

Avaya Solution & Interoperability Test Lab

Application Notes for DuVoice 6.0 with Avaya IP Office Server Edition 10.1 – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for the DuVoice 6.0 to interoperate with Avaya IP Office Server Edition 10.1. DuVoice is a hospitality messaging system.

In the compliance testing, DuVoice used the SIP User and Configuration Web Service interfaces from Avaya IP Office to provide automated attendant, voicemail, wake-up call, do not disturb, user name and profile template change, and room maid status features.

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 the DuVoice 6.0 to interoperate with Avaya IP Office Server Edition 10.1. DuVoice is a hospitality messaging system.

In the compliance testing, DuVoice used the SIP User and Configuration Web Service interfaces from IP Office to provide automated attendant, voicemail, wake-up call, do not disturb, user name and profile template change, and room maid status features.

The IP Office Server Edition configuration consisted of two IP Office systems, a primary Linux server and an expansion IP500V2 that were connected via Small Community Network (SCN) trunks. The SIP connection between DuVoice and IP Office can be with either the primary or the expansion IP Office system. The configuration shown in these Application Notes used the primary IP Office system for SIP connectivity with DuVoice.

For customer configurations that include a Property Management System (PMS), DuVoice supports the PMS interface for initiation of hospitality features, which is outside the scope of the compliance test. For customer configurations that do not include the PMS, such as in the case of the compliance test configuration, the DuVoice Hospitality Tester tool can be used for initiation of hospitality features. In the compliance testing, the Hospitality Tester tool was running on the DuVoice server and used for initiation of hospitality requests such as check-in, check-out, room move, wakeup call, and do not disturb.

The Configuration Web Service interface was used by DuVoice to provide user name and profile template changes. DuVoice established Configuration Web Service connections with both IP Office systems, for update of user name and profile template on both systems. Two common user rights templates were configured on IP Office for use for check-in, check-out, and room moves.

The SIP User interface was used by DuVoice to provide all remaining hospitality features. In the compliance testing, four virtual SIP users were configured as members of a hospitality group on the primary IP Office system, and were registered by DuVoice with the primary IP Office system. Incoming calls to the hospitality group were delivered over an available virtual SIP user to DuVoice. DuVoice used the SIP packets to determine the type of call and hence the service to provide, such as automated attendant for incoming calls, voicemail coverage for redirected call, voicemail retrieval by subscribers, setting of room maid status from guest telephones, and scheduling of wakeup calls from staff telephones. All SIP communications on DuVoice were supported using the Dialogic Host Media Processing SIP stack.

For the auto attendant feature, incoming calls from the PSTN to the hospitality group were routed via available virtual SIP users to DuVoice. DuVoice played the appropriate greeting announcement and used the inputted DTMF digits along with the SIP REFER method to perform unsupervised transfer of calls to appropriate user destinations on IP Office.

For support of the room maid status feature, a common short code was created on IP Office. The short code was dialed manually from the guest room telephones, with the call routed via an available virtual SIP user to DuVoice, for setting of appropriate maid status for the guest room.

In the compliance testing, subscribers of DuVoice voicemail consisted of all front desk, staff, and guest users on both IP Office systems. The Call Forwarding feature from IP Office was used to redirect calls to DuVoice via virtual SIP users. Three common short codes were configured on IP Office, two were dialed by virtual SIP users for activation and deactivation of the Call Forwarding Unconditional feature for guest users, and one was used for setting the user's Forward Number on IP Office. Upon the guest manually making a request to the front desk or to staff for do not disturb, the Hospitality Tester tool was used in the compliance testing to initiate the Call Forwarding Unconditional feature activation/deactivation on behalf of guests.

Voicemail messages were recorded and saved on DuVoice. Two common short codes were configured on IP Office, and dialed by virtual SIP users for activation and deactivation of subscriber's Message Waiting Indicator (MWI).

For the wakeup call feature, wakeup call requests were made manually to the front desk or staff. The front desk or staff can use his/her telephone to call the hospitality group to schedule a wakeup call on behalf of guests, or use the Hospitality Tool to schedule the wakeup calls. The virtual SIP users were used by DuVoice to initiate wakeup calls to guests.

2. General Test Approach and Test Results

The feature test cases were performed manually. Calls were made from the PSTN and from local users to the hospitality group, for various hospitality features such as auto attendant, voicemail retrieval, etc. The Hospitality Tester was used to manually initiate check-in, check-out, room moves, activate/deactivate do not disturb, and for monitoring of room maid status.

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

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.

Avaya recommends our customers implement Avaya solutions using appropriate security and encryption capabilities enabled by our products. The testing referenced in these DevConnect Application Notes included the enablement of supported encryption capabilities in the Avaya products. Readers should consult the appropriate Avaya product documentation for further information regarding security and encryption capabilities supported by those Avaya products.

Support for these security and encryption capabilities in any non-Avaya solution component is the responsibility of each individual vendor. Readers should consult the appropriate vendor-supplied product documentation for more information regarding those products.

For the testing associated with these Application Notes, the Configuration Web Service interface between IP Office and DuVoice was encrypted by default with TLS, and the SIP users interface was UDP so did not include use of any specific encryption features as requested by DuVoice.

2.1. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing.

The feature testing focused on verifying the following on DuVoice:

- Registration of virtual SIP users.
- Automated attendant navigation for incoming trunk calls, such as transfer to guests, front desk, and staff.
- Voicemail recording and retrieval, with proper MWI activation/deactivation for users with analog, digital, H.323, and SIP telephone types.
- Scheduling and delivering of wake-up call requests, including retried attempts and escalation to operator.
- Handling of maid codes as indication of room maid status for hospitality group calls from guest telephones.
- Use of virtual SIP users and short codes to set Forwarding Unconditional feature on IP Office for support of do not disturb requests from guests.
- Use of Configuration Web Services to update guest user name and user rights template associated with check-in, check-out, and move requests.

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

2.2. Test Results

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

- By design, PSTN caller ID was not made available to voicemail subscribers as part of message retrieval.
- Depending on the customer network, greeting and announcement playback from DuVoice to users with analog and digital telephones can be chopped off at times, such that the users may not hear the beginning portion of the playback. DuVoice has a system wide delay variable that can be lengthened to help with this situation, and the default value for the variable is set to one second.
- Depending on the customer network, additional pauses may need to be added for the room maid status short code on IP Office, in order for room maid status setting from guest rooms with analog and digital telephones to be processed successfully by DuVoice. Refer to the room maid status short code configuration on **Section 5.8.4**.
- In the rare case that the trunk connection with the PSTN is SIP trunks via the expansion IP Office system, there can be a no audio connection problems when the PSTN caller calls the hospitality group configured on the primary IP Office system to request transfer to a user on the expansion IP Office system that does not answer with call covered to DuVoice. The no audio issue for his situation is under investigation by the IP Office team. Note that this issue does not exist when the trunk connection with the PSTN is SIP trunks via the primary IP Office system, or when the PSTN trunk connection is PRI via the expansion IP Office system.

2.3. Support

Technical support on DuVoice can be obtained through the following:

- **Phone:** (425) 250-2393
- Email: <u>support@duvoice.com</u>

3. Reference Configuration

The configuration used for the compliance testing is shown in **Figure 1**. The DuVoice server used in the testing included the Dialogic Host Media Processing Software for support of the SIP protocol.

The IP Office resources used in the compliance testing are shown in the table below.

Users	Extensions				
Prir	nary				
Front Desk	21030				
Guests	21031, 21041				
Expansion					
Front Desk and Staff	22020, 22030, 22040				
Guests	22001, 22021, 22031, 22041				

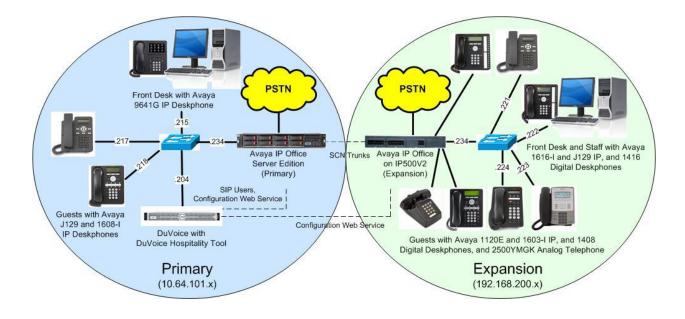


Figure 1: Compliance Testing Configuration

4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya IP Office Server Edition (Primary) in Virtual Environment	10.1.0.0.0
Avaya IP Office on IP500 V2	10.1.0.0.0
Avaya 1120E IP Deskphone (SIP)	4.4.23.0
Avaya J129 IP Deskphone (SIP)	1.1.0.0.15
Avaya 1603-I, 1608-I, 1616-I IP Deskphones (H.323)	1.3110
Avaya 9641G IP Deskphone (H.323)	6.6506
Avaya 1408 and 1416 Digital Deskphones	46.0
2500YMGK Analog Phone	NA
DuVoice on Microsoft Windows 10 Pro	6.0.73
Dialogic Host Media Processing Software	3.0.375
Hospitality Tester	NA
 Avaya Configuration Web Service SDK 	10.1

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 in all configurations.

5. Configure Avaya IP Office

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

- Verify license
- Obtain LAN IP address
- Administer SIP Registrar
- Administer SIP extensions
- Administer SIP users
- Administer hospitality group
- Administer incoming call route
- Administer short codes
- Administer voicemail users
- Administer user rights
- Administer security service

5.1. Verify License

From a PC running the IP Office Manager application, select **Start** \rightarrow **Programs** \rightarrow **IP Office** \rightarrow **Manager** to launch the application. Select the proper 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 **License** under the IP Office system that will be used for SIP users connections with DuVoice, in this case "IPO2-IPOSE", a list of licenses is displayed in the right pane. Verify that there are sufficient licenses for **3rd Party IP Endpoints**, as shown below.

ile Edit View Tools Help		1.0.00	n na		
PO2-IPOSE • License	-	* 2 *		🖬 🚺 🖌 🖂 🖪	
Configuration				ei - 🗉	$ \times \checkmark < $
i⊟-≪ IPO2-IPOSE ▲ i⊞-≪ System (1)	License Remote Server				
	License Mode License Normal Licensed Version 10.0 PLDS Host ID 248701875134 PLDS File Status Valid				
Incoming Call Route Directory (0)	Feature	Instances	Status	Expiration Date	Source
Time Profile (0)	3rd Party IP Endpoints	1000	Valid	Never	PLDS Nodal
IP Route (1)	Additional Voicemail Pro Ports	252	Valid	Never	PLDS Nodal
Account Code (0)	Avaya Contact Center Select	1	Valid	Never	PLDS Nodal
🕂 🍋 License (22)	Avaya IP endpoints	1000	Valid	Never	PLDS Nodal

Solution & Interoperability Test Lab Application Notes ©2018 Avaya Inc. All Rights Reserved. 8 of 38 DuVoice-IPO10

5.2. Obtain LAN IP Address

From the configuration tree in the left pane, select **System** under the IP Office system that will be used for SIP user connections with DuVoice, in this case "IPO2-IPOSE". Select the **LAN1** tab, followed by the **LAN Settings** sub-tab in the right pane.

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

le Edit View Tools Help	Edition IPO2-IPOSE [10.1.0.0.0 build 2:			_	
02-IPOSE 🔹 System	✓ IPO2-IPOSE	- 2		1 🗸 🖂 🖪	
Configuration	E	IP02-IP0SE		<u> </u>	$ \times \checkmark < $
	System LAN1 LAN2 DNS LAN Settings VoIP Network	Voicemail Telephony [Topology	Directory Services	System Events	SMTP SMC 4
	IP Address IP Mask	10 64 101 23 255 255 255 0			
Group (11) Group	Number Of DHCP IP Addresses DHCP Mode Server © Client @ Disa	20 🛓	Adva	nced	

5.3. Administer SIP Registrar

Select the **VoIP** sub-tab. Make certain that **SIP Registrar Enable** is checked, as shown below. Make a note of the **SIP Domain Name** field value, which will be used later to configure DuVoice.

	ver Edition IPO2-IPOSE [10.1.0.0.0 build 237]
IPO2-IPOSE - System	🝷 IPO2-IPOSE 🔹 🔹 😂 🖓 🖓 🔄 💽 🖬 🚺 🛃 💉 🥪 🐼
Configuration	E IP02-IP0SE
IPO2-IPOSE System (1) IPO2-IPOSE IPO2-IPOSE T Line (2) Control Unit (11) Extension (15)	System LAN1 LAN2 DNS Voicemail Telephony Directory Services System Events SMTP SMDR Image: SMTP <
	H.323 Signaling over TLS Disabled Remote Call Signaling Port 1720
 Service (0) 	Image: SIP Trunks Enable Image: SIP Registrar Enable Image: Auto-create Extension/User Image: SIP Remote
→ License (22)	SIP Domain Name dr220.com

5.4. Administer SIP Extensions

From the configuration tree in the left pane, right-click on **Extension** under the IP Office system that will be used for SIP user connections with DuVoice, in this case "IPO2-IPOSE", and select **New** \rightarrow SIP Extension from the pop-up list to add a new SIP extension.

Enter the desired digits for **Base Extension**, and retain the default values in the remaining fields.

🗶 Avaya IP Office Manager for Serve	r Edition IPO2-IPOSE [10.1.0.0.0 build 237]	
File Edit View Tools Hel	p	
IPO2-IPOSE • Extension	 11212 21030 	• : 2 : • • • • • • • • • • • • • •
Configuration	SIP Exte	nsion: 8000 * 🛛 💣 - 🖻 🛛 🗙 🗸
i⊟≪ IPO2-IPOSE i⊟≪ System (1)	Extension VoIP	
IPO2-IPOSE	Extension ID	8000
臣一行了 Line (2) 臣──── Control Unit (11)	Base Extension	28881
Extension (15)	Caller Display Type	On
⊕ 🙀 Group (11) ⊕ 🕬 Short Code (65)	Reset Volume After Calls	
Service (0) Grooming Call Rout Orectory (0)	Device Type	Unknown SIP device
	Location	Automatic
Account Code (0)	Fallback As Remote Worker	Auto
🗄 🏰 User Rights (13) 🔤	Module	0
⊕¥ ARS (2) ⊕₩ Location (2) 	Port	0
	Disable Speakerphone	
B Control Unit (4) B Stension (32) B User (13) B Sroup (2)	Force Authorization	

Select the **VoIP** tab. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- Codec Selection: "Custom"
- Selected: Retain only the G.711 codec variants.
- Reserve License: "Reserve 3rd party IP endpoint license"
- Media Security: "Disabled"

Repeat this section to add the desired number of SIP extensions. In the compliance testing, four SIP extensions with base extensions of 28881-28884 were created.

🚹 Avaya IP Of	fice Manager for Server Ed	ition IPO2-IPOSE [10.1.0.0.0 bui	ld 237]	- • •
File Edit	View Tools Help			
IPO2-IPOSE	 Extension 	· 11212 21030	- 2 - 1	
Configu	1 2	SIP Exte	nsion: 8000 *	🔤 🚽 - 🔄 🗙 🗸 < > 🔮
	Extension VoIP			
	IP Address	0.,0,0,0		Requires DTMF
.		Contract		🔲 Local Hold Music
œ.–	Codec Selection	Custom	•	🖉 Re-invite Supported
		Unused G.729(a) 8K CS-ACELP	Selected	🔲 Codec Lockdown
±		Girzs(a) in Co-ACEEP	G.711 ALAW 64K	👿 Allow Direct Media Path
			(†	
±			<<<	
			4	
÷.				
E			>>>	
±	Reserve License	Reserve 3rd party IP endpoint	license	
	Fax Transport Support	None		•
÷	DTMF Support	RFC2833/RFC4733		•
	3rd Party Auto Answer	None	•	
	Media Security	Disabled	•	

5.5. Administer SIP Users

From the configuration tree in the left pane, right-click on **User** under the IP Office system that will be used for SIP users connections with DuVoice, in this case "IPO2-IPOSE", and select **New** from the pop-up list to add a new user.

Enter desired values for **Name** and **Full Name**. For **Extension**, enter the first SIP base extension from **Section 5.4**. Retain the default values in the remaining fields.

Avaya IP Office Manager for Server Edit File Edit View Tools Help	ion IPO2-IPOSE [10.1.0.0.0 build 237]
IPO2-IPOSE • User	🝷 21031 H323 Primary 💿 🕴 🗶 😂 - 🖃 💽 💽 🔛 🔨 🛹 💷 🕢
Configuration	📴 <user:0>: * 📸 - 🔤 🗙 🗸 < > 📣</user:0>
É-≪ IPO2-IPOSE É-≪ System (1)	User Voicemail DND Short Codes Source Numbers Telephony Forwarding Dial In Voice Rec + +
IPO2-IPOSE IPO2-IPOSE If Line (2) If Line (2) If Line (2) If Line (1) If Line (1	Name SIP-28881 Password
	Account Status Enabled
License (22) ⊕ 10 User Rights (13) ⊕ 11 ARS (2)	Full Name DuVoice SIP1

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

Maya IP Office Manager for File Edit View Tools		IPOSE (10).1.0.0.0 build 23	7]				
IPO2-IPOSE + Use	÷.	▼ 210)31 H323 Primar	y •[2]	3 - 🖬 🖪	1	× -	- 4
Configuration	12		<	User:0>: *			* - *	🖻 🗙 🗸 < > 🛷
ia-≪ IPO2-IPOSE ▲ ia-≪ System (1)	User Voicema	il DND	Short Codes	Source Numbers	Telephony	Forwarding	Dial In	Voice Recording Bu + +
└──ጫ IPO2-IPC ⊞─行{ Line (2)	Voicemail Code						E	🗏 Voicemail On
🕀 🖘 Control Unit	Confirm Voicem	ail Code					I	🗌 Voicemail Help
⊕& Extension (1 ⊕ 1 User (15)	Voicemail Email						[🗌 Voicemail Ringback
🕀 💥 Group (11) 🕀 🗫 Short Code 📼							E	Voicemail Email Reading
- 🚱 Service (0)							E	UMS Web Services
🕀 🕑 Incoming C: —— A Directory (0)							Ι	Enable GMAIL API

Select the **Telephony** tab, followed by the **Call Settings** sub-tab. Check **Call Waiting On**, as shown below. Retain the default values in the remaining fields.

ile Edit View Too	ls Help							
IPO2-IPOSE 🔫 L	lser		1031 H323 Prima	ry - 🕴 🏝 I	2 - 🖬 🖪	1 🖭 📰 🔔	V -	3 9
Configuration	12			<user:0>: *</user:0>			<u>e</u> - 1	$\ \times \vee < > $
in the system (1)	User Vo	icemail DND	Short Codes	Source Numbers	Telephony	Forwarding	Dial In	Voice Recording Bu 🔹
IPO2-IPC ⊞-177 Line (2)	Call Setting	3 ^s Supervisor	Settings Multi	-line Options Call	Log TUI]		
🕀 🖘 Control Unit	Outside Ca	ll Sequence		Default Ring			•	🛛 🛛 🔽 Call Waiting On
🖲 🐨 🕼 Extension (1 🕀 📲 User (15)	Inside Call	Sequence		Default Ring			•	🗹 🛛 🗹 Answer Call Wa
😟 🐨 🎆 Group (11) 🕀 💬 🕬 Short Code 🖓	Ringback S	equence		Default Ring			•	📔 Busy On Held
	No Answer	Time (sec)		System Default (15)		A V	📃 🔲 Off-hook Statio

Select the **Supervisor Settings** sub-tab. Enter desired password for **Login Code** and **Confirm Login Code**, and check **Force Login**. Retain the default values in the remaining fields.

le Edit View Tools PO2-IPOSE → Usi		031 H323 Primary 🔹 🕱 - 🔒 🚺	
Configuration	12	<user:0>: *</user:0>	
international IPO2-IPOSE	User Voicemail DND	Short Codes Source Numbers Telephony	Forwarding Dial In Voice Recording Bu •
 In C2-In C In C2-In C	Call Settings Supervisor	Settings Multi-line Options Call Log TUI	✓ Force Login
Group (11) Group (11)	Login Idle Period (sec) Monitor Group	<none> ·</none>	 Force Account Code Force Authorization Code
	Coverage Group Status on No-Answer	<none> · · · · · · · · · · · · · · · · · · ·</none>	Incoming Call Bar Outgoing Call Bar
e Account Co e License (22) E- f User Rights I	Privacy Override Group		 Inhibit Off-Switch Forward/Transfer Can Intrude
 Image: ARS (2) Image: Location (2) Image: Authorizatio IPO2-IP500V2 ■ 	Reset Longest Idle Time		Cannot Be Intruded Can Trace Calls
亩句 System (1) 亩行了 Line (4)	📄 💿 External Incoming		

Select the **Button Programming** tab. Retain only the first **Appearance** button and remove all others as shown below.

Repeat this section to add a new user for each remaining SIP extensions from **Section 5.4**. In the compliance testing, four users with names of "SIP-28881" to "SIP-28884" were created.

File Edit View Tools	Help								
IPO2-IPOSE 🔹 Use	er		• 21031 H323 Prim	iary •	12 10-		🖭 🖬 🚺	🗸 🖂 🛛	9
Configuration	R			<user:0></user:0>	»: *			(- <u>(u)</u>	$\times \mid \checkmark \mid < \mid >$
IPO2-IPOSE System (1) IPO2-IPC ⊕-f₹ Line (2) ⊕-∞ Control Unit	DND	Short Codes	Source Numbers	Telephony	Forwarding	Dial In	Voice Recordi	ng Butto	on Programming
	Butt	on Label	Action		Action Dat	ta		•	Remove
	1		Appearanc	e	a=			E	Edit
⊕ 🋷 Extension (1 ⊕1 User (15)									

5.6. Administer Hospitality Group

From the configuration tree in the left pane, right-click on **Group** under the IP Office system that will be used for SIP users connections with DuVoice, in this case "IPO2-IPOSE", and select **New** from the pop-up list to add a new group. This group will be used to deliver calls to DuVoice for hospitality features.

Enter desired values for **Name** and **Extension**. For **Ring Mode**, select "Sequential" from the drop-down list. Retain the default values in the remaining fields.

In the User List sub-section, add all SIP users from Section 5.5 as members, as shown below.

File Edit View Tools IPO2-IPOSE - Grou	Help	uVoice Main 🔹 🕴 🚨 💽 🔹 💽	I 💦 🖌 🖉 🖓	
Configuration	and the second se	itial Group DuVoice Main: 28000		 ✓
IPO2-IPOSE	Group Queuing Overflow F	allback Voicemail Voice Recording Annou	ncements SIP	
System (1)	Name	DuVoice Main	Profile	Standard
由一行了 Line (2) 由一句 Control Unit (Extension	28000	🔲 Exclude From Directory	1.27
	Ring Mode	Sequential	No Answer Time (sec)	System [
Group (11) Group (11) Group (11)	Hold Music Source	No Change 🔹		
- 🚱 Service (0)	Ring Tone Override	None 👻		
⊕ ⊕ Incoming Cal → ← Directory (0)	Agent's Status on No-Answer Applies To	None		
 ⊡ IP Route (1) Account Cod License (22)	Central System User List	IPO2-IPOSE	📝 Advertise Group	
🕀 🌆 User Rights (1	Extension Name S	ystem		
ARS (2) Location (2) Authorization PO2-IP500V2	28882 SIP-28882 IF	202-IPOSE 202-IPOSE 202-IPOSE		
● ● System (1) ● 一行 Line (4)		PO2-IPOSE		

TLT; Reviewed: SPOC 1/8/2018

Solution & Interoperability Test Lab Application Notes ©2018 Avaya Inc. All Rights Reserved. 14 of 38 DuVoice-IPO10

File Edit View Tools He	r Edition IPO2-IPOSE [10.1.0.0.0 build 237] Ip	
IPO2-IPOSE - Group	🔹 28000 DuVoice Main 🔹 💈 😂 - 🖃 🖪 💽 🖬 📣 🛹 🖂 🕢	
Configuration	🗄 Sequential Group DuVoice Main: 28000 📑 🖓	×
PO2-IPOSE System (1) PO2-IPOSE	Group Queuing Overflow Fallback Voice Recording Announcements SIP Queuing On Queue Length No Limit Image: Comparison of the second	

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

Select the **Overflow** tab. In the **Overflow Group List** sub-section, add a desired group for coverage of non-answered calls for the hospitality group. In the compliance testing, "DR Main" is a pre-existing group consisting of front desk and staff users on both IP Office systems.

Manager for Serve File Edit View Tools He	r Edition IPO2-IPOSE [10.1.0.0.0 build 237] Ip	
IPO2-IPOSE - Group		2 🖻 - 🗐 🖪 🔛 🖬 🖌 🖌 💷 🛛
Configuration	E Sequential Group Du	√oice Main: 28000 🛛 💣 - 😬 🗙 🗸 < >
PO2-IPOSE System (1) PO2-IPOSE P-17 Line (2) Control Unit (11) P-∞ Extension (15) P-∞ Short Code (65) Service (0) P-∞ Incoming Call Rou Directory (0) Time Profile (0) P-∞ In Route (1)	Group Queuing Overflow Overflow Overflow Overflow Time (sec) Overflow Mode Immediate Overflow Overflow Group List Group Name DR Main	SI Voice Recording Announcements SIP

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

Maya IP Office Mana	The second second		IPO2-IPOSE	[10.1.0.0.0]	build 237]					- • •
	Tools He • Group	ip	•	28000 DuV	oice Main	- 13		E 🖬 🔺 🗸	- 4	
Configuratio	Configuration 🗄 Sequential Group DuVoice Main: 28000 💣 - 🖭 🗙 🗸 🧹						× < >			
in the system (1)	*	Group	Queuing	Overflow	Fallback	Voicemail	Voice Recording	Announcements	SIP	
ा प्राप्त (1) जिल्ला IPO2-IF सिर्नि Line (2) सिर्ज्ञ Control Ur	POSE	Voicemail Code Confirm Voicemail Code						Voicem /oicemail A	ail On Inswer Time (sec)	
		Voicemail Email] Voicema] Broadca	1 (20.07) (2) (2) (2) (2) (2) (2) (2) (2	
Service (0)		I Off	f 🔵 Copy	/ 🔘 Forw	ard 🔘 A	lert			UMSWe	b Services

TLT; Reviewed: SPOC 1/8/2018

Solution & Interoperability Test Lab Application Notes ©2018 Avaya Inc. All Rights Reserved. 15 of 38 DuVoice-IPO10

5.7. Administer Incoming Call Route

If necessary, create an incoming call route to route incoming calls to the hospitality group. In the compliance testing, the existing incoming call route on the primary IP Office system for connection to the PSTN can route to any five digit extensions on both IP Office systems.

As shown in the screen below, the **Incoming Number** for the line is "30353xxxxx", which uses five single digit wildcards "x" allowing the last five digits to be any number.

Avaya IP Office Manager for Serve File Edit View Tools Hel		2-1P-03E (10.1.0.0.0	Dunu 207]	
IPO2-IPOSE 🔹 Incoming	Call Route	• 8 3035300	oox - 🗟 😂 - 🗐	🔺 🔛 🔜 📐 🖌 🖂 🔄
Configuration	E		8 30353XXXXX	📥 • 🔤 🗙 🗸 < >
É Solution	Standard	d Voice Recording	Destinations	
⊞¶ User(26) ⊕∰ Group(13)				
	Bearer (Capability	Any Voice	•
- 🕧 Time Profile(0)	Line Gro	oup ID	8	•
Account Code(0) ⊕ § _ User Rights (13)	Incomir	ng Number	30353>00000	
E IPO2-IPOSE	Incomir	ng Sub Address	-	
🗄 🖘 System (1)	Incomir	Sectors.		
● 千子 Line (2) ● 一	Locale			•
⊕≪ Extension (15) ⊕¶ User (15)	Priority		1 - Low	
🕀 🎆 Group (11)	202		1 1000	
🗄 🕬 Short Code (65)	Tag			
Incoming Call Route	Hold M	usic Source	System Source	•
Directory (0)	Ring To	ne Override	None	-
- 💮 Time Profile (0)				

In the **Destinations** tab, the use of "#" in the **Destination** field enables the routing to be based on the "xxxxx" from the **Incoming Number** field from above. Therefore, incoming calls to "3035328000" will be routed to the hospitality group configured in **Section 5.6**.

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

🐮 Avaya IP Office Manager for S	erver B	dition IPO2-	IPOSE [1	0.1.0.0.0 build 237	7]		
File Edit View Tools	Help						
IPO2-IPOSE • Incom	ning C	all Route	• 83	10353)00000	- 🗈 🚨 -		🖬 🚹 🖌 🗁 🕢
Configuration		E		8 30	353XXXXX		📸 • 🖻 🗙 🗸 < >
E-Solution	^	Standard	Voice R	ecording Destir	nations		
⊞¶ User(26) ⊕∰ Group(13)		Т	'imeProfi	e	Destination		Fallback Extension
Short Code(57) Code(57) Directory(0) Time Profile(0) Account Code(0)		► D	efault Val	ue	#	•	▼

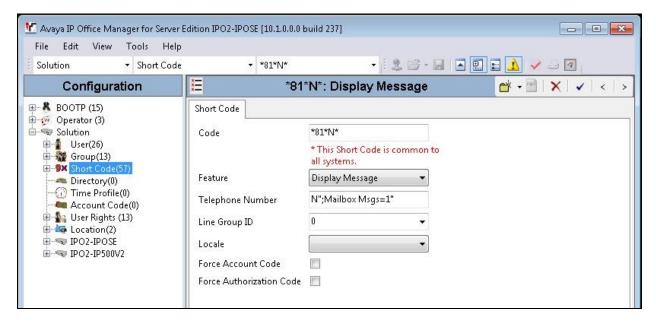
Solution & Interoperability Test Lab Application Notes ©2018 Avaya Inc. All Rights Reserved.

5.8. Administer Short Codes

From the configuration tree in the left pane, under **Solution** \rightarrow **Short Code**, create a set of common short codes for support of MWI, Call Forwarding Unconditional, operator, and room maid status.

5.8.1. MWI

Create two common short codes for activation and deactivation of MWI, as shown below. These two short codes are dialed by DuVoice via the virtual SIP users. Note that the default DuVoice configuration expects the MWI short codes to use the exact code values shown below. Should different values be used, then the new values need to be configured in the DuVoice setup wizard in **Section 6.1**.



Avaya IP Office Manager for Server Ed File Edit View Tools Help			
Solution • Short Code	★ *80*N*	• Z 🗇 • 🖬	
Configuration	180	*N*: Display Message	📑 🗝 🛛 🗙 🗠 🖌 🗠
BOOTP (15) Coperator (3) Solution User(26) Short Code(57) Time Profile(0) Account Code(0) User Rights (13) Location(2) PO2-IPOSE PO2-IP500V2	Short Code Code Feature Telephone Number Line Group ID Locale Force Account Code Force Authorization Code	*80*N* * This Short Code is common to all systems. Display Message N";Mailbox Msgs=0" 0	

Solution & Interoperability Test Lab Application Notes ©2018 Avaya Inc. All Rights Reserved. 17 of 38 DuVoice-IPO10

5.8.2. Call Forwarding

Create two common short codes for activation and deactivation of Call Forwarding Unconditional, and one common short code for use as Forward Number.

The two Call Forwarding Unconditional short codes are dialed by DuVoice via the virtual SIP users, when a guest manually places a do not disturb request/cancel to the front desk or staff. Note that DuVoice requires the two short codes to use the same exact values shown below.

Manager for Ser File Edit View Tools H	ver Edition IPO2-IPOSE (10.1.0 Help	0.0.0 build 237]	
Solution • Short C	ode 🔫 *98*N*	* 🔹 🗟 🛸 - 🖬 🖪 🖬 🏊 🖌 🥪	4
Configuration	198*N*	*: Forward Unconditional On 🛛 📑 👻 🗙	[✔ < >]
 BOOTP (15) ⊕	Short Code Code	*98*N* * This Short Code is common to all	
Short Code (59) Short Code (59) Time Profile(0) Account Code(0) User Rights (13) Source Code (0) IPO2-IPOSE SIPO2-IP500V2	Feature Telephone Number	systems. Forward Unconditional On ▼ "@POST="N";"	
	Line Group ID Locale Force Account Code Force Authorization Code	0 v	

Maya IP Office Manager for Sen File Edit View Tools H	ver Edition IPO2-IPOSE (10.1.0.) elp	0.0 build 237]	
Solution • Short Co	ode → *99*N*	- 12 - 1 - 2 - 1	
Configuration	¥⊟ *99*N*	: Forward Unconditional Off 🛛 📑 👻	X < < >
	Short Code		
🖨 🖘 Solution	Code	*99*N*	
⊈-1 User(26) च-₩ Group(13) ⊕-9¥ Sho rt Code (58)		* This Short Code is common to all systems.	
Directory(0)	Feature	Forward Unconditional Off 🛛 👻	
	Telephone Number	"@POST="N";"	
🗄 📲 User Rights (13) 🗄 🚧 Location(2)	Line Group ID	0 👻	
IPO2-IPOSE	Locale	•	
⊞ IPO2-IP500V2	Force Account Code		
	Force Authorization Code		

Create one common short code for use as Forward Number for all users that use DuVoice for voicemail. For **Telephone Number**, "28000" is the hospitality group extension from **Section 5.6**. Note that DuVoice requires this short code to contain the exact format shown below.

Maya IP Office Manager for Ser File Edit View Tools H		0.0 build 237]	
Solution • Short C	and the second se	- 2	🖪 🔛 🖬 🔥 🛹 🖂 🕢
Configuration	E	*67;: Dial Extension	📑 • 🔤 🗙 🗸 < >
	Short Code		
🖻 🖘 Solution	Code	*67;	
田一】 User(26) 由一課 Group(13) 由一課 Short Code (59)		* This Short Code is common to all systems.	
	Feature	Dial Extension 🔹	
	Telephone Number	28000 >>E	
🖮 🏰 User Rights (13)	Line Group ID	0 🗸	
IPO2-IPOSE	Locale		
⊞ IPO2-IP500V2	Force Account Code		
	Force Authorization Code		

5.8.3. Operator

DuVoice recommends a common short code be created for reaching the operator. This is used by DuVoice for coverage of failed wakeup calls and for supporting the operator option for calls to the hospitality group. In the compliance testing, **Telephone Number** was set to the extension of a pre-existing group consisting of front desk and staff users on both IP Office systems. Note that the code value can vary, and "0" is used in this case.

Manager for Ser File Edit View Tools H	ver Edition IPO2-IPOSE (10.1.0.) Help	0.0 build 237]	
Solution • Short C	ode 🔻 0	- 🛛 🕹 🗃 - 🖬 🚺	A 🔝 🖬 ႔ 🗸 👑 🕢
Configuration	E	0: Dial Extension	📥 • 🖻 🗙 🗸 < >
BOOTP (15)	Short Code		
Operator (3) Solution User(26) Group(13)	Code	0 * This Short Code is common to all systems.	
⊕-♥¥ Short Code (59) ≪ Directory(0) 	Feature	Dial Extension 👻	
🗕 📥 Account Code(0)	Telephone Number	21991	
車🏰 User Rights (13) 車編 Location(2)	Line Group ID	0 -	
ie≪ IPO2-IPOSE ie≪ IPO2-IP500V2	Locale		
	Force Account Code		
	Force Authorization Code		

Solution & Interoperability Test Lab Application Notes ©2018 Avaya Inc. All Rights Reserved.

5.8.4. Room Maid Status

Create a common short code for room maid status. This short code is dialed by maids from the guest rooms, to reach DuVoice for update of room maid status.

For **Telephone Number**, enter "28000, "61N", where "28000" is the hospitality group extension from **Section 5.6**. Note that the number of commas in the telephone number may vary. Each comma represents a pause, and three commas were needed in the compliance testing for maid status reporting from all guest rooms on both IP Office systems to be recognized. Note that DuVoice requires this short code to use the exact format shown below, with only variation in the hospitality group extension and the number of commas for pauses.

🕐 Avaya IP Office Manager for Sen			
File Edit View Tools H	elp		
Solution 🔹 Short Co	ode 🔹 *61N	- 12 🗃 - 🛃	🔺 🖳 🖬 🔔 🖌 🖂 🗃
Configuration	×	*61N: Dial Extension	📥 - 🔤 🗙 🗸 < >
BOOTP (15) Gerator (3)	Short Code		
😑 🖘 Solution	Code	*61N	
歯・】 User(26) 歯・数 Group(13) 歯・2× Short Code (59)		* This Short Code is common to all systems.	
	Feature	Dial Extension 🔹	
	Telephone Number	28000,,,61N	
🕀 🌆 User Rights (13) 🕀 🏧 Location(2)	Line Group ID	0 🔻	
🖅 🖘 IPO2-IPOSE	Locale	▼	
⊞ IPO2-IP500V2	Force Account Code		
	Force Authorization Code		

5.9. Administer Voicemail Users

From the configuration tree in the left pane, select the first user under the primary IP Office system from **Section 3** that will be using DuVoice for voicemail, in this case "21030". Select the **Voicemail** tab. Uncheck **Voicemail On**, as shown below.

IPO2-IPOSE 🔻 Use	r - 2						
		1030 Staff Prim:	ary 🔹 🕄 🚨	🔊 - 📮	 Image: A state Image: A state<th>1</th><th> व</th>	1	व
Configuration	=	Staff Pri	mary: 21030		 -	· 🖻 🗙	< ✓ < > a
Group(13) Group(User Voicemail DND Voicemail Code	Short Codes	Source Numbers	Telephony	Forwarding	Dial In	Voice Recordir
Account Cod Constraints (1 Constraints) Description (2) Description (2) Description (2)	Confirm Voicemail Code						🗌 Voicemail Help

Select the **Forwarding** tab. Set the **Forward Number** to the Forward Number short code from **Section 5.8.2**. Check all forwarding parameters in the bottom sub-section, as shown below.

Repeat this section for all users on both IP Office systems that will use DuVoice for voicemail.

	rver Edition IPO2-IPOSE [10.1.0.0.0 build 237]		
File Edit View Tools I IPO2-IPOSE - User	Help		
IPOZ-IPOSE • User		2 🖻 - 🖬 🔺 🖳 🖬 🔔 🗸 🥪	
Configuration	E Staff Primary: 2	1030 📑 🚽 🖄 🔀	✓ < >
⊕ 🔏 BOOTP (15) ⊕ 💯 Operator (3)	User Voicemail DND Short Codes Source	e Numbers Telephony Forwarding Dial In	n Voice Rev 🔹 🕨
Solution User(26) Group(13) Short Code (59)	Block Forwarding		
Directory(0) Time Profile(0) Account Code(0) @	Follow Me Number		•
🖶 🦝 Location(2) 🖃 🖘 IPO2-IPOSE	Forward Unconditional		
। ● ~ 行了 Line (2)	To Voicemail		
🗄 🖘 Control Unit (11)	Forward Number *67		
🗄 🐗 Extension (15) 🗄 📲 User (15)	Forward Hunt Group Calls		
🕀 🎆 Group (11) 🕀 🗫 Short Code (66)	Forward Internal Calls		
Service (0)			
🖨 🕩 Incoming Call Rou	Forward On Busy		
	Forward On No Answer		
- 🕜 Time Profile (0)	Forward Number *67		•
 IP Route (1) Account Code (0) License (22) Iser Rights (13) 	Forward Internal calls		

TLT; Reviewed: SPOC 1/8/2018

Solution & Interoperability Test Lab Application Notes ©2018 Avaya Inc. All Rights Reserved. 21 of 38 DuVoice-IPO10

5.10. Administer User Rights

From the configuration tree in the left pane, right-click on **Solution** \rightarrow **User Rights** and select **New** to create a new common user rights template. For **Name**, enter "UNRESTRICTED" as user rights for use by guest rooms in the check-in state. Configure the remaining parameters as desired.

Avaya IP Office Manager for File Edit View Tool:		ition IPO2-IPO	SE [10.1.0.0.0 build 237]			
Solution - Us	er Rights		 RESTRICTED 	-	2 🖙 - 🖌 💽 🖬	1 🖌 🗸 🗆 🕢
Configuration	×××		RESTR	CTED		📸 • 🔤 🗙 🗸 < >
 BOOTP (15) Operator (3) Solution User(26) Short Code(57) Time Profile(0) Account Code(0) User Rights (13) User Rights (13) Docation(2) IPO2-IPOSE IPO2-IP500V2 	User	Short Codes	Button Programming	Telephony	User Rights Membership	Voicemail Forwarding
	Name - Locale		ght is common to all sy	stems.		
	Priorit	y			•	Not part of User Rights
	5				-	Not part of User Rights
	Do no	t disturb				
	En:	able do not dis	turb			Not part of User Rights

Repeat this section to create another common user rights template for guest rooms in the checkout state. In the compliance testing, two user rights templates with names of "UNRESTRICTED" and "RESTRICTED" were created.

Solution • Us	er Rights		- UNRESTRICTED	- 2	. 🗃 - 🔒 🔳 🖬	1
Configuration	×=		UNREST	RICTED		📸 - 🔤 🗙 🖌 <
BOOTP (15) Operator (3) Solution Group(13) Short Code(57) Time Profile(0) Code (13) Short Code(57) Time Profile(0) Code (13) Short Code(0) Short		UNRESTRICT * This User Ri	ED ght is common to all sy		User Rights Membership	Voicemail Forwarding Not part of User Rights Not part of User Rights Not part of User Rights

Solution & Interoperability Test Lab Application Notes ©2018 Avaya Inc. All Rights Reserved.

5.11. Administer Security Service

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 screen is displayed. Select Security \rightarrow Services in the left pane to display the Service: Configuration screen in the right pane. For Service Security Level, select "Unsecure + Secure" as shown below. The additional "Secure" level is needed for the Configuration Web Service interface.

📶 Avaya IP Office Manager for Se	erver Edition - Security Ad	ministration - IPO2-IPOSE [10.1.0.0.0 build 237]	
File Edit View Help			
	1		
Security Settings	Service: Conf	figuration	₫- ≥ < >]
E G Security	Service Details		
E	Name	Configuration	
⊕ (C) Services (7) ⊕ (C) Rights Groups (16)	Host System	IP02-IPOSE	
E Service Users (10)	Service Port	50804, 50805	
	Service Security Level	Unsecure + Secure 👻	
	Service Access Source	Unrestricted 🗸	

Repeat the procedures in this section to set the security level for the expansion IP Office system.

Server Edition - Security Ad	ministration - IPO2-IP500V2 [10.1.0.0.0 build 237]	
1		
Service: Conf	figuration	$\exists \cdot \times \checkmark < >]$
Service Details		
Name	Configuration	
Host System	IP02-IP500V2	
Service Port	50804, 50805	
Service Security Level	Unsecure + Secure	
Service Access Source	Unrestricted 👻	
	Service : Cont Service Details Name Host System Service Port Service Security Level	Service: Configuration Service Details

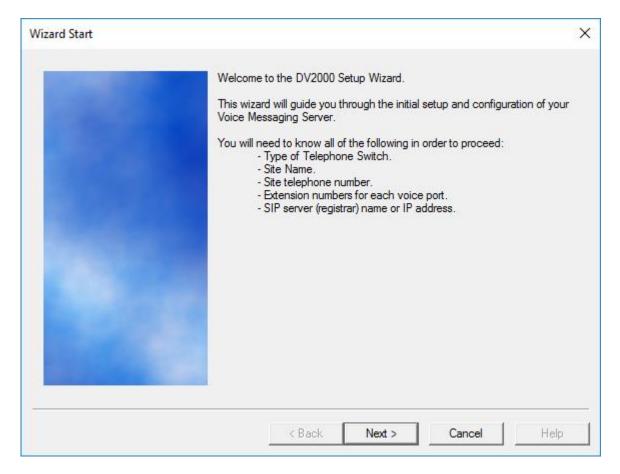
6. Configure DuVoice

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

- Administer setup wizard
- Administer profile configuration
- Administer SIP configuration
- Administer hospitality configuration
- Administer mailboxes

6.1. Administer Setup Wizard

From the DuVoice server, select Start \rightarrow DV2000 \rightarrow System Configuration. The Wizard Start screen is displayed upon initial access.



The Site Information screen is displayed next. Enter descriptive values for the required fields.

Site Name is required. All o	ther entries should be filled	
Site Name: Avaya DevC		
Site Telephone	908-953-2103	-
Dealer Name	Avaya	
Dealer Telephone	908-953-2103	
Address	350 Mount Kemble Ave	
Address		
State	NJ	
Zip	07960	
City	Morristown	
Country	USA	

The **Tenant Information** screen is displayed next. Enter the operator short code value from **Section 5.8.3**.

Tenant Information		×
	Operator extension or huntgroup: 0 Enable operator to send/receive voice messages and receive VeMail.	

The PBX Model screen is displayed next. Expand and select Avaya \rightarrow Avaya IP Office Server Edition, as shown below.

PBX Model		×
	Select the telephone system the DuVoice will be connected to. If you do not see your particular telephone system listed select Other.	
	Alcatel Asterisk Avaya Avaya Aura Communications Manager Avaya Aura SM CS1000 Avaya Communications Manager with SIP Enablement Services Avaya IP Office Avaya IP Office Avaya IP Office Server Edition Avaya PIMG Analog interface	^

The **MWI Method** screen is displayed. Select **Inband using a feature or shortcode**, and retain the default values in the remaining fields.

Choose the method by cleared.	which message waiting lights will be set and
C SIP Notify	
C TAPI	
C SMDI	
Inband using a feat	ure or shortcode
C HTTP	
- Inband codes	
Enter the code used to an E for the extension r automatically added to	set and clear the message waiting lights. Enter number. If an E is not specified it will be the end of the code.
For example: *81*E* or	*4E
Set code	Clear code
*81*E*	*80*E*
< Back	Next > Cancel Help

The **SIP Information** screen is displayed next. For **Server IP Address or DNS name**, enter the IP address or DNS name of the primary IP Office system.

SIP Information		×
	Enter the server name or IP address of the SIP registrar with which the SIP ports will be registered; this is optional but recommended. Typically, this will be the server name or IP address of the IP PBX.	
	Server IP Address or DNS name: 10.64.101.234	
		1

The **Voice Ports** screen is displayed. For **Voicemail Huntgroup**, enter the hospitality group extension from **Section 5.6**.

When the configured SIP extensions from **Section 5.4** are sequential, check **Auto increment extension numbers based on line 1**, and enter the first SIP extension as shown below. Otherwise, enter the relevant SIP extensions next to each port number.

In the compliance testing, four DuVoice ports were configured to correspond to the four SIP extensions created on IP Office.

Click Next, followed by Finish in the subsequent screen (not shown) to complete the wizard.

Voice Ports			\times
	extension of ea	Il be configured for 4 voice mail ports. If you know the ach port enter it in the space provided by clicking the ports below. Entering the extension numbers is required for some d will help with resolving integration issues.	
		now the extensions leave them blank, they can be entered Configuration.	
	Voicemail Hun	tgroup: 28000	
	Auto increr	ment extension numbers based on line 1.	_
	Number	Extension	_
	Port 1	28881	
	Port 2		
	Port 3		
	Port 4		
	<	>	
		< Back Next > Cancel Help	

6.2. Administer Profile Configuration

From the DuVoice server, double-click on the **System Configuration** icon shown below, which was created as part of server installation.



The **System Configuration** screen below is displayed. Select **Site** \rightarrow **Profiles** from the top menu.

Device	Extension	Hunt Group	PBX Template	SIP User	Server	Enable Registe
SIP Line 1	28881	28000	SIP_IPOFFICE_SRVR		10.64.101.234	Yes
SIP Line 2	28882	28000	SIP_IPOFFICE_SRVR		10.64.101.234	Yes
SIP Line 3	28883	28000	SIP_IPOFFICE_SRVR		10.64.101.234	Yes
SIP Line 4	28884	28000	SIP_IPOFFICE_SRVR		10.64.101.234	Yes

The Profile Selection screen is displayed next. Select the default entry and click Edit.

ofiles		Edit
Name	PMS Mailboxes	
ystem Def	fault 0 1	Add
		Сору
		Copy

The Profile Configuration screen below is displayed. Select Details in the left pane. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- Name: A descriptive profile name for the primary IP Office system.
- Hospitality Server: The applicable pre-configured hospitality server.
- "Avaya IP Office Server Edition" • PBX:

Profile Configuration			<u>3</u>	×
Details	Details			
Line Access MWI Inband Codes	Name (required and must be unique)			
Outdial Translations	Primary IPO			
≟- PBX Link	Hospitality Server			
	ID: 1	•		
	PBX			
	Avaya IP Office Server Edition			•

Expand PBX Link in the left pane, and select IP Office. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- IP or DNS Name: IP address of the primary IP Office system.
- Username: The default administrator credentials for the primary IP Office system.
- Password:
- The default administrator credentials for the primary IP Office system. "Enable Forward Unconditional" • DND Support:

[
Network IP or DNS Name TCP Port number Username Password DND Support Scheduling Retries Interval (seconds) Optional	10.64.101.234 50805 xxx yyy Enable Forward Unconditional 3 60			
	TCP Port number Username Password DND Support Scheduling Retries Interval (seconds)	TCP Port number 50805 Username xxx Password yyy DND Support Enable Forward Unconditional Scheduling Retries Retries 3 Interval (seconds) 60 Optional	TCP Port number 50805 Username xxx Password yyy DND Support Enable Forward Unconditional Scheduling Retries Retries 3 Interval (seconds) 60 Optional	TCP Port number 50805 Username xxx Password yyy DND Support Enable Forward Unconditional Scheduling

Repeat this section to add a new profile for the expansion IP Office system, as shown below.

Profile Configuration			<u>8</u>	×
Details	Details			
Line Access MWI Inband Codes	Name (required and must be unique)			
Outdial Translations	Expansion IPO			
⊕ PBX Link	Hospitality Server			
	ID: 1	•		
	PBX			
	Avaya IP Office Server Edition			•

Details	^	IP Office			
 Line Access MWI Inband Codes Outdial Translations PBX Link Avaya ACM Aconix Alcatel OXE Alcatel OXO Cisco IPitomy HTTP Post IP Office 		Network IP or DNS Name TCP Port number Username Password DND Support Scheduling Retries Interval (seconds) Optional Enable TAPI Support	192.168.200.234 50805 xxx yyy Enable Forward Unconditional 3 60		

6.3. Administer SIP Configuration

The System Configuration screen below is displayed again. Select Telephony \rightarrow SIP Integration from the top menu.

File Site T	elephony Featu	ires		/		4
Device	Extension	Hunt Group	PBX Template	SIP User	Server	Enable Registe
SIP Line 1	28881	28000	SIP_IPOFFICE_SRVR		10.64.101.234	Yes
SIP Line 2	28882	28000	SIP_IPOFFICE_SRVR		10.64.101.234	Yes
SIP Line 3	28883	28000	SIP_IPOFFICE_SRVR		10.64.101.234	Yes
SIP Line 4	28884	28000	SIP IPOFFICE SRVR		10.64.101.234	Yes

The **SIP Configuration** screen is displayed. Select **PBX Settings** from the left pane. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- PBX IP or DNS: IP address of the primary IP Office system.
- **Domain Name:** The IP Office domain name from **Section 5.3**.
- Realm: "ipoffice"
- **Register using:** Select **Domain Name**.

	-					
PBX Settings	PBX Setting	S				
Lines MWI / DMG Routing	Local address	Γ	10 . 64 . 101 . 2	05		
	PBX IP or DN	is [1	0.64.101.234		Port 5060	
	Domain Name	e d	Ir220.com			
	Register expire	e time 1	60 📩 seconds			
	Realm	ļip	ooffice			
	Optional Bac	ckup Serve	rs		Transport Protocol	1
	🔽 Default f	to primary o	n restart.		UDP	
	Order	PBX IP	or DNS Name	^	C TCP	
	1					_
	2				Register using	ï
	3				C PBX address	
	4					
	5			~	C Local IP address	
	<			>	Operation Name	

Select **Lines** from the left pane. For **Password**, enter the corresponding SIP user login code from **Section 5.5** for each SIP line entry, as shown below.

- PBX Settings - Lines	Lines					
- MWI / DMG Routing	Line	Register	Extension	Account	Password	User Ag
	1	×	28881	28881	123456	DuVoice
	2	×	28882	28882	234567	DuVoice
	3	×	28883	28883	345678	DuVoic
	4	×	28884	28884	456789	DuVoic
	<					>
	Auto N	lumber Extension	Auto Number Ac	count Ma	tch Passwords	

6.4. Administer Hospitality Configuration

The System Configuration screen below is displayed again. Select Features \rightarrow Hospitality from the top menu.

File Site T Device	Extension	Hunt Group	PBX Template	SIP User	Server	Enable Registe
SIP Line 1	28881	28000	SIP_IPOFFICE_SRVR	Sil Osci	10.64.101.234	Yes
SIP Line 2	28882	28000	SIP IPOFFICE SRVR		10.64.101.234	Yes
SIP Line 3	28883	28000	SIP IPOFFICE SRVR		10.64.101.234	Yes
SIP Line 4	28884	28000	SIP_IPOFFICE_SRVR		10.64.101.234	Yes

The Hospitality Configuration screen is displayed next. Select Server $1 \rightarrow$ Phone Control from the left pane.

In the User group restrictions / call restriction values sub-section in the right pane, create two entries for check-in and check-out. Use descriptive values for **Display Text**, and use the user rights template values from **Section 5.10** for **PBX Value**.

After creating the above entries, in the **Auto-set phone state on** sub-section in the right pane, check and select the relevant values for **Check-in** and **Check-out**, as shown below.

- Server 1	Phone Control						
General Language Maid Codes Phone Control ⊞- PMS Reports	Auto-set phone s	Checked In	•	Call accouti Type: Enabled: Disabled:	ng -none -no change -no change	•	
Translations		ctions / call restrictio r, left-click on it. For		Reset restric	tions to defaults for:		
Translations	To edit an entry		rall other	Reset restric		.	
L. Translations	To edit an entry	v, left-click on it. For ck any row to displa	rall other	- No Chang		<u> </u>	

6.5. Administer Mailboxes

From the DuVoice server, double-click on the **Mailbox Administration** icon shown below, which was created as part of server installation.



The **Mailbox Administration** screen is displayed next. Follow reference [2] to create a mailbox for each user on IP Office that will be using DuVoice for voicemail. In the compliance testing, an entry was created for each IP Office user from **Section 3**.

991	1000			Туре	Description	Ten	Profile	COS	SDA
	991	Auto Attendant		System	Auto Attendant	Avaya	Primary IPO	system	default
21030	21030	Front	Primary	Standard	Standard	Avaya	Primary IPO	standard	standard
21031	21031	Room H323	Primary	Guest	Guest	Avaya	Primary IPO	guest	standard
21041	21041	Room SIP	Primary	Guest	Guest	Avaya	Primary IPO	guest	standard
22001	22001	Room Analog	Expansion	Guest	Guest	Avaya	Expansion IPO	guest	standard
22020	22020	Staff Digital	Expansion	Standard	Standard	Avaya	Expansion IPO	standard	standard
22021	22021	Room Digital	Expansion	Guest	Guest	Avaya	Expansion IPO	guest	standard
22030	22030	Front	Expansion	Standard	Standard	Avaya	Expansion IPO	standard	standard
22031	22031	Room H323	Expansion	Guest	Guest	Avaya	Expansion IPO	guest	standard
22040	22040	Staff SIP	Expansion	Standard	Standard	Avaya	Expansion IPO	standard	standard
22041	22041	Room SIP	Expansion	Guest	Guest	Avaya	Expansion IPO	guest	standar
	21041 22001 22020 22021 22030 22031 22031	21041 21041 22001 22001 22020 22020 22021 22021 22030 22030 22031 22031 22040 22040	21041 21041 Room SIP 22001 22001 Room Analog 22020 22020 Staff Digital 22021 22021 Room Digital 22030 22030 Front 22031 22031 Room H323 22040 22040 Staff SIP	2104121041Room SIPPrimary2200122001Room AnalogExpansion2202022020Staff DigitalExpansion2202122021Room DigitalExpansion203022030FrontExpansion203122031Room H323Expansion2204022040Staff SIPExpansion	2104121041Room SIPPrimaryGuest2200122001Room AnalogExpansionGuest2202022020Staff DigitalExpansionStandard2202122021Room DigitalExpansionGuest2203022030FrontExpansionStandard2203122031Room H323ExpansionGuest2204022040Staff SIPExpansionStandard	2104121041Room SIPPrimaryGuestGuest2200122001Room AnalogExpansionGuestGuest2202022020Staff DigitalExpansionStandardStandard2202122021Room DigitalExpansionGuestGuest2203022030FrontExpansionStandardStandard2203122031Room H323ExpansionGuestGuest2204022040Staff SIPExpansionStandardStandard	2104121041Room SIPPrimaryGuestGuestAvaya2200122001Room AnalogExpansionGuestGuestAvaya2202022020Staff DigitalExpansionStandardStandardAvaya2202122021Room DigitalExpansionGuestGuestAvaya2203022030FrontExpansionStandardStandardAvaya2203122031Room H323ExpansionGuestGuestAvaya2204022040Staff SIPExpansionStandardStandardAvaya	2104121041Room SIPPrimaryGuestGuestAvayaPrimary IPO2200122001Room AnalogExpansionGuestGuestAvayaExpansion IPO2202022020Staff DigitalExpansionStandardStandardAvayaExpansion IPO2202122021Room DigitalExpansionGuestGuestAvayaExpansion IPO2203022030FrontExpansionStandardStandardAvayaExpansion IPO2203122031Room H323ExpansionGuestGuestAvayaExpansion IPO2204022040Staff SIPExpansionStandardStandardAvayaExpansion IPO	2104121041Room SIPPrimaryGuestGuestAvayaPrimary IPOguest2200122001Room AnalogExpansionGuestGuestGuestAvayaExpansion IPOguest2202022020Staff DigitalExpansionStandardStandardAvayaExpansion IPOstandard2202122021Room DigitalExpansionGuestGuestGuestAvayaExpansion IPOguest2203022030FrontExpansionStandardStandardAvayaExpansion IPOguest2203122031Room H323ExpansionGuestGuestAvayaExpansion IPOguest2204022040Staff SIPExpansionStandardStandardAvayaExpansion IPOstandard

7. Verification Steps

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

7.1. Verify SIP User Integration

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 5.4**, that the **User Agent** is "DuVoice", and that the **Status** is "SIP: Registered", as shown below.

Place an incoming call from the PSTN to the hospitality group. Verify that the calling party hears the greeting announcement from DuVoice. Enter the extension of a guest user on the primary IP Office system, and verify that the call is transferred to the guest user. Repeat with a call transfer to a guest user on the expansion IP Office system.

	nfigured: gistered:			Registered Status		Wai	iting 1 secs for update					
Extn N	User	Phone Type	Security	B IP Address	P. T	ra	User Agent	Licensed	SI	S.,	S	Status
21041	21041	J129 SIP	best effort	192,168,200,144	T	LS	Avaya J129 IP Phone 1.1.0.0.15 (15)	Avaya IP	RU	11	a	SIP: Registered
28881	28881	SIP	disable	10.64.101.205		IDP	DuVnice	3rd Party IP Res	R		0	SIP: Registere
28882	28882	SIP	disable	10.64.101.205		IDP	DuVoice		B		Ō	SIP: Registere
28883	28883	SIP	disable	10.64.101.205			DuVoice	3rd Party IP Res			õ	SIP: Registere
28884	28884	SIP	disable	10.64.101.205		JDP	DuVoice	3rd Party IP Res			Ō	SIP: Registere
•												

Solution & Interoperability Test Lab Application Notes ©2018 Avaya Inc. All Rights Reserved.

7.2. Verify Configuration Web Service Integration

From the DuVoice server, select Start \rightarrow DV2000 Testing \rightarrow Hospitality Tester to launch the tool. The Hospitality Tester screen is displayed.

For **Rooms**, select a desired guest extension on the primary IP Office system, in this case "21031". Enter the desired **First name** and **Last name**, and click **Check in**. Verify that the pertinent guest user name and user rights template are updated properly on the primary IP Office system.

Rooms			Refres	h			
21031	▼ Reload		Update	All			
Current Settings —				_			
	Extension	Profile	Guest ID				
Checked in/out	21031	Primary IPO					
	Maid status	Language	Text count				
	0:Dirty		0				
	Phone COS						
First name	Last name	Title					
Room H323	Primary						
	Maid stat.	us Phone	COS				
Language							
Language Default	•	<u> </u>	<u> </u>				
Language Default Update		Add text count	▼ Set DND				
Default	-						

Repeat with a check-in request for a guest user on the expansion IP Office system.

8. Conclusion

These Application Notes describe the configuration steps required for DuVoice 6.0 to successfully interoperate with Avaya IP Office Server Edition 10.1. 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 10.1, June 2017, available at <u>http://support.avaya.com</u>.
- 2. *DV2000 System Reference Guide*, Version 6.0.61, available at <u>http://support.duvoice.com/vs6/manual/home</u>.

©2018 Avaya Inc. All Rights Reserved.

Avaya and the Avaya Logo are trademarks of Avaya Inc. All trademarks identified by \mathbb{R} and TM are registered trademarks or trademarks, respectively, of Avaya Inc. All other trademarks are the property of their respective owners. The information provided in these Application Notes is subject to change without notice. The configurations, technical data, and recommendations provided in these Application Notes are believed to be accurate and dependable, but are presented without express or implied warranty. Users are responsible for their application of any products specified in these Application Notes.

Please e-mail any questions or comments pertaining to these Application Notes along with the full title name and filename, located in the lower right corner, directly to the Avaya DevConnect Program at <u>devconnect@avaya.com</u>.