

Avaya Solution & Interoperability Test Lab

Application Notes for Zeacom Communications Center with Avaya IP Office – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for Zeacom Communications Center 5.0 to interoperate with Avaya IP Office 6.0. Zeacom Communications Center is a multi-channel and multi-contact solution that can handle voice, fax, web, and email contacts. The compliance testing focused on the voice integration with Avaya IP Office using the TAPI and Analog interfaces.

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

Zeacom Communications Center is a multi-channel and multi-contact solution that can handle voice, fax, web, and email contacts. The compliance testing focused on the voice integration with Avaya IP Office using the TAPI and Analog interfaces.

The TAPI in third party mode interface is used by Zeacom Communications Center to monitor hunt groups and users on Avaya IP Office. Incoming calls are routed by Zeacom Communications Center using the TAPI line redirect capability to an available agent.

The agents are configured as users on Avaya IP Office, with the ACD functionality provided by Zeacom Communications Center. The agents have desktop computers running the Zeacom Executive Desktop client software. Upon notified of an incoming hunt group call via TAPI events, Zeacom Communications Center redirects the call to an available agent, and populates the answering agent's desktop screen with call related information received via the TAPI interface. Call related actions such as answering of incoming calls can be initiated via the agent telephone, or via the agent desktop. The call related actions from the agent desktops are supported by Zeacom Communications Center using TAPI line control capabilities.

The Analog interface is used by Zeacom Communications Center to support the voicemail and announcement features. There is a physical connection between each used Dialogic port on Zeacom Communications Center with Avaya IP Office. The analog ports are configured as analog users on Avaya IP Office, with Zeacom Communications Center monitoring the ports via TAPI. Voicemail and announcement calls are redirected to route over an available analog port to Zeacom Communications Center.

1.1. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing.

The feature testing focused on verifying the following on Zeacom Communications Center:

- Use of TAPI functions to monitor users and hunt groups, route incoming calls, support call control via agent desktops, set call forwarding and message waiting indicator (MWI).
- Proper handling of call scenarios including incoming call to different hunt groups, hold, reconnect, blind/attended transfer, conference, park, voicemail, announcement, call forwarding, MWI, supervisor monitor, outgoing call, and outpulse of DTMF digits.

The serviceability testing focused on verifying the ability of Zeacom Communications Center to recover from adverse conditions, such as disconnecting/reconnecting the Ethernet cable to Zeacom Communications Center.

1.2. Support

Technical support on Zeacom Communications Center can be obtained through the following:

- **Phone:** (800) 513-9002
- Web: <u>www.zeacom.com</u>
- Email: <u>usasupport@zeacom.com</u>

2. Reference Configuration

The configuration used for the compliance testing is shown below.



3. Equipment and Software Validated

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

Equipment	Software
Avaya IP Office IP500	6.0 (8)
Avaya 1600 Series IP Telephones (H.323)	1.21
 Zeacom Communications Center Dialogic 120JCT-LS-Rev Analog Card Avaya IP Office TAPI2 Driver (tspi2w) 	5.0 SP4 6.0 1.0.0.35
Zeacom Executive Desktop	5.0 SP4

4. Configure Avaya IP Office

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

- Verify IP Office license
- Administer short code
- Administer hunt groups
- Administer agents
- Assign agents to monitor hunt group
- Administer supervisors
- Administer analog extensions

4.1. Verify IP Office License

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

The Avaya IP Office R6 Manager screen is displayed. From the configuration tree in the left pane, select License > CTI Link Pro to display the CTI Link Pro screen in the right pane. Verify that the License Status is "Valid".

🜃 Avaya IP Office R6 Manager IP5	i00-Dev [6.0(8)]		
File Edit View Tools Help : 🎗 😂 - 🔛 🏊 🛄 📰 🔝 🗸	i IP500-Dev	▼ License	CTI Link Pro	
IP Offices	×=	CTI Link P	Pro	☆ - × < >
 License (130) 1600 Series Phones 3rd Party IP Endpoints Advanced Edition Advanced Small Community AUDIX Voicemail Avaya IP endpoints CCC Agent Rostering CCC Agents CCC Chat CCC Chat CCC Cosigner (users) CCC Spectrum Wallboards CCC Supervisors CCC Supervisors CCC Supervisors CCC CR Sup CCC Supervisors CCC CR Sup CCR SUP CCM Designer CCC Supervisors CCC Supervisors CCC Supervisors CCC Supervisors CCC Supervisors CCC Supervisors CCR SUP CCM Designer CCR SUP Compact Business Cen Conferencing Center CTI Link Pro Customer Service Ager 	Licenses License Key License Type License Status Instances Expiry Date	yGzJa25JAKSYDzzOCe99oj4iMbN CTI Link Pro Valid 255 Never	MNUol1	

4.2. Administer Short Code

From the configuration tree in the left pane, right-click on **Short Code** and select **New** from the pop-up list to add a new short code.

Configure the fields as shown below in the right pane. Note that this short code will be dialed by each Dialogic port as part of application start up, to enable Zeacom Communications Center to automatically learn the extension numbers associated with the analog ports. The actual **Code** value may vary, and should consist of a string that human users are not likely to dial.

🜃 Avaya IP Office R6 Manage	er IP500-Dev [6.0(8)]			
File Edit View Tools Ha	elp V	✓ Short Code	*34	
IP Offices	12 ²	<short code:0="">: Dial*</short>		≝ • X ✓ < >
BOOT (6) Operator (3) Operator (3) System (1) System (28) S	Short Code Code Feature Telephone Number Line Group Id Locale Force Account Code Force Authorization Code	*99424299*N# Barred 0		

4.3. Administer Hunt Groups

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. Enter desired values for the **Name** and **Extension** fields.

👫 Avaya IP Office R6 Manage	er IP500-Dev [6.0(8)]					
File Edit View Tools He	elp					
: 2 🖻 - 🖬 🖬 💽 🖬 🚺	🚺 🛹 🍰 📙 IP500-Dev	HuntGroup	•	25555 KnoahSoft ACD		
IP Offices	🖬 s	equential Group <hunt< th=""><th>Grou</th><th>up:0>: *</th><th>🚽 • × •</th><th> < $$ ></th></hunt<>	Grou	up:0>: *	🚽 • × •	< $ $ >
	Hunt Group Voicemail Fallba	ck Queuing Voice Recording An	nounce			
in Sourcev in System (1) in (7 Line (26)	Extension	22201				
🗈 🤝 Control Unit (6)	Ring Mode	Sequential	~	No Answer Time (secs)	System Default (15)	÷
Extension (33)	Overflow Mode	Group	~	Overflow Time (secs)	Off	\$
 HuntGroup (2) Short Code (67) 	Hold Music Source	No Change	*	Voicemail Answer Time (secs)	45	\$
Service (0) RAS (1)	Agent's Status on No-Answer Applies To	None	~			
🖨 🚯 Incoming Call Route	User List			Overflow Group List		
17 0 1 0 9 73285XXXXX 0 9 WanPort (0) 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1	Extension Name			Group Name		
Time Profile (0)						
IP Route (1)						
 Account Code (1) License (72) Tunnel (0) 	18					~
← C_ Logical LAN (0)	<					>
ARS (1)				<u> </u>		Help

Repeat this section to create the hunt groups shown below. These hunt groups are used to provide routing and handling of incoming calls.

Extension	Name
22201	Zeacom Hold
22202	Zeacom Voicemail
22203	Zeacom Operator
22204	Zeacom Monitor
22205	Zeacom Fallback
22206	Zeacom Sales
22207	Zeacom Support

4.4. Administer Agents

From the configuration tree in the left pane, select the first user that will be answering calls, in this case "21251". Select the **Voicemail** tab, and uncheck **Voicemail On**, as shown below.

🜃 Avaya IP Office R6 Man	ager IP500-Dev [6.0(8)]
File Edit View Tools	Help IP500-Dev User 21251 Extn21251
IP Offices	🗄 Extn21251: 21251 🛗 📲 🖌 🗸 🔍 🗧
User (29)	Button Programming Menu Programming Mobility Phone Manager Options Hunt Group Membership Announcements Personal Directory
	User Voicemail DND ShortCodes Source Numbers Telephony Forwarding Dial In Voice Recording
 21231 Extrá 21232 Extrá 21232 Extrá 21233 Extrá 21234 Extrá 21235 Extrá 21236 Extrá 21236 Extrá 21238 Extrá 21238 Extrá 21238 Extrá 21239 Extrá 21239 Extrá 21239 Extrá 	Voicemail Code Voicemail On Confirm Voicemail Code Voicemail Help Voicemail Email Voicemail Ringback Voicemail Email UMS Web Services

Select the **Telephony** tab, followed by **Supervisor Settings**. Check **Can Intrude**, and uncheck **Cannot be Intruded**, as shown below.

Repeat this section for all users that will be answering calls. In the compliance testing, two users with extensions 21251 and 21252 were configured.

File Edit View Tools Help Image: Second Secon	 X < < >
Image:	X ✓ < >
IP Offices E Evtr21251 21251	X ✓ < >
	a solution to a second second
 Extension (Menu Programming Mobility Phone Manager Options Hunt Group Membership Announcements Personal Dir User (29) User (29) User Voicemail DND ShortCodes Source Numbers Telephony Forwarding Dial In Voice Recording Call Settings Supervisor Settings Multi-line Options Call Log 	Directory Button Programming
Image: State of the state o	e
212371 Status on No-Answer Logged On (No change) Outgoing Call Bar 212391 Reset Longest Idle Time Inhibit Off-Switch Forward 212411 All Calls ✓ Can Intrude 212501 External Incoming Can Trace Calls	rd/Transfer

4.5. Assign Agents to Monitor Hunt Group

From the configuration tree in the left pane, select the Zeacom Monitor hunt group, in this case "22204". Click on **Edit** in the **User List** section to add members. In the next screen (not shown below), select all agent users from **Section 4.4**.

 HuntGroup Sequential G mail Fallback Queuing Zeacom Mc 	2220 Toup Zeacom Mo Voice Recording Annou	4 Zeacom Monitor	≝ • X ✓	< >
Sequential G mail Fallback Queuing Zeacom Mc	Voice Recording Annou	nitor: 22204	🗳 • 🗙 🗸	< >
mail Fallback Queuing Zeacom Mo	Voice Recording Annou	ncements		
Zeacom Mo				
	nitor	CCR Agent Group		-
22204				
Sequential		No Answer Time (secs)	System Default (15)	Ŷ
Group		Overflow Time (secs)	Off	\$
No Change		Voicemail Answer Time (secs)	45	\$
No-Answer None	1			
		Overflow Group List		
me		Group Name		
	Zeacom Mo 22204 Sequential Group No Change No Change ne	Zeacom Monitor 22204 Sequential Group No Change None ne Edit Remove	Zeacom Monitor CCR Agent Group 22204 No Answer Time (secs) Group Overflow Time (secs) No Change Voicemail Answer Time (secs) No Change Overflow Group List ne Group Name Edit Remove	Zeacom Monitor CCR Agent Group 22204 No Answer Time (secs) System Default (15) Group Overflow Time (secs) Off No Change Voicemail Answer Time (secs) 45 Io-Answer None Group List ne Group Name Group Name

The resultant screen is shown below.

👫 Avaya IP Office R6 Manager IP5	00-Dev [6.0(8)]				E		X
File Edit View Tools Help : 🏖 📨 - 💭 💽 🔛 💉	IP500-Dev	HuntGroup 2	2204 2	Zeacom Monitor			
IP Offices	E Seq	uential Group Zeacom I	Moni	itor: 22204	🖻 • X 🗸	< :	>
	Hunt Group Voicemail Fallbac Name Extension	k Queuing Voice Recording Ann Zeacom Monitor 22204		ments	n - Las Dafask (17)		
Control Unit (6) Extension (32) User (29) WHUNTGroup (9) Soft ACD	Ring Mode Overflow Mode Hold Music Source	Sequential Group No Change	× ×	No Answer Time (secs) Overflow Time (secs) Voicemail Answer Time (secs)	Off 45	<> <>	
- 22003 kitolanoit ekse 21200 Main - 22205 Zeacom Fallback - 22201 Zeacom Hold - 22204 Zeacom Molifor	Agent's Status on No-Answer Applies To User List	None	~	Overflow Group List			
22203 Zeacom Operator 22203 Zeacom Operator 22206 Zeacom Sales 22207 Zeacom Support 22202 Zeacom Voicemai	Extension Name ✓ 21251 Extn21251 ✓ 21252 Extn21252			Group Name			- Hite

4.6. Administer Supervisors

From the configuration tree in the left pane, select the supervisor user that will be monitoring agents, in this case "21253".

Select the **Telephony** tab, followed by **Supervisor Settings**. Check **Can Intrude**, and uncheck **Cannot be Intruded**. For **Monitor Group**, select the Zeacom Monitor hunt group from **Section 4.5**.

Repeat this section for all supervisors that will be monitoring agents. In the compliance testing, one supervisor user with extension 21253 was configured, as shown below.

🜃 Avaya IP Office R6 Manager IP	500-Dev [6.0(8)]			
File Edit View Tools Help : 🎎 😂 - 🖼 💽 🔛 🔛 🗸	🖊 🎃 📜 IP500-Dev	🔹 User 🔹	21253 Extn21253	
IP Offices	3	Extn21253: 21253*		📸 • 🗙 🗸 < >
User (29) Volumer 25001 agent1 25002 agent2 21231 Extn21231 21232 Extn21232 21233 Extn21233 21234 Extn21234 21235 Extn21235 21236 Extn21236 21237 Extn21237 21238 Extn21237 21238 Extn21238 21239 Extn21239 21239 Extn21239 21241 Extn21241 21243 Extn21243 21245 Extn21243 21250 Extn21250 21251 Extn21251	Button Programming Menu P Announcements Personal Di User Voicemail DND S Call Settings Supervisor Set Login Code Login Idle Period (secs) Monitor Group Coverage Group Status on No-Answer Reset Longest Idle Time All Calls	Programming Mobility Phone Manage rectory shortCodes Source Numbers Telepho titings Multi-line Options Call Log Zeacom Monitor <none> Logged On (No change)</none>	r Options Hunt Gro	up Membership Dial In Voice Recording Force Login Force Account Code Force Authorization Code
	After Call Work Time (secs)	System Default (10)		an Trace Calls ICR Agent Nutomatic After Call Work

4.7. Administer Analog Extensions

From the configuration tree in the left pane, select the first analog extension that is physically connected to the Dialogic card in Zeacom Communications Center, in this case "21246".

Select the Extn tab, and set Caller Display Type to "Off", as shown below.

Repeat this section for all analog extensions physically connected to Zeacom Communications Center. In the compliance testing, two analog extensions of "21246" and "21247" were modified.

🐮 Avaya IP Office R6 Ma	mager IP500-Dev [6.0(8)]			
File Edit View Tools	Help I 🚺 🗸 🥧 📜 IP500-Dev	Extension	31 21246	•]
IP Offices	E A	nalogue Extension: 31	21246	📸 • 🗙 🗸 < >
 Extension (32) 8006 2123: 2 21233 2 21233 3 21234 4 21235 5 21236 6 21237 6 21237 7 21238 8 21239 2 25 21240 26 21241 27 21242 28 21243 29 21244 30 21245 31 21246 32 21247 	Extn Analogue Extension Id Base Extension Caller Display Type Device type Module Port	31 21246 Off Analogue Handset BP2 7		

5. Configure Zeacom Communications Center

This section provides the procedures for configuring the Zeacom Communications Center server. The procedures include the following areas:

- Launch Administrator application
- Verify Zeacom license
- Administer PBX
- Administer Application Manager
- Administer TAPI driver
- Administer lines
- Administer queues
- Administer phonebook

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

5.1. Launch Administrator Application

From the Zeacom Communications Center server, launch the Administrator application by double-clicking the **Administrator** icon shown below, which was created as part of installation.



The administrator login screen is displayed. Enter the administrator credentials, and click OK.



5.2. Verify Zeacom License

The Administrator screen is displayed. Select General > Licenses from the left pane, to display All Licenses in the right pane. Verify that the following licenses are in place: Agent Desktop, CT Control, Executive Desktop, IPOfficePBX, and UCUL (UC User License).

	All Licenses V Import/Regi	ster Licenses	Product Kev: .		2X-I BEI-118.1	
voice messaging	Description	Licenses		Start Date	End Date	Dauste
Console	Agent Desktop	5	User	6/2/2010	6/2/2011	360
Ouevie e	Alert Notification	1	site	6/2/2010	6/2/2011	360
Queuing	🙀 Callback	1	Site	6/2/2010	6/2/2011	360
Announce	Console	1	User	6/2/2010	6/2/2011	360
	R CT Control	5	User	6/2/2010	6/2/2011	360
General	🕅 <table-of-contents> Custom Announce</table-of-contents>	12	Port	6/2/2010	6/2/2011	360
24	Custom Reporting	1	Single	6/2/2010	6/2/2011	360
🕍 Companies	🕺 🕅 Dashboard	5	User	6/2/2010	6/2/2011	360
and a set of the second	🔹 🖷 🕅 DefinityPBX	1	Single	6/2/2010	6/2/2011	360
🛪 Holidays	📲 🖷 Email Queuing Desktop SMTP	5	User	6/2/2010	6/2/2011	360
Licenses	Resolutive Conference	8	units	6/2/2010	6/2/2011	360
11 LICENSES	🔹 👘 Executive Desktop	5	User	6/2/2010	6/2/2011	360
Security	📲 👫 Executive Insight	5	user	6/2/2010	6/2/2011	360
	🔹 👫 Executive Mobile	5	units	6/2/2010	6/2/2011	360
Lines	🐴 Fax Messaging	4	Port	6/2/2010	6/2/2011	360
	🐂 Fax Queuing	5	User	6/2/2010	6/2/2011	360
🔟 Phonebook	R IPOfficePBX	1	Single	6/2/2010	6/2/2011	360
	📲 🖓 UCUL (UC User License)	1	units			
System Prompts	📲 🧌 UCUL (UC User License)	9	units	6/2/2010	6/2/2011	360
Distan Dulas	🔹 👫 Unified Messaging for Excha	5	User	6/2/2010	6/2/2011	360
	🔹 📲 Web Callback Queuing	5	User	6/2/2010	6/2/2011	360
	🗌 <table-of-contents> Web Chat Queuing</table-of-contents>	5	User	6/2/2010	6/2/2011	360

5.3. Administer PBX

From the Administrator screen, select File > System Setup from the top menu.

\land Administrator	-	- Carlo	
<u>File E</u> dit <u>W</u> indow <u>H</u> elp	Gast-		
Line for Recording Copy Manager	English	•	1
System Setup			
Verify System Configuration Wizards	•		
Exit			

The System Setup screen is displayed. Select the PBX tab, and click Add.

Name	Туре	
Chat	Web Chat Server	Type: Web Chat Server Media: Chat PBX is configured and running.
Add Proj	perties Delete	

The Add New PBX screen is displayed. For PBX Type, select "Avaya IP Office" from the drop-down list. Retain the default value in the remaining field.

dd New PBX			1
PBX <u>T</u> ype:	Avaya IP Office		
PBX <u>N</u> ame:	IPOffice		
		ОК	Cancel

The **Configure PBX** screen is displayed next. Click the **Run** button for **Configure PBX Essentials**, as shown below.



The Avaya IP Office PBX Setup Wizard screen is displayed. For Park Queue Number, enter the Zeacom Hold hunt group extension from Section 4.3.

Create Park Que	ue			
The Park queue is a Hun	t Group for the m	nanagement of p	arked calls.	
This number is not normal voiceport installed in the General->System Queues	ly dialed by user system. This will section of this a	s. It must be dial appear as a entr application.	able by any dialo y in the	gic
Park Queue Number:	22201			
	/ Rock	Nevts	Cancel	Help

The screen below is displayed next. For **Voice Messaging Queue Number**, enter the Zeacom Voicemail hunt group extension from **Section 4.3**. Retain the default value in the next screen, and click **Finish** in the subsequent screen to complete the wizard.

Avaya IP Office PBX Setup Wizard	
Create Voice Messaging Queue	
The Voice Messaging Queue is a Hunt Group used as the Pilot Number to dial Voicemail. When a user activates a Presence Profile the system will forward the phone to this number. The forward busy destination for users phones will need to be set manually or via the PBX Maintenance interface.	xir D
This number is dialed by all users, and is normally an easily remembered number. This will appear as a entry in the General->System Queues section of this application.	
Voice Messaging Queue Number: 22202	
< <u>B</u> ack <u>N</u> ext > Cancel <u>H</u>	<u>l</u> elp

The **Configure PBX** screen is displayed again. Click the **Run** button for **Configure Operator Console**, as shown below.



The **Configure Operator Console** screen is displayed. For **Console Operator Queue Number**, enter the Zeacom Operator hunt group extension from **Section 4.3**.

Configure Operator Console						?
Configure Console Operat	tor Qu	leue				
To create a Console Operator Queue, the Console Operator Queue.	you mus	t enter ti	he nu	mber diale	d to rea	ch
Console Operator Queue Number: 22	2203					
		ПК	1	Cancel	1	Help
		ОК		Cancel		Help

	Name	Tupe	
	Chat IPOffice	Web Chat Server Avaya IP Office	Type: Avaya IP Office Media: Phone PBX is configured but the PBX process is not registered on the CTI server. You need to run Application Manager to register
			Run Application Manager
4	Add Prop	erties Delete	

The System Setup screen is displayed, click Properties.

The **IP Office PBX Setup** screen is displayed. Check **Music on hold**, and retain the default values in the remaining fields. Make certain that the **Voicemail port auto learn code** matches the short code from **Section 4.2**.

IP Office PBX Setup	×
PBX <u>N</u> ame:	IPOffice
Voicemail port auto learn code:	*99424299
Park retrieve code:	*7
CallListen access code:	*6*
Music on hold	
System Extensions	
Analog Login Extension:	<none></none>
System Maintenance Extension	on: <none></none>
	OK Cancel

5.4. Administer Application Manager

The System Setup screen is displayed again, click Run Application Manager.

8	Name	Tupe	
1	Chat	Web Chat Server	IPOffice
0	IPOffice	Avaya IP Office	Type: Avaya IP Office Media: Phone
			PBX is configured but the PBX process is not registered on the CTI server. You need to run Application Manager to register and start the process.
	Add Prope	rties Delete	Run Application Manager

The Zeacom Application Manager screen is displayed next. Select DEVCONNECT > Server Applications > CTI Application Server in the left pane, where DEVCONNECT is the local computer name. Right click in the right-pane, and select Add Application in the pop-up list (not shown below).

DEVCONNECT CT	Application Server[DEVC	ONNECT]		
💀 💀 Client Applications 🛛 🗛	pplication	Machine	Path	File Version
🖃 🧊 Server Applications 🛛 🚺 🕨	Announce Port 0	DEVCONNECT	C:\Program Files\Telephony\CTI\bin\AnnouncePort.exe	5.0.2115.38
- 🧐 All Applications 🛛 🖡 🕨	Audit Server	DEVCONNECT	C:\Program Files\Telephony\CTI\bin\AuditServer.exe	5.0.2100.9
CTI Application Serve	Avaya Communication Manager (A	DEVCONNECT	C:\Program Files\Telephony\CTI\bin\DefinityPBX.exe	5.0.2100.3
Alerts	Chat PBX	DEVCONNECT	C:\Program Files\Telephony\CTI\bin\ChatPBX.exe	5.0.2100.12
Calls View	CT Control	DEVCONNECT	C:\Program Files\Telephony\CTI\bin\QControl.exe	5.0.2115.8
I asks	Database Server	DEVCONNECT	C:\Program Files\Telephony\CTI\bin\QAServer.exe	5.0.2100.1
Þ	DB Cleanup	DEVCONNECT	C:\Program Files\Telephony\CTI\bin\QCleanup.exe	5.0.2100.2
Þ	DB Controller	DEVCONNECT	C:\Program Files\Telephony\CTI\bin\DBController.exe	5.0.2100.4
Þ	Licence Manager	DEVCONNECT	C:\Program Files\Telephony\CTI\bin\LicenceManager.exe	5.0.2100.3
Þ	LogCompress	DEVCONNECT	C:\Program Files\Telephony\CTI\bin\LogCompress.exe	5.0.2100.2
Þ	Notification Manager	DEVCONNECT	C:\Program Files\Telephony\CTI\bin\NotifServer.exe	5.0.2100.1
Þ	Performance Monitor	DEVCONNECT	C:\Program Files\Telephony\CTI\bin\PerformanceMonitor	5.0.2100.1
Þ	Presence Server	DEVCONNECT	C:\Program Files\Telephony\CTI\bin\PresenceSrv.exe	5.0.2115.4
	Report Server	DEVCONNECT	C:\Program Files\Telephony\CTI\bin\reportsrv.exe	5.0.2100.1

The **Application Wizard** screen is displayed. For **Application**, select "IPOffice PBX" from the drop-down list. Retain the default value in the next screen (not shown below).

Application Wizard	×
Select an application name	
Select an application from the Application drop-down list. To add an application which not in the list, type the name in the Application field.	n is
Application: IPOffice PBX	
< Back Next > Cancel	<u>H</u> elp

The screen below is displayed next. Check **Application starts automatically**, and click **Finish** in the subsequent screen to complete the wizard.

plication Wizard				
Configure the follo	wing settings:			
You can set the application application yourself each tin	to start each time th ne.	e service starts a	and/or start the	
Application starts autom	atically			
	< Back	Next >	Cancel	Help

5.5. Administer TAPI Driver

From the Zeacom Communications Center server, select **Start > Control Panel > Phone and Modem Options**, to display the **Phone and Modem Options** screen. Select the **Avaya IP Office TAPI2 Service Provider** entry under the **Advanced** tab, and click **Configure**.

one and	Modem Opt	ions		?
Dialing R	ules Modems	Advanced		
	The followin	g telephony provic	lers are installed o	n this computer:
Provider	S: IP Office TAPI	2 Sarvica Providar		
Microso Microso NDIS F TAPI K Unimod	off H.323 Telep off HID Phone ft Multicast Co Yoxy TAPI Ser ernel-Mode Se Jem 5 Service	onoriy Service Pro- TSP onference TAPI Se vice Provider rivice Provider Provider	vider rvice Provider	<u>C</u> onfigure

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. Check ACD Queues, as shown below. Reboot the Zeacom Communications Center server.

Contract Contract		
witch IP Address	10.32.33.10	OK
_		Cancel
) Single User		
User Name		
User Password		
Third Party		
Switch Password		
	Ex Directory Users	
	WAV Users	
	ACD Queues	

5.6. Administer Lines

From the Zeacom Communications Center server, follow the procedures in **Section 5.1** to launch the Administrator application. The **Zeacom Administrator** screen is displayed. Select **General** > **Lines** from the left pane, to display a list of extensions obtained automatically from Avaya IP Office.

Right click on the entry associated with the Zeacom Monitor hunt group from Section 4.3, in this case "22204", and select Convert Into Queue from the pop-up list.

Repeat and convert entries associated with the Zeacom Fallback hunt group "22205", Zeacom Sales hunt group "22206", and the Zeacom Support hunt group "22207".

Zeacom Administrator - [Line	:5]					
le <u>E</u> dit <u>W</u> indow <u>H</u> elp	-					
🕴 📶 📝 🤖 🗙 🛛 Languag	ge: English	•				
Voice Messaging	IPOffice * All Lines	•				
+ toice Piessaging	Name	Extension	Туре	Tenant	Monitor Status	Default Agent
Console	Added by System	21250	Dterm		Yes	
-	Added by System	21251	Dterm		Yes	
🖁 Queuing	Added by System	21252	Dterm		Yes	
	Added by System	21253	Dterm		Yes	
Announce	Added by System	21254	Dterm		Yes	
Coneral	Added by System	21281	Dterm		Yes	
General	Added by System	21282	Dterm		Yes	
🛍 Companies 📥	🕴 📍 Added by System	22000	Dterm		Yes	
	Added by System	22204	Analog	** ,	vdd	
🗙 Holidays	Added by System	22205	Analog		100	
-	Added by System	22206	Dterm		.dit	
👫 Licenses	Added by System	22207	Analog	×)elete	
	🥊 🦞 Added by System	22222	TAPI Wave Port	42 0	Гору	
📸 Security	Added by System	25001	Dterm	B	Aove To Company	•
St lines	🔊 Added by System	25002	Dterm			
I cines	Added by System	25555	Dterm		unvert into Queue	
D Phonebook	Added by System	28001	Dterm		Yes	
	🔰 🧼 Added by System	28002	Dterm		Yes	
📸 System Queues 🛛 🗧						
						•

5.7. Administer Queues

Select **Queuing > Queues** from the left pane, to display a list of queues. Double click on the entry corresponding to the Zeacom Monitor hunt group from **Section 4.3**, in this case "22204". In the subsequent screen (not shown below), modify the queue name to match the hunt group name from **Section 4.3**.

\land Zeacom Administrator -	[Queues]				_ 🗆 🗙
<u> E</u> ile <u>E</u> dit <u>W</u> indow <u>H</u> elp					
🔀 🐂 🔏 🐚 🗙 🛛 Lar	nguage: English	*			5
Voice Messaring	IPOffice *	PBX Queues 📍			
TOICE Piessaging	Queue	Name	Wrapups	Modes	Indial Modifiers
🔱 Console	22203	Operator		Yes	
	22204	Added by System		Yes	
🙀 Queuing	22205	Added by System		Yes	
	22206	Added by System		Yes	
W Queues	22207	Added by System		Yes	
🍇 Delivery Patterns	-				
Announce					
🔊 General					•
Queues: 5/1					

Repeat this section for all queues converted from **Section 5.6**. In the compliance testing, the names of four queues were modified, as shown in the screenshot below.

🔉 Zeacom Administrator - [[Queues]				
<u>File E</u> dit <u>W</u> indow <u>H</u> elp					
🔀 🐂 🔏 🐚 🗙 🛛 Lar	nguage: English	•			~
Vaice Meccaging	IPOffice *	PBX Queues 🔻			
w vice messaying	Queue	Name	Wrapups	Modes	Indial Modifiers
🕵 Console	22203	Operator	13 - 1223 - 13	Yes	1 M 2 80
		Zeacom Monitor		Yes	
🙀 Queuing	22205	Zeacom Fallback		Yes	
100 ·	22206	Zeacom Sales		Yes	
Queues	22207	Zeacom Support		Yes	
🎭 Delivery Patterns	-				
Announce					
🦻 General					1
Jueues: 5/1	1.1				

5.8. Administer Phonebook

From the **Administrator** screen, select **General > Phonebook** from the left pane, to display a list of phonebook entries. Click the **Add Wizard** icon, to add a contact.

🔉 Zeacom Administrator - [Pho	nebook]							×
<u>File E</u> dit <u>W</u> indow <u>H</u> elp								
🔀 🗋 📈 🔤 Langua	ge: English	_						2
🐶 Voice Messaging	Filter		-		- 0		1	
🕵 Console	Look for:	Co	mpany: </th <th>ALL COMPANIES></th> <th>Uwner: 😻 🗸</th> <th>All Contacts> 💌</th> <th>Directory: <all contacts=""></all></th> <th>_</th>	ALL COMPANIES>	Uwner: 😻 🗸	All Contacts> 💌	Directory: <all contacts=""></all>	_
-	First Name	Last Name	Ext	Office	Mobile	Home	Company	
Cueuing	DevConnect	System					DevConnect:	
Announce	System	Admin					DevConnect	
🔊 General								
Companies								
🗙 Holidays								
R Licenses								
🔒 Security								
🔊 Lines								
Phonebook								
Phonebook: 6/1								

The Adding Phonebook Contact screen is displayed. Enter desired values for First Name and Last Name, and click Next. Retain the default values in the next screen (not shown below).

Enter the Enter the first	e Contact Name	book
		DOOK .
ast Name: .ast Name:	Zeacom	
Enter an alia:	s or quick search name for the contact. A QuickSearch	allows the
user to quick	ly find the contact in the Phonebook (Optional) .	
Quick Search	n:	

The screen below is displayed. For **Extension**, enter the first agent extension from **Section 4.4**. In the subsequent screens, follow [2] to select the proper security class, mailbox creation, mailbox class, and contact registration.

Business:	United States (1)	•	E.	
Home:	United States (1)			
Mobile:	United States (1)			
Fax:	United States (1)	-		
Pager:	United States (1)	-		
E-mail:				

Repeat this section to add all agents and supervisors. In the compliance testing, two agents and one supervisor with extensions "21251-21253" were added. Click on **Class has no delivery**.

🔕 Zeacom Administrator - [Phon	ebook]					
<u>File Edit Window H</u> elp						
🥂 🖬 🖉 🐚 🗙 🛛 Language	e: English	-				🔬 🦑
🐶 Voice Messaging	Filter			el Ouwer 🕋	All Contacts	Incomplete Tasks X
🚨 Console	First Name	Last Name	Ext	Mobile	Home	
🎇 Queuing	DevConnect	System				
Announce	 IPO Agent1 IPO Agent2 	Zeacom Zeacom	21251 21252			
🔊 General	Supervisor	Zeacom	21253			
Companies	System	Admin				
🗙 Holidays						
R Licenses						
🔒 Security						
Tines						
Phonebook	•				F	
Phonebook: 7/0						

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

ame: IPO Ger epartment: <unspe< th=""><th>neral</th><th>N.</th><th>umber: 5</th><th></th></unspe<>	neral	N.	umber: 5	
neral Delivery Me	dia Worktime	Break Reas	ons Worktime Reas	ons
onfiguration Meth	od: 💿 Standa	ard C	Schedule	
ueues:				
Queue	Delivery	ACW	Override Delay	Seconds Delay-Priority

The Add Queues screen is displayed next. Check the Zeacom Support and Zeacom Sales entries, as shown below. This will enable calls to these hunt groups to be delivered to the agents.

	Name	
22207	Zeacom Support	
22203	Operator	
22204	Zeacom Monitor	
22206	Zeacom Sales	

6. General Test Approach and Test Results

The feature test cases were performed both automatically and manually. Upon start of the Zeacom Communications Center application, the application automatically requests monitoring of devices.

For the manual part of the testing, incoming calls were made to the general routing hunt groups. The Zeacom Communications Center server used the TAPI event messages to track agent states, and specified calls to be redirected to available agents. Manual call controls from both the agent telephones and the agent desktops were exercised to verify remaining features such as answering and transferring of calls.

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

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

The verification of tests included human checking of proper states at the agent telephones and desktop screens, and of reviewing the TAPI log file from Zeacom Communications Center.

All test cases were executed and passed.

7. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Avaya IP Office and Zeacom Communications Center. From the agent desktop running the Zeacom Executive Desktop client software, double-click on the **Desktop** icon shown below, which was created as part of installation.



The desktop login screen is displayed. Log in with the proper agent credentials.

		desktop	
unified	d communications	Communications center	connect. as one
<u>L</u> ogin Name:	IPO Agent1 Zeacom IPO Agent1 Zeacom Image: Remember me next time		PIN: ****

🔎 Desktop - IPC) Agent1 Zeacom	
<u>File Call Agent V</u>	oice Messaging View Help	10:42:13 A
Contact:		
<u>6</u> 9 - 9 1	🗩 🛩 🚳 👻 🌾 🚽 Presence: 🏽 🎉 <in office="" the=""> 🛛 😴 📝 🧐 🥔 🖉</in>	
Phone Calls	Active Calls	2
🚰 Call History	Line State Caller Info Origin Date Time Duration	Queue
Contact Center	<	>
🕵 Agents	Phone Calls	2
🎇 Queues	Ø Idle	
🦻 Chat	🙏 Answer Call 🛛 🚳 Forward All 🎐 🐶	
🕴 Presence	No Active Call	
🐚 Web Browser		
< >		
🙎 <in offic<="" td="" the=""><td>e> 🐉 Schedule: On 🕓 Free Until: 5:00 pm (8:00 pm) 🧷 <type here="" note="" presence=""> No New Messages</type></td><td></td></in>	e> 🐉 Schedule: On 🕓 Free Until: 5:00 pm (8:00 pm) 🧷 <type here="" note="" presence=""> No New Messages</type>	

The **Desktop** screen is displayed. Click the **Log into Queues** icon, as shown below.

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

Log into Queues	×
Make yourself available to take Queue Calls.	
Class: IPO General	*
<u>M</u> ake me ready for:	
 ✓ Ø Phone calls ✓ Ø Chat 	
OK Cancel <u>H</u> elp	

Make an incoming call to the Zeacom Support hunt group, with an available agent. Verify that the answering agent's desktop is populated with a voice call entry, as shown below. Verify that the **State** is "Offering", and that the **Caller Info** displays the calling party number. Click on **Answer Call** to answer the call.

🧿 Desktop - IPC	Agent1 Zea	acom						
<u>File Call Agent Vi</u>	oice <u>M</u> essaging	<u>V</u> iew <u>H</u> elp						10:53:18 AM
Contact: 📲 (908) 8485000 💌 😰 🙈 🔛 🚱								
🌋 🕑 🗕 🧐 🗌	D - 🎳 🕅	🔨 🐔 🚽 Presei	nce: 🤱 <in office="" the=""></in>	× 💰	1 a a a a a a a a a a a a a a a a a a a			
Phone Calls	Active Calls							2
	Line	State	Caller Info	Origin	Date	Time	Duration	Queue
Call History	⊘21251	C Offering	+1 (908) 8485000	External	6/9/2010	10:53:12 AM	0:06	5 Zeacom S
🍻 Contact Center	-							
	Phone Calls							2
🎇 Queues	Inbound	Call [+1 (908) 8485	5000]					
🤗 Chat	🙏 Answer (Call 🙀 Forward .	All					
7.0	🛈 Zead	com Suppoi	rt: Queue Call			Duration:		0:06
7 Presence	Unkno	wn on +1	(908) 8485000			Wait Time:		0:00
👈 Web Browser			. ,					
< >								
🗧 🔏 <in offic<="" th="" the=""><th>e> 🛛 🔣 Sched</th><th>lule: On 🛛 😃 Free</th><th>e Until: 5:00 pm (8:00 pm) 🛛 🟒</th><th><type i<="" presence="" th=""><th>note here></th><th>No New</th><th>Messages</th><th></th></type></th></in>	e> 🛛 🔣 Sched	lule: On 🛛 😃 Free	e Until: 5:00 pm (8:00 pm) 🛛 🟒	<type i<="" presence="" th=""><th>note here></th><th>No New</th><th>Messages</th><th></th></type>	note here>	No New	Messages	

Verify that the **State** is updated to "Connected", and that the agent is connected to the caller with two-way talk paths.

🧿 Desktop - IPC	Agent1 Zeacom					
Eile Call Agent VoiceMessaging View Help 10:53:34 A						
Contact: 📲 (908) 8485000 💌 😥 🐾 🐔 😵 🔁 🚳						
🚨 🕑 🗕 🧐 📗	🗈 👻 🖏 🚽 Presence: 🏼 🕵 < In the Office> 🛛 👽 💋 🐓 🧭					
Phone Calls	Active Calls	2				
Colligion	Line State Caller Info Origin Date Time	Duration Queue				
	© 21251 Connected +1 (908) 8485000 External 6/9/2010 10:53	3:12 AM 0:13 Zeacom S				
🍻 Contact Center						
	Phone Calls	2				
🎇 Queues	C Inbound Call [+1 (908) 8485000]					
🦻 Chat	🝕 Hangup 😵 Hold 🔋 Park 🛷 Transfer 🞇 Invite 🖳 Record 🚳 Forward All	≢ # Ì				
7.5	3 Zeacom Support: Queue Call	uration: 0:13				
Presence	Unknown on +1 (908) 8485000	/ait Time: 0:00				
🚵 Web Browser						
< >						
📃 🤱 <in offic<="" td="" the=""><td>e> 😼 Schedule: On 🛛 9 Free Until: 5:00 pm (8:00 pm) 🧷 <type here="" note="" presence=""></type></td><td>No New Messages</td></in>	e> 😼 Schedule: On 🛛 9 Free Until: 5:00 pm (8:00 pm) 🧷 <type here="" note="" presence=""></type>	No New Messages				

8. Conclusion

These Application Notes describe the configuration steps required for Zeacom Communications Center 5.0 to successfully interoperate with Avaya IP Office 6.0 using the TAPI and Analog interfaces. All feature and serviceability test cases were completed.

9. Additional References

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

- 1. IP Office 6.0 Documentation CD, February 2010, available at http://support.avaya.com.
- **2.** *IP Office Installation Manual*, Zeacom Library Version 5.0, available via IP Office training course provided by Zeacom.

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