



Avaya Solution & Interoperability Test Lab

Application Notes for configuring Avaya Aura® Communication Manager R6.3 with TigerTMS iCharge v50.0 - Issue 1.0

Abstract

These Application Notes describe the configuration steps required for TigerTMS iCharge v50 to interoperate with Avaya Aura® Communication Manager R6.3. TigerTMS iCharge is a hospitality package offering an external interface into the hospitality features of Avaya Aura® Communication Manager.

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 TigerTMS iCharge R50.0 and Avaya Aura® Communication Manager R6.3. This utilises the Property Management System (PMS) link to Avaya Aura® Communication Manager.

TigerTMS iCharge 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 Aura® Communication Manager over the PMS link.

2. General Test Approach and Test Results

The general test approach was to validate correct operation of typical hospitality functions and recovery from network interruption.

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

Interoperability compliance testing consisted of successful execution of the following features and link failure scenarios.

- 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 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 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 – 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 – TigerTMS iCharge allows messages to be left for guests. This function alerts the guest to such a message using the telephone MWI.
- DID Allocation – This facility enables a dynamic virtual extension to be associated to the guest extensions so it can be accessed directly from outside the hotel.
- DND – This facility enables the Communication Manager to prevent calls reaching the guest extension, if so desired by the guest.

- 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 TigerTMS iCharge to be updated by use of Feature 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 test for both link failure detection and recovery.

2.2. Test Results

All test cases passed successfully.

2.3. Support

For product support contact details at:

- support@tigertms.com
- +44-1425-891099

3. Reference Configuration

Figure 1 shows an Avaya Aura® Communication Manager R6.3 serving H323 endpoints with an Avaya G430 Media Gateway was configured along with Avaya Aura® Session Manager R6.3 hosted on an Avaya S8800 Server providing SIP endpoints. TigerTMS iCharge was configured on the same IP network for connection to the PMS interface of Avaya Aura® Communication Manager.

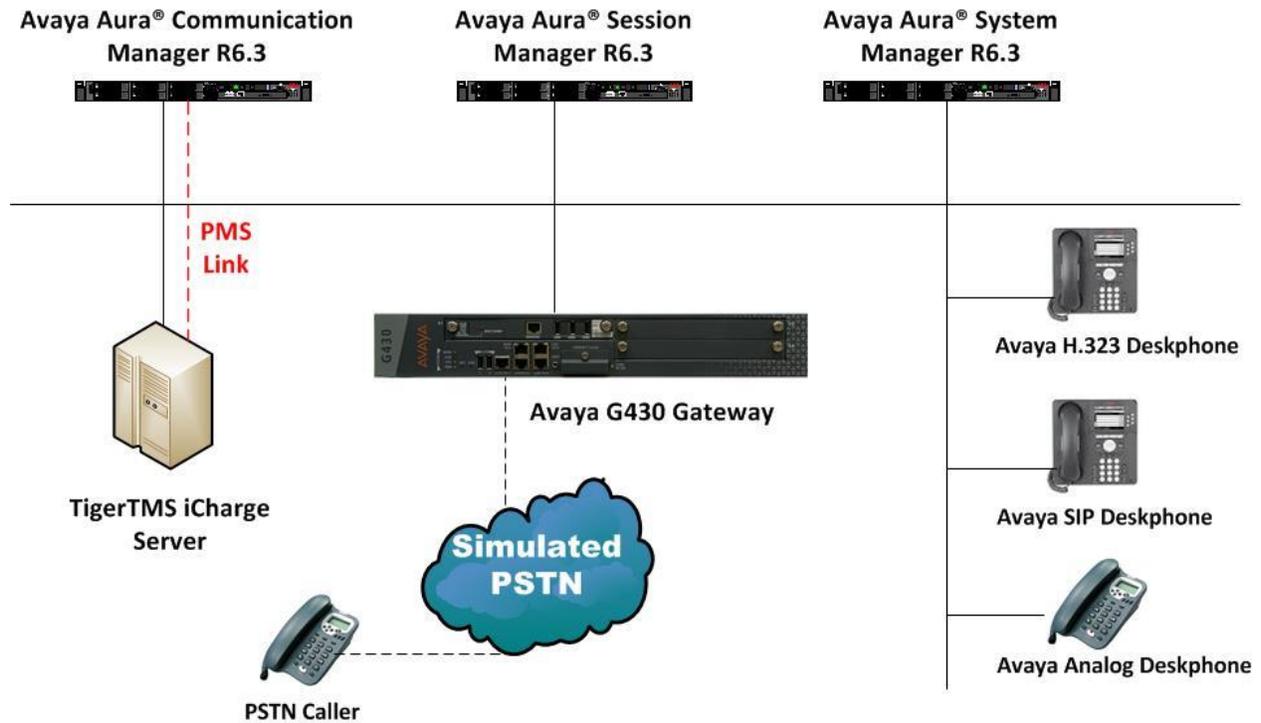


Figure 1: Avaya Aura® Communication Manager and Avaya Aura® Session Manager with TigerTMS iCharge Solution

4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya Aura® System Manager running on Avaya S8800 Server	System Manager 6.3.0 - FP2 Build No. - 6.3.0.8.5682-6.3.8.1814 Software Update Revision No: 6.3.3.5.1719
Avaya Aura® Communication Manager running on Avaya S8800 Server	R6.3 SP1 R016x.03.0.124.0
Avaya Aura® Session Manager running on Avaya S8800 Server	Session Manager R6.3 (SP3) SM 6.3.3.0.633004
Avaya G430 Gateway	R6.3
Avaya 9630 IP Deskphone	<ul style="list-style-type: none">• H323 S3.105S• SIP 2.6.8.4
TigerTMS iCharge running on Generic Server	V50.0.0.0

5. Configure Avaya Aura® Communication Manager

This section describes the steps for configuring the 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.

5.1. Configure IP Node Names

Enter the **change node-names ip** command. Create a new node name and IP address for the iCharge server. The node name configured below will be used in the ip-services form to specify the remote node of the PMS link.

change node-names ip		Page 1 of 2
Name		IP Address
aesserver63	10.10.16.96	
clan	10.10.16.31	
cmm	10.10.16.142	
cms	10.10.16.175	
default	0.0.0.0	
gateway	10.10.16.1	
procr	10.10.16.142	
procr6	::	
sm63sigint	10.10.16.148	
tiger	10.10.16.101	

5.2. Configure IP Services

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 **procr** and **Remote Node** to **tiger** as configured in **Section 5.1**. The **Local Port** is fixed at **0** and the **Remote Port** may be set to a value between 5000 and 64500, but must match the port configured on iCharge in this case **5004**.

change ip-services			Page 1 of 4		
			IP SERVICES		
Service Type	Enabled	Local Node	Local Port	Remote Node	Remote Port
AESVCS	y	procr	8765		
PMS		procr	0	tiger	5004
CDR1		procr	0	tiger	9000

5.3. Configure Hospitality Parameters

Enter the command **change system-parameters hospitality**. Configure the following highlighted parameters on **Page 1** of the **HOSPITALITY** screen.

```
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? n

                        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
```

Configure the following highlighted parameters on **Page 2** of the **HOSPITALITY** screen.

```
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:
                        PMS Sends Prefix? n
                        Number of Digits in PMS Coverage Path: 3
                        Digit to Insert/Delete:
```

5.4. Configure Hospitality Features

Enter **change feature-access-codes** command. On **Page 8** of the **FEATURE ACCESS CODE (FAC)** screen enter appropriate feature access code numbers as shown in the screen below. This mode 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.

```
change feature-access-codes                                     Page 8 of 10
                                                              FEATURE ACCESS CODE (FAC)
                                                              Hospitality Features

Automatic Wakeup Call Access Code:
Housekeeping Status (Client Room) Access Code: *81
Housekeeping Status (Client Room) Access Code: *82
Housekeeping Status (Client Room) Access Code: *83
Housekeeping Status (Client Room) Access Code: *84
Housekeeping Status (Client Room) Access Code: *85
Housekeeping Status (Client Room) Access Code: *86
Housekeeping Status (Station) Access Code:
Verify Wakeup Announcement Access Code:
Voice Do Not Disturb Access Code: 100
```

5.5. Configure COS for Hospitality

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 iCharge. During compliance testing all client rooms were configured with a **COS** of **2**. Enter the **change cos-group 1** command, set **Client Room** to **y** for COS 2.

change cos-group 1																Page	1 of	2	
CLASS OF SERVICE	COS Group: 1															COS Name:			
	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	y	y	y	n	n	y	y	n	n	y	y	n	n	y			
Data Privacy	n	y	y	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	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n			
Off-hook Alert	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n			
Client Room	n	n	y	n	n	n	n	n	n	n	n	n	n	n	n	n			
Restrict Call Fwd-Off Net	y	n	n	y	y	y	y	y	y	y	y	y	y	y	y	y			
Call Forwarding Busy/DA	n	n	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	n	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			

5.6. Configure Client Room Extension

Enter the command **change station x** where **x** is a client room extension, configure the **COS** field as **2**.

```
change station 6000                                     Page 1 of 5
                                                    STATION
Extension: 6000                                         Lock Messages? n          BCC: 0
  Type: 9630                                           Security Code: 1234      TN: 1
  Port: S00006                                         Coverage Path 1: 7      COR: 1
  Name:                                                Coverage Path 2:        COS: 2
                                                    Hunt-to Station:
STATION OPTIONS
  Loss Group: 19                                       Time of Day Lock Table:
  Speakerphone: 2-way                                  Personalized Ringing Pattern: 1
  Display Language: english                            Message Lamp Ext: 6000
  Survivable GK Node Name:                             Mute Button Enabled? y
  Survivable COR: internal                             Button Modules: 0
  Survivable Trunk Dest? y                             Media Complex Ext:
                                                    IP SoftPhone? n
                                                    IP Video? n
Short/Prefixed Registration Allowed: default
                                                    Customizable Labels? y
```

5.7. Configure XDIDVIP Stations

XDIDVIP stations are a pool of DID numbers which can be assigned to client rooms requiring Direct Inward Dialing. This negates the requirement to have DID numbers for every client room. Enter the command **add station x** where **x** is an extension relevant to the dial plan. Set the **Type** as **XDIDVIP** and assign an identifying **Name**.

```
add station 6200                                       Page 1 of 1
                                                    STATION
Extension: 6200                                         BCC: 0
  Type: XDIDVIP                                         TN: 1
  Name:                                                 Coverage Path 1:        COR: 1
                                                    Coverage Path 2:        COS: 1
                                                    Hunt-to Station:
                                                    Time of Day Lock Table:
  Survivable COR: internal
  Survivable Trunk Dest? y
```

6. Configure TigerTMS iCharge

The configuration information provided in this section describes the steps required to set up iCharge to interoperate with Communication Manager via a PMS link.

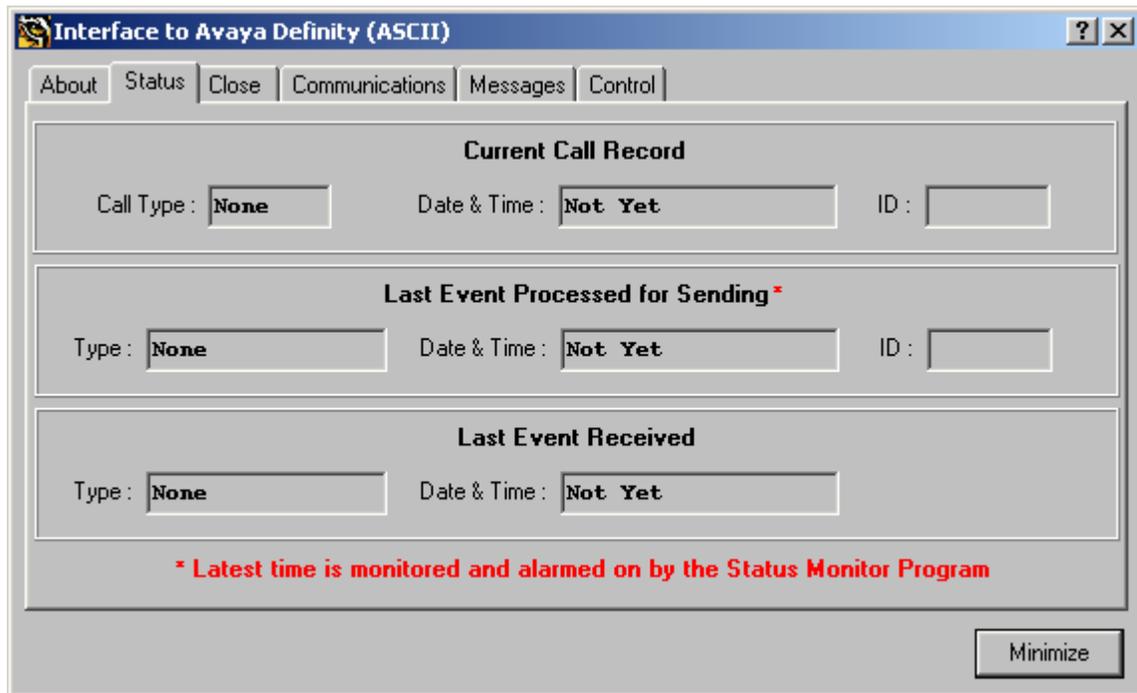
6.1. Configure PMS Connection Parameters

On the iCharge 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 Communication Manager in **Section 5.2**.

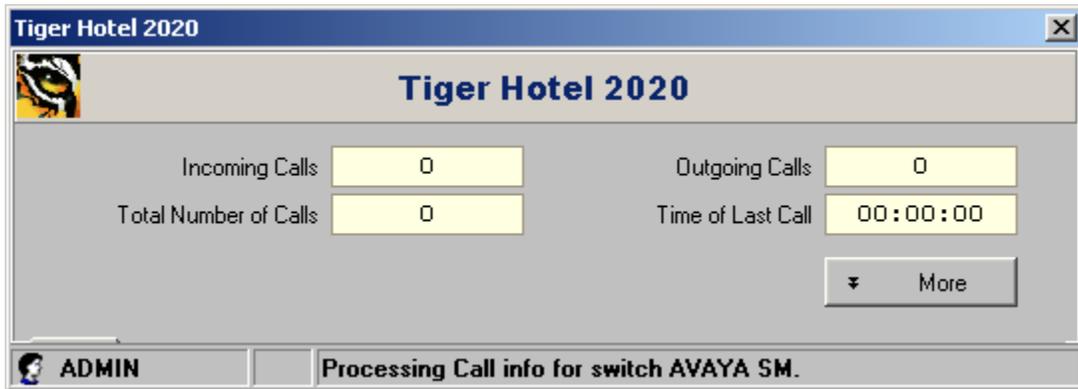
```
[Port]
PortType=IP
ClientServer=Server
IPPortNumber=5004
IPPersistentSocket=1
```

6.2. Start PMS Connection

On the iCharge server run the batch file by clicking on **Start → Programs → Startup → Start Interfaces**. The following screen is displayed.

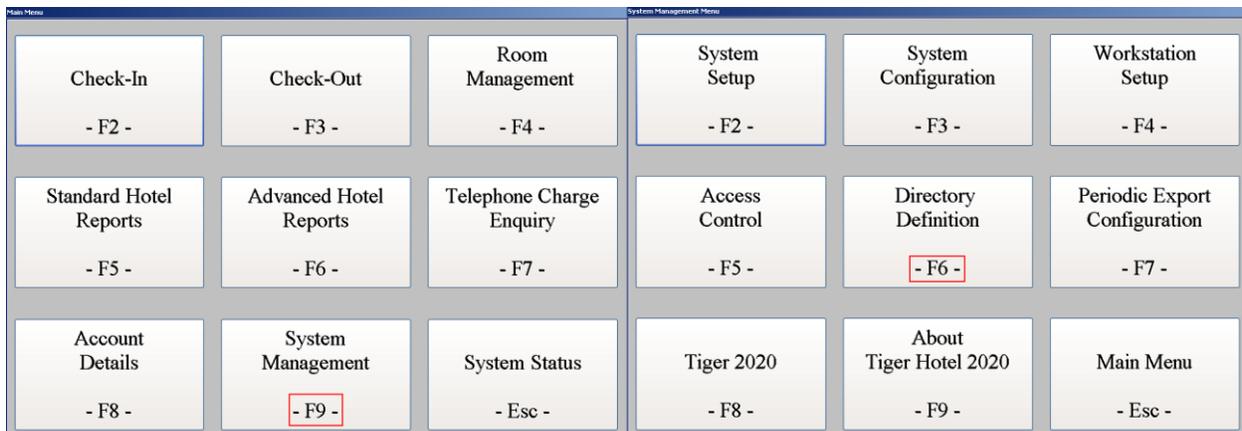


On the iCharge server, click on the **Tiger Hotel** shortcut on the desktop (not shown). Click on the Tiger Hotel 2020 screen and enter the appropriate user name and password in the dialog box that appears. The screen below will appear.

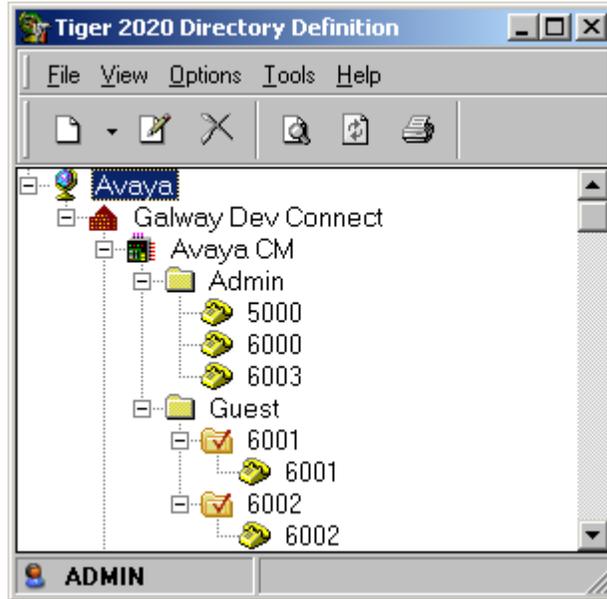


6.3. Configure Client Rooms

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



Administered client rooms are displayed in the screenshot below.



7. 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.

7.1. Verify Status of Avaya Aura® Communication Manager PMS Link

Enter the command **status pms-link**, verify that the **Physical Link State** is **up**.

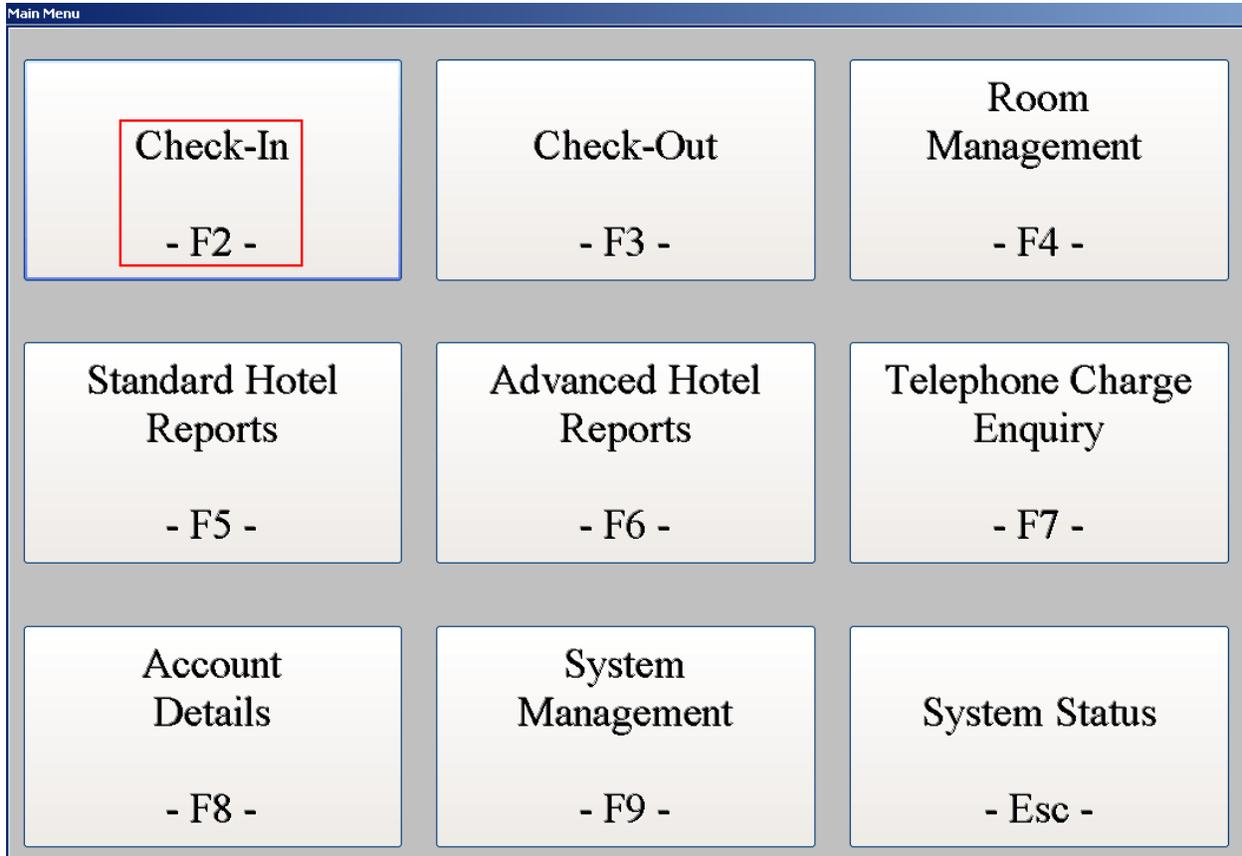
```
status pms-link
                                PMS LINK STATUS

Physical Link State: up
    Protocol State: up

Maintenance Busy? no
Data Base Swapping? no
```

7.2. Check-In Client Room and Verify Status

Using the iCharge application, use the **Check-In** hospitality function, to assign a room and extension to a guest. In the Main Menu screen, click on **Check-In (F2)**

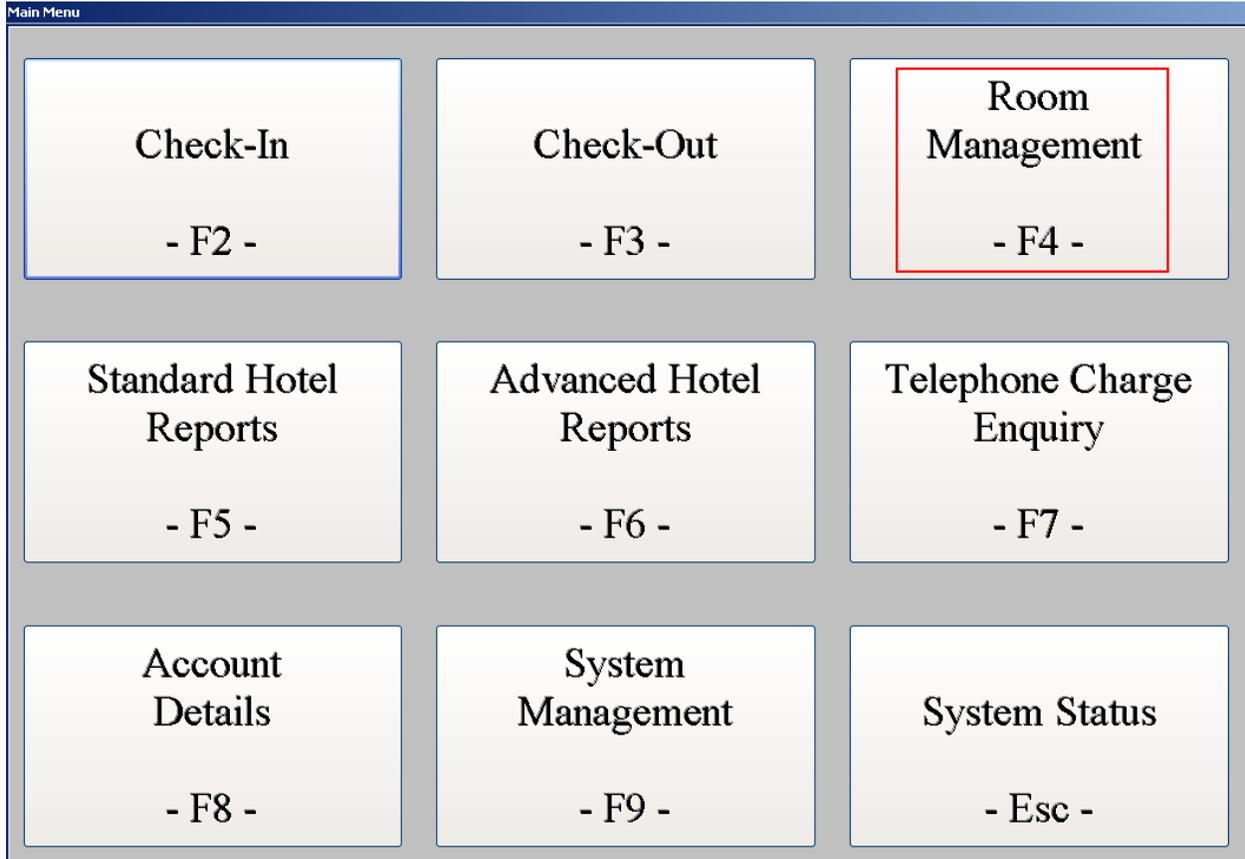


In the **Room** field, select a room number from the drop down list. Enter a descriptive name for the **Guest Details - Name** field and then click on the **Check-In (F10)** button.

The screenshot displays the 'Check-In' application window. The interface is divided into several sections:

- Room Details:** Contains fields for Reservation, Room Category (set to 'All'), Room (set to '6001'), Default Rate, New Rate (set to '(None)'), PIN (set to 'Not Allowed'), Intervals (set to '1'), and Total Rate Charge.
- Guest Details:** Includes tabs for 'Guest Details' and 'Additional Guest Details'. Fields include Name (set to 'Avaya Test'), Title, Initials, Address, and Arrival Date & Time.
- Function Buttons:** A vertical column of buttons on the right side, each with a function key label: Extension Attributes (-F2-), Additional Guests (-F3-), Message Waiting (-F4-), Budget Limits (-F5-), Wake-Up Calls (-F6-), PIN Attributes (-F7-), DDI Attributes (-F8-), Account Details (-F9-), Check-In (-F10-), and Exit (-Esc-).

In the **Main Menu** screen, click on **Room Management (F4)**.



In the **Room Management** screen, select room **6001** from the **Room** field drop down list. Verify the **Room state** is **Occupied**.

The screenshot displays the 'Room Management' application interface. The main window is titled 'Room Management' and is divided into several sections:

- Room Details:** A dropdown menu for 'Room' is set to '6001'. Below it is a yellowed-out 'Reservation' field. The 'Room Status' is 'Status 1', and the 'Room State' is 'Occupied'. There are radio buttons for 'Do Not Disturb' (On/Off).
- Guest Details:** A tabbed interface with 'Guest Details' selected. Fields include 'Name' (Avaya Test), 'Title' (dropdown), 'Initials', 'Address' (text area), 'MAC Address', and 'Person Id'. An 'Update' button is at the bottom right.
- Functionality Grid:** A vertical column of buttons on the right side, each with a function name and a key label:
 - Extension Attributes (-F2-)
 - Additional Guests (-F3-)
 - Message Waiting (-F4-)
 - Budget Limits (-F5-)
 - Wake-Up Calls (-F6-)
 - PIN Attributes (-F7-)
 - DDI Attributes (-F8-)
 - Account Details (-F9-)
 - Room Transfer (-F10-)
 - Exit (-Esc-)

7.3. Verify Room Status on Avaya Aura® Communication Manager

Enter the command **status station n** where **n** is the client room checked-in in **Section 7.2**. Confirm that the **Room Status** displays **Occupied**.

```
status station 6000                                     Page 1 of 7
                                     GENERAL STATUS
Administered Type: 9630                               Service State: in-service/on-hook
Connected Type: 9630                                  TCP Signal Status: connected
  Extension: 6000
    Port: S00006                                       Parameter Download: complete
      Call Parked? no                                  SAC Activated? no
      Ring Cut Off Act? no
Active Coverage Option: 1                             one-X Server Status: N/A

      EC500 Status: N/A                               Off-PBX Service State: N/A
Message Waiting: VM Server
Connected Ports:

Limit Incoming Calls? no

User Cntrl Restr: none                               HOSPITALITY STATUS
Group Cntrl Restr: none                             Awaken at:
                                                    User DND: not activated
                                                    Group DND: not activated
Room Status: occupied
```

8. Conclusion

These Application Notes describe the required configuration steps for the TigerTMS iCharge to execute hospitality functions via the PMS link to Avaya Aura® Communication Manager. All test cases passed successfully with observations noted in **Section 2.2**.

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>.

- *Administering Avaya Aura® Communication Manager*, Release 6.3, 03-300509
- *GuestWorks and DEFINITY Enterprise Communications Server*. Property Management System Interface Specifications. Document ID 555-231-601, Issue 4, December 2001.

TigerTMS iCharge Product information available from <http://www.tigertms.com>

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