

Avaya Solution & Interoperability Test Lab

# Application Notes for DuVoice 5.0 with Avaya IP Office 7.0 – Issue 1.0

#### Abstract

These Application Notes describe the configuration steps required for the DuVoice 5.0 hospitality messaging system to interoperate with Avaya IP Office 7.0. In the compliance testing, DuVoice used the SIP User, TAPI, DevLink, and Configuration Web Service interfaces from Avaya IP Office, and the PUSH interface from Avaya 96xx IP Telephones to provide automated attendant, voicemail, wake-up call, do not disturb, name and user profile template change, room clean status, and 911 alerting features.

Information in these Application Notes has been obtained through DevConnect compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.

# 1. Introduction

These Application Notes describe the configuration steps required for the DuVoice 5.0 hospitality messaging system to interoperate with Avaya IP Office 7.0. In the compliance testing, DuVoice used the SIP User, TAPI, DevLink, and Configuration Web Service interfaces from Avaya IP Office, and the PUSH interface from Avaya 96xx IP Telephones to provide automated attendant, voicemail, wake-up call, name and user profile template change, and 911 alerting features.

The SIP User and TAPI interfaces were used by DuVoice to provide basic hospitality features such as automated attendant, voicemail, wake-up call, do not disturb, and room clean status indication. In the compliance testing, DuVoice emulated two virtual SIP users on Avaya IP Office. The two virtual SIP users were registered with Avaya IP Office, and configured as members of a hospitality hunt group. DuVoice used the TAPI interface to monitor the virtual SIP users. Incoming calls to the hospitality hunt group were delivered over an available virtual SIP user to DuVoice. DuVoice used the TAPI events to determine the type of call and hence the service to provide, such as automated attendant for incoming trunk calls, voicemail coverage for redirected call, voicemail, do not disturb, room clean status, and wake-up call scheduling for internal calls.

For the voicemail coverage scenarios, voicemail messages were recorded and saved on DuVoice. The TAPI lineDevSpecific capability was used to activate/deactivate the Message Waiting Indicator (MWI), and to optionally set the divert setting for Do Not Disturb when requested manually by the guests.

DuVoice also has a Property Management System (PMS) application called InnDesk with a webbased interface. In the compliance testing, InnDesk was running on the DuVoice server and used for initiation of hospitality requests such as check-in and check-out. Two user rights templates were set up on Avaya IP Office for use with check-in and check-out guests, and DuVoice used the Configuration Web Service to send updates to Avaya IP Office on the guest name and user rights template as part of the check-in, check-out, and move process.

The DevLink and IP Telephone PUSH interfaces were used by DuVoice to send 911 alerting messages. Upon notified of any user dialing "911" on Avaya IP Office, DuVoice pushed a 911 alerting text message to the display of a predetermined list of Avaya 96xx IP Telephone users.

# 2. General Test Approach and Test Results

The feature test cases were performed manually. Calls were made from the PSTN and from local users to the hospitality hunt group, with different options selected for extension transfer, voice message retrieval, and wake-up call schedule. The DuVoice InnDesk was used to manually initiate check-in/check-out/move requests, to monitor the room and wake-up call status, and to set Do Not Disturb.

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

### 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 emulated SIP users.
- Automated attendant navigation for incoming trunk calls, such as transfer to guests and staff.
- Handling of voicemail messages and message waiting lamps for check-out and move requests initiated via InnDesk.
- Voicemail recording, logging, and retrieval, with proper message waiting lamp activation/deactivation for users with analog, digital, and IP telephone types.
- Scheduling and delivering of wake-up call requests, including retried attempts and escalation to staff.
- Handling of TAPI events and messages for calls, and setting of MWI and do not disturb divert parameters.
- Handling of maid codes as indication of room clean status from the hospitality hunt group calls.
- Use of Configuration Web Services to update guest name and user rights template associated with check-in, check-out, and move requests from InnDesk.
- Use of real-time DevLink events to monitor "911" dialing, and push of 911 alerting text message to an Avaya 9620 IP Telephone user. The 911 alerting text message included the name and extension of the user making the "911" call.

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

TLT; Reviewed:	
SPOC 4/5/2011	

#### 2.2. Test Results

All test cases were executed.

The one observation on DuVoice from the compliance testing was that when the DNS server setting for the network card on the DuVoice server is left blank, then calls connected to the first couple of DuVoice ports will not have audio. The workaround is to always configure the DNS server setting on the network card, followed by a server reboot.

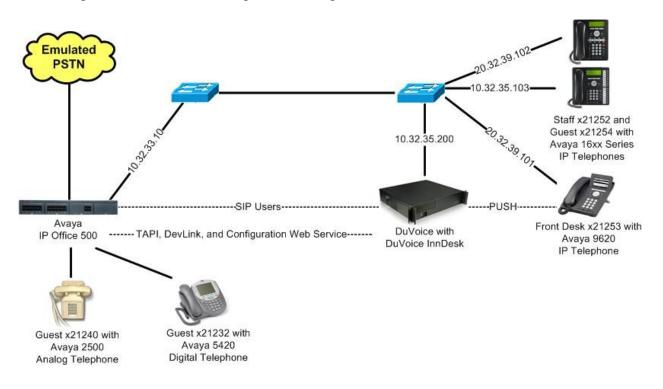
#### 2.3. Support

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 below.



## 4. Equipment and Software Validated

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

Equipment	Software
Avaya IP Office 500	7.0
Avaya 16xx Series IP Telephones (H.323)	1.3
Avaya 9620 IP Telephone (H.323)	3.11
Avaya 5420 Digital Telephone	NA
Avaya 2500 Analog Telephone	NA
<ul> <li>DuVoice on Microsoft Windows 7 Professional</li> <li>InnDesk</li> <li>Avaya TAPI (tspi2w.tsp)</li> <li>Avaya DevLink (devlink.dll)</li> </ul>	5.00.025 1.30 1.0.0.35 1.0.0.5

# 5. Configure Avaya IP Office

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

- Verify IP Office license
- Obtain LAN IP address
- Administer SIP Registrar
- Administer SIP extensions
- Administer SIP users
- Administer hospitality hunt group
- Administer incoming call route
- Administer system voicemail
- Administer voicemail users
- Administer analog user MWI
- Administer user rights
- Administer security service

### 5.1. Verify IP Office License

From a PC running the Avaya IP Office Manager application, select **Start > Programs > IP Office > Manager** to launch the Manager application. Select the proper IP Office system, and log in with the appropriate credentials.

The Avaya IP Office R7 Manager screen is displayed. From the configuration tree in the left pane, select Licence > 3rd Party IP Endpoints to display the 3rd Party IP Endpoints screen in the right pane. Verify that the Licence Status is "Valid".

🖿 Avaya IP Office R7 Manager IP50	0-Dev [7.0(3)]				
File Edit View Tools Help		00-Dev	Licence	3rd Party IP Endpoints	•
IP Offices	×××	31	rd Party IP Endpoints	📥 -	×
<ul> <li>Licence (73)</li> <li>1600 Series Phones</li> <li>3rd Party IP Endpoints</li> <li>Advanced Edition</li> <li>Advanced Small Communi</li> <li>AUDIX Voicemail</li> <li>Avaya IP endpoints</li> <li>Avaya IP endpoints</li> <li>CCC Agent Rostering</li> <li>CCC Agents</li> <li>CCC Chat</li> <li>CCC Chat</li> <li>CCC Chail</li> <li>CCC Cesigner (users)</li> <li>CCC Email</li> <li>CCC PC Wallboards</li> <li>CCC Server</li> </ul>	Licences Licence Key Licence Type Licence Status Instances Expiry Date	4vtB3X6fEt 3rd Party IA Valid 255 Never	dYUIfafoEe1tAOdD2_Gg@z P Endpoints		

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

📶 Avaya IP Office R7 Manager IP50	0-Dev [7.0(3)]			
File Edit View Tools Help				
🗄 🕹 🗁 - 🔙 🖪 💽 🖬 🚺 🖌 -	🗆 🛹 🌆 🕴 IP5	10-Dev 🗾 Licence		CTI Link Pro
IP Offices	E	CTI Link	Pro	📸 •   🗙   •   <   >
Licence (73) 1600 Series Phones 3rd Party IP Endpoints Advanced Edition Advanced Small Communi AUDIX Voicemail Avaya IP endpoints Avaya IP endpoints CCC Agent Rostering CCC Agents CCC Chat CCC Coseigner (users) CCC Server CCC Spertrum Wallboard CCC Supervisors CCC Supervisors CCC CC UPG CCR CCC UPG	Licences Licence Key Licence Type Licence Status Instances Expiry Date	yGzJa25JAKSYDzzOCe99oj4iM CTI Link Pro Valid 255 Never		
CCR SUP Compact Business Centre Conferencing Center CTI Link Pro Customer Service Agent				

#### 5.2. Obtain LAN IP Address

From the configuration tree in the left pane, select **System** to display the **IP500-Dev** screen in the right pane. Select the **LAN1** tab, followed by the **LAN Settings** sub-tab in the right pane. Make a note of the **IP Address**, which will be used later to configure DuVoice. Note that IP Office can support SIP on the LAN1 and/or LAN2 interfaces, and the compliance testing used the LAN1 interface.

🖬 Avaya IP Office R7 Man	ager IP500-Dev [7.0(3)]			
File Edit View Tools : 2 🔊 - 🖃   🛋 💽 📰	Help <u>)</u> 🗸 🔄 🏞 👔 🕺 IP500-	Dev 🗾 System	IP500-Dev	• ]
IP Offices		IP500-Dev	d -	<pre>  X   V   &lt;   &gt;</pre>
BOOTP (6)     Operator (3)     IP500-Dev     System (1)     IP500-Dev     Control Unit (6)     Control Unit (6)     User (27)     User (27)     User (27)     Short Code (78)     Service (0)     RAS (1)	VCM CCR System LANI LAN2 DNS LAN Settings VoIP Network IP Address IP Mask Primary Trans, IP Address RIP Mode	Voicemail     Telephony     Directory       x Topology     SIP Registrar       10     32     33     10       255     255     255     0       0     0     0     0       RIP 2 Broadcast (RIP 1 Compatibil       Enable NAT		SMDR Twinning

#### 5.3. Administer SIP Registrar

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

🕼 Avaya IP Office R7 Man	ager IP500-Dev [7.0(3)]	
File Edit View Tools	Help	
BOOTP (6)     Operator (3)     IP500-Dev     System (1)     IP500-Dev     IP500-Dev     Int (26)     Control Unit (6)     Extension (32)     Int (27)     I	VCM CCR	IMTP SMDR Twinning
<ul> <li>Service (0)</li> <li>RAS (1)</li> <li>Incoming Call Rou</li> <li>WanPort (0)</li> <li>Directory (0)</li> </ul>	H323 Auto-create Extn     RTP Port Number Range       Port Range (Minimum)     49152 \$       H323 Auto-create User     Port Range (Maximum)       53246     \$	

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

🕼 Avaya IP Office R7 Mana	ager IP500-Dev [7.0(3)]					
File Edit View Tools	Help					
	🔟 🗸 🖂 🗱 🗄 IP500	0-Dev 💽 Sy	stem	IP500-Dev	8	
IP Offices	12 12	IP500-Det	r*			✓   <   >
	VCM CCR					
🕀 🖗 Operator (3)	System LAN1 LAN2 DNS	5 Voicemail Telephor	Directory Services	System Events	SMTP SMDR	Twinning
🖃 🤜 System (1)	LAN Settings VoIP Netwo	ork Topology SIP Registr	ar			
ाP500-Dev ⊡ 17 Line (26)	Domain Name				1	
<ul> <li></li></ul>	Layer 4 Protocol	Both TCP & UDP 👻				
<ul> <li>User (27)</li> <li>User (27)</li> <li>HuntGroup (4)</li> </ul>	TCP Port	5060				
🗄 🥬 Short Code (78)	UDP Port	5060				
<ul> <li>Service (0)</li> <li>RAS (1)</li> </ul>	Challenge Expiry Time (secs)	10				
🗈 🍅 Incoming Call Rot 🤯 WanPort (0)	Auto-create Extn/User					

#### 5.4. Administer SIP Extensions

From the configuration tree in the left pane, right-click on **Extension**, and select **New > SIP Extension** from the pop-up list to add a new SIP extension. Enter the desired digits for **Base Extension**, and uncheck **Force Authorization**, as shown below.

Repeat this section to add the desired number of SIP extensions. In the compliance testing, two SIP extensions with base extensions of "29001" and "29002" were created.

🐮 Avaya IP Office R7 Man	🖥 Avaya IP Office R7 Manager IP500-Dev [7.0(3)]							
	Help							
2 🖻 - 🖬 🖪 🔜 🖬	<u>1)</u> 🗸 🦾 孝 🕼 🕴 IP500-Dev	🝸 Extension	8002 27001	•				
IP Offices	SII SI	P Extension: 8016 *		$\operatorname{Her}  X  <   <   >$				
	Extn VoIP T38 Fax							
■一行 Line (26) ■一一 Control Unit (6)	Extension Id	8016						
<ul> <li>Extension (32)</li> <li>8006 21231</li> </ul>	Base Extension	29001						
- 🎝 1 21232 - 🎝 2 21233	Caller Display Type	On	~					
- 🧄 3 21234 -	Reset Volume After Calls							
40 4 21235 40 5 21236 40 6 21237	Device type	Unknown SIP device						
- 🎝 7 21238 - 📣 8 21239	Module	0						
	Port	0						
- 40 27 21242 - 40 28 21243	Force Authorization			10.7.7				

#### 5.5. Administer SIP Users

From the configuration tree in the left pane, right-click on User, and select New from the pop-up list. Enter desired values for Name and Full Name. For Extension, enter the first SIP base extension from Section 5.4.

🕼 Avaya IP Office R7 Manager	IP500-Dev [7.0(3)]			
File Edit View Tools Help	)   ✔ ⇄ ^@	500-Dev 💽 User	• 21253 Extn21253	
IP Offices	12	<user:0>: *</user:0>	A +   ×   ×   <	> ]
User (27) NoUser 25001 agent1 21231 Extn21231 21233 Extn21233 21234 Extn21234 21235 Extn21235 21236 Extn21236 21237 Extn21237	Button Programming M Personal Directory User Voicemail DNL Name Password Confirm Password Full Name	Menu Programming Mobility Phone Mana D ShortCodes Source Numbers Tele sip29001	ager Options Hunt Group Membership Announcemen	nts
	Extension	29001		NHE:
-2 21245 Extn21245 -2 21250 Extn21250 -2 21251 Extn21251 -2 2 21251 Extn21251 -2 2 21252 Extn21252 -2 2 21253 Extn21253	Priority System Phone Rights Profile	5 None Basic User	✓	
- 21254 Extn21254 - 2= 21232 Guest21232 - 21240 Guest21240 - 2= 27001 IVR 27001 - 2= 27002 IVR 27002		Receptionist     Enable SoftPhone     Enable one-X Portal Services	5	

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

🕼 Avaya IP Office R7 Manager	IP500-Dev [	7.0(3)]						
File Edit View Tools Help	✓ ं ₹	1P500	-Dev	User		2125	3 Extn21	253
IP Offices	<b>1</b> 2		<د	Jser:0>: *			C	$   \times   \times   <   >$
User (27)	Button Progra		iu Programming	Mobility Phone	Manager Op	tions Hunt (	Group Me	mbership Announcements
25001 agent1	User Voice	email DND	ShortCodes	Source Numbers	Telephony	Forwarding	Dial In	Voice Recording
<ul> <li>21231 Extn21231</li> <li>21231 Extn21231</li> <li>21233 Extn21233</li> <li>21234 Extn21234</li> <li>21235 Extn21235</li> <li>21236 Extn21236</li> <li>21237 Extn21237</li> <li>21238 Extn21238</li> <li>21239 Extn21239</li> <li>21243 Extn21241</li> <li>21243 Extn21241</li> <li>21245 Extn21245</li> <li>21250 Extn21250</li> </ul>	Voicemail Co Confirm Voic Voicemail En	email Code Iail	ору (	) Forward	Alert		Voicemail	

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

🕅 Avaya IP Office R7 Manager	IP500-Dev [7.0(3)]		
File Edit View Tools Help	🗸 🌛 孝 👔 📋 IP500-Dev	• User	NoUser
IP Offices	12	<user:0>: *</user:0>	iii -   ×   √   <   >
BOOTP (6) Grad Operator (3) From Deven (1) From System (1) From Control Unit (6) From	Button Programming Menu Pro Personal Directory User Voicemail DND Sh Call Settings Supervisor Sett Outside Call Sequence Inside Call Sequence Ringback Sequence No Answer Time (secs)	Ings Multi-line Options Call Log Default Ring Default Ring Default Ring 15	varding Dial In Voice Recording
21234 Extn21234     21235 Extn21235     21235 Extn21235     21236 Extn21236     21237 Extn21237     21238 Extn21238	Wrap-up Time (secs) Transfer Return Time (secs) Call Cost Mark-Up	2 0ff 2 100	The local second

Select the Supervisor Settings sub-tab. Check the Cannot be Intruded field, as shown below.

Repeat this section to add a new user for each SIP extension from **Section 5.4**. In the compliance testing, two users with names of "sip29001" and "sip29002" were created.

🜃 Avaya IP Office R7 Manager	IP500-Dev [7.0(3)]			
File Edit View Tools Help : 🏖 🗃 - 🛃   🏊 🖭 🔛	🗸 🔄 🕏 👔 🗄 IP500-De	ev 🔽 User	NoUser	
IP Offices	<b>₽</b>	<user:0>: *</user:0>		→   ×   ✓   <   >
	Personal Directory	Programming Mobility Phone		Dial In Voice Recording
	Call Settings Supervisor Se Login Code	ttings Multi-line Options Cal		Force Login
NoUser	Login Idle Period (secs)			Force Account Code
	Monitor Group Coverage Group	<none></none>	✓ □ F	Force Authorization Code
21233 Extn21233 21234 Extn21234	Status on No-Answer	Logged On (No change)		Dutgoing Call Bar
21235 Extn21235	Reset Longest Idle Time -			nhibit Off-Switch Forward/Transfe
	All Calls     External Incoming			Can Intrude Cannot be Intruded Can Trace Calls

#### 5.6. Administer Hospitality Hunt Group

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

Manager IP Office R7 Manager IP500-Dev [7.0(3)] File Edit View Tools Help 🗄 🧟 🗁 - 🛃 | 🔄 💽 🔜 🔔 | 🗸 🖾 🚑 🏌 IP500-Dev 29000 DuVoice Main HuntGroup -Z **IP Offices** Sequential Group <HuntGroup:0>: \* - X V < > PY. Hunt Group Voicemail Fallback Queuing Voice Recording Announcements 🗄 🝻 Operator (3) DuVoice Main CCR Agent Group Name 😑 🤜 IP500-Dev 🗄 🤜 System (1) 29000 Extension 田 行 Line (26) 🛓 🤝 Control Unit System Default (15) Ŷ Ring Mode Sequential ~ No Answer Time (secs) 🗄 🛷 Extension (3 × \$ Off Overflow Mode Group Overflow Time (secs) 🗄 🧯 User (25) 🗄 🂱 HuntGroup \$ Hold Music Source No Change ¥ Voicemail Answer Time (secs) 45 🗄 🥬 Short Code Agent's Status on No-Answer Service (0) None v Applies To 🕀 🗸 RAS (1) User List Overflow Group List 🗄 🜔 Incoming Ca 🙆 WanPort (0 Extension Name Group Name 🛲 Directory (0 🕥 Time Profile 🗄 🔞 Firewall Prol 🗄 👖 IP Route (1) 🗄 🚛 Account Co 🗄 🍖 Licence (73) Tunnel (0) 🗄 🌆 User Rights 🗄 🍸 ARS (1) 🗄 🎆 Authorizatic 🛹 RAS Locatio 🗄 🚺 E911 Syster Edit... Remove Add... Remove

Click on Edit in the User List section to add members.

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

Filters Extn Nam	e i	Extn	Number					
Available Us	ers ( 24/24	ŧ١			Member	s [ 2/2 ]		
Name	Extn	^	1	<b>†</b>	Order	Enabled	Name	Extn
agent2	25002	٦.,			1	<b>V</b>	sip29001	29001
Extn21231	21231				2	<b>~</b>	sip29002	29002
Extn21232	21232							
Extn21233	21233							
Extn21234	21234							
Extn21235	21235							
Extn21236	21236							
Extn21237	21237							
Extn21238	21238		~					
Extn21239	21239		Add Be	ore				
Extn21240	21240		Add Af	ter				
Extn21241	21241		Apper	a				
Extn21243	21243		_	_				
Extn21245	21245		Remo	/e				
Extn21250	21250							
Extn21251	21251							
Extn21252	21252							
Extn21253	21253							
Extn21254	21254							
sip28001	28001							
sip28002	28002							
sip29001	29001							
sip29002	29002			Ŧ				

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

👫 Avaya IP Office F	7 Manager IP500-Dev [7.0	)(3)]		
File Edit View 🗄 🙇 📂 🗕   🛋 🛛	Tools Help 🔝 🖬 🚺 🗸 🗔 🛹 👔	IP500-Dev 💽 HuntGroup	<ul> <li>29000 DuVoic</li> </ul>	e Main
IP Offices	🛃 Se	quential Group <huntgroup< th=""><th>o:0&gt;: *</th><th></th></huntgroup<>	o:0>: *	
BOOTP (6)     Operator (3)     Vortex (3)     System (1)     F7 Line (26)     Control Unit     System (1)     F7 Line (26)     Sort Code     Service (0)	Name Extension	ck Queuing Voice Recording Announce DuVoice Main 29000 Sequential Group No Change	ments CCR Agent Group No Answer Time (secs) Overflow Time (secs) Voicemail Answer Time (secs)	System Default (15) 🗘 Off 🗘 45
<ul> <li>Incoming Ca</li> <li>WanPort (0)</li> </ul>	User List Extension Name		Overflow Group List	
Directory (0     O	✓         29001         sip29001           ✓         29002         sip29002			

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📶 Avaya IP Office I	R7 Manager IP500-Dev [7	.0(3)]				
File Edit View	Tools Help 🔝 🖬 🔔 🛹 🗔 🛹 🕯	🛙 📙 IP500-Dev	• F	luntGroup	21200 Main	
IP Offices	S S	equential G	roup <hur< th=""><th>ntGroup:0&gt;:</th><th>*</th><th><math display="block">\mathbb{R}^{ \mathcal{A} } \to  \mathcal{A}  \times  \mathcal{A}  \times  \mathcal{A}  \times  \mathcal{A} </math></th></hur<>	ntGroup:0>:	*	$\mathbb{R}^{ \mathcal{A} } \to  \mathcal{A}  \times  \mathcal{A}  \times  \mathcal{A}  \times  \mathcal{A} $
<ul> <li>➡ K BOOTP (6)</li> <li>➡ Ø Operator (3)</li> <li>➡ IP500-Dev</li> <li>➡ System (1)</li> <li>➡ ↑ (Line (26))</li> <li>➡ ↑ (Line (26))</li> <li>➡ Extension (( ■ ↓ User (25))</li> <li>➡ W HuntGroup (25)</li> <li>➡ Short Code</li> <li>➡ Service (0)</li> </ul>	croicontair Ennail				] Voicemail On ] Voicemail Help ] Broadcast ] UMS Web Services	

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

🜃 Avaya IP Office F	R7 Manager IP500-Dev [7.0(3)]	×
File Edit View	Tools Help 	
IP Offices	Sequential Group <huntgroup:0>: * 🛛 🚔 -   X   V   &lt;  </huntgroup:0>	>
<ul> <li>BOOTP (6)</li> <li>Operator (3)</li> <li>IP500-Dev</li> <li>System (1)</li> <li>↑? Line (26)</li> <li>↑? Line (26)</li> <li>↑? Line (26)</li> <li>↓ Extension (;</li> <li>↓ User (25)</li> <li>↓ User (25)</li> <li>↓ User (25)</li> <li>↓ Short Code</li> <li>♦ Short Code</li> <li>♦ Service (0)</li> <li>♠ RAS (1)</li> <li>♠ Droming Ca</li> </ul>	Calls In Queue Alarm Calls In Queue Threshold 1 2 Analog Extension to Notify <a href="https://www.extension.com">Notify</a>	

### 5.7. Administer Incoming Call Route

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

As shown in the screen below, the **Incoming Number** for the ISDN PRI line "9" is "73285XXXX", which uses five single digit wildcards "X" allowing the last five digits to be any number.

👫 Avaya IP Office R7 Manager IP	2500-Dev [7.0(3)]			
File Edit View Tools Help : 🔍 🗁 - 🖃 💽 🔛 🚺	∕ 🦲 袭 🏠 į́ IP500-Dev	<ul> <li>Incoming Call Route</li> </ul>	9 73285XXXXX	
IP Offices		9 73285XXXXX		<b>⊡</b> * •   <b>X</b>   <b>√</b>   <   >
BOOTP (6)     Operator (3)     TP500-Dev     System (1)     f  Line (26)     Control Unit (6)     Extension (34)     User (25)     WhutGroup (5)     Short Code (78)	Standard Voice Recording Bearer Capability Line Group Id Incoming Number Incoming Sub Address Incoming CLI	Destinations Any Voice 9 73285XXXX		
	Locale Priority Tag	1 - Low	<ul> <li></li> <li></li> </ul>	
	Hold Music Source	System Source	*	

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 "7328529000" will be routed to the hospitality hunt group configured in **Section 5.6**.

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

🖬 Avaya IP Office R7 Manager IP	2500-Dev	[7.0(3)]				
File Edit View Tools Help		A=_ 1			101	
. 🔝 🖻 - 🖬 🖬 💽 🖬 🚺	_	1P500-Dev 🔹	Incoming Call Route	9 73285XXXXX		
IP Offices		9 73	285XXXXX			✓   <   > ]
BOOTP (6)	Standard	Voice Recording Destinations				
⊕ 🦗 Operator (3) 🖃 🧠 IP500-Dev		TimeProfile	Destination	Fallb	ack Extension	
🗄 🤜 System (1)	• •	efault Value	#	*		~
			· · · · · · · · · · · · · · · · · · ·			

#### 5.8. Administer System Voicemail

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

For **Voicemail Type**, select "Group Voicemail" from the field drop-down list. For **Voicemail Destination**, select the name of the hospitality hunt group from **Section 5.6**.

🔣 Avaya IP Office R7 Mana	ger IP500-Dev [7.0(3)]			
File Edit View Tools	Help <u> </u>	Dev 💽 System	IP500-Dev	
IP Offices		IP500-Dev*		
BOOTP (6)     Operator (3)     System (1)     System (1)	CCR System LAN1 LAN2 DN Voicemail Type	S Voicemail Telephony Direct	ory Services System Events	SMTP SMDR Twinning VCM sages Button Goes To Visual Voice
<ul> <li>↑ 7 Line (26)</li> <li>○ Control Unit (6)</li> <li>○ A Extension (34)</li> <li>○ User (25)</li> <li>○ M HuntGroup (5)</li> </ul>	Voicemail Destination Voicemail IP Address Backup Voicemail IP Address	DuVoice Main 10 · 32 · 35 · 10 0 · 0 · 0 · 0	×	

### 5.9. Administer Voicemail Users

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

🖬 Avaya IP Office R7 Manager	P500-De	v [7.0(3	B)]							
File Edit View Tools Help : 🎗 😂 - 属 💽 📰 🔔	بة ت 🖌	≥ ^@ !	IP500-0	Dev	🔹 User		2124	) Extn212	240 💌	J
IP Offices	Z			Extn2	1240: 21240	*			∦ -  ×   ✓	<   >
System (1)     IP500-Dev     IF 行 Line (26)	Announce	ements F	Personal	Directory	Mobility Phone	· · · · ·		· · · ·	· 1	
i -≪ Control Unit (6)	User <u>N</u> ame	Voicemail	DND	ShortCodes Guest21	Source Numbers	Telephony	Forwarding	Dial In	Voice Recording	
- 17 NoUser - 25001 agent1 - 25002 agent2	Passwor Confirm	'd Password								
1 21231 Extn21231 1 21232 Extn21232 1 21233 Extn21233	Full Nam	-		Room 2	1240					
	Extensio Locale	n		21240					~	
21237 Extn21237	Priority System F	Phone Rigi	hts	5 None					× ×	
21239 Extn21239 21240 Extn21240 21241 Extn21240 21241 Extn21241 21243 Extn21243	Profile			Basic U:	ser eptionist				~	

✓ 🦾 🏞 👔 📜 IP500-1		User		21240		inter j
12	Extn21	240: 21240	)*		Ĉ	K •   X   ✓   <   >
		Mobility Phone	e Manager Op	tions Hunt (	Group Mer	mbership
User Voicemail DND	ShortCodes	Source Numbers	Telephony	Forwarding	Dial In	Voice Recording
Voicemail Code				🖉 Voicemail 🤇	Dn	
Confirm Voicemail Code			[	Voicemail H	Help	
Voicemail Email				Voicemail P	Ringback	0
			1	Voicemail B	Email Read	ding
Voicemail Email	у О Бо	rward 🔿 Al	ert	UMS Web	Services	
XXX	Button Programming Men Announcements Personal User Voicemail DND Voicemail Code [ Confirm Voicemail Code [ Voicemail Email	Extn21 Button Programming Menu Programming Announcements Personal Directory User Voicemail DND ShortCodes Voicemail Code Confirm Voicemail Code Voicemail Email Voicemail Email	Extn21240: 21240     Extn21240: 21240     Button Programming Menu Programming Mobility Phone Announcements Personal Directory User Voicemail DND ShortCodes Source Numbers Voicemail Code Confirm Voicemail Code Voicemail Email Voicemail Email	Extn21240: 21240*  Button Programming Menu Programming Mobility Phone Manager Opl Announcements Personal Directory User Voicemail DND ShortCodes Source Numbers Telephony Voicemail Code Confirm Voicemail Code Voicemail Email	Extn21240: 21240*  Button Programming Menu Programming Mobility Phone Manager Options Hunt O Announcements Personal Directory User Voicemail DND ShortCodes Source Numbers Telephony Forwarding Voicemail Code Voicemail Code Voicemail Code Voicemail Email UMS Web Voicemail Email	Extn21240: 21240*         Button Programming       Menu Programming       Mobility       Phone Manager Options       Hunt Group Menu         Announcements       Personal Directory       User       Voicemail       DND       ShortCodes       Source Numbers       Telephony       Forwarding       Dial In         Voicemail Code       Image: Confirm Voicemail Code       Image: Voicemail Code       Image: Voicemail Help       Voicemail Ringback         Voicemail Email       Image: Voicemail Email       Image: Voicemail Email       Image: Voicemail Email

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

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

🕼 Avaya IP Office R7 Manager	IP 500-Dev [7.0(3	)]						
File Edit View Tools Help : 🍭 🗁 - 属   🏊 💽 📰 🔔	✓ _ ≠ * <u>0</u> ]!	IP500-Dev	,	💌 User		21240	) Extn212	240
IP Offices	Z		Extn21	1240: 21240	•			k •   <b>X</b>   <b>√</b>   <   >
	Button Programming Announcements Pr	Menu Pr ersonal Dire		Mobility Phone	Manager Op	tions Hunt G	iroup Mer	mbership
🗉 🖘 Control Unit (6)	User Voicemail	DND Sł	hortCodes	Source Numbers	Telephony	Forwarding	Dial In	Voice Recording
Extension (34) User (25) NoUser 25001 agent1	Follow Me Number							
25002 agent2 21231 Extn21231 21232 Extn21232 21233 Extn21232	Forward Uncondit	ional						
21234 Extn21234	Forward Number							~
21235 Extn21235	Forward Hunt Gro	up Calls						
21237 Extn21237	Forward Internal	Calls		$\checkmark$				
21238 Exth21238 21239 Exth21239 21240 Exth21240 21241 Exth21241 21243 Exth21243 21245 Exth21243	Forward On Busy Forward On No Ar Forward Number	nswer						~
	Forward Internal	calls						

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

Manager IP Office R7 Manager IP 50	00-Dev [7.0(3)]		
File Edit View Tools Help : 🏂 📨 - 🔜 🖪 💽 📰 🔔 🛩	🥶 孝 👔 📔 IP500-Dev	▼ User	21253 Front21253
IP Offices		Front21253: 21253	📑 📲 🗙   🗸   <   >
21238 Extn21238	Button Programming Menu Pro Announcements Personal Dire	ogramming Mobility Phone Manager Op	tions Hunt Group Membership
21243 Extn21243	User Voicemail DND Sh	ortCodes Source Numbers Telephony	Forwarding Dial In Voice Recording
21245 Extn21245	Name	Front21253	
	Password		
	Confirm Password		
21240 Guest21240 21254 Guest21254	Full Name	DuVoice Front Desk	
	Extension	21253	
29001 sip29001	Locale		
29002 sip29002	Priority	5	×

#### 5.10. Administer Analog User MWI

For voicemail users with analog telephones, the MWI setting on the analog extension may need modification, depending on the type of analog telephone. Refer to [2] for details on the specific analog telephone types requiring the MWI setting. In the compliance testing, one guest had an analog telephone type 2500, which required an update to the MWI setting.

From the configuration tree in the left pane, select **Extension**, followed by the extension corresponding to the analog user. In this case, the extension is "21240". In the **Message Waiting Lamp Indication Type** section, select "On" from the drop-down list, as shown below.

忆 Avaya IP Office R7 Manager	IP500-Dev [7.0(3)]			
File Edit View Tools Help : 2 😂 - 🚽 🛋 💽 📰 🔔	) 🗸 🌛 之 🜠 🕴 IP500-Dev	Extension	25 21240	
IP Offices	E Analogu	e Extension: 25 21240	📥 •	🗙   ✔   <   >
Extension (34) 8006 21231 21232 221233 321234 421235 521236 6 21237 7 21238 8 21239 25 21240 26 21241 27 21242	Extn Analogue Equipment Classification Quiet Headset Paging Speaker Standard Telephone Door Phone 1 Door Phone 2 IVR Port FAX Machine	Flash Hook Pulse Width	20 🔷 ms	

#### 5.11. Administer User Rights

From the configuration tree in the left pane, right-click on User **Rights**, and select **New** to create a new user rights template. Enter a desired **Name** to designate user rights for guests in the check-in state.

Repeat this section to create the desired number of user rights templates for guests in various states. In the compliance testing, two user rights templates with names of "CheckIn" and "CheckOut" were created.

🜃 Avaya IP Office R7 Mar	nager IP500-Dev [7.0(3)]	
File Edit View Tools	Help	
j 2 🖻 - 🖬   🔺 🔃 🖬	🔝 🗸 🗁 🔁 🁔 🕺 IP500-Dev 🔹 User Rights 🔹 Agent	•
IP Offices	🗹 <user rights:0="">*</user>	∦ -   ×   √   <   >]
BOOTP (6) Operator (3) FS00-Dev System (1) FS00-Dev Control Unit (6) Extension (34) Extension (34) Ext	User ShortCodes Button Programming Phone Manager Telephony User Rights membership V Name CheckIn Locale Priority 5 Not part of User Rights Do not disturb Enable do not disturb Not part of User Rights	Voicemail

### 5.12. Administer Security Service

From the Avaya IP Office R7 Manager screen, select File > Advanced > Security Settings from the top menu. Select the proper IP Office system, and log in with the appropriate security user credentials.

The Avaya IP Office R7 Manager – Security Administration screen is displayed. From the configuration tree in the left pane, select Security > Services to display the Service : Configuration screen in the right pane. For Service Security Level, select "Unsecure + Secure" as shown below. The additional "Secure" level is needed for the Configuration Web Service interface.

🐮 Avaya IP Office R7 Manager	- Security Administrati	on - IP500-Dev [7.0 (3)]	
File Edit View Tools Hel;	)		
1 2. 🗑 🖻 - 🖪 💽 🖬 🛦	~		9
Security Settings	Service : Config	juration	<b>⊡</b> -   X   ✓   <   >
E Gecurity	Service Details		
⊕ ≪ General ⊕ ≪ System (1)	Name	Configuration	
⊕	Host System	IP500-Dev	
E Service Users (5)	Service TCP Port	50804, 50805	
	Service Security Level	Unsecure + Secure	
	Under ENM Administration		

# 6. Configure Avaya 96xx IP Telephones

This section provides the procedures for configuring the Avaya 96xx IP Telephones to support the PUSH interface. The procedures include the following areas:

- Administer common parameters
- Administer specific phone parameters
- Reboot telephones

#### 6.1. Administer Common Parameters

From the appropriate HTTP server serving the 96xx IP Telephones, locate the **46xxsettings.txt** file. Navigate to the **COMMON SETTINGS** section, under the **WML BROWSER SETTINGS** sub-section, set **WMLPORT** to "8090". Navigate to the **PUSH INTERFACE SETTINGS** sub-section, and set the **TPSLIST** and **SUBSCRIBELIST** parameters as shown below, where "10.32.35.200" is the IP address of the DuVoice server.

```
##
                                               ##
##
                                               ##
                  COMMON SETTINGS
##
                                               ##
              Applies to all telephones
##
##
   This section contains the common settings used to
## enable and administer the 'Web' application. These
## parameters are not supported on 16cc SIP phones.
  The TCP port number of your HTTP proxy server
##
## SET WMLPORT 8080
SET WMLPORT 8090
##
## These settings are used to administer the Push interface.
## These parameters are not supported on 16cc SIP phones.
##
##
  The list of all the Trusted Push Servers.
  If set to "/", all servers are allowed.
##
## If set to null or blank, Push is disabled.
## SET TPSLIST 135.20.21.20
##
##
   The list of all the Subscription Servers.
## SET SUBSCRIBELIST http://135.20.21.21/subscribe
SET TPSLIST 10.32.35.200:8090
SET SUBSCRIBELIST http://10.32.35.200:8090/
```

#### 6.2. Administer Specific Phone Parameters

Navigate to the relevant specific phone parameters section, in this case **SETTINGS9620**. Under the **WML BROWSER SETTINGS** subsection, set the **WMLHOME** parameter as shown below, where "10.32.35.200" is the IP address of the DuVoice server, and "8090" is the **WMLPORT** value from **Section 6.1**.

Repeat this section for all relevant 96xx IP Telephone types. In the compliance testing, the 9620 IP Telephone was used for testing the push of 911 alerting text message.

```
****************
#
# SETTINGS9620
#
           .
##
## The WMLHOME setting is used to enable and
## administer the 'Web' Application.
##
## The WMLIDLEURI setting acts as an idle screen when the
## phone has been idle (see WMLIDLETIME value). By default
## this URL is NULL ("") and this screen is not activated.
##
           •
##
## SET WMLHOME http://support.avaya.com/elmodocs2/avayaip/4620/home.wml
## SET WMLIDLEURI http://support.avaya.com/elmodocs2/avayaip/4620/idle.wml
##
SET WMLHOME http://10.32.35.200:8090/
GOTO END
```

#### 6.3. Reboot Telephones

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

# 7. Configure DuVoice

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

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

### 7.1. Administer TAPI Driver

From the DuVoice server, select **Start > Control Panel**, and click on the **Phone and Modem** icon (not shown below). In the **Phone and Modem** screen, select the **Advanced** tab. Select the **Avaya IP Office TAPI2 Service Provider** entry, and click **Configure**.

🔉 Phone and Modem		×
Dialing Rules Modems	s Advanced	
The following Providers:	ng telephony providers	are installed on this computer:
Avaya IP Office TAP Microsoft HID Phone NDIS Proxy TAPI Ser TAPI Kernel-Mode Se Unimodem 5 Service	TSP rvice Provider ervice Provider	
	Add	🚱 Remove ) 🚱 Configure
	ОК	Cancel Apply

The Avaya TAPI2 configuration screen is displayed. For Switch IP Address, enter the IP address of Avaya IP Office. Select the radio button for Third Party, and enter the IP Office password into the Switch Password field. Reboot the DuVoice server.

Switch IP Address	10.32.33.10	OK
		Cancel
C Single User		
User Name		
User Password		
Third Party		
Switch Password	******	
	🔲 Ex Directory Users	
	🗖 WAV Users	
	ACD Queues	

#### 7.2. Administer Setup Wizard

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



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

Site Information		X
	Enter the required site inform if you are using any type of F Required Name: Site telephone number:	ation. The optional information should be filled in AX application. Avaya DevConnect Lab ( 908 ). 8485601
	- Optional Fax telephone number: Address:	()
DuVoice	State or Province:	Zip or Postal Code
	< Back	Next > Cancel Help

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

SIP Information			×
	ports will be registere	e or IP address of the SIP d; this is optional but reco P address of the IP PBX.	registrar with which the SIP mmended. Typically, this will be
	Server address:	10.32.33.10	
DuVoice			
	< B	ack Next>	Cancel Help

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

PBX Selection			×
	Select the telephone switch the your particular switch listed select		to. If you do not see
	AvayaACMSIP AvayaIPofficeSIP AvayaIPOfficeSIPInbandMWI	01/17/2011 12:25:48 01/17/2011 12:25:48 01/17/2011 12:25:48	
	AvayalPOfficeSIPTapiMWI Generic SIP Sphericall	01/17/2011 12:25:48 01/17/2011 12:25:48 01/17/2011 12:25:48 01/17/2011 12:25:48	
DuVoice			
	< <u>B</u> ack	<u>N</u> ext > Cance	Help

The Voice Ports screen is displayed. Assign each SIP base extension from Section 5.4 to an available Port, and enter the hunt group extension from Section 5.6, as shown below. In the compliance testing, two DuVoice ports were configured to correspond to the two SIP extensions created on Avaya IP Office.

Click Next, followed by Finish in the subsequent screen to complete the wizard.

Voice Ports	each port e below. Ente help with re	nter it in the spa ering the extens solving integrat ot know the ext	red for 4 voice mail ports. If you know the extension of ace provided by clicking the ports extension field sion numbers is required for some integrations and will ion issues. ensions leave them blank, they can be entered later in
	Number	Extension	Hunt group
	Port 1 Port 2 Port 3 Port 4	29001 29002	29000 29000
DuVoice			W
2		< <u>B</u> ack	Cancel Help

### 7.3. Administer TAPI Integration

From the DuVoice server, select **Start > All Programs > DuVoice > System Configuration**. The **System Configuration** screen is displayed. Select **Integrations > TAPI Integration** from the top menu.

Password Define Ports		itions Features	Tools Help		
Port Number	Extension	Hunt Group	PBX Template	Default Mailbox	Location
🛣 Voice Port Number 1	29001	29000	AvayaIPOfficeSIPTapiMWI	991	Default Location
🕿 Voice Port Number 2	29002	29000	AvayaIPOfficeSIPTapiMWI	991	Default Location
🕿 Voice Port Number 3			AvayaIPOfficeSIPTapiMWI	991	Default Location
🛣 Voice Port Number 4			AvayaIPOfficeSIPTapiMWI	991	Default Location

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

TAPI Provider	ОК
C None	Cancel
Avaya IPOffice	
Panasonic KX-TDA	
C Custom	
Special Codes RNA Prefix	Busy Prefix
Special Codes RNA Prefix ##	Busy Prefix #*

#### 7.4. Administer Connectors

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

Port Number	Extension	Hunt Group	PBX Template	Default Mailbox	Location
🛣 Voice Port Number 1	29001	29000	AvayaIPOfficeSIPTapiMWI	991	Default Location
🛣 Voice Port Number 2	29002	29000	AvayaIPOfficeSIPTapiMWI	991	Default Location
🕿 Voice Port Number 3			AvayaIPOfficeSIPTapiMWI	991	Default Location
🛣 Voice Port Number 4			AvayaIPOfficeSIPTapiMWI	991	Default Location

The **Connectors** screen is displayed. Select **IP Office > User Configuration** from the left pane, to display the **User Configuration** screen in the right pane. Check **Enabled**. For **IP address**, enter the IP address of Avaya IP Office. Enter the appropriate Avaya IP Office credentials for **Service User Name** and **Service Password**. Retain the default values in the remaining fields.

This connector is used to establish a Configuration Web Service connection to Avaya IP Office, for update of guest user names and user rights template.

Connectors					• 🔀
Connectors System Details UP Office User Configuration Devlink ShoreTel SIP Univerge / Sphere	User Configuration Location IP address Service User Name Service Password TCP/IP Port Retries	Default Location 10 . 32 . 3 50805 3 ÷	33 . 10	Enabled	
			ОК	Cancel	Apply

#### 7.5. Administer Hospitality

From the **System Configuration** screen shown in **Section 7.4**, select **Features > Hospitality** from the top menu. The **Hospitality Configuration** screen is displayed. Select **Maid Codes** from the left pane, to display the **Maid Codes** screen in the right pane.

Check the desired **PMS Digit** to be used, and enter the desired **Display Text**. The digits can be used by the maids to indicate the room clean status, upon dialing into the hospitality hunt group and selecting the appropriate option.

— General — Language	Maid Codes	
Maid Codes Phone Control PMS	Valid codes         PMS Digit       Display Text         Image:	<ul> <li>PMS Digit: Digit sent to the PMS to signify a specific room clean status. Maid can dial the code only if the box is checked.</li> <li>Display Text: The text to use whenever the system displays the room clean status. Leave blank if not used.</li> <li>Reset: Load the default display text for the active PMS protocol.</li> </ul>
	Automation On check-out, set to: Dirty Every night, set to: Dirty	I IV Notify PMS I IV Notify PMS

Select **Phone Control** from the left pane, to display the **Phone Control** screen in the right pane. For **PBX Type**, select "Avaya IP Office".

In the User group restrictions / call restriction values section (bottom half of screen), add an entry to match each user rights template in Section 5.11. Note that the PBX Value must match the user rights template name in Section 5.11. Enter desired names for Display Text. In the compliance testing, two entries were created to match the two user rights template in Section 5.11. Click Apply.

After clicking **Apply**, the new user group rights will show up in the field drop-down list for **Check-In** and **Check-out**. In the **Auto-set phone state on** section, check **Check-in** and **Check-out**, and select the corresponding drop-down values as shown below.

Hospitality Configuration				
General	Phone Control			
Language Maid Codes Phone Control ⊕ PMS	PBX Type: Avaya IP Offic Auto-set phone state on — ✓ Check-in: Check ✓ Check-out: Check	Ce	all accouting [ype:none Enabled:no change Disabled:no change bdavi-specific settings Dutdial prefix: 470	
	User group restrictions / ca To edit an entry, left-click Display Text Check In Check Out	all restriction values on it. For all other actions, r PBX Value CheckIn CheckOut	ight-click any row to displa	ay a menu.
	Active PMS: DuVoice	IVMP (DUVOICEIVMP)	<u> </u>	Cancel Apply

Retain the default values in the remaining fields.

#### 7.6. Administer Push Server

From the System Configuration screen shown in Section 7.4, select Features > Push Server from the top menu. The Push Server screen is displayed.

Select **General** from the left pane, to display the **General** screen in the right pane. For **Switch IP**, enter the IP address of Avaya IP Office. Retain the default values in the remaining fields.

Push Server				
Push Server General Phones Emergency Alerting Hunt groups	General Server Configuration ✓ Push server enabled Port number: 8090 Password: password Default Settings ✓ Push on Ring ✓ Push on Answer	Switch IP: Server IP:	10 . 32 . 33 . 10 10 . 32 . 35 . 200	
			OK	Cancel Apply

Select **Phones** from the left pane, to display the **Phones** screen in the right pane. For each Avaya 96xx IP Telephone that will be used for receiving 911 alerting text messages, enter the telephone extension and IP address in the **Extension** and **IP Address** fields respectively, and click **Add/Modify**.

ush Server		
General	Phones	
— Phones — Emergency Alerting — Hunt groups	Add Phone Extension 21253	Manually IP Address 10 , 32 , 35 , 114 Add/Modify Delete Cancel
	Enabled	Extension   Alert Phone   Alert Email   Alert Voice   E   Push on ring   Push on answer   Pus There are no items to show in this view.
		i nere are no items to snow in this view.
		OK Cancel Apply

The screen is updated with an entry for each added phone. Click the **Alert Phone** field for each entry, and select "Enabled" as shown below. In the compliance testing, the 911 alerting test messages were pushed to an Avaya 9620 IP Telephone with extension "21253".

Push Server								
— General — Phones — Emergency Alerting — Hunt groups	Add Phones	Manually IP Address		Add/Mc	dify Delete	Cancel	]	
	Enabled	Extension 21253	Alert Phone Enabled	Alert Email Disabled	Alert Voice   E Disabled	Push on ring Disabled	Push on answer Enabled	Pus Ena
	•			m				Þ
						ОК	Cancel	Apply

#### 7.7. Administer Mailboxes

From the DuVoice server, select **Start > All Programs > DuVoice > Mailbox Administration**. The **Mailbox Administration** screen is displayed. Select **Mailbox > Create** from the top menu.

ile Configuration	Mailbox	lemplates	Help						
— Distribution List 🔺	Mailbox	Extension	First name	Last n	Туре	Description	Location	COS	SDA
Group	0	0	Operator		Standard	Operator	Default Location	Standard	STANDARD
- Guest	991	991	System Reserved		System	Main Greetings	<b>Default Location</b>	System	Night Menu Action
QA	999	999	System Reserved		System	Disconnect	<b>Default Location</b>	System	Disconnect
Standard	9000	9000	System Reserved		Standard	Fax Storage	<b>Default Location</b>	FaxMailbox	Fax Action Menu
System									
<mark>A</mark>									
- Settings									
- Language									
Search Results									
Recently Chang 💂									
- Recently Chang +						14			

The **Create Mailbox** screen is displayed next. For **Mailbox Number**, enter the first voicemail user extension from **Section 5.9**, in this case "21240". For **Mailbox Type**, select "Guest" for guest users, and "Standard" for front desk and staff users.

Mailbox Number 21240		
Create Based On:		
Mailbox Type	Guest	<u> </u>
C Mailbox Template	AudioText	Ŧ
Guest mailbox.		
	ОК	Cancel

The Create Mailbox 21240 screen is displayed next. Enter desired values for Password, First Name, and Last Name, and retain the default values in the remaining fields.

Owner Settings	Owner Settings	
Advanced     Address List     Mailbox Statistics     Message Delivery     Notifications     Single Digit Actions     Speed and Volume	Owner Information       Properties         Extension       21240         Password       *****         First Name       Guest21240         Last Name       DuVoice         Greeting       Options         Browse       Image         Browse       Call Blocking On	■     ■     ■     ■     ■     ■     ■     ■     ■     ■     ■     ■     ■     ■
	OK Canc	el Apply

Repeat this section for all voicemail users from Section 5.9, as shown below.

File Configuration	Mailbox	Templates	Help						
- Distribution List	Mailbox	Extension	First name	Last n	Type	Description	Location	COS	SDA
Group	0	0	Operator		Standard	Operator	Default Location	Standard	STANDARD
🗄 Guest	991	991	System Reserved		System	Main Greetings	Default Location	System	Night Menu
QA	999	999	System Reserved		System	Disconnect	Default Location	System	Disconnect
Standard	9000	9000	System Reserved		Standard	Fax Storage	Default Location	FaxMailbox	Fax Action M
System	21232	21232	Guest21232	DuVoice	Guest		Default Location	Guest	Standard
	21240	21240	Guest21240	DuVoice	Guest		<b>Default Location</b>	Guest	Standard
All	21252	21252	Staff21252	DuVoice	Standard		Default Location	Standard	Standard
🖶 Settings	21253	21253	Front21253	DuVoice	Standard		<b>Default Location</b>	Standard	Standard
🖶 Language	21254	21254	Guest21254	DuVoice	Guest		Default Location	Guest	Standard
Search Results									
Recently Changed									
Recently Created									
Selected	1.10								
	4		III						

#### 7.8. Startup Server

From the DuVoice server, select **Start > All Programs > DuVoice > Server Control**. The **Server Control** screen is displayed. Select **Startup** to start the server.

System Information		ОК
Computer Name: DVSERVER System State: The system is not runn	ning.	Startup
Product Information		Shutdowr
DV2000 DuVoice Corporation Copyright (c) 2000-2010 Serial number: 10022		Options
Installation Date: 2011/03/14	Ш	
Version: 5.00.025 Product Path: C:\DuVoice		

# 8. Verification Steps

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

### 8.1. Verify DuVoice Port Activity

From the DuVoice server, select **Start > All Programs > DuVoice > Port Activity**. The **Port Activity View** screen is displayed. Verify that ports **1-4**, **TAPI**, and **PBXS** are all in the "Idle" state, as shown below. Verify that **PUSH** is either in the "Idle" or "Subscribed" state.

🖀 Port Activity View		
File View Tools		
1: IDLE Calls[9] ID[21254	4] 12:09 3/14/2011	
2: IDLE Calls[8] ID[21254	4] 11:59 3/14/2011	
3: IDLE Calls[8] ID[21254	4] 12:15 3/14/2011	
4: IDLE Calls[9] ID[21254	4] 12:14 3/14/2011	
ISI: 12:15 03/14 Idle		
RSI: 12:15 03/14 Idle		
System: 12:15 03/14 Run	ning.	
VeMail: 12:15 03/14 Disat	bled	
PUSH: 11:42 03/14 Exten:	sion 21253 at 10.32.35.1	14 Subscribed.
TAPI: 12:13 03/14 Idle		
VeMail Reply: 12:10 03/14	1 Disabled	
PBXS: 12:15 03/14 Idle		
Total Hours: 4560	Calls In: 30	Calls Out: 20 🥢

#### 8.2. Verify SIP User Integration

From a PC running the Avaya IP Office Monitor application, select Start > Programs > IP Office > Monitor to launch the application. The Avaya IP Office R7 SysMonitor screen is displayed, as shown below. Select Status > SIP Phone Status from the top menu.

🕦 Avaya IP Office R7 SysMonitor - Monitoring 10.32.33.10 (IP500-Dev); Log Settings - C:\Documents and Setting 💶 🗖
File Edit View Filters Status Help
********* SysMonitor v9.0 (3) *********
********** contact made with 10.32.33.10 at 14:00:39 14/3/2011 **********
********** System (10.32.33.10) has been up and running for 3hrs, 3mins and 58secs(11038238mS) **********
********* Warning: BINARY File Logging selected **********

The **SIPPhoneStatus** screen is displayed. Verify that there is an entry for each SIP extension from **Section 5.4**, and that the **User Agent** is "DuVoice", and the **Status** is "SIP: Registered", as shown below.

Total Configured: 4			Waiting					
Total Regist	tered: 4		Registered Status					
Extn Num	IP Address	Transport	User Agent	SIP Options	SIP Events	Status	LastAv	LastIP.
28001 28002	10.32.35.116 10.32.35.112	TCP TCP	Avaya IP Phone 1120E (SIP1120e.04 Avaya IP Phone 1120E (SIP1120e.04	RU RU		SIP: Registered SIP: Registered	3/14/2 3/14/2	
29001 29002	10.32.35.200 10.32.35.200	UDP UDP	DuVoice DuVoice	R		SIP: Registered SIP: Registered		3/15/2 3/15/2
<								
Display Op	otions		Print C					

Place an incoming call from the PSTN to the hospitality hunt group. Verify that the calling party hears the greeting announcement from DuVoice. Enter the extension of a guest user, and verify that the call is transferred to the guest user.

### 8.3. Verify TAPI Integration

Place an incoming call from the PSTN to the hospitality hunt group, and leave a voice message for a guest user. Verify that the MWI is turned on for the guest user.

Place a call from the guest user to the hospitality hunt group. Verify that DuVoice recognizes the calling party as a voicemail user. Verify that the voice message can be retrieved, and that the MWI is turned off.

### 8.4. Verify Configuration Web Service Integration

Use InnDesk to perform a guest check-in. Verify that the guest name and user rights template is updated automatically on Avaya IP Office as part of the check-in process.

### 8.5. Verify PUSH Integration

Dial "911" from any guest user on Avaya IP Office. Verify that a 911 alerting text message is pushed to the Avaya 9620 IP Telephone user configured in **Section 7.6**.

# 9. Conclusion

These Application Notes describe the configuration steps required for DuVoice 5.0 to successfully interoperate with Avaya IP Office 7.0. All feature and serviceability test cases were completed.

# 10. Additional References

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

- 1. IP Office 7.0 Documentation CD, March 2011, available at http://support.avaya.com.
- 2. *System Reference Guide*, 3<sup>rd</sup> Edition, Version 5.00.023, December 2010, available on the DuVoice server as part of the installation.

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