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Avaya Solution & Interoperability Test Lab

Application Notes for Configuring Avaya IP Office 500 V2 R9.0 with TigerTMS InnLine IP - Issue 1.0

Abstract

These Application Notes describe the configuration steps required for Avaya IP Office 9.0 with TigerTMS InnLine IP.

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.

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1 of 22
Tiger_VM_IPO9_0

1. Introduction

These Application Notes describe the compliance-tested configuration using a TigerTMS InnLine IP SIP Voicemail server and Avaya IP Office. TigerTMS InnLine IP SIP Voicemail is part of a hospitality solution that provides hotels with voicemail functionality. The voicemail feature is delivered via SIP and each voicemail channel on the TigerTMS InnLine IP is configured on the Avaya IP Office as a SIP user.

2. General Test Approach and Test Results

The general test approach was to configure the TigerTMS InnLine IP to communicate with the Avaya IP Office (IP Office) as implemented on a customer's premises. Feature functionality testing was performed manually. Call coverage was verified when there was no answer on a dialled extension and when a dialled extension was busy. Direct access to the Voicemail system was verified with message retrieval from the extension which had message waiting. Voicemail integration with hospitality features, including check-in, room transfer and check-out was verified using TigerTMS Hotel Pro. As a result of check-in, a voicemail box was setup for the extension and the Message Waiting Indication (MWI) lamp was turned off. As a result of check-out, the extensions MWI lamp was turned off and the voicemail box is emptied. As a result of room transfer, the old extension's MWI lamp was turned off and the voicemail was purged and new extension's MWI lamp was illuminated and the voicemail was been moved to the new extension.

Note: Information on TigerTMS Hotel Pro can be obtained from TigerTMS at www.tigertms.com

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

The testing included typical voicemail functions including call coverage in the following scenarios:
- Recording messages on the voicemail system
- Retrieving messages by making a direct call to the voicemail system
- Accessing Personal Assistance via the voicemail system
- Dialling directly to the voicemail system and being redirected to known extensions
- MWI lamp/off
- Voicemail integration with hospitality features like check-in, check-out and room transfer

2.2. Test Results

Tests were performed to insure full interoperability between TigerTMS InnLine IP and Avaya IP Office. The tests were all functional in nature and performance testing was not included. All test cases passed successfully.

2.3. Support

Technical support from TigerTMS can be obtained through the following:

Phone: Technical Support Department
+44 1425 891 090
E-mail: support@tigertms.com

3. Reference Configuration

Figure 1 illustrates the network topology used during compliance testing. The InnLine IP was configured to connect to the IP Office as a SIP Endpoint. A Hunt Group was configured on the IP Office so that busy and unanswered calls were diverted to the InnLine IP. The TigerTMS 2020 Pro package (a TigerTMS Hospitality product) was also installed during compliance testing so as to test the MWI on/off feature of the InnLine IP when room changes were made. Digital, H323 and Soft phones were configured on the IP Office to generate intra-switch calls (calls between phones on the same system). A QSIG trunk was configured to connect the IP Office to the PSTN to enable outbound/inbound calls and external access to the InnLine IP.

Note: The configuration of the TigerTMS 2020 Pro solution is outside the scope of this Application note. A separate application Note is available for TigerTMS 2020 Pro.
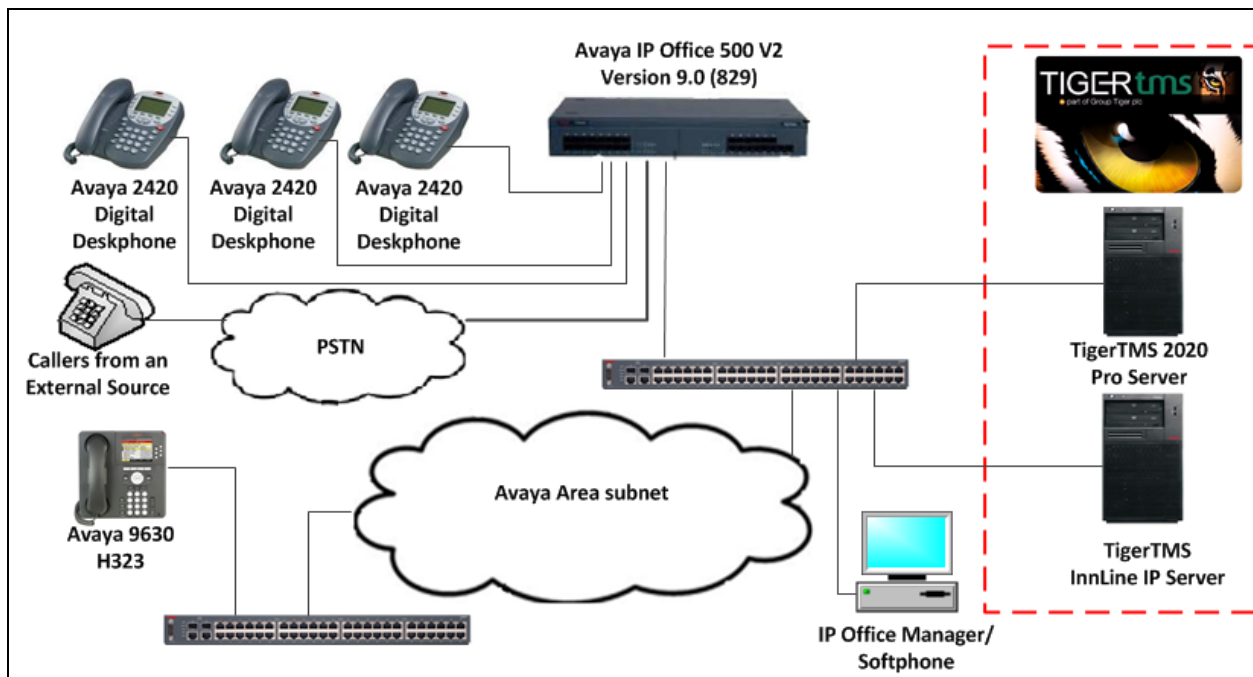

Figure 1: Avaya IP Office and TigerTMS InnLine IP Reference Configuration

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3 of 22
Tiger_VM_IPO9_0

4. Equipment and Software Validated

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

Avaya Equipment	Software / Firmware Version
Avaya IP Office 500 v2	9.0 (829)
Avaya IP Office Manager	9.0 (829)
Avaya 9630 H323 Telephone	Ha96xxua3_2_0_s.bin
Avaya 2420 Digital Telephones	--
Avaya IP Office softphone	3.2.3.49
TigerTMS Equipment	**Software / Firmware Version**
Generic Server running Windows 7 SP1	TigerTMS InnLine IP Version 3.1.4

Note: Testing was performed with IP Office 500 v2 R9.0, but it also applies to IP Office Server Edition R9.0. Note that IP Office Server Edition requires an Expansion IP Office 500 v2 R9.0 to support analog or digital endpoints or trunks. IP Office Server Edition does not support TAPI Wave or Group Voicemail.

5. Avaya IP Office Configuration

Configuration and verification operations on the Avaya IP Office illustrated in this section were all performed using Avaya IP Office Manager. The information provided in this section describes the configuration of the Avaya IP Office for this solution. It is implied a working system is already in place. For all other provisioning information such as initial installation and configuration, please refer to the product documentation in **Section 9**. The configuration operations described in this section can be summarized as follows:

- Launch Avaya IP Office Manager
- Configure LAN1
- Configure SIP Users for Voicemail
- Configure Hunt group
- Set Voicemail type
- Enable Voicemail for users
- Save Configuration

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SPOC 7/10/2014

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4 of 22
Tiger_VM_IPO9_0

5.1. Launch Avaya IP Office Manager

From the Avaya IP Office Manager PC, go to **Start → Programs → IP Office → Manager** to launch the Manager application. Log in to Avaya IP Office using the appropriate credentials to receive its configuration (not shown). In the IP Offices window expand the Configuration Tree and double-click **System**. During compliance testing the System was called **IPOMC**.
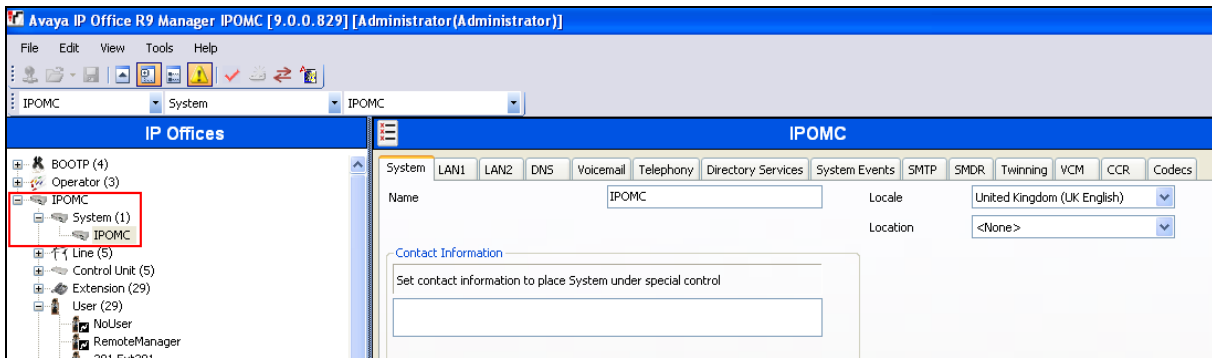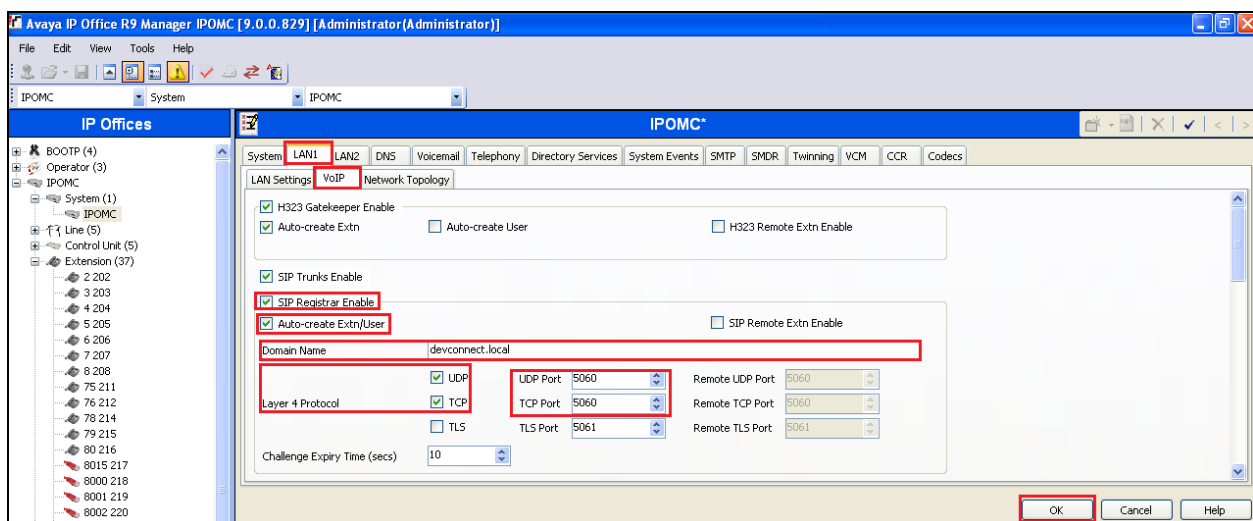

5.2. Configure LAN1

LAN 1 was configured to use either TCP or UDP, in order to do this select **System** in the left window. In the main window, click on the **LAN1** tab and then **VoIP** tab and enter the following:

- **SIP Registrar Enable**   Check the check box
- **Auto-create Extn/User**   Check the check box
- **Domain Name**   Enter the domain (i.e., devconnect.local)
- **Layer 4 protocol**   Select **Both TCP and UDP** check boxes
- **UDP Port**   Enter **5060**
- **TCP Port**   Enter **5060**

Click the **OK** button to save.

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5 of 22
Tiger_VM_IPO9_0

5.3. Configure SIP Users for Voicemail

A SIP user must be added for each voicemail channel on InnLine. This section shows the configuration for user 7001. Users 7002-7004 were also configured during compliance testing. In the Manager window, go to the Configuration Tree, right-click **User** and select **New** in the popup that appears, (not shown). Click on the **User** tab and enter the following:

- **Name**   Enter and informative name (i.e., VoiceMail SIP 1)
- **Password**   Enter a password, required by InnLine IP to connect, (Required in **Section 6.1**). **Note:** The same password should be used for each voicemail extension
- **Confirm Password**   Confirm the password
- **Account Status**   Select **Enabled** from the dropdown box
- **Extension**   Enter **7001**

Click the **OK** button to save.

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SPOC 7/10/2014

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6 of 22
Tiger_VM_IPO9_0

5.4. Configure Hunt Group

In the Manager window, go to the Configuration Tree, right click **Group** and select **New** in the popup that appears, (not shown). Click the **Group** tab and enter the Following:

- **Name**   Enter and informative name (i.e., **Tiger VoiceMail**)
- **Extension**   Enter the extension of the InnLine IP (i.e., **7000**)
- **Ring Mode**   Select **Sequential** from the dropdown box

Click on the **Edit** button.
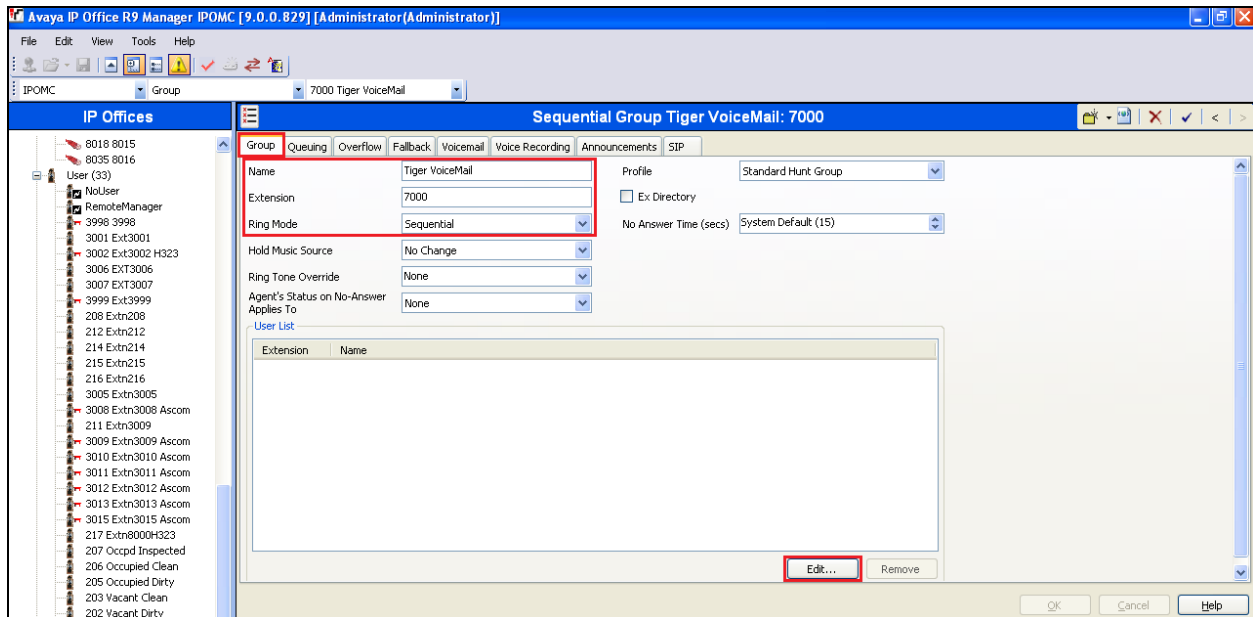
Once the **Sequential HuntGroup Select Members** opens click on the **Group** tab and select the users that were configured in **Section 5.3** (7001 to 7004) in the **Available Users** frame and click on the **Append** button. Click the **OK** button.

Click on the **Queuing** tab.

Once the Queuing tab window opens, uncheck the **Queuing On** check box. Click the **OK** button.

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9 of 22
Tiger_VM_IPO9_0
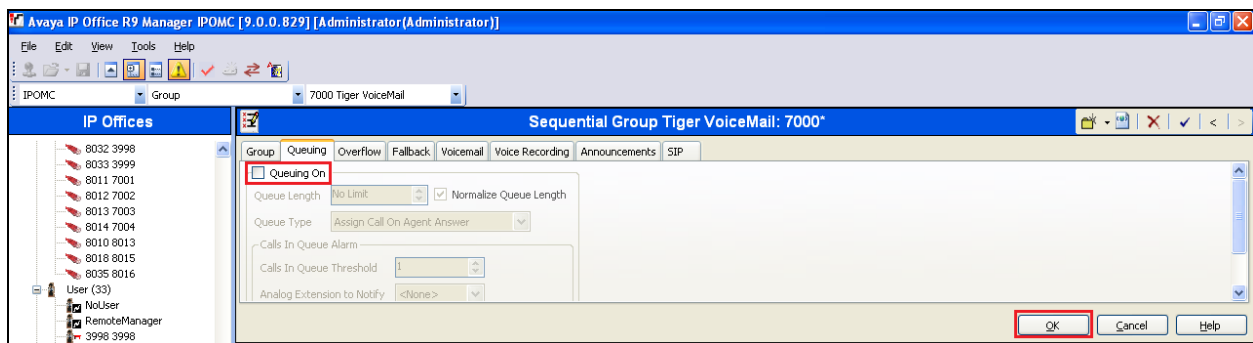
5.5. Set Voicemail Type

In the Manager window, go to the Configuration Tree and click **System** (not shown). Select the **Voicemail** tab and enter the following:

- **Voicemail Type**   Select **Group Voicemail** from the dropdown box
- **Voicemail Destination**   Select **Tiger VoiceMail** from the dropdown box

Click the **OK** button.
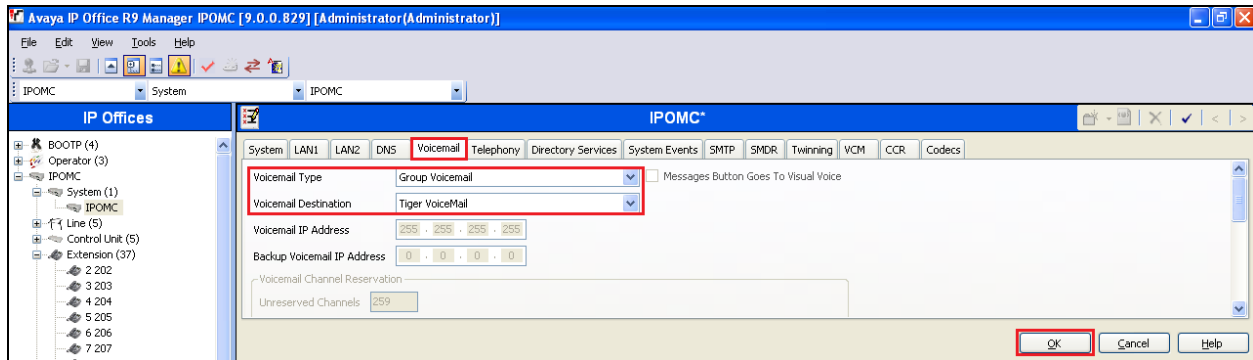
5.6. Create Short Codes

Create a Short Code used for set the MWI Lamp Off. In the Manager window, go to the Configuration Tree, right-click **Short Code** and select **New** (Not shown) and enter the following:

- **Code**   Enter ***60*N***
- **Feature**   Select **Display Msg** from the dropdown box
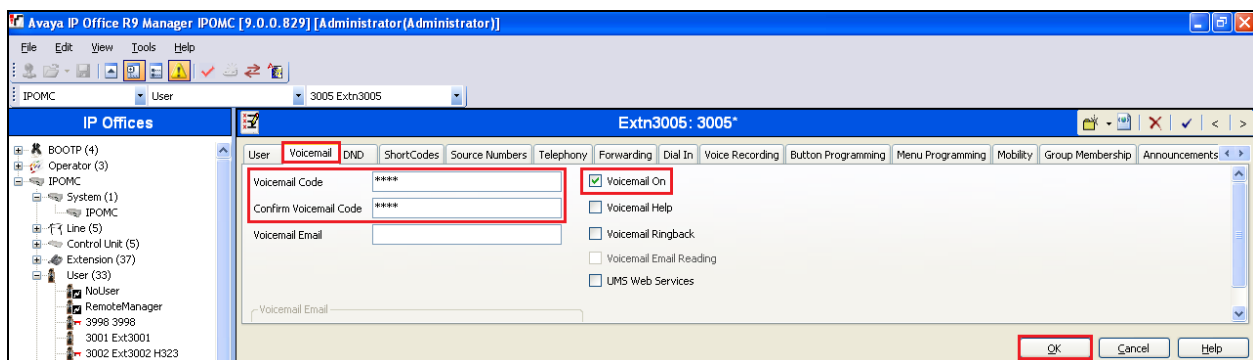- **Telephone Number**   Enter **N";MWL Msgs=0 OLD=0 Sav=0"**

Click **OK** button.

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10 of 22
Tiger_VM_IPO9_0
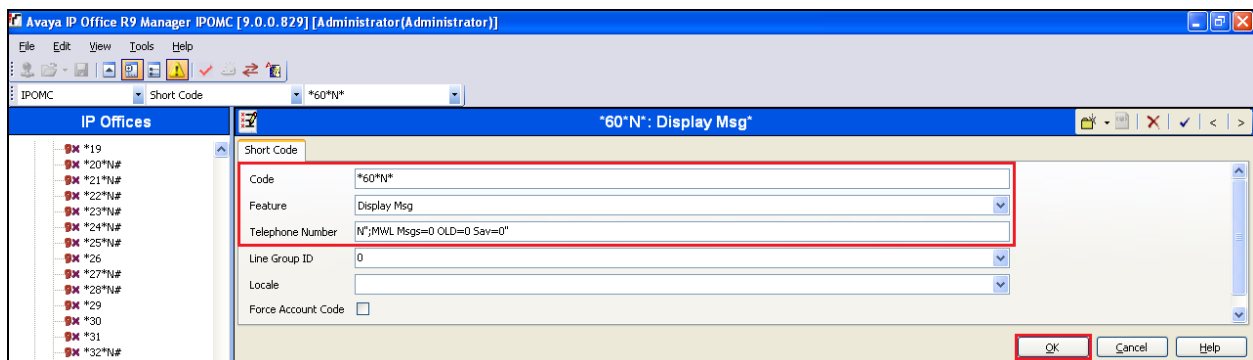
Create a Short Code used for set the MWI Lamp On. In the Manager window, go to the Configuration Tree, right-click **Short Code** and select **New** (not shown) and enter the following:
- **Code** Enter ***61*N***
- **Feature** Select **Display Msg** from the dropdown box
- **Telephone Number** Enter **N";MWL Msgs=1 OLD=0 Sav=0"**

Click **OK** button.
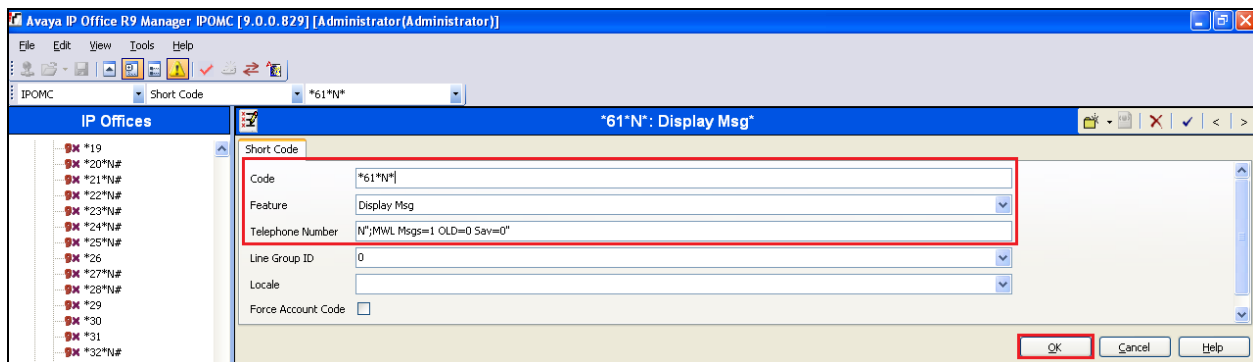
5.7. Enable Voicemail for users

For each user that requires an InnLine IP mail box, Voicemail must be enabled.
The screenshot below shows the Voicemail configuration for User 3005. Go to the Configuration Tree and select the user that requires voicemail (not shown). When the new window opens click on the **Voicemail** tab and enter the following:
- **Voicemail Code** Enter the code required to access the voicemail box. This code will be required when users need to access their voicemails.
- **Confirm Voicemail Code** Renter the Voicemail Code
- **Voicemail on** Click the Check Box

Click the **OK** button.

Note: The full configuration of users is outside the scope of these Application Notes.

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11 of 22
Tiger_VM_IPO9_0
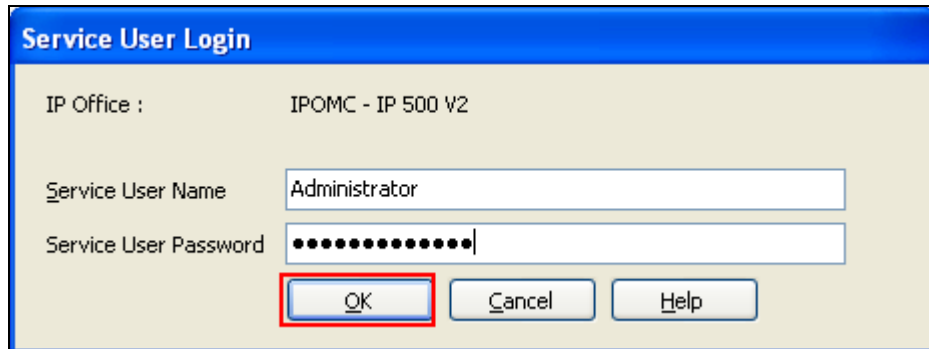
5.8. Save Configuration

Once all the configurations have been made it must be sent to the IP Office. Click on the **Save** icon as shown below.
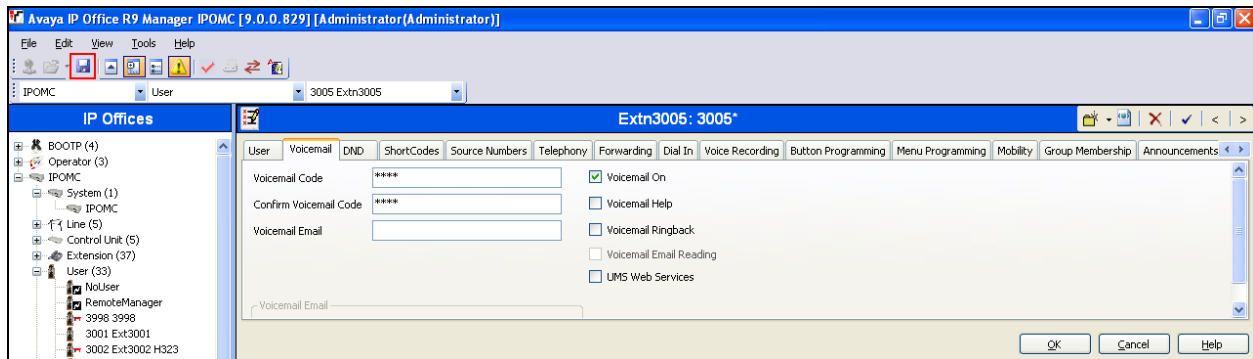
Once the **Save Configuration** Window opens, click the OK button.
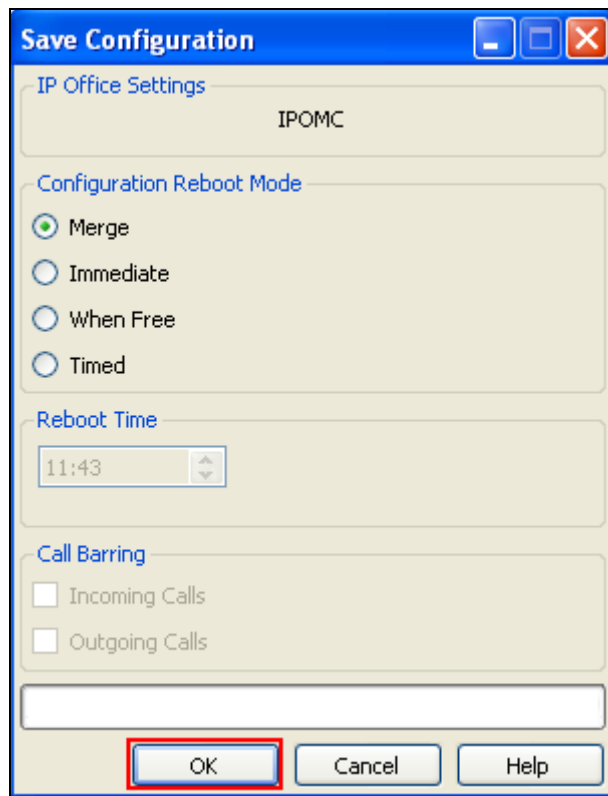
When the **Service User Login** Window opens, enter the appropriate credentials and click the **OK** button.

6. Configure TigerTMS InnLine IP

This section describes the steps preformed to configure the InnLine IP. It is implied that the InnLine IP software is already installed. For all other provisioning information such as initial installation and configuration, please refer to the product documentation in **Section 9.** The configuration can be summarised as follows:

- Configure SIP Settings for Voicemail Server
- Configure Port Types
- Configure Voice Ports
- Configure Guest Mailboxes

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SPOC 7/10/2014

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13 of 22
Tiger_VM_IPO9_0

6.1. Configure SIP Settings for Voicemail Server

Click on **Start → All Programs → InnLine IP Config** (not shown) on the desktop of the server and enter the following:

- **Local IP Address**   Select the IP Address of the InnLine IP from the dropdown box
- **SIP Proxy Address**   Enter the IP Address of the IP Office
- **SIP Password**   Enter the Password as configured in **Section 5.3**

Click on the **Save** button.

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SPOC 7/10/2014
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14 of 22
Tiger_VM_IPO9_0

6.2. Configure Port Types

Click on **Start → All Programs → InnLine IP** (not shown) on the desktop of the server when the new window opens click on the **DO** icon and select **Configure System** (not shown), and navigate to **System → Voice Ports → Port** Types and double click on the **VoipLink for IPoffice** icon.

When the new window opens click on the **Call ID** tab and enter the **Hunt Group** as configured in **Section 5.4** (i.e., **7000**) in the **Hunt Group ID** box.
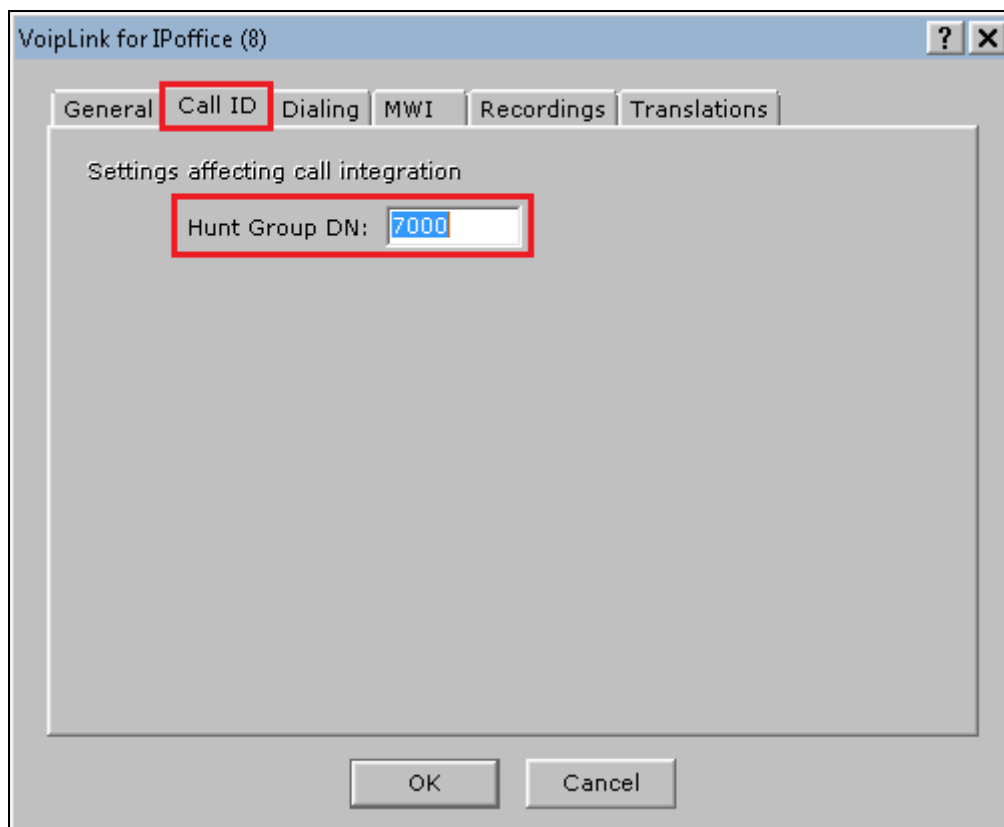
Click on the MWI tab and enter the following:

Indicator On
- **Dial String Prefix:**   Enter the short code for MWI Lamp On as configured in **Section 5.6** minus the **N*** (i.e., *61*)
- **Dial String Suffix:**   Enter *****

Indicator Off
- **Dial String Prefix:**   Enter the short code for MWI Lamp On as configured in **Section 5.6** minus the N* (i.e., *60*)
- **Dial String Suffix:**   Enter *****

Click on the **OK** button.

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SPOC 7/10/2014

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16 of 22
Tiger_VM_IPO9_0

6.3. Configure Voice Ports

Click on **Voice Ports** in the Configuration Tree, and double click the **Port 01** icon.

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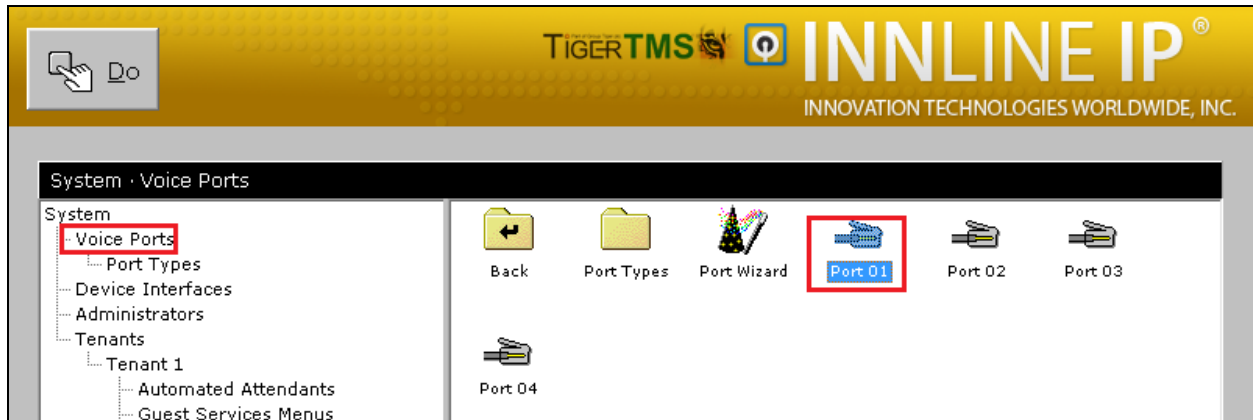
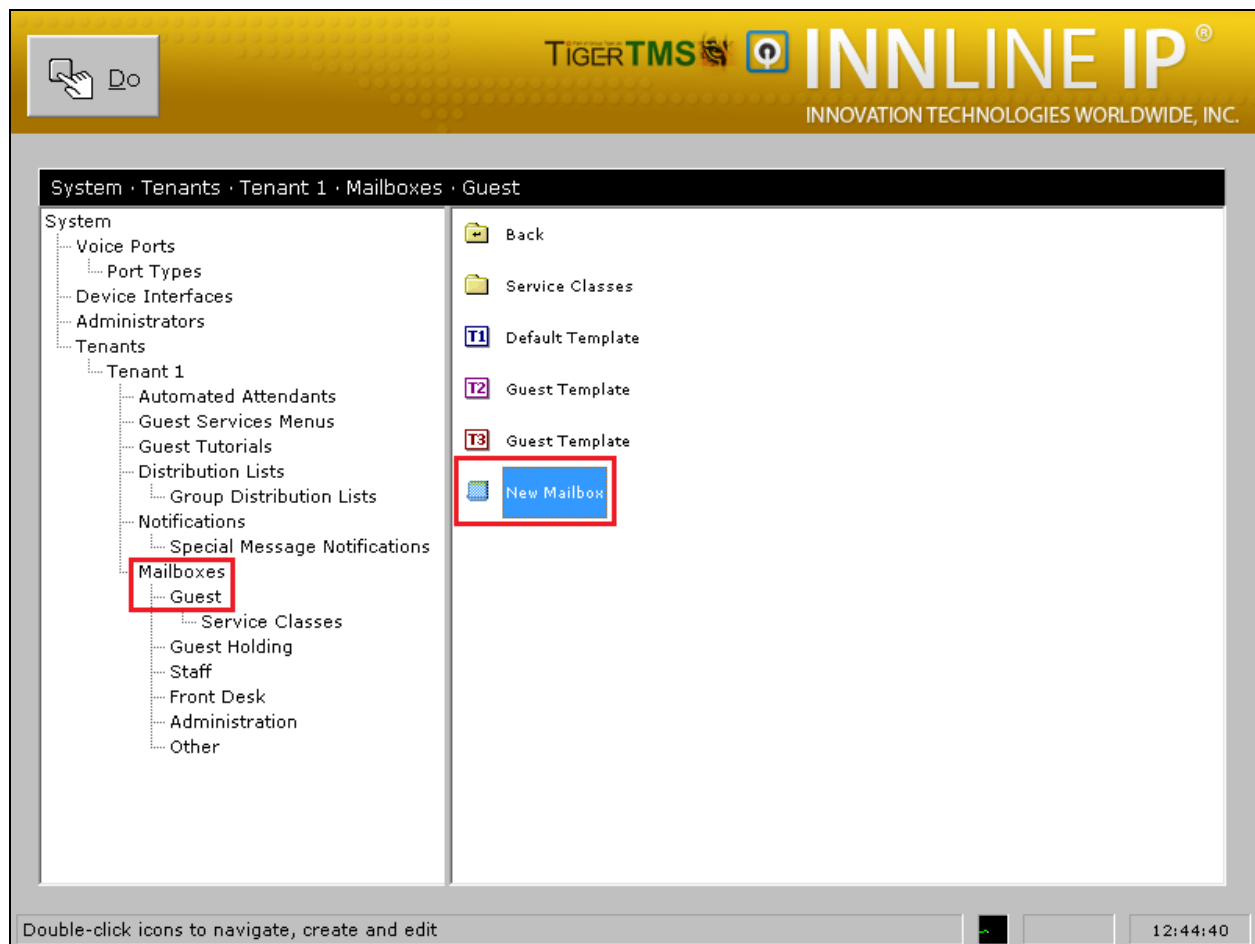When the new window opens enter the following:
- **Port Extension:** Enter the extension of the first SIP user as configured in **Section 5.3** (7001)
- **Port Type:** Select **VoipLink for IPoffice** from the dropdown box
- **Call Direction** Select **In-bound only** from the dropdown box
- **Default Mailbox:** Enter **AA** and select **Go To** from the dropdown box
- **Guest Direct Call:** Select **Logs in to guest mailbox** from the dropdown box
- **Sip Alias:** Enter the extension of the first SIP user as configured in **Section 5.3** (7001)
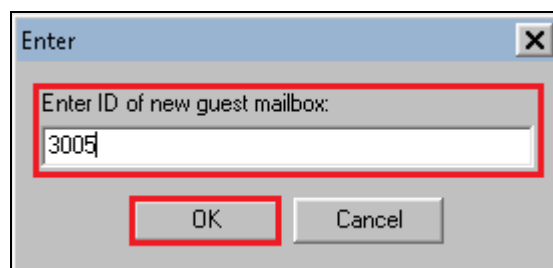
Click on the OK button.

Note: Repeat this Section for all required ports. During compliance testing Port 2 used Extension 7002, Port 3 used Extension 7003, and Port 4 used Extension 7004,

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18 of 22
Tiger_VM_IPO9_0

6.4. Configure Guest Mailboxes

Navigate to **Mailboxes → Guest** and double click on the **New Mailbox**.

When the screen pop opens enter the extension of a user configured on IP Office that requires a voicemail box. Click the **OK** button. The example bellows shows extension 3005.

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SPOC 7/10/2014

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19 of 22
Tiger_VM_IPO9_0

When the new window opens click on the **General** tab and enter in the **Passcode:** enter the voicemail box password as configured for the user on the IP Office in **Section 5.7**. Click on the **Use Message Indication** check box. Click on the **OK** button.

7. Verification Steps

This section provides the tests that can be performed to verify correct configuration of the Avaya IP Office and TigerTMS InnLine IP solution.

Place a call to an administered extension and allow it to go to coverage.
- Verify the InnLine IP greeting answers and a message is left
- Verify that the MWI lamp of the dialled station is turned ON

Dial the InnLine IP voicemail pilot number (i.e., 7000) from an extension administered with voicemail, verify successful login, listen to voicemails and delete voicemails, verify MWI is extinguished accordingly.

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20 of 22
Tiger_VM_IPO9_0

8. Conclusion

A full and comprehensive set of feature and functional test cases were preformed during Compliance testing. TigerTMS InnLine IP 3.1.4 is considered compliant with Avaya IP Office 9.0. All test cases have passed and met the objectives outlined in **Section 2.2**.

9. Additional References

These documents form part of the Avaya official technical reference documentation suite. Further information may be had from *http://support.avaya.com* or from your Avaya representative.

   [1] Avaya IP Office Manager 9.0, Document 15-601011, Issue 9.01, September 2013

Product documentation for TigerTMS Products can be obtained at: http://www.tigertms.com

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22 of 22
Tiger_VM_IPO9_0