



Avaya Solution & Interoperability Test Lab

Application Notes for Tiger Communications' Hotel 2020 Pro with Avaya Communication Manager - Issue 1.0

Abstract

These Application Notes describe the configuration steps required for Tiger Communications' Hotel 2020 Pro to interoperate with Avaya Communication Manager. Tiger Hotel 2020 Pro is a hospitality package offering an external interface into the hospitality features of Avaya Communication Manager. Features and functionality were validated and performance testing was conducted in order to verify operation under light load.

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

1. Introduction

These Application Notes describe the compliance-tested configuration using a Tiger Communications' Hotel 2020 Pro and Avaya Communication Manager. This addresses the Property Management System (PMS) link to Avaya Communication Manager.

Tiger Hotel 2020 Pro is a graphical hospitality package. It is commonly used in hotels to provide a means of controlling usage of room facilities. Information is sent and received to and from Avaya Communication Manager over the PMS link. The following main features were compliance tested.

- 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 Avaya Communication Manager. This includes the display name of the phone as well as calling restrictions and Message Waiting Indicator (MWI) updates.
- Update Name – A facility that updates the display name of a station in Avaya Communication Manager.
- Room Transfer – This allows a guest to either transfer to a different room, or to allow two guests to swap rooms. In either case, the station configurations of the two related telephones are swapped
- Change Controlled Restriction – Avaya Communication Manager allows a variety of restrictions to be placed on room telephone usage over and above any static configuration. This includes the capability of barring or permitting external calls
- Leave Message – Tiger Hotel 2020 Pro allows messages to be left for guests. This function alerts the guest to such a message using the telephone MWI
- Check-out – Once a guest has vacated a room, this function resets the telephone to default configuration. This typically clears the station name and sets call barring of external calls.
- Maid Status – If a room status should change by activity other than the above, this mechanism allows Tiger Hotel 2020 Pro to be updated by use of Facility Access Codes (FAC) on the room telephone. As its name implies, this is often used to indicate room ready status following cleaning.
- Link Failure/Recovery – PMS over IP link will be tested for both link failure detection and recovery.

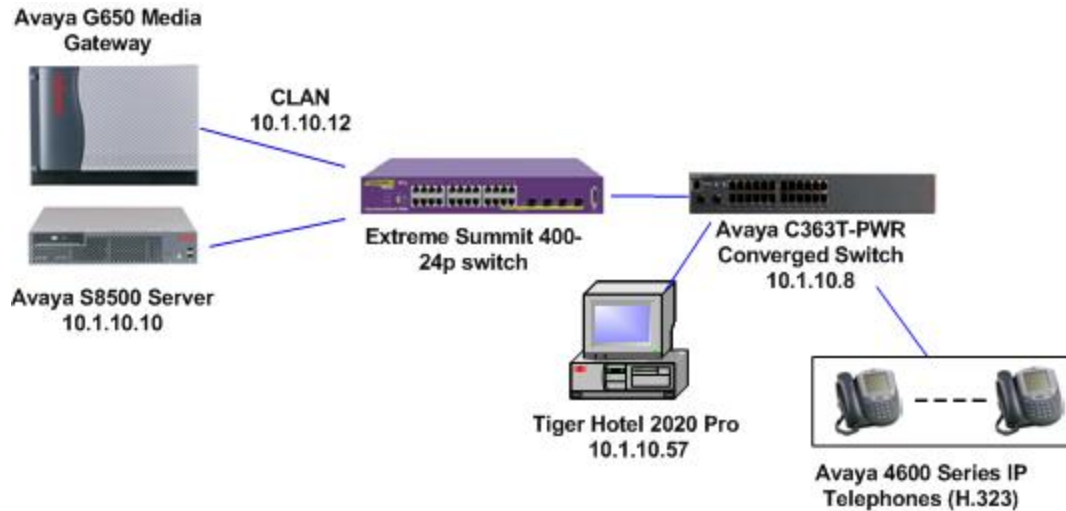


Figure 1: Tested Avaya Communication Manager System with Tiger Hotel 2020 Pro Server

2. Equipment and Software Validated

Below is a list of the equipment and software versions used within the compliance-tested network.

Equipment	Software
Avaya S8500 Server running Avaya Communication Manager	4.0.1 (R014x.00.0.731.2)
Avaya G650 Media Gateway IPSI TN2312BP C-LAN TN799DP Medpro TN2302AP	HW 7, FW 39 HW 1, FW24 HW 20, FW116
Extreme Summit 400-24p Switch	Extremeware 7.5e.2.8
Avaya C363T PWR Converged Stackable Switch	4.3.12
Avaya 46XX IP Telephones (H.323)	2.8
Avaya 96XX IP Telephones (H.323)	1.5
Tiger Communications Hotel 2020 Pro Server Tiger Communications 2020 Database	V4.9 MySQL v4.1.

3. Configure Avaya Communication Manager

This section describes the steps for configuring PMS link, hospitality system parameters, feature access code and class of service on Avaya Communication Manager. The steps are performed through the System Access Terminal (SAT) interface.

Step	Description
<p>1.</p>	<p>Enter the change node-names ip command. Create a new node name and IP address for the Tiger Hotel 2020 Pro server used to interoperate with Avaya Communication Manager. The node name configured below will be used in the ip-services form to specify the remote node of the PMS link.</p> <pre data-bbox="277 653 1495 1020"> change node-names ip Page 1 of 2 IP NODE NAMES Name IP Address AEServer 10.1.10.20 Abacus 10.1.10.31 CDR_Server 10.1.10.56 TigerHotel 10.1.10.57 S8300a_DC1 10.1.30.10 S8500_Val1 10.1.10.14 SEServer 10.1.10.22 </pre>
<p>2.</p>	<p>Enter the change ip-services command. On page 1 of the IP SERVICES screen, define the PMS link by setting the Service Type to “PMS”. Set Local Node to “clan1a_DC1” and Remote Node to “TigerHotel” as configured in Step 1 above. The Local Port is fixed at “0” and the Remote Port may be set to a value between 5000 and 64500, inclusive, but must match the port configured on the Tiger Hotel 2020 Pro in Section 4, Step 1.</p> <pre data-bbox="277 1276 1463 1535"> change ip-services Page 1 of 4 IP SERVICES Service Enabled Local Local Remote Remote Type Type Node Port Node Port SAT y clan1a_DC1 5023 any 0 AESVCS y clan1a_DC1 8765 PMS y clan1a_DC1 0 TigerHotel 5004 </pre>

Step	Description
3.	<p>Enter the display system-parameters customer-options. Verify the Hospitality (Basic) and Hospitality (G3V3 Enhancements) to “y”. Please note that this is a licensed feature. Contact an Ayaya representative if the features are not licensed.</p> <pre data-bbox="277 373 1511 884"> display system-parameters customer-options Page 4 of 11 OPTIONAL FEATURES Emergency Access to Attendant? y IP Stations? y Enable 'dadmin' Login? y Enhanced Conferencing? y ISDN Feature Plus? y Enhanced EC500? y ISDN Network Call Redirection? n Enterprise Survivable Server? n ISDN-BRI Trunks? n Enterprise Wide Licensing? n ISDN-PRI? y ESS Administration? n Local Survivable Processor? n Extended Cvg/Fwd Admin? y Malicious Call Trace? n External Device Alarm Admin? n Media Encryption Over IP? n Five Port Networks Max Per MCC? n Mode Code for Centralized Voice Mail? n Flexible Billing? n Forced Entry of Account Codes? n Multifrequency Signaling? y Global Call Classification? y Multimedia Call Handling (Basic)? n Hospitality (Basic)? y Multimedia Call Handling (Enhanced)? n Hospitality (G3V3 Enhancements)? y IP Trunks? y </pre>
4.	<p>Enter the change system-parameters hospitality. Configure the following parameters on Page 1 of the HOSPITALITY screen.</p> <pre data-bbox="277 1003 1511 1570"> change system-parameters hospitality Page 1 of 3 HOSPITALITY Message Waiting Configuration: act-pms Controlled Restrictions Configuration: act-pms Housekeeper Information Configuration: act-pms Number of Housekeeper ID Digits: 0 PMS Log Endpoint: Journal/Schedule Endpoint: Client Room Coverage Path Configuration: act-nopms Default Coverage Path for Client Rooms: Forward PMS Messages to Intuity Lodging? y PMS LINK PARAMETERS PMS Endpoint: PMS PMS Protocol Mode: transparent ASCII mode? y Seconds before PMS Link Idle Timeout: 20 Milliseconds before PMS Link Acknowledgement Timeout: 1500 PMS Link Maximum Retransmissions: 5 PMS Link Maximum Retransmission Requests: 5 Take Down Link for Lost Messages? n </pre>

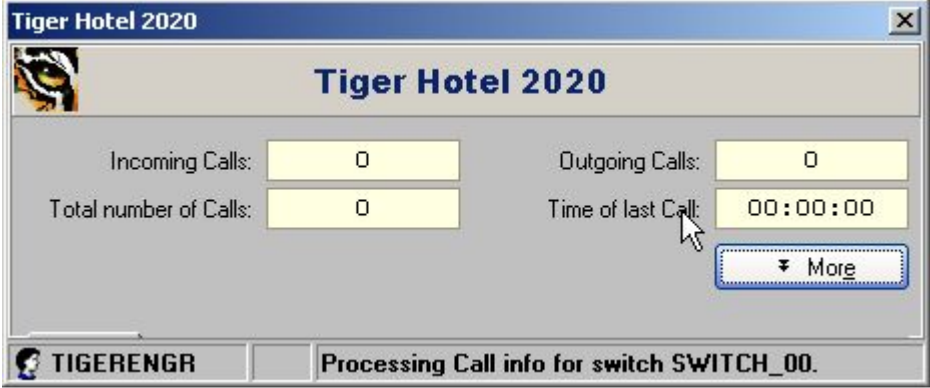

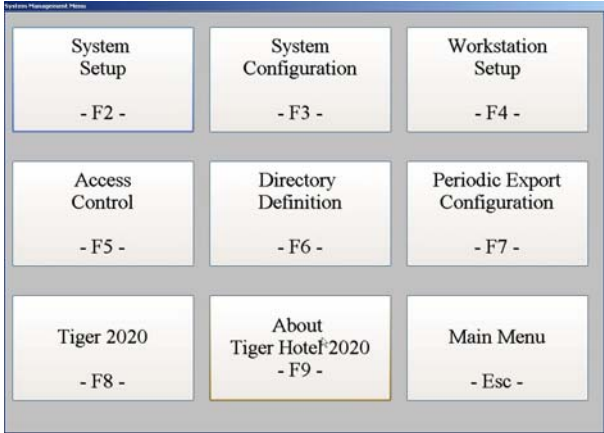
Step	Description
5.	<p>Configure the following parameters on Page 2 of the HOSPITALITY screen.</p> <pre> change system-parameters hospitality Page 2 of 3 HOSPITALITY Dual Wakeups? n Daily Wakeup? n VIP Wakeup? n Room Activated Wakeup With Tones? n Time of Scheduled Wakeup Activity Report: Time of Scheduled Wakeup Summary Report: Time of Scheduled Emergency Access Summary Report: Announcement Type: silence Length of Time to Remain Connected to Announcement: 30 Extension to Receive Failed Wakeup LWC Messages: Routing Extension on Unavailable Voice Synthesis: Display Room Information in Call Display? y Automatic Selection of DID Numbers? y Custom Selection of VIP DID Numbers? y Number of Digits from PMS: 5 PMS Sends Prefix? n Number of Digits in PMS Coverage Path: 3 Digit to Insert/Delete: </pre>
6.	<p>Enter change feature-access-codes command. One Page 7 of the FEATURE ACCESS CODE (FAC) screen. Enter 2 digit feature access code numbers beginning with a * as shown in the screen below. This FAC allows the PMS to be accessible from a standard telephone within a hospitality room, for example a cleaner is able to update the status of the room by entering in the FAC from the room telephone.</p> <pre> change feature-access-codes Page 7 of 7 FEATURE ACCESS CODE (FAC) Hospitality Features Automatic Wakeup Call Access Code: *87 Housekeeping Status (Client Room) Access Code: *88 Housekeeping Status (Client Room) Access Code: *89 Housekeeping Status (Client Room) Access Code: *90 Housekeeping Status (Client Room) Access Code: *91 Housekeeping Status (Client Room) Access Code: *92 Housekeeping Status (Client Room) Access Code: *93 Housekeeping Status (Station) Access Code: *94 Housekeeping Status (Station) Access Code: *95 Housekeeping Status (Station) Access Code: *96 Housekeeping Status (Station) Access Code: *97 Verify Wakeup Announcement Access Code: *98 Voice Do Not Disturb Access Code: *99 </pre>

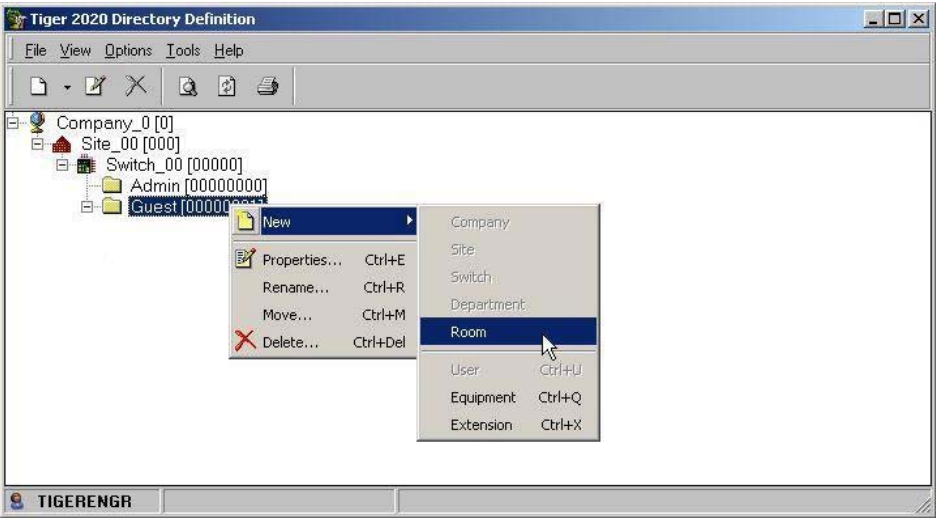
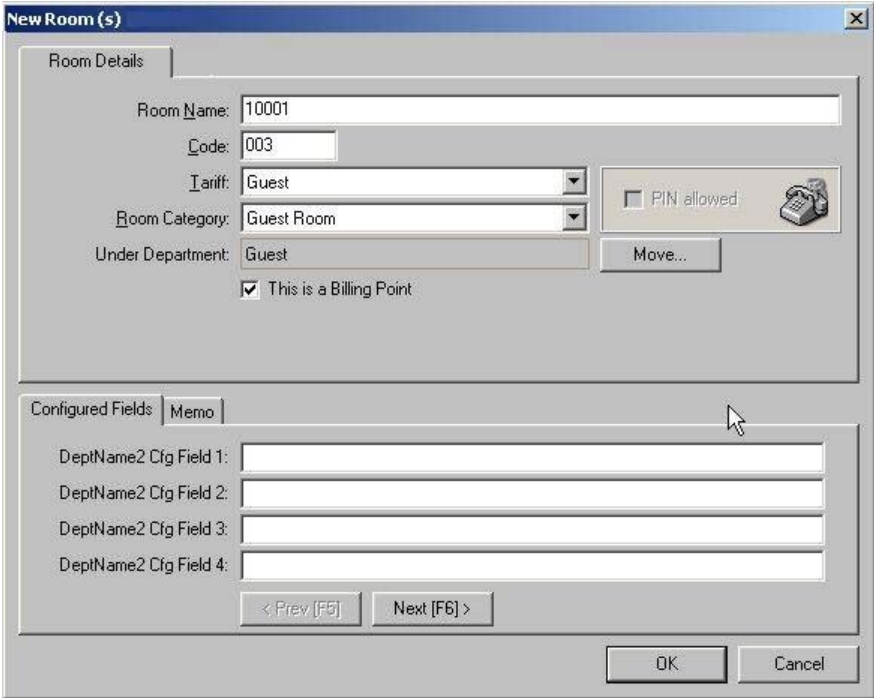
Step	Description
7.	<p>In order for the hospitality feature to be fully available, all of the devices in a hospitality room should be assigned to a Class Of Service (COS) with the client room option set to “y”, which is required to be controlled by the PMS server. During compliance testing all telephones belong to COS 1. Enter change cos command, set Client Room to “y” for COS 1.</p> <div data-bbox="277 411 1520 926" style="border: 1px solid black; padding: 5px;"> <pre> change cos Page 1 of 2 CLASS OF SERVICE 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Auto Callback n y y n y n y n y n y n y n y n Call Fwd-All Calls n y n y y n n y y n n y y n n y Data Privacy n y n n n y y y y n n n n y y y Priority Calling n y n n n n n n n y y y y y y y Console Permissions n y n n n n n n n n n n n n n n Off-hook Alert n y n n n n n n n n n n n n n n Client Room n y n n n n n n n n n n n n n n Restrict Call Fwd-Off Net n n y y y y y y y y y y y y y y Call Forwarding Busy/DA n y n n n n n n n n n n n n n n Personal Station Access (PSA) n n n n n n n n n n n n n n n n Extended Forwarding All n n n n n n n n n n n n n n n n Extended Forwarding B/DA n n n n n n n n n n n n n n n n Trk-to-Trk Transfer Override n y n n n n n n n n n n n n n n QSIG Call Offer Originations n n n n n n n n n n n n n n n n Contact Closure Activation n n n n n n n n n n n n n n n n </pre> </div>

4. Configure the Tiger Hotel 2020 Pro Server

The configuration information provided in this section describes the steps required to set up Tiger Hotel 2020 Pro to interoperate Avaya Communication Manager via a PMS link.

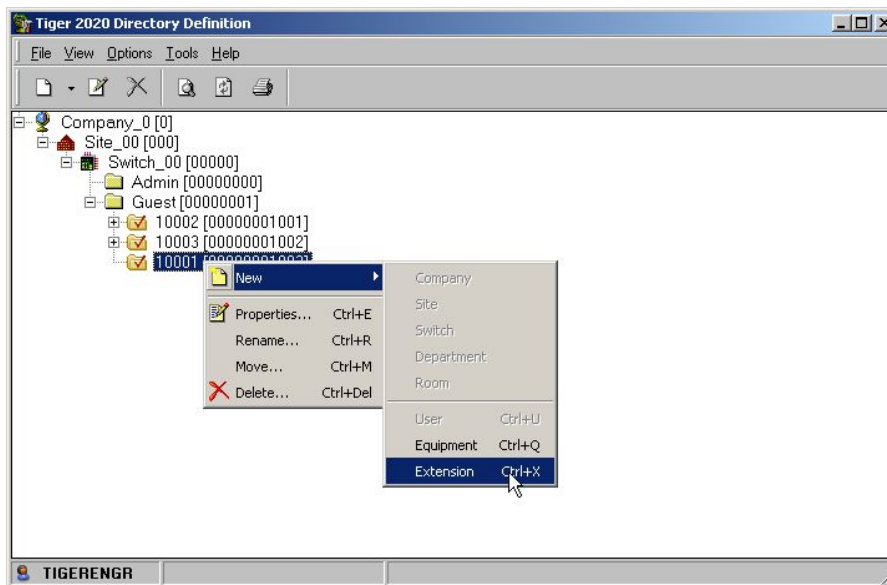
Step	Description
<p>1.</p>	<p>On the Tiger Hotel 2020 Pro server. Modify the pbx_DefinityASCII.ini file in the directory D:\tig2020\Scripts\SwitchPMS. In the [Port] section ensure the PortType field is set to “IP”. Set the ClientServer option to “Server” and the IPPortNumber to “5004” to match the port number configured on Avaya Communication Manager in section 3, step 2.</p> <div data-bbox="578 579 1219 1020" style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <p style="text-align: center;">Contents of pbx_DefinityASCII.ini</p> <pre> [Port] ;PortType=SERIAL ;PortName=COM2 ;BaudRate=4800 ;DataBits=7 ;StopBits=1 ;Parity=E PortType=IP ClientServer=Server IPPortNumber=5004 IPPersistentSocket=1 </pre> </div>
<p>2.</p>	<p>On the Tiger Hotel 2020 Pro server run the batch file by clicking on Start → Programs → Startup → DC_Start. Once the batch file has been executed the Interface to Avaya Definity(ASCII) dialog box is displayed to indicate the system status..</p> <div data-bbox="475 1226 1321 1738" style="border: 1px solid gray; padding: 10px; margin: 10px 0;"> </div>

Step	Description
3.	<p>On the Tiger Hotel 2020 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 shown in Step 4.</p> 
4.	<p>In the Main Menu screen, click on System Management (F9) then Directory Definition (F6).</p> <div style="display: flex; justify-content: space-around;"> <div data-bbox="289 913 883 1377" style="text-align: center;"> <p>Main Menu</p>  </div> <div data-bbox="911 913 1511 1377" style="text-align: center;"> <p>System Management</p>  </div> </div>

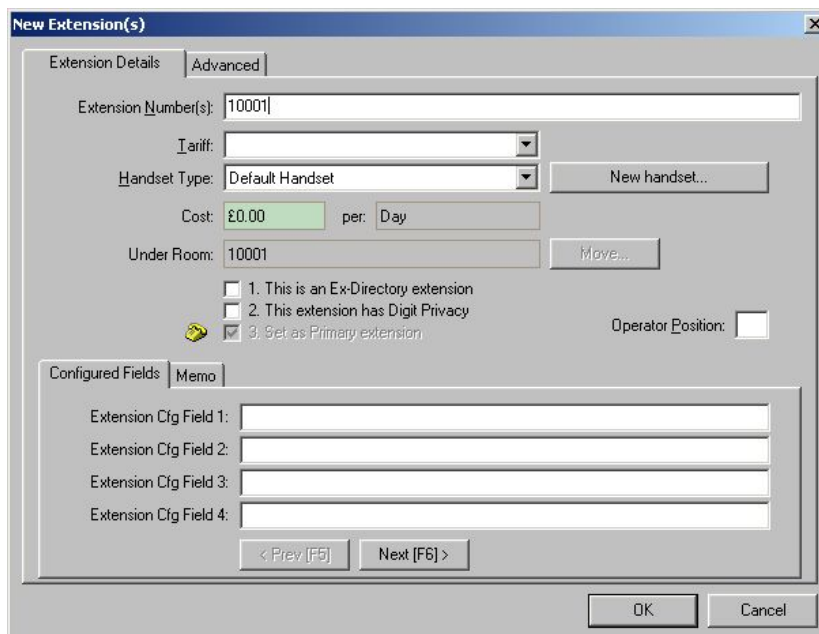
Step	Description
5.	<p>Expand the tree by clicking Company → Site → Switch → Guest. Right click on Guest → New → Room, as shown in the screen below.</p>  <p>The screenshot shows the 'Tiger 2020 Directory Definition' application window. The tree view on the left shows a hierarchy: Company_0 [0] > Site_00 [000] > Switch_00 [00000] > Admin [00000000] > Guest [00000000]. A right-click context menu is open over the 'Guest' node, with the 'New' option selected. A sub-menu is displayed, listing options: Company, Site, Switch, Department, Room (highlighted), User, Equipment, and Extension. The 'Room' option is highlighted with a mouse cursor.</p>
6.	<p>Enter the room extension in the Room Name field. For the Tariff field select “Guest” from the drop down list and for the Room Category field select “Guest Room” from the drop down list. Tick the checkbox for This is a Billing Point option. Click OK.</p>  <p>The screenshot shows the 'New Room (s)' dialog box. The 'Room Details' tab is active. The fields are filled as follows: Room Name: 10001, Code: 003, Tariff: Guest, Room Category: Guest Room, Under Department: Guest. The checkbox 'This is a Billing Point' is checked. There is a 'PIN allowed' checkbox which is unchecked. A 'Move...' button is visible. Below the 'Room Details' tab is the 'Configured Fields' section with a 'Memo' tab. It contains four empty text boxes labeled 'DeptName2 Cfg Field 1:' through '4:'. At the bottom are 'Prev [F5]' and 'Next [F6]' buttons, and 'OK' and 'Cancel' buttons.</p>

Step	Description
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- | | |
|----|---|
| 7. | <p>In the Tiger 2020 Directory Definition screen. Right click on the new room created in the above step and select New → Extension to assign an extension to the room.</p> |
|----|---|



- | | |
|----|--|
| 8. | <p>In the Extension Number(s) field enter the extension number for the new room created in step 6. Click OK.</p> |
|----|--|



5. Interoperability Compliance Testing

The interoperability compliance testing included feature and serviceability testing. The feature testing evaluated the ability of Tiger Hotel 2020 Pro to carry out hospitality functions via the PMS link. The serviceability testing introduced failure scenarios to see if Tiger Hotel 2020 Pro could resume after a PMS link failure.

5.1. General Test Approach

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

- Check-in
- Update Name
- Room Transfer
- Change Controlled Restriction
- Leave Message
- Check-out
- Maid Status

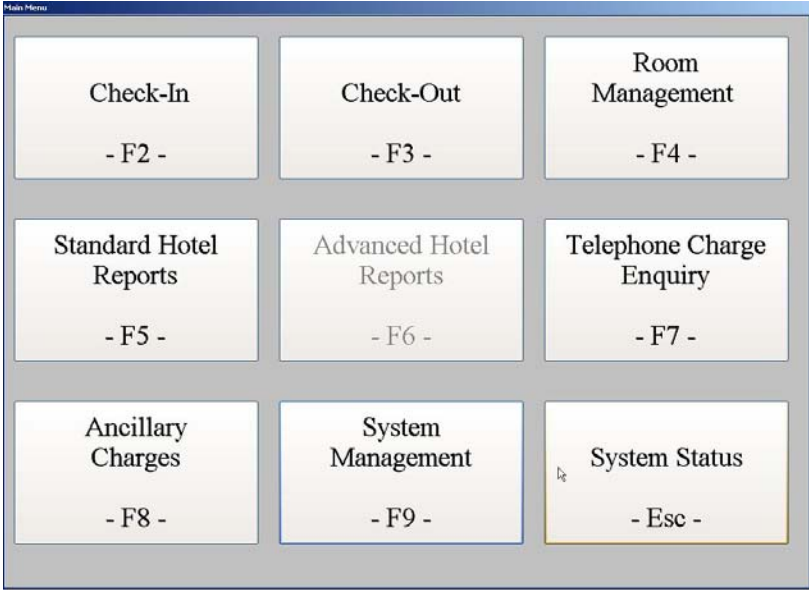
Light load testing and link integrity testing was also carried out.

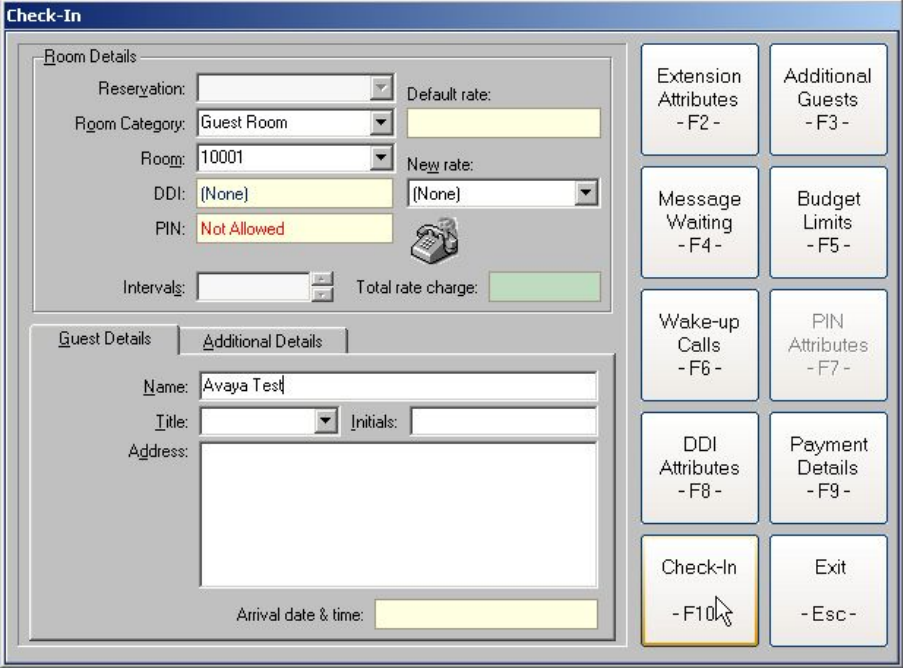
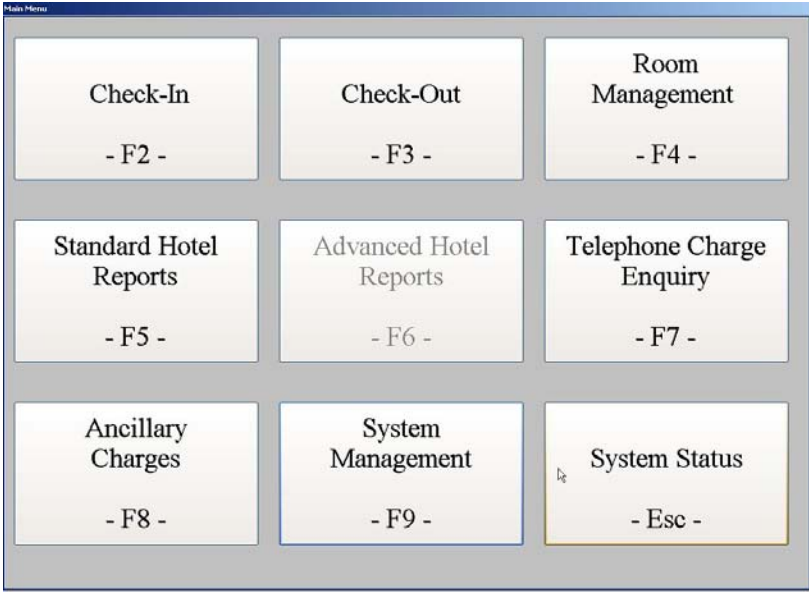
5.2. Test Results

All feature and performance tests passed. The Tiger Hotel 2020 Pro successfully executed hospitality functions via the PMS link.

6. Verification Steps

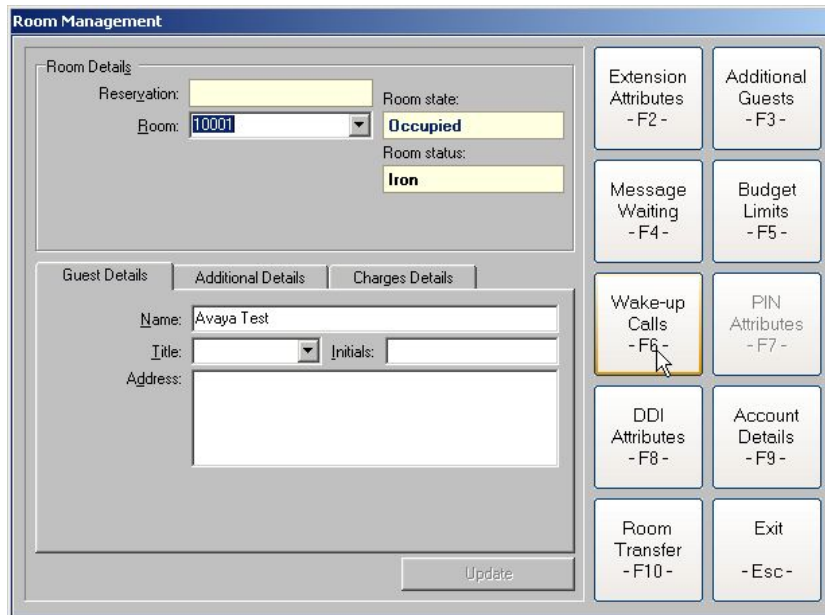
The following verification steps can be used to ensure that the PMS link is correctly passing data between the various components of the solution.

Step	Description
1.	<p>On the SAT, enter the status pms-link command to verify that the PMS link state is up.</p> <div data-bbox="391 501 1409 720" style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <pre> status pms-link PMS LINK STATUS Physical Link State: up Protocol State: up Maintenance Busy? no Data Base Swapping? no </pre> </div>
2.	<p>Using the Tiger Hotel 2020 Pro Check-in hospitality function assign room 10001 with extension to 10001 to a guest. In the Main Menu screen, click on Check-In (F2).</p> <div data-bbox="496 850 1300 1436" style="border: 1px solid black; padding: 10px; margin: 10px 0;">  <p>The screenshot shows the 'Main Menu' screen with the following options:</p> <ul style="list-style-type: none"> 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 -) </div>

Step	Description
3.	<p>In the Check-In dialog box, select “Guest Room” from the drop down list for Room Category. In the Room select a room number that have been previously administered in Section 4, Step 5 from the drop down list. Enter a descriptive name for the Guest Details Name field and then click on the Check-In (F10) button.</p> 
4.	<p>In the Main Menu screen, click on Room Management (F4).</p> 

Step	Description
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| 5. | In the Room Management screen, select room “10001” from the Room field drop down list. Verify the Room state is “Occupied”. |
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- | | |
|-----------|---|
| 6. | On the SAT, enter the status station 10001 command and verify the Room Status has changed “occupied”. |
|-----------|---|

```

status station 10001
                                                    Page 1 of 6

GENERAL STATUS
Administered Type: 4620      Service State: in-service/on-hook
Connected Type: 4620        TCP Signal Status: connected
Extension: 10001
Port: S00324                Parameter Download: complete
Call Parked? no            SAC Activated? no
Ring Cut Off Act? no
Active Coverage Option: 1

EC500 Status: N/A          Off-PBX Service State: N/A
Message Waiting:
Connected Ports:
Limit Incoming Calls? no

User Cntrl Restr: outward
Group Cntrl Restr: none

HOSPITALITY STATUS
Awaken at:
User DND: not activated
Group DND: not activated
Room Status: occupied
    
```

7. Support

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

Email: support@tigercomms.com

Phone: +44 1425 891 000 (When prompted select Option 2)

8. Conclusion

These Application Notes describe the required configuration steps for the Tiger Hotel 2020 Pro to execute hospitality functions via the PMS link to Avaya Communication Manager. Tiger Hotel 2020 Pro V4.9 was successfully compliance tested with Avaya Communication Manager 4.0.1.

9. Additional References

This section references the product documentations that are relevant to these Application Notes.

Avaya product documentation can be found at <http://support.avaya.com>.

- *Administrator Guide for Avaya Communication Manager (4.0)*, Document ID 03-300509, Issue 3.1, February 2007.
- *GuestWorks and DEFINITY Enterprise Communications Server. Property Management System Interface Specifications*. Document ID 555-231-601, Issue 4, December 2001.

Tiger Communications' Hotel 2020 Pro Product information available from www.tigercomms.com

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