



## **Avaya Solution & Interoperability Test Lab**

---

# **Application Notes for VTech 1-Line and 2-Line Analog Hotel Phones with Avaya IP Office 8.1 and Voicemail Pro 8.1 – Issue 1.0**

### **Abstract**

These Application Notes describe a compliance-tested configuration consisting of Avaya IP Office 8.1, Voicemail Pro 8.1 and VTech 1-Line and 2-Line Analog Hotel Phones.

VTech's hospitality product line provides a clear cost and feature advantage that is backed by decades of expertise in the corded/cordless telephony industry. These Analog endpoints connect directly with Avaya IP Office 8.1.

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 a compliance-tested configuration consisting of Avaya IP Office and Voicemail Pro with VTech 1-Line and 2-Line Hotel Phones.

The compliance testing covers the following VTech analog phones:

- Analog cordless 1-line hotel telephone - A2410
- Analog cordless 2-line hotel telephone - A2420

# 2. General Test Approach and Test Results

The compliance testing focused on the interoperability between the VTech Analog Hotel Phones, Avaya IP Office and Voicemail Pro, including the ability to make and receive calls from PSTN endpoints, Avaya SIP, H.323 and Digital phones.

As the purpose of these phones is for hotel guest rooms and hotel lobbies, certain functionality considered to be standard on Avaya endpoints is not supported and therefore was not tested. More details on these limitations are described in **Sections 2.1 and 2.2**.

DevConnect Compliance Testing is conducted jointly by Avaya and DevConnect members. The jointly-defined test plan focuses on exercising APIs and/or standards-based interfaces pertinent to the interoperability of the tested products and their functionalities. DevConnect Compliance Testing is not intended to substitute full product performance or feature testing performed by DevConnect members, nor is it to be construed as an endorsement by Avaya of the suitability or completeness of a DevConnect member's solution.

## 2.1. Interoperability Compliance Testing

Testing consisted of typical call scenarios involving external endpoints using a simulated PSTN, and various Avaya endpoints aimed at simulating a typical hotel in which the staff uses full featured Avaya phones and guests use VTech analog phones.

The feature testing included basic calls, mute/un-mute, hold/reconnect, drop, music on hold, DTMF, speed dial, redial, attended transfer, attended conference, call forwarding, park/unpark, Hunt group member, MWI, and voicemail with Voicemail Pro. Hospitality features Do Not Disturb and Alarm Set with Voicemail Pro were also covered. The VTech phones are not able to initiate attended transfer and attended conference but were tested as members of these scenarios.

The MWI testing was performed using an IPO 500 Extn Card Phone 8, analog line card.

The following tests were not covered because the VTech phones do not support these functions:

- Display
- Call Forward Key
- Phonebook

## 2.2. Test Results

The objectives described in **Section 2.1** were verified and all applicable tests passed.

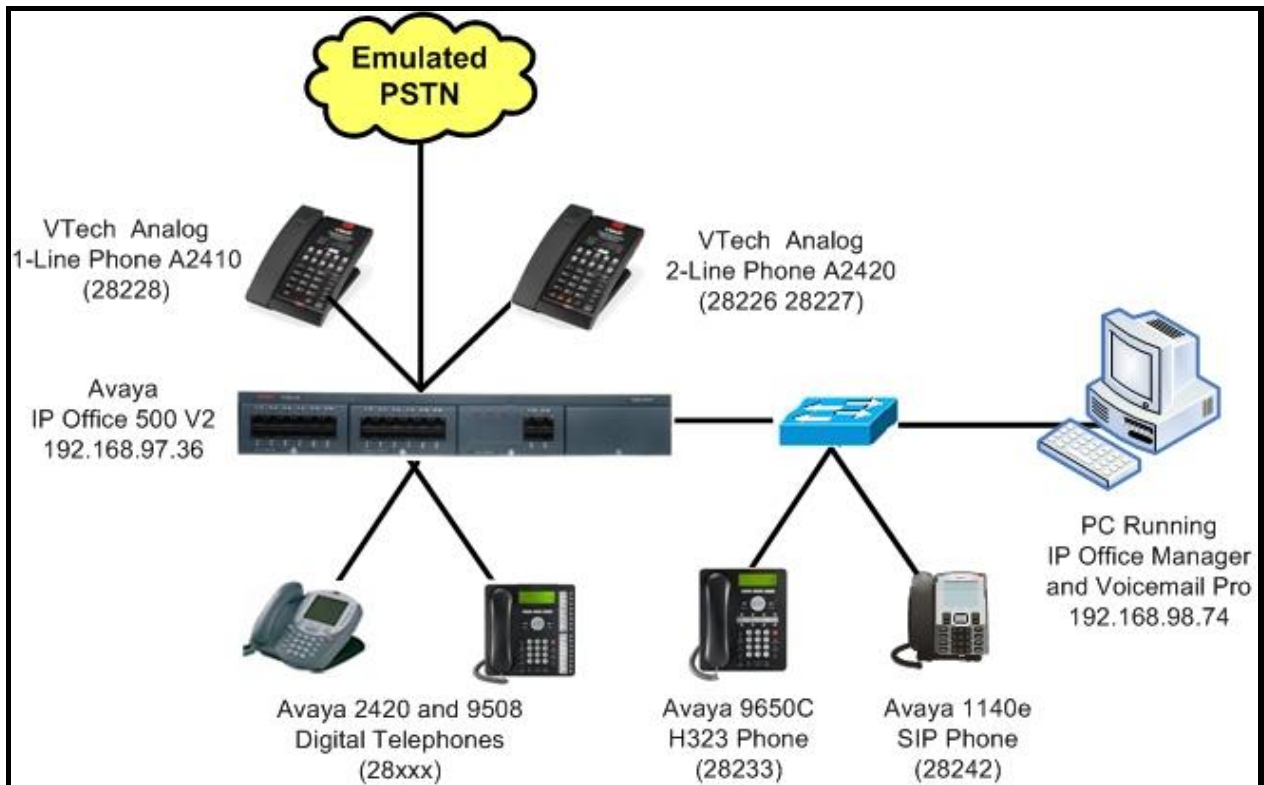
## 2.3. Support

Information, documentation and technical support for VTech Hotel Phones can be obtained at:

- Phone: 1 (888) 714-7385
- <http://vtechhotelphones.com>

### 3. Reference Configuration

The configuration used for the compliance testing is shown below.



**Figure 1 –Test Configuration for VTech Analog Hotel Phones**

## 4. Equipment and Software Validated

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

Equipment	Version
Avaya IP Office 500 V2	8.1(43)
IPO 500 Extn Card Phone 8 (Analog Line Card)	700417231
Voicemail Pro	8.1.810.0
Avaya 9650C H.323 Phone	Avaya one-X <sup>®</sup> Deskphone S3.104S
Avaya 1608-I H.323 Phone	I.302S
Avaya 1140E SIP Phone	04.03.12.00
Avaya 9508 Digital Phone	N/A
VTech Analog cordless 1-line hotel telephone Model A2410	N/A
VTech Analog cordless 2-line hotel telephone Model A2420	N/A

Testing was performed with IP Office 500 R8.1, but it also applies to IP Office Server Edition R8.1. Note that IP Office Server Edition requires an Expansion IP Office 500 v2 R8.1 to support analog or digital endpoints or trunks.

## 5. Configure Avaya IP Office

This section describes the steps to configure IP Office to interoperate with VTech Analog Hotel phones. It is assumed that IP Office has already been installed and is functioning. For additional information on IP Office installation and configuration refer to **Section 10**.

Summary of IP Office Configuration to add a Vtech analog endpoint:

- Configuring an Analog Extension
- Configuring a User
- Verify Locale Setting
- Configuring a Short Code for Alarm Set

### 5.1. Configuring an Analog Extension

This section explains the steps to modify an analog extension. Open the IP OFFICE Manager by navigating to **Start > Programs > IP Office > Manager** on the server or PC that IP OFFICE Manager is installed on (not shown).

In the left panel navigate to **Extension** and then select an available analog extension in the **Extension** panel. In the example configuration port 4 of module BP2 was used. In the **Analogue Extension** panel enter a **Base Extension** that works with the dialing plan of the IP Office. The **Caller Display Type** can be set to **Off** as the Vtech phones do not have displays.

The screenshot displays the IP Office Manager configuration interface. On the left, the 'IP Offices' tree shows the 'Extension (47)' node selected. The main panel is divided into two sections: 'Extension' and 'Analogue Extension: 28 28228\*'. The 'Extension' table lists various extensions, with extension 28 (28228, BP2, Port 4) highlighted. The 'Analogue Extension' panel on the right shows the configuration for extension 28, with fields for Extension Id (28), Base Extension (28228), Caller Display Type (Off), Device Type (Analogue Handset), Module (BP2), and Port (4).

Id	Extension	Module	Port
25	28225	BP2	1
26	28226	BP2	2
27	28227	BP2	3
28	28228	BP2	4
29	28229	BP2	5
30	28230	BP2	6
31	28231	BP2	7
32	28232	BP2	8
101	28201	1	1
102	28202	1	2
103	28203	1	3
104	28204	1	4
105	28205	1	5

**Analogue Extension: 28 28228\***

Extn Analogue

Extension Id: 28

Base Extension: 28228

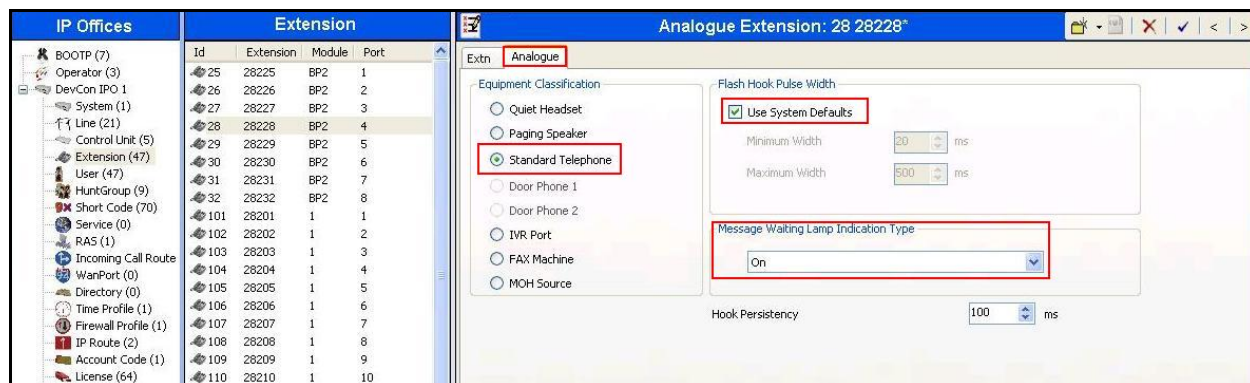
Caller Display Type: Off

Device Type: Analogue Handset

Module: BP2

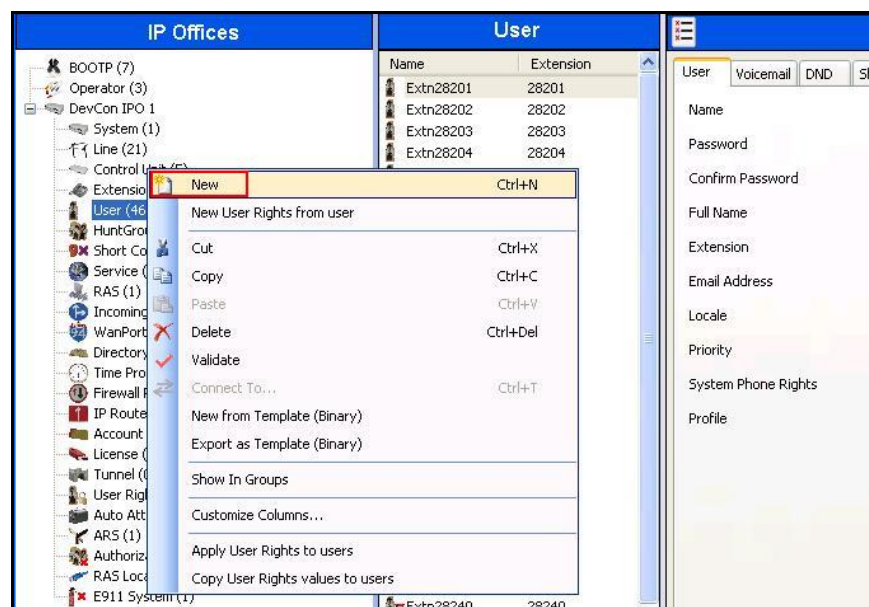
Port: 4

In the **Analogue Extension** panel select the **Analogue** tab. Ensure that **Standard Telephone** is selected. For **Flash Hook Pulse Width** select **Use System Defaults**. Verify that the **Message Waiting Lamp Indication Type** is set to **On**. This configuration will then use the **system locale** setting to determine the message waiting type as in **Section 5.3**. Now select OK (not shown).



## 5.2. Configuring a User

This section shows the steps to add a new user. In the left panel, right click on **User** and then select **New** as shown below.



In the right panel, enter a **Name** for this user and the **Extension** number as configured in **Section 5.1**. In this sample configuration defaults were used for the remaining fields and tabs. Select **OK** when done.

The screenshot shows the 'User' configuration window for '<User:0>: \*'. The 'User' tab is selected. The 'Name' field is highlighted with a red box and contains 'Extn28228'. The 'Extension' field is also highlighted with a red box and contains '28228'. Other fields include 'Password', 'Confirm Password', 'Full Name', 'Email Address', 'Locale' (dropdown), 'Priority' (dropdown with value '5'), 'System Phone Rights' (dropdown with value 'None'), 'Profile' (dropdown with value 'Basic User'), and several checkboxes for 'Receptionist', 'Enable Softphone', 'Enable one-X Portal Services', 'Enable one-X TeleCommuter', 'Enable Remote Worker', 'Enable Flare', and 'Ex Directory'. The 'Flare Mode' dropdown is set to 'Standalone'. The 'Device Type' is set to 'All Other Phone Types'. The 'User Rights' section at the bottom includes 'User Rights view' (dropdown with value 'User data'), 'Working hours time profile' (dropdown with value '<None>'), and 'Working hours User Rights' (dropdown). The window has 'OK', 'Cancel', and 'Help' buttons at the bottom right.

Field	Value
Name	Extn28228
Extension	28228
Priority	5
System Phone Rights	None
Profile	Basic User
Flare Mode	Standalone
Device Type	All Other Phone Types
User Rights view	User data
Working hours time profile	<None>



### 5.3. Verify Locale Setting

With the **Message Waiting Lamp Indication Type** set to **On** as in **Section 5.1**, the **Locale** setting determines the method that IP Office will use to trigger the message waiting lamp. To change this setting, select the IP Office **System** in the left panel. In the right panel the **Locale** can be selected from the drop-down box. For the compliance testing two different settings were tested for the Locale to verify that MWI on the VTech phones would work for the two options. **United States (US English)** was used to test the 51V Stepped method and **Hong Kong (Cantonese)** was used to test the 81V method supplied from the IP500 Phone Card. These two settings cover all of the possible Locale settings. For more information on **Message Waiting Lamp Indication Type** and **Locale** settings, refer to **Section 10** or select **Help** in IP Office Manager.



The following table from IP Office built in help shows the **Message Waiting Lamp Indication Type** that is used for different locale configurations.

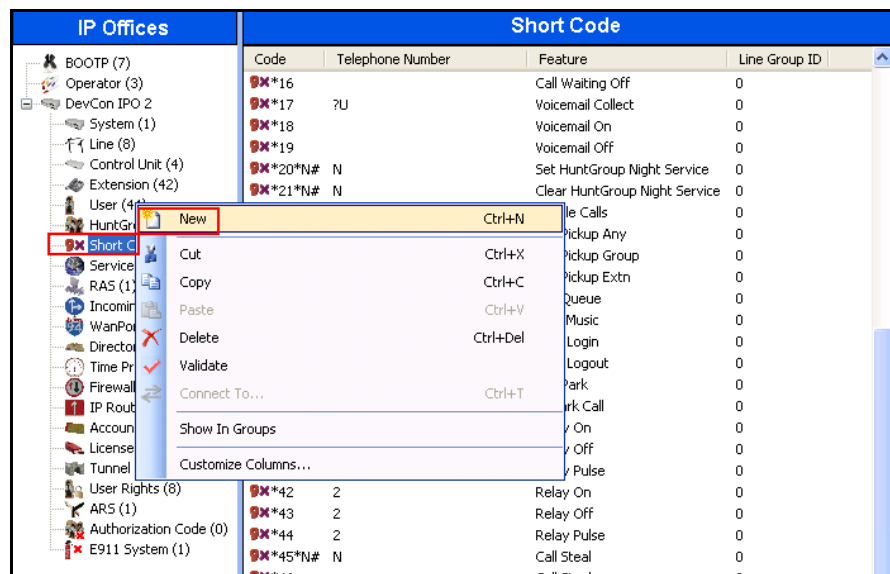
Locale	MWI type when "On"
Argentina, Australia, Brazil, Canada, Chile, China, Colombia, Japan, Korea, Mexico, New Zealand, Peru, Russia, Saudi Arabia, South Africa, Spain, United States, Venezuela.	<b>51V Stepped</b>
Bahrain, Belgium, Denmark, Egypt, Finland, France, Germany, Greece, Hong Kong, Hungary, Iceland, Italy, India, Kuwait, Morocco, Netherlands, Norway, Oman, Pakistan, Poland, Portugal, Qatar, Singapore, Sweden, Switzerland, Taiwan, Turkey, United Arab Emirates, United Kingdom.	On = <b>101V</b> on Phone V2 modules and IP500 Phone cards, otherwise <b>81V</b> .

For a 2-Line phone repeat **Sections 5.1 and 5.2** to configure a second extension and user for line two.

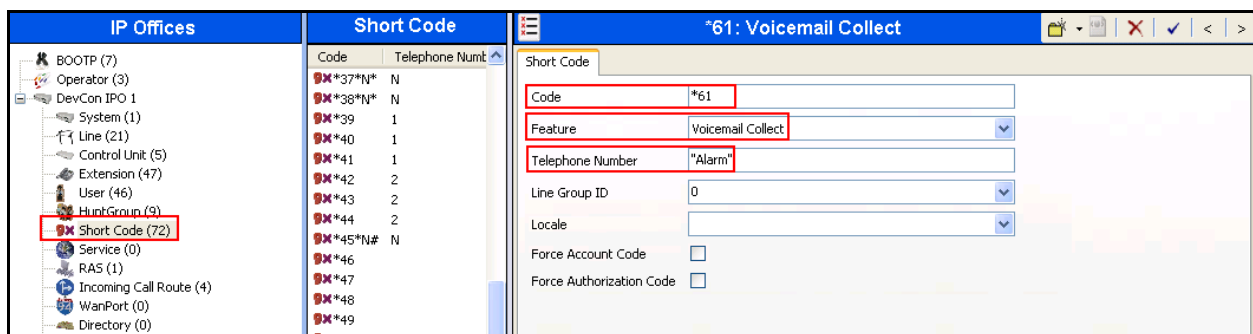
## 5.4. Configuring a Short Code for Alarm Set

This section describes the steps required to configure a new Short Code that can be used to access the Alarm Set feature of Voicemail Pro.

To configure a new Short Code, right click on **Short Code** as seen in the left hand window pane of IP Office Manager and select **New** as shown below.



In the right hand window pane enter a unique **Code** that will be used to access Alarm Set in Voicemail Pro. In this example configuration **\*61** was used for the **Code**. For the **Feature** field select **Voicemail Collect** from the drop down menu. Now enter a unique name in double quotes in the **Telephone Number** field. In the example **"Alarm"** was used. This name needs to match the name configured in Voicemail Pro Client in **Section 6**. When finished click on **OK** (not shown).



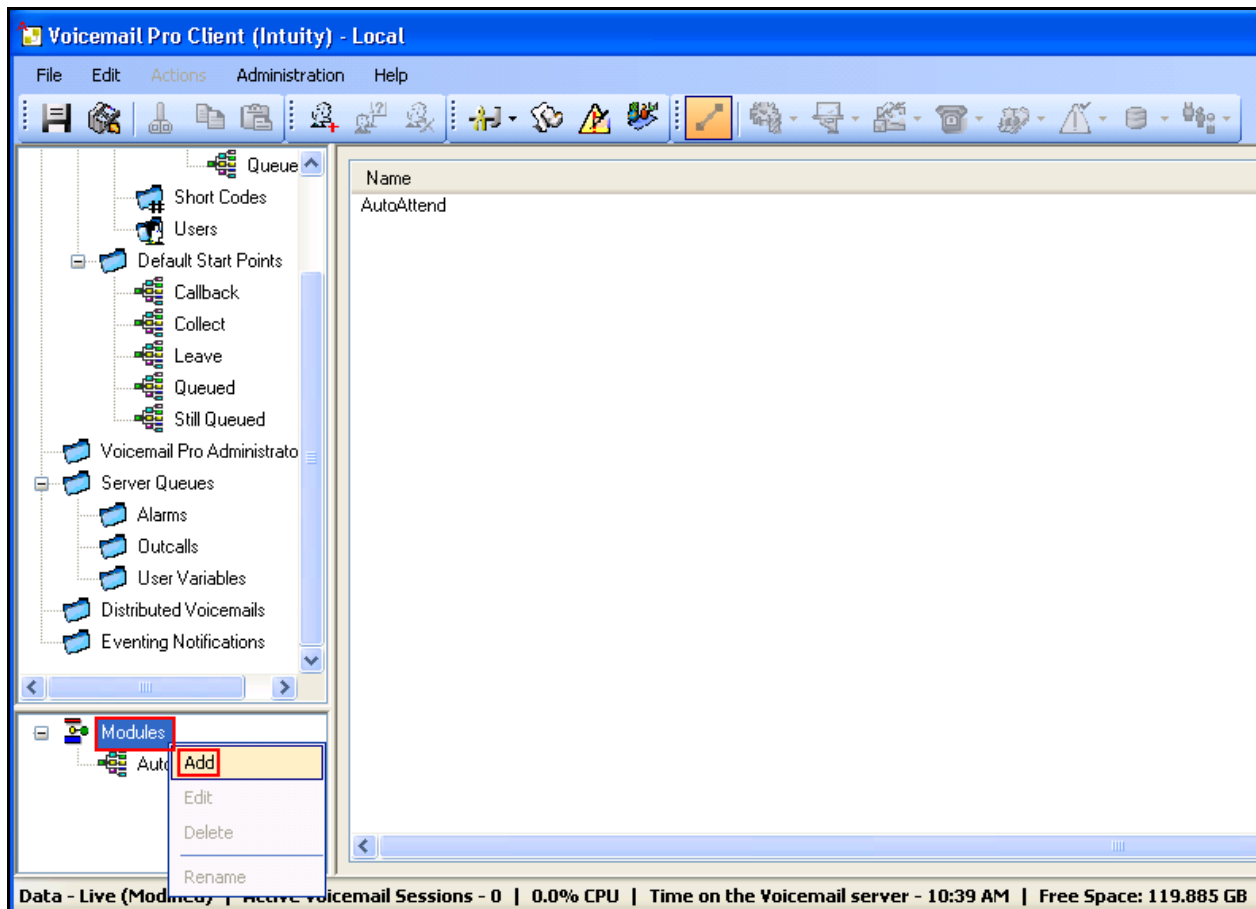
Now perform a save of the IP Office configuration (not shown).

## 6. Configure Voicemail Pro for Alarm Set

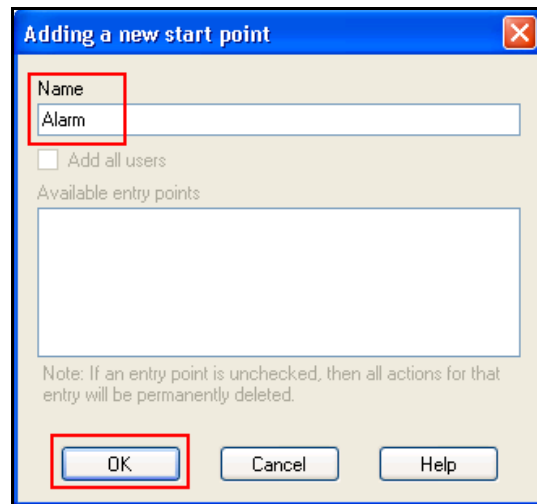
This section describes the steps required to configure Voicemail Pro for the Alarm Set feature.

Open the Voicemail Pro Client by navigating to **Start > Programs > IP Office > Voicemail Pro Client** on the server Voicemail Pro is installed on (not shown).

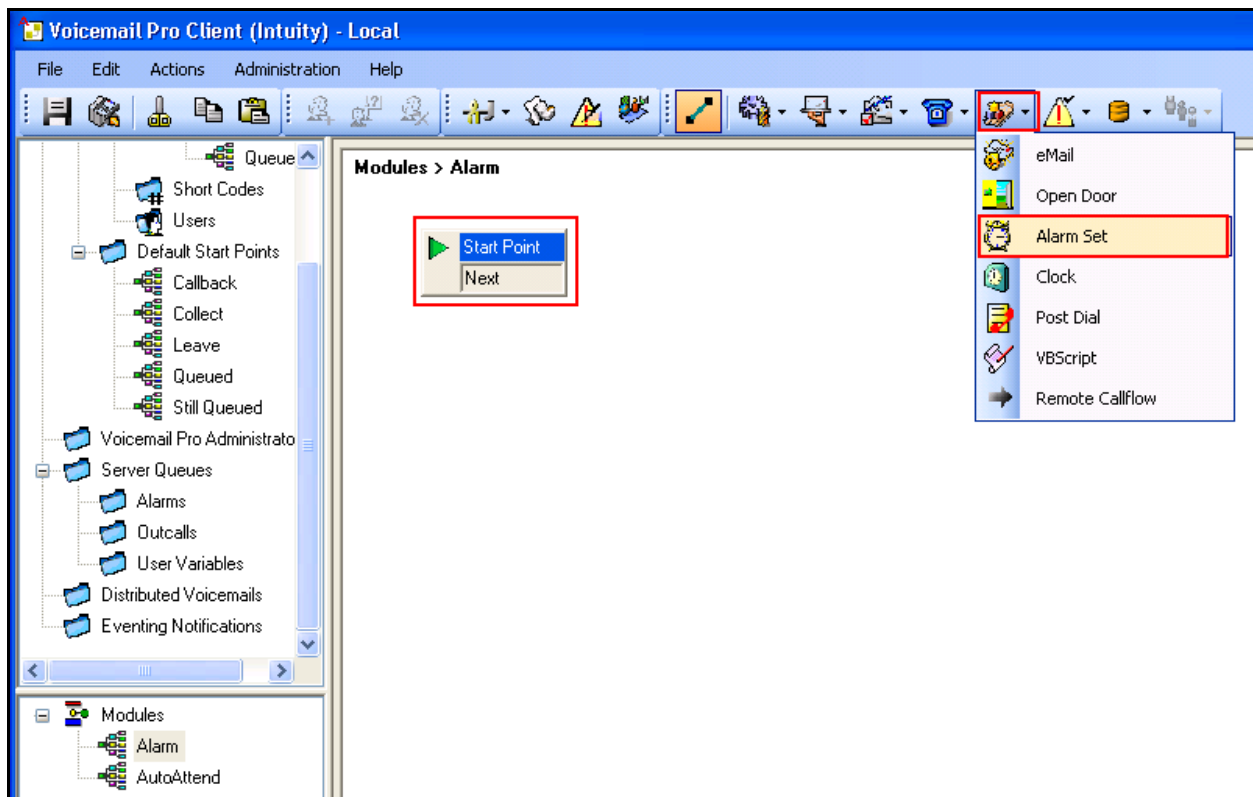
In the Voicemail Pro Client right click on **Modules** and select **Add**.



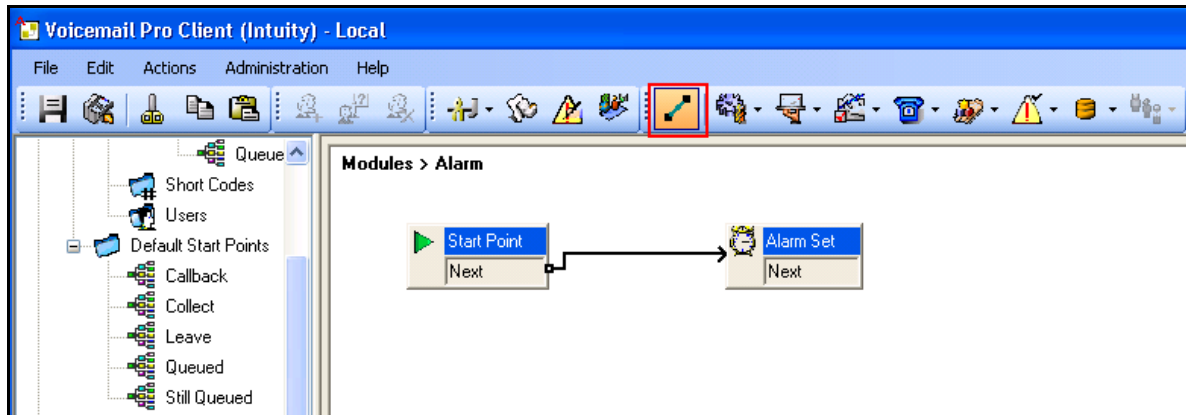
In the **Name** field of the new window that appears, enter the name that was entered in the **Telephone Number** field in **Section 5.4**. Note that the double quotes are not required here. In this example configuration **Alarm** was used for the name. When finished click on **OK**.



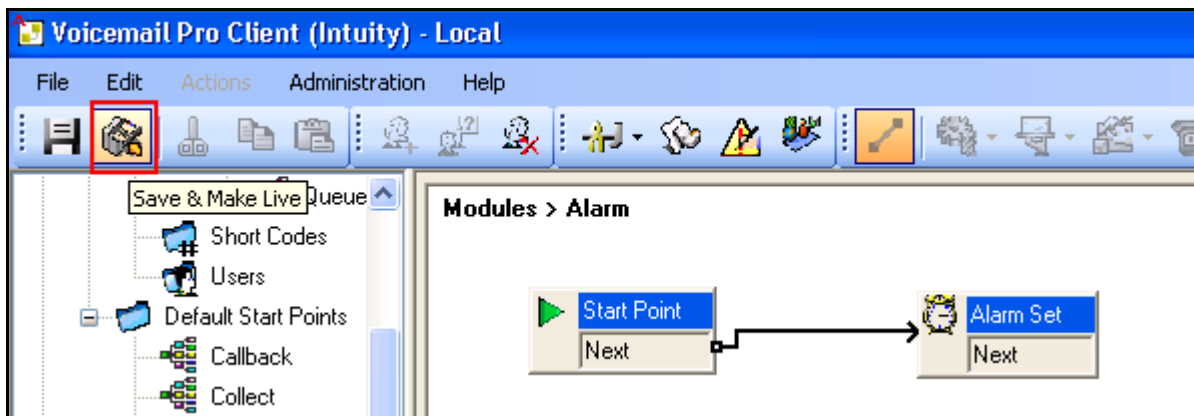
Next click on the **Start Point** object to enable the icons in the toolbar, then select the **Miscellaneous Actions** toolbar icon and select **Alarm Set**. Next, click in the **Modules > Alarm** window to add the Alarm Set object (not shown).



Now use the **Connection** tool to connect the **Start Point** object to the **Alarm Set** object as shown below.



When finished, click on the **Save & Make Live** icon.



Now when the Short Code as configured in **Section 5.4** is entered on a phone, the user will be prompted to enter an alarm time using dialed digits on the phone. The Short code can also be configured as a Speed Dial Key as in **Section 7.2**.

## 7. Configure VTech Phones

VTech Analog Hotel Phones as listed in **Section 4** are configured using buttons that are located under the faceplate and overlay. See VTech documentation listed in **Section 10** for more details. The default setting of the VTech phones interoperated with IP Office as described in these notes.

### 7.1. Hold Timeout Configuration (optional)

The VTech phones have a hold timeout duration setting that can be configured from 01 to 99 minutes. The default setting will drop a call on hold after 15 minutes. A value of 00 can be entered to disable the feature.

#### To change the call on hold timeout duration:

- Remove the faceplate and overlay if they are on the telephone base. Then press the recessed **PROGRAM** key.
- Press **02** and you hear 3 beeps. Then press the dialing keys from **00** to **99** minutes. You hear 3 rising beeps as confirmation.

### 7.2. Speed Dial Key Configuration (optional)

VTech phones are capable of using up to 10 Speed Dial buttons to provide one-touch access to various hotel services such as concierge, front desk, voicemail, and Do Not Disturb. This was simulated by configuring speed dial keys to dial IP, SIP and Digital phones in the test environment. IP Office Shortcodes can also be used with the Speed Dial Keys. For example, **\*08** can be used to activate **Do Not Disturb** and **\*09** to disable **Do Not Disturb**. The code **\*17** can also be used to access the phones **VoiceMail**. The IP Office Shortcodes **\*08**, **\*09** and **\*17** used in this sample configuration are default values. For more information on configuring IP Office Shortcodes, refer to documentation listed in **Section 10**.

#### To program a Speed Dial key:

- 1) Remove the faceplate and overlay if they are on the telephone base. Then press the recessed **PROGRAM** key.
- 2) Press the desired **Speed Dial** key where the telephone number is to be stored. You hear 3 beeps.
- 3) Enter the **telephone number** (up to 32 digits).
  - To insert a pause in the stored number, press the recessed **PAUSE** key.
- 4) The telephone stores the number automatically when 32 digits are entered. When the number has less than 32 digits, press the recessed **PROGRAM** key again. You hear 3 rising beeps as confirmation.

#### To clear the programmed Speed Dial key:

- 1) Remove the faceplate and overlay if they are on the telephone base. Then press the recessed **PROGRAM** key.
- 2) Press the **Speed Dial** key where the telephone number is to be deleted. You hear 3 beeps. Press the recessed **PROGRAM** key again. You hear 3 rising beeps as confirmation.

## 8. Verification Steps

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

From a PC running the IP Office Monitor application, select **Start > Programs > IP Office > System Status** to launch the application. The **Avaya IP Office System Status** screen is displayed. From the left panel expand **Extensions** then select an **extension**. Place a call from the selected extension. In the **Extension Status** window the **Current State** should be **Connected**.

**AVAYA** IP Office System Status

Help Snapshot LogOff Exit About

**System**  
**Alarms (13)**  
**Extensions (28)**  
28201  
28202  
28203  
28204  
28205  
28206  
28207  
28208  
28209  
28210  
28211  
28212  
28213  
28214  
28215  
28216  
▶ 28225  
28226  
28227  
28228  
28229  
28230  
28231  
28232  
28233  
28234  
28242  
28254  
**Trunks (5)**  
**Active Calls**  
**Resources**  
**Voicemail**  
**IP Networking**

**Extension Status**

Extension Number: 28225  
Slot: 2  
Port: 1  
Telephone Type: POT (CLI On)  
Current User Extension Number: 28225  
Current User Name: Extn28225  
Forwarding: Off  
Trunking: Off  
Do Not Disturb: Off  
Message Waiting: Off  
Number of New Messages: 0  
Phone Manager Type: None  
Packet Loss Fraction:  
Jitter:  
Round Trip Delay:  
Connection Type:  
Codec:  
Remote Media Address:

Call Ref	Current State	Time in State	Calling Number or Called Number	Direction	Other Party on Call
31	Connected	00:01:41		Outgoing	Extn 28201, Extn28201

Trace Trace All Pause Call Details Print... Save As...

1:26:04 PM Online

## 9. Conclusion

The VTech 1-Line and 2-Line Analog Hotel Phones successfully interoperated with the Avaya IP Office and Voicemail Pro as described in these notes.

## 10. Additional References

Product documentation for Avaya products may be found at <http://support.avaya.com>.

- 1) Avaya IP Office Basic Edition - Quick Mode 8.1 Manager –Issue 05e, 25 May 2012
- 2) Avaya IP Office Technical Bulletin, Bulletin no: 145, 16 July 2012
- 3) Avaya IP Office Administering Voicemail Pro 15-601063 Issue 8b - December 11, 2012

Product information for VTech Analog Hotel Phones may be found at <http://vtechhotelphones.com>.

- 4) Analog Contemporary Series Master User Guide



---

**©2013 Avaya Inc. All Rights Reserved.**

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

Please e-mail any questions or comments pertaining to these Application Notes along with the full title name and filename, located in the lower right corner, directly to the Avaya DevConnect Program at [devconnect@avaya.com](mailto:devconnect@avaya.com).