

Avaya Solution & Interoperability Test Lab

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: <u>www.enghouseinteractive.com</u>
- Email: <u>usa.support@enghouse.com</u>

3. Reference Configuration

The configuration used for the compliance testing is shown below.

Device Type	Device Number/Extension					
Main S	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					

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



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	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 CTI Application Server Avaya 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 CTI Auxiliary Services Avaya 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** \rightarrow **All Programs** \rightarrow **IP Office** \rightarrow **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.

📶 Avaya IP Office Manager for Serv	er Edition IPO2-IPOSE [10.0.0.1.0 build	1 53]				- • ×
File Edit View Tools He	elp					
IPO2-IPOSE - License	•	-	🤱 🗁 - 🔚 🛛	a 🔝 📰 🔺 i 🗸 🚈 🖪		
Configuration					📥 - 🖻 🗙	(✓ < >
BOOTP (13) License Remote Server Derator (3) DLDS File Status Valid					•	
🗄 🙀 Group(12)	Feature	Instances	Status	Expiration Date	Source 🔶	Add
	3rd Party IP Endpoints	1000	Valid	Never	PLDS Nodal	
······································	Additional Voicemail Pro Ports	252	Valid	Never	PLDS Nodal	Remove
- Account Code(0)	Avaya Contact Center Select	1	Valid	Never	PLDS Nodal	
🕮 📲 User Rights(11)	Avaya IP endpoints	1000	Valid	Never	PLDS Nodal	
E- Cocation(2)	Avaya Mac Softphone	1000	Valid	Never	PLDS Nodal	
E POZ-IPOSE	Avaya Softphone Licence	1000	Valid	Never	PLDS Nodal	
IPO2-IPOSE	Basic User	1000	Obsolete	Never	PLDS Nodal	
⊕行 Line (2)	CTI Link Pro	2	Valid	Never	PLDS Nodal	
🖽 🖘 Control Unit (8)	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.

📶 Avaya IP Office Manager for Serv	er Edition IPO2-IP500V2 [10.0.0.1.0 build 5	53]				
File Edit View Tools He	۱p					
IPO2-IP500V2 License	-	-	2 🗁 - 🖬 🛛	🔺 🔝 🔝 🔺 🖃 💽		
Configuration					r - 🖻 🛛 🗙	(< >
BOOTP (13) License Remote Server Image: Solution PLDS File Status Valid						^
🖽 📲 Group(12)	Feature	Instances	Status	Expiration Date	Source	Add
Short Code(52)	IP500 Universal PRI (Additional cha	100	Valid	Never	PLDS Nodal	
Time Profile(0)	CTI Link Pro	1	Valid	Never	PLDS Nodal	Remove
Account Code(0)	Wave User	16	Valid	Never	PLDS Nodal	
🐵 🏰 User Rights(11)	Avaya IP endpoints	12	Valid	Never	Virtual	
🗈 🔤 Location(2)	Server Edition R10	1	Valid	Never	Virtual	
	Power User	1	Valid	Never	Virtual	
• • • • • • • • • • • • • • • • • • •	SIP Trunk Channels	30	Valid	Never	Virtual	

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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.

M Avaya IP Office Manager for Server Edition IPO2-IPOSE [10.0.0.1.0 build 53]						
File Edit View Tools	Help					
IPO2-IPOSE - Grou	up - 21882 Co	ombo Support 💿 🔹 🗟 🗁 - 🛃 🛛 💽	🔜 🚹 🖌 🎿 🔄			
Configuration	Se Se	equential Group <hunt group:0=""></hunt>	.*	- 🖻 🗙 🗸 < >		
⊞ 8 BOOTP (13)	Group Queuing Overflow Fa	allback Voicemail Voice Recording Annou	ncements SIP			
Solution	Name	EICC Hold	Profile	Standard Hunt Group		
user(26) ⊡∰ Group (12)	Extension	21771	Exclude From Directory			
	Ring Mode	Sequential 👻	No Answer Time (sec)	System Default (15)		
	Hold Music Source	No Change 🔹 🔻				
🗄 📲 User Rights(11)	Ring Tone Override	None 🗸 🗸				
⊕ 🗫 Location(2) ⊟ ≪ IPO2-IPOSE	Agent's Status on No-Answer Applies To	None 🔻				
IPO2-IPOSE	Central System	IPO2-IPOSE	📝 Advertise Group	=		
⊕~17 Line (2) ⊕~⇔ Control Unit (8)	User List					
Extension (8)	Extension Name System					
⊞…∎ User (18) ⊕…∰ Group (10)						
⊡ 9× Short Code (5) 						

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

File Edit View Tools Help		
IPO2-IPOSE Group	21771 EICC Hold Composition of the second)= <u>1</u>
BOOTP (13) Operator (3) Solution User(28) Group(21) Wind Code(53) Directory(0) Time Profile(0) Account Code(0) User Rights(11) Location(2) System (1) T↑ Line (2) Control Unit (8) Docentrol Unit (8)	up Queuing Overflow Fallback Voicemail Voice Recording Anno icemail Code nfirm Voicemail Code icemail Email Off O Copy O Forward Alert	ouncements SIP Voicemail On Voicemail Answer Time (sec) Voicemail Help Broadcast UMS Web Services

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.

nie Edit View Tools Help IPO2-IPOSE 🔻 Group	✓ 21771 EICC Hold	• 12 - 1 • 1 • • • •	- 4	
Configuration	E Sequ	ential Group EICC Hold: 21771	📥 - 🖻 🗙 🗸 🗸	<
IPO2-IPOSE System (1) Group (10) System (1) S	Group Queuing Overflow I Name Extension Ring Mode Hold Music Source Ring Tone Override Agent's Status on No-Answer Applies To Central System User List Extension Name System	Fallback Voicemail Voice Recording Annour EICC Hold 21771 Sequential No Change None IPO2-IPOSE	Icements SIP Profile Star Exclude From Directory No Answer Time (sec) Syste Advertise Group	em De

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.

🝸 Avaya IP Office Manager for Sen	ver Edition IPO2-IPOSE [10.0.0.]	1.0 build 53]	
File Edit View Tools H	elp		
Configuration	n • 112052.		
Configuration		H.323 Extension. 11205 21031	
BOOTP (13) Operator (3) Operator (3) Solution User (28) Directory(0) Directory(0) Operator Code (53) Directory(0) Operator Code(0) User Rights(11) Operator Code(0) O	Extension VoIP IP Address MAC Address Codec Selection	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Enable Faststart for non-Avaya IP phones Out Of Band DTMF Requires DTMF Local Tones Allow Direct Media Path
11203 21031 11200 21041 11203 21441 11204 21442 11202 33333	Reserve License Supplementary Services	None None	•
User (20) Group (18) Short Code (5) Service (0) Go find the service (0) Go find the service (0)	Media Security	Same as System (Preferred) Advanced Media Security Options Same As System	n

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.

Manager for Server Editio	n IPO2-IPOSE [10.0.0.1.0 build 53]	
IPO2-IPOSE User	🔹 21031 H323 Primary 🔹 🗟 😂 - 🖃 🔳 🔝	V - 9
Configuration	E H323 Primary: 21031	📸 • 🔛 🗙 🗸 > 🥔
BOOTP (13) A Country (1)	User Voicemail DND Short Codes Source Numbers Telephony	Forwarding Dial In Voice Recording Butto 🔹 🕨
Solution	Call Settings Supervisor Settings Multi-line Options Call Log TUI	
eref User(28) eref Group (21) eref Short Code(53) Director (0)	Login Code	Force Login
Directory(0) Time Profile(0) Account Code(0) So Une Director(1)	Login Idle Period (sec)	Force Account Code
E-tocation(2)	Monitor Group	Force Authorization Code
⊡-≪ IPO2-IPOSE ⊞-≪ System (1)	Coverage Group	🔄 Incoming Call Bar
电一行 Line (2)	Status on No-Answer Logged On (No change)	🔲 Outgoing Call Bar
Extension (10)		🔄 Inhibit Off-Switch Forward/Transfer
User (20)	Reset Longest Idle Time	🔲 Can Intrude
21033 Extn21033	All Calls	🔲 Cannot Be Intruded
21034 Extn21034	External Incoming	🔲 Can Trace Calls
		🔲 Deny Auto Intercom Calls

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.

Manager for Server Edition	IPO2-IPOSE [10.0.0.1.0 build 53]		
File Edit View Tools Help IPO2-IPOSE - User	✓ 21031 H323 Primary	1 2 2 - B A 🛛 A 🖓 🗆 🛛	7
Configuration	Е H32	3 Primary: 21031	
BOOTP (13) Operator (3)	User Voicemail DND Short Code	s Source Numbers Telephony Forwarding	Dial In Voice Recording Butter
Solution User (28) Group (21) Short Code (53)	Block Forwarding		
Directory(0) Time Profile(0) Account Code(0) @ \$_ User Rights(11)	Follow Me Number		•
i∰i∰ Location(2) i=i¶ IPO2-IPOSE	Forward Unconditional		
⊕-≪s System (1) ⊕-⊄? Line (2)	To Voicemail		
End (c)	Forward Number	21032	•
⊕	Forward Hunt Group Calls	V	
- Ing NoUser 21033 Extn21033	Forward Internal Calls	V	
21034 Extn21034	Forward On Busy		
	Forward On No Answer		
21041 SIP Primary	Forward Number	21772	•
erver (18) erver (18) erver (1) erver (1) erver (1) erver (1)	Forward Internal calls		

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.

🐮 Awaya IP Office Manager for Server Editi	on IPO2-IPOSE [10.0.0.1.0 build 53]			
File Edit View Tools Help				
IPO2-IPOSE • Group	 21774 EICC Monitor 	- 🗄 🚨 - 属 🔺 🔜 🛕	🗸 🐸 🖪	
Configuration	🗄 Sequ	ential Group EICC Monitor: 2177	4 📑 - 🖭	× < >
IPO2-IPOSE	Group Queuing Overflow F	allback Voicemail Voice Recording Annot	uncements SIP	
IPO2-IPOSE	Name	EICC Monitor	Profile	Standard Hunt 📤
●一行了 Line (2) ●一句 Control Unit (8)	Extension	21774	🔲 Exclude From Directory	
⊕@ Extension (8) ⊕¶ User (18)	Ring Mode	Sequential 🔹	No Answer Time (sec)	System Default
Group (17)	Hold Music Source	No Change 🔹		
21883 Combo Hot	Ring Tone Override	None 👻		
21884 Combo Hot 2 21881 Combo Sales	Agent's Status on No-Answer Applies To	None		
22881 Combo support	Central System	IPO2-IPOSE	📝 Advertise Group	=
21991 DR Main	User List			
21775 EICC Fallback	Extension Name System			
21771 EICC Hold				
21773 EICC Operator				
🛛 🎢 21772 EICC Voicemail				

The resultant screen after the selection is shown below.

🜃 Avaya IP Office Manager for Server Editi	ion	IPO2-IPOSE [10.0.0	.1.0 build 53]				- • ×
File Edit View Tools Help							
IPO2-IPOSE		✓ 21774	EICC Monitor	•	🎩 🗁 - 🔙 🔤 🔜 🔝 🔔	🗸 🐸 🖪	
Configuration	XXX	2	Seque	ntial G	Group EICC Monitor: 21774	📫 🚽 🔤	× < >
in − − ■ IPO2-IPOSE	Γ	Group Queuing	Overflow Fa	llback	Voicemail Voice Recording Annou	uncements SIP	
中行 Line (2)		Hold Music Source	:	No Cł	nange 🔹		*
Ene (2)		Ring Tone Overrid	2	None	•		
		Agent's Status on I Applies To	No-Answer	None	•		
Group (1/)		Central System		IPO2-I	POSE	📝 Advertise Group	
21883 Combo Hot		User List					
21881 Combo Sales		Extension	Name		System		
- Grand 21882 Combo Suppol ≡ - Grand 22881 Combo via Exp - Grand 21991 DR Main		 ✓ 21031 ✓ 21032 ✓ 22031 	H323 Primary H323 Primary H323 Expansi	/ /2 ion	IPO2-IPOSE IPO2-IPOSE IPO2-IP500V2		
21392 DK Secondary 21775 EICC Fallback 21771 EICC Hold		22032	H323 Expansi	ion2	IPO2-IP500V2		E
21773 EICC Operator							

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".

🖌 Avaya IP Office Manager for Server Editio	n IPO2-IPOSE [10.0.0.1.0 build 53]	
File Edit View Tools Help IPO2-IPOSE + User	• 21035 Extn21035 • 💈 📚 🗁 - 🖃 🛋 💽 🖬 ✔ 🍛 🍳	
Configuration	Extn21035: 21035*	📸 - 🖻 🗙 🗸 < > 🦽
	User Voicemail DND Short Codes Source Numbers Telephony Forwarding D Voicemail Code Confirm Voicemail Code Voicemail Email	ial In Voice Recording Button • • • Voicemail On Voicemail Help Voicemail Ringback Voicemail Email Reading UMS Web Services Enable GMAIL API

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**.

📶 Avaya IP Office Manager for Server Editio	n IPO2-IPOSE [10.0.0.1.0 build 53]	
File Edit View Tools Help IPO2-IPOSE + User	🔹 21035 Extn21035 🔹 🕴 🚨 😂 - 🖃 💽 🖬 🚺	✓ I
Configuration	E Extn21035: 21035	📸 - 🔛 🗙 🗸 > 🦔
 BOOTP (13) Operator (3) Solution User (28) Group (21) Short Code (53) Directory(0) Time Profile(0) Account Code(0) User Rights(11) User Rights(11) Location(2) IPO2-IPOSE System (1) T ime (2) 	User Voicemail DND Short Codes Source Numbers Telephony Call Settings Supervisor Settings Multi-line Options Call Log TUI Login Code	Forwarding Dial In Voice Recording Butte • >
Control Unit (8) ✓ Control Unit (8) ✓ Extension (10) User (20) ✓ IUser (20) ✓ IUser (20) ✓ IU33 Extn21033 ✓ 21033 Extn21034 ✓ 21035 Extn21035 ✓ 21031 H323 Primary ✓ 21031 H323 Primary ✓ 21031 H323 Primary ✓ IU31 H32 Prima	Reset Longest Idle Time All Calls External Incoming	 Inhibit Off-Switch Forward/Transfer Can Intrude Cannot Be Intruded Can Trace Calls Deny Auto Intercom Calls

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.

🕐 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 	- 🖌 🔝 - 🖬 🖪 🔛 🖬 📣 🗸	i 🖪
Configuration	H	Extn21035: 21035	📥 - 🖻 🗙 🗸 < > 🛷
BOOTP (13)	User Voicemail DND Sh	ort Codes Source Numbers Telephony Forward	ing Dial In Voice Recording Buth
	Block Forwarding		
Directory(0) 	Follow Me Number		
ia - 🔤 Location(2) ia - 🖘 IPO2-IPOSE ia - 🖘 System (1)	Forward Unconditional		
⊕-f7 Line (2) ⊕-≪ Control Unit (8)	Forward Number		•
User (20)	Forward Hunt Group Calls Forward Internal Calls	<i>v</i>	
	Economic On Russ		
	Forward On No Answer		
⊕ ∰ Group (18) ⊕ ∰ Short Code (5)	Forward Number	21772	
Service (0)	Forward Internal calls	Ø	

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.

Avaya IP Office Manager for Se File Edit View Tools	rver Edition IPO2-IPOSE [10.0.0.1.0 buil Help	d 53]							×
IPO2-IPOSE • System	▼ IPO2-IPOSE	- 12 🖼 +		1 🗸 🖂 🖪					
Configuration	X	IP02-IP0S	E		ſ	* - 10	$ \times $	✓ <	>
BOOTP (13)	System LAN1 LAN2 DNS	Voicemail Telephony	Directory Services	System Events	SMTP	SMDR	VoIP	VoIF +	
B User(28) Group (21)	IP Address	10 64 101	234						
Directory(0) Time Profile(0)	IP Mask	255 - 255 - 255 -	0						
Account Code(0) Current Code(0) Current Curr	Number Of DHCP IP Addresses DHCP Mode Server O Client O Dis	20 x	Adva	nced					

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

File Edit View Tools Helt	Edition IPO2-IPOSE [10.0.0.1.0 build 53]				
IPO2-IPOSE • System	✓ IPO2-IPOSE	• 2] 🖬 🔺 🛹 🔄 🖪		
Configuration	I	IP02-IP0SE		× 🖻 - 省	✓ < < < < < < < < < < < < < < < < < < <
BOOTP (13)	System LAN1 LAN2 DNS	Voicemail Telephony Directory Se	ervices System Events S	MTP SMDR Vol	VoIF +
Solution	LAN Settings VoIP Network Top	pology	r Mei	natur natur	
⊞-1 User(28) ⊞-19 Group (21)	H.323 Gatekeeper Enable	4			
Short Code(53) Directory(0)	Auto-create Extension	📃 Auto-create User	📃 H.323 Remo	te Extension Enable	
Directory(0) Time Profile(0)	H.323 Signaling over TLS D	isabled 👻	Remote Call Sig	naling Port 1720	4.
User Rights(11)	III CID Tauska Easkis				1
E-Section(2)					
C. S. Sustaine (1)	SIP Registrar Enable			101110-01097/0410 (D) U	
System (1)	Auto-create Extension/User			SIP Remote	Extension Er
System (1) IPO2-IPOSE IPO7-TA Line (2)	🥅 Auto-create Extension/User			SIP Remote	Extension Er
System (1) PO2-IPOSE PO77 Line (2) Por Control Unit (8) Por Strengton (10)	Auto-create Extension/User SIP Domain Name	dr220.com		🔲 SIP Remote	Extension Er
System (1) [PO2-IPOSE [PO2-IPOSE T7 Line (2) Control Unit (8) ⊕ Control Unit (8) ⊕ User (20) ⊕ User (20)	Auto-create Extension/User SIP Domain Name SIP Registrar FQDN	dr220.com		🔲 SIP Remote	Extension Er
System (1) [IPO23IPOSE [IPO23IPOSE Control Unit (8) Control Unit (8) User (20) User (20) Short Code (5)	Auto-create Extension/User SIP Domain Name SIP Registrar FQDN	dr220.com	5060	SIP Remote	Extension Er
System (1) IPO2-IPOSE IPO2-IPO2-IPOSE IPO2-IPO2-IPOSE IPO2-IPO2-IPOSE IPO2-IPO2-IPOSE IPO2-IPO2-IPO2-IPOSE IPO2-IPO2-IPO2-IPO3E IPO2-IPO2-IPO3E IPO2-IPO2-IPO3E IPO2-IPO2-IPO3E IPO2-IPO2-IPO3E IPO2-IPO3E IPO2-IPO3E IPO2-IPO3E IPO2-IPO3E IPO2-IPO3E IPO2-IPO3E IPO2-IPO3E IPO2-IPO3E IPO2-IPO3E IPO2-IPO3E IPO2-IPO3E IPO2-IPO2-IPO3E IPO2-IPO3E	Auto-create Extension/User SIP Domain Name SIP Registrar FQDN Layer 4 Protocol	dr220.com UDP UDP Port UDP TCP TCP Port	5060 (m) 5060 (m)	SIP Remote	Extension Er
	Auto-create Extension/User SIP Domain Name SIP Registrar FQDN Layer 4 Protocol	dr220.com ✓ UDP UDP Port ✓ TCP TCP Port ✓ TLS TLSPort	5060 (m) 5060 (m) 5061 (m)	SIP Remote	Extension Er 5060 5061

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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** \rightarrow **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.

🐮 Avaya IP Office Manager for Serve	er Edition IPO2-IPOSE (10.0.0.1.0 build 53	1	
File Edit View Tools He	lp		
IPO2-IPOSE	· 11209 21035	• ji 🏖 😂 • 🗐 🖪 🔝 🖬 🔺 🛩	1 4
Configuration	2	SIP Extension: 8000 *	🗠 - 🔤 🗙 🗸 < > 🛔
🗷 🕺 BOOTP (13) 🔥	Extension VoIP		
Operator (3) Solution	Extension ID	8000	
⊞ 🙀 Group (21)	Base Extension	21441	
⊕-♥¥ Short Code(53)	Caller Display Type	On	-
Time Profile(0)	Reset Volume After Calls		
	Device Type	Unknown SIP device	
⊕ 🐨 System (1) ⊕ ₫3 Line (2)	Location	Automatic	
E Control Unit (8)	Fallback As Remote Worker	Auto	•
🖽 📲 User (20)	Module	0	
⊕ 🐨 Group (18) ⊕ 🗪 Short Code (5)	Port	0	
···· S Service (0) ⊕ ⊕ D Incoming Call Rour ⊕ 1 IP Route (1)	Disable Speakerphone		
ARS (2)	Force Authorization		

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.

Avaya IP Office Manager for Ser	ver Edition IPO2-IPOSE [10.0.1.0 build 53]	
IPO2-IPOSE • Extensio	on •1	.1209 21035 🔹 🗟 😒 - 🖃 🔳 💽 🔝 🛹 💷 🖉	
Configuration	2	SIP Extension: 8000 *	🖆 - 🖻 🗙 🗸 < > 🛔
BOOTP (13) Operator (3) Solution User (28) Solution Directory(0) Caccount Code (53) Caccount Code (0) User Rights(11) User Rights(11) System (1) System (1) Cantrol Unit (8) Cantrol Unit (8) System (10) User (20) Service (0) Service (0)	Extension VoIP IP Address Codec Selection	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	 Requires DTMF Local Hold Music Re-invite Supported Codec Lockdown Allow Direct Media Path
Service (0) Incoming Call Rc Incoming Call Rc License (22) ARS (2) Poz-IP500V2 System (1) F(7 Line (4) Control Unit (4) Extension (31) User (10)	Reserve License Fax Transport Support DTMF Support 3rd Party Auto Answer Media Security	Reserve 3rd party IP endpoint license None RFC2833/RFC4733 None Same as System (Preferred) Advanced Media Security Options Same As System	

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 File Edit View Tools Help	Edition IPO2-IPOSE [10.0.0.1.0 build 5	[3]	_ = .
IPO2-IPOSE • User	 ▼ 21035 Extn21035 	• 🕴 🗶 🗁 - 🖃 🖪 🔛 📥 🛹 🖂 🛛	
Configuration	3	<user:0>: *</user:0>	🖆 - 🗎 X V K S 🛷
BOOTP (13) Operator (3) Solution Solution User(28) Group (21) Short Code(53) Directory(0) Time Profile(0) Account Code(0) System (1) Ff Line (2) Control Unit (8) Extension (10) Short Code (5) Sho	User Voicemail DND Shor Name Password Confirm Password Unique Identity Conference PIN Confirm Audio Conference PIN Account Status Full Name Extension Email Address Locale Priority System Phone Rights ACCS Agent Type Profile	rt Codes Source Numbers Telephony Forwarding Dial In EICC21441 EICC21441 EICC SIP Port 1 21441 5 None None Basic User	Voice Recording Button Pro
⊞≪ Control Unit (4) ⊞& Extension (31)		Receptionist	

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

Maya IP Office Manager for Serve File Edit View Tools Hel	Edition IPO2-IPOSE [10.0.0.1.0 build 53]	
IPO2-IPOSE 🔹 User	🝷 21035 Extn21035 🔹 🔹 😂 - 🖃 💽 📰 🛕 🛹 🔤	9
Configuration	 ✓ ✓	📑 - 🖻 X 🗸 < > 📣
	User Voicemail DND Short Codes Source Numbers Telephony Forwarding Dia	In Voice Recording Button Pro 🔹 🛌
Solution	Voicemail Code	🔲 Voicemail On
Group (21)	Confirm Voicemail Code	🔲 Voicemail Help
H Short Code(53)	Voicemail Email	🔲 Voicemail Ringback
		🔲 Voicemail Email Reading
User Rights(11)		🔲 UMS Web Services
IPO2-IPOSE		Enable GMAIL API
● ~ System (1) ● 一行 Line (2) ● ~ Control Unit (8) ● ~ <u>●</u> <u>Extension</u> (10)	- Voicemail Email Off Copy Forward Alert	
⊕ 1 User (20) ⊕ 3 Group (18)	DTMF Breakout	

Solution & Interoperability Test Lab Application Notes ©2016 Avaya Inc. All Rights Reserved. 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.

- 21025 Ev	+n21025 - 2 0 02 - 12 1 1 1	
· 21055 EX	<user:0>: *</user:0>	▲ < > × × × × × ×
User Voicemail DND Call Settings Superviso) Short Codes Source Numbers Telephon r Settings Multi-line Options Call Log TUI	Y Forwarding Dial In Voice Recording Button Pro * *
Login Code Confirm Login Code Login Idle Period (sec)		Force Login
Monitor Group Coverage Group	EICC Monitor	 Force Authorization Code Incoming Call Bar
Status on No-Answer	Logged On (No change)	 Outgoing Call Bar Inhibit Off-Switch Forward/Transfer
Reset Longest Idle Tim All Calls	16	 ✓ Can Intrude ✓ Cannot Be Intruded
	User Voicemail DNE Call Settings Superviso Login Code Confirm Login Code Login Idle Period (sec) Monitor Group Coverage Group Status on No-Answer Reset Longest Idle Tim All Calls	Image: Second Stress Image: Second Stress Image: Second Stress Image: Second Stress Image: Second Stress Second Stress

5.10. Administer Short Code

From the configuration tree in the left pane, right-click on **Solution** \rightarrow **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.

📶 Avaya IP Office Ma	inager for Server	Edition IPO2-IPOSE [10.0.0.1.0	build 53]	
File Edit View	Tools Help			
Solution	▼ Short Code	• *12*N#	• 🗟 🗁 - 📓 💽 🖬 🔥 🛹 🛶 🕢	
Configura	tion	12	<short code:0="">: Barred*</short>	🗠 - 🖻 X 🗸 < >
13)	*	Short Code		
Operator (3) Solution		Code	*6*N#	
🗄 📲 User (28)			* This Short Code is common to all systems.	
E-9× Short Code	(53)	Feature	Call Listen 👻	
) e(0)	Telephone Number	N	
Account Co	ode(0)	Line Group ID	0	
Location(2)		Locale	•	
in the system	(1)	Force Account Code		
由一行了 Line (2) 由一一一 Control 由一本 Extensio	Unit (8) on (10)	Force Authorization Code		

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.

🐮 Avaya IP Office Manager for Se	erver Edition IPO2-IPOSE [10.0.0.1.0 build	1 53]					
File Edit View Tools	Help			-			
IPO2-IPOSE 🔹 System	n 🔹 IPO2-IPOSE	- 1.2. 13	- 🗐 🖪 🛄	🖬 🚺 🖌 🖃	4		
Configuration	E	IP02-I	POSE				📸 - 🖻 🗙 🗸 < >]
BOOTP (13) Operator (3) Solution	System LAN1 LAN2 DNS Telephony Park & Page Tones & Dial Delay Time (sec) Dial Delay Count Default No Answer Time (sec) Hold Timeout (sec) Park Timeout (sec) Ring Delay (sec) Call Priority Promotion Time (sec) Default Currency Default Name Priority Media Connection Preservation Phone Failback Login Code Complexity	Voicemail Telephony & Music Ring Tones Sh 4 1 0 1 15 1 120 1 300 1 5 1 Disabled USD Favor Trunk Enabled Automatic	Directory Service: M Call Log	s System Events	SMTP Compand Switch O U-Law A-Law DSS Stat Auto Hc Dial By f Show Ac Show Ac Inhibit C Restrict Inc	SMDR V ling Law v v v v sus old Vame ccount Coo Dff-Switch I Network In lude locatin	/oIP VoIP Security C + +
⊡	Minimum length 4			1	Visually	Differentia	te External Call

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** \rightarrow **Advanced** \rightarrow **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 \rightarrow System to display the System screen in the right pane. Select the Unsecured Interfaces tab, and check TAPI/DevLink3 as shown below.

Avaya IP Office Manager for Server	Edition - Security Administration	- IPO2-IPOSE [10.0.0.1.0	build 53] [Administrator]	
File Edit View Help				
	*			
Security Settings	System: IP02-IP0	OSE		$\exists \cdot \times \checkmark < >$
E Security	System Details Unsecured Int	erfaces Certificates		
General ⊕ ≪ System (1)	System Password	*****	Change	
Services (7)	Voicemail Password	******	Change <u>1</u>	
Email: Service Users (7)	Monitor Password	******	Change 📃 Use Service User Cred	dentials
	TFTP Server V) Program Code 🔽 🚹 DevLink 🛛 🚺	TAPI/DevLink3 ☑ 1 HTTP Directory Read ☑ 1 HTTP Directory Write ☑ 1	
	Application Support			
	Application	Active Limitations		
	Legacy Voicemail	1		
	Voicemail Lite	1		
	Upgrade wizard	1		
	TAPI	1		
	one-X Portal Client	1		
	IP Office Directory Services	1		

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

🕐 Avaya IP Office Manager for Server Ed	lition - Security Administration	- IPO2-IP500V2 [10.0.0.1.0	ouild 53] [Administrator]	
File Edit View Help				
Security Settings	System: IP02-IP5	500V2		₫+ ≤ < >]
E- Security	System Details Unsecured Inte	erfaces Certificates		
General ⊕	System Password	*******	Change	
⊕-	Voicemail Password	******	Change 1	
🕀 🏠 Service Users (6)	Monitor Password	******	Change 📃 Use Service User Cre	dentials
	Application Controls TFTP Server V TFTP Directory Read TFTP Voicemail	Nerogram Code ☑ <u>↑</u> T. DevLink ☑ <u>↑</u> H H	API/DevLink3 ♥♪ TTP Directory Read ♥♪ TTP Directory Write ♥♪	
	Application Support			
	Application	Active Limitations		
	Legacy Voicemail	×		
	Voicemail Lite	×		
	Upgrade wizard	~		
	TAPI	~		
	one-X Portal Client	~		
	IP Office Directory Services	~		

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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 \rightarrow Control Panel \rightarrow 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.

3	Phone and Modem	X
Dialing Rules M	odems	
🔊 The f	ollowing telephony providers are insta	illed on this computer:
Providers:		
Avaya IP Office Microsoft HID I	e TAPI2 Service Provider Phone TSP	
TAPI Kernel-M Unimodem 5 S	ode Service Provider ervice Provider	
3L	Add 🚱 Rem	ove 🚱 Configure
	Close Ca	ncel Apply

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.

Avaya	TAPI2 config	uration	
Switch IP Address 10	.64.101.234	ОК	9
C Single User		Cano	el:
User Name			
User Password			
Third Party			
Switch Password	****		
Г	Ex Directory Us	ers	
Γ	WAV Users		
F	ACD Queues		

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.

Switch IP Address	192.168.200.234	OK
		Cancel
⊂ Single User		
User Name	1	
User Password		
Third Party	<u> </u>	
Switch Password	******	
	Ex Directory Users	
	WAV Users	

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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**.

0		Installation Process	X
Ru To c fund	un Installation Wizards continue the installation process, configure the parameter tion correctly. Complete the setup steps in the order sp	ers required for your system to ecified below.	
	Import Licenses Configure Default Company Define Phone System Type	Register	Define Phone System Type Run to select the PBX type to be installed. You can set up connection details and number plan information required to configure the CTI server.
- -	 Set Phone System Data Configure Email Notification 	3 Run	continue to the next step or Close now and complete this wizard at a later time. This step must be completed before beginning the Set Phone System Data step.

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

ø	Phone System Type	x
	Define Phone System Type Select the type of Phone PBX to be installed. The PBX will be added to the database and Application Manager will launch afterwards for further configuration steps. This step must be completed before beginning the Configure Phone System Data step.	
	PBX Type: Avaya IP Office V	

6.3. Administer Phone System Data

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

٥	Installation Proce	ss X
Run Installation Wizards To continue the installation process, configure the pa function correctly. Complete the setup steps in the or	rameters required for your system t der specified below.	10
✓ Import Licenses	6 7	Configure PBX Connection
 Configure Default Company 	3	Use the Connection Wizard to specify the SIP Registrar IP address and port number.
✓ Define Phone System Type	6	
▲ Set Phone System Data		
Configure PBX Connection	🧒 Run	
➔ Configure PBX Essentials	Run	
→ Configure IP Voice Ports	6	
→ Configure Email Notification	6	

The Avaya IP Office PBX Setup Wizard \rightarrow 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.

ø	Avaya	IP Office PBX Setup Wizard	x
	Configure PBX Col The System needs configure below.	nnection ation data for the Avaya IP Office PBX. Please enter it	
	SIP Registrar IP Address:	10.64.101.234 Test	

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

Avaya IP Office PBX Setup Wizard	x
Create Park Queue	
he Park queue is a Hunt Group for the management of parked calls.	
his number is not normally dialed by users. It must be dialable by any dialogic oiceport installed in the system. This will appear as an entry in the ieneral->System Queues section of this application.	
ark Queue Number: 21771	
1	Avaya IP Office PBX Setup Wizard Create Park Queue the Park queue is a Hunt Group for the management of parked calls. his number is not normally dialed by users. It must be dialable by any dialogic biceport installed in the system. This will appear as an entry in the eneral->System Queues section of this application. ark Queue Number: 21771

The Avaya IP Office PBX Setup Wizard \rightarrow 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.

ø	Avaya IP Office PBX Setup Wizard	x
	Create Voice Messaging Queue	
	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.	
	Voice Messaging Queue Number: 21772	

Continue with the Installation Wizard until the IP Voice Ports Setup \rightarrow 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 \rightarrow 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).

Ø	Adm	ninistrator - [Licenses]			- 0 ×
<u>File E</u> dit <u>W</u> indow <u>H</u> elp						
🕫 🖿 🐂 🗙 🛛 Lang	uage: English 🗸 🗸					
🐖 Voice Messaging	All Licenses 🔻		Product Key: JDV	S-HGYF-UE	A-FBBZ-SG9Z	
Canada .	Description	Licenses	Units	Start Date	End Date	Days Left
Console	Aculab SIP Ports	100	Port			1
📽 Queuing	👘 👫 Agent Desktop	10	User			
dill formula	🕂 Announce	100	Port			
Announce	🖷 👫 Avaya IP Office	1	single			
	- R Callback	1	Site			
📎 General	R Console	10	User			
1.22	- R CT Control	100	user			
🔛 Companies	🔢 👎 Custom Reporting	1	Single			
	🖷 🦷 Dashboard	10	User			
💓 Holidays	R Executive Desktop	10	User			
	Recutive Insight	10	user			
R Licenses	R Executive Mobile	10	Named User			
a second s	🕺 Fax Messaging	10	Port			
B Security	Gateway for Microsoft Lync	1	Site			
	N IVB	10	Port			
Lines	Microsoft Skype for Business	1	site			
	Multimedia ALL	100	Agent			
Development Phonebook	Networked Queuing	1	Site			
	Rutdial Queuing	10	User			
🏀 System Queues	Rent IMS	10	Port			
	MMS Gateway	10	Site			
System Prompts	Redundancu	1	Site			
• • •			Cite			
🚰 Dialing Rules	SMC Cateway	4	Cito			
	Characteria (10	Sile			
	The Shapshot	10	Oser			
	TADLO Dive in	10	Site			
	Third Darks Excel Director	90 9	User			
	Third Party Email Plug-In	10	Site			
		10	units			
	TouchPoint Lonsole	10	units			
	TouchPoint UC User	10	units			
	The sector of th	300	User			

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6.5. Administer Lines

Select **General** \rightarrow **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**.

٥		Administrate	or - [Lines]			- 🗆 X
<u> E</u> ile <u>E</u> dit <u>W</u> indow <u>H</u> elp						
💥 憎 📝 🛅 🗙 🛛 Lan	guage: English	v				🛆 e ?
Voice Messaging	All PBXes All Lines	•				
9	Name	Extension	Туре	Tenant	Monitor Status	Default Agent
🗟 Console	Added by System	21031	Dterm		Yes	
	Added by System	21032	Dterm		Yes	
Sign Queuing	Added by System	21033	Dterm		Yes	
Announce	Added by System	21034	Dterm		Yes	
Announce	Added by System	21035	Dterm		Yes	
⊘ General	Added by System	21041	Dterm		Yes	
	Added by System	21991	Dterm		Yes	
Companies	Added by System	21992	Dterm		Yes	
	Added by System	21881	Dterm		Yes	
🗙 Holidays	Added by System	21882	Dterm		Yes	
	Added by System	21883	Dterm		Yes	
R Licenses	Added by System	21884	Dterm		Yes	
4.	Added by System	22881	Dterm		Yes	
Security	Added by System	22993	Dterm		Yes	
-	Added by System	21993	Dterm		Yes	
a Lines	Added by System	21995	Dterm		Yes	_
*	Added by System	21773	Dterm		Yes	
Phonebook	Added by System	21774	Dterm		Yes	
	Added by System	21775	Dterm		Yes	
System Oueues	Added by System	21776	Dterm		Yes	
1000 - J	Added by System	21777	Dterm		Yes	
System Prompts	Added by System	22021	Dterm		Yes	
~ ~ ~	Added by System	22022	Dterm		Yes	
Dialing Rules	Added by System	22031	Dterm		Yes	
	Added by System	22032	Dterm		Yes	
	Added by System	22033	Dterm		Yes	
	Added by System	22034	Dterm		Yes	
	Added by System	22035	Dterm		Yes	
	Added by System	22041	Dterm		Yes	
	Added by System	22024	Dterm		Yes	
	Added by System	22991	Dterm		Yes	
	Added by System	22992	Dterm		Yes	
	SIP Soft Port: 21441	21441	SIP Voice Port		Yes	
	SIP Soft Port: 21442	21442	SIP Voice Port		Yes	

6.6. Administer Queues

Select **Queuing** \rightarrow **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**.

٥	Con	nmunication	is Center Administra	tor - [Queues]			x
<u> E</u> ile <u>E</u> dit <u>W</u> indow <u>H</u> elp	HE	242					
💢 怕 🔏 🛅 🗙 🛛 Language	: English	~					62
Voice Messaging	All PBXes 🔻	All Queues	excluding Operator/Sys	stem Queues 🔻			
woice messaging	Queue		Name	Wrapups	Modes	Indial Modifiers	Callba
Console	21773		Added by System		Yes		
	21774		Added by System		Yes		
🙀 Queuing	21775		Added by System		Yes		
	21776		Added by System		Yes		
i Queues	21777		Added by System		Yes		
a Delivery Patterns							
🕵 Agent Login Classes							

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.

٥	Cor	nmunication	s Center Administra	ator - [Queues]		_ 0	X
<u>File E</u> dit <u>W</u> indow <u>H</u> elp	HI	242					
💢 怕 🔏 🐚 🗙 🛛 Language	: English	×					1
Voice Messaging	All PBXes 🔻	All Queues	excluding Operator/Sy	/stem Queues 🔻			
where the standing	Queue		Name	Wrapups	Modes	Indial Modifiers	Callba
🕵 Console	21774		EICC Monitor		Yes		
	21775		EICC Fallback		Yes		
🛱 Queuing	21776		EICC Sales		Yes		
Queues ^	21777		EICC Support		Yes		
Seg. Delivery Patterns							
🕵 Agent Login Classes							
0 Outdial ≣							

6.7. Administer Phonebook

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

	Continue	annead on o d	arrears	tarining a data i fi	inorna bo cong			
<u>File E</u> dit <u>W</u> indow <u>H</u> elp	141	34						
🔀 📶 🛒 🐚 🗙 👘 Language	: English	~						2
Voice Messaging	Filter							
	Look for:	Con	npany:	(ALL COMPANIES) 🗸	Owner: 💽 <a< td=""><td>All Contacts> 🗸 🗸</td><td>Directory: <all co<="" td=""><td>ontacts</td></all></td></a<>	All Contacts> 🗸 🗸	Directory: <all co<="" td=""><td>ontacts</td></all>	ontacts
	First Name	Last Name	Ext	Office	Mobile	Home	Company	
🇌 Queuing	DevConnect	System					DevConnec	:t
Announce	System 🥥	Admin					DevConnec	:t
⊘ General								
Companies								
🗙 Holidays								
<table-of-contents> Licenses</table-of-contents>								
🔒 Security								
🔊 Lines								

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**.

٥	Comm	nunication	s Center A	Administrator - [P	honebo	pok]		x
<u>File E</u> dit <u>W</u> indow <u>H</u> elp			-				20	
🔀 🐩 🛒 🐚 🗙 🛛 Language	English	¥						e 2
Voice Messaging	Filter						Incomplete Tasks	×
Protect recording	Look for:		Company:	(ALL COMPANIES> 👻	Owner:	All Contacts>	\Lambda Class has no delivery	
Sa Console	First Name	Last Name	- Evt	Office	Mobile	Home		
🇌 Queuing	Agent 1	Primary	21031	Childo	inobile.	Tionic		
O Announce	Agent 1 Agent 2	Expansion Primary	22031 21032					
📎 General	Agent 2	Expansion Primary	22032					
M Companies	Supervisor	Expansion	22035					
💥 Holidays								

The Editing Agent Login (Class screen is displayed.	Select the Delivery tab, and clic	k Add.
---------------------------	----------------------------	--	--------

ieneral Name: Department:	agen <uns< th=""><th>t class specified</th><th>t></th><th>Numt</th><th>ber: 1</th><th></th><th></th></uns<>	t class specified	t>	Numt	ber: 1		
ieneral Deli Configuratio	very	Media od:	Worktime	Break Reasons	Worktime Reas	ons	
Queues:							
			128 8				
Queue			Delivery	ACW	Override Delay	Seconds Delay-Priority	
<u>u</u> ueue			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.

	Add Queues X
Select <u>Q</u> ueu	es to add
Number	Name
21777	EICC Support
21775	EICC Fallback
21774	EICC Monitor
21773	Added by System
21995	Added by System
21776	EICC Sales
Select All	Deselect All OK Cancel <u>H</u> elp

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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** \rightarrow **All Programs** \rightarrow **IP Office** \rightarrow **Monitor** to launch the application, and connect to the primary IP Office system. The **Avaya IP Office SysMonitor** screen is displayed. Select **Status** \rightarrow **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.

Fotal Config Fotal Regist	jured: 2 tered: 2			Registered Status	W	aiting 1 secs	for update					
Extn Num	User Num	Security	Behind	IP Address	Private	Transport	User Agent	Licensed	SIP	SIP	SIP	Status
1441	21441	best effort	1	10.64.101.207		UDP	ZeacomSIP	3rd Party IP Res	6	10	0	SIP: Registered
1442	21442	best effort		10.64.101.207		UDP	ZeacomSIP	3rd Party IP Res			0	SIP: Registered
1				III								
-								1				

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.

bring c	ustomers closer	Desktop	
	Enghouse Interactive		
<u>L</u> ogin Name:	Agent 1 Primary Image: Agent 1 Primary Image: Agent 1 Primary Image: Agent 1 Primary	PIN: OK Cancel <u>H</u> elp]

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

	1 1 4 4 4	0.00				
🕨 🕶 🖌 🕷 👻 👘 Pre	esence: 🛛 🌉 In the Office	~ 🛃 🦃 🍏	3			
Active Calls						8
Line State	Caller Info	Origin	Date	Time	Duration	Queue
<						>
Phone Calls						8
🔊 Idle						
👗 Answer Call 🚳 Forwar	d All					
No Active Call						
	Active Calls Line State Phone Calls The Inswer Call State No Active Call	Active Calls Line State Caller Info Phone Calls Idle Answer Call S Forward All No Active Call	Active Calls Line State Caller Info Origin Phone Calls Idle Idle	Active Calls Line State Caller Info Drigin Date Phone Calls Idle Idle	Active Calls Line State Caller Info Drigin Date Time Phone Calls Idle Idle	Active Calls Line State Caller Info Drigin Date Time Duration Colspan="4">Colspan="4">State Caller Info Drigin Date Time Duration Phone Calls State Stat

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

Make	yourself available to take Qu	eue Calls.				
<u>C</u> lass:	agent class					
<u>M</u> ake I	me ready for:					
	≥ Phone calls ∋ Chat (no delivery)					
F	OK Cancel	Help				

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**.

Communications Center Desktop - Agent 1 Primary						-		×
<u>File Call Ag</u> ent Vo	Call Agent Voice Messaging View Help 4:48:4						:49 PM	
Contact: 📲 (908) 9532103								
S → I								
Phone Calls	Active Calls							8
Call History	Line State	Caller Info	Origin	Date	Time	Duration	Queue	
	🔊 21031 🧧 Offering	+1 (908) 9532103	External	10/17/2016	4:48:41 PM	0:08	EICC Sal	es
🏙 Contact Center							_	
🔍 Agents	<							2
	Phone Calls							?
👫 Queues	🔁 Inbound Call [+1 (908) 95321	03]						Ś
🦻 Chat	🔔 Answer Call 🚳 Forward All							<
🕖 Presence	EICC Sales: Queue Call Duration:				Duration:		0:0	18
Mah Dawara	Unknown on +1 (90)8) 9532103			Wait Time:		0:0	0
Vied Browser								
In the Office	Schedule: Off 🧷 <type td="" 🕫<=""><td>presence note here></td><td></td><td></td><td></td><td></td><td></td><td></td></type>	presence note here>						

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.

O Communications Center Desktop - Agent 1 Primary							×	
File Call Agent Voice Messaging View Help 4:48:						:58 PM		
Contact: 🕂 (908) 9532103								
Solution → (a) (b) → (b) (b) → (b) (c) → (c)								
Phone Calls	Active Calls							?
Call History	Line State	Caller Info	Origin	Date	Time	Duration	Queue	
	21031 21031 Connect	d +1 (908) 9532103	External	10/17/2016	4:48:41 PM	0:07	EICC Sal	es
🏙 Contact Center							_	
🔍 Agents	<							_
	Phone Calls							8
👫 Queues	🕜 Inbound Call [+1 (908) 95	32103]						<
🤗 Chat	🐔 Hangup 💱 Hold 🔋 Park 👻 Transfer 👜 Record 🚳 Forward All 👔 😥							# <
🕖 Presence	IEICC Sales: Queue Call				Duration:		0:0)7
A 111 A	Unknown on +1	908) 9532103			Wait Time:		0:0	0
VVeb Browser								-
In the Office	Schedule: Off 🖉 <ty< td=""><td>e presence note here></td><td></td><td></td><td></td><td>,</td><td></td><td></td></ty<>	e presence note here>				,		

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.

Communication	ns Center Deskt	op - Agent 1 Expa	nsion				//		×
<u>File Call Agent Vo</u>	ice <u>M</u> essaging	<u>V</u> iew <u>H</u> elp						10:00:55	5 AM
Contact: +1 (732)	3883834		🖂 🔟 🖌 🔔 🛛 🖉	🖻 🚳 🗌					
🤹 🕑 🗸 🐌 🛛	0 • 6 Y	🖌 🐝 👻 Presenc	e: 🏼 🍇 In the Office	~ 🔏	19 3				
Phone Calls	Active Calls						8	8	
Call History	Line	State	Caller Info +1 (732) 8883834	Origin External	Date 10/21/2016	Time 10:00:52 AM	Duration 0:0	Queue 8 EICC Sales	
S Agents									1
🎇 Queues	Control Call [+1 (732) 8883834]								
🦻 Chat	🍕 Hangup	🧚 Hold 🔋 Pa	rk 🛷 Transfer 🛛 📴 Rec	ord 🛛 🚳 Forward A	All .				
🥖 Presence	ICC Sales: Queue Call			Duration:	uration: 0:0				
🏫 Web Browser	Unknown on +1 (732) 8883834				Wait Time	1	0:00		
Desktop has re-co	onnected to the s	server. 🤱 In th	ne Office 🛛 💥 Schedule: O	ff 🛛 🧷 <type pre<="" td=""><td>sence note here></td><td></td><td></td><td></td><td></td></type>	sence note here>				

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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 <u>http://support.avaya.com</u>.
- **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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