



Avaya Solution & Interoperability Test Lab

Application Notes for Configuring FCS WinExpress R2.0 with Avaya IP Office R8.0 – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for FCS WinExpress 2.0 to interoperate with Avaya IP Office 8.0. FCS WinExpress is a Windows-based hospitality system that provides a seamless interface with a hotel's Property Management System and Avaya IP Office. In the compliance testing, FCS WinExpress used a SIP User, TAPI, SMDR, and Configuration Web Service interfaces from Avaya IP Office to provide call billing, voicemail, name and user profile template change, wake-up call, room status and mini-bar posting 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 FCS WinExpress R2.0 to interoperate with Avaya IP Office R8.0. FCS WinExpress is a Windows-based hospitality system that provides a seamless interface with a hotel's Property Management System and Avaya IP Office. In the compliance testing, FCS WinExpress used a SIP User, TAPI, SMDR, and Configuration Web Service interfaces from Avaya IP Office to provide call billing, voicemail, name and user profile template change, do not disturb, wake-up call, room status and mini-bar posting features.

The SIP User and TAPI interfaces were used by WinExpress to provide hospitality features such as voicemail, wake-up call, do not disturb, room status and mini-bar posting. In the compliance testing, WinExpress registers as a SIP user on Avaya IP Office to receive up to eight simultaneous calls. The SIP user was configured as a member of a hospitality hunt group. WinExpress used the TAPI interface to set the divert setting for Do Not Disturb for guest room phones when requested manually by the guests.

For the voicemail coverage scenarios, voicemail messages were recorded and saved on WinExpress. The TAPI lineDevSpecific capability was used to activate/deactivate the Message Waiting Indicator (MWI).

WinExpress also has a Property Management System (PMS) interface. A PMS simulator provided by FCS was used in the compliance testing to initiate the room check-in, check-out, and move requests on WinExpress and IP Office. In the compliance testing, two user rights templates were set up on Avaya IP Office for use with check-in and check-out guests. WinExpress 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. Two other user rights templates were set up on Avaya IP Office for use with barring and unbarring of guest phones for outgoing calls.

The Station Message Detail Reporting (SMDR) interface was used by WinExpress to capture calls made from room phones for the purpose of call billing.

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 by dialing the different extensions for voice message recording/retrieval, mini-bar and room status posting, and wake-up call schedule. The PMS Simulator was used to manually initiate check-in/check-out/move requests, to activate/deactivate the MWI for Voicemail and to set Do Not Disturb. For SMDR testing, incoming and outgoing calls were made to/from the PSTN and the WinExpress call billing reports were verified. The serviceability test cases were performed manually by disconnecting and reconnecting the Ethernet cable to WinExpress, and rebooting the Avaya IP Office and FCS WinExpress servers.

DevConnect Compliance Testing is conducted jointly by Avaya and DevConnect members. The jointly-defined test plan focuses on exercising APIs and/or standards-based interfaces pertinent to the interoperability of the tested products and their functionalities. DevConnect Compliance Testing is not intended to substitute full product performance or feature testing performed by DevConnect members, nor is it to be construed as an endorsement by Avaya of the suitability or completeness of a DevConnect member's solution.

2.1. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing. The feature testing focused on verifying the following on WinExpress:

- Registration of SIP user.
- Handling of voicemail messages and message waiting lamps for check-out and move requests initiated via the PMS simulator.
- Voicemail recording 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 administration staff.
- Setting of MWI and do not disturb divert parameters using the TAPI interface.
- Posting of room status and mini-bar usage from the room phones.
- 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.
- Capture calls made from room phones for the purpose of call billing.

The serviceability testing focused on verifying the ability of WinExpress to recover from adverse conditions, such as disconnecting and reconnecting the Ethernet cables to WinExpress and rebooting of IP Office and WinExpress server.

2.2. Test Results

All test cases were executed and passed.

2.3. Support

Technical support on WinExpress can be obtained through the following:

- Website: <http://www.fcscs.com/>

3. Reference Configuration

The configuration used for the compliance testing is shown below. In the compliance testing, WinExpress was installed on one PC. FCS provided a PMS Simulator to initiate room check-in/check-out and move, monitor room and wake-up call status, capture SMDR, and to set Do Not Disturb.

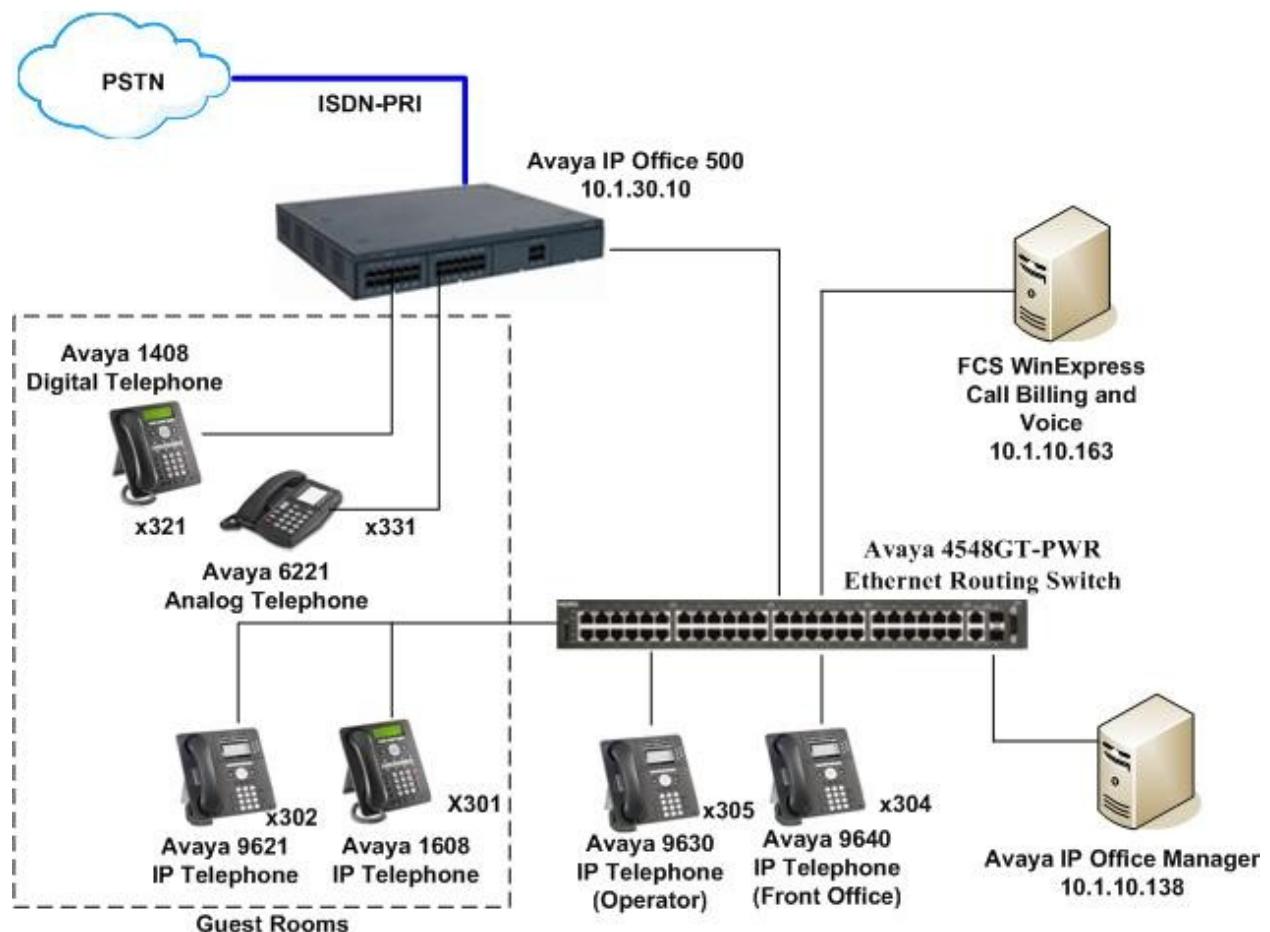


Figure 1: Test Configuration of FCS WinExpress and Avaya IP Office R8.0

4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya IP Office 500	8.0 (16)
Avaya IP Office Manager	10.0 (16)
Avaya IP Office TAPI2 Service Provider (tspi2w.tsp)	1.0.0.35
Avaya IP Office Digital Station Module	7.0 (12)
Avaya 9640 H323 IP Telephones	3.1 SP2
Avaya 9630 H323 IP Telephones	3.1 SP2
Avaya 9621 H323 IP Telephones	6.0 SP 4.1
Avaya 1608 H323 IP Telephones	1.300B
Avaya 1408 Digital Telephones	-
Avaya 6221 Analog Telephone	-
FCS WinExpress running on Microsoft Windows 7 Professional SP1	2.0

5. Configure Avaya IP Office

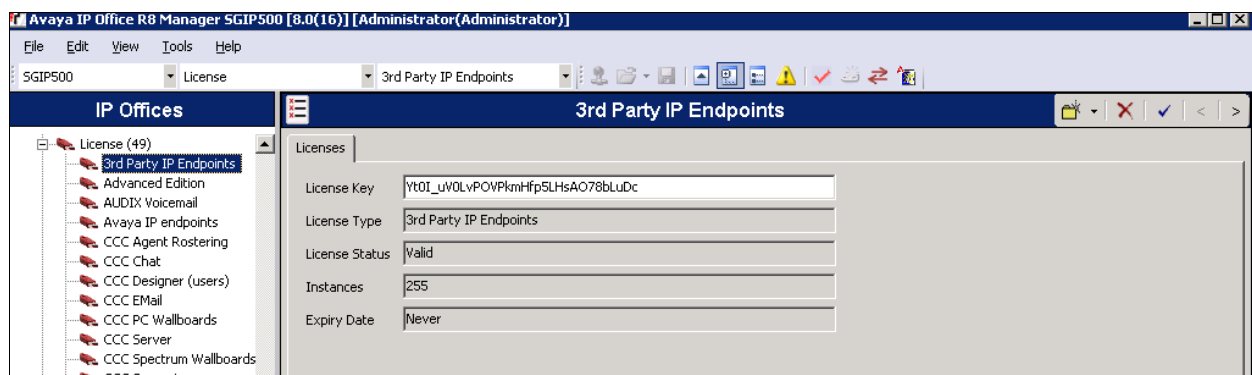
This section provides the procedures for configuring Avaya IP Office. The procedures include the following:

- 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
- Administer System Password
- Administer SMDR

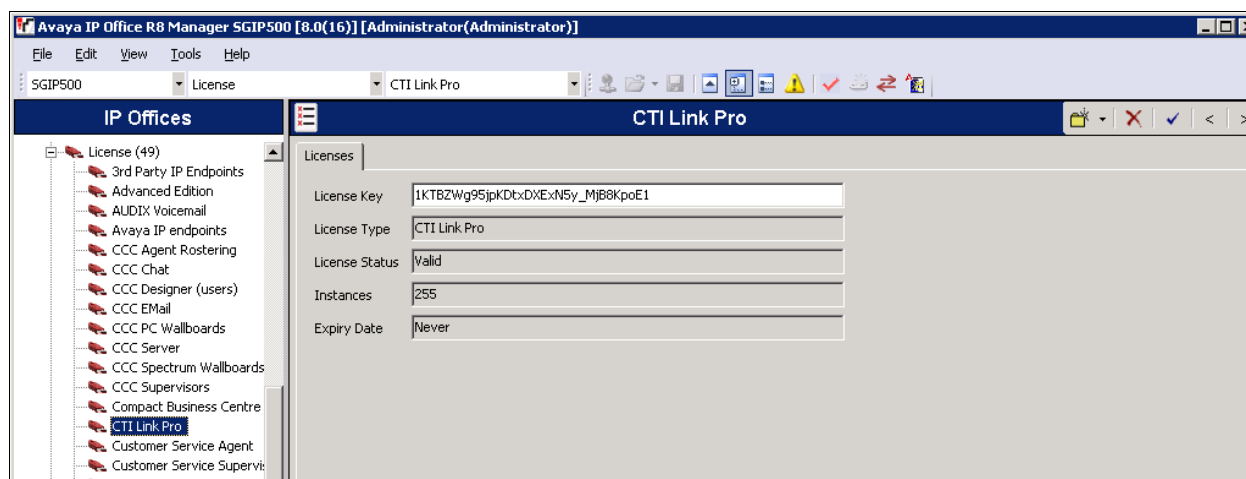
5.1. Verify IP Office License

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 Manager** screen is displayed. From the configuration tree in the left pane, select **License → 3rd Party IP Endpoints** to display the **3rd Party IP Endpoints** screen in the right pane. Verify that the **License Status** is “Valid”. This license is required for WinExpress to register to IP Office as a SIP User.

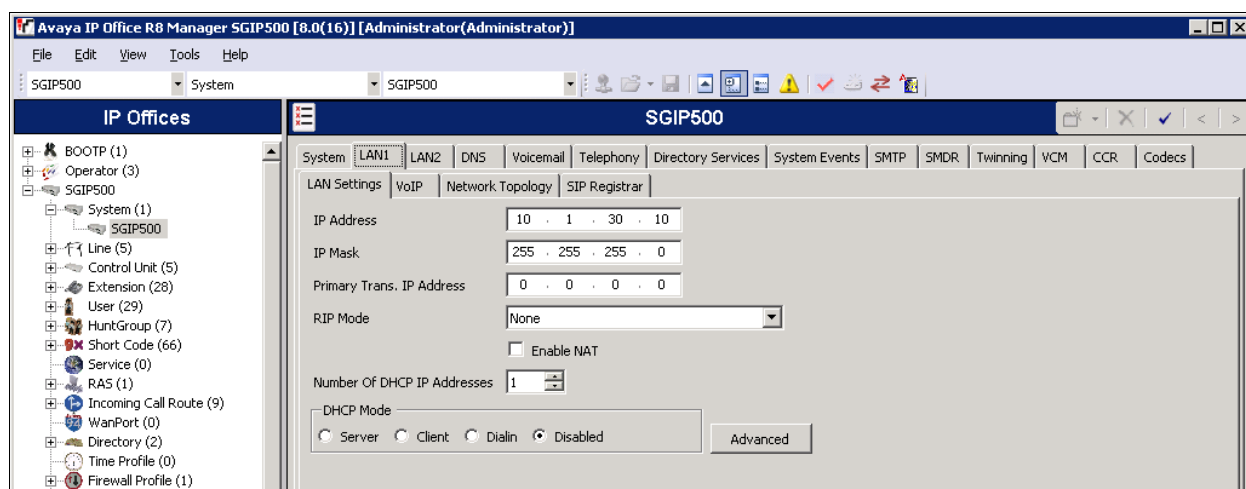


Scroll down the left pane and select **License** → **CTI Link Pro**, to display the **CTI Link Pro** screen in the right pane. Verify that the **License Status** is “Valid”. This license is required for WinExpress to use third-party TAPI control mode on IP Office.



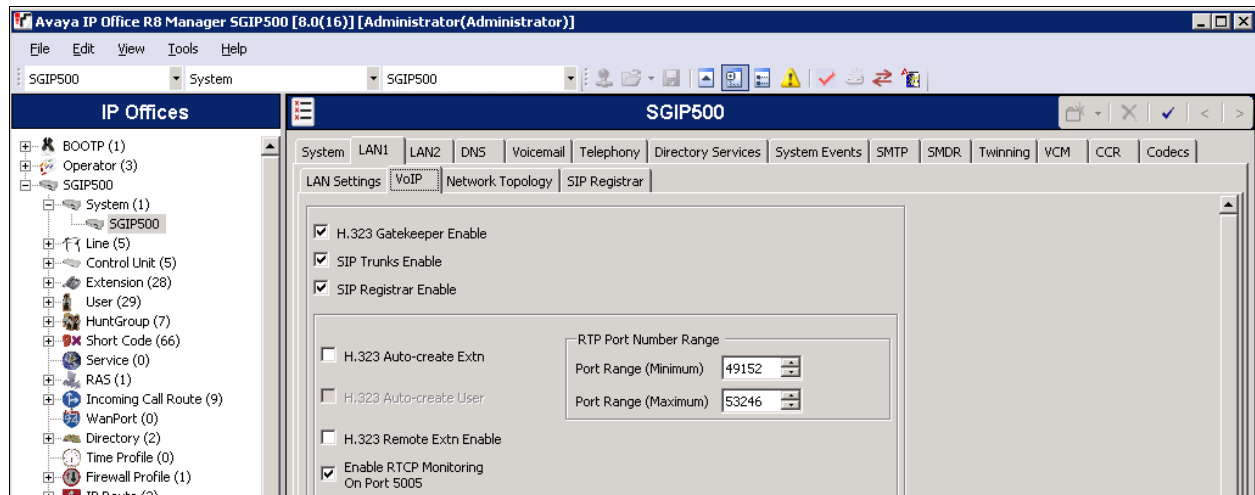
5.2. Obtain LAN IP Address

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

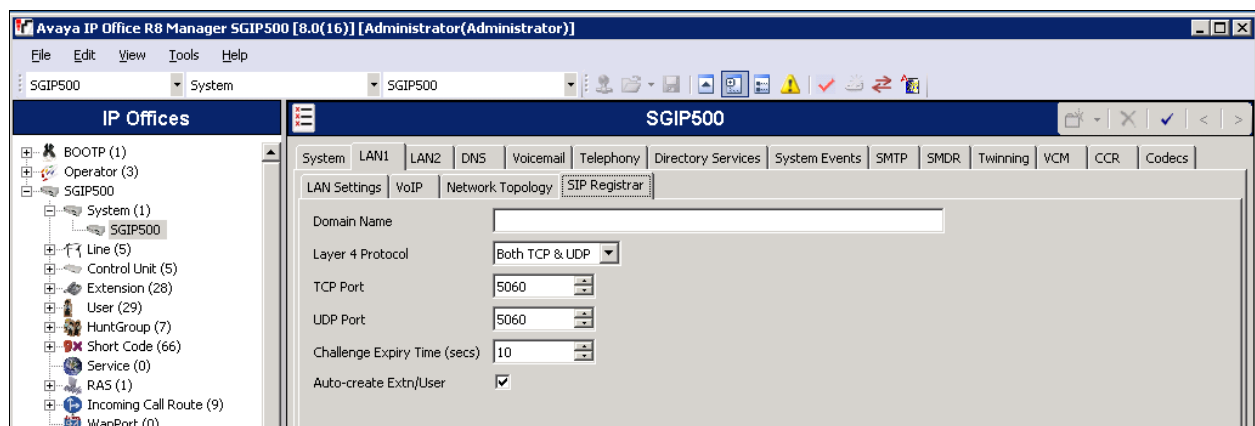


5.3. Administer SIP Registrar

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

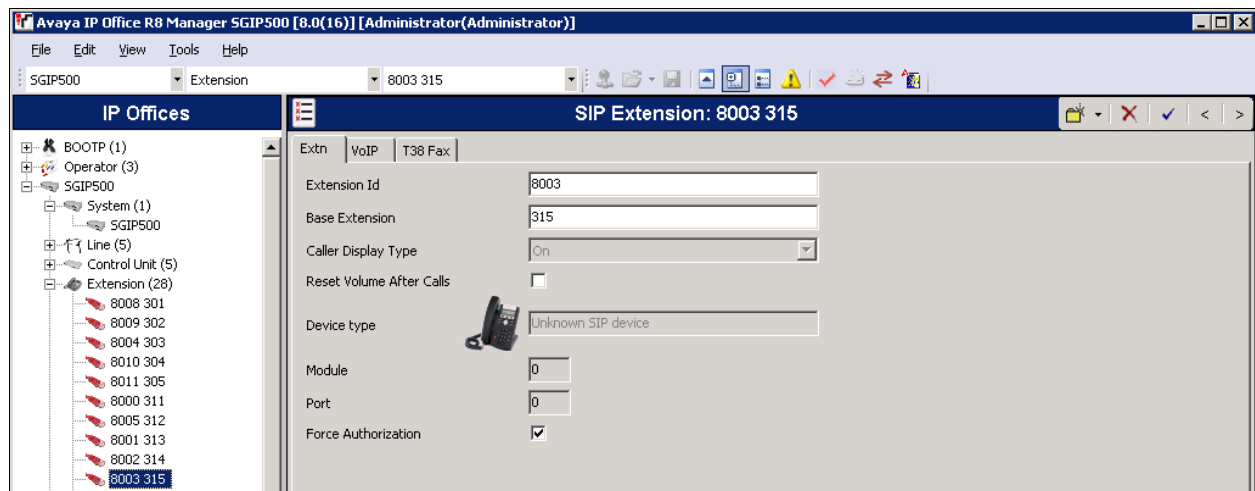


Select the **SIP Registrar** sub-tab, and enter a valid **Domain Name** for SIP endpoints to use for registration with IP Office. In the compliance testing, the **Domain Name** was left blank, so the LAN IP address was used for registration.



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 check **Force Authorisation**, as shown below.



Repeat this section to add other SIP extensions. In the compliance testing, the following SIP extensions, with base extensions of “315”, “311”, “312” and “313”, were created. WinExpress used the called-party number to activate the various hospitality features. Note that mini-bar and post room status can also be set such that it uses one extension instead of separate extensions to call. In the compliance testing, they are set as separate extension.

Call receive by WinExpress at 315 will detect the type of call based on the "History" info in the SIP INVITE to determine whether the call is routed from another phone or direct incoming. If it is direct, caller is retrieving voice message. However, if it is indirect, caller is leaving a voice message.

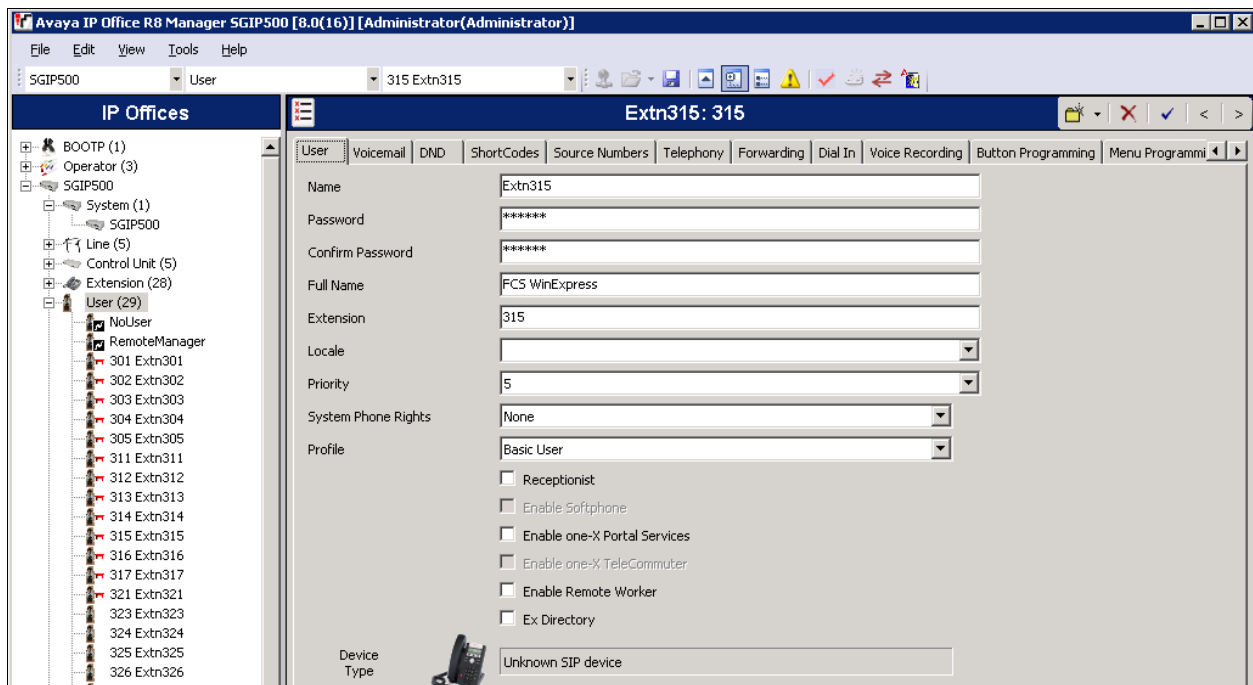
SIP Extension	Usage
315	WinExpress registers to this extension to receive calls.
311	To post mini-bar status.
312	To post room status.
313	To set wakeup call.

5.5. Administer SIP Users

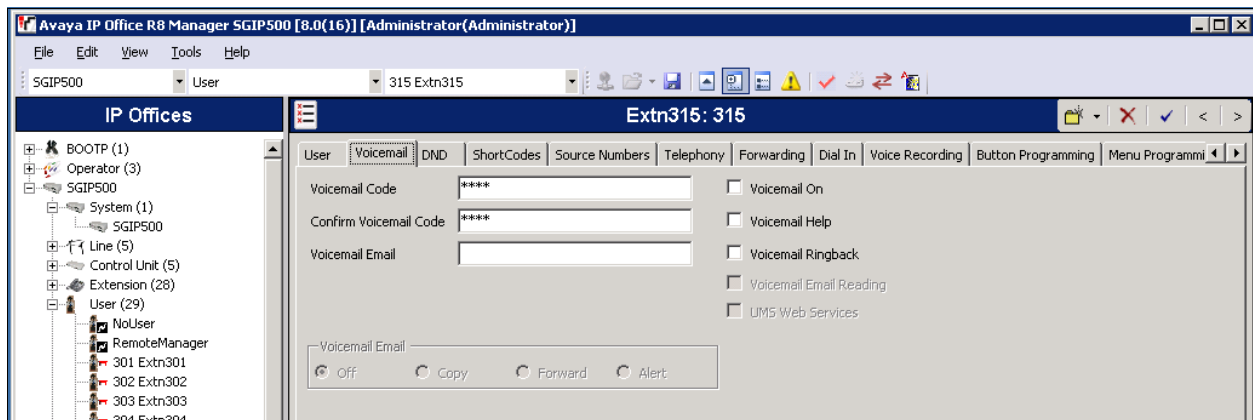
SIP users are administered for the SIP extensions created in **Section 5.4**. The primary SIP user “315” is for receiving calls and the secondary SIP users “311”, “312” and “313” are to forward calls to primary SIP user.

5.5.1. Administer Primary SIP Users

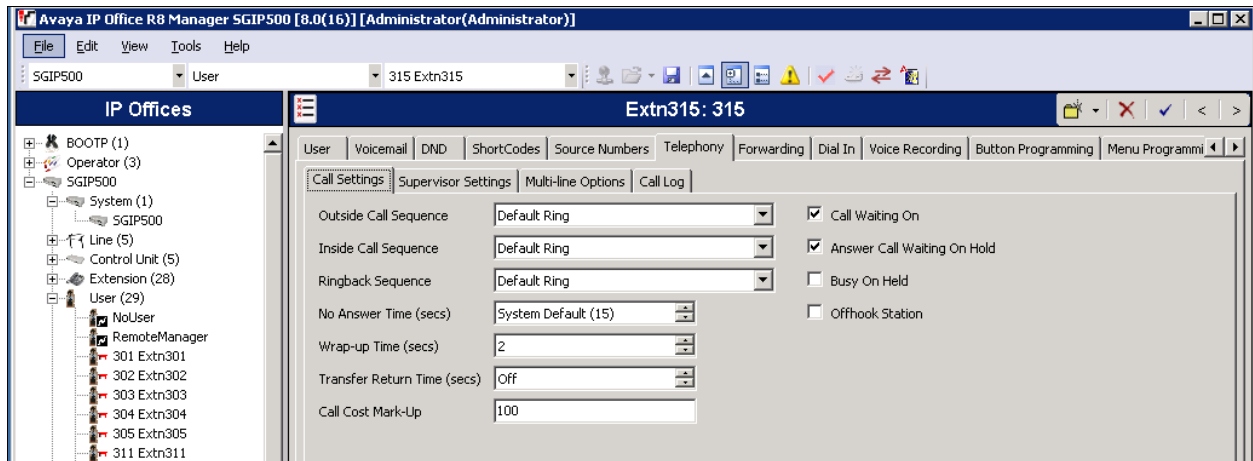
From the configuration tree in the left pane, right-click on **User** and select **New** from the pop-up list (not shown). Enter desired values for **Name** and **Full Name**. For **Extension**, enter the first Base Extension from **Section 5.4**. WinExpress registers using this primary SIP User to receive calls.



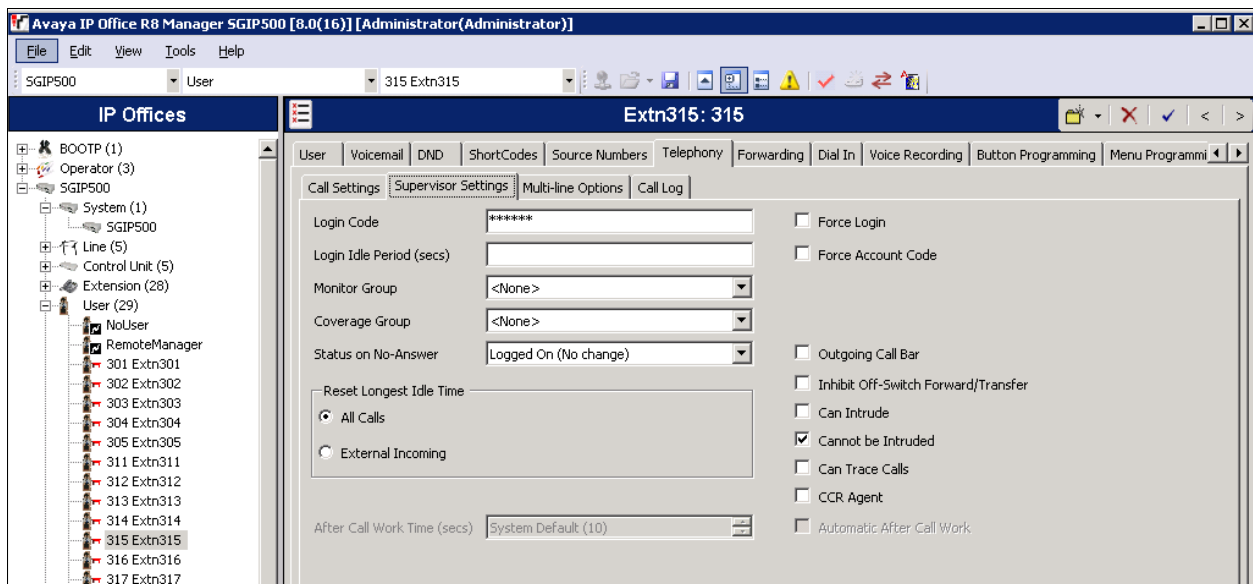
Select the **Voicemail** tab, and uncheck **Voicemail On**, as shown below.



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

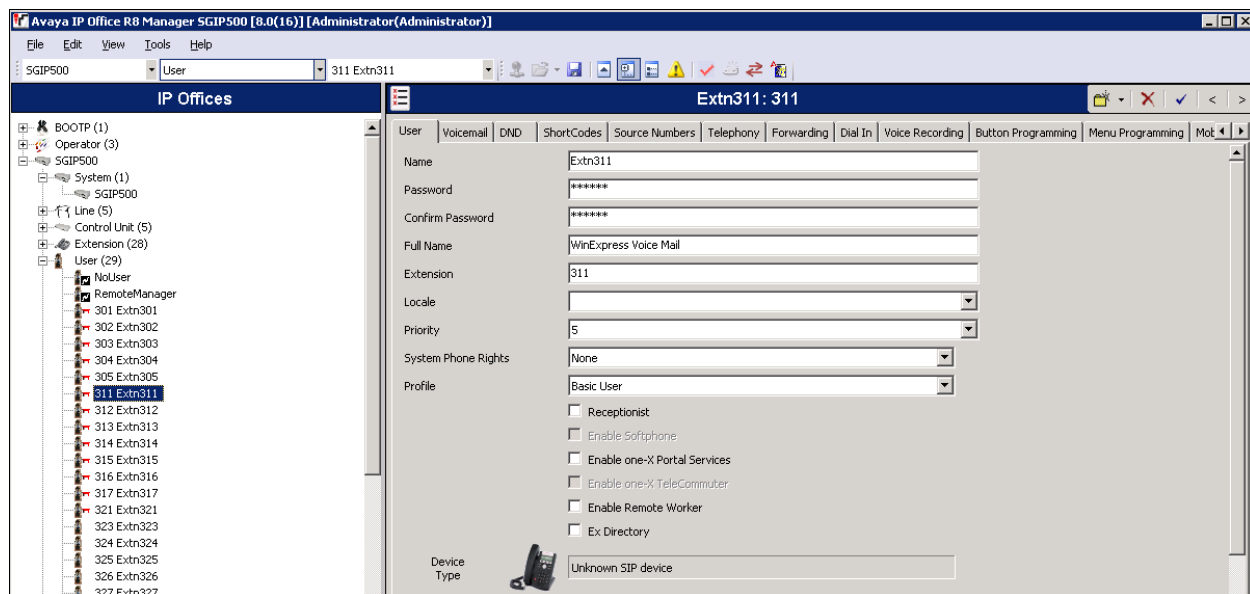


Select the **Supervisor Settings** sub-tab. Check the **Cannot be Intruded** field, as shown below. Specify the **Login Code** field, which will be used by WinExpress to log in the SIP User.

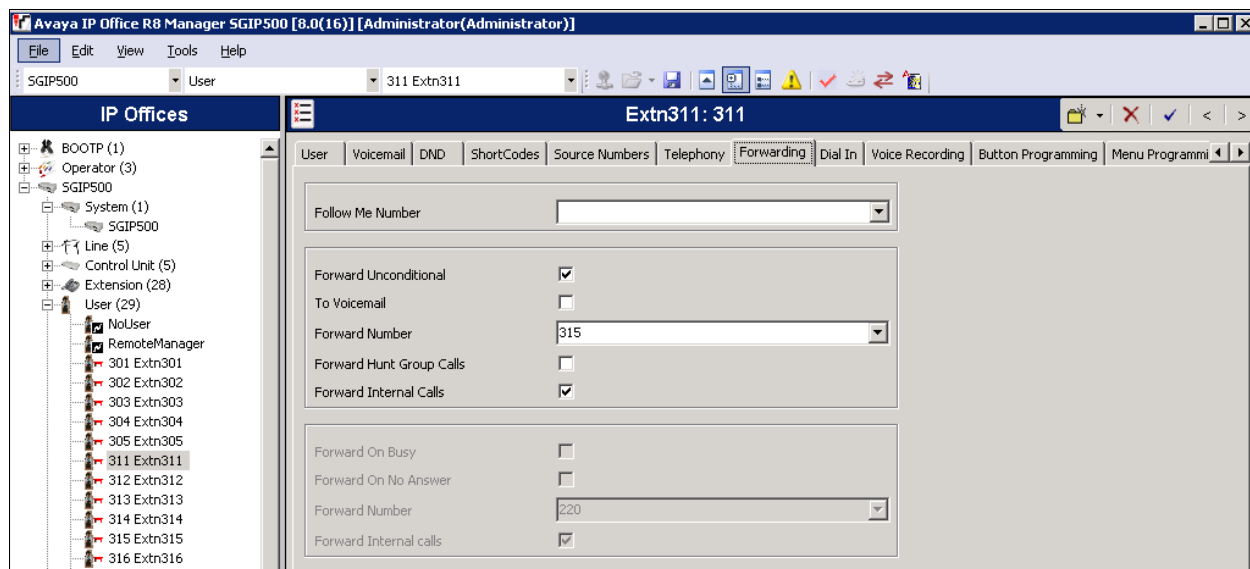


5.5.2. Administer Secondary SIP Users

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 second Base Extension from **Section 5.4**, in this case “311”.



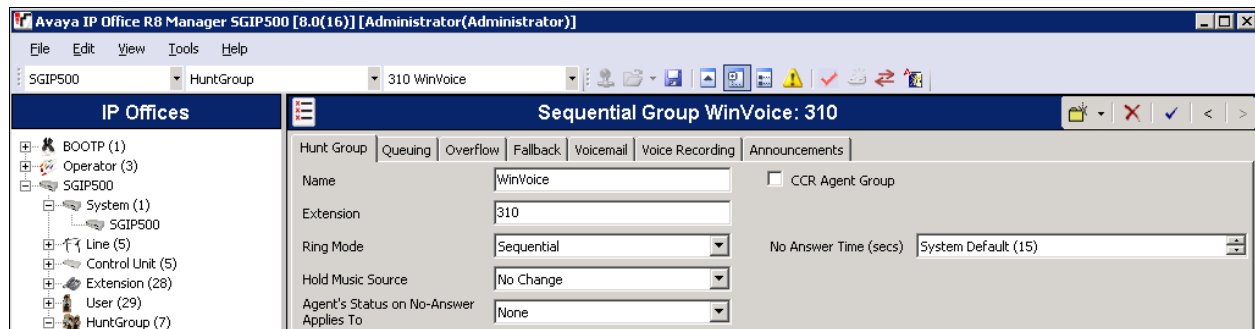
Select the **Forwarding** tab. Check **Forward Unconditional** and set the **Forward Number** to the primary SIP User, in this case “315”, as shown below. Check **Forward Internal Calls**.



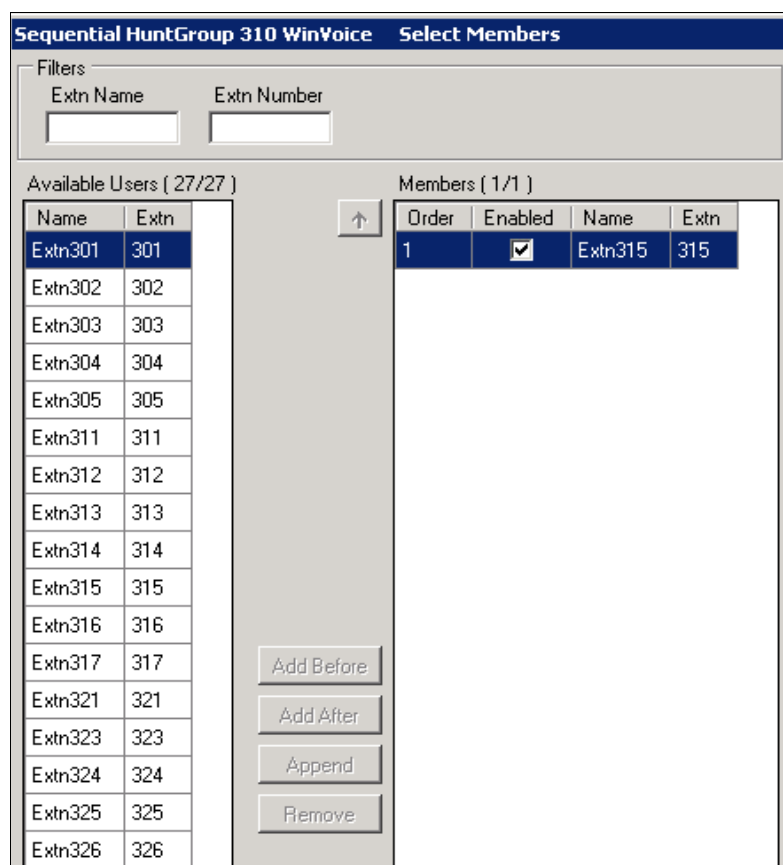
Repeat this section to add another two SIP Users associated with the last two SIP Extensions from **Section 5.4**. In the compliance testing, SIP Users with names of “Extn315”, “Extn311”, “Extn312” and “Extn313” were created.

5.6. Administer Hospitality Hunt Group

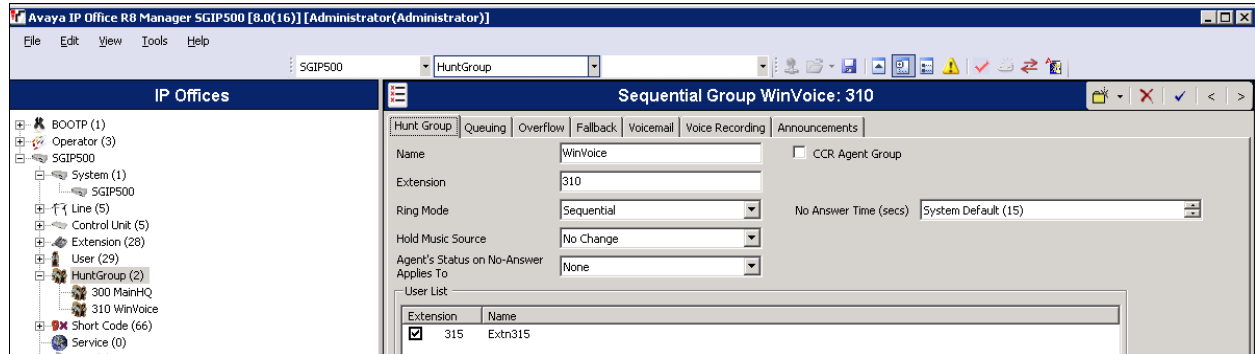
From the configuration tree in the left pane, right-click on **HuntGroup** and select **New** from the pop-up list to add a new hunt group. This hunt group will be used to deliver calls to WinExpress for the hospitality features. Enter desired values for the **Name** and **Extension** fields, and retain the default values in the remaining fields. Click on **Edit** in the **User List** section to add members.



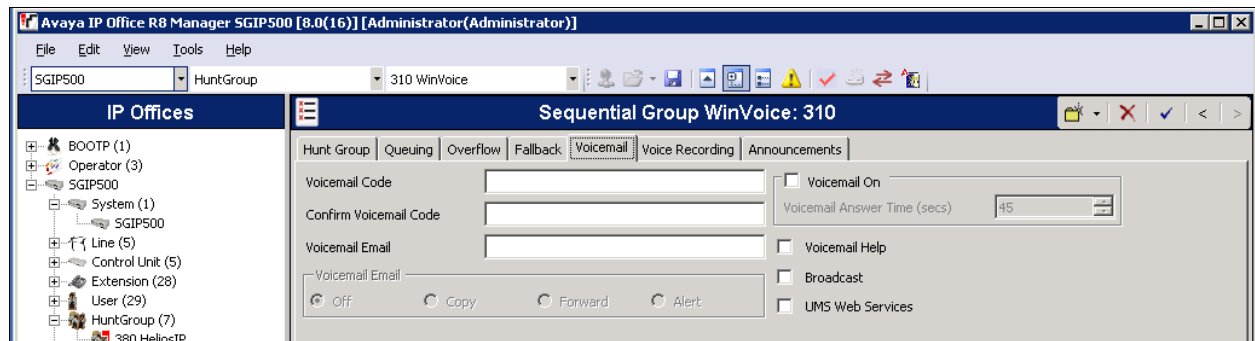
The **Select Members** screen is displayed. Select the SIP user from **Section 5.5**, and click the **Append** button to move the selected entries to the right.



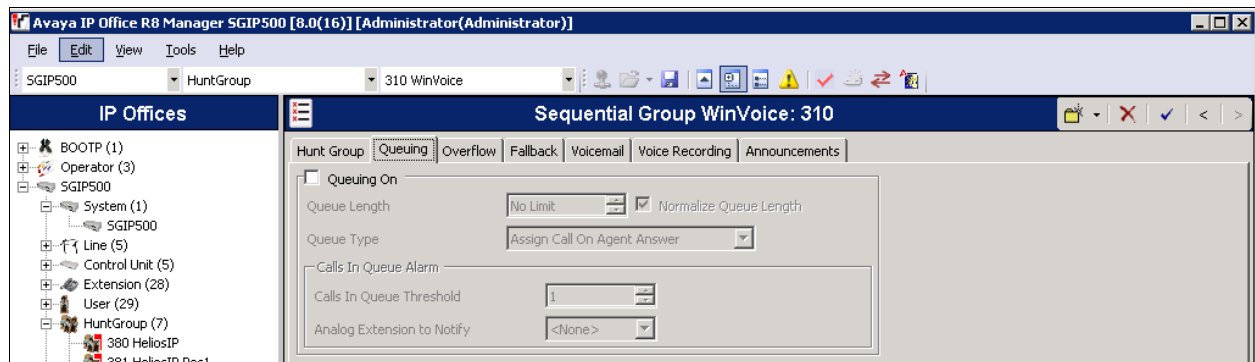
The **Sequential Group** screen is displayed again and updated with the selected member.



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



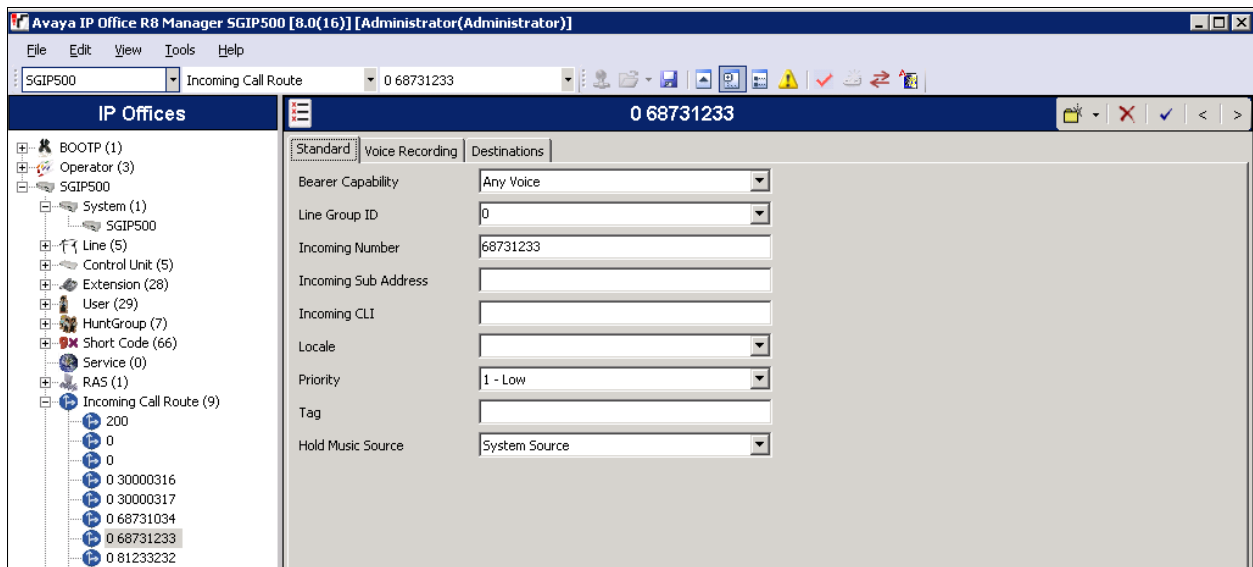
Select the **Queuing** tab, and uncheck **Queuing On**, as shown below.



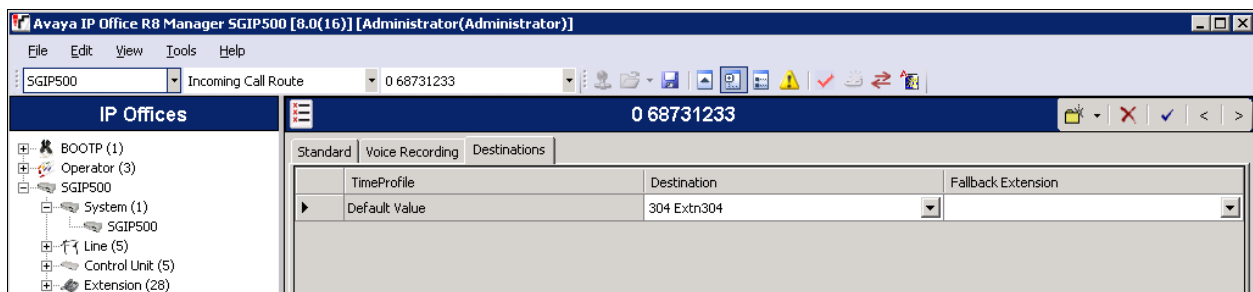
5.7. Administer Incoming Call Route

If necessary, create an incoming call route to route incoming calls to the desired phones. In the compliance testing, an incoming call route was created to route incoming calls for the ISDN PRI line, to the front office phone.

As shown in the screen below, the **Incoming Number** for the ISDN PRI line “0” is “68731233”.



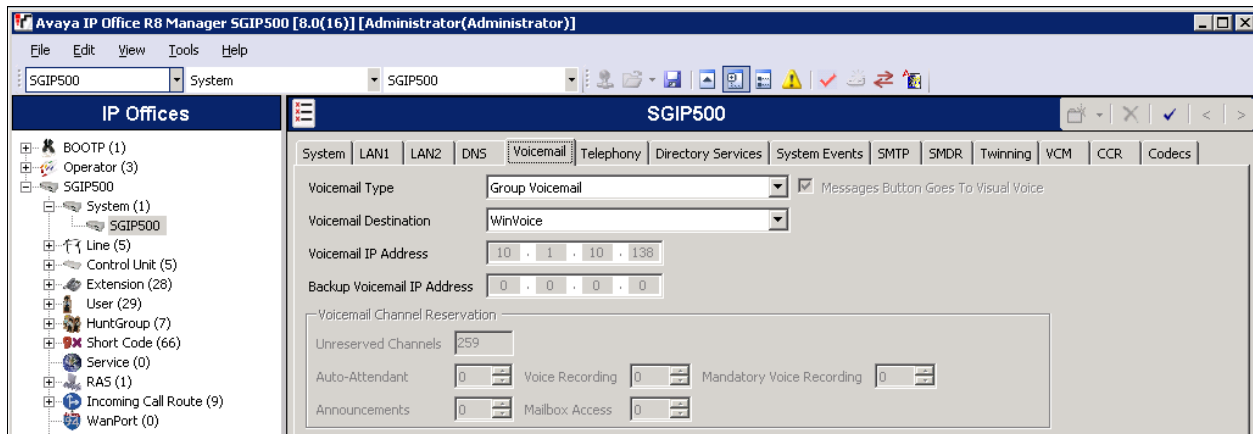
In the **Destinations** tab, select the front office phone extension from the **Destination** drop-down menu to route all incoming trunk calls to it. In the compliance testing, Extension “304” was used, as shown below.



5.8. Administer System Voicemail

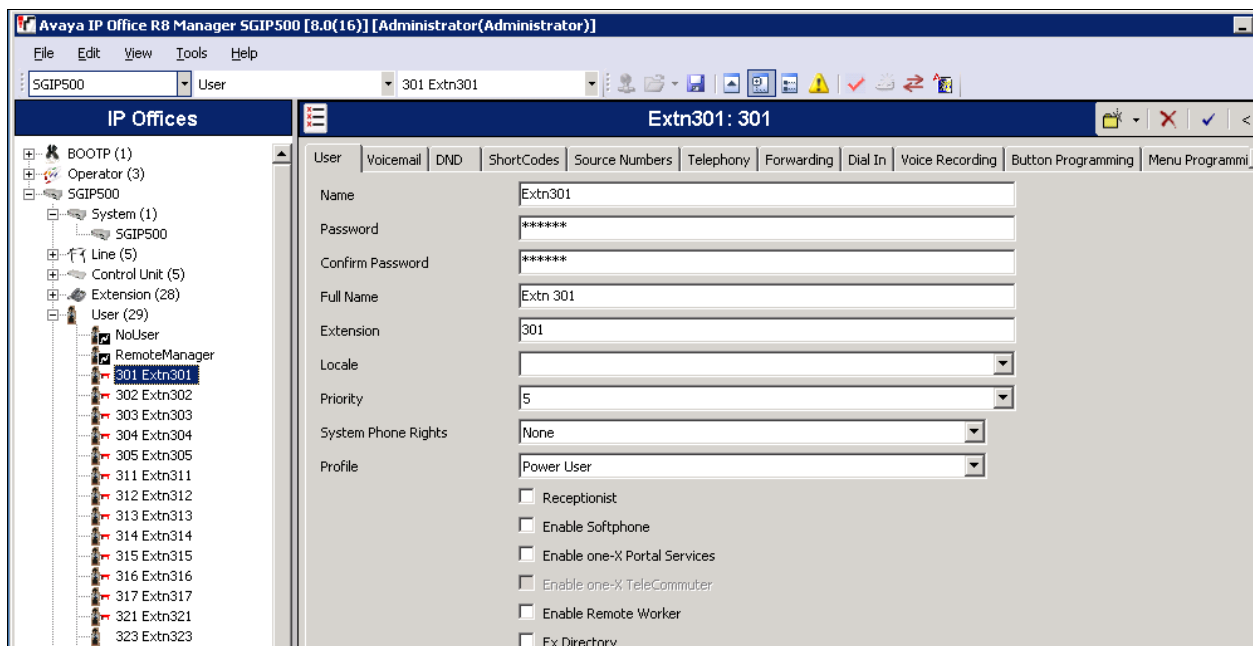
From the configuration tree in the left pane, select **System** → **SGIP500** to display the **SGIP500** screen in the right pane. Select the **Voicemail** tab in the right pane.

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**.

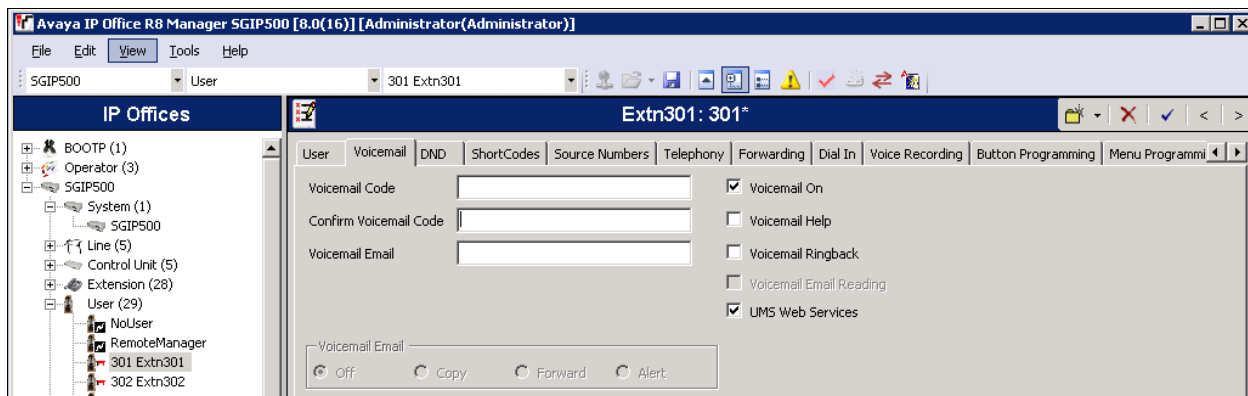


5.9. Administer Voicemail Users

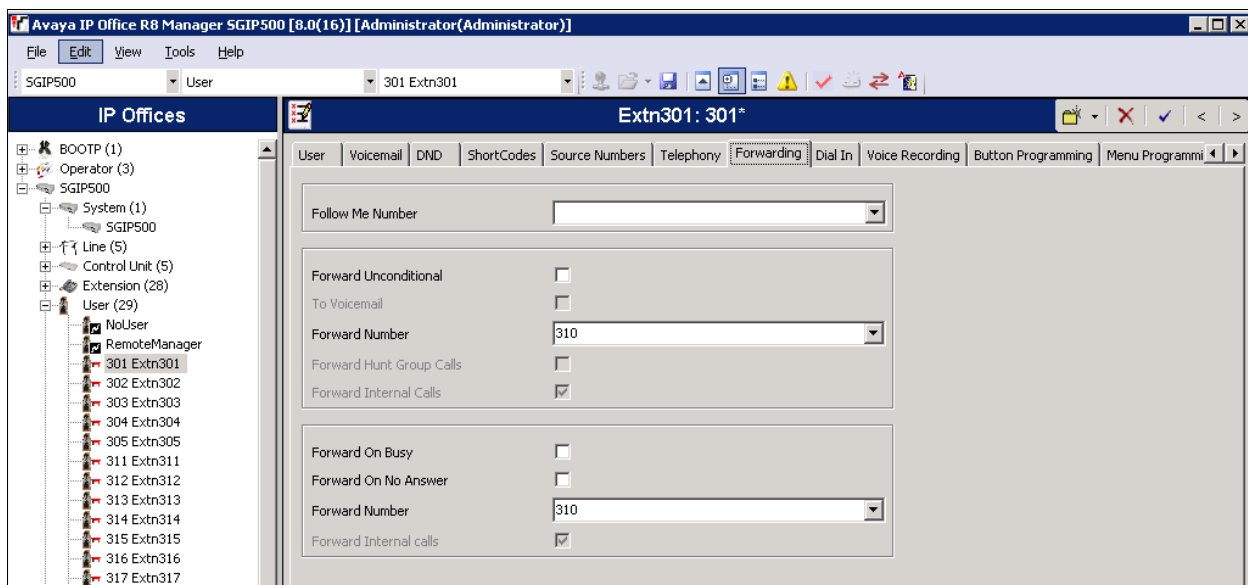
From the configuration tree in the left pane, select the first user that will be using WinExpress for voicemail. In this case, the user is “301”. Enter a descriptive **Name**. Leave the **Full Name** blank as it will be used by WinExpress to update the guest name.



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.

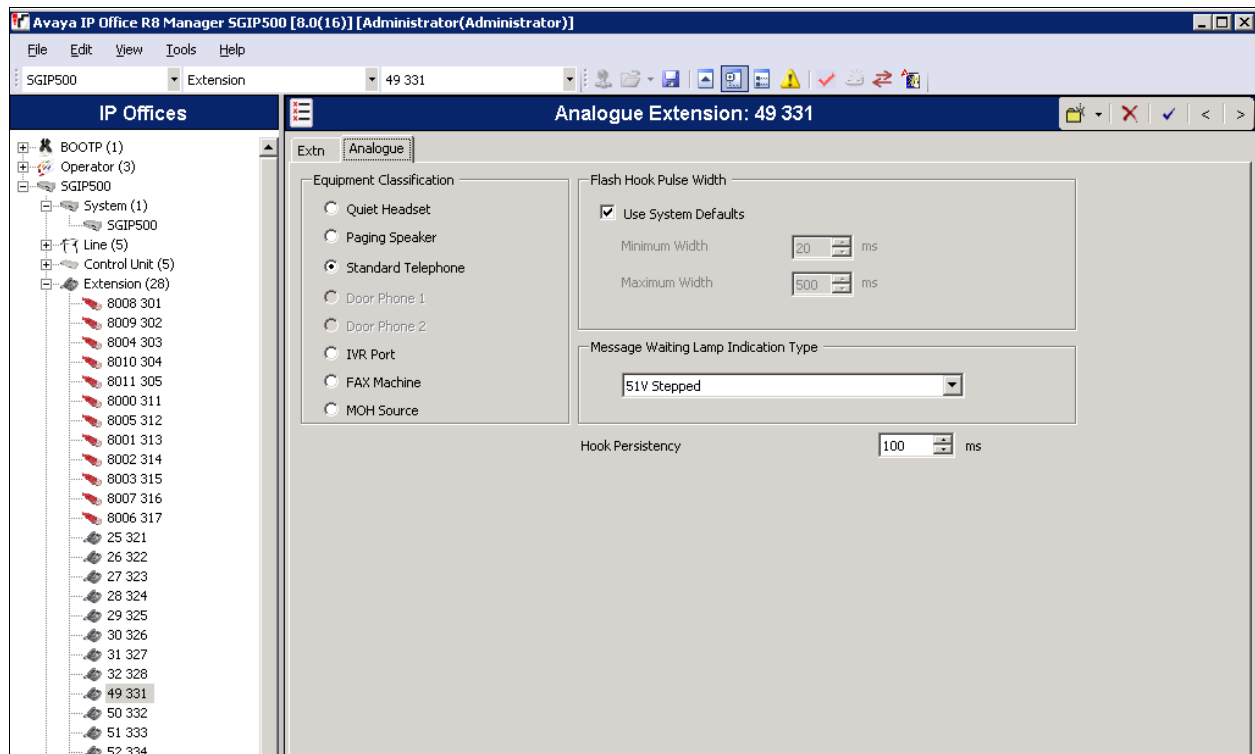


Repeat this section for all users using WinExpress for voicemail, including all guest rooms, front desk, and staff. In the compliance testing, the voicemail users consisted of one front desk with extension “304” and four guest rooms with extensions “301, 302, 321 and 331”, as shown in **Figure 1**.

5.10. Administer Analog User MWI

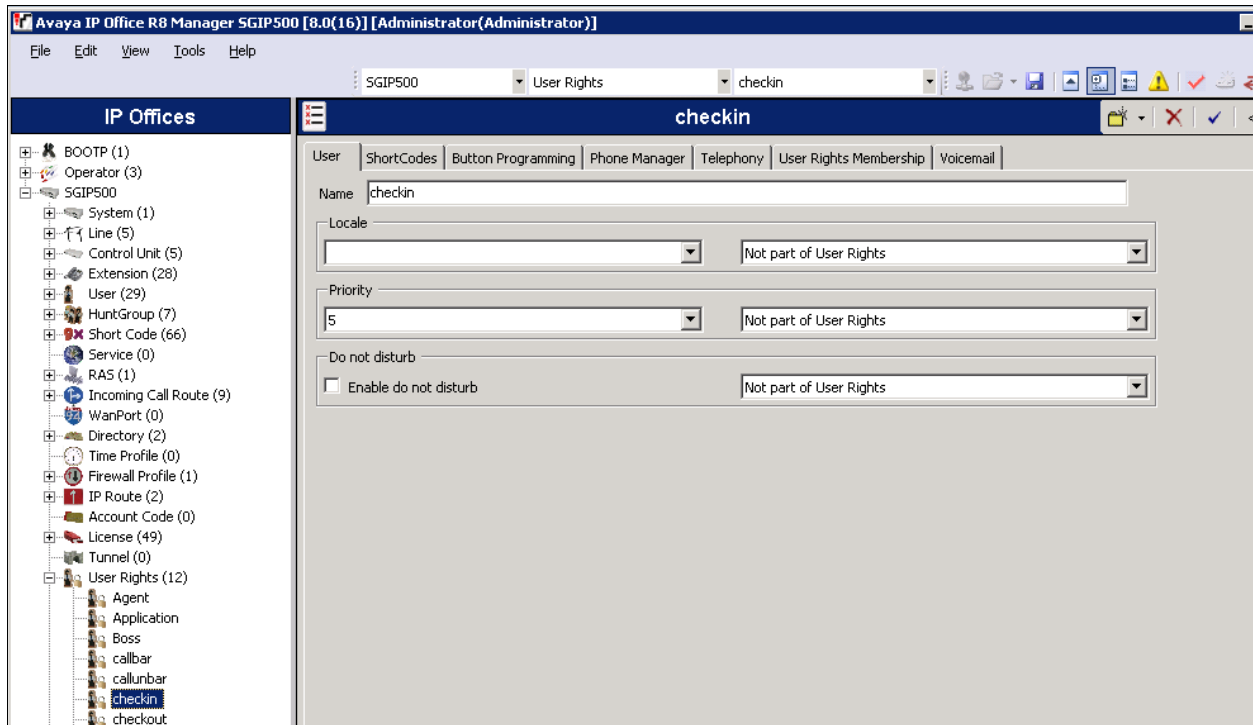
For voicemail users with analog telephones, the MWI setting on the analog extension may need modification, depending on the type of analog telephone. Please refer to **Section 9** of these Application Notes for information on the specific analog telephone types requiring the MWI setting.

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 “331”. In the **Message Waiting Lamp Indication Type** section, “51V Stepped” was selected from the drop-down list, as shown below.

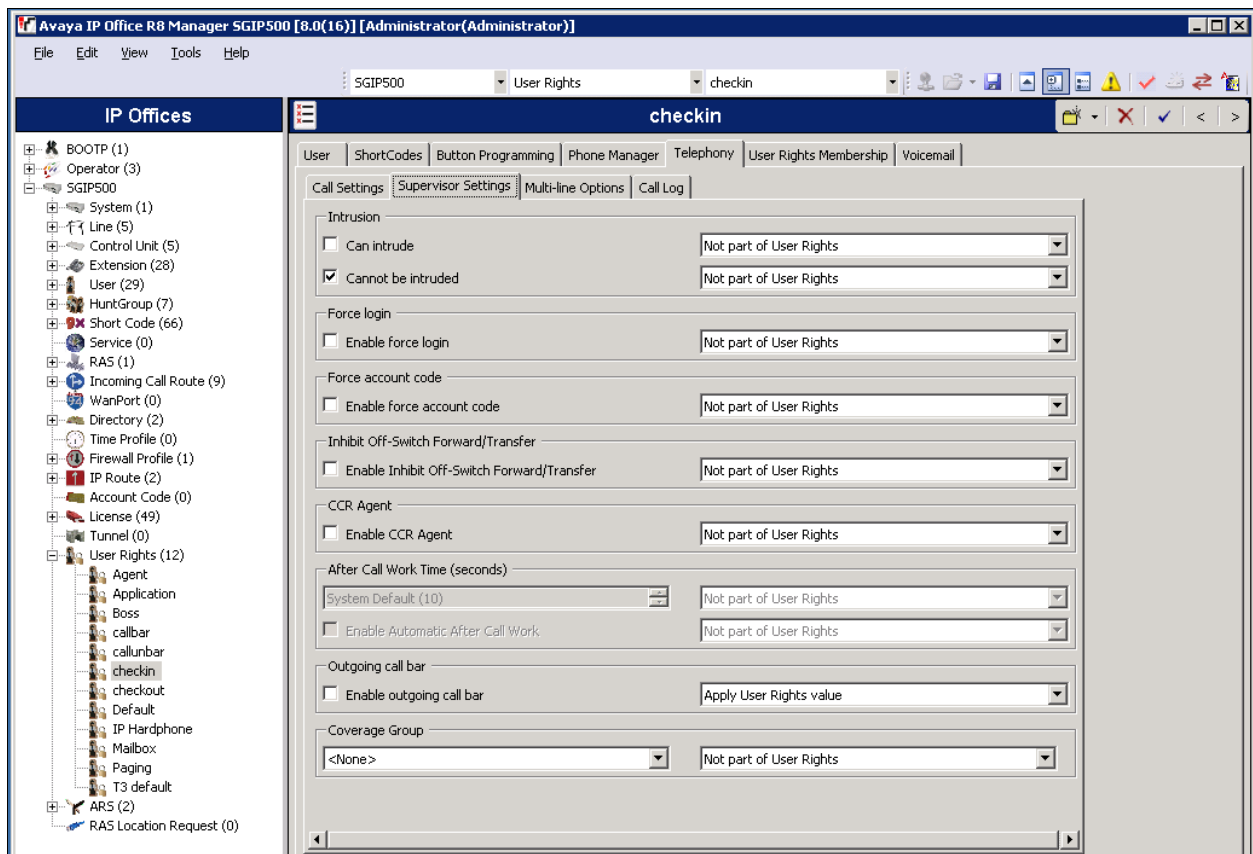


5.11. Administer User Rights

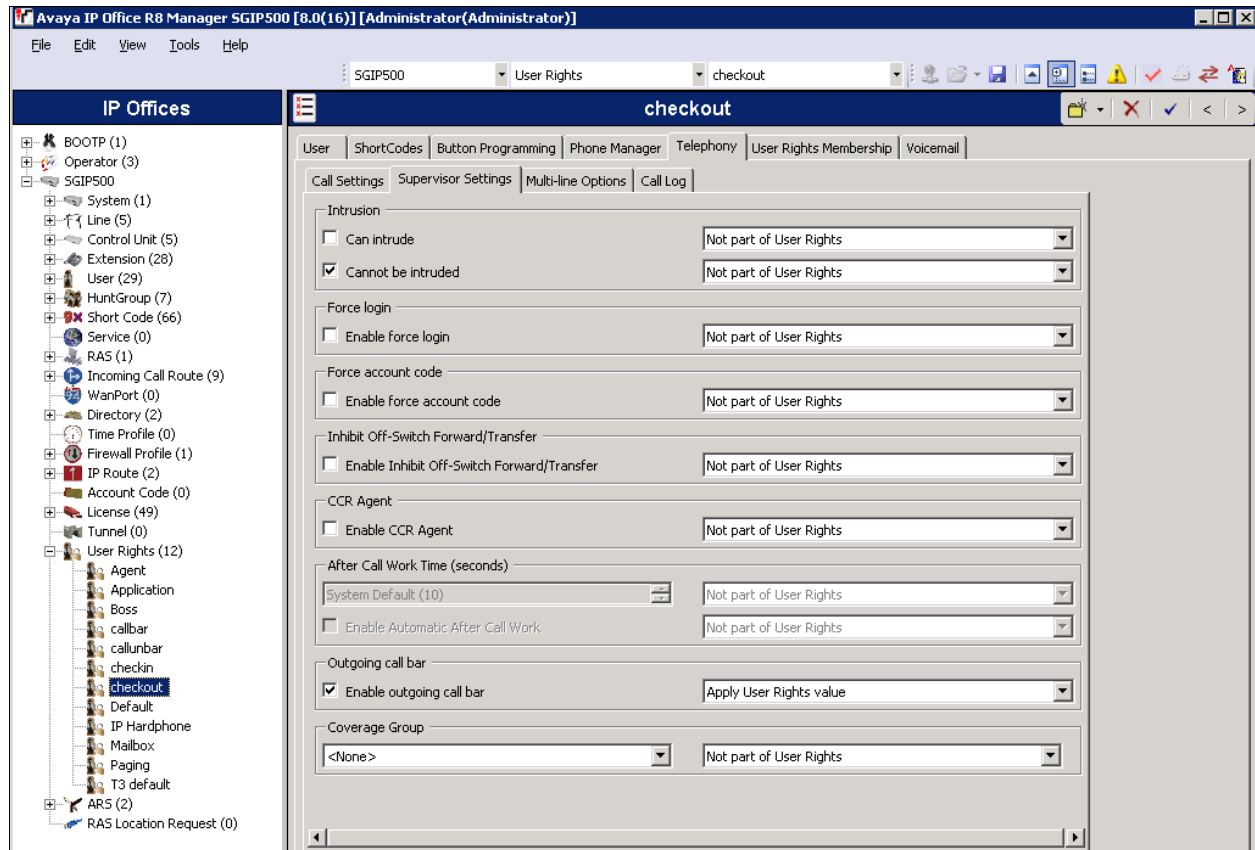
From the configuration tree in the left pane, right-click on **User Rights** and select **New** to create a new user rights template. Enter a desired **Name** to designate user rights for guests in the check-in state. In the compliance testing, the name was set to “checkin” as shown below.



Select the **Telephony** tab and then the **Supervisor Settings** sub-tab. Uncheck **Enable outgoing call bar** field towards the bottom, and select “Apply User Rights Value” from the corresponding drop-down box, as shown below.



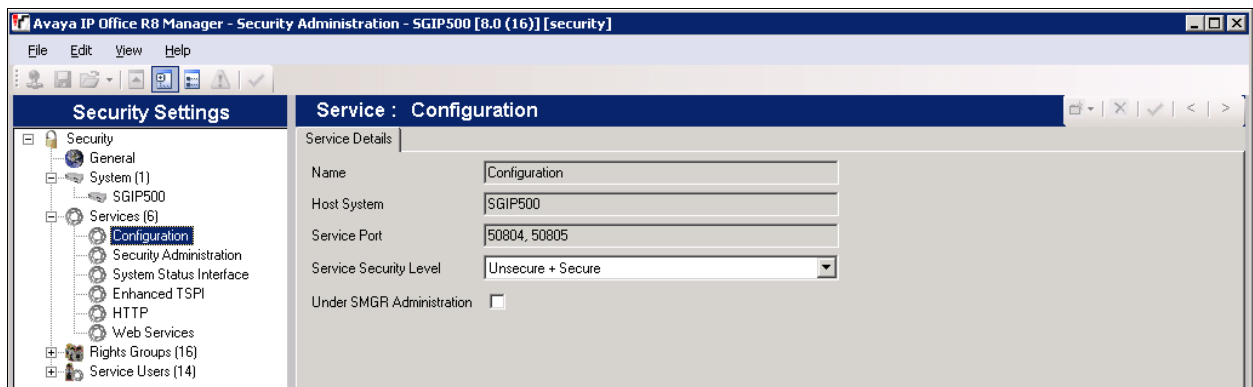
Repeat this section to create the desired number of user rights templates for guests in various states. In the compliance testing, four user rights templates with names of “checkout”, “checkin”, “callbar” and “callunbar” were created, as shown below in the left pane. In this compliance testing, the **Enable outgoing call bar** field was checked for the user rights “checkout” and “callbar” to prevent the guest room phone from making calls to the PSTN when either of these user rights is applied.



5.12. Administer Security Service

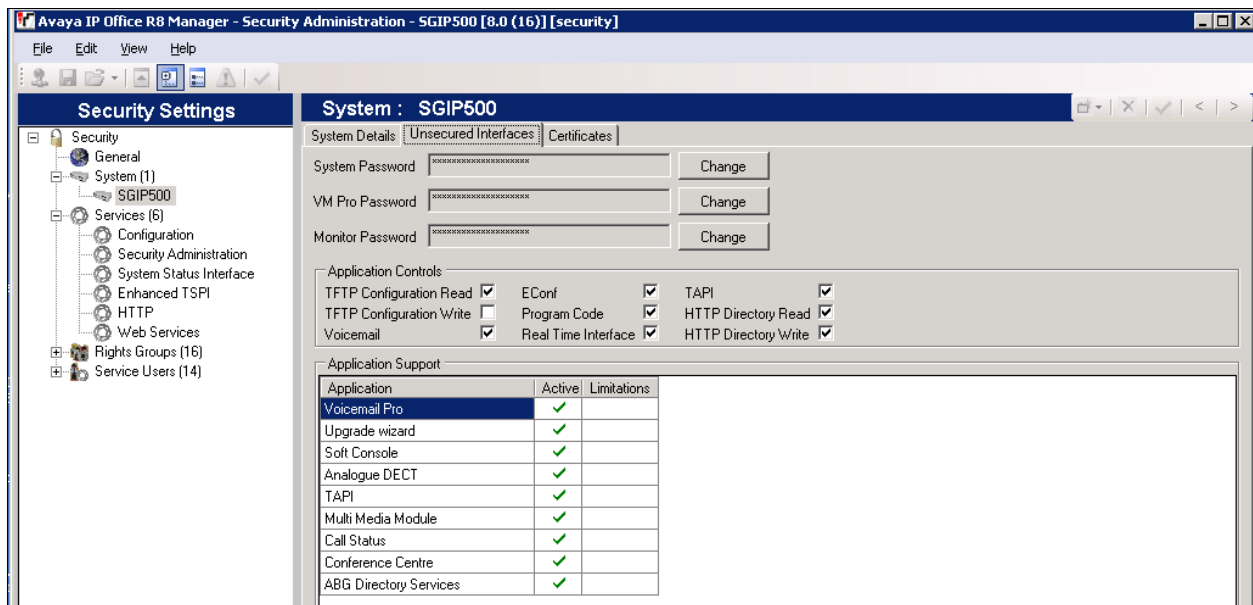
From the **Avaya IP Office R8.0 Manager** screen, select **File → Advanced → Security Settings** from the top menu. Select the proper IP Office system, and log in with the appropriate security user credentials.

The **Avaya IP Office R8.0 Manager – Security Administration** screen is displayed. From the configuration tree in the left pane, select **Security → Services → Configuration** to display the **Service : Configuration** screen in the right pane. For **Service Security Level**, select “Unsecure + Secure” as shown below. In this compliance testing, WinExpress used the “Unsecure” level for the Configuration Web Service interface.



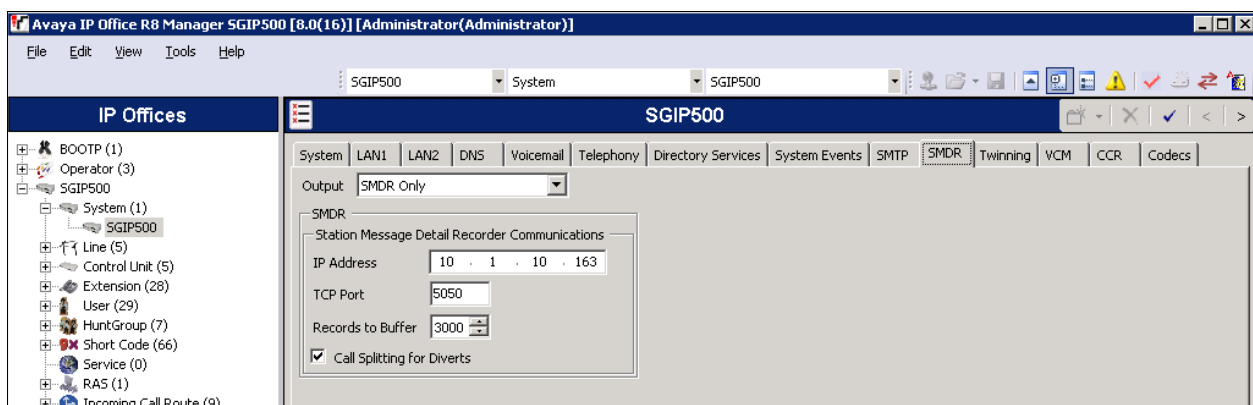
5.13. Administer System Password

From the **Avaya IP Office R8 Manager – Security Administration** screen, select **Security** → **System** from the configuration tree in the left pane to display the **System: SGIP500** screen in the right pane. In the **Unsecured Interfaces** tab, click the **Change** button next to the **System Password** to configure the IP Office System Password. The System Password is used in **Section 6.1** to configure the TAPI Driver.



5.14. Administer SMDR

From the configuration tree in the left pane, select **System** to display the **SGIP500** screen in the right pane, then select the **SMDR** tab. For the Output field, select “SMDR Only” from the drop-down box. Set **IP Address** to the WinExpress Call Billing server IP address, and set the **TCP Port** to “5050”. Optionally, you can increase the **Records to Buffer** field to “3000” and check **Call Splitting for Diverts**.



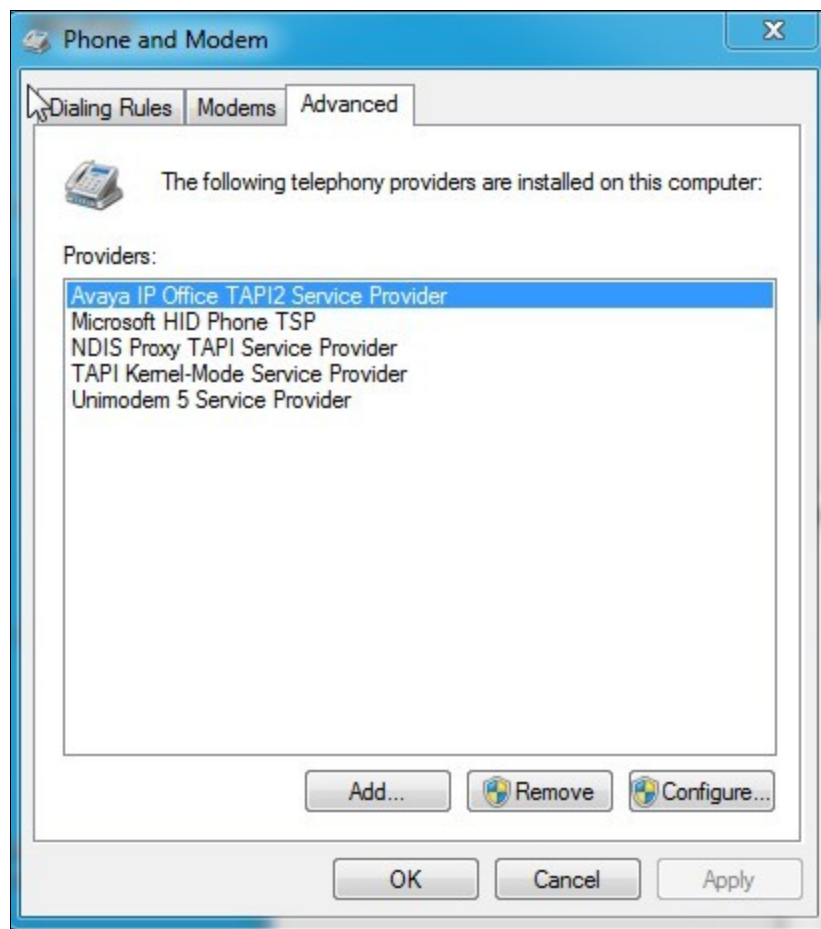
6. Configure FCS WinExpress

This section provides the procedures for configuring FCS WinExpress. The procedures include the following

- Administer TAPI driver
- Obtaining IP Office Configuration Web Service SDK
- Configuring WinExpress Call Billing for Avaya IP Office
- INI Configuration for FCS WinExpress Call Billing Interface
- FCS WinExpress Voicemail Engine Configuration
- FCS WinExpress Voicemail Web Configuration

6.1. Administer TAPI Driver

From the FCS WinExpress Call Billing server as shown in **Figure 1**, 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 **System Password** configured in **Section 5.13** into the **Switch Password** field. Reboot the WinExpress server.

The image shows a Windows-style dialog box titled "Avaya TAPI2 configuration". It has a standard Windows window frame with a title bar, a close button (X), and a maximize button. The dialog contains several input fields and radio buttons. At the top, there is a "Switch IP Address" field with the value "10.1.30.10". Below this are two radio buttons: "Single User" (which is selected) and "Third Party". Under the "Single User" section, there are "User Name" and "User Password" fields. The "User Name" field contains the text "administrator", and the "User Password" field contains a series of asterisks. Under the "Third Party" section, there is a "Switch Password" field and three checkboxes: "Ex Directory Users", "WAV Users", and "ACD Queues". At the bottom right of the dialog are "OK" and "Cancel" buttons.

6.2. Obtaining Avaya IP Office Configuration Web Service SDK

Avaya provides the IP Office Configuration Web Service SDK for DevConnect members to incorporate IP Office configuration changes in their solutions. The Configuration Web Service SDK must match the release of the IP Office that is deployed, in this case Release 8.0. To obtain the IP Office Configuration Web Service SDK, browse to <https://devconnect.avaya.com/> using a web browser and login using a valid DevConnect member account. Then click **Products & SDKs → IP Office → IP Office Release 8.0 Contents** to locate and download the Configuration Web Service SDK. FCS implementation engineer will then deploy the files from the Configuration Web Service SDK onto the WinExpress server.

6.3. Configuring WinExpress Call Billing for Avaya IP Office

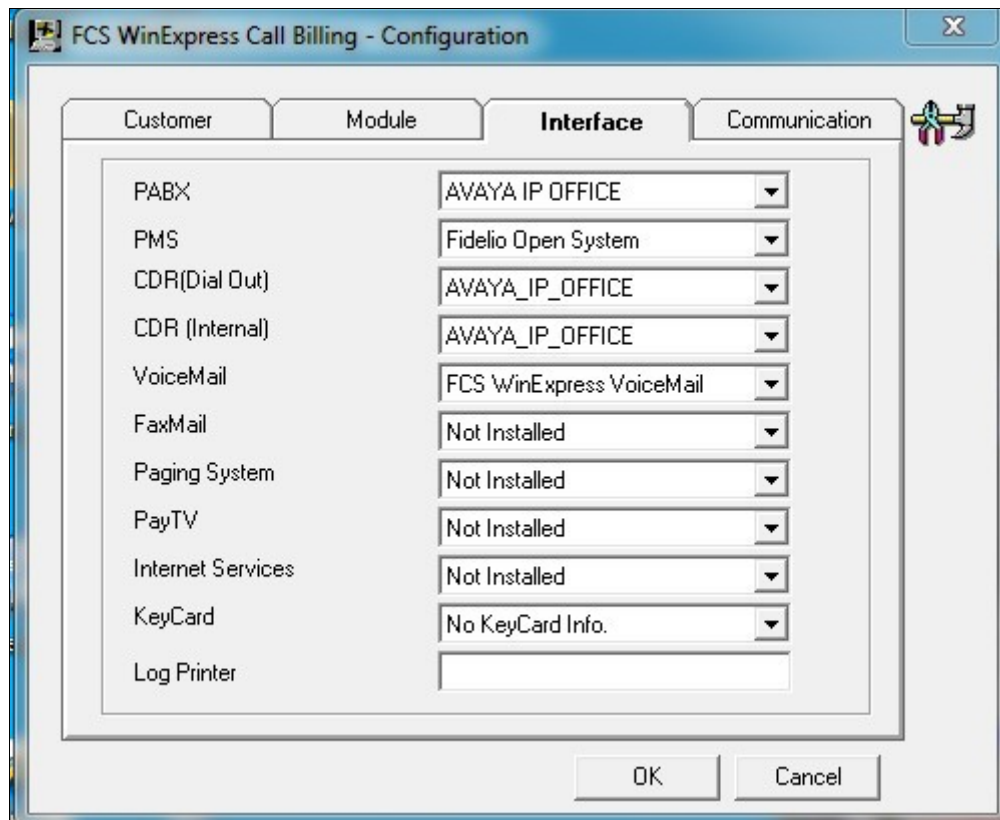
Open the FCS WinExpress Call Billing Configuration, as shown below. Click the System icon.



The System menu is presented, as shown below. Click on **Configuration** to enter into the FCS WinExpress Call Billing – Configuration window.

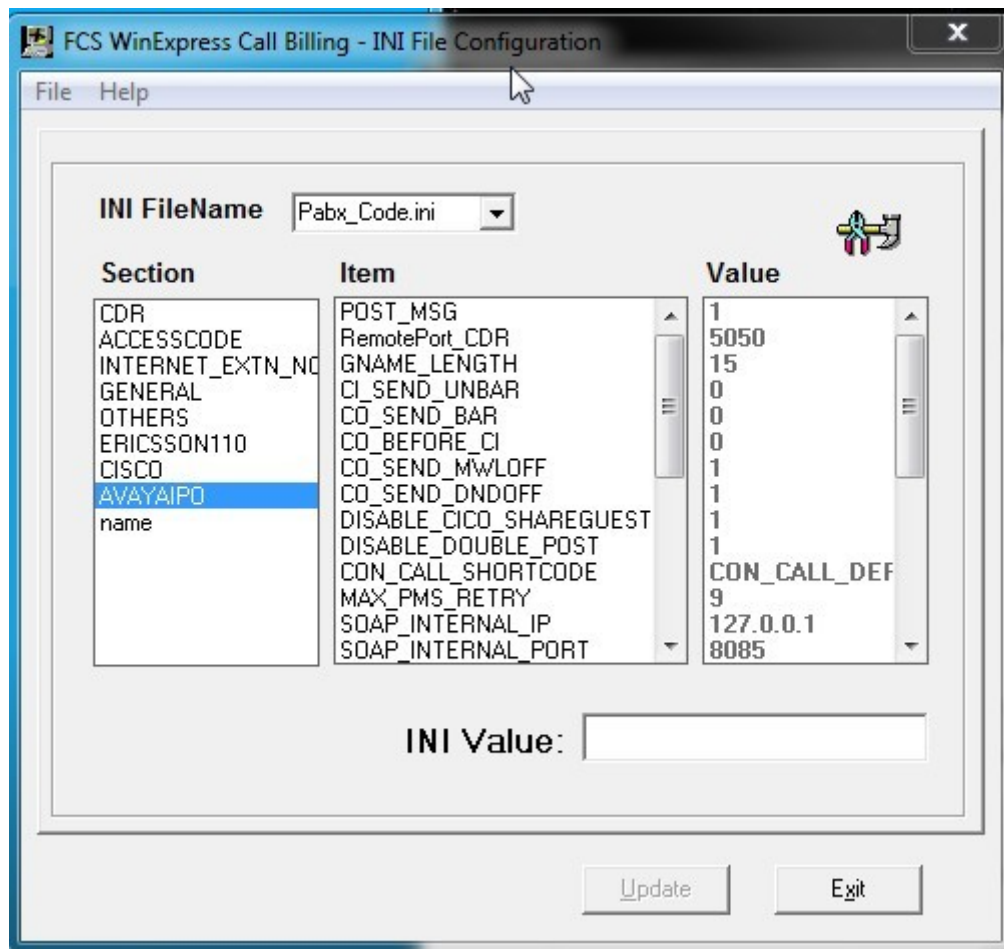


Under **Interface** tab, select “AVAYA_IPOFFICE” for **PABX** interface. Click **OK** to save the configured interface.



6.4. INI Configuration for WinExpress Call Billing Interface

Click on the **System** icon from the FCS WinExpress Call Billing Configuration screen, and in the subsequent “System” window, select **INI Config** (not shown below). The FCS WinExpress Call Billing – INI File Configuration screen is presented, as shown below.



In the FCS WinExpress Call Billing – INI File Configuration window, select “Pabx_Code.ini” from the **INI FileName** drop-down field, then select “AVAYAIPD” in the Section column. Select, in turn, the appropriate INI entries in the Item column, and set the values used for the corresponding service. The rest are leave as default. After entering each value, click **Update**.

The significant INI entries are explained as below:

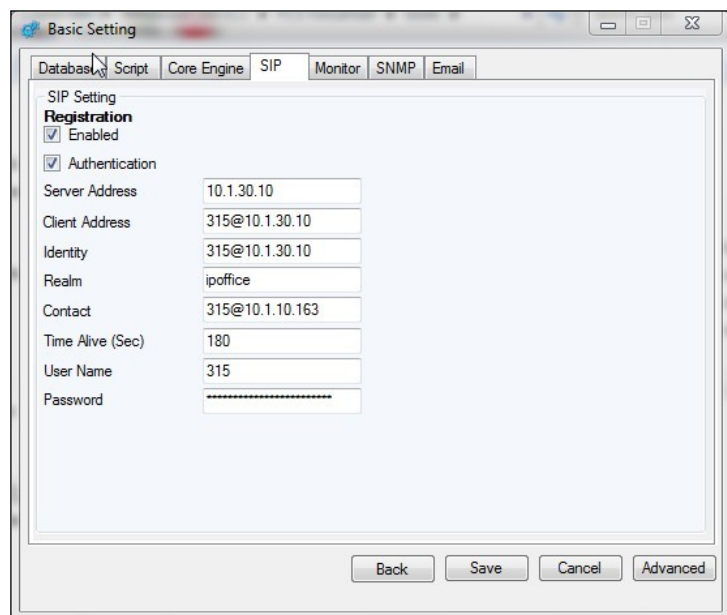
INI Entries	Functionalities
RemotePort_CDR	Open port for Avaya IP Office server to connect and send CDR to FCS WinExpress Call Billing. This is set to “5050” for testing.
CI_SEND_UNBAR	To send phone unbar upon check in. (1-Activate / 0-Deactivate).
CO_SEND_BAR	To send phone bar upon check out. (1-Activate / 0-Deactivate).
CO_SEND_MWLOFF	To send Message Lamp off upon check out. (1-Activate / 0-Deactivate).
CO_SEND_DNDOFF	To send DND off upon check out. (1-Activate / 0-Deactivate).
SOAP_INTERNAL_IP	IP address of the service host.
SOAP_INTERNAL_PORT	Port number of the service host for FCS to connect to.
AVAYA_IP	Avaya IP Office’s server IP address.
AVAYA_IP_PORT	Avaya IP Office’s server port.
AVAYA_ACCOUNT	Avaya IP Office account.
AVAYA_PASSWORD	Avaya IP Office password.
BAR_PROFILE	Profile for phone bar, corresponding to the profile configured in Avaya IP Office.
UNBAR_PROFILE	Profile for phone unbar, corresponding to the profile configured in Avaya IP Office.
GUEST_PROFILE	Profile for normal guest check-in, corresponding to the profile configured in Avaya IP Office.
VIP_PROFILE	Profile for VIP guest check-in, corresponding to the profile configured in Avaya IP Office.
CHECKOUT_PROFILE	Profile for guest check-out, corresponding to the profile configured in Avaya IP Office.

6.5. FCS WinExpress Voicemail Engine Configuration

From the WinExpress Voice server in **Figure 1**, open the file **BlueOcean_Wolphin.cfg** located in the Config folder using a text editor. Configure the following settings:

Field	Values
Configuration name	SIPRegistration
SIPRegister value	Set to “1” to enable registration.
SIPAuthentication value	Set to “1” to enable authentication.
SIPServerAddr	IP Address of the Avaya IP Office, in this case is “10.1.30.10”.
SIPClientAddr	Set to the SIP URL for WinExpress Voice, in this case “315@10.1.30.10”.
SIPIdentity	Set to the SIP Identity for WinExpress Voice, in this case “sip:315@10.1.30.10”.
SIPRealm	Default Value - ipoffice
SIPContact	Set to the SIP Contact for WinExpress Voice, in this case “sip:315@10.1.10.137:5060”.
SIPTimeAliveSec	Sets the SIP Registration Expiry time, which is “30” for this testing.
SIPUsername	The Primary SIP Users configured in Section 5.5.1 , in this case is “315”.
SIPPassword	The Login Code for the Primary SIP Users configured in Section 5.5.1 . Administration of Primary SIP User setup is done from the VoiceGUI.exe in the c:\FCS Voicemail\tools directory as shown below.

Administration of SIP User setup is done from the VoiceGUI.exe in the c:\FCS Voicemail\tools directory as shown below.



A sample configuration for WinExpress Voice is provided below.

```
<Monitor>
  <UdpClient1 value="127.0.0.1@18888" update="Live" eg="IPAddress@PortNo" />
  <UdpClient2 value="" update="Live" eg="IPAddress@PortNo" />
  <UdpClient3 value="" update="Live" eg="IPAddress@PortNo" />
</Monitor>
<SIPRegister>
  <SIPRegister value="1" update="Restart" />
  <SIPAuthentication value="1" update="Restart" />
  <SIPServerAddr value="10.1.30.10" update="Restart" eg="Server_IPAddress" />
  <SIPClientAddr value="315@10.1.30.10" update="Restart" eg="Extension@Server_IPAddress" />
  <SIPIdentity value="315@10.1.30.10" update="Restart" eg="Extension@Server_IPAddress" />
  <SIPRealm value="ipoffice" update="Restart" />
  <SIPContact value="315@10.1.10.163" update="Restart" eg="Extension@Local_IPAddress[:PortNo]" />
  <SIPTimeAliveSec value="180" update="Restart" />
  <SIPUsername value="315" update="Restart" />
  <SIPPassword value="E10vnOM4jCkxrbb6znNi1Q==" cipher="true" update="Restart" />
</SIPRegister>
```


6.6. FCS WinExpress Voicemail Web Configuration

To log into the FCS WinExpress Voicemail System launch Microsoft Internet Explorer and type in the FCS Voicemail Web Configuration URL, in this case

<http://10.1.10.137/voicemailwebui/Password.aspx>. At the login screen (not shown), log in using an account with administrative privileges to display the main menu as shown below.



6.7. Entry Points

From the main menu, click **System Configuration** followed by **Entry Point** (not shown). The following screen will display at the right-side of the menu. Configure the Entry Points as shown below to correspond to the SIP Extensions created on Avaya IP Office in **Section 5.4**. However, there is no need for extension 315 which is the actual extension for receiving calls to be set as an entry point.

The screenshot shows the FCS WinExpress v2 web interface in a Windows Internet Explorer browser. The address bar shows <http://localhost/voicemailwebui/EntryPoint.aspx>. The browser's Favorites bar includes links to FCS WinExpress v2, Lenovo laptops - ThinkPa..., and others. A yellow warning banner at the top states: "Intranet settings are now turned off by default. Intranet settings are less secure than Internet settings. Click for options...".

The main navigation bar includes links for Home, System Configuration, Hotel Operation, Administration, and Reports. A user greeting "Welcome, superadmin" is displayed with links for Change Password and Logout.

The left sidebar shows the "System Configuration" menu with sub-items: Hardware Setting, Channels, Entry Point, Others, TCP Setting, Log Printer Setting, System Setting, General Setting, AWU Setting, and Minibar Setting.

The main content area is titled "Entry Point" and contains a red warning message: "Please restart FCS WinExpress v2 system for the configuration to take effect." Below this is the "Line Type Setting" section, which includes a "CPI Description" field with a value of "X = Ignore any character , M and N = For CPI", a "CPI Format" field, and a "Description" dropdown menu set to "BUSY". An "Add" button is located below these fields.

A table displays the current entry points:

	Entry Point	CPI Format	Description
Delete Edit	1	311	MINIBAR
Delete Edit	2	312	ROOM STATUS
Delete Edit	3	313	SETAWU

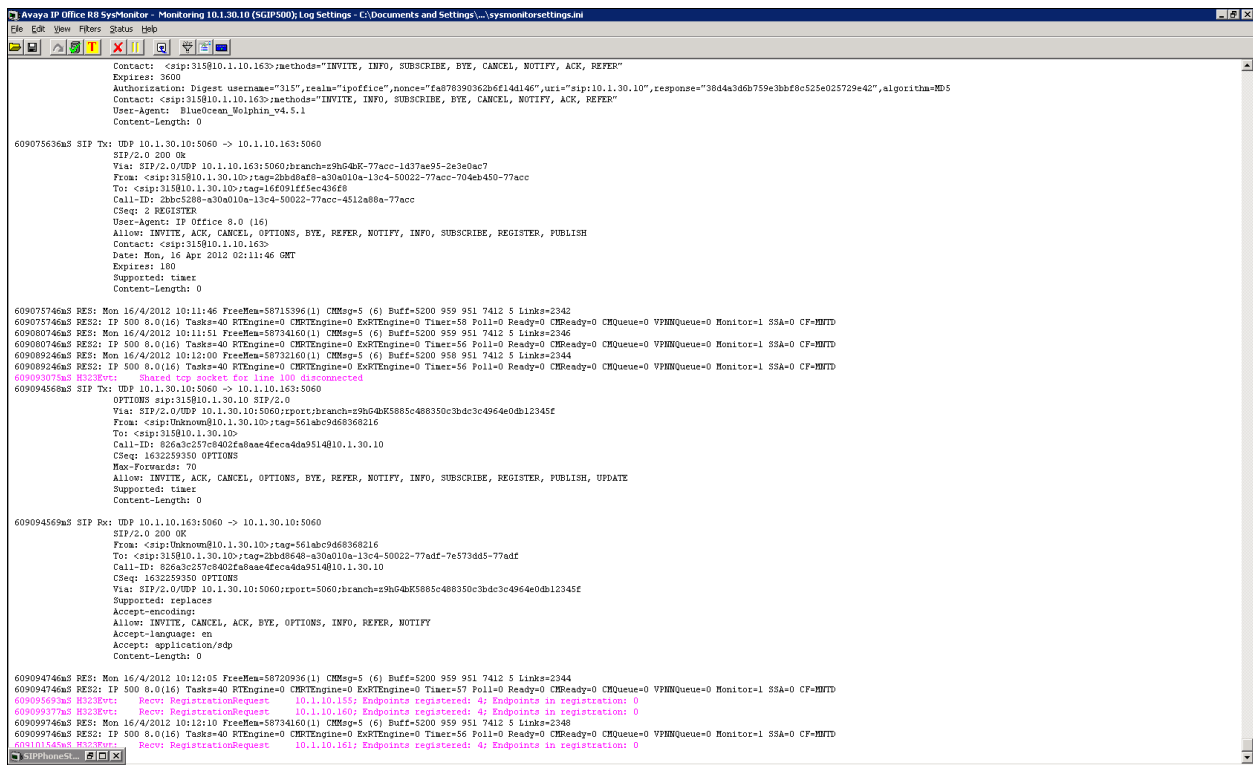
The bottom status bar shows the date and time as "04/18/2012 4:45 PM" and the security status as "Internet | Protected Mode: On".

7. Verification Steps

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

7.1. 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 R8 SysMonitor** screen is displayed, as shown below. Select **Status → SIP Phone Status** from the top menu.



The screenshot shows the Avaya IP Office R8 SysMonitor application window. The title bar reads "Avaya IP Office R8 SysMonitor - Monitoring 10.1.30.10 (SIP500) [Log Settings - C:\Documents and Settings\...\sysmonitorsettings.ini]". The menu bar includes File, Edit, View, Filters, Status, Help. The main display area shows a log of SIP messages. The messages include headers like Contact, Expires, Authorization, Digest, User-Agent, and Content-Length. The log shows various SIP transactions, including INVITE, REGISTER, and OPTIONS, with details about the SIP endpoints and the status of the transactions. The log is filtered to show messages from 10.1.30.10 to 10.1.30.10. The log shows a series of messages, including a 200 OK response, a 404 Not Found response, and a 400 Bad Request response. The log also shows a 200 OK response for a REGISTER message. The log is filtered to show messages from 10.1.30.10 to 10.1.30.10. The log shows a series of messages, including a 200 OK response, a 404 Not Found response, and a 400 Bad Request response. The log also shows a 200 OK response for a REGISTER message.

SIPPhoneStatus

Total Configured: 8

Total Registered: 1

Registered Status: ■■■

Waiting 2 secs for update

Extn Num	IP Address	Transport	User Agent	SIP Options	SIP Events	Status	LastAv...	LastIP...
311	0.0.0.0		UA?			SIP: Unregistered		
313	0.0.0.0		UA?			SIP: Unregistered		
314	0.0.0.0		UA?			SIP: Unregistered		
315	10.1.10.163	UDP	BlueOcean_Wolphin_v4.5.1	R		SIP: Registered		4/12/2...
303	0.0.0.0		UA?			SIP: Unregistered		
312	0.0.0.0		UA?			SIP: Unregistered		
317	0.0.0.0		UA?			SIP: Unregistered		
316	0.0.0.0		UA?			SIP: Unregistered		

Display Options: ☒ Show All ☐ Registered ☐ UnRegistered

Print Reset Phones Cancel

Place a call to a guest room and leave a voice message. Verify that the MWI is turned on for the guest room. Place a call from the guest room to the WinExpress voicemail pilot number. Verify that WinExpress recognizes the calling party as a voicemail user. Verify that the voice message can be retrieved, and that the MWI is turned off.

Use the PMS simulator to perform a guest check-in request. Verify that the guest name, and user rights template, is updated correctly on Avaya IP Office as part of the check-in process.

8. Conclusion

These Application Notes describe the configuration steps required for FCS WinExpress R2.0 to successfully interoperate with Avaya IP Office R8.0. All feature and serviceability test cases were completed.

9. Additional References

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

- [1] *IP Office KnowledgeBase 8.0 Documentation CD*, Dec 2011, available at <http://support.avaya.com>
- [2] *FCS WinExpress Voice Configuration Guide*, Version 2.0
- [3] *FCS WinExpress Voice Installation Guide*, Version 2.0
- [4] *FCS WinExpress - Call Billing Configuration Manual*, Version 2.0
- [5] *FCS WinExpress - Call Billing Installation Manual*, Version 2.0

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