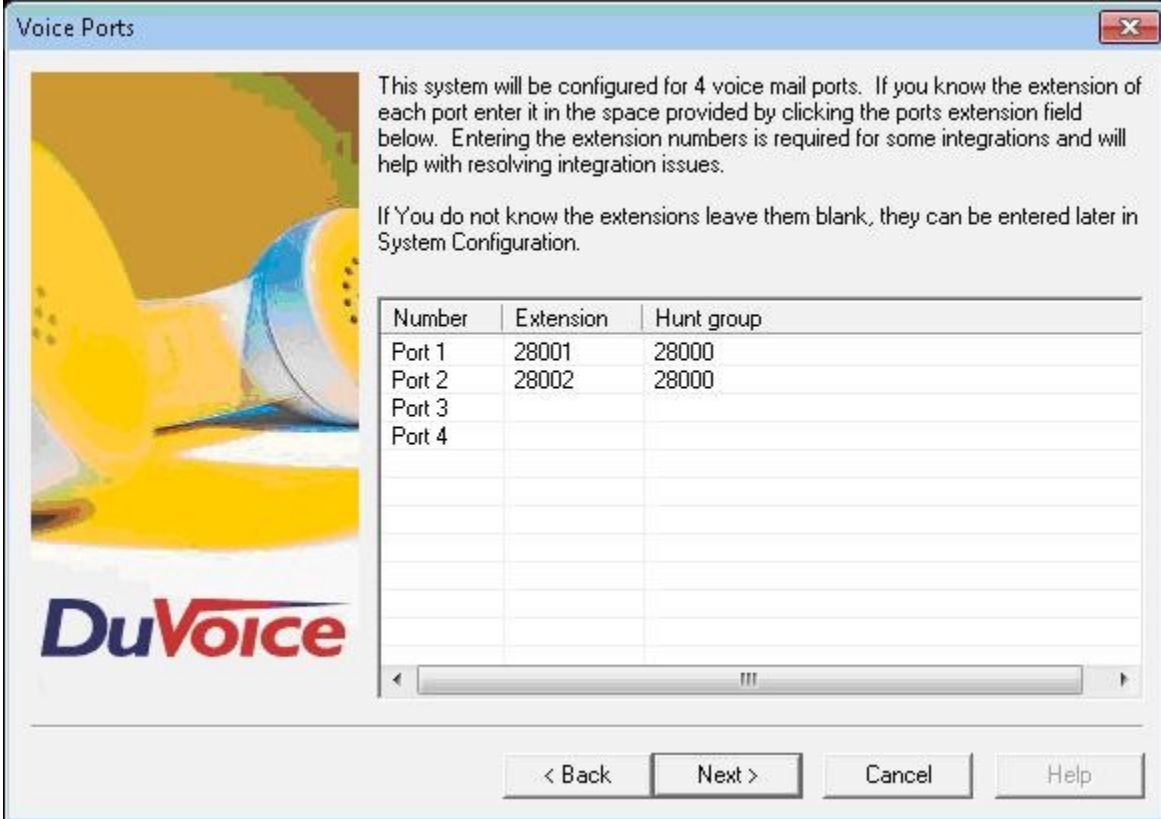


The PBX Selection dialog box features a DuVoice logo on the left and instructional text on the right: "Select the telephone switch the system will be connected to. If you do not see your particular switch listed select Generic." Below the text is a table with two columns: "Name" and "Modified". The table lists several entries, with "AvayaIPOfficeSIPapiMWI" highlighted in blue. At the bottom are four buttons: "< Back", "Next >", "Cancel", and "Help".

Name	Modified
AvayaACMSIP	06/17/2010 13:16:56
AvayaIPofficeSIP	06/17/2010 13:16:56
AvayaIPOfficeSIPapiMWI	06/17/2010 13:16:56
Generic	06/02/2010 13:42:10
SIP	06/02/2010 13:42:10

The **Voice Ports** screen is displayed. Assign each SIP base extension from **Section 4.4** to an available **Port**, and enter the hunt group extension from **Section 4.6**, 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.



Voice Ports

This system will be configured for 4 voice mail ports. If you know the extension of each port enter it in the space provided by clicking the ports extension field below. Entering the extension numbers is required for some integrations and will help with resolving integration issues.

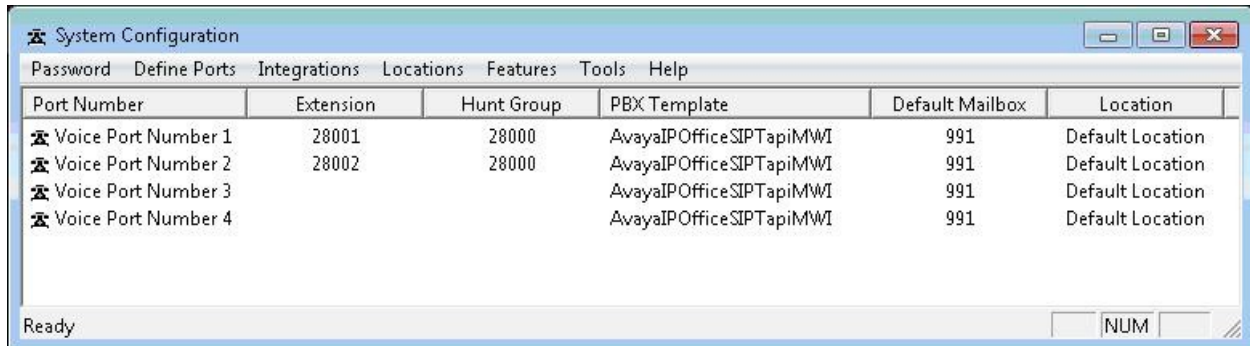
If You do not know the extensions leave them blank, they can be entered later in System Configuration.

Number	Extension	Hunt group
Port 1	28001	28000
Port 2	28002	28000
Port 3		
Port 4		

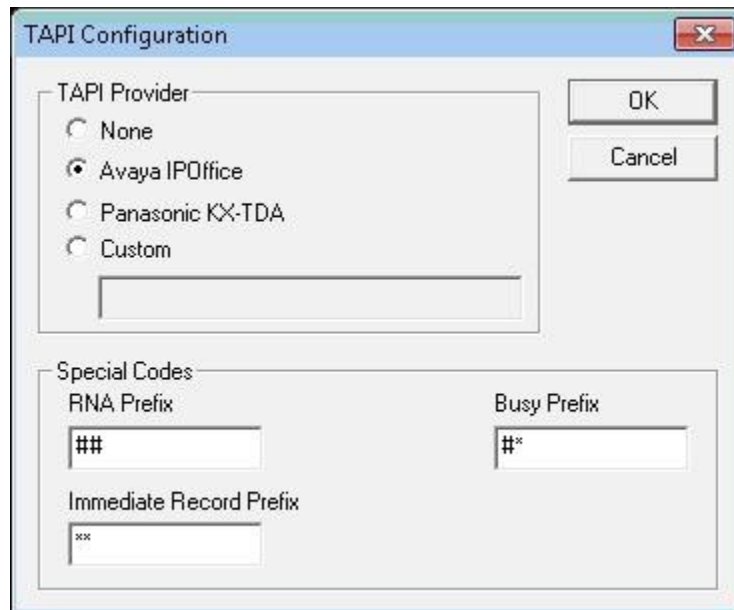
< Back Next > Cancel Help

6.4. 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.

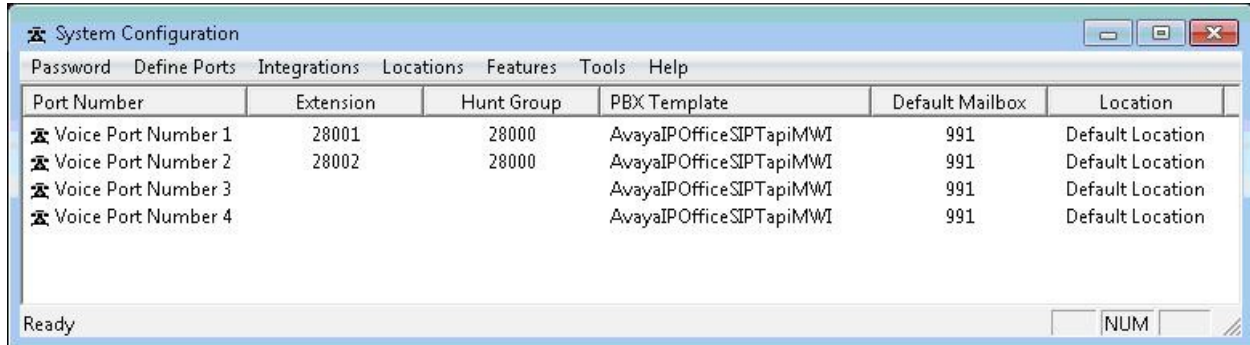


The **TAPI Configuration** screen is displayed. For **TAPI Provider**, select **Avaya IPOffice**. Retain the default values in the remaining fields.



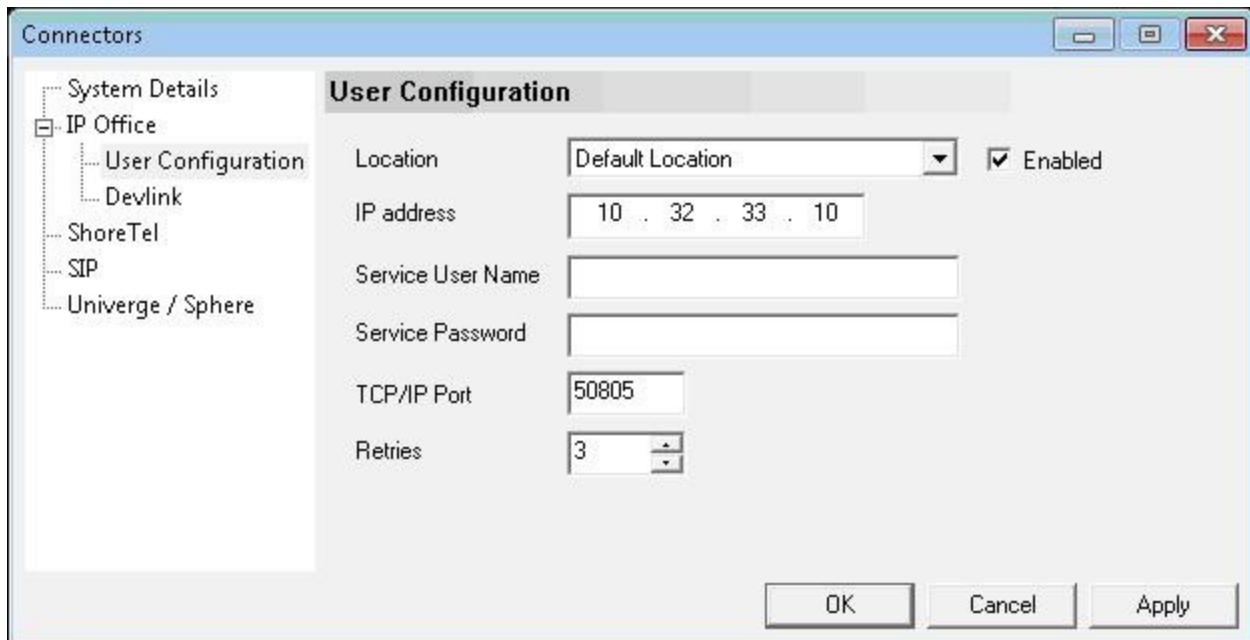
6.5. Administer Connectors

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



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.



6.6. Administer Hospitality

From the **System Configuration** screen shown in **Section 6.5**, 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 4.11**. Note that the **PBX Value** must match the user rights template name in **Section 4.11**. Enter desired names for **Display Text**. In the compliance testing, two entries were created to match the two user rights template in **Section 4.11**. Click **Apply**.

After clicking **Apply**, then 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

General
Language
Maid Codes
Phone Control
PMS

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

6.7. Administer Push Server

From the **System Configuration** screen shown in **Section 6.5**, select **Features > Push Server** from the top menu. The **Push Server Configuration** screen is displayed.

In the **Push On** section, uncheck **Ring** and **Answer**. In the **Hunt Groups and 911** section, select “911” from the drop-down list. For each Avaya 96xx IP Telephone that will be used for receiving 911 alerting text messages, enter the telephone extension in the **Extension** field, and click **Add phone** to move the extension to the box in the right. Retain the default values in the remaining fields.

In the compliance testing, the 911 alerting test messages were pushed to an Avaya 9630 IP Telephone with extension “21253”.

Push Server Configuration

Server Configuration

☒ Push server enabled

Port number: Switch IP:

Password: Server IP:

Push On

☐ Ring

☐ Answer

911 Options

☐ Push 911 clear messages

☐ Persistent 911 alerts

Initial Delay:

Repeat Delay:

IP Phones

Enabled	Extension	Address	Type
<input checked="" type="checkbox"/>	21252	20.32.39.102	1608D01A
<input checked="" type="checkbox"/>	21253	20.32.39.101	9630D01A
<input checked="" type="checkbox"/>	21254	10.32.35.103	1616D01A

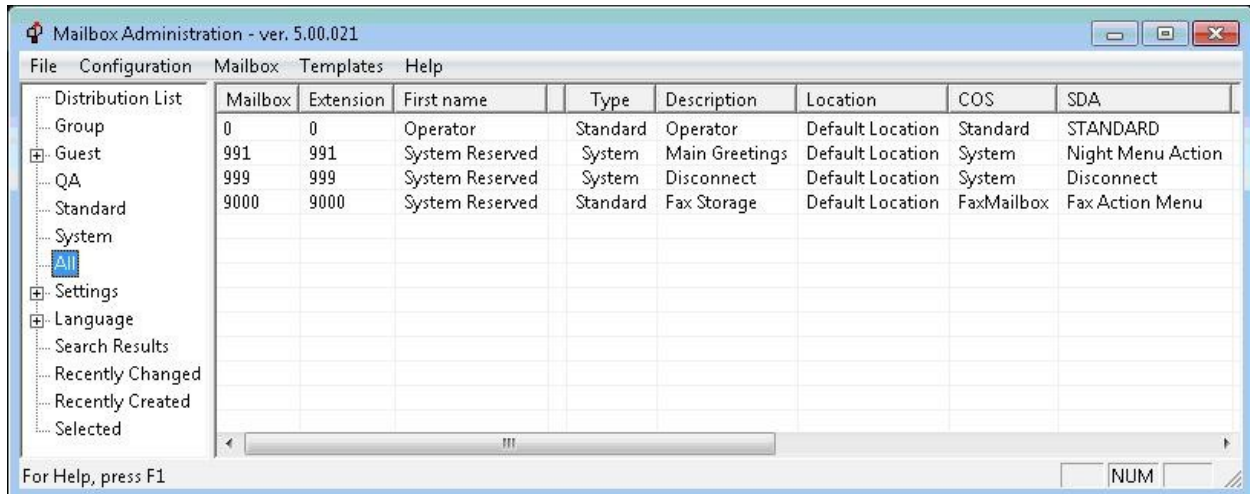
Hunt Groups and 911

Group number:

Extension:

6.8. 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 4.9**, in this case “21240”. For **Mailbox Type**, select “Guest” for guest users, and “Standard” for front desk and staff users.

Create Mailbox

Mailbox Number: 21240

Create Based On:

☒ Mailbox Type: Guest

☐ Mailbox Template: AudioText

Guest mailbox.

OK Cancel

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.

Create Mailbox 21240

Owner Settings

Owner Information

Extension: 21240

Password: XXXXXX

First Name: Guest21240

Last Name: DuVoice

Properties

Description:

COS: Guest Details ...

Location: Default Location Details ...

Language: Default

Greeting

Browse...

Options

☒ Hide from Directory

☒ Tutorial Complete

☐ Call Blocking On

OK Cancel Apply Help

Repeat this section for all voicemail users from **Section 4.9**, as shown below.

Mailbox Administration - ver. 5.00.021

File Configuration Mailbox Templates Help

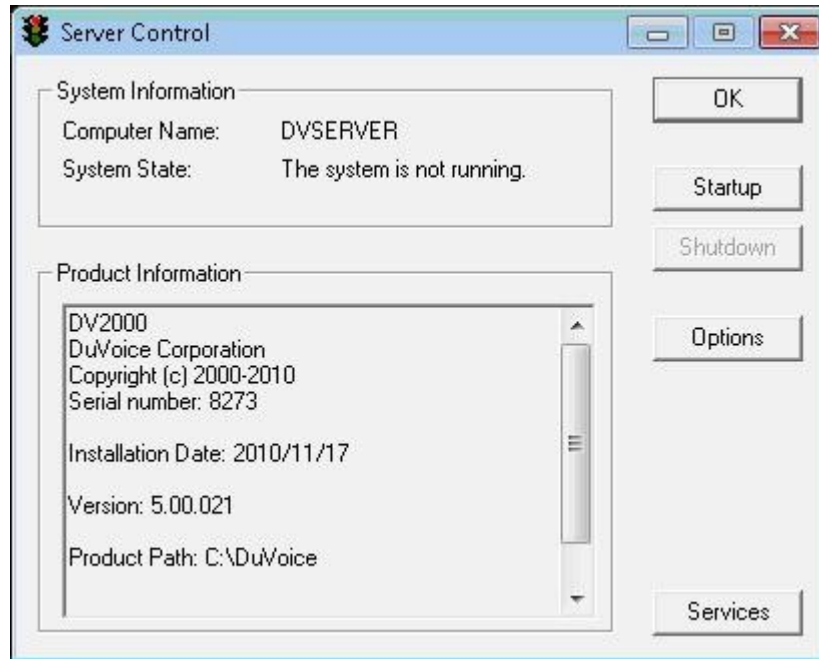
Mailbox	Extension	First name	Last n...	Type	Description	Location	COS	SDA
0	0	Operator		Standard	Operator	Default Location	Standard	STANDARD
991	991	System Reserved		System	Main Greetings	Default Location	System	Night Menu ..
999	999	System Reserved		System	Disconnect	Default Location	System	Disconnect
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

For Help, press F1

NUM

6.9. 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.



7. 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 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.

All test cases were executed. The following were the observations on DuVoice from the compliance testing.

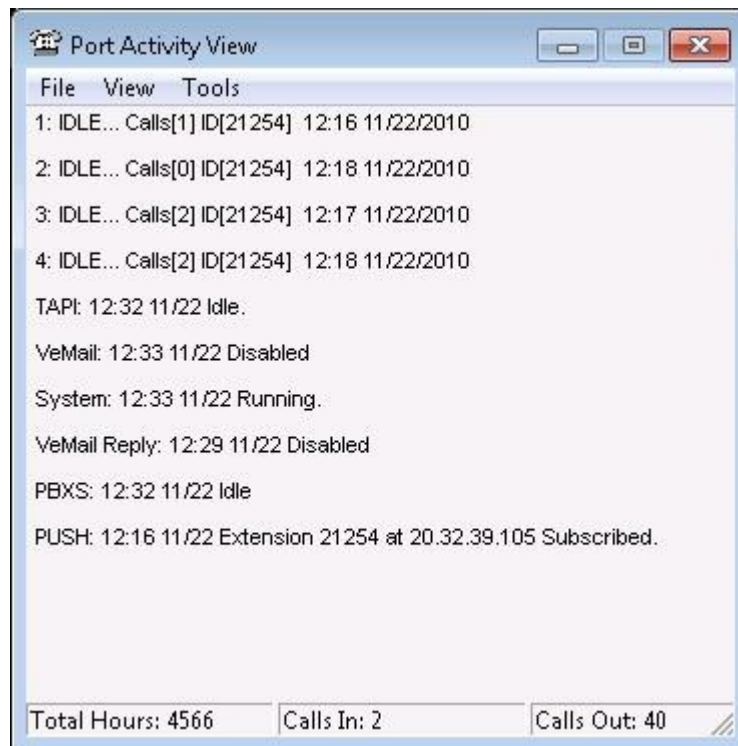
- When the DNS server setting for the network card on the DuVoice server is left blank, then calls connected to the first couple of DuVoice ports will not have audio. The workaround is to always configure the DNS server setting on the network card, and note that the server doesn't need to exist.
- Use of TAPI to disable the Do Not Disturb feature was not tested this time due to a problem with the DuVoice InnDesk tool.

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.

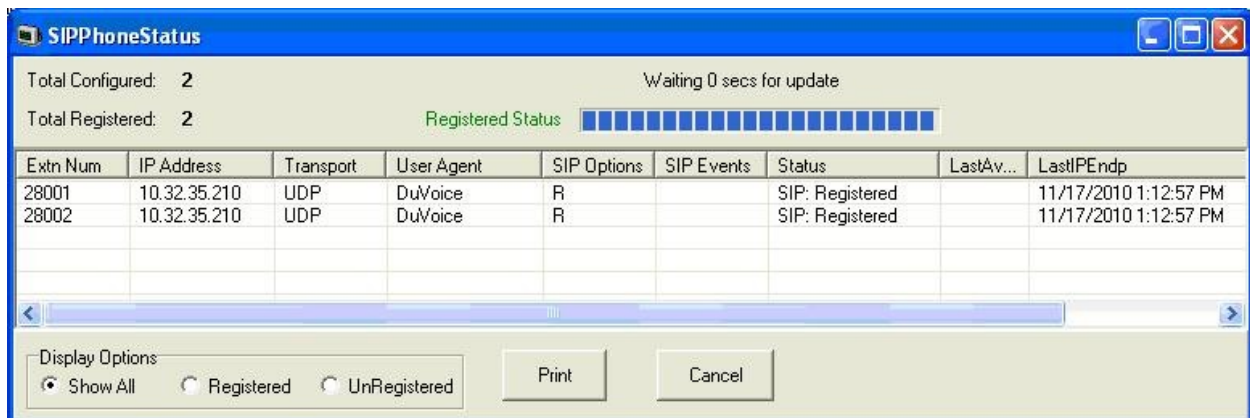


8.2. Verify SIP User Integration

From a PC running the Avaya IP Office Monitor application, select **Start > Programs > IP Office > Monitor** to launch the application. The **Avaya IP Office R6 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 4.4**, 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 the PMS simulator to perform a guest check-in request. Verify that the guest name and user right 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 9630 IP Telephone user configured in **Section 6.7**.

9. Conclusion

These Application Notes describe the configuration steps required for DuVoice 5.0 to successfully interoperate with Avaya IP Office 6.1. 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 6.1 Documentation CD*, November 2010, available at <http://support.avaya.com>.
2. *System Reference Guide*, 3rd Edition, Version 5.00.009, July 2010, available on the DuVoice server as part of the installation.

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