



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.

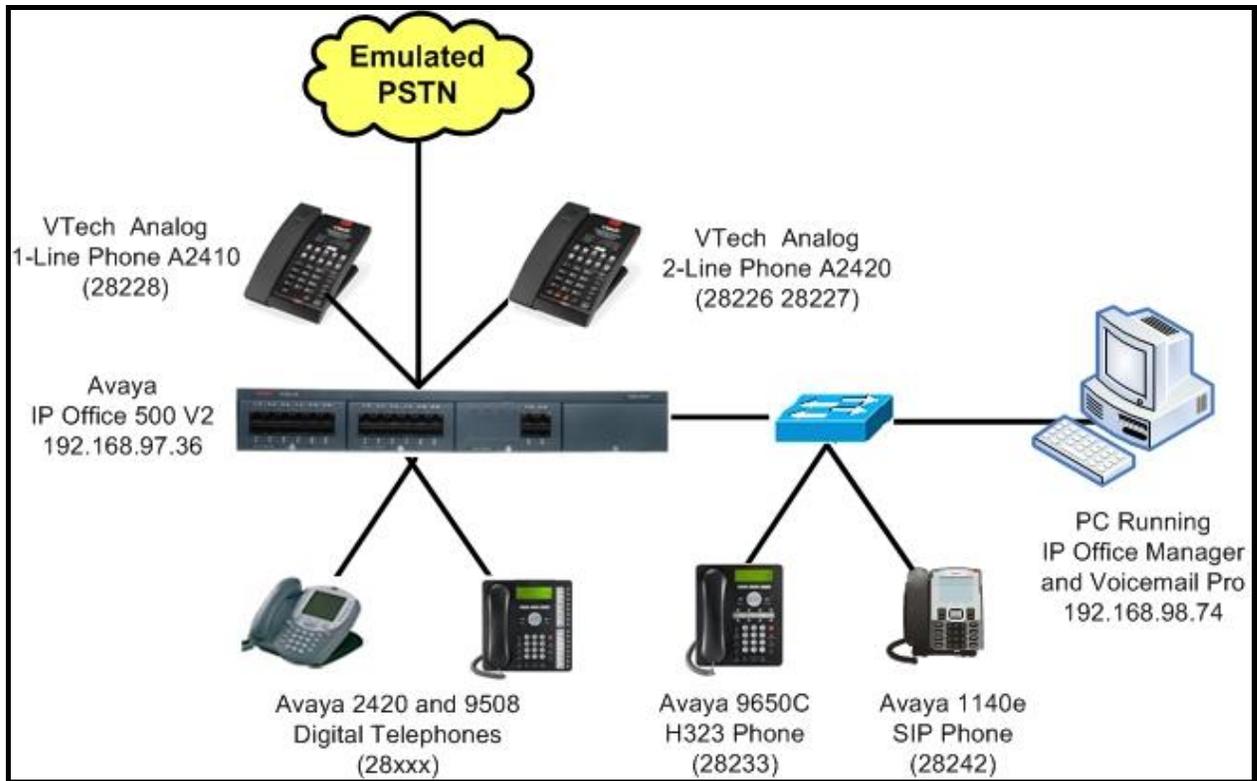


Figure 1 –Test Configuration for VTech Analog Hotel Phones

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 [®] 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.

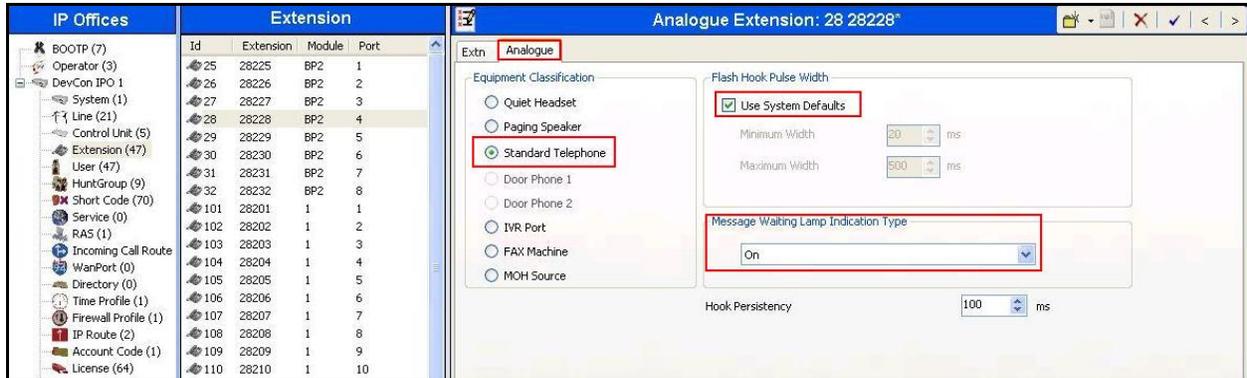
The screenshot displays the Avaya IP Office Manager configuration interface. On the left, a tree view shows the 'Extension (47)' category selected. The main area is divided into two panels. The left panel, titled 'Extension', contains a table with the following data:

| 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 |

The right panel, titled 'Analogue Extension: 28 28228*', shows the configuration for extension 28. The 'Extn' tab is selected, and the 'Analogue' sub-tab is active. The configuration fields are as follows:

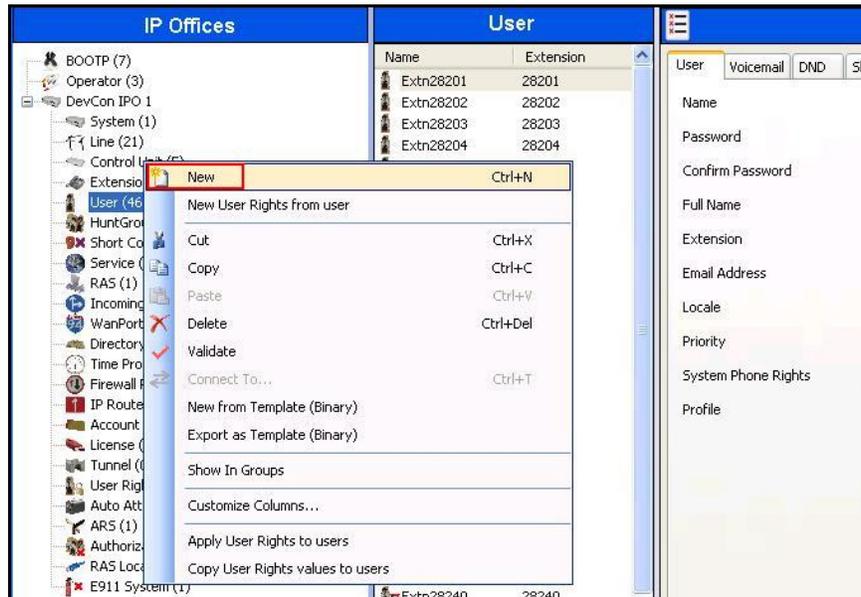
- Extension Id: 28
- Base Extension: 28228
- Caller Display Type: Off
- Device Type: Analogue Handset
- Module: BP2
- Port: 4

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.

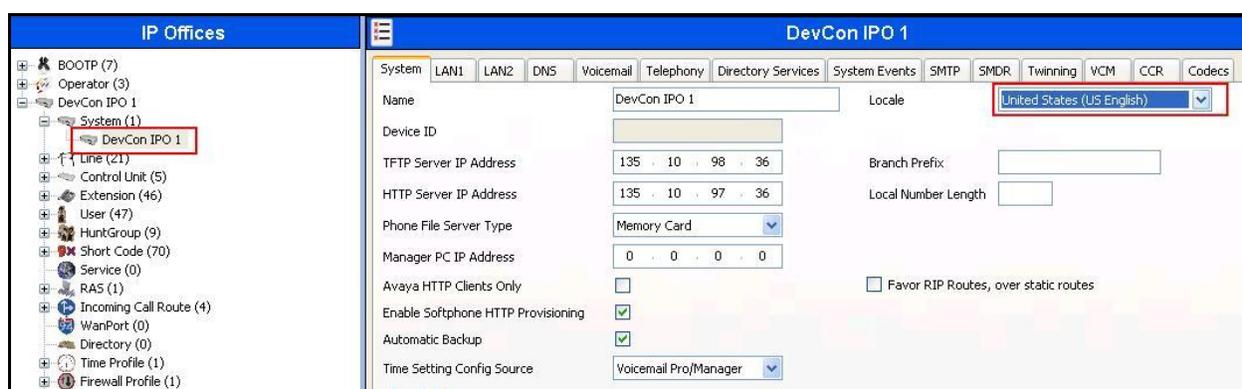
The screenshot shows a configuration window for a user. The title bar reads "<User:0>: *". The window has a tabbed interface with the following tabs: User, Voicemail, DND, ShortCodes, Source Numbers, Telephony, Forwarding, Dial In, Voice Recording, Button Programming, and Menu Programming. The "User" tab is active. The fields are as follows:

- Name: Extn28228
- Password: [Empty]
- Confirm Password: [Empty]
- Full Name: [Empty]
- Extension: 28228
- Email Address: [Empty]
- Locale: [Dropdown menu]
- Priority: 5
- System Phone Rights: None
- Profile: Basic User
- Receptionist:
- Enable Softphone:
- Enable one-X Portal Services:
- Enable one-X TeleCommuter:
- Enable Remote Worker:
- Enable Flare:
- Ex Directory:
- Flare Mode: Standalone
- Device Type: All Other Phone Types
- User Rights view: User data
- Working hours time profile: <None>
- Working hours User Rights: [Dropdown menu]

Buttons at the bottom: OK, Cancel, Help.

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.

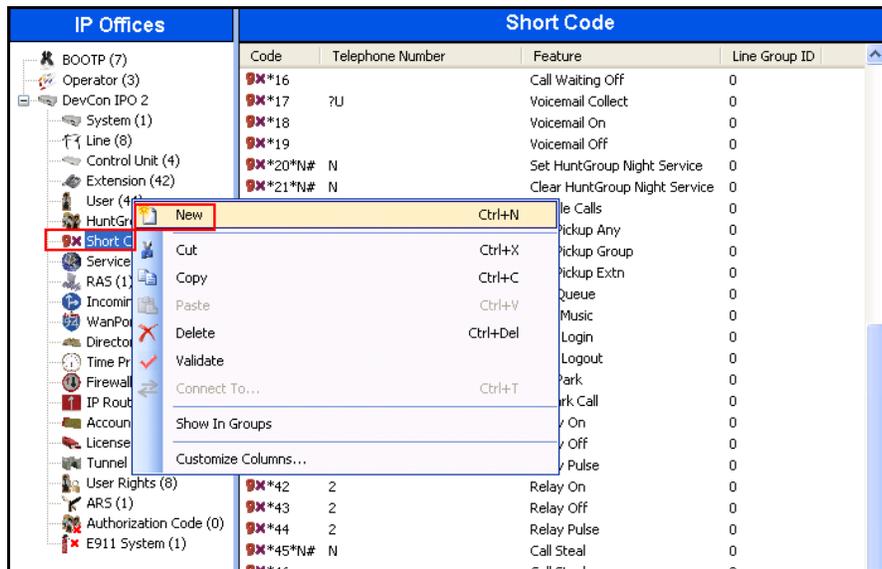
| Locale | MWI type when "On" |
|--|--|
| Argentina, Australia, Brazil, Canada, Chile, China, Colombia, Japan, Korea, Mexico, New Zealand, Peru, Russia, Saudi Arabia, South Africa, Spain, United States, Venezuela. | 51V Stepped |
| Bahrain, Belgium, Denmark, Egypt, Finland, France, Germany, Greece, Hong 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 = 101V on Phone V2 modules and IP500 Phone cards, otherwise 81V. |

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

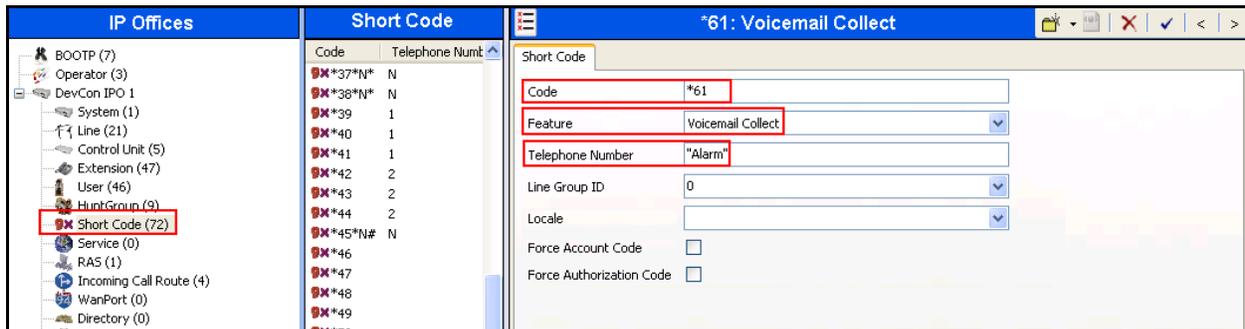
5.4. Configuring a Short Code for Alarm Set

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).



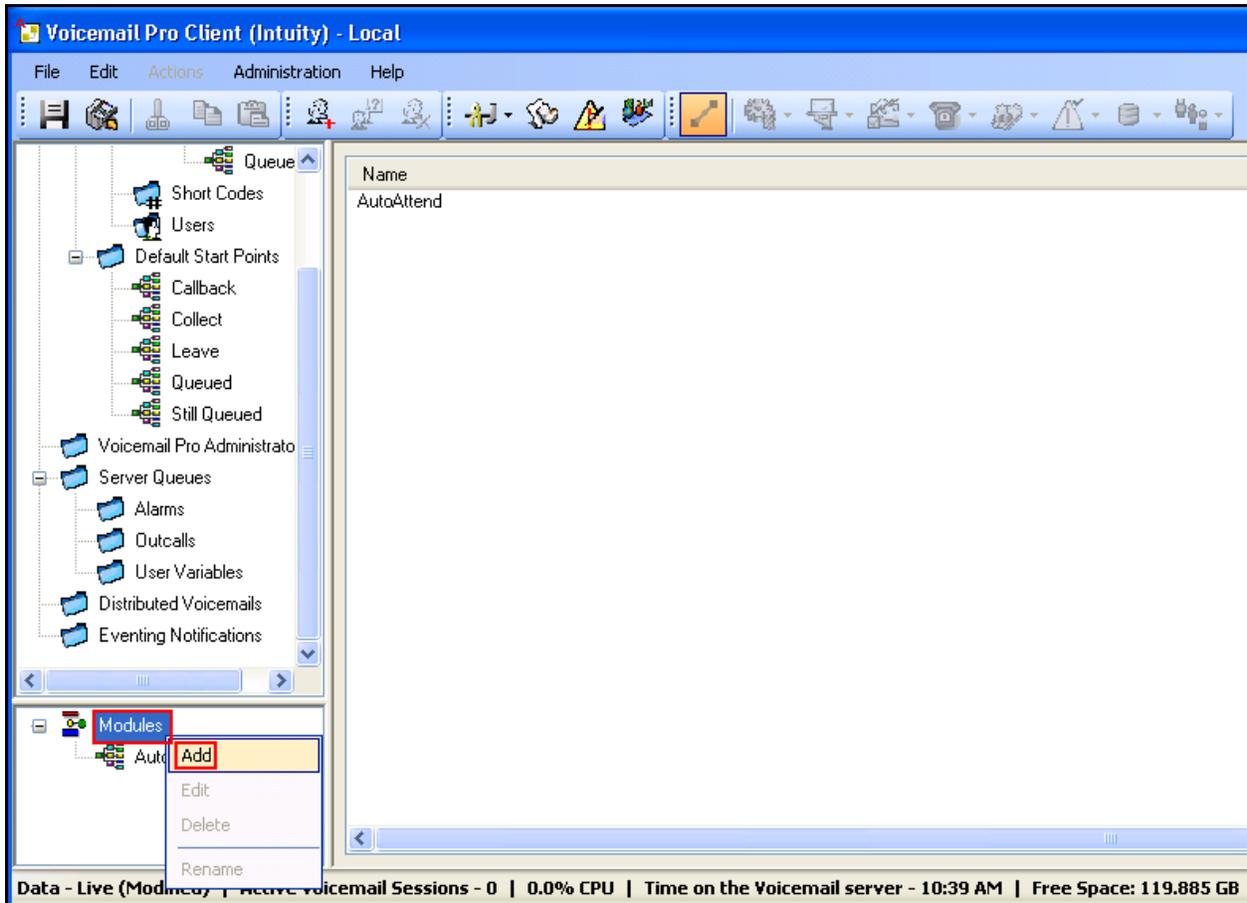
Now perform a save of the IP Office configuration (not shown).

6. Configure Voicemail Pro for Alarm Set

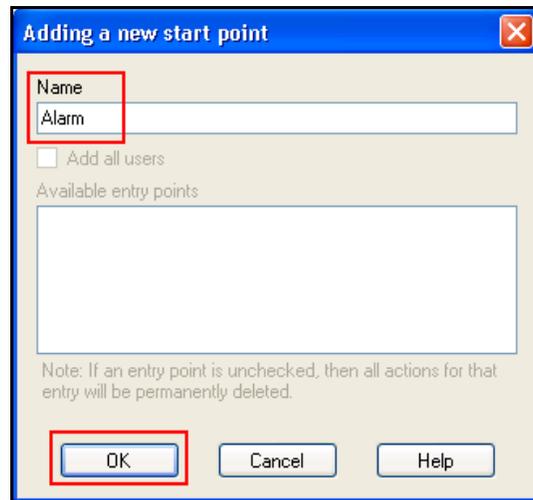
This section describes the steps required to configure Voicemail Pro for the Alarm Set feature.

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).

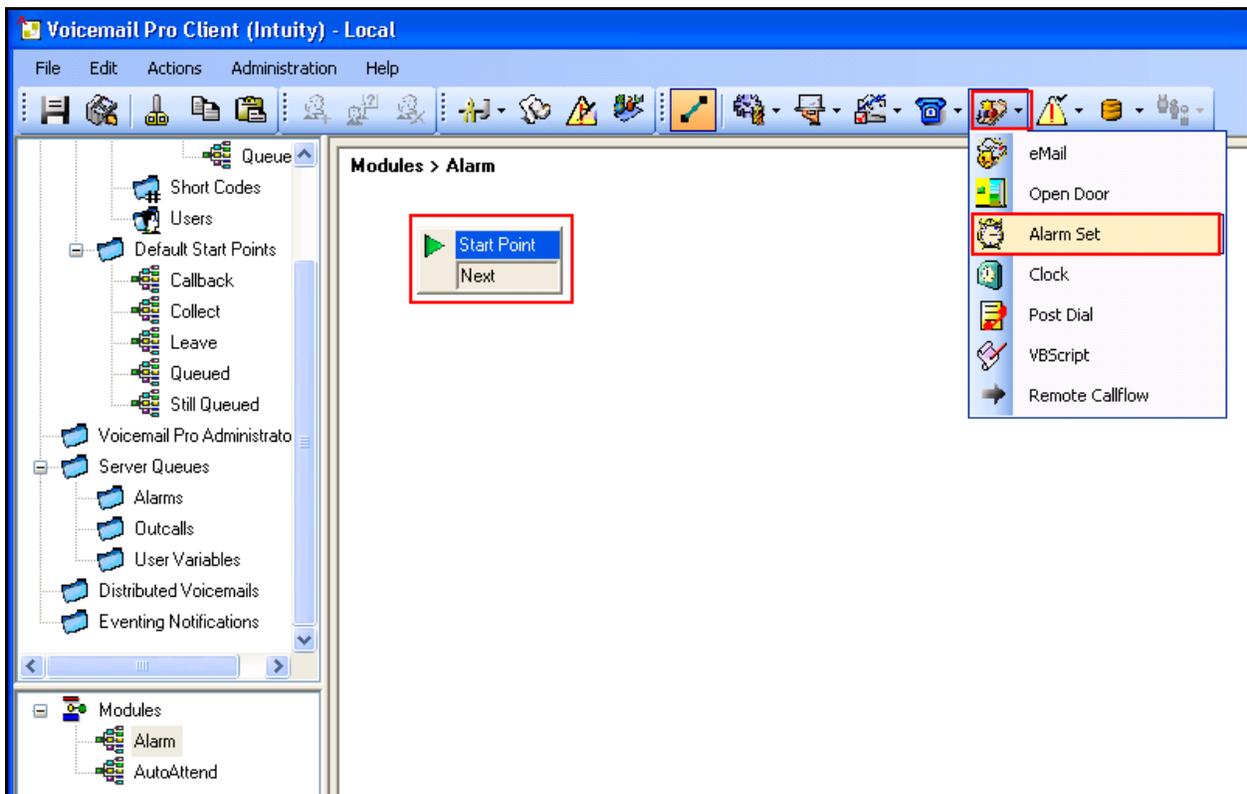
In the Voicemail Pro Client right click on **Modules** and select **Add**.



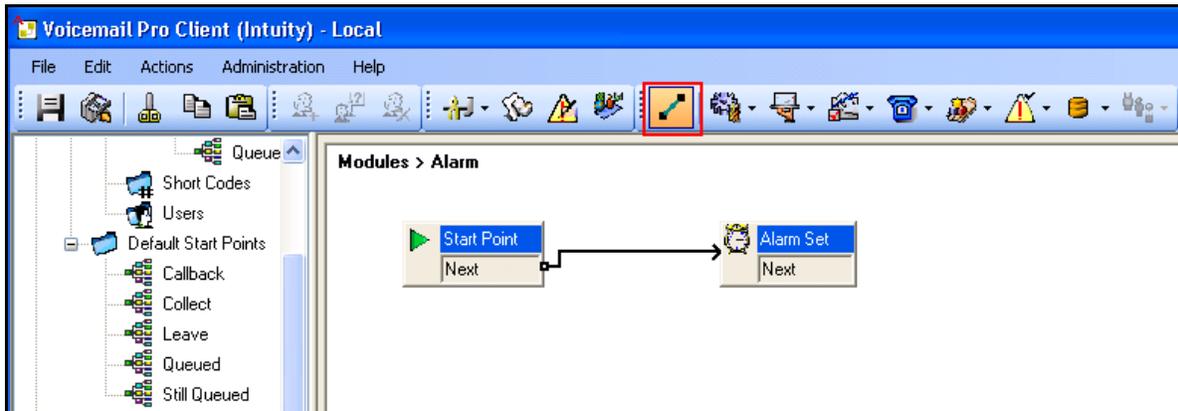
In the **Name** field of the new window that appears, enter the name that was entered in the **Telephone Number** field in **Section 5.4**. Note that the double quotes are not required here. In this example configuration **Alarm** was used for the name. When finished click on **OK**.



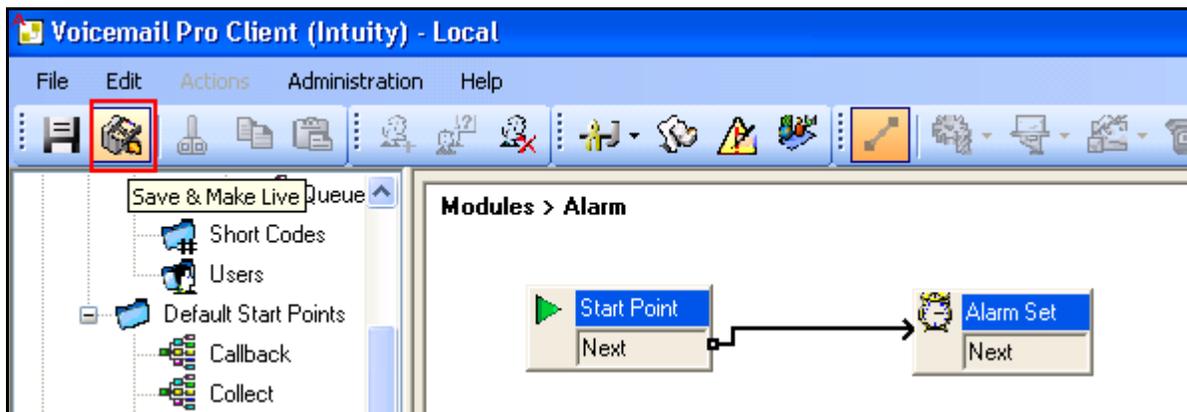
Next click on the **Start Point** object to enable the icons in the toolbar, then select the **Miscellaneous Actions** toolbar icon and select **Alarm Set**. Next, click in the **Modules > Alarm** window to add the Alarm Set object (not shown).



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
Twinning: 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

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