



Application Notes for Enghouse Interactive Communications Center 2016R2 with Avaya IP Office Server Edition 10.0 – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for Enghouse Interactive Communications Center 2016R2 to interoperate with Avaya IP Office Server Edition 10.0. Enghouse Interactive Communications Center is a multi-channel and multi-contact solution that can handle voice, fax, web, and email contacts. The compliance testing focused on the voice integration with Avaya IP Office Server Edition using the TAPI and SIP user interfaces.

The Avaya IP Office Server Edition configuration consisted of two Avaya IP Office systems, a primary Linux server at the Main site and an expansion IP500V2 at the Remote site that were connected via Small Community Network trunks. In the compliance testing, two Enghouse Interactive Communications Center servers were deployed, a primary server at the Main site to interface with the primary IP Office system via TAPI and SIP user interfaces, and an expander server at the Remote site to interface with the expansion IP Office system via TAPI only.

Readers should pay attention to **Section 2**, in particular the scope of testing as outlined in **Section 2.1** as well as any observations noted in **Section 2.2**, to ensure that their own use cases are adequately covered by this scope and results.

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 Enghouse Interactive Communications Center (EICC) 2016R2 to interoperate with Avaya IP Office Server Edition 10.0. EICC is a multi-channel and multi-contact solution that can handle voice, fax, web, and email contacts. The compliance testing focused on the voice integration with Avaya IP Office Server Edition using the TAPI and SIP user interfaces.

The Avaya IP Office Server Edition configuration consisted of two Avaya IP Office systems, a primary Linux server at the Main site and an expansion IP500V2 at the Remote site that were connected via Small Community Network trunks. In the compliance testing, two EICC servers were deployed, a primary server at the Main site to interface with the primary IP Office system via TAPI and SIP user interfaces, and an expander server at the Remote site to interface with the expansion IP Office system via TAPI only.

The agents were configured as users on IP Office systems, with ACD functionality provided by EICC. Each EICC server used TAPI 2 in third party mode to monitor agent users on the local IP Office system and provided call control via the Enghouse Interactive Desktop client application. The status of agent users on the expansion IP Office system were relayed by the expander EICC server to the primary EICC server, for tracking of agent availability.

All groups were required by EICC to be configured on the primary IP Office system, and were monitored by the primary EICC server. Upon being notified of an incoming group call via TAPI events, the primary EICC server used TAPI line redirect capability to redirect call to an available agent that can reside on either the Main or Remote site, and populated answering agent's desktop with call related information received via the TAPI interface. Call related actions such as answer and drop can be initiated via the agent desktop, or via the agent telephone. The call related actions from the agent desktops, including park and un-park, were supported by EICC using TAPI line control capabilities. In addition, EICC used TAPI short codes to support forwarding, message waiting indicator (MWI), and supervisor monitor features.

The SIP user interface and the Aculab SIP stack were used by the primary EICC server to support voicemail, announcement, and basic call recording features. Voicemail and announcement calls were redirected to an available virtual SIP user to terminate to EICC, and recording was accomplished by intruding a virtual SIP user onto an active call to pick up the media.

2. General Test Approach and Test Results

The feature test cases were performed both automatically and manually. Upon start of the EICC application, the application automatically registered virtual SIP users with the primary IP Office system, and established TAPI connection from each EICC server with its local IP Office system.

For the manual part of testing, incoming calls were made to the general routing groups configured on the primary IP Office system. EICC used the TAPI event messages to track agent states, and specified calls to redirect to available agents. Manual call controls from both the agent desktops and the agent telephones were exercised to verify remaining features such as answering and transferring of calls.

Voicemail was tested by not answering personal calls at the agent, and have the call cover to EICC for proper leaving of voice message and activation of MWI. Manual call was made subsequently from agent to the voicemail group for retrieval of voice message and proper deactivation of MWI.

The serviceability test cases were performed manually by disconnecting and reconnecting the Ethernet connection to the EICC servers and clients.

The verification of tests included human checking of proper states at the agent desktops and agent telephone displays, and of reviewing the log files from EICC.

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 compliance testing included feature and serviceability areas.

The feature testing focused on verifying the following on EICC:

- Virtual SIP user registrations, G.711 and G.729 codec, and inbound DTMF.
- Use of TAPI functions to monitor users and groups, redirect incoming calls, support call control and supervisor monitor via agent desktops, and set call forwarding and MWI.
- Proper handling of call scenarios including incoming calls to different groups, screen pop, hold, reconnect, blind/attended transfer, attended conference, voicemail, announcement, call forwarding, MWI, supervisor monitor, non-ACD call, queuing, hot desking, supervisor monitor, outgoing call, outpulse of DTMF digits, multiple calls, multiple agents, long duration, park/unpark at destination agent, follow me, overflow, fallback, and recording of basic calls.

The feature testing call flows included calls between the two IP Office systems.

The serviceability testing focused on verifying the ability of EICC to recover from adverse conditions, such as disconnecting/reconnecting the Ethernet connection to EICC servers and clients.

2.2. Test Results

All test cases were executed and verified. The following were observations on EICC from the compliance testing.

- By design, for a hold and reconnect call scenario, the basic call recording feature captures the audio up to the hold action. After the call is reconnected, the Record icon becomes visible again and can be pressed to record the reconnected segment of the call. Note that each Record action produces one call recording accessible via the agent mailbox/voicemail.
- Only one EICC expander server is supported in the current version.
- EICC does not support the IP Office resiliency feature, therefore agents that re-registered to the other IP Office system as part of resiliency will not be used by EICC for routing of subsequent calls.
- For the attended conference scenarios, after any party drops, the call entry in the remaining agents' desktop are updated with agents' own information in the Caller Info column, and with "Outbound" in the Origin column.

2.3. Support

Technical support on EICC can be obtained through the following:

- **Phone:** (800) 513-2810
- **Web:** www.enghouseinteractive.com
- **Email:** usa.support@enghouse.com

3. Reference Configuration

The configuration used for the compliance testing is shown below.

The contact center devices used in the compliance testing are shown in the table below.

Device Type	Device Number/Extension
Main Site	
Agent Extensions	21031, 21034
Supervisor Extension	21035
Agent Users	21031, 21032
Supervisor User	21035
Remote Site	
Agent Extensions	22031, 22034
Supervisor Extension	22035
Agent Users	22031, 22032
Supervisor User	22035

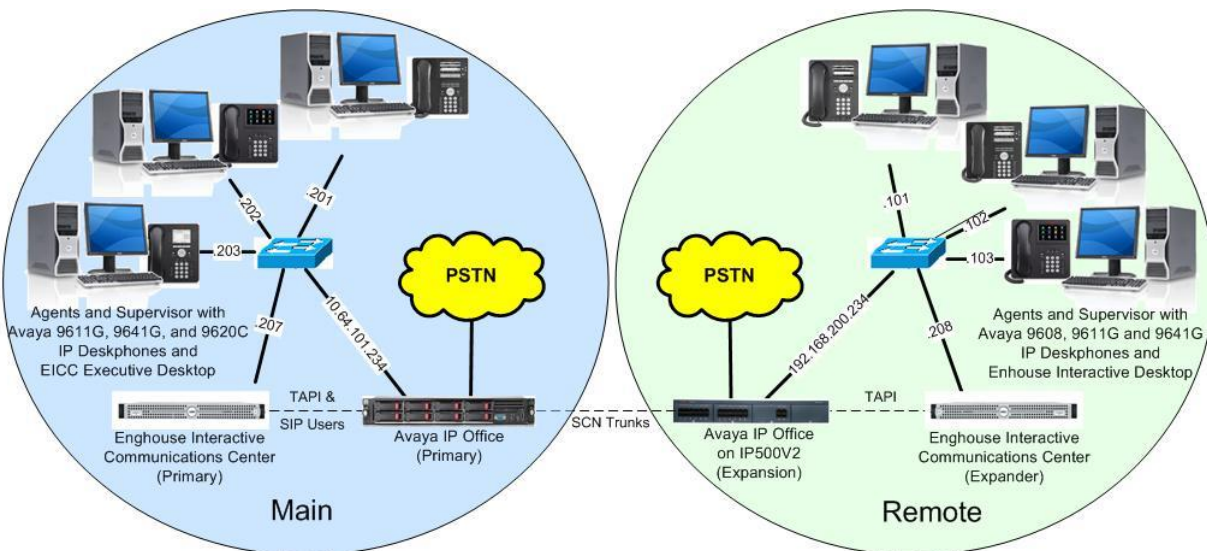


Figure 1: Compliance Testing Configuration

4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Main Site	
Avaya IP Office Server Edition (Primary)	10.0.0.1.0
Avaya 9620C IP Deskphone (H.323)	3.270A
Avaya 9611G & 9641G IP Deskphone (H.323)	6.6302
Enghouse Interactive Communications Center on Windows Server 2012 R2 <ul style="list-style-type: none">CTI Application ServerAvaya IP Office TAPI2 Driver (tspi2w)Aculab SIP Stack	2016R2 (9.1.0.4502) Standard 9.1.0.4502 1.0.0.43 2.0.11
Enghouse Interactive Desktop on Windows 10 Pro	2016R2 (9.1.0.4502)
Remote Site	
Avaya IP Office on IP500V2 (Expansion)	10.0.0.1.0
Avaya 9608, 9611G & 9641G IP Deskphone (H.323)	6.6302
Enghouse Interactive Communications Center on Windows Server 2012 R2 <ul style="list-style-type: none">CTI Auxiliary ServicesAvaya IP Office TAPI2 Driver (tspi2w)	2016R2 (9.1.0.4502) Standard 9.1.0.4502 1.0.0.43
Enghouse Interactive Desktop on Windows 7 Enterprise	2016R2 (9.1.0.4502) Service Pack 1

Compliance Testing is applicable when the tested solution is deployed with a standalone IP Office 500 V2 and also when deployed with IP Office Server Edition configurations consisting of no more than two IP Office systems.

5. Configure Avaya IP Office

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

- Verify licenses
- Administer groups
- Administer agent extensions
- Administer agent users
- Assign agents users to monitor group
- Administer supervisors
- Administer SIP registrar
- Administer SIP extensions
- Administer SIP users
- Administer short code
- Administer system settings
- Administer security settings

Note that all procedures above apply to the primary IP Office system, and only a subset of the procedures below apply to the expansion IP Office system.

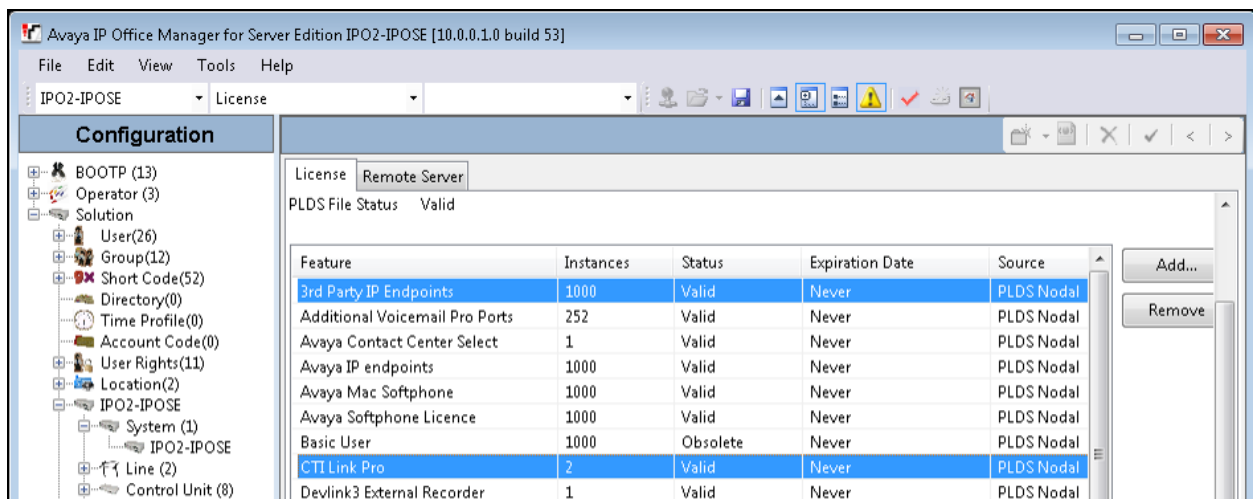
- Verify licenses
- Administer agent extensions
- Administer agent users
- Administer supervisors
- Administer system settings
- Administer security settings

5.1. Verify Licenses

From a PC running the IP Office Manager application, select **Start → All Programs → IP Office → Manager** to launch the application. Select the primary IP Office system, and log in using the appropriate credentials.

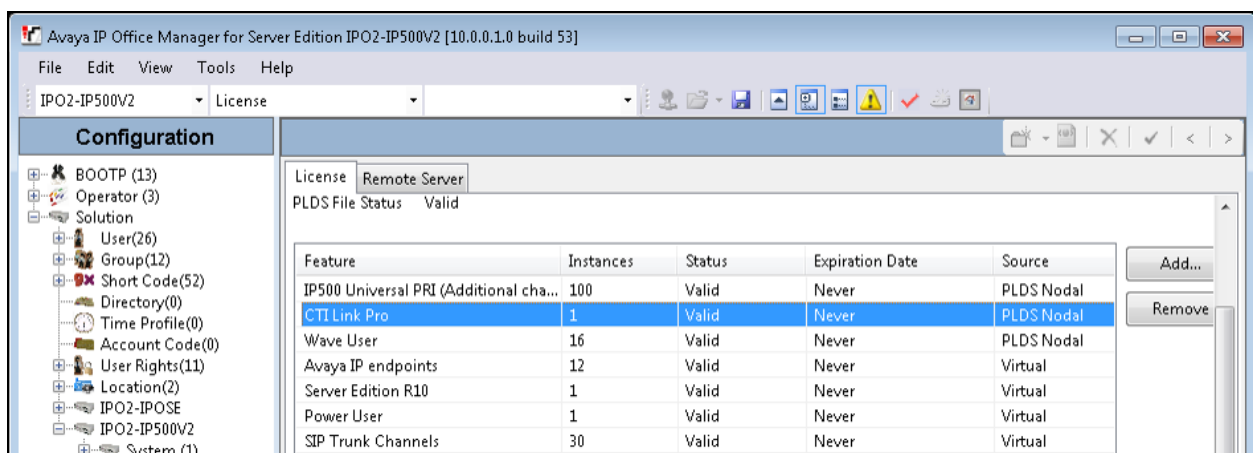
The **Avaya IP Office Manager for Server Edition IPO2-IPOSE** screen is displayed, where **IPO2-IPOSE** is the name of the primary IP Office system.

From the configuration tree in the left pane, select the primary IP Office system, in this case **IPO2-IPOSE**, followed by **License** (not shown) to display licenses in the right pane. Verify that there are licenses for **3rd Party IP Endpoints** and **CTI Link Pro**, and with both license **Status** being “Valid”, as shown below.



Feature	Instances	Status	Expiration Date	Source
3rd Party IP Endpoints	1000	Valid	Never	PLDS Nodal
Additional Voicemail Pro Ports	252	Valid	Never	PLDS Nodal
Avaya Contact Center Select	1	Valid	Never	PLDS Nodal
Avaya IP endpoints	1000	Valid	Never	PLDS Nodal
Avaya Mac Softphone	1000	Valid	Never	PLDS Nodal
Avaya Softphone Licence	1000	Valid	Never	PLDS Nodal
Basic User	1000	Obsolete	Never	PLDS Nodal
CTI Link Pro	2	Valid	Never	PLDS Nodal
Devlink3 External Recorder	1	Valid	Never	PLDS Nodal

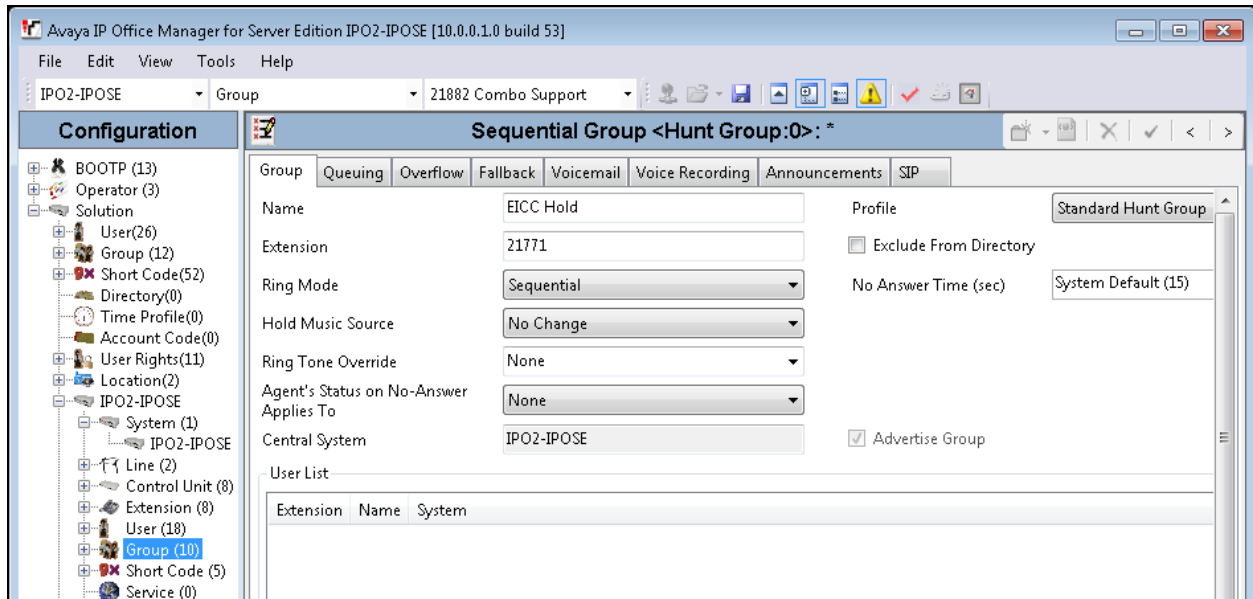
From the configuration tree in the left pane, select the expansion IP Office system, in this case **IPO2-IP500V2**, followed by **License** (not shown) to display licenses in the right pane. Verify that there is a **CTI Link Pro** license, and with the license **Status** being “Valid”, as shown below.



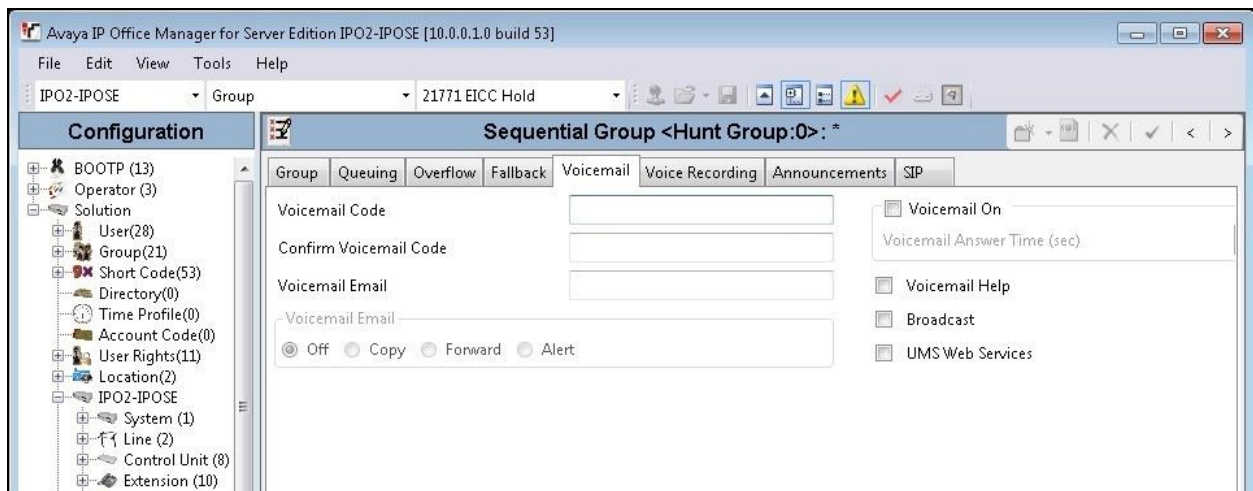
Feature	Instances	Status	Expiration Date	Source
IP500 Universal PRI (Additional cha...	100	Valid	Never	PLDS Nodal
CTI Link Pro	1	Valid	Never	PLDS Nodal
Wave User	16	Valid	Never	PLDS Nodal
Avaya IP endpoints	12	Valid	Never	Virtual
Server Edition R10	1	Valid	Never	Virtual
Power User	1	Valid	Never	Virtual
SIP Trunk Channels	30	Valid	Never	Virtual

5.2. Administer Groups

From the configuration tree in the left pane, right-click on **Group** under the primary IP Office system and select **New** from the pop-up list to add a new group. For **Name** and **Extension**, enter desired values. Retain the default values for the remaining fields.



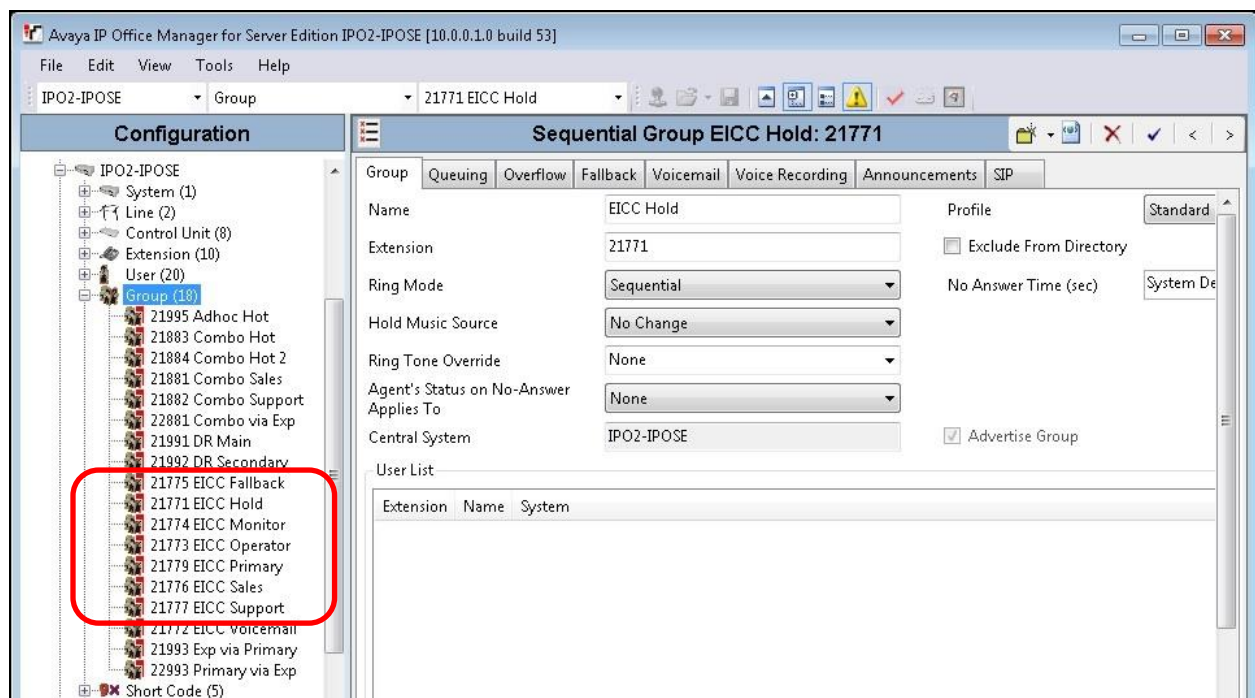
Select the **Voicemail** tab, and uncheck **Voicemail On** as shown below.



Repeat this section to create the groups shown below. These groups are used by EICC for routing and handling of incoming calls. Note that all groups are required by EICC to be configured on the primary IP Office system.

Extension	Name
21771	EICC Hold
21772	EICC Voicemail
21773	EICC Operator
21774	EICC Monitor
21775	EICC Fallback
21776	EICC Sales
21777	EICC Support

The created groups are shown in the left pane of the screen below.

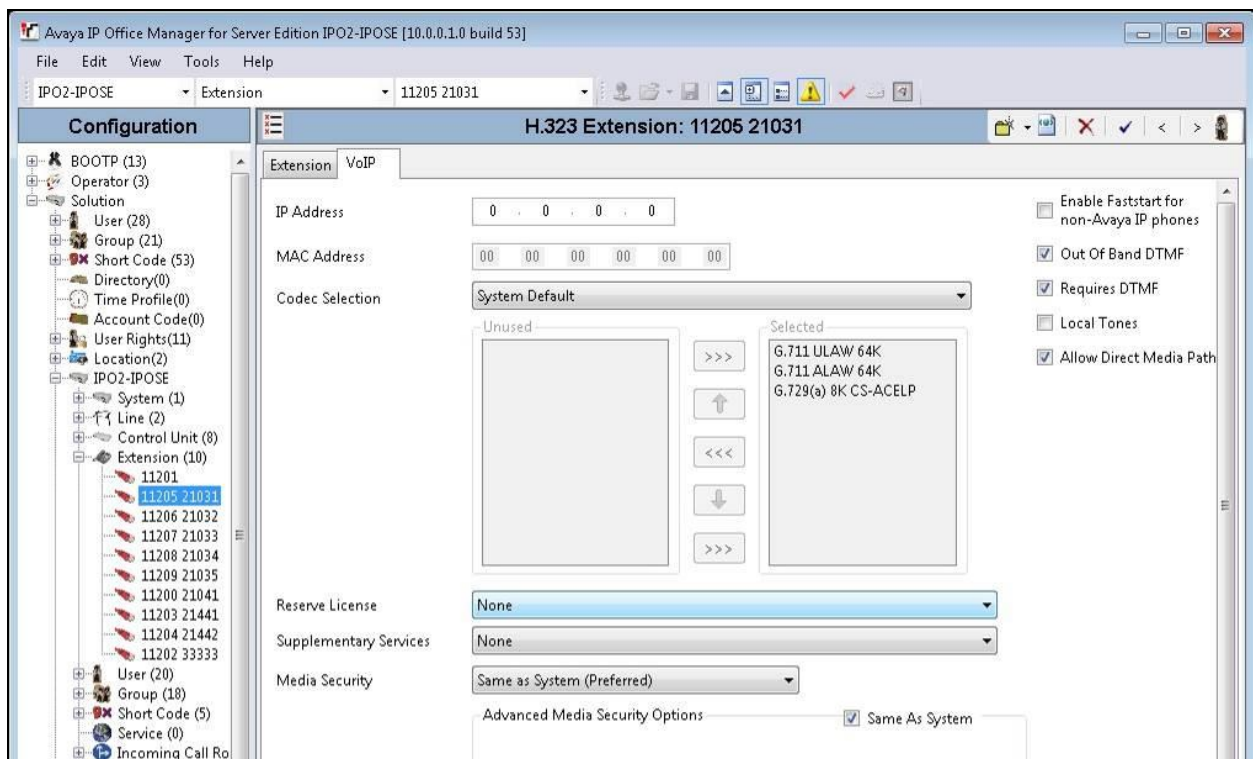


5.3. Administer Agent Extensions

From the configuration tree in the left pane, select the primary IP Office system, followed by the first H.323 extension on the system that will be used by agents and supervisors, in this case “21031”. Select the **VoIP** tab, and check **Requires DTMF** as shown below.

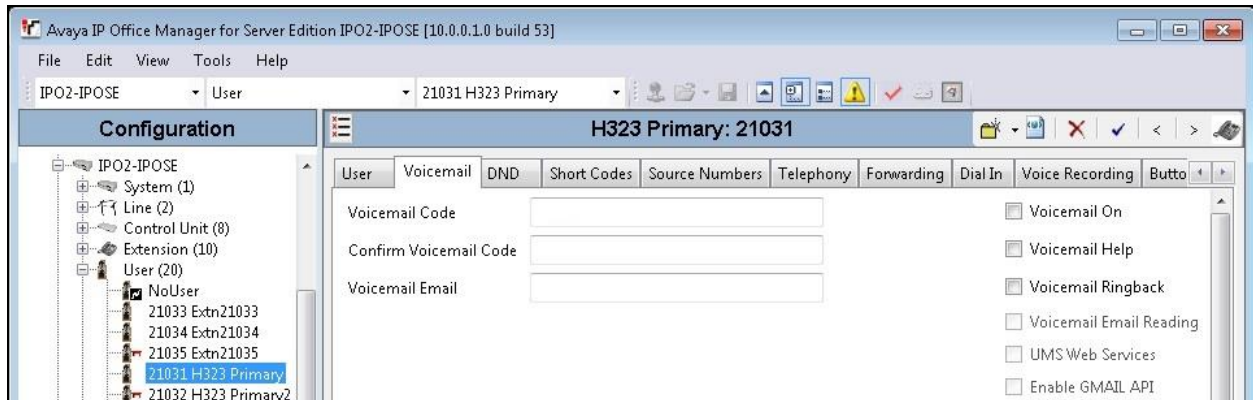
Repeat this section for all H.323 extensions on the Main site that will be used by agents and supervisors. In the compliance testing, three H.323 extensions on the Main site with extensions “21031”, “21034”, and “21035” were configured on the primary IP Office system.

Repeat this section for all H.323 extensions on the Remote site that will be used by agents and supervisors. In the compliance testing, three H.323 extensions on the Remote site with extensions “22031”, “22034”, and “22035” were configured on the expansion IP Office system.

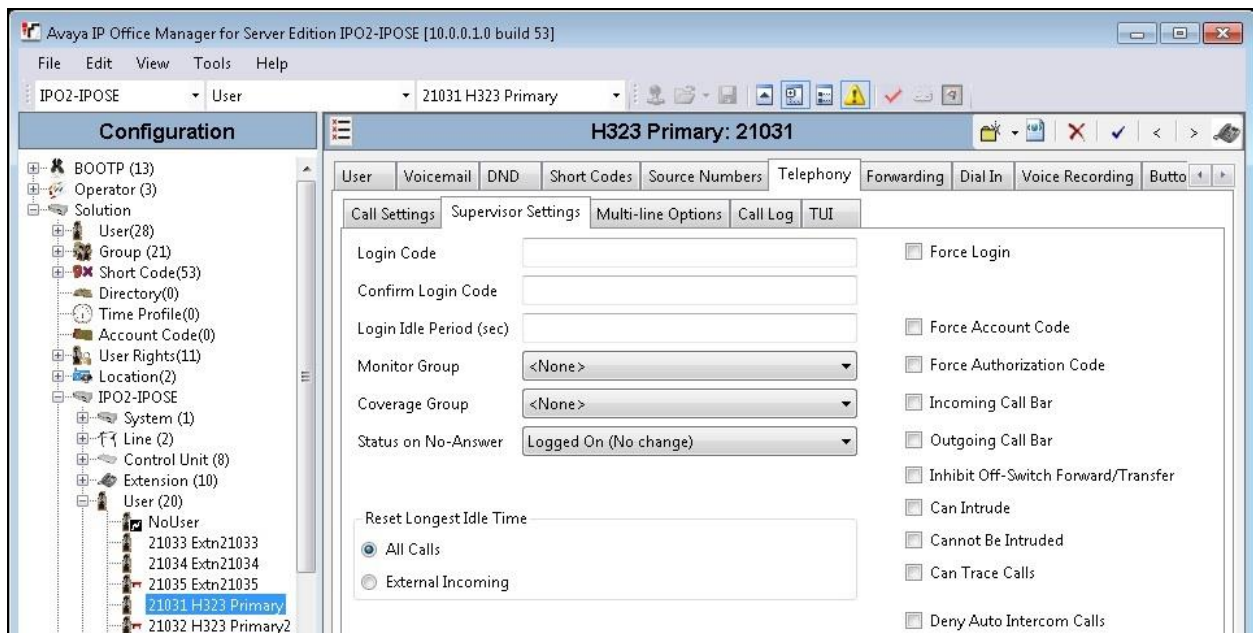


5.4. Administer Agent Users

From the configuration tree in the left pane, select the primary IP Office system, followed by the first user on the system that will be used by agents, in this case “21031”. Select the **Voicemail** tab, and uncheck **Voicemail On** as shown below.



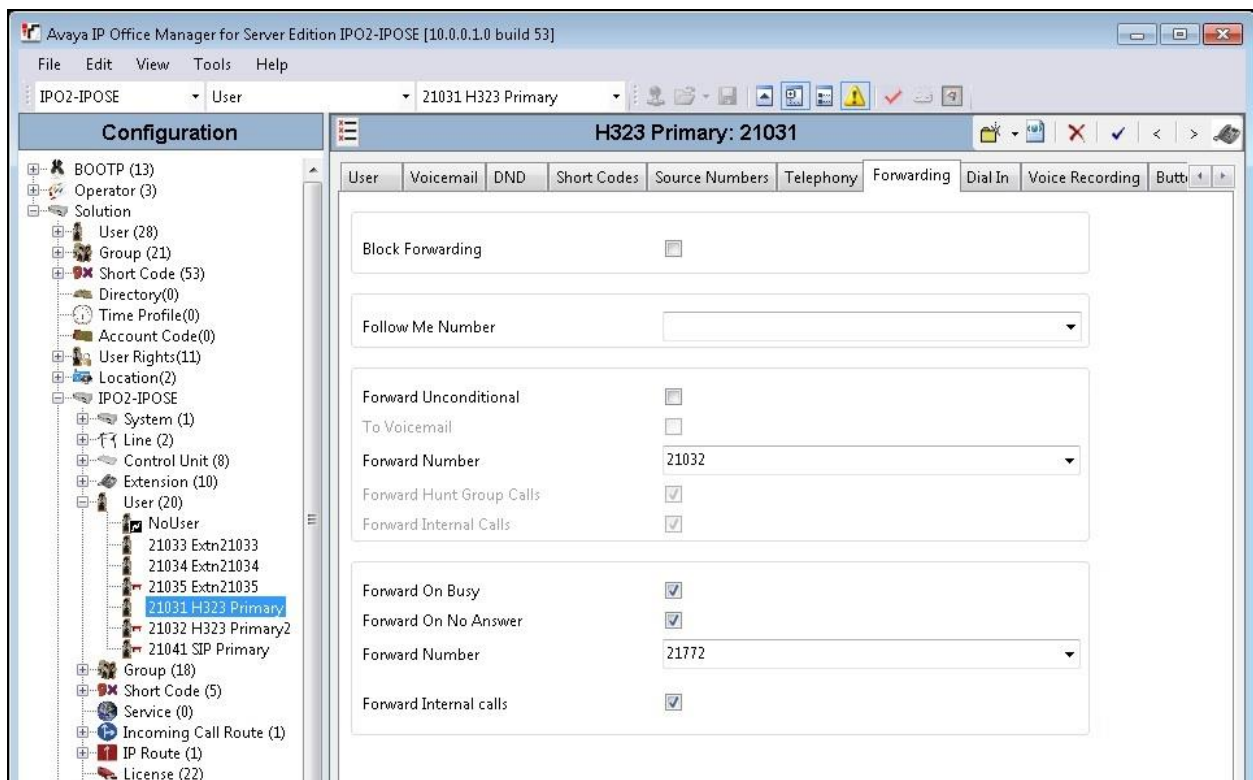
Select the **Telephony** tab, followed by the **Supervisor Settings** sub-tab. Uncheck **Cannot be Intruded**, and set **Can Intrude** to the desired setting.



Select the **Forwarding** tab. Check **Forward On Busy**, **Forward On No Answer**, and **Forward Internal calls**. For **Forward Number**, enter the EICC Voicemail group extension from **Section 5.2**.

Repeat this section for all users on the Main site that will be used by agents. In the compliance testing, two users on the Main site with extensions “21031” and “21032” were configured on the primary IP Office system.

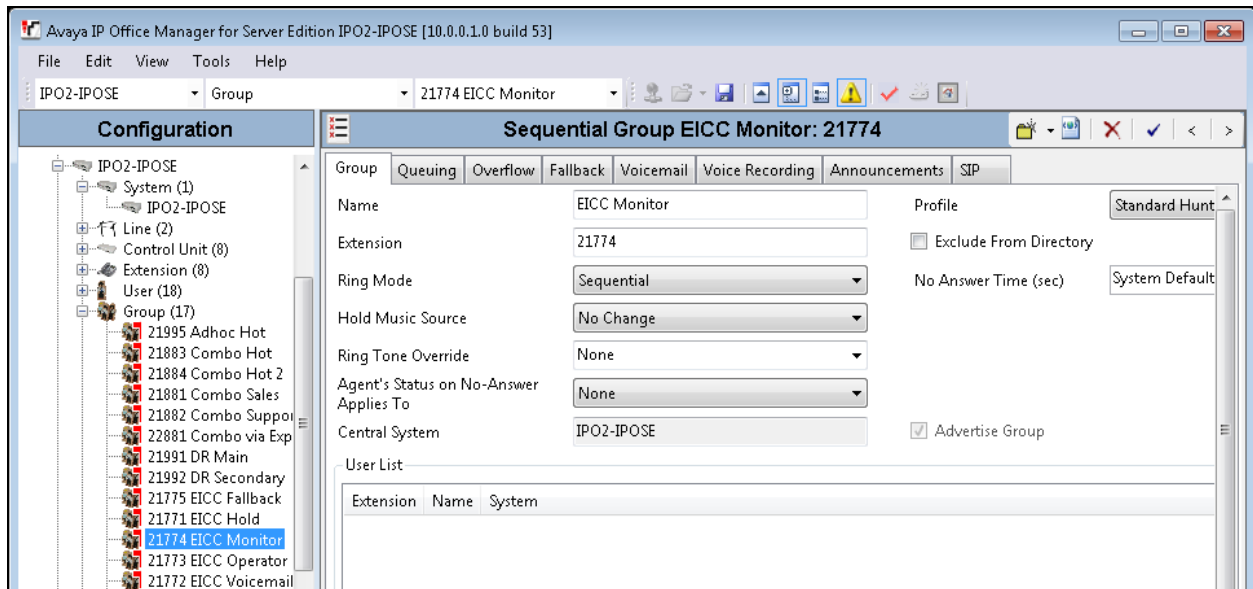
Repeat this section for all users on the Remote site that will be used by agents. In the compliance testing, two users on the Remote site with extensions “22031” and “22032” were configured on the expansion IP Office system.



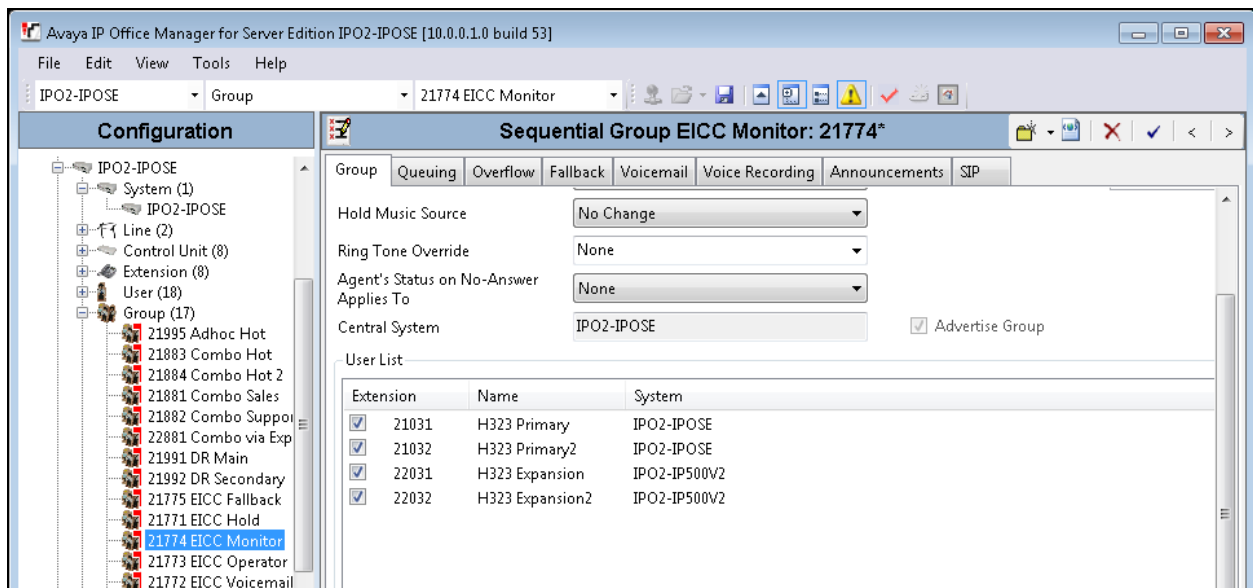
5.5. Assign Agent Users to Monitor Group

From the configuration tree in the left pane, select the EICC Monitor group under the primary IP Office system, in this case “21774”. Click on **Edit** (not shown) in the **User List** sub-section to add members.

In the next screen (not shown), select all agent users on both IP Office systems from **Section 5.4**.



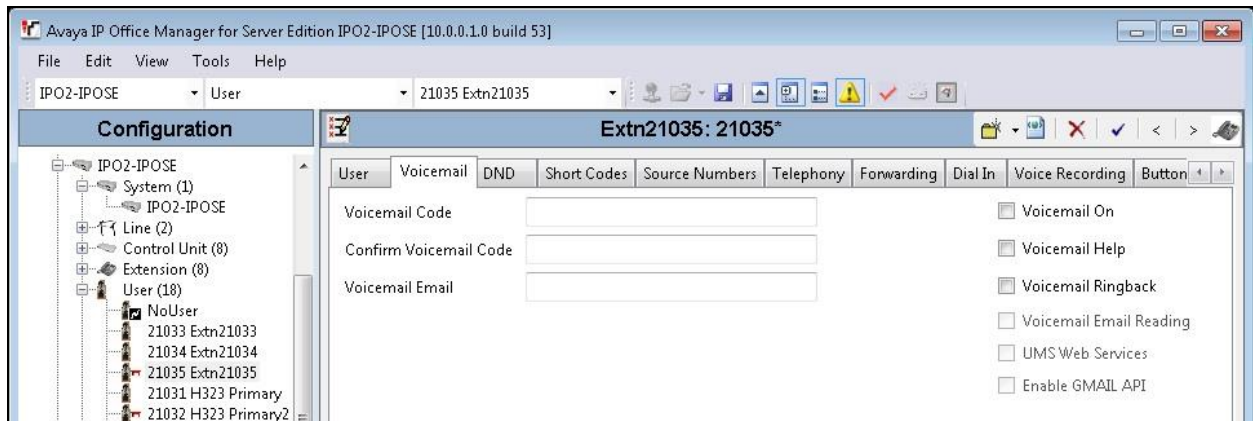
The resultant screen after the selection is shown below.



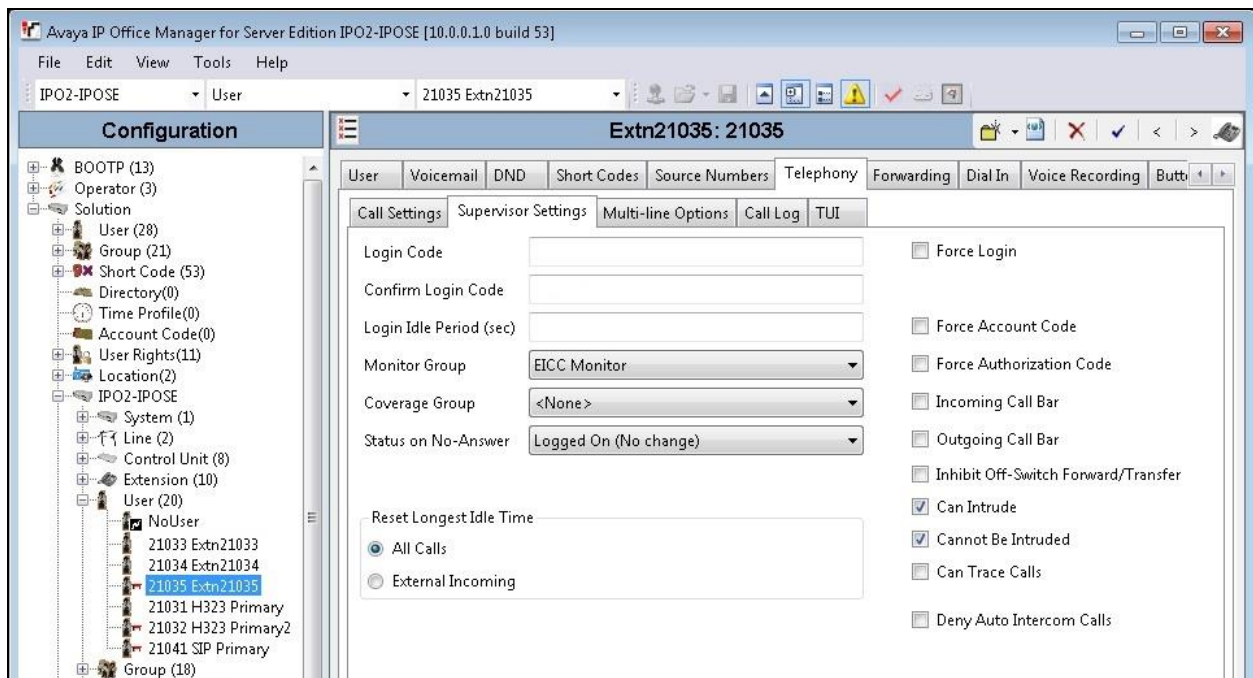
5.6. Administer Supervisors

From the configuration tree in the left pane, select the primary IP Office system, followed by the first user on the Main site that will be used as the supervisor, in this case “21035”.

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



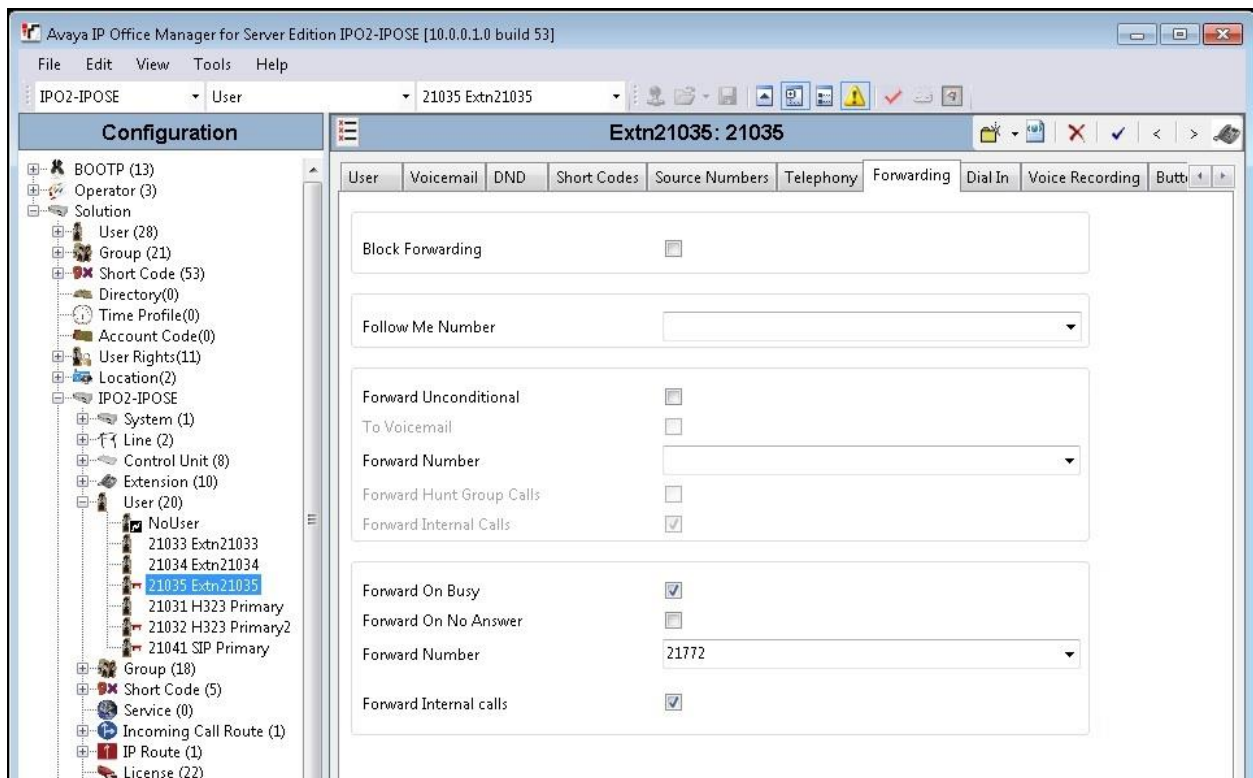
Select the **Telephony** tab, followed by the **Supervisor Settings** sub-tab. Check **Can Intrude**, and set **Cannot be Intruded** to the desired setting. For **Monitor Group**, select the EICC Monitor group from **Section 5.2**.



Select the **Forwarding** tab. Check **Forward On Busy**, **Forward On No Answer**, and **Forward Internal calls**. For **Forward Number**, enter the EICC Voicemail group extension from **Section 5.2**.

Repeat this section for all supervisors on the Main site. In the compliance testing, one supervisor on the Main site with extension “21035” was configured on the primary IP Office system.

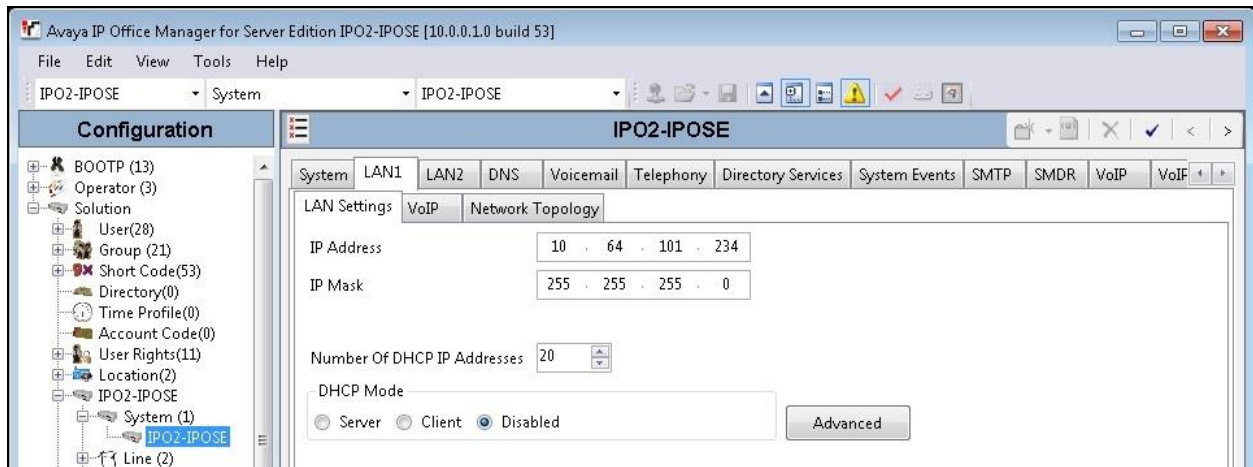
Repeat this section for all supervisors on the Remote site. In the compliance testing, one supervisor on the Remote site with extension “22035” was configured on the expansion IP Office system.



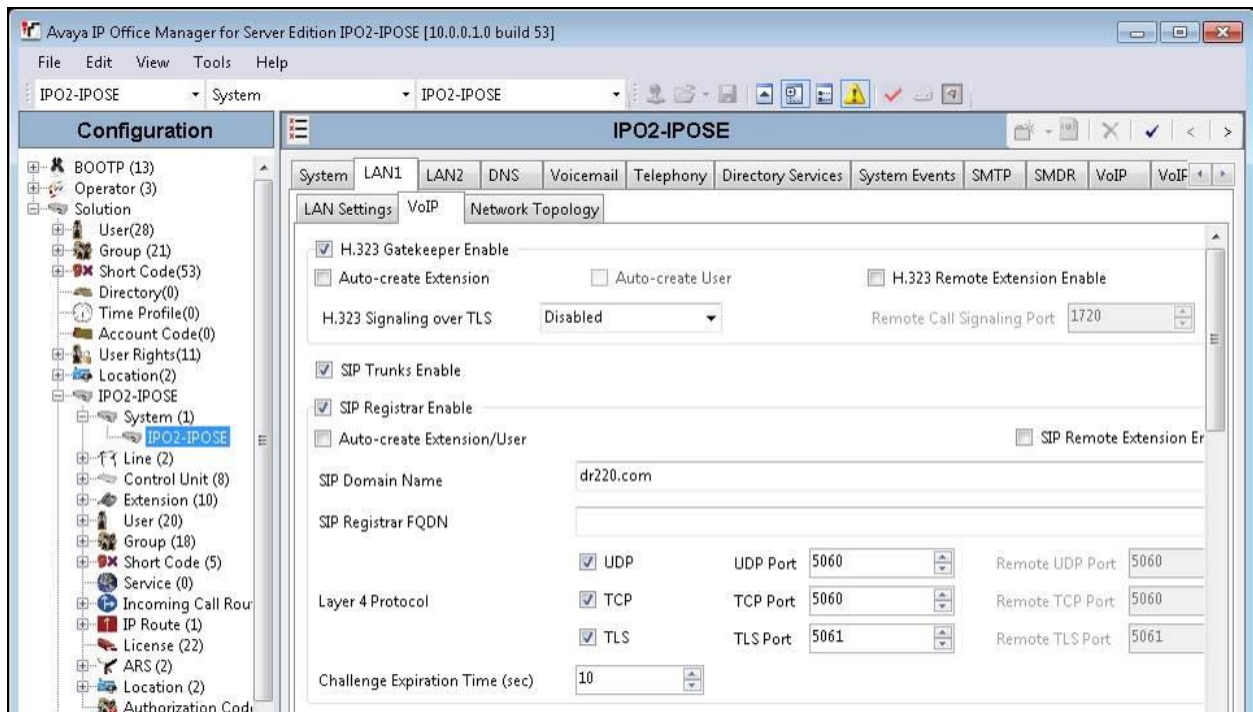
5.7. Administer SIP Registrar

From the configuration tree in the left pane, select **System** under the primary IP Office system to display the system screen in the right pane. Select the **LAN1** tab, followed by the **LAN Settings** sub-tab.

Make a note of the **IP Address** field value, which will be used later to configure EICC. Note that IP Office can support SIP on the LAN1 and/or LAN2 interfaces, and the compliance testing used the LAN1 interface.

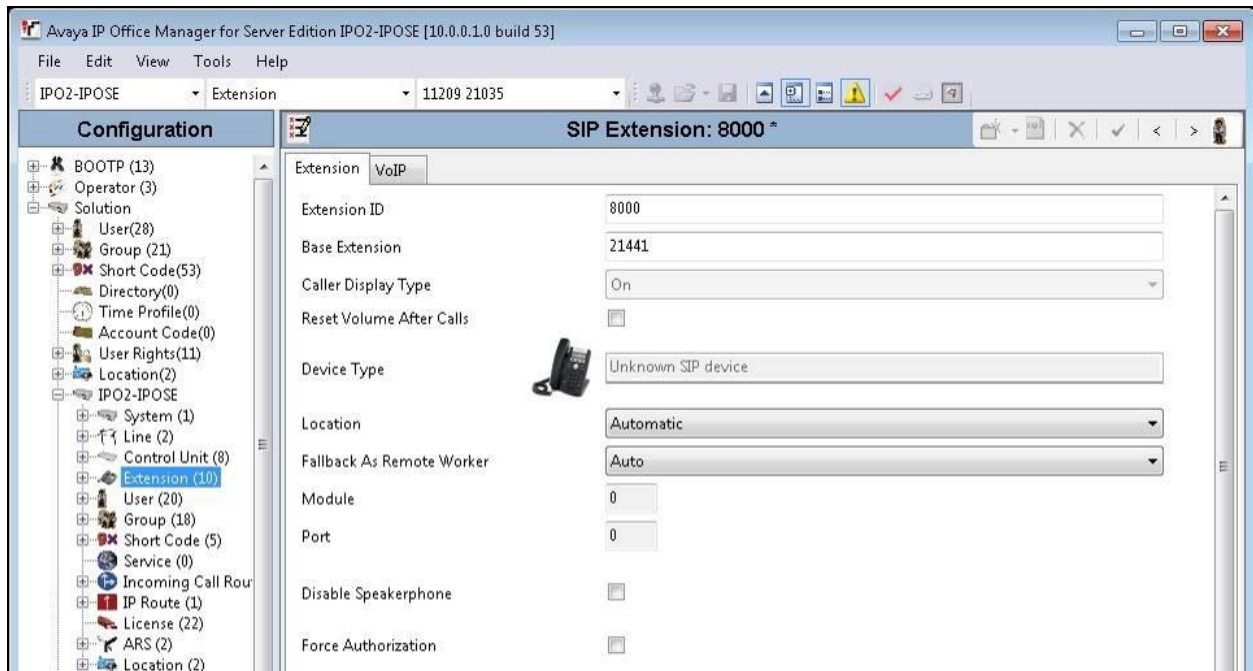


Select the **VoIP** sub-tab. Make certain that **SIP Registrar Enable** is checked, as shown below.



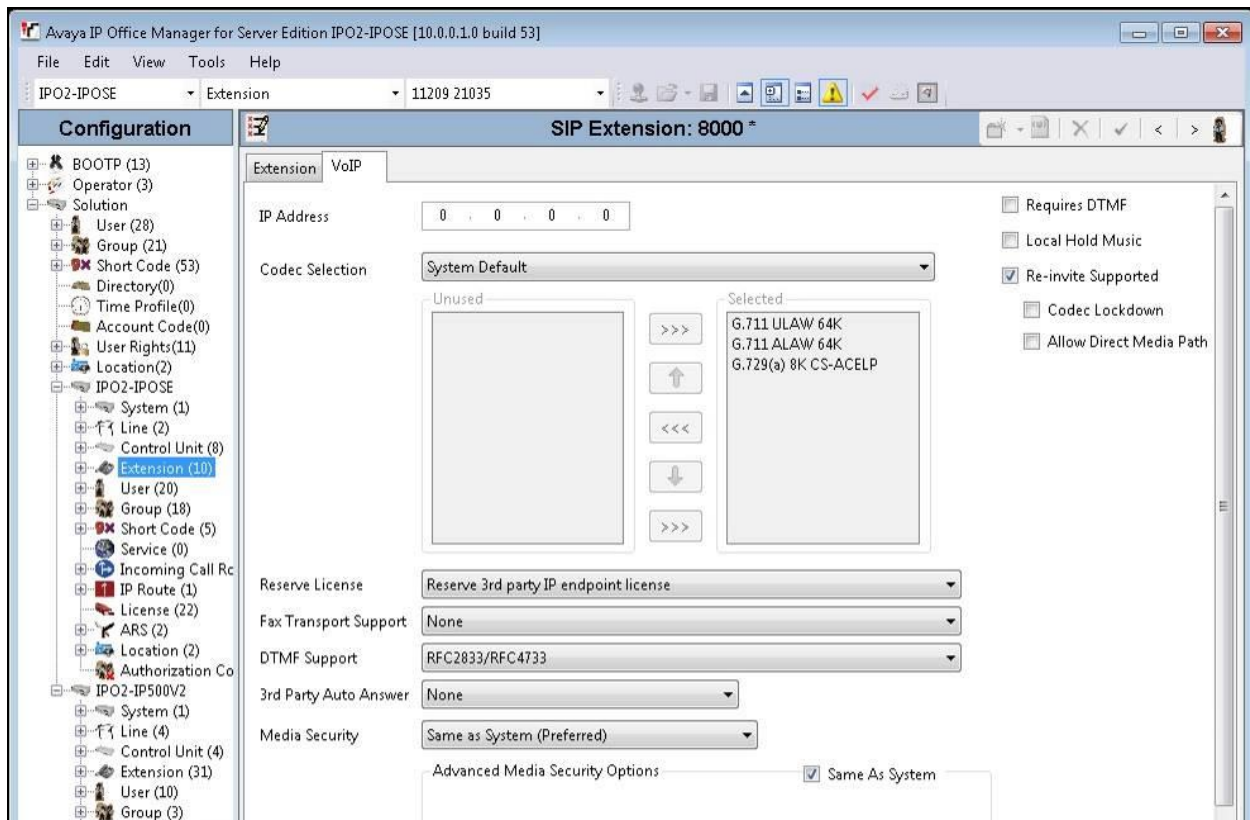
5.8. Administer SIP Extensions

From the configuration tree in the left pane, right-click on **Extension** under the primary IP Office system, and select **New → SIP Extension** from the pop-up list to add a new SIP extension. For **Base Extension**, enter an available extension number, in this case “21441”. Uncheck **Force Authorization**, as shown below.



Select the **VoIP** tab, and uncheck **Allow Direct Media Path**. For **Reserve License**, select **Reserve 3rd party IP endpoint license**, as shown below.

Repeat this section to add the desired number of SIP extensions with consecutive extension numbers. In the compliance testing, two SIP extensions “21441” and “21442” were created.



5.9. Administer SIP Users

From the configuration tree in the left pane, right-click on **User** under the primary IP Office system, and select **New** from the pop-up list. For **Name** and **Full Name**, enter desired values. For **Extension**, enter the first SIP base extension from **Section 5.8**.

Avaya IP Office Manager for Server Edition IPO2-IPOSE [10.0.0.1.0 build 53]

File Edit View Tools Help

IPO2-IPOSE User 21035 Extn21035

Configuration

BOOTP (13)
Operator (3)
Solution
User (28)
Group (21)
Short Code (53)
Directory (0)
Time Profile (0)
Account Code (0)
User Rights (11)
Location (2)
IPO2-IPOSE
System (1)
Line (2)
Control Unit (8)
Extension (10)
User (20)
Group (18)
Short Code (5)
Service (0)
Incoming Call Rout
IP Route (1)
License (22)
ARS (2)
Location (2)
Authorization Code
IPO2-IP500V2
System (1)
Line (4)
Control Unit (4)
Extension (31)

<User:0> *

User Voicemail DND Short Codes Source Numbers Telephony Forwarding Dial In Voice Recording Button Pro

Name EICC21441
Password
Confirm Password
Unique Identity
Conference PIN
Confirm Audio Conference PIN
Account Status Enabled
Full Name EICC SIP Port 1
Extension 21441
Email Address
Locale
Priority 5
System Phone Rights None
ACCS Agent Type None
Profile Basic User
☐ Receptionist

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

Avaya IP Office Manager for Server Edition IPO2-IPOSE [10.0.0.1.0 build 53]

File Edit View Tools Help

IPO2-IPOSE User 21035 Extn21035

Configuration

BOOTP (13)
Operator (3)
Solution
User (28)
Group (21)
Short Code (53)
Directory (0)
Time Profile (0)
Account Code (0)
User Rights (11)
Location (2)
IPO2-IPOSE
System (1)
Line (2)
Control Unit (8)
Extension (10)
User (20)
Group (18)

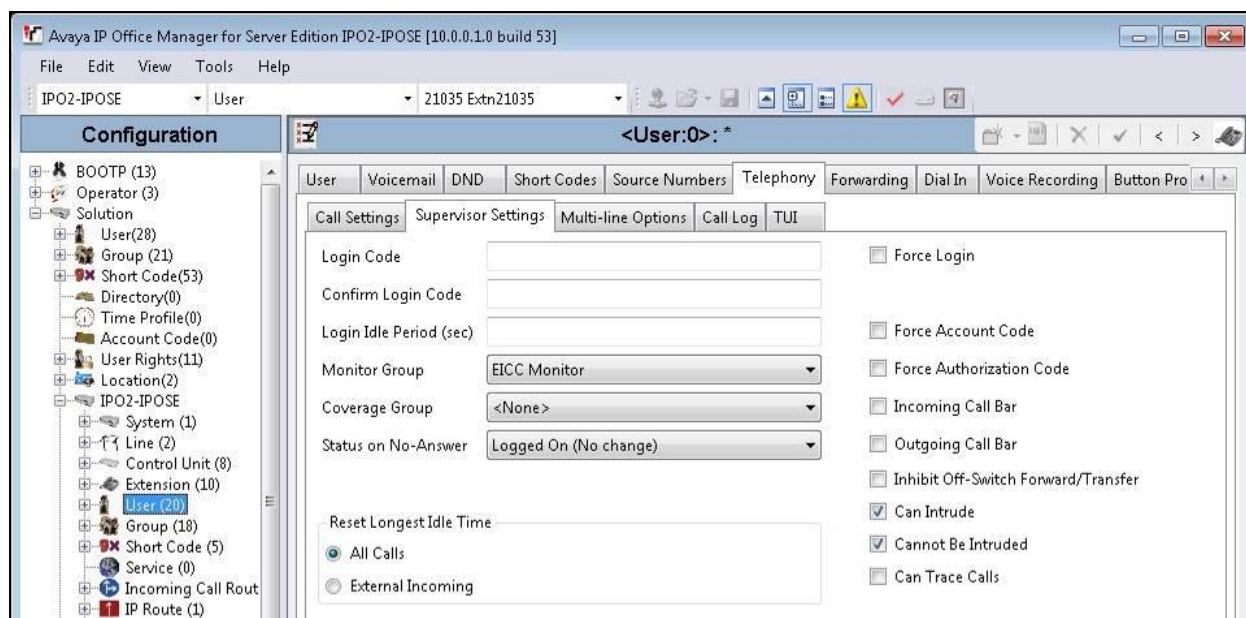
<User:0> *

User Voicemail DND Short Codes Source Numbers Telephony Forwarding Dial In Voice Recording Button Pro

Voicemail Code
Confirm Voicemail Code
Voicemail Email
Voicemail On
Voicemail Help
Voicemail Ringback
Voicemail Email Reading
UMS Web Services
Enable GMAIL API
Voicemail Email
Off Copy Forward Alert
DTMF Breakout

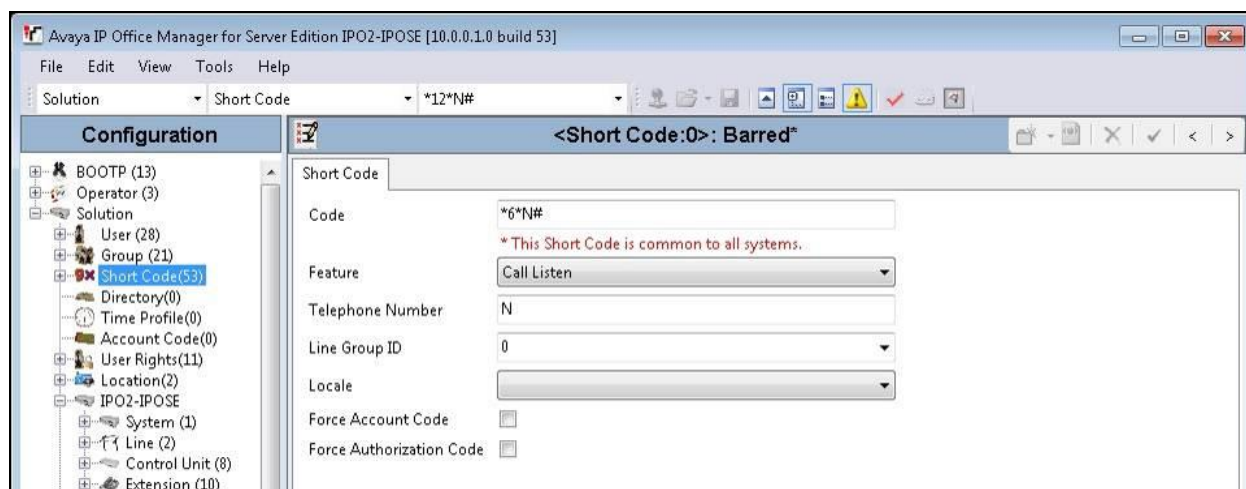
Select the **Telephony** tab, followed by the **Supervisor Settings** sub-tab. Check **Can Intrude** and **Cannot be Intruded**. For **Monitor Group**, select the EICC Monitor group from **Section 5.2**.

Repeat this section to add a new user for each SIP extension from **Section 5.8**. In the compliance testing, two users with extensions of “21441” and “21442” were created.



5.10. Administer Short Code

From the configuration tree in the left pane, right-click on **Solution** → **Short Code** and select **New** from the pop-up list to add a new common short code for Call Listen. Configure the fields exactly as shown below. This fixed short code value will be used by EICC to intrude virtual SIP users onto active calls for basic call recording.

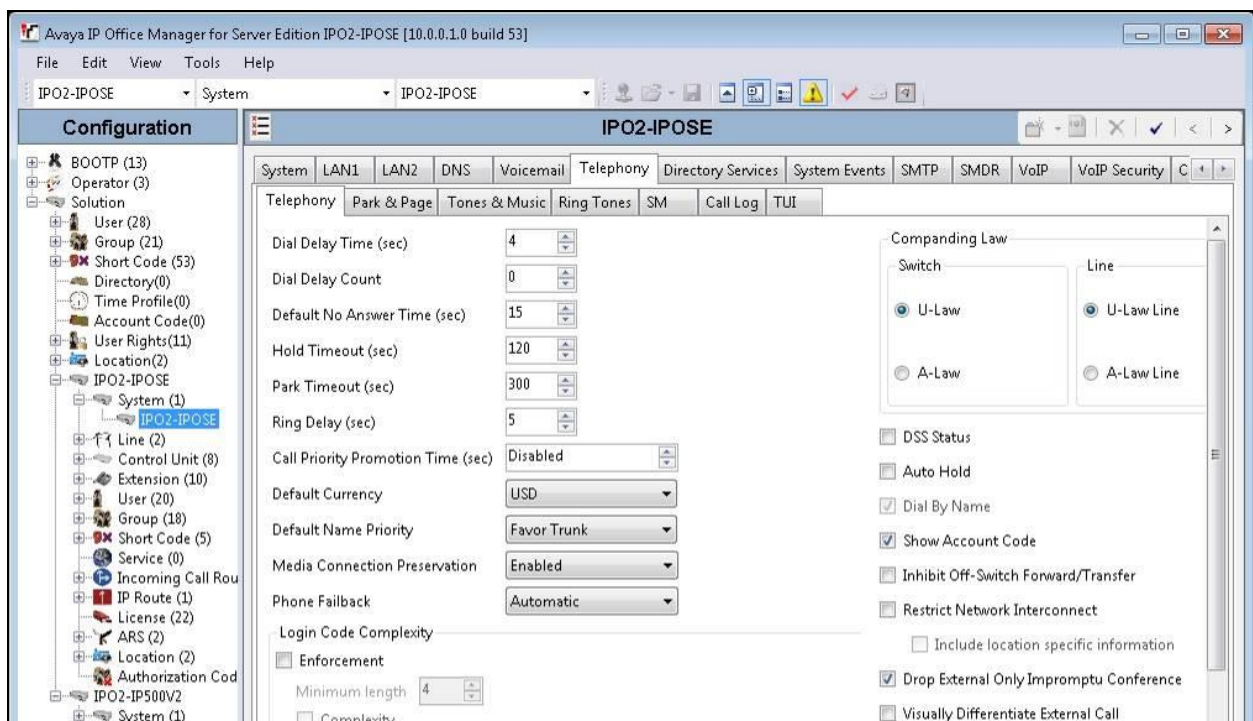


5.11. Administer System Setting

From the configuration tree in the left pane, select **System** under the primary IP Office system to display the system screen in the right pane. Select the **Telephony** tab, followed by the **Telephony** sub-tab in the right pane.

Uncheck **Inhibit Off-Switch Forward/Transfer** to allow call forwarding and transfer with EICC over SIP trunks.

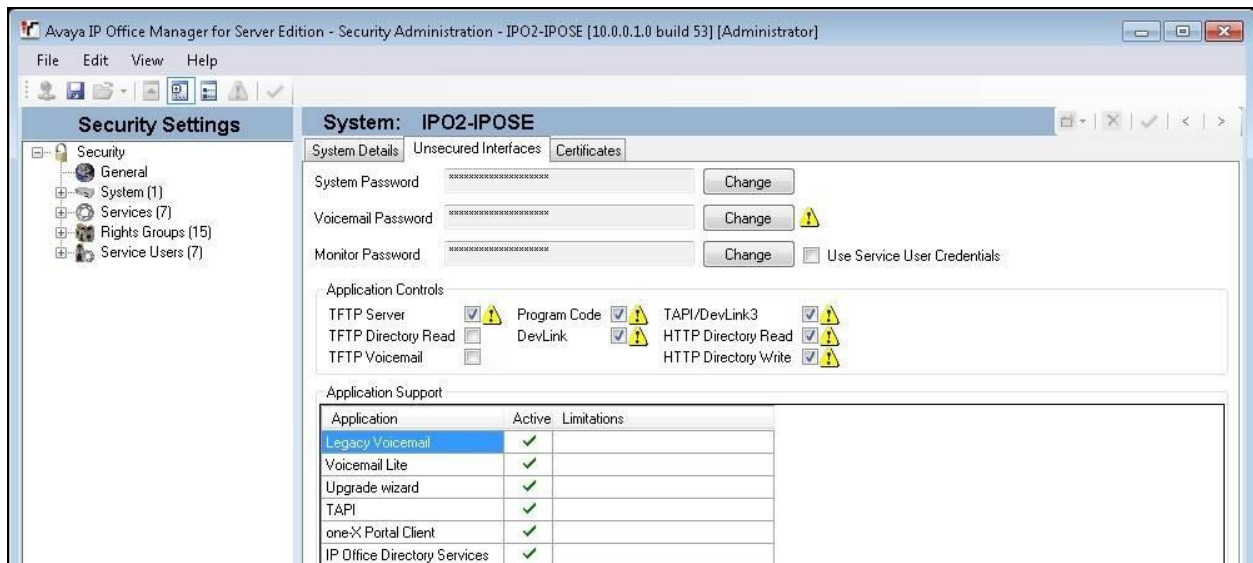
Repeat this section to uncheck **Inhibit Off-Switch Forward/Transfer** on the expansion IP Office system.



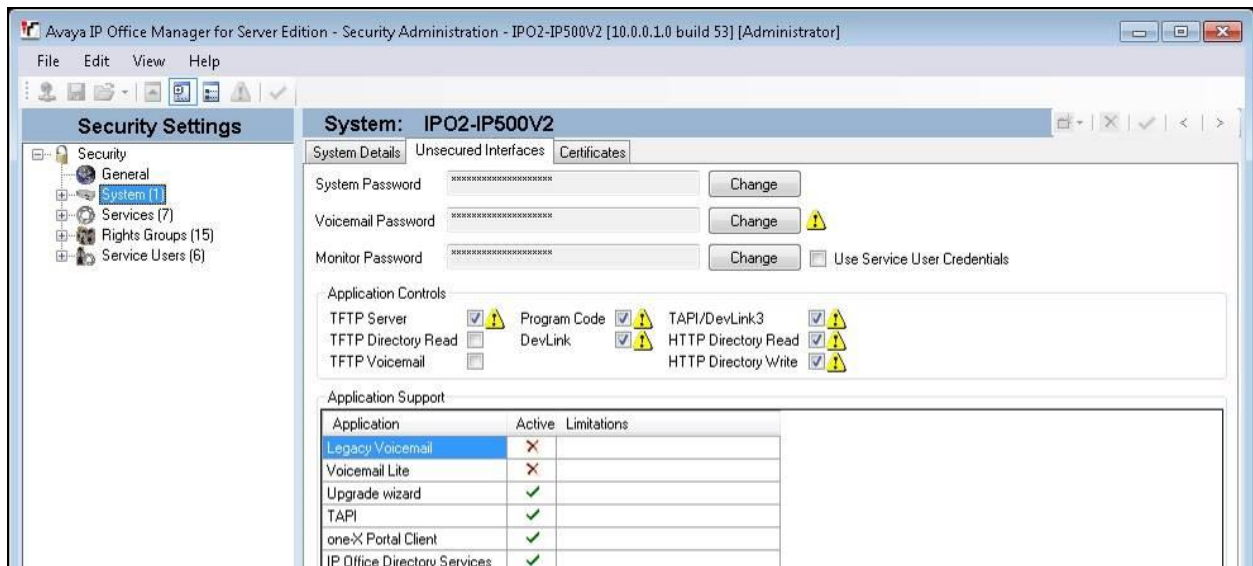
5.12. Administer Security Settings

From the configuration tree in the left pane, select the primary IP Office system, in this case “IPO2-IPOSE” (not shown), followed by **File → Advanced → Security Settings** from the top menu.

The **Avaya IP Office Manager for Server Edition – Security Administration - IPO2-IPOSE** screen is displayed, where **IPO2-IPOSE** is the name of the selected IP Office system. Select **Security → System** to display the **System** screen in the right pane. Select the **Unsecured Interfaces** tab, and check **TAPI/DevLink3** as shown below.



Repeat this section to enable **TAPI/DevLink3** on the expansion IP Office system.



6. Configure Enghouse Interactive Communications Center

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

- Administer TAPI driver
- Administer phone system type
- Administer phone system data
- Verify license
- Administer lines
- Administer queues
- Administer phonebook

Note that all procedures above apply to the primary EICC server, and only the administer TAPI driver procedure apply to the expander EICC server.

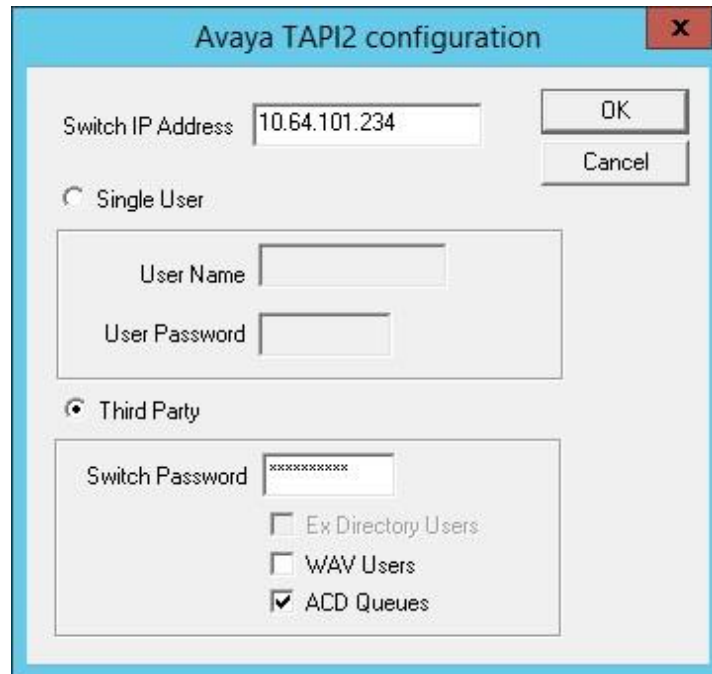
The configuration of EICC is typically performed by Enghouse Interactive installation technicians or third party resellers. The procedural steps are presented in these Application Notes for informational purposes.

6.1. Administer TAPI Driver

From the primary EICC server, select **Start → Control Panel → Phone and Modem**, to display the **Phone and Modem** screen. Select the **Advanced** tab, followed by **Avaya IP Office TAPI2 Service Provider**, as shown below. Click **Configure**.

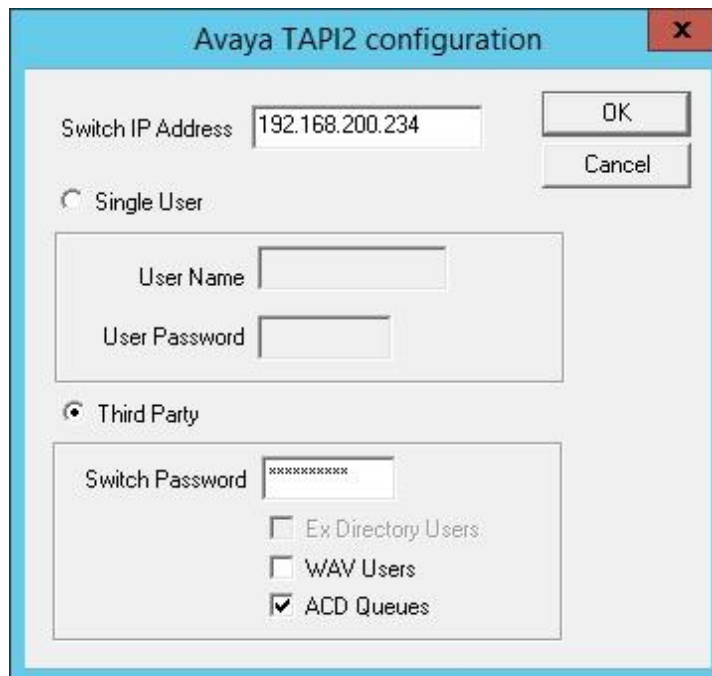


The **Avaya TAPI2 configuration** screen is displayed. For **Switch IP Address**, enter the IP address of the primary IP Office system, in this case “10.64.101.234”. Select the radio button for **Third Party**, and enter the applicable IP Office password into the **Switch Password** field. Check **ACD Queues** as shown below. Reboot the primary EICC server.



The image shows a screenshot of the 'Avaya TAPI2 configuration' dialog box. The title bar is blue with a red 'X' button. The dialog has a light gray background. At the top, there is a text field for 'Switch IP Address' containing '10.64.101.234'. To the right of this field are 'OK' and 'Cancel' buttons. Below the IP field, there are two radio buttons: 'Single User' (unselected) and 'Third Party' (selected). Under 'Single User', there are text fields for 'User Name' and 'User Password'. Under 'Third Party', there is a text field for 'Switch Password' containing 'xxxxxxxx'. Below this, there are three checkboxes: 'Ex Directory Users' (unchecked), 'WAV Users' (unchecked), and 'ACD Queues' (checked).

Repeat this section to administer TAPI driver on the expander EICC server, and use the IP address and credentials for the expansion IP Office system, as shown below.

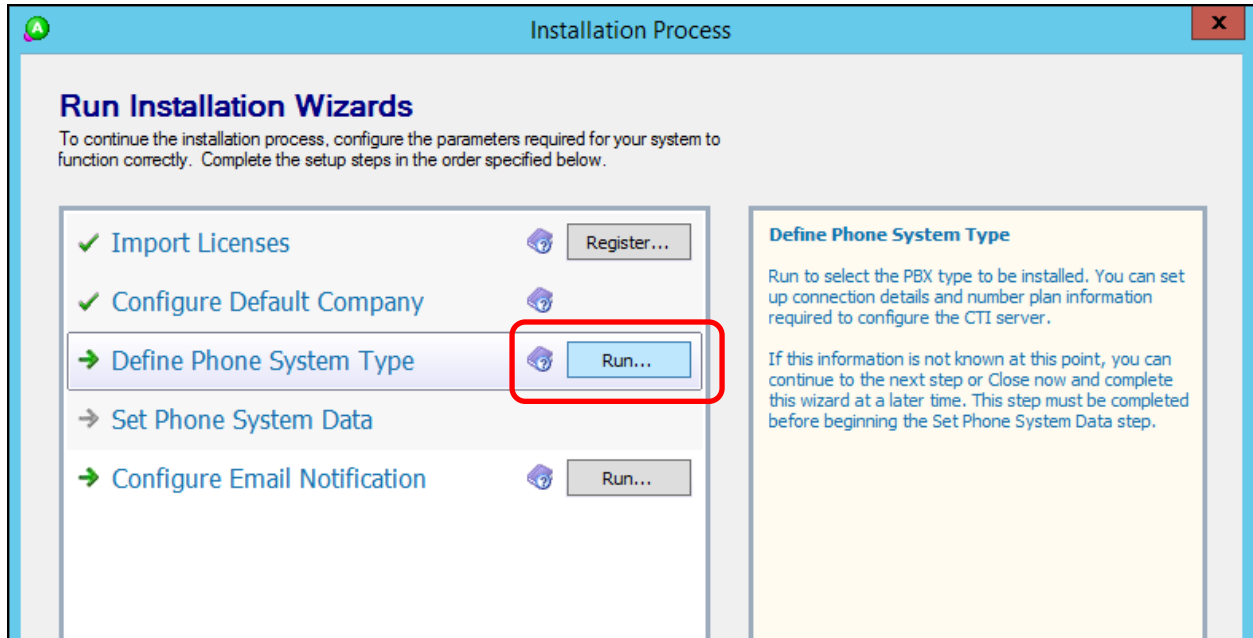


The image shows a screenshot of the 'Avaya TAPI2 configuration' dialog box, similar to the one above but for an expander server. The 'Switch IP Address' field contains '192.168.200.234'. The 'Third Party' radio button is selected. The 'Switch Password' field contains 'xxxxxxxx'. The 'ACD Queues' checkbox is checked, while 'Ex Directory Users' and 'WAV Users' are unchecked.

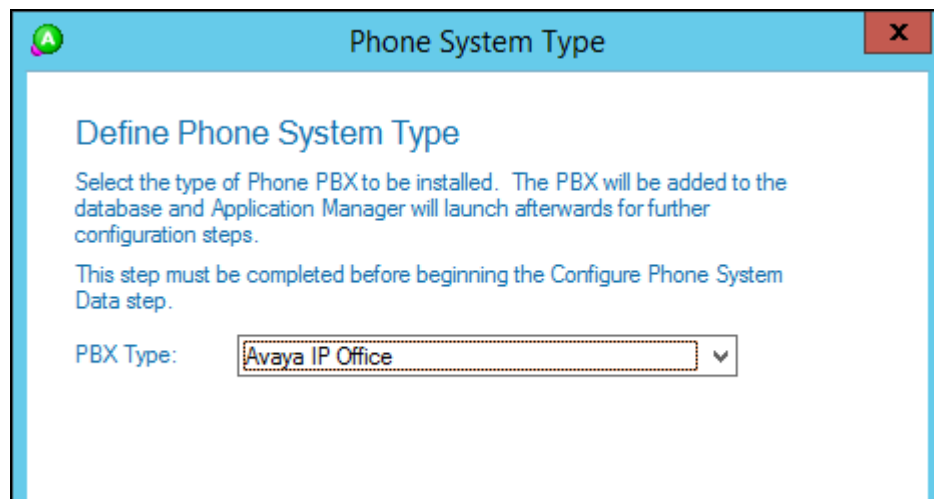
6.2. Administer Phone System Type

At the conclusion of EICC installation, the **Installation Process** screen will be displayed on the primary EICC server by the Installation Wizard. Follow [2] to import licenses and configure the default company.

The **Installation Process** screen shown below is displayed next. Click the **Run** icon associated with **Define Phone System Type**.

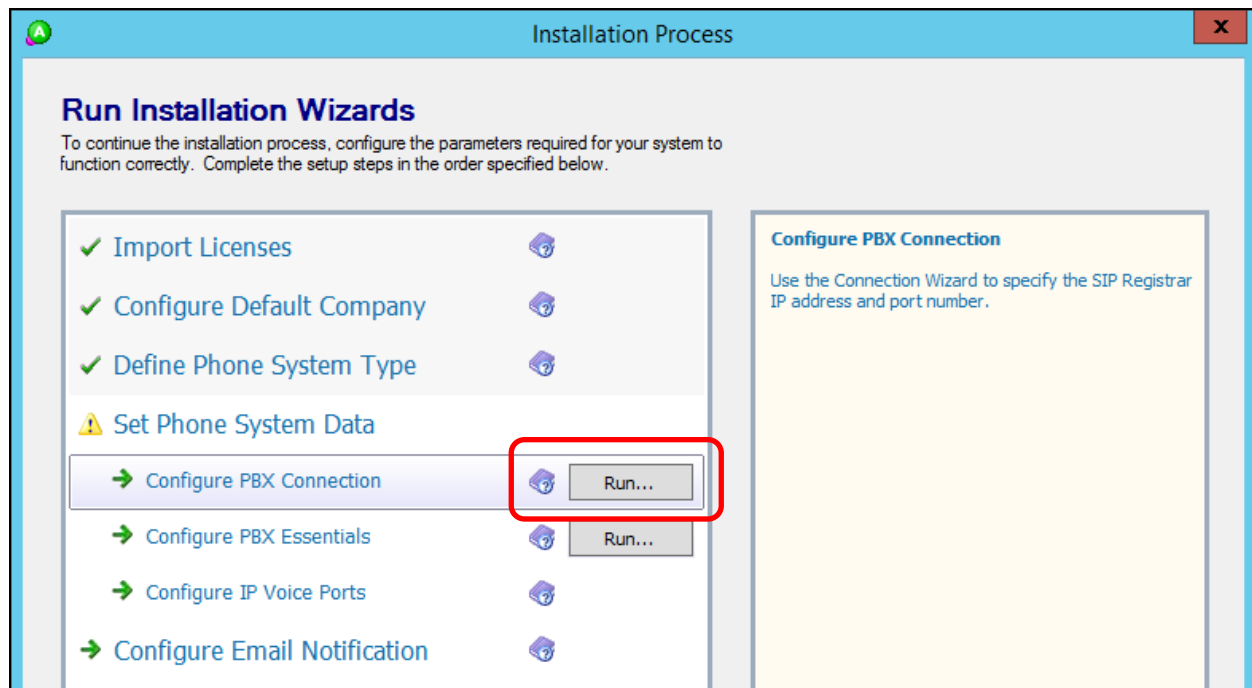


The **Phone System Type** screen is displayed next. For **PBX Type**, select “Avaya IP Office”.



6.3. Administer Phone System Data

The **Installation Process** screen below is displayed. Click the **Run** icon associated with **Set Phone System Data** → **Configure PBX Connection** shown below.



The **Avaya IP Office PBX Setup Wizard** → **Configure PBX Connection** screen is displayed. For **SIP Registrar IP Address**, enter the pertinent LAN IP address of the primary IP Office system from **Section 5.7**.




Continue with the Installation Wizard until the **Avaya IP Office PBX Setup Wizard → Create Park Queue** screen is displayed. For **Park Queue Number**, enter the extension of the EICC Hold group from **Section 5.2**.



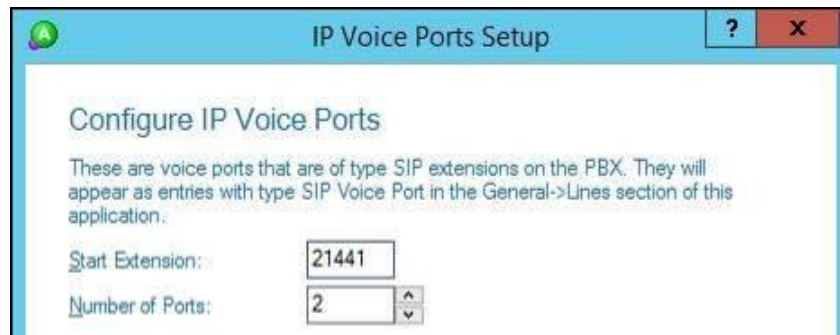
The screenshot shows a window titled "Avaya IP Office PBX Setup Wizard" with a close button (X) in the top right corner. The main heading is "Create Park Queue". Below the heading, there is explanatory text: "The Park queue is a Hunt Group for the management of parked calls. This number is not normally dialed by users. It must be dialable by any dialogic voiceport installed in the system. This will appear as an entry in the General->System Queues section of this application." At the bottom, there is a label "Park Queue Number:" followed by a text input field containing the number "21771".

The **Avaya IP Office PBX Setup Wizard → Create Voice Messaging Queue** screen is displayed next. For **Voice Messaging Queue Number**, enter the extension of the EICC Voicemail group from **Section 5.2**.



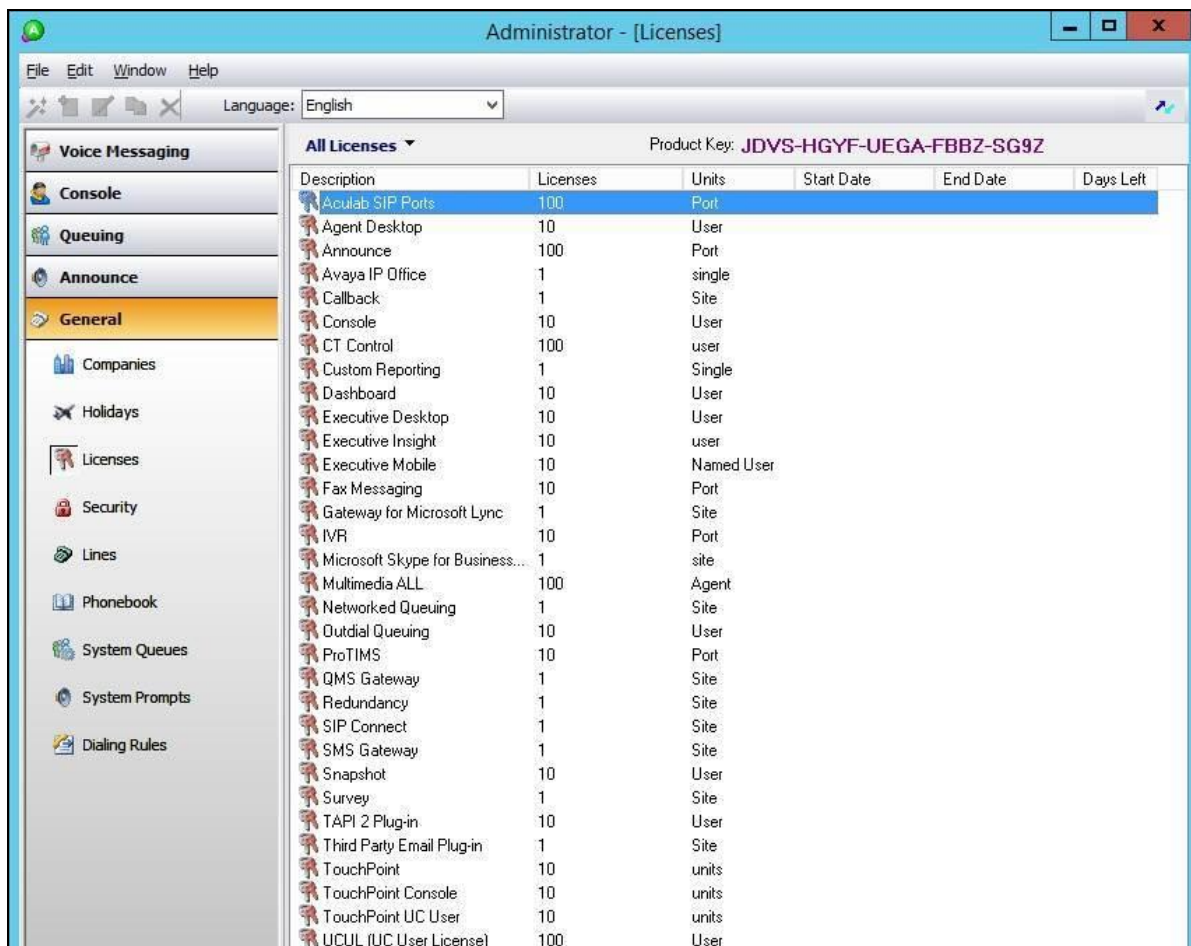
The screenshot shows a window titled "Avaya IP Office PBX Setup Wizard" with a close button (X) in the top right corner. The main heading is "Create Voice Messaging Queue". Below the heading, there is explanatory text: "The Voice Messaging Queue is a Hunt Group used as the Pilot Number to dial Voicemail. When a user activates a Presence Profile the system will forward their phone to this number. The forward busy destination for users phones will need to be set manually or via the PBX Maintenance interface. This number is dialed by all users, and is normally an easily remembered number. This will appear as a entry in the General->System Queues section of this application." At the bottom, there is a label "Voice Messaging Queue Number:" followed by a text input field containing the number "21772".

Continue with the Installation Wizard until the **IP Voice Ports Setup** → **Configure IP Voice Ports** screen is displayed. For **Start Extension**, enter the first SIP base extension from **Section 5.8**. For **Number of Ports**, select the total number of SIP extensions from **Section 5.8**.



6.4. Verify License

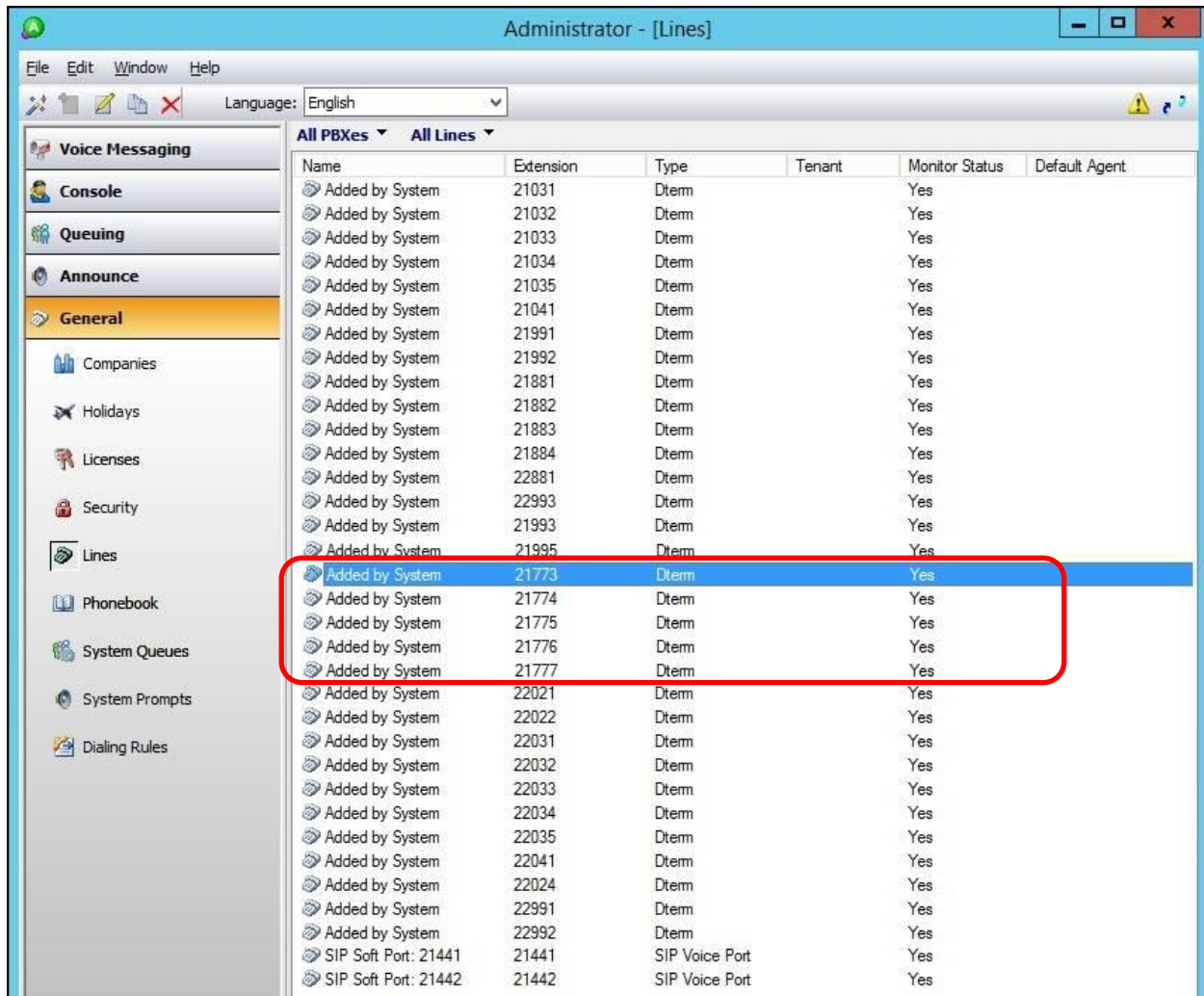
The **Administrator** screen is displayed upon completion of the Installation Wizard. Select **General** → **Licenses** from the left pane, to display **All Licenses** in the right pane. Verify that the following licenses are in place: **Aculab SIP Ports**, **Agent Desktop**, **Avaya IP Office**, and **UCUL (UC User License)**.



6.5. Administer Lines

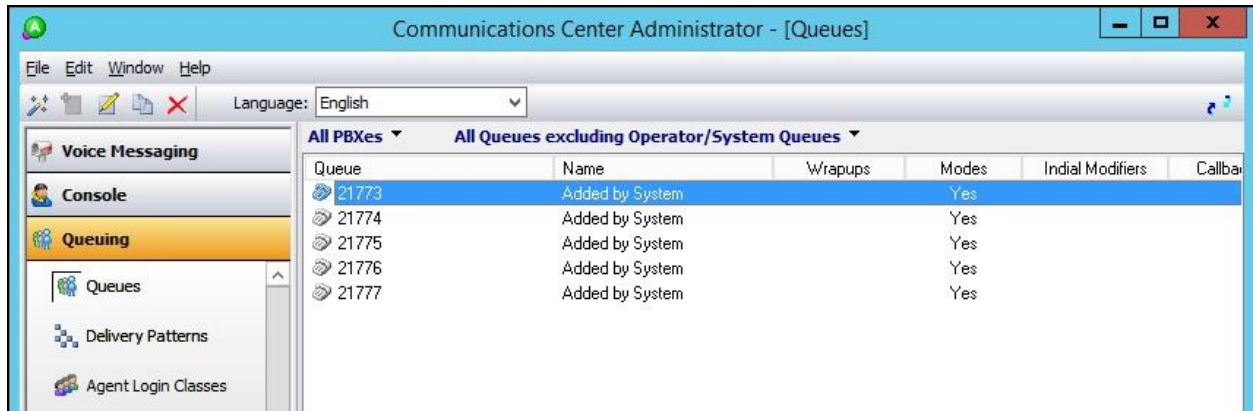
Select **General** → **Lines** from the left pane, to display all extensions obtained automatically from both IP Office systems. Locate the entries associated with the EICC groups from **Section 5.2**, in this case extensions “21773-21777”, right-click on the entries one at a time and select **Convert Into Queue**.

Note that the EICC groups with extensions “21771-217722” were already configured as part of the Installation Wizard in **Section 6.3**.



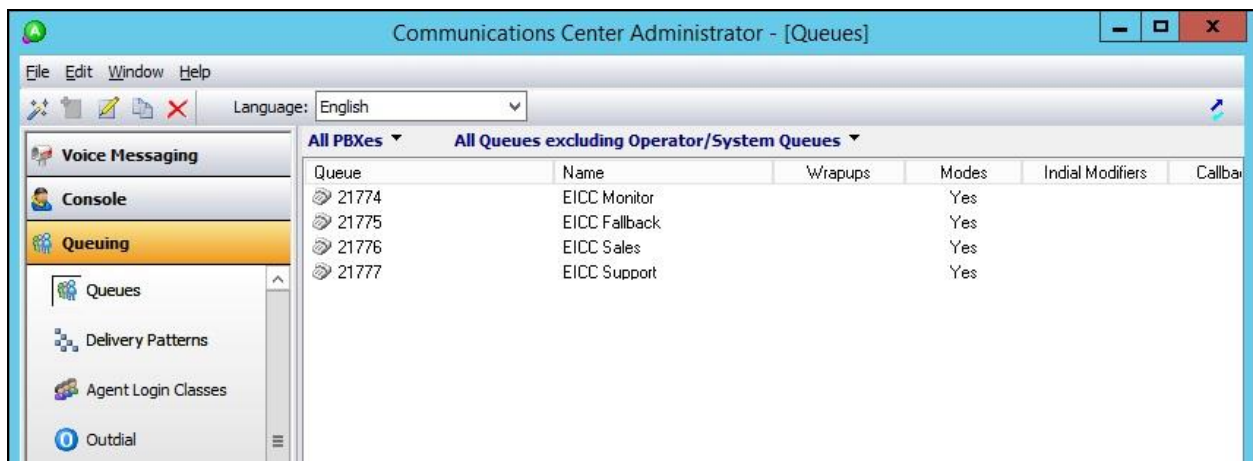
6.6. Administer Queues

Select **Queuing** → **Queues** from the left pane, to display a list of queues converted from **Section 6.5**. Right click on the entry associated with the EICC Operator group from **Section 5.2**, in this case extension “21773”, and select **Convert to Operator Queue**.



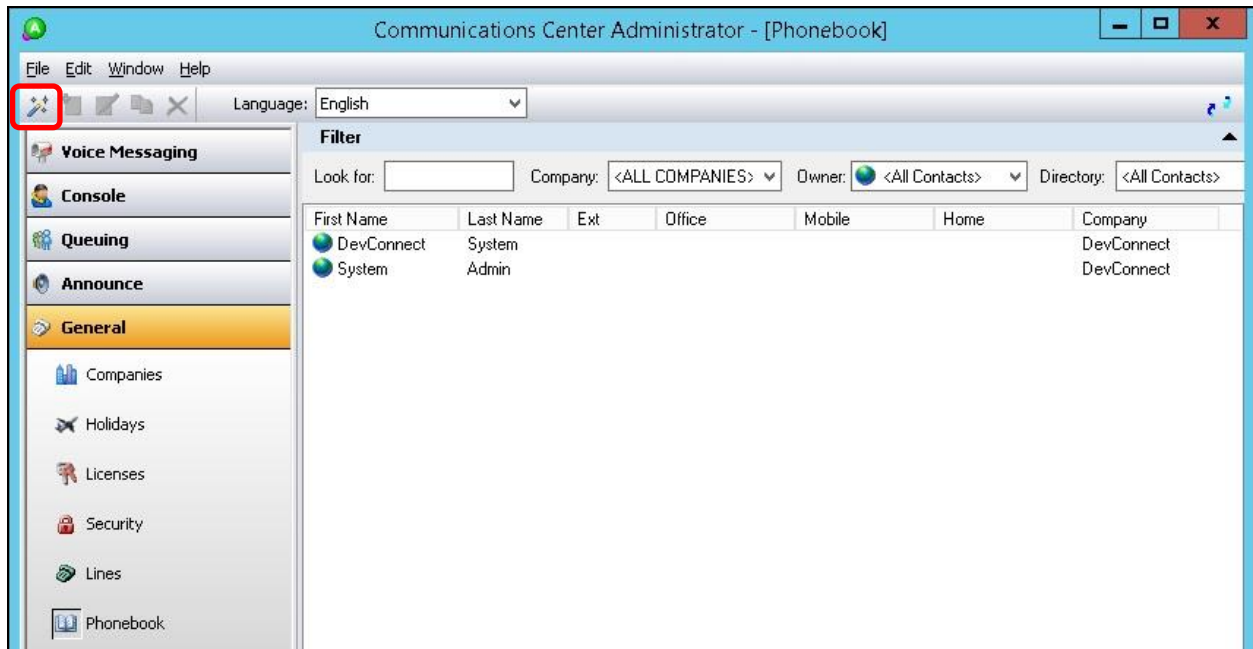
Right click on each remaining entry, and select **Edit** to modify the **Name** as desired. The queue name will be used in agent desktop screen pops.

In the compliance testing, the queues were modified to match corresponding group names from **Section 5.2**, as shown below.



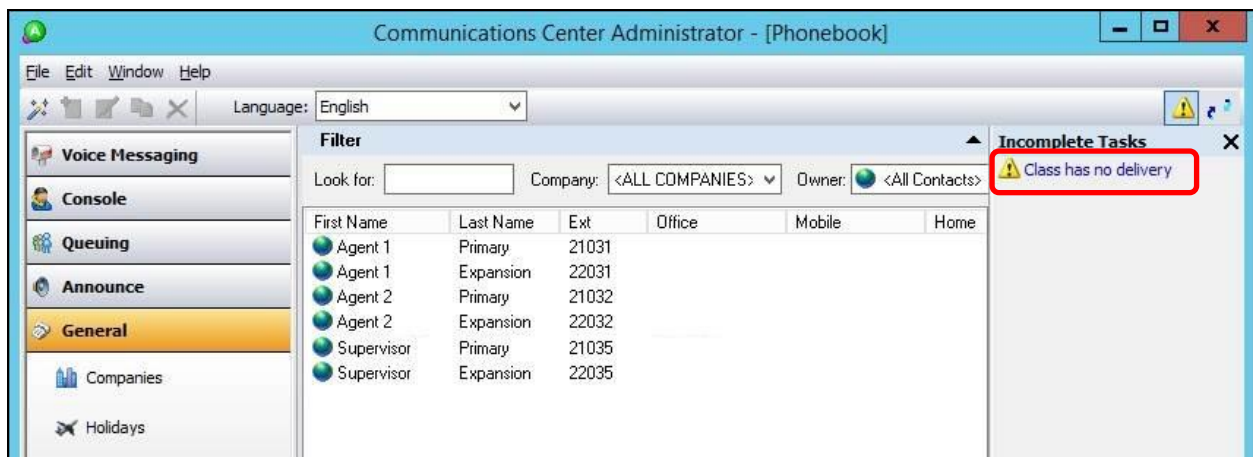
6.7. Administer Phonebook

Select **General** → **Phonebook** from the left pane, followed by the **Add Wizard** icon located at the upper left corner of the screen.

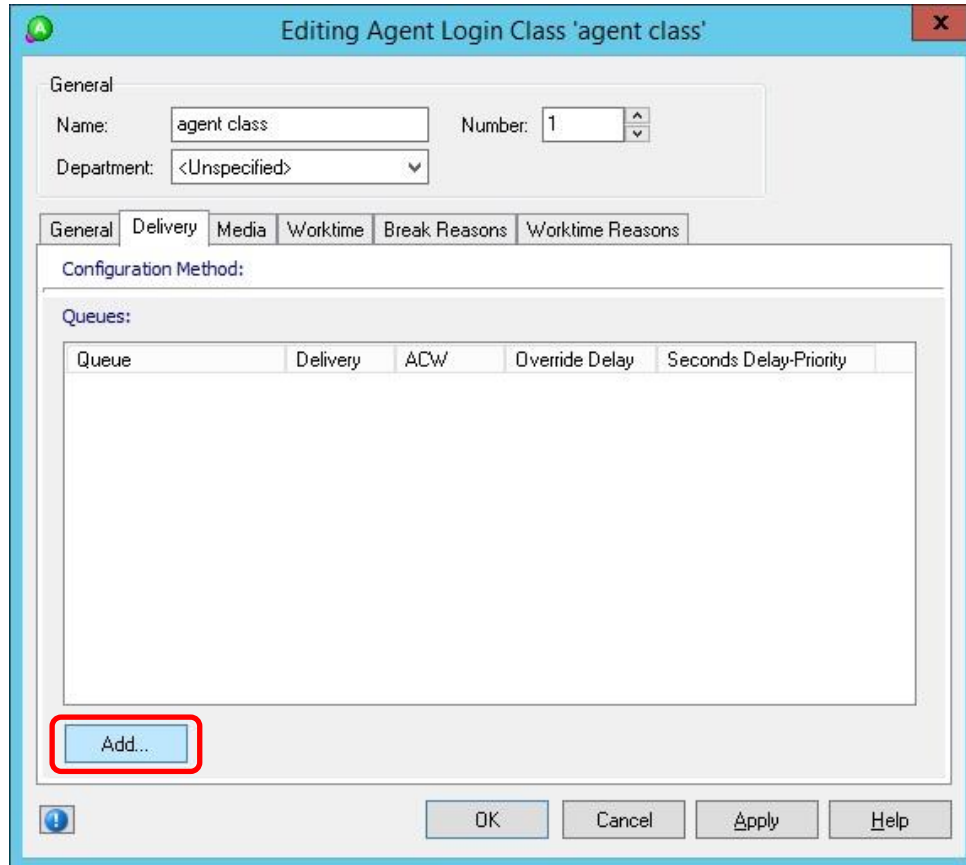


Follow the **Adding Phonebook Contact** pop-up screens (not shown) to configure a corresponding entry for each agent and supervisor from **Section 5.4** and **Section 5.6** respectively. In the compliance testing, four agents and two supervisors were created as shown below.

Double click on **Class has no delivery**.



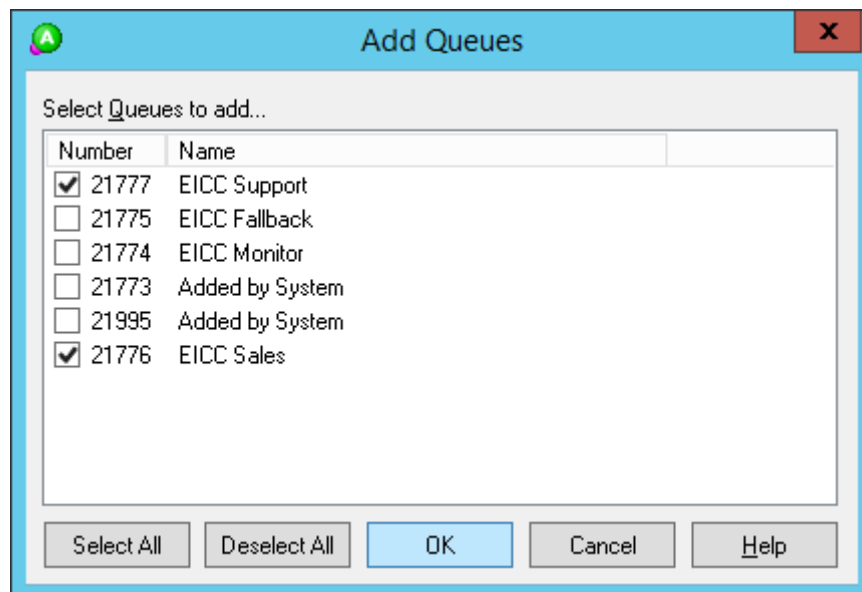
The **Editing Agent Login Class** screen is displayed. Select the **Delivery** tab, and click **Add**.



The dialog box titled "Editing Agent Login Class 'agent class'" has a "General" tab selected. It contains fields for "Name" (agent class), "Number" (1), and "Department" (<Unspecified>). Below these are tabs for "General", "Delivery", "Media", "Worktime", "Break Reasons", and "Worktime Reasons". The "Delivery" tab is active, showing a "Configuration Method:" section with a "Queues:" table. The table has columns: Queue, Delivery, ACW, Override Delay, and Seconds Delay-Priority. An "Add..." button is highlighted with a red rectangle at the bottom left of the "Queues" section. At the bottom of the dialog are "OK", "Cancel", "Apply", and "Help" buttons.

Queue	Delivery	ACW	Override Delay	Seconds Delay-Priority
-------	----------	-----	----------------	------------------------

The **Add Queues** screen is displayed next. Select the applicable queues to be handled by the agents, in this case **EICC Support** and **EICC Sales**, as shown below.



The dialog box titled "Add Queues" has a "Select Queues to add..." section. It contains a table with columns "Number" and "Name". The table lists several queues, with checkboxes next to the "Number" column. The checkboxes for "21777 EICC Support" and "21776 EICC Sales" are checked. At the bottom are "Select All", "Deselect All", "OK", "Cancel", and "Help" buttons.

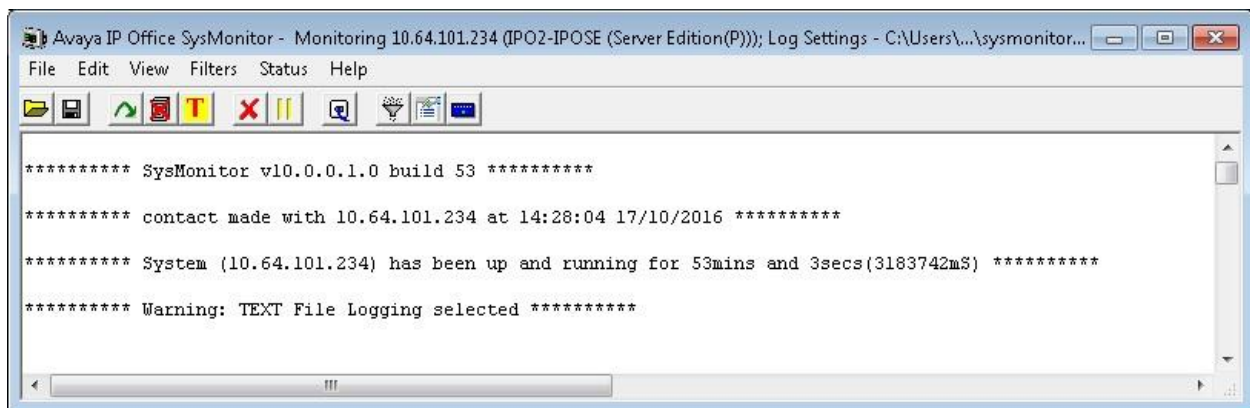
Number	Name
<input checked="" type="checkbox"/> 21777	EICC Support
<input type="checkbox"/> 21775	EICC Fallback
<input type="checkbox"/> 21774	EICC Monitor
<input type="checkbox"/> 21773	Added by System
<input type="checkbox"/> 21995	Added by System
<input checked="" type="checkbox"/> 21776	EICC Sales

7. Verification Steps

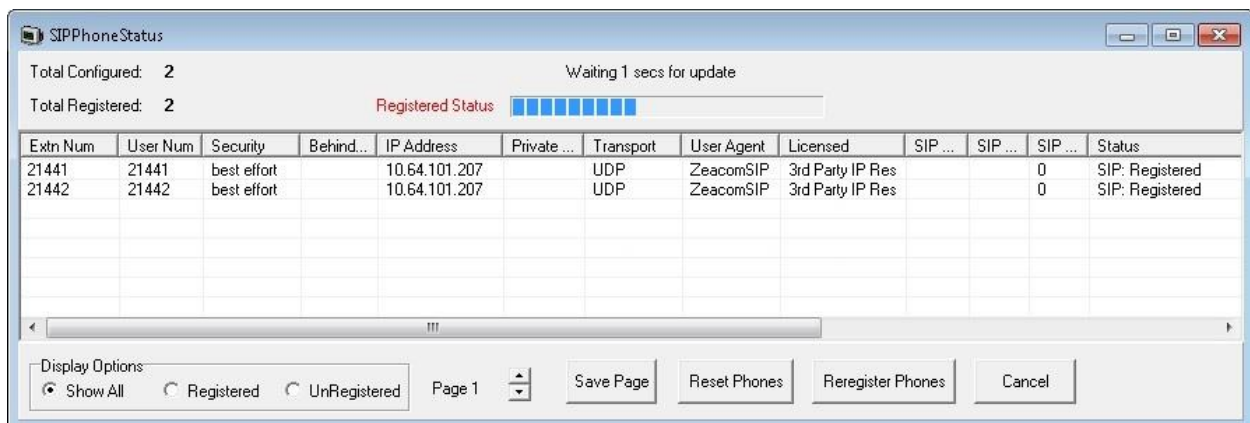
This section provides tests that can be performed to verify proper configuration of IP Office Server Edition and EICC.

7.1. Verify Main Site

From a PC running the IP Office Monitor application, select **Start → All Programs → IP Office → Monitor** to launch the application, and connect to the primary IP Office system. The **Avaya IP Office SysMonitor** screen is displayed. 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 5.8** and that the **Status** is “SIP: Registered“, as shown below.



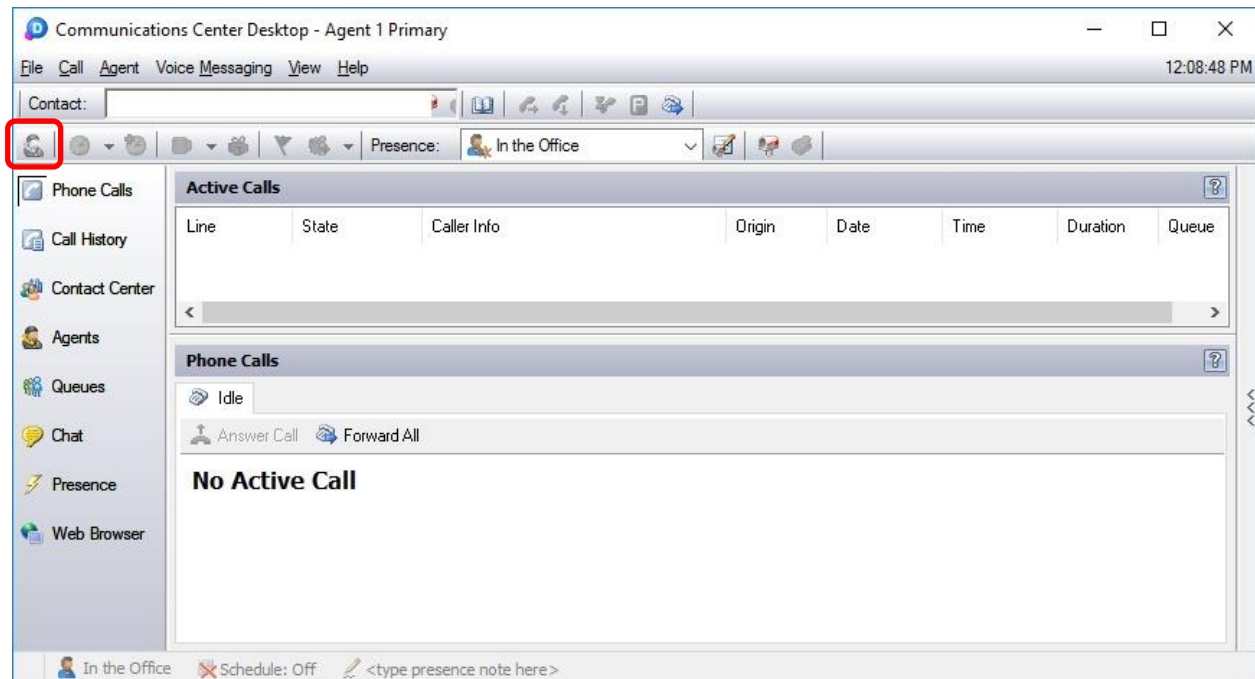
From the agent desktop, double-click on the **Desktop** shortcut icon shown below, which was created as part of Enghouse Interactive Desktop installation.



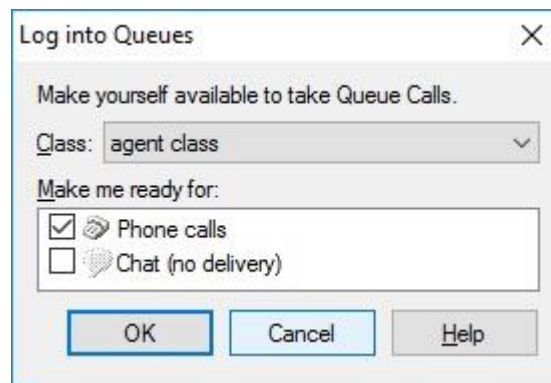
The **Desktop** login screen is displayed. Enter the login name associated with an agent on the Main site from **Section 6.7**, and use the generic default PIN value from EICC. Retain the default value in the remaining fields.

The login screen features a white background with a blue wave graphic at the bottom. In the top left is a colorful logo with the text 'bring customers closer'. In the top right is the word 'Desktop' in large blue font. Below the wave is the 'Enghouse Interactive' logo. The login section includes a 'Login Name:' label, a text box containing 'Agent 1 Primary', a 'PIN:' label, and an empty text box. There is a checked checkbox labeled 'Remember me next time'. At the bottom right are three buttons: 'OK', 'Cancel', and 'Help'.

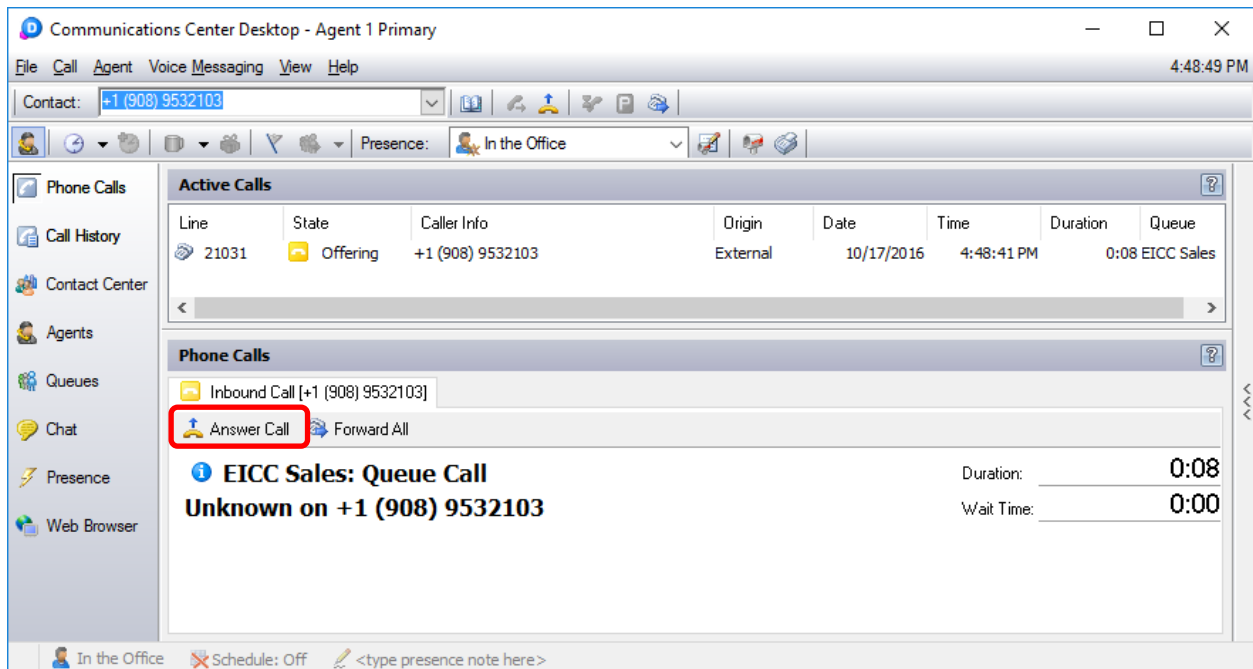
The **Communications Center Desktop** screen is displayed. Click on the **Log into Queues** icon shown below.



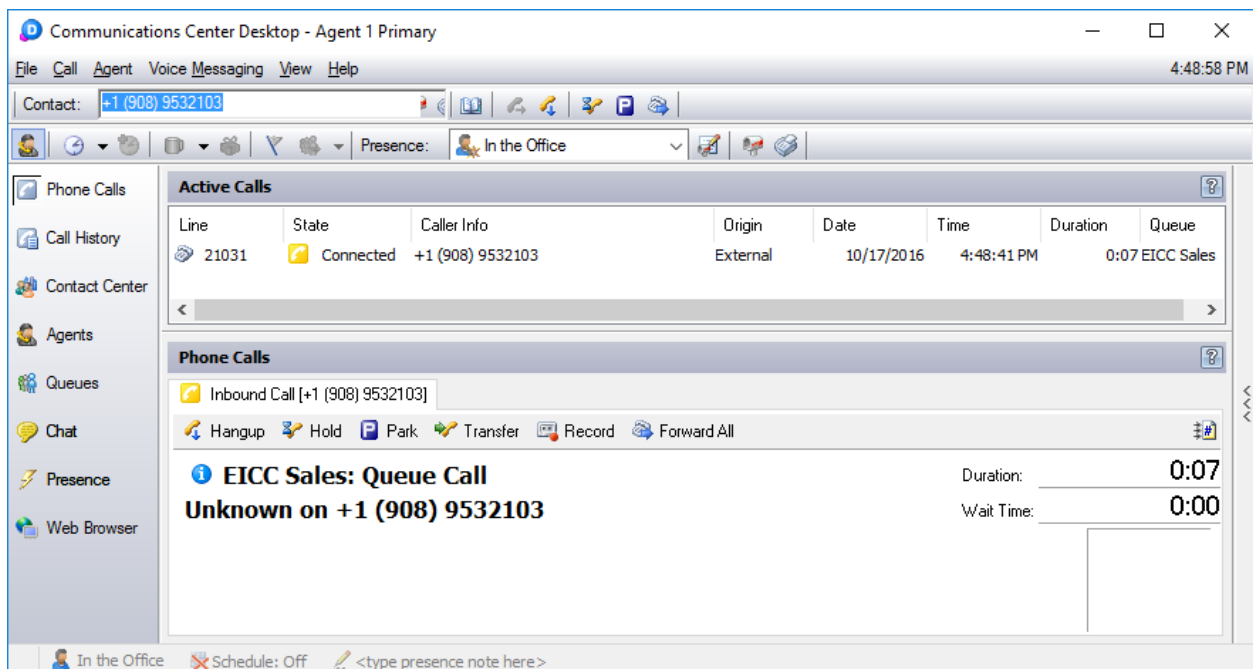
The **Log into Queues** dialog box is displayed next. Retain all default values.



Make an incoming call from PSTN to the EICC Sales group, with available agent “21031” at the Main site. Verify that the agent desktop is populated with a voice call entry, and that the **State** is “Offering”, as shown below. Click **Answer Call**.

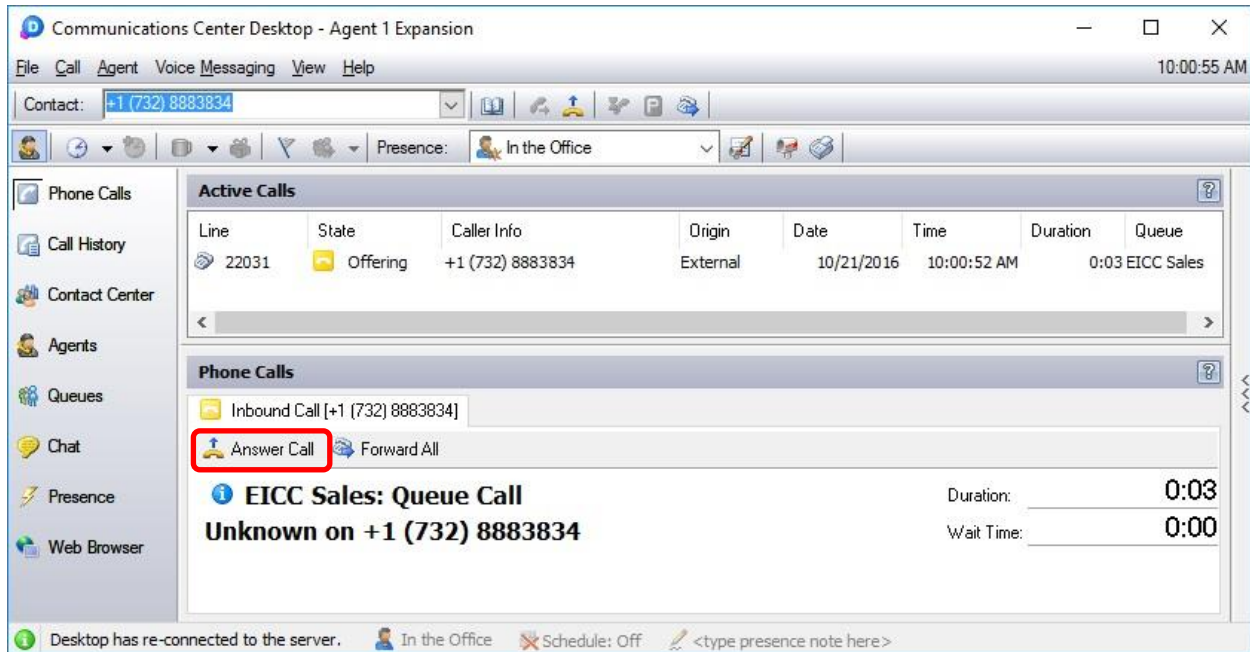


Verify that the agent is connected to the PSTN caller with two-way talk paths, and that the **State** is updated to “Connected”, as shown below.

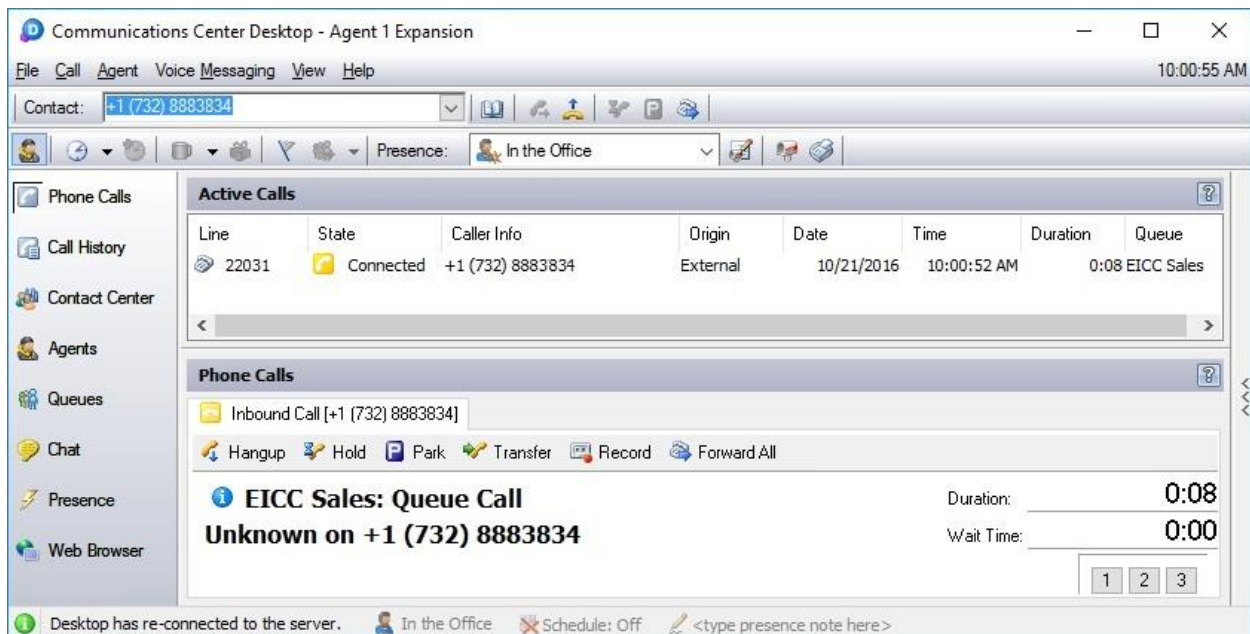


7.2. Verify Remote Site

Repeat the procedures in **Section 7.1** to log in an agent on the Remote site into the queues. Make an incoming call from PSTN to the EICC Sales group, with available agent “22031” at the Remote site. Verify that the agent desktop is populated with a voice call entry, and that the **State** is “Offering”, as shown below. Click **Answer Call**.



Verify that the agent is connected to the PSTN caller with two-way talk paths, and that the **State** is updated to “Connected”, as shown below.



8. Conclusion

These Application Notes describe the configuration steps required for Enghouse Interactive Communications Center 2016R2 to successfully interoperate with Avaya IP Office Server Edition 10.0 using the TAPI and SIP user interfaces. All feature and serviceability test cases were completed with observations noted in **Section 2.2**.

9. Additional References

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

1. *Administering Avaya IP Office™ Platform with Manager*, Release 10.0, September 2016, available at <http://support.avaya.com>.
2. *CC 2016 R2 First-time Installation and Server Setup – IP Office*, August 2016, available via IP Office training course provided by Enghouse Interactive.
3. *Installing CC Expander Server for an IP Office Expansion*, August 2016, available via IP Office training course provided by Enghouse Interactive.

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