

Avaya Solution & Interoperability Test Lab

# **Application Notes for Tiger Communications' Innovation 2020 with Avaya IP Office - Issue 1.0**

#### **Abstract**

These Application Notes describe the configuration steps required in order for Tiger Communications' Innovation 2020 to successfully interoperate with Avaya IP Office 4.2. Tiger Innovation 2020 is hospitality system that provides a hotel with voicemail functionality.

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

### 1. Introduction

These Application Notes describe the compliance-tested configuration using a Tiger Innovation 2020 and Avaya IP Office 4.2.

Tiger Innovation 2020 is hospitality system that provides a hotel with voicemail functionality. The voicemail feature is delivered via a Dialogic analogue voice processing card which connects to analogue extension ports of Avaya IP Office.

The following areas of integration between the products were validated:

- Call coverage is provided by routing internal calls through Avaya IP Office analog lines to Tiger Innovation 2020 voicemail. The following scenarios of call coverage were verified:
  - No answer on a dialed extension
  - Dialed extension is busy
- Recording messages on the voicemail system
- Retrieving messages by making a direct call to the voicemail system
- Message Waiting Indication (MWI) lamp
- Voicemail integration with hospitality features like check-in, check-out and room transfer
- Link Failure and Recovery for analog lines and IP connection.

The configuration in **Figure 1** was used to test Tiger Innovation 2020 interoperability with Avava IP Office.

- IP412 Office was configured with analog and digital expansion modules
- The Dialogic analog voice processing card in the Tiger Innovation 2020 server was connected to analog extension ports on the IP400 Phone Expansion Unit using RJ11 connectors for delivery of the voicemail feature. Calls not answered at the destination extension were diverted to the "voicemail" hunt group with extension 800.
- TCP/IP link was established between Tiger Innovation 2020 and Avaya IP Office.
- An E1 PRI Trunk card connected Avaya IP Office to another PBX which was simulating a PSTN environment for testing inbound/outbound external calls.
- Avaya 2420 digital telephones and Avaya 4620SW and 4621SW IP telephones were used to answer and/or place the calls.

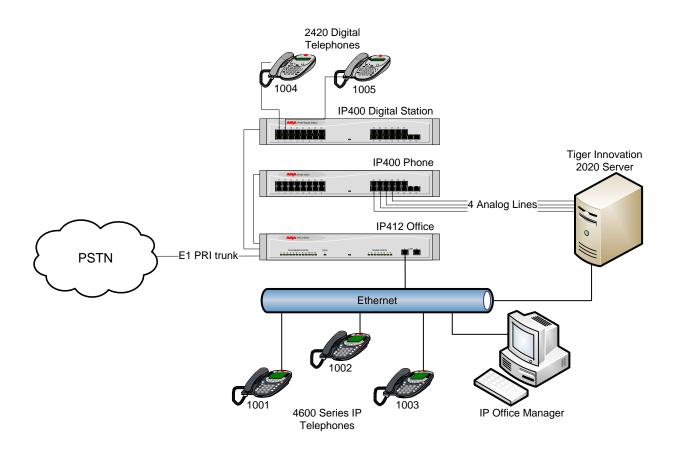


Figure 1 – Network Topology

**Table 1** lists the Extensions, Users and Hunt Groups required for this testing. The information in the table will be referenced at different stages during the configuration portion of these Application Notes in the sections that follow.

Analog Extensions connecting to ports on the Tiger Innovation 2020 Dialogic card				
Extension	User Name	Notes		
211	vm1	Analog expansion port connecting to Tiger Innovation		
		2020 Analog Dialogic card		
212	vm2	ιι ιι		
213	vm3	ιι ιι		
214	vm4	ιι ιι		
Tiger Voicemail Hunt group				
Extension	Name	Ring Mode		
800	Tiger Voicemail	Voicemail hunt group extension number		
Extensions used as Room Stations				
Extension	User Name	Notes		
1001	Extn 1001	IP Telephone		
1002	Extn 1002	IP Telephone		
1003	Extn 1003	IP Telephone		

1004	Extn 1004	Digital Telephone	
1005	Extn 1005	Digital Telephone	

Table 1 – Extension, Users and Hunt Groups Setup

# 2. Equipment and Software Validated

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

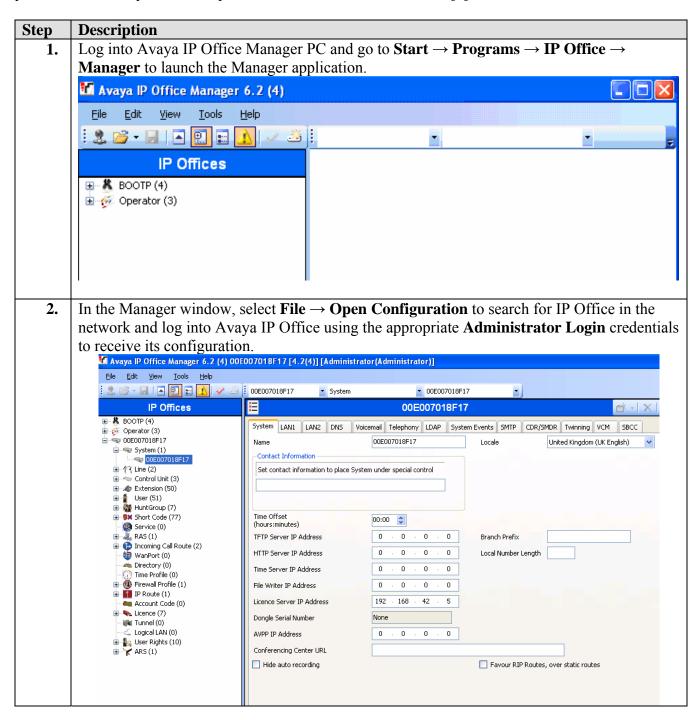
Equipment	Software /Firmware
Avaya IP412 Office	4.2(4)
Avaya IP400 Phone	6.2(4)
Avaya IP400 Digital Station	6.2(4)
Avaya IP Office Manager	6.2(4)
Avaya E1 PRI Trunk Card (PRI 30 E1)	-
Avaya 4600-Series IP Telephones (4620SW, 4621SW)	2.9
Avaya 2420 Digital Telephones	-
Tiger Innovation 2020	2.7.10

**Table 2: Equipment and Software Validated** 

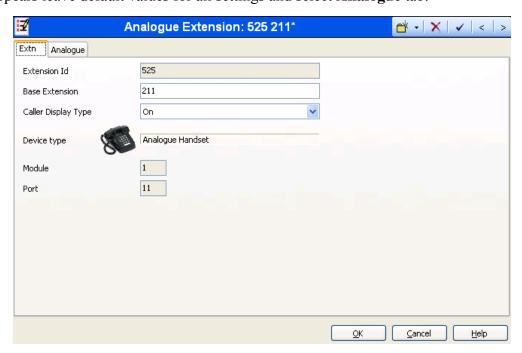
## 3. Configure Avaya IP Office

The configuration information provided in this section describes the steps required to set up Avaya IP Office for this solution.

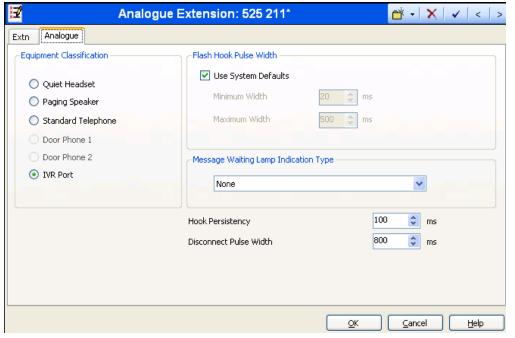
For all other provisioning information, such as Avaya IP Office installation and configuration please refer to Avaya IP Office product documentation in reference [1].

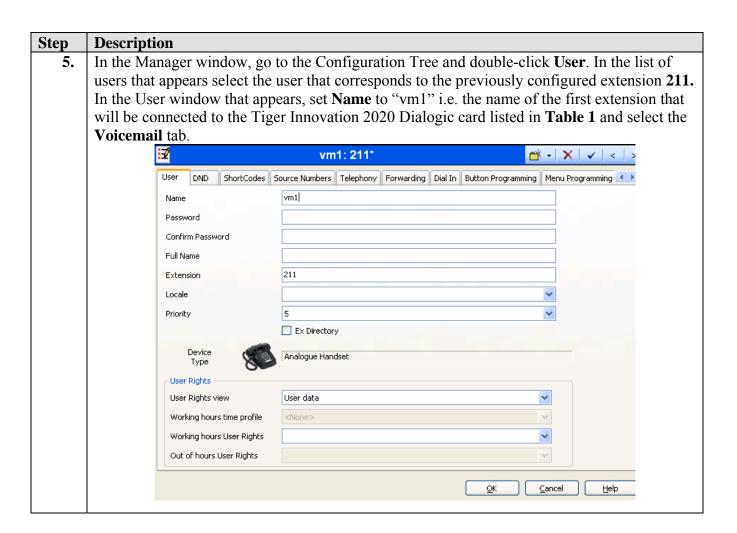


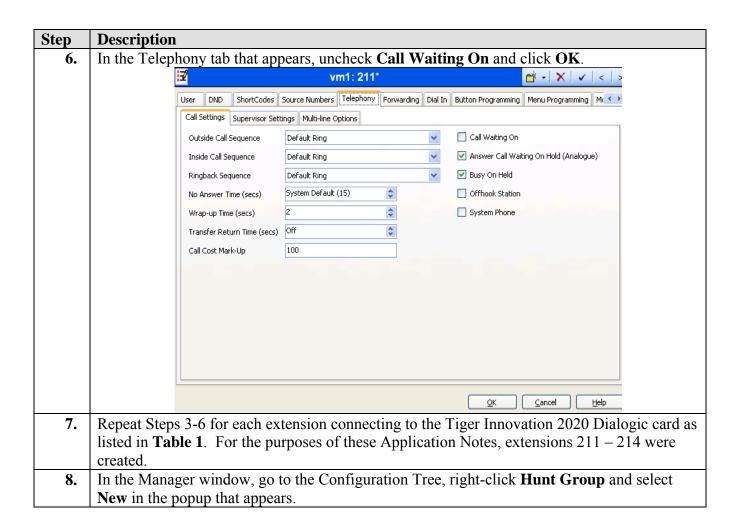
3. In the Manager window, go to the Configuration Tree and double-click **Extension**. In the list of extensions that appears select extension **211** i.e. the first extension that will be connected to the Tiger Innovation 2020 Dialogic card according to **Table 1**. In the Extension window that appears leave default values for all settings and select **Analogue** tab.

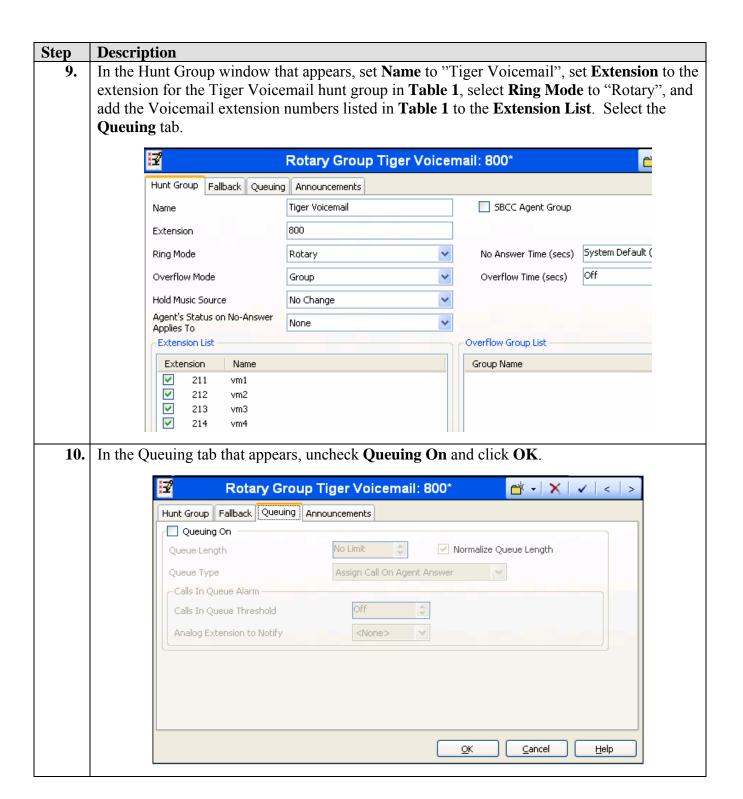


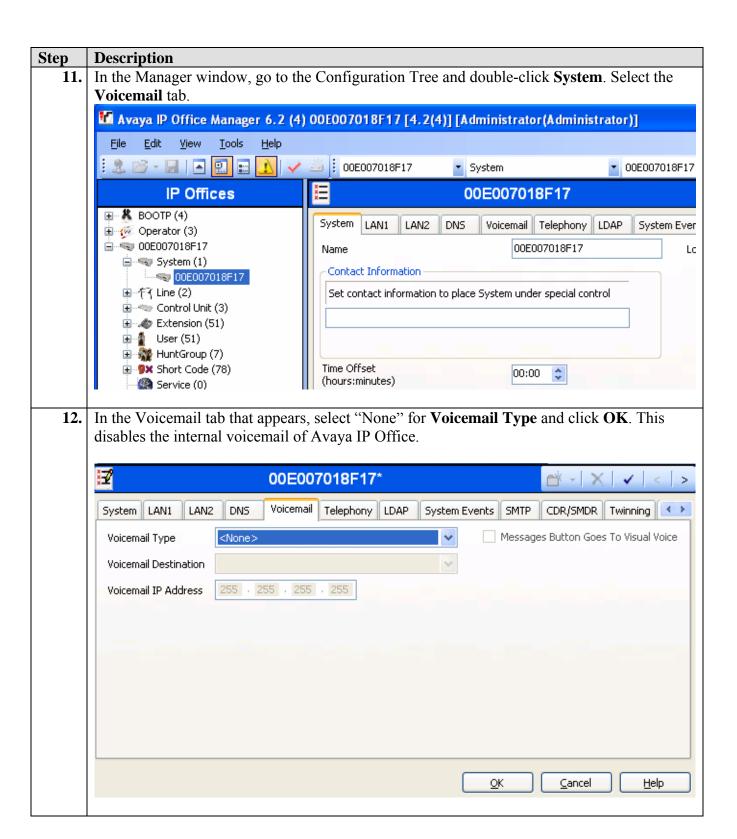
4. In the Analogue tab that appears, select **IVR Port** for **Equipment Classification** and click **OK**.

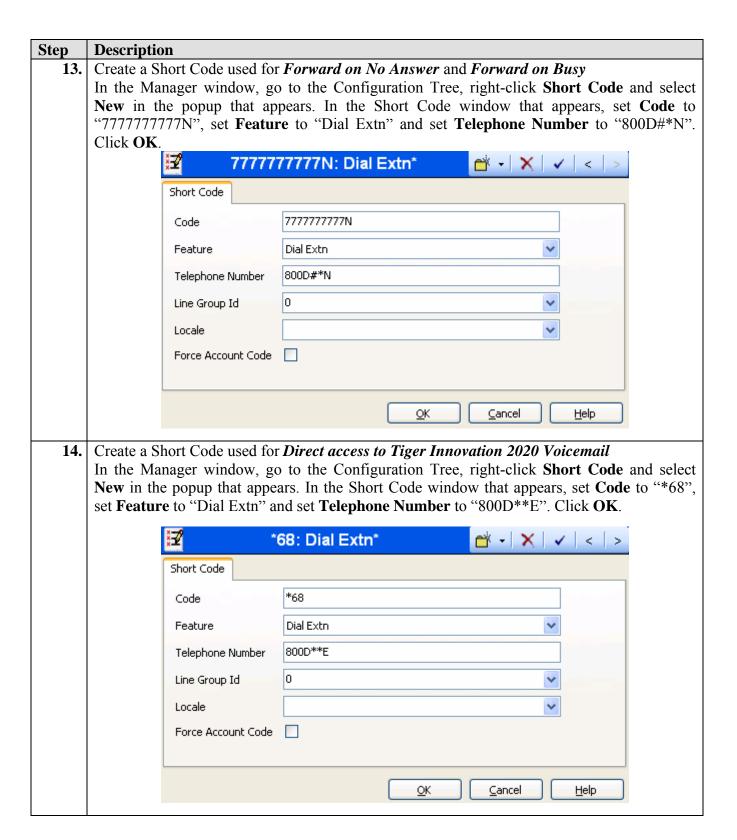






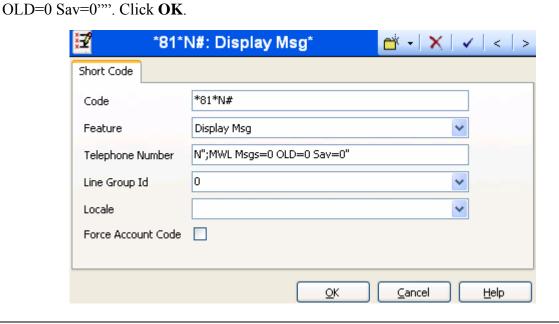






## **Description** Step **15.** Create a Short Code used for set the MWI Lamp On In the Manager window, go to the Configuration Tree, right-click **Short Code** and select New in the popup that appears. In the Short Code window that appears, set Code to "\*80\*N#", set **Feature** to "Display Msg" and set **Telephone Number** to "N";MWL Msgs=1 OLD=0 Sav=0"". Click **OK**. ₹ \*80\*N#: Display Msg\* Short Code Code \*80\*N# Feature Display Msq. N";MWL Msgs=1 OLD=0 Sav=0" Telephone Number Line Group Id Locale Force Account Code OK. Cancel Help 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

In the Manager window, go to the Configuration Tree, right-click **Short Code** and select **New** in the popup that appears. In the Short Code window that appears, set **Code** to "\*81\*N#", set **Feature** to "Display Msg" and set **Telephone Number** to "N";MWL Msgs=0



In the Manager window, go to the Configuration Tree, right-click Extension and select New in the popup that appears. In the Extension window that appears, set **Base Extension** to "1001" i.e. the first extension in **Table 1** and click **OK**. VolP Extension: 8001 1001\* ×. Extn VoIP Extension Id 8001 Base Extension 1001 Caller Display Type Reset Volume After Calls Unknown IP handset Device type Module Port Disable Speakerphone Cancel Help In the Manager window, go to the Configuration Tree, right-click **User** and select **New** in the popup that appears. In the User window that appears, set Name to "Extn 1001", set Password to "1234", set the same password for Confirm Password, and set Extension to "1001" i.e. use the details of the first Extension specified as a room station in **Table 1** and click OK. Select the Forwarding tab. ₹ Extn 1001: 1001\* User ShortCodes Source Numbers Telephony Forwarding Dial In Button Programming Menu Extn 1001 Name \*\*\*\* Password \*\*\*\* Confirm Password Full Name 1001 Extension Locale Priority 5 Ex Directory Device Unknown IP handset Туре User Rights User data User Rights view

Working hours time profile

Working hours User Rights

Out of hours User Rights

<u>H</u>elp

Cancel

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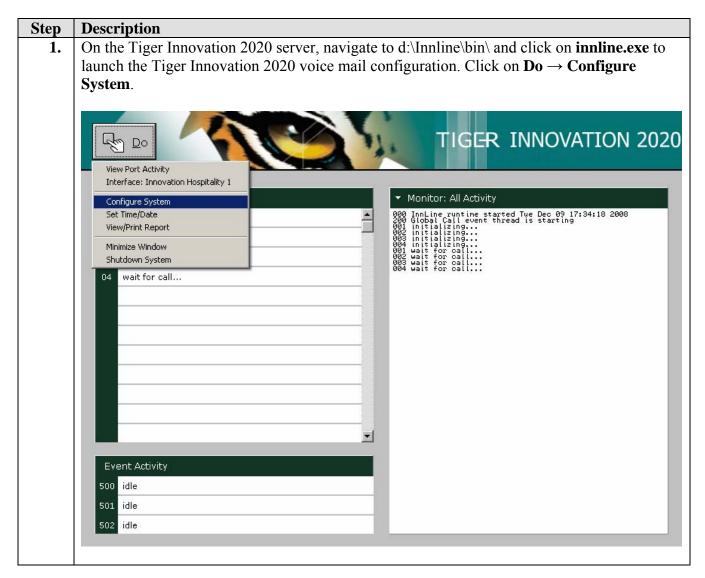
On the Forwarding tab that appears check the Forward on Busy, Forward on No Answer, and Forward Internal Calls check boxes. In the Forward Number specify "777777777X" where X is the Extension, e.g. for Extension=1001, the Forward Number=777777771001. Click **OK**. Extn 1001: 1001\* ShortCodes | Source Numbers | Telephony | Forwarding | Dial In | Button Pro DND User Follow Me Number Forward Unconditional Forward Number Forward Hunt Group Calls V Forward Internal Calls ~ Forward On Busy V Forward On No Answer 77777777771001 Forward Number Forward Internal calls ~ <u>C</u>ancel OK. Help Repeat steps 17, 18, and 19 for each Room Station listed in **Table 1**. For the purposes of 20.

- **20.** Repeat steps 17, 18, and 19 for each Room Station listed in **Table 1**. For the purposes of these Application Notes, users for 1001-1003 VoIP extensions were created as well as for 1004-1005 Digital extensions.
- 21. In the Manager window, select **File** → **Save** to push the configuration to Avaya IP Office and wait for the system to update. This completes configuration of Avaya IP Office.

# 4. Configure Tiger Communications' Innovation 2020 Server

The configuration information provided in this section describes the steps required to configure Tiger Communications' Innovation 2020 to work with Avaya IP Office 4.2.

For all other provisioning information, such as software installation, installations of optional components, and configuration of Tiger Innovation 2020, please refer to the Tiger Communications' product documentation in reference [2].

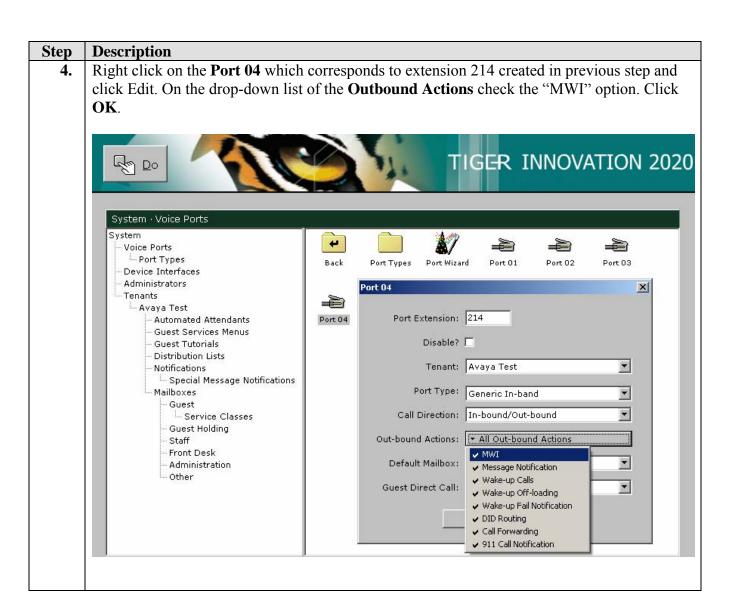


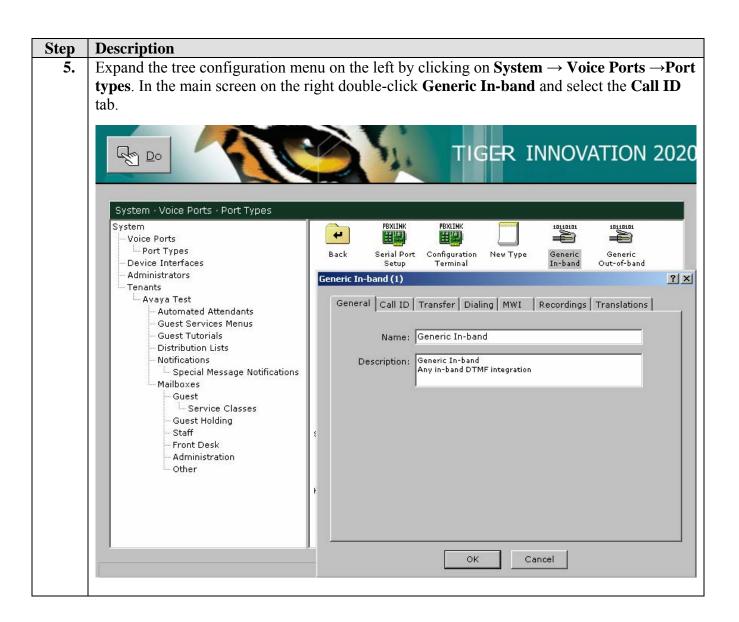
#### **Step** Description

2. Expand the tree configuration menu on the left by clicking on System → Voice Ports. In the main screen on the right double-click Port 01. Enter the Port Extension to match the analog extension configured in Section 3, Steps 3-6. Select "Generic In-band" from the Port Type drop-down list, and select "In-bound/Out-bound" for the Call Direction. On the drop-down list of the Outbound Actions uncheck the "MWI". The remaining parameters can be left with their default settings. Click OK.



Repeat the previous step for the number of Ports configured on Avaya IP Office as listed in **Table 1**. For the purpose of this Application notes ports 211-214 were configured.





**Description** Step In the Call ID tab that appears specify the following values: **6. ID Time-Out:** 3000 ms **Direct Call ID Format:** \*\*%7g Type A covered call ID Format: #\*%7d Type B covered call ID Format: #\*%7d The remaining parameters can be left with their default settings. Click **OK**. Generic In-band (1) ? X General Call ID Transfer Dialing MWI Recordings Translations Settings affecting in-band call integration ID Time-out: 3000 ms ID Inter-digit Timeout: 500 ms Post-ID Pause: 1000 ms ID Size: 1 digits Direct Call ID Format: \*\*%7g Type A Covered Call ID Format: #\*%7d Type B Covered Call ID Format: #\*%7d ▾ Type C Covered Call ID Format: Cancel OΚ

#### **Step Description**

7. Click on the **MWI** tab.

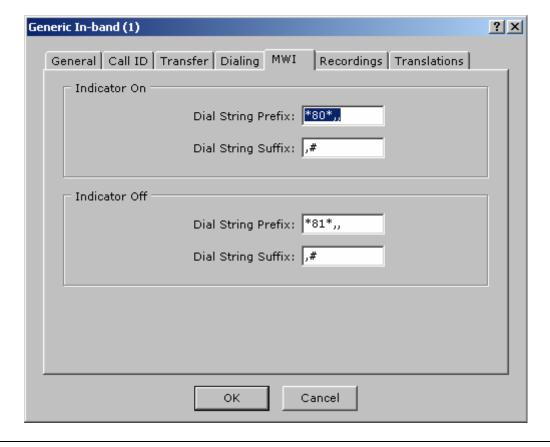
In the **Indicator On** section specify following:

Dial String Prefix: \*80\*,, Dial String Suffix: ,#

In the **Indicator Off** section specify following:

Dial String Prefix: \*81\*,, Dial String Suffix: ,#

These values correspond to "Lamp On" and "Lamp Off" Short Codes configured on Avaya IP Office in Section 3, Steps 15-16



## 5. Interoperability Compliance Testing

The interoperability compliance testing included feature and serviceability testing. The feature testing evaluated voicemail functionality of Tiger Innovation 2020 which is delivered via a Dialogic analogue voice processing card connected to analogue extension ports of Avaya IP Office. The serviceability testing introduced failure scenarios to see if Tiger Innovation 2020 could resume after a link failure.

## 5.1. General Test Approach

The general test approach was to validate correct operation of typical voicemail functions including:

- Call coverage in following scenarios:
  - o No answer on a dialed extension
  - o Dialed extension is busy
- Recording messages on the voicemail system
- Retrieving messages by making a direct call to the voicemail system
- Message Waiting Indication (MWI) lamp
- Voicemail integration with hospitality features like check-in, check-out and room transfer
- Link Failure and Recovery for analog lines and IP connection.

Feature functionality testing was performed manually. Call coverage was verified when there was no answer on a dialed extension and when a dialed extension was busy. Direct access to the Voicemail system was verified with message retrieval from the extension which had the message waiting indication, from a different extension, and also by placing an inbound E1/PRI call to the Voicemail. Voicemail integration with hospitality features like check-in, room transfer and check-out was verified. As a result of check-in a voicemail box was setup for the extension, an automatic check-in message was left at the extension, and the MWI lamp was turned on. As a result of a check-out, the station MWI lamp was turned off and the voicemail box was emptied. As a result of room transfer, the old extension's MWI lamp was turned off, voicemail was purged, and the new extension's MWI lamp was turned on and voicemail was moved to the new extension.

#### 5.2. Test Results

All executed test cases were completed successfully.

#### 5.3. Test Notes

At the moment Tiger Innovation 2020 in integration with Avaya IP Office doesn't support Voicemail coverage for external inbound calls to a room station.

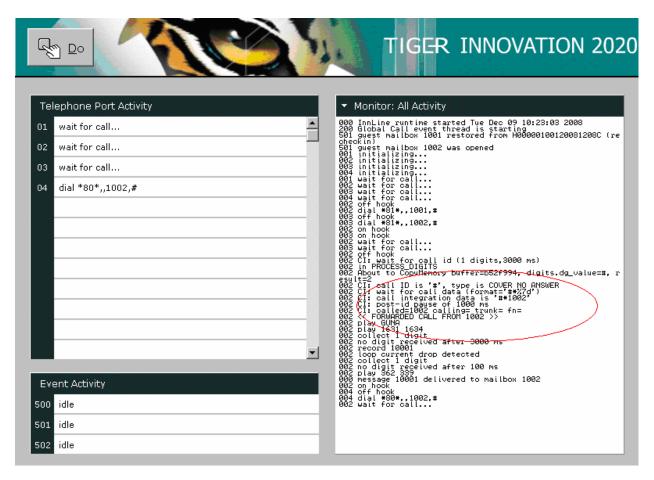
## 6. Verification Steps

Place a call to one of the guest extensions and allow it to go to coverage.

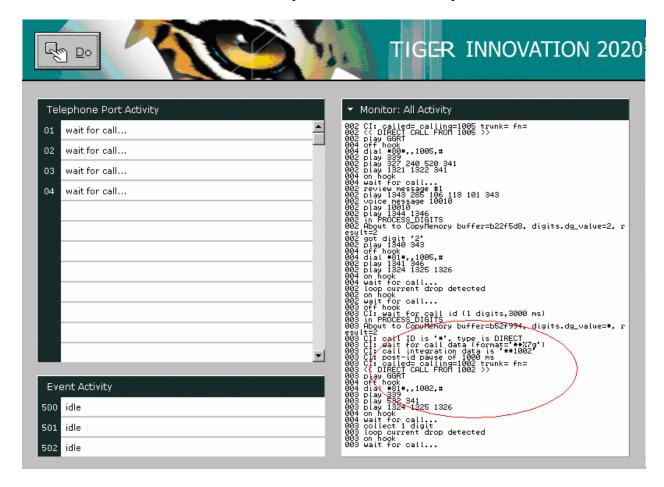
- -Verify the voicemail greeting is heard and leave a message.
- -Verify that the MWI lamp of the dialed station is turned on.

Using the Tiger Innovation 2020 Monitor, confirm that the call was transferred using one of the analog lines.

The screen shot below shows a call placed into extension 1002 that covered to voicemail.



The screen shot below shows a direct call placed to the voicemail system.



# 7. Support

If technical support is required for the Tiger Communications' Innovation 2020, contact the Technical Support Department.

Email: <a href="mailto:support@tigercomms.com">support@tigercomms.com</a>

Phone: +44 1425 891 000

## 8. Conclusion

These Application Notes describe the steps for configuring Tiger Innovation 2020 to work with Avaya IP Office. All test cases that were executed were successfully passed.

Tiger Innovation 2020 version 2.7.10 was successfully compliance tested with Avaya IP Office version 4.2(4)

# **Additional References**

[1] Product documentation for Avaya products may be found at <a href="http://support.avaya.com">http://support.avaya.com</a> Avaya IP Office 4.2 Manager 6.2, Issue 22d, 14<sup>th</sup> July 2008

[2] Product documentation for Tiger Communications' products may be found at: <a href="https://www.tigercomms.com">www.tigercomms.com</a>

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