



Avaya Solution & Interoperability Test Lab

Application Notes for TigerTMS Hotel Pro with Avaya IP Office - Issue 1.0

Abstract

These Application Notes describe the configuration steps required for TigerTMS Hotel Pro to interoperate with Avaya IP Office. TigerTMS Hotel Pro is the primary user interface of the hospitality package Tiger Hotel 2020 suite, where the staff can carry out their day-to-day tasks.

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 the compliance-tested configuration using a TigerTMS Hotel Pro and Avaya IP Office. Hotel Pro is a graphical hospitality user interface. It is commonly used in hotels to provide a means of controlling usage of room facilities. Hotel Pro utilizes XML based communication for hospitality control of the IP Office. Hospitality features are translated into a set of XML commands which are passed via a secure IP port on the IP Office. The following main features provided by Hotel Pro interface with IP Office:

- **Check-In** - This function is used to assign a new guest to a particular room with a telephone. The credentials of the guest are used to update the station configuration within IP Office. This includes the display name of the phone as well as calling restrictions and Message Waiting Indicator (MWI) updates.
- **DDI** - This function is used to allocate a DDI to a room telephone extension. When DDI is allocated to a checked-in room, the room can be accessed externally, by making an inbound external call to a DDI number.
- **Update** - A facility that updates the display name of the station in IP Office.
- **Room Transfer** - This allows a guest to transfer to a different unoccupied room and it results in transfer of the guest's extension configuration.
- **Telephone Service Class** - Tiger allows two telephone service classes: "Barred" and "Unbarred" which refer to barring or permitting external calls. On check-in, user rights are set to "Unbarred" in IP Office, however this can be overridden to "Barred" if guest wishes so through Update facility. On check-out the user-rights are set to "Barred"
- **Message Waiting** - Hotel Pro allows messages to be left for guests. The Message Waiting Indication (MWI) phone feature alerts the guest to a voice message.
- **Check-out** - Once a guest has vacated a room, this function resets the telephone to default configuration and sets call barring of external calls.
- **Maid Status** – Maid Status is a mechanism allowing the room status to be updated in Hotel Pro by minimal telephone interaction. This is often used to indicate room ready status following cleaning
- **Link Failure/Recovery** – Verification was done to ensure that there is suitable recovery of the Hotel Pro after lost connection link to the IP Office.

The configuration in **Figure 1** was used to compliance test Hotel Pro with IP Office. A TCP/IP link was established between the Hotel Pro server and IP Office. Hotel Pro XML commands were passed via secure IP port on the IP Office for replication of the hospitality features

- An E1 PRI Trunk card was connecting IP Office to another PBX which was simulating PSTN environment for testing outbound external calls.
- The IP Office 500 was configured with a digital expansion module
- Avaya 2420 digital telephones and Avaya 1616 IP telephones were used to answer and/or place the calls.

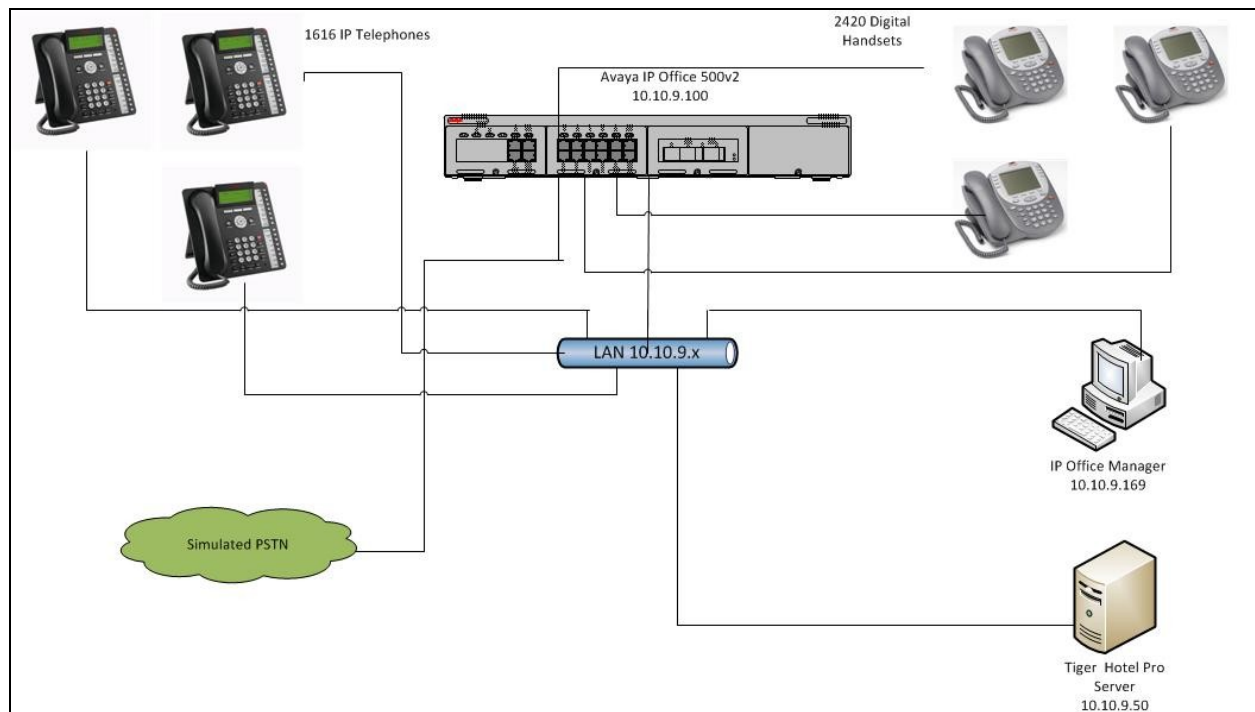


Figure 1 – TigerTMS Hotel Pro Network Topology

Table 1 lists the Extensions, Users and Hunt Groups required for this testing. The information in the table will be referenced at different stages throughout these Application Notes.

Extension	Room Extensions
89100	IP Phone
89101	IP Phone
89102	IP Phone
89011	Digital Phone
89012	Digital Phone
Extension	DDI Extensions
89200	Sequential
89201	Sequential
89202	Sequential
89203	Sequential
Extension	Room Status
89020	Vacant Dirty
89021	Vacant Clean
89022	Vacant Inspected
89023	Occupied Dirty
89024	Occupied Clean
89025	Occupied Inspected

Table 1 – Extension, Users and Hunt Groups Setup

2. General Test Approach and Test Results

The interoperability compliance testing included feature and serviceability testing. The feature testing evaluated the ability of TigerTMS Hotel Pro to carry out hospitality functions through XML based communication with Avaya IP Office. The serviceability testing introduced failure scenarios confirm that Hotel Pro could resume after a link failure with IP Office.

2.1. Interoperability Compliance Testing

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

- Check-In
- DDI
- Update Name
- Room Transfer
- Telephone Service Class
- Message Waiting
- Check-out
- Room Status
- Link Failure/Recovery

Feature functionality testing was performed manually. The Hotel Pro interface was used to exercise hospitality features like check-in, check-out and room transfer. These activities would cause the following to occur: User's name in IP Office was updated with specified value or with room status, outbound external calls on an extension were barred/unbarred, Hunt Groups which were used for DDI allocation were updated with correct extensions. Internal and external calls were made by using digital and IP phones, and external inbound and outbound calls were made through T1/PRI trunk.

2.2. Test Results

All test cases that were executed have successfully passed.

2.3. Support

If technical support is required for the Hotel Pro, contact their Technical Support Department.

Email: support@tigercomms.com

Phone: +44 1425 891 000

3. Equipment and Software Validated

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

Equipment	Software /Firmware
Avaya IP Office 500v2 <ul style="list-style-type: none">700417462 PRI Card700417330 DS1 Card	Avaya IP Office 7.0(3) Avaya IP Office Manager 9.0(3)
Avaya 1616 IP Telephones	1.3
Avaya 2420 Digital Telephones	-
TigerTMSHotel Pro	4.9.9

Table 2: Equipment and Software Validated

4. Configure Avaya IP Office

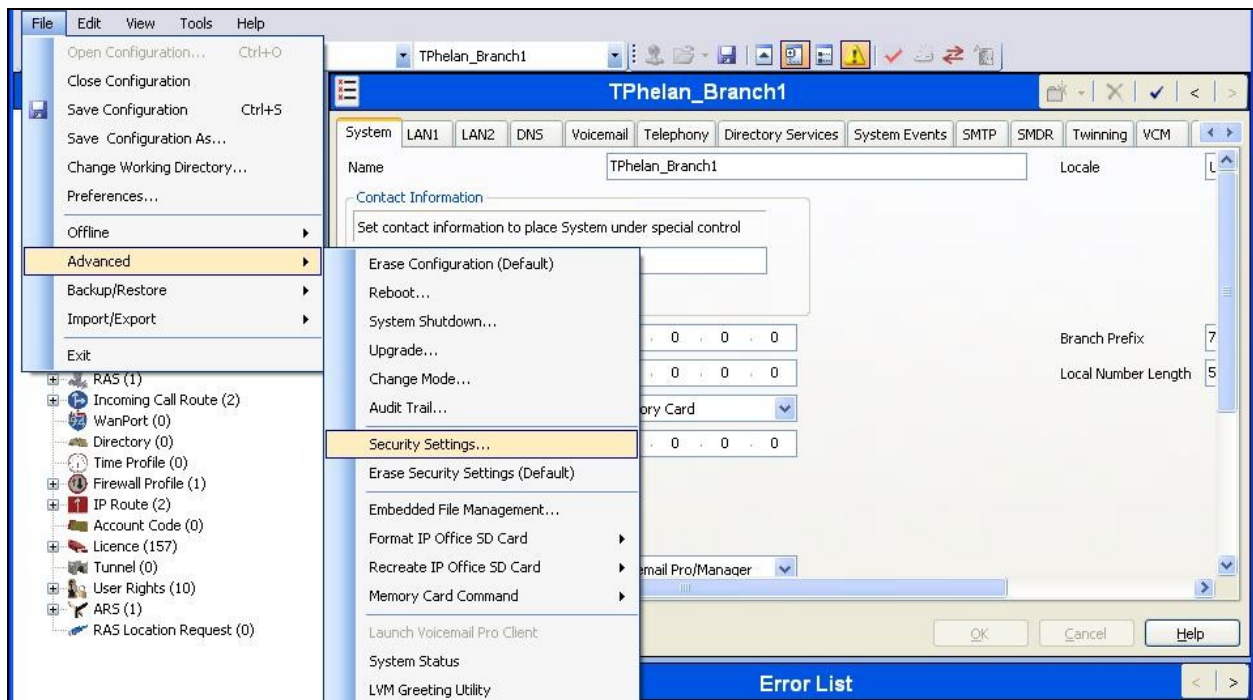
The configuration information provided in this section describes the steps required to set up Avaya IP Office for this solution. For all other provisioning information, such as IP Office installation and configuration please refer to IP Office product documentation in reference [1].

4.1. Configure Secure Connection

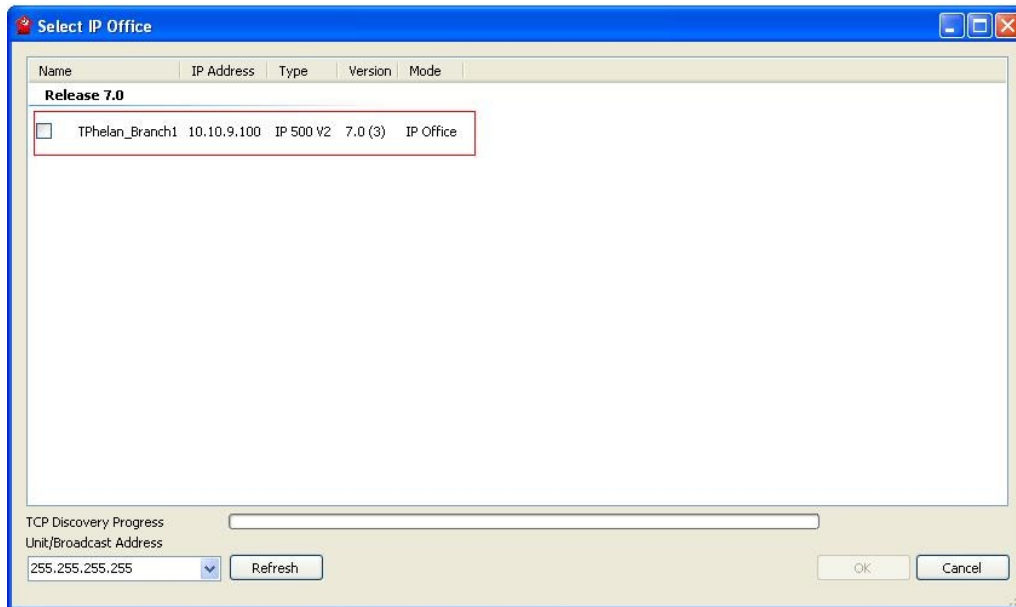
From the IP Office Manager PC go to **Start → Programs → IP Office → Manager** and launch the Manager application. Log in to IP Office Manager using the appropriate credentials.

In the Manager window, select **File → Advanced → Security Settings**

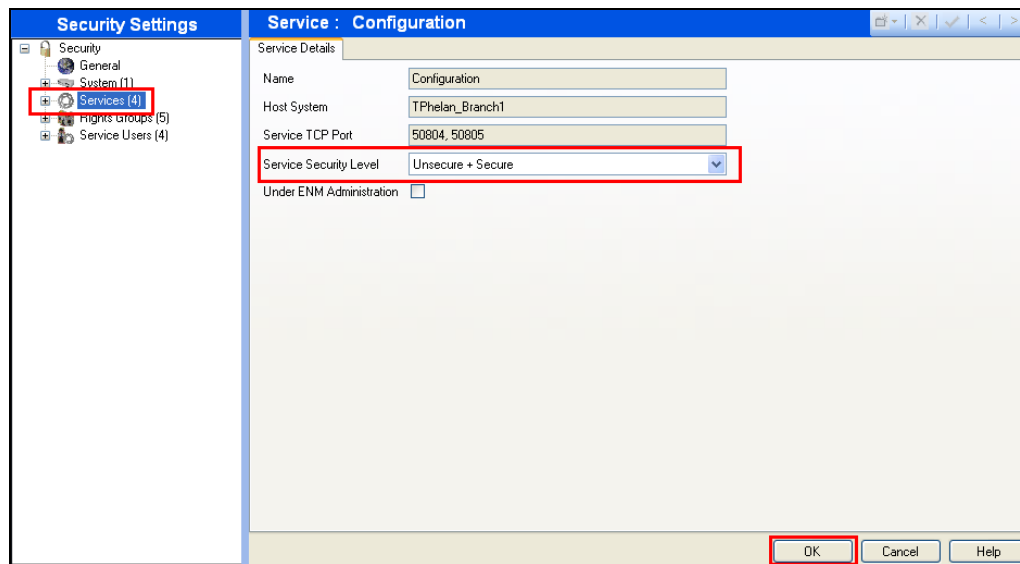
Select IP Office window will come up listing all IPO on the network.



Log in to IP Office using the appropriate **Security Service User Login** credentials to receive its security settings.



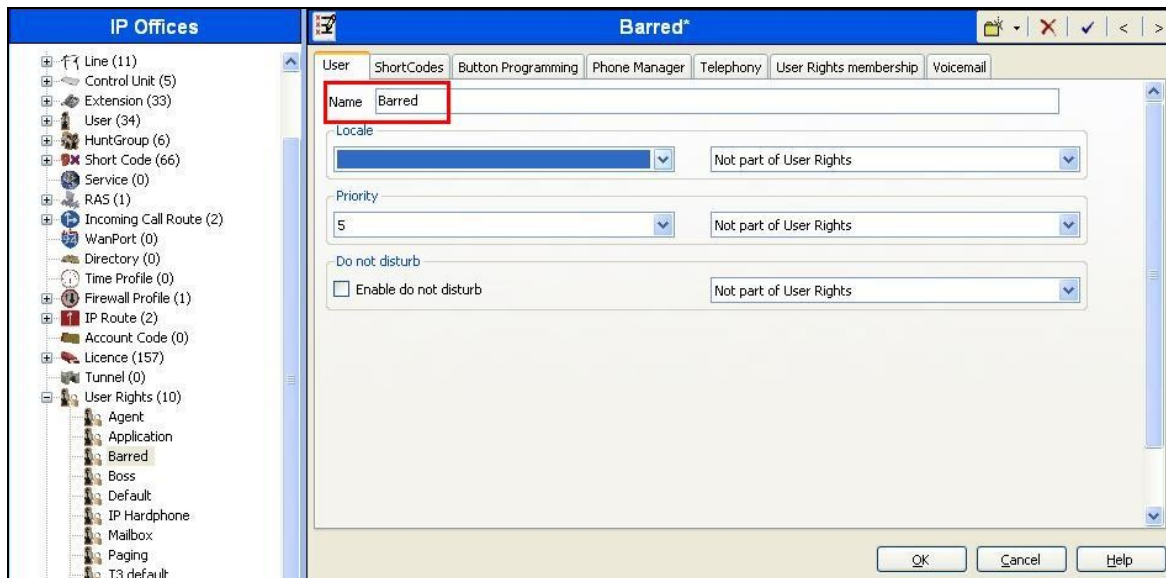
In the **Service Details** tab, from the drop-down list of the **Service Security Level** select **Unsecure + Secure** and click **OK**.



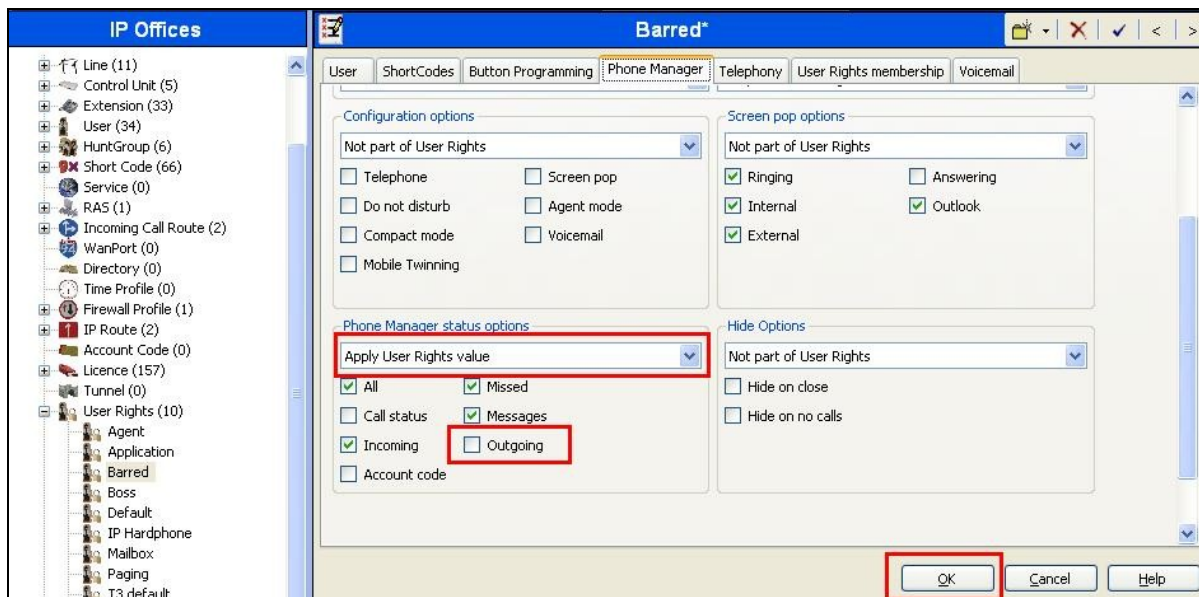
In the Manager window, select **File → Save Security Settings** and re-enter username and password of the security administrator.

4.2. Modify User Rights

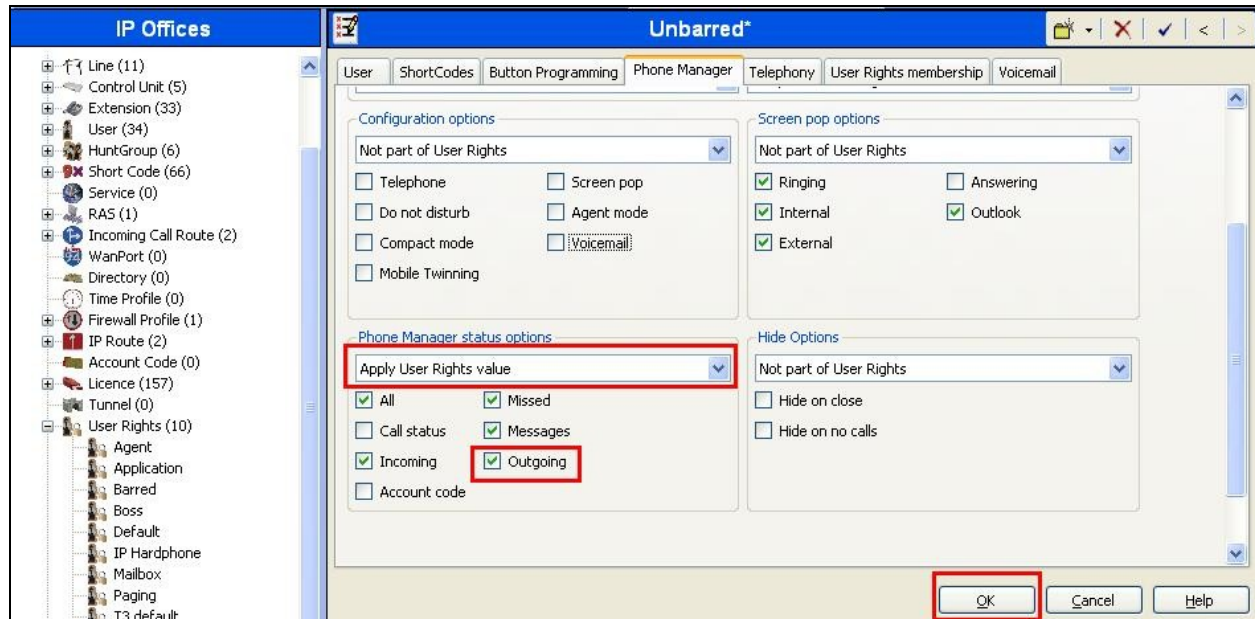
In the Manager window, expand Configuration Tree. Right click on **User Rights**, and select the **New** option. The New User Rights window appears on the right hand side. In the **Name** field set value **Barred**.



Click on the **Phone Manager** tab. In **Phone Manager status options** section, uncheck the **Outgoing** checkbox and from the drop down list select **Apply User Rights value**. Click **OK**.

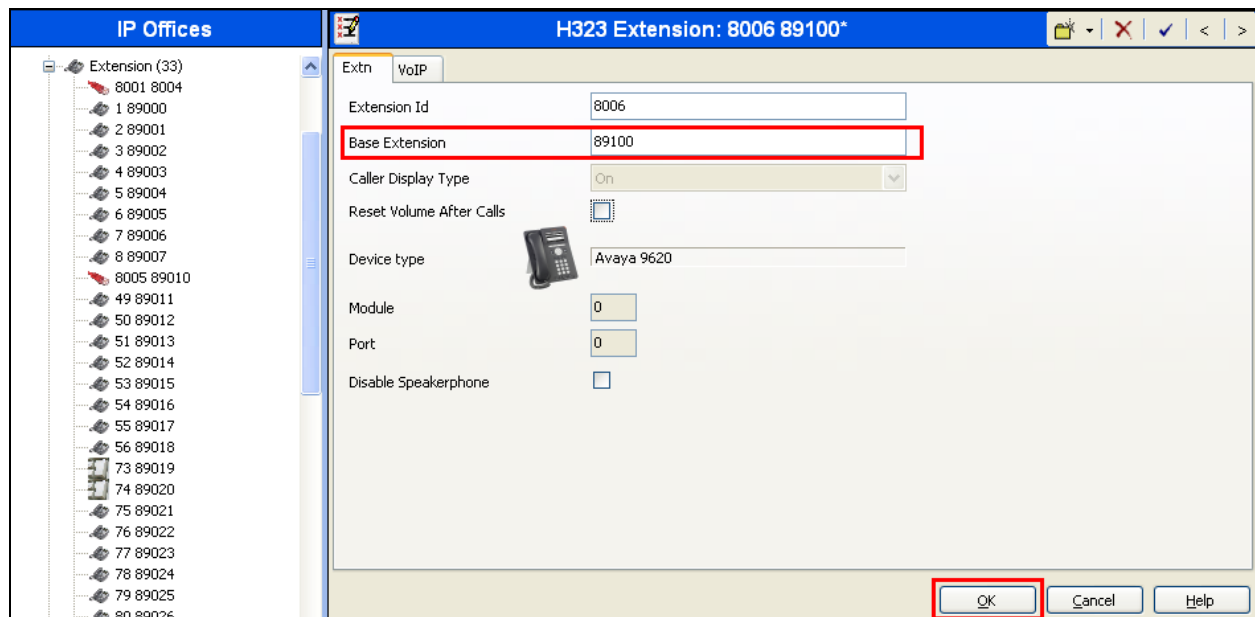


Create a second new **User Rights**. In the **Name** field set the value to **Unbarred** (Not shown). Click on the **Phone Manager** tab. In **Phone Manager status options** section, ensure the **Outgoing** checkbox is checked and select **Apply User Rights value** from the drop down list. Click **OK**.



4.3. Configure Users and Extensions

In the Manager window, go to the Configuration Tree, right-click **Extension** and select **New** in the popup that appears. In the subsequent Extension window, set **Base Extension** to **89100** which is the first extension in **Table 1**. Click **OK**.



In the Manager window, go to the Configuration Tree, right-click **User** and select **New** in the popup that appears. In the subsequent User window, set an appropriate **Name**, **Password** and **Confirm Password**. Set **Extension** to **89100** from earlier in this section and click **OK**.

The screenshot shows the 'Extn89100: 89100*' configuration window. The left pane shows the 'IP Offices' tree with 'User (34)' expanded. The right pane has tabs for 'User', 'Voicemail', 'DND', 'ShortCodes', 'Source Numbers', 'Telephony', 'Forwarding', 'Dial In', 'Voice Recording', and 'Button Programming'. The 'User' tab is active, showing fields for Name, Password, Confirm Password, Full Name, Extension, Locale, Priority, System Phone Rights, and Profile. The 'Name' field contains 'Extn89100', 'Password' and 'Confirm Password' contain '****', 'Full Name' contains 'Extn 89100', and 'Extension' contains '89100'. The 'OK' button is highlighted with a red box.

Repeat this for all room extensions that are required.

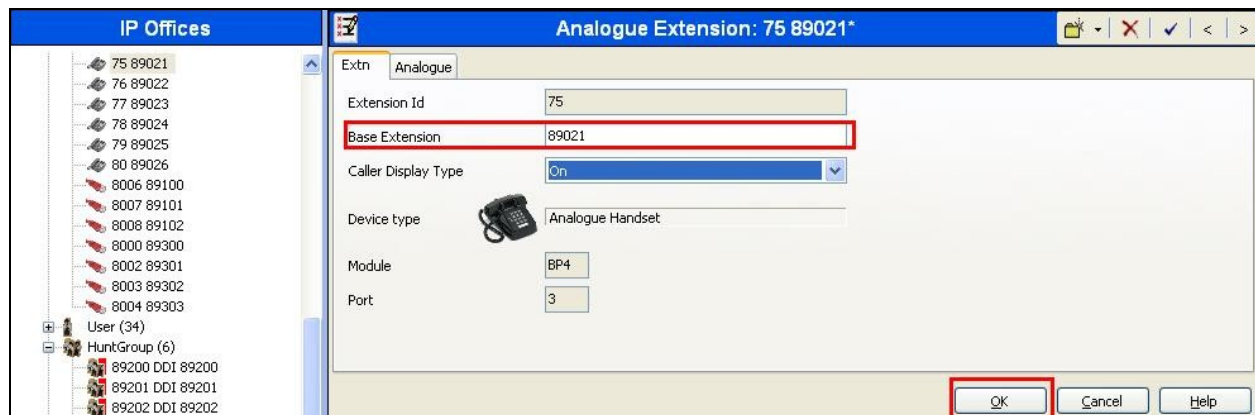
4.4. Create DDI Hunt Groups

In the Manager window, go to the Configuration Tree, right-click **Hunt Group** and select **New** in the popup that appears. In the subsequent **Hunt Group** window, set **Name** to something appropriate, set **Extension** to **89201** and set the **Ring Mode** to **Sequential**. Ensure that no extension is added to the hunt group as they will be automatically added by Hotel Pro once a DDI is allocated to an extension. Click **OK**. Repeat this for each hunt group listed in **Table 1**.

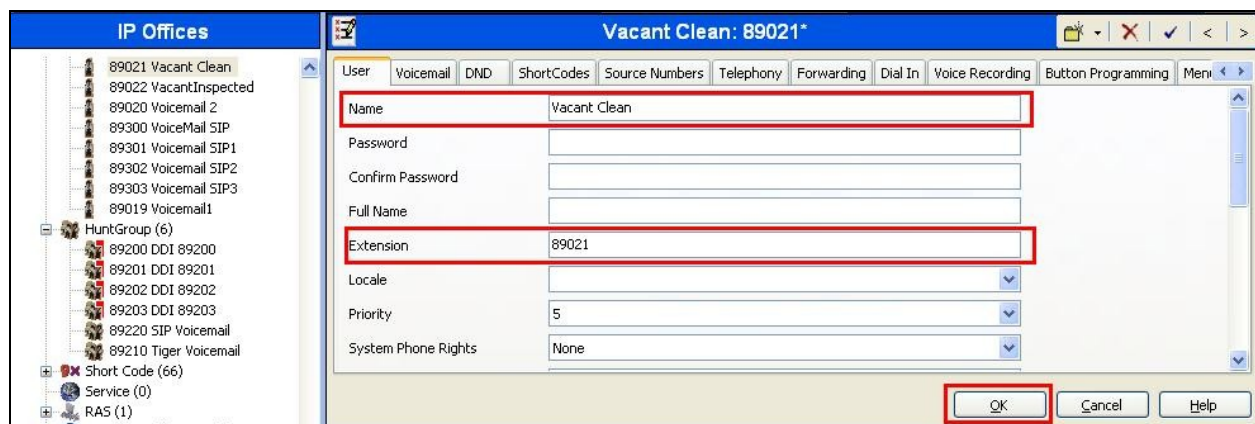
The screenshot shows the 'Sequential Group DDI 89201: 89201*' configuration window. The left pane shows the 'IP Offices' tree with 'HuntGroup (6)' expanded. The right pane has tabs for 'Hunt Group', 'Voicemail', 'Fallback', 'Queuing', 'Voice Recording', and 'Announcements'. The 'Hunt Group' tab is active, showing fields for Name, Extension, Ring Mode, Overflow Mode, Hold Music Source, Agent's Status on No-Answer Applies To, No Answer Time (secs), Overflow Time (secs), and Voicemail Answer Time (secs). The 'Name' field contains 'DDI 89201', 'Extension' contains '89201', and 'Ring Mode' is set to 'Sequential'. The 'OK' button is highlighted with a red box.

4.5. Create Room Status Extensions

In the Manager window, go to the Configuration Tree, and in the **Extension** area select one of the analog phones which are available by default when an IP Office Analog Card is present. Make a note of the selected analog extension and rename the **Base Extension** to **89021**. Details of extensions used for Room Status feature are located in **Table 1**. Click **OK**.



In the Manager window, go to the Configurations Tree, and in the **User** area select the User corresponding to the original analog extension that was renamed earlier. Rename the **Name** to **Vacant Clean** and ensure the **Extension** is set to **89021**. Click **OK**.



Repeat this step for each Maid Status required. Use the details of extensions specified for the Room Status feature in **Table 1**. In the IP Office Manager window, select **File → Save** to push the configuration to IP Office and wait for the system to update. This completes configuration of IP Office.

5. Configure TigerTMS Hotel Pro

The configuration information provided in this section describes the steps required to set up TigerTMS Hotel Pro to interoperate with IP Office. Hotel Pro utilizes XML based communication for hospitality control of the IP Office. Hospitality features are translated into a set of XML commands which are passed via a secure IP port on the IP Office. For all other provisioning information, such as software installation, installations of optional components, and configuration of Hotel Pro, please refer to the Tiger Communications' product documentation in reference [3]. It is assumed Hotel Pro is installed as described in reference [3]. This section will discuss the changes required for this specific deployment.

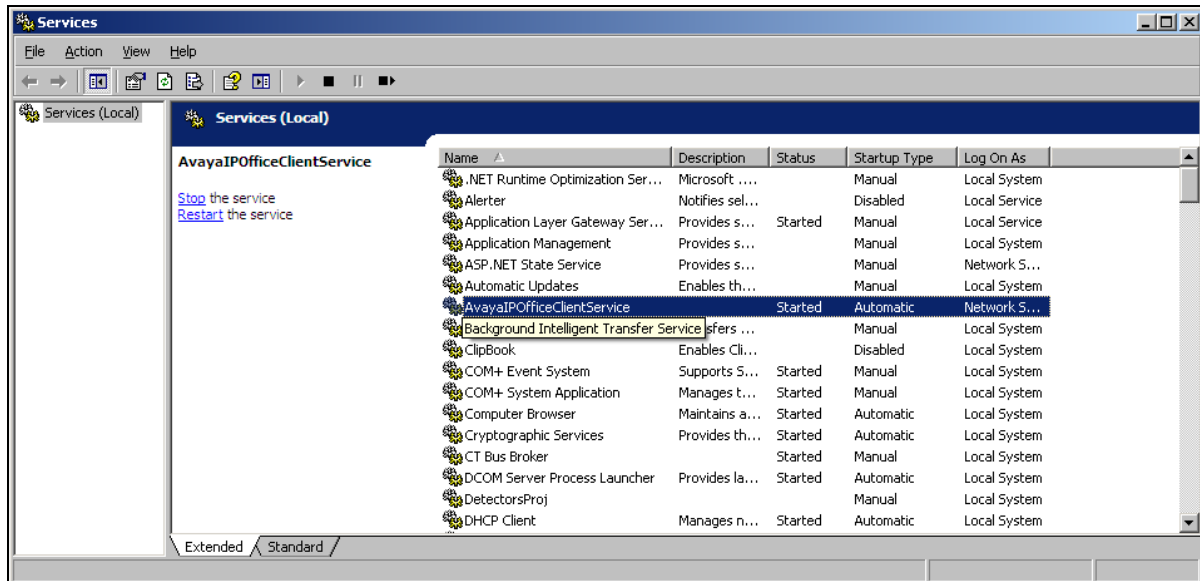
5.1. Avaya Service Configuration File.

After installation and basic configuration, open the **AvayaService.INI** file located in the <drive letter>:\tig2020\Avaya\Client. The following values should be configured:

- **ipofficeunitip:** The IP address of IP Office
- **ipofficeunitport:** The Port used to talk to IP Office (in this case secure)
- **ipofficeusername:** Login user name for IP Office
- **ipofficepassword:** Login password for IP Office

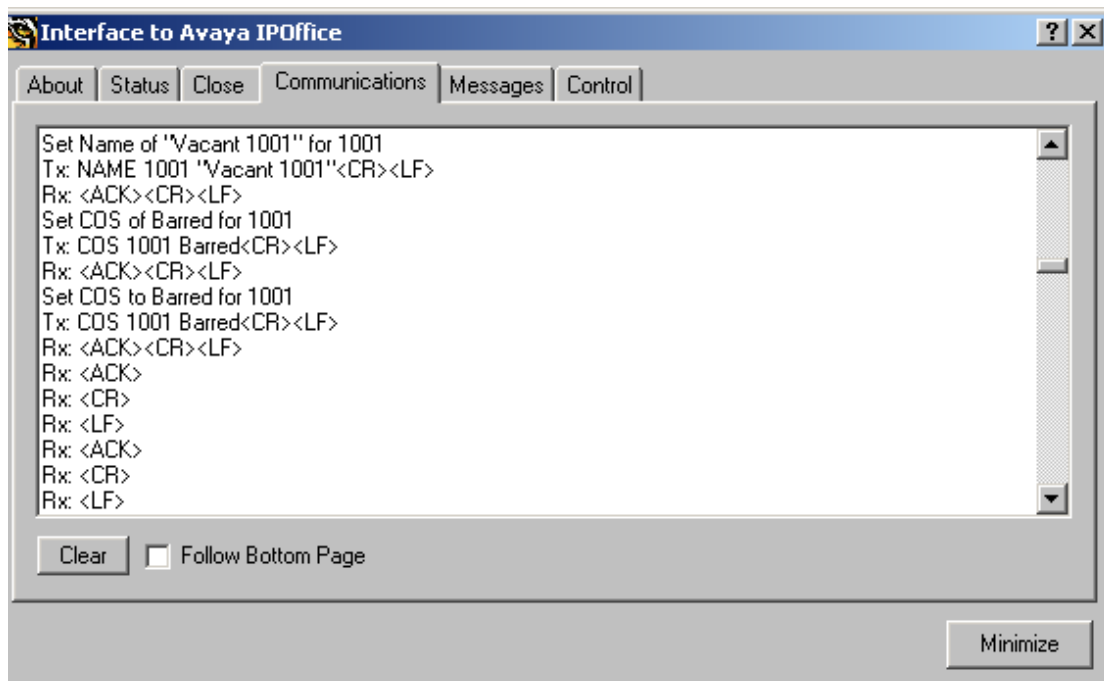
```
<?xml version="1.0" encoding="UTF-8"?>
<sections>
  <section name="avayadebug">
    <item key="port" value="8000" />
    <item key="hostname" value="localhost" />
    <item key="level" value="10" />
    <item key="fileloggingon" value="True" />
    <item key="totallogfiles" value="100" />
    <item key="logfilesizemb" value="10" />
  </section>
  <section name="avayaipoffice">
    <item key="serviceurl" value="http://localhost/AvayaIPOffice/service.svc" />
    <item key="serviceport" value="80" />
    <item key="ipofficeunitip" value="10.10.9.100" />
    <item key="ipofficeunitport" value="50805" />
    <item key="ipofficeusername" value="Administrator" />
    <item key="ipofficepassword" value="EnterPwdHere" />
    <item key="hiportno" value="7000" />
    <item key="messagedelaytime" value="1" />
    <item key="batchprocesstimeout" value="60" />
    <item key="batchprocessrecordstopprocess" value="10" />
    <item key="setconfigbatchtransactionflag" value="FALSE" />
  </section>
</sections>
```

Open up the **Services** Management tool (services.msc) and set the **AvayaIPOfficeClientService** service to be *Automatic* and start the service.



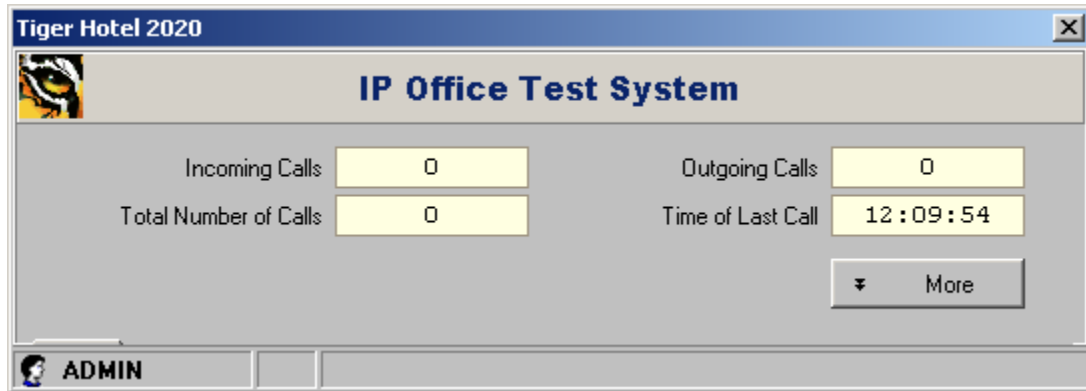
5.2. Start Interface

On the Tiger server run the batch file by clicking on **Start → Programs → Startup → Start Interfaces**. Once the batch file has been executed, the **Interface to Avaya IPOffice** dialog box will be displayed. The interface shown below will display events that are passed from Hotel Pro to IP Office using the XML service.

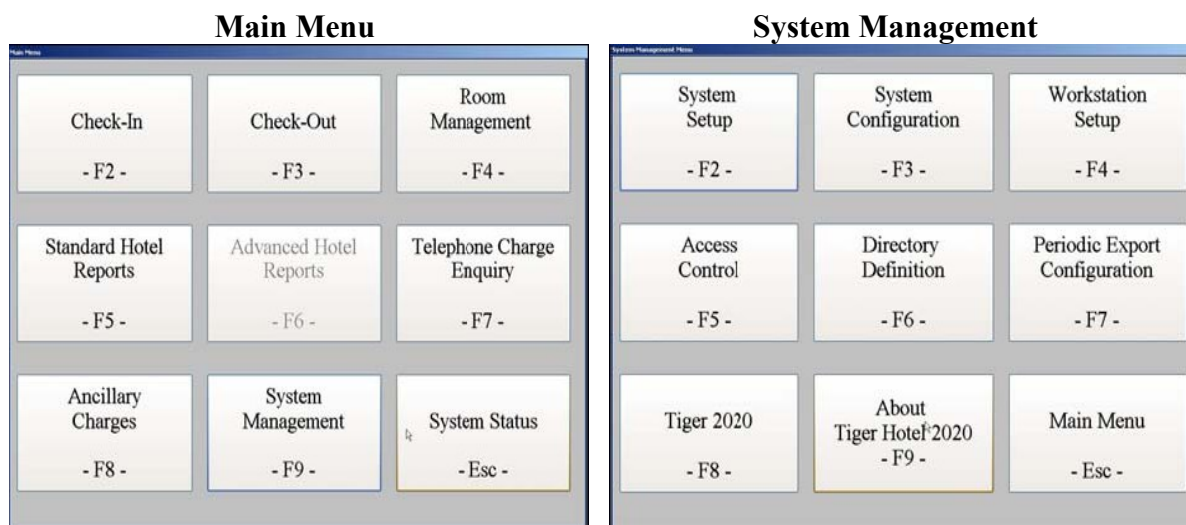


5.3. Create Guest Rooms

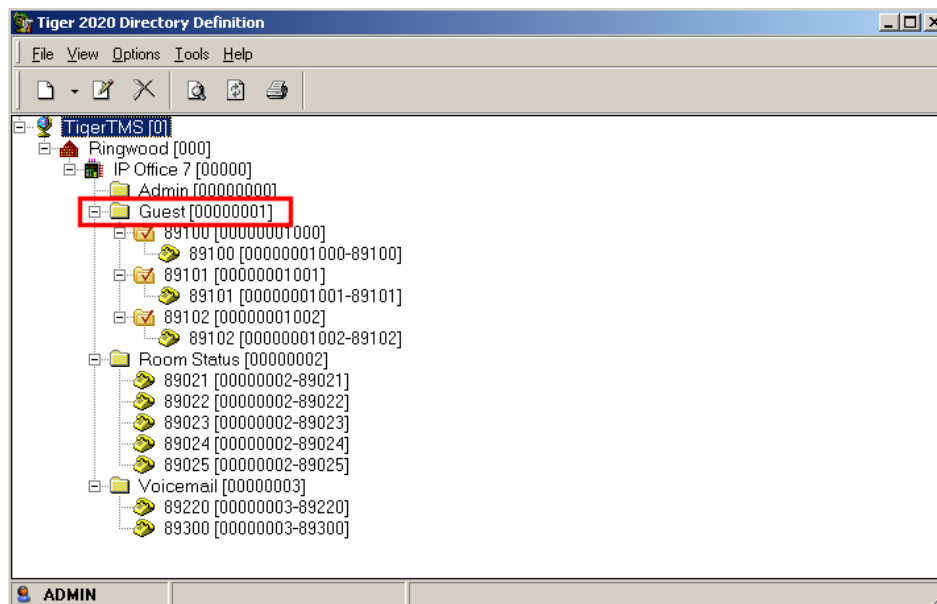
On the Hotel Pro server, click on **Start→Programs→Tiger 2020 Hotel Pro→Tiger Hotel 2020**. In the **Tiger Hotel 2020** screen that appears, click anywhere within this screen to launch the username and password dialog box (not shown) enter the appropriate user name and password to launch the **Main Menu** options screen.



In the **Main Menu** screen, click on **System Management (F9)** then **Directory Definition (F6)**.



Expand the tree by clicking **TigerTMS** → **Ringwood** → **IP Office 7** → **Guest**.



Right click on **Guest** → **New** → **Room** to open the screen shown. Enter the room extension in the **Room Name** field. For the **Tariff** field select **Guest** and for the **Room Category** field select **Guest Room**. Tick the checkbox **This is a Billing Point**. Click **OK**.

The screenshot shows the 'New Room' dialog box. It has a 'Room Details' tab. The 'Room Name' field contains '89101'. The 'Code' field contains '001'. The 'Tariff' dropdown menu is set to 'Guest'. The 'Room Category' dropdown menu is set to 'Guest Rooms'. The 'Under Department' field is set to 'Guest'. There is a 'PIN allowed' checkbox which is unchecked. A 'Move...' button is next to it. The 'This is a Billing Point' checkbox is checked. Below the 'Room Details' tab is a 'Configured Fields' tab with a 'Memo' section. It contains four text fields labeled 'DeptName2 Cfg Field 1:', 'DeptName2 Cfg Field 2:', 'DeptName2 Cfg Field 3:', and 'DeptName2 Cfg Field 4:'. At the bottom are buttons for '< Prev [F5]', 'Next [F6] >', 'OK', and 'Cancel'.

5.4. Create Extensions

In the **Tiger 2020 Directory Definition** screen accessed from the Main Menu shown in **Section 5.3**, right click on the new room created in the previous step and select **New → Extension** to assign an extension to the room. In the **Extension Number(s)** field enter the extension number for the new room previously created. Click **OK**.

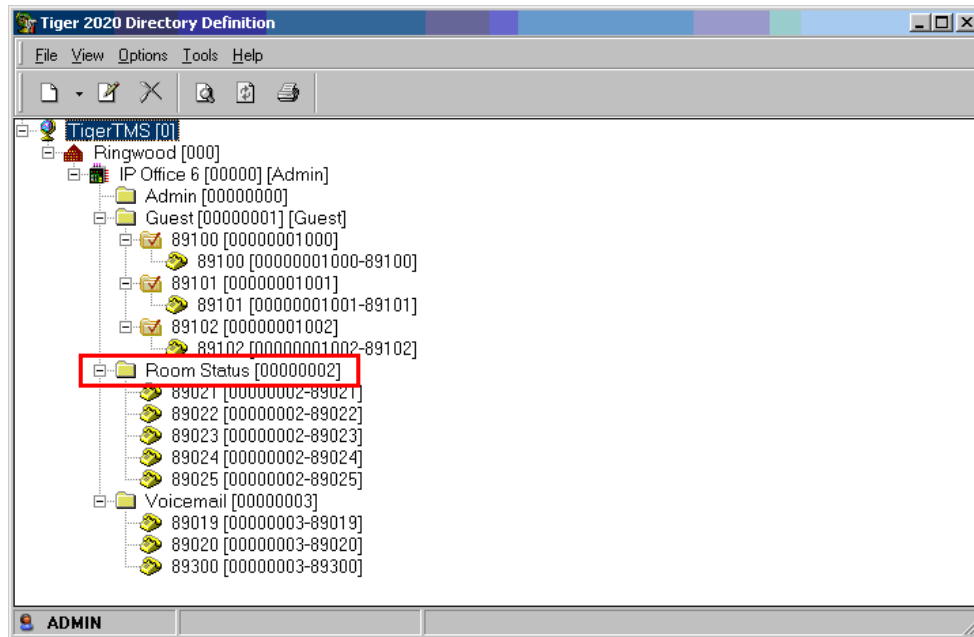
The screenshot shows the 'Edit Extension Properties' dialog box with the following fields and controls:

- Extension Number:** 89101 (highlighted with a red box)
- Operator Position:** [Empty field]
- Tariff:** (None) [Dropdown menu]
- Handset Type:** Default Handset [Dropdown menu]
- Cost:** £0.00 per Day
- Under Department:** Room Status [Dropdown menu]
- Buttons:** New Handset..., Move...
- Checkboxes:**
 - ☐ This is an Ex-Directory Extension
 - ☐ This extension has Digit Privacy
 - ☒ Set as Primary Extension
- Configured Fields:**
 - Extension Cfg Field 1: [Empty text box]
 - Extension Cfg Field 2: [Empty text box]
 - Extension Cfg Field 3: [Empty text box]
 - Extension Cfg Field 4: [Empty text box]
- Navigation:** < Prev [F5], Next [F6] >
- Buttons:** OK (highlighted with a red box), Cancel

Repeat for all room extensions.

5.5. Create Room Status Extensions

Create a new department for Maid Status called **Room Status**. The creation of a new department is documented in reference [2]. In the **Tiger 2020 Directory Definition** screen accessed from the Main Menu shown in **Section 5.3**, right click on the **Room Status** department and select **New → Extension** to create the new extensions for the Maid Status.



The extension numbers shown reflect the Room Status numbers defined in **Table 1**. Repeat for all room status extensions.

Edit Extension Properties

Extension Details | **Advanced**

Extension Number: Operator Position:

Tariff:

Handset Type:

Cost: per

Under Department:

☐ This is an Ex-Directory Extension
☐ This extension has Digit Privacy
☒ Set as Primary Extension

Configured Fields | **Memo**

Extension Cfg Field 1:


Extension Cfg Field 2:

Extension Cfg Field 3:

Extension Cfg Field 4:

6. Verification Steps

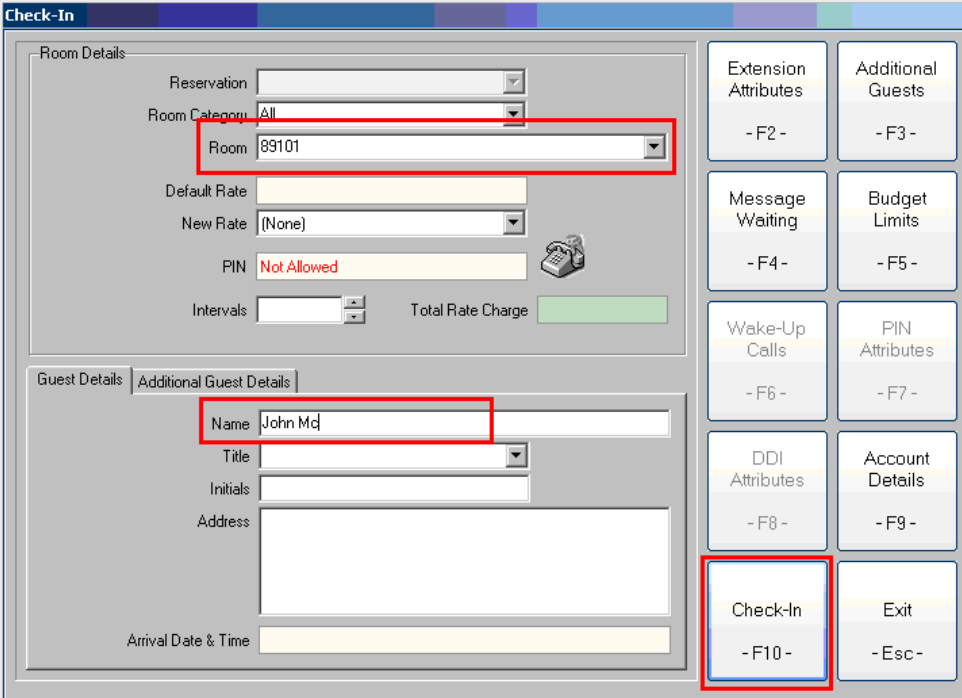
Using the Check-in hospitality function, assign a room to a guest. In the **Main Menu** screen, click on **Check-In (F2)**.



The Main Menu screen displays a grid of function buttons:

Check-In - F2 -	Check-Out - F3 -	Room Management - F4 -
Standard Hotel Reports - F5 -	Advanced Hotel Reports - F6 -	Telephone Charge Enquiry - F7 -
Ancillary Charges - F8 -	System Management - F9 -	System Status - Esc -

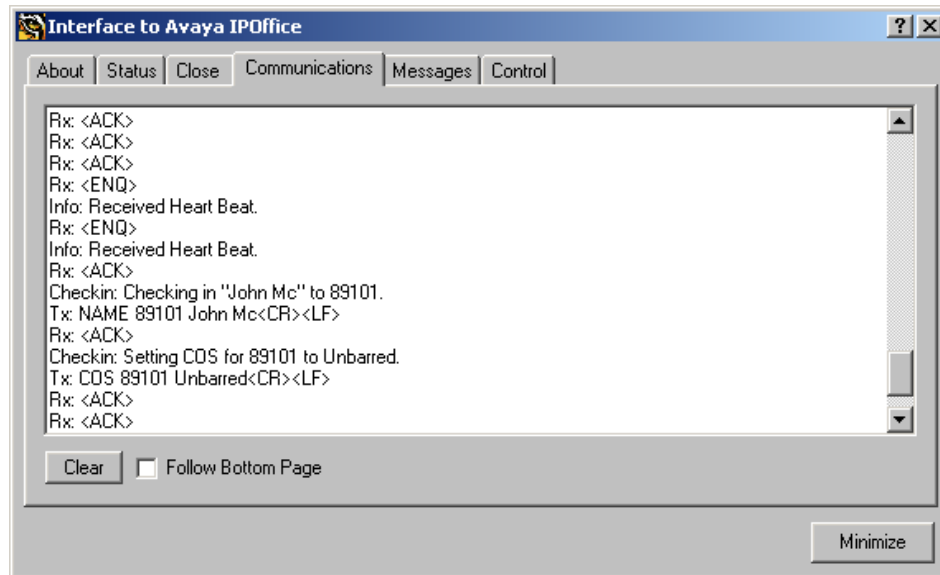
In **Room** select room **89101** from the drop down list. Enter a descriptive name for the **Guest Details Name** field and then click on the **Check-In (F10)** button.



The Check-In screen is divided into several sections:

- Room Details:** Includes fields for Reservation, Room Category (All), Room (89101), Default Rate, New Rate (None), PIN (Not Allowed), Intervals, and Total Rate Charge.
- Guest Details:** Includes fields for Name (John Mc), Title, Initials, Address, and Arrival Date & Time.
- Additional Guest Details:** A tab for additional guest information.
- Function Buttons:** A grid of buttons on the right side, including Extension Attributes, Additional Guests, Message Waiting, Budget Limits, Wake-Up Calls, PIN Attributes, DDI Attributes, Account Details, Check-In, and Exit.

Verify that Hotel Pro has passed the correct details onto the IP office in **Interface to Avaya IP Office**: accessed using the application shown in **Section 5.2**.



The station handset should now reflect the name entered in the check-in form.

7. Conclusion

These Application Notes describe the required configuration steps for the TigerTMS Hotel Pro to execute hospitality functions with Avaya IP Office. All test cases that were executed successfully passed. Hotel Pro version 4.9.9 was successfully compliance tested with IP Office version 7.0(3). Observations made during testing are noted below:

- Hotel Pro sends names in reversed order to handsets: Hotel Pro reverses first name and surname when sending them to IP Office.

8. Additional References

This section references the Avaya documentation relevant to these Application Notes. The following Avaya product documentation is available at <http://support.avaya.com>.

- [1] *Avaya IP Office Release 7.0 Manager 9.0, Issued 17th March 2011* available at <http://support.avaya.com>

Product documentation for TigerTMS products may be found at: www.tigercomms.com

- [2] *TigerTMS Avaya IPOffice Interface PMS Client Service* available at www.tigercomms.com

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