



Avaya Solution & Interoperability Test Lab

Application Notes for FCS Unicorn with Avaya Aura® Communication Manager 6.2 - Issue 1.0

Abstract

These Application Notes describe the procedures for configuring the FCS Unicorn application to interoperate with Avaya Aura® Communication Manager. FCS Unicorn is a Windows-based integrated billing and interface solution that supports all major PMS and PABX systems. This system is unlike its predecessor FCS WinSuite, which is limited to a single property and PABX system.

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 procedures for configuring FCS Unicorn to interoperate with Avaya Aura® Communication Manager. FCS Unicorn is a Windows-based integrated billing and interface solution that supports all major PMS and PABX systems. This system is unlike its predecessor FCS WinSuite, which is limited to a single property and PABX system. FCS Unicorn provides a real-time multitasking interface between Avaya Aura® Communication Manager and a hotel's 3rd party Property Management System (PMS). In addition to functioning as a call charge and billing system that manages the costs of telephony and service usage, FCS Unicorn supports standard Hospitality feature requests to/from a PMS (guest room check-in/check-out/moves, Do Not Disturb (DND), Automatic Wake-Up (AWU), Message Waiting Lamp (MWL) control, Housekeeping/Room Status changes). The call charge and billing functionality is facilitated by a Call Detail Recording (CDR) interface to Avaya Aura® Communication Manager, while the Hospitality features are enabled by a PMS data link to Avaya Aura® Communication Manager.

When notified of a guest room check-in, FCS Unicorn removes outbound call restrictions on the guest room extension and changes that extension's Hospitality Status to "occupied." Conversely, when notified of a guest room check-out, FCS Unicorn restricts outbound calls on the guest room extension and sets its Hospitality Status to "non-guest room."

2. General Test Approach and Test Results

Feature functionality testing was performed manually. Inbound calls were made to the Avaya IP Telephones (i.e., the guest telephones) over BRI trunks, as well as from other local extensions (analog, digital, and IP Telephone). A simulated PMS application was used to launch changes to telephone message waiting lamps and phone privileges during room check in / check out / move requests, receive room status updates, and activate/deactivate DND.

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 focused on the ability of FCS Unicorn to work with Avaya Aura® Communication Manager. FCS Unicorn features and capabilities that were verified included the following: receipt and processing of Call Detail Records, check-in/check-out/room change for guest extensions, receipt of Housekeeping/Room Status changes initiated at guest telephones and forwarding to a simulated Property Management System, MWL activation for incoming voicemail, and DND activation/deactivation

2.2. Test Results

All executed test cases were completed successfully. One observation to note was that the FCS Unicorn application needed to be restarted on occasion if the server is rebooted. However, one work around would be to place FCS Unicorn in the Start menu for auto-restart.

2.3. Support

For technical support on FCS Unicorn, contact FCS Computer Systems at Support Hotline at +632-857-4000.

3. Reference Configuration

The configuration used in performing compliance testing of FCS Unicorn is shown in **Figure 1**. It shows a network consisting primarily of an Avaya S8800 Server running Avaya Aura® Communication Manager in Duplex mode with an Avaya G650 Media Gateway, an FCS Unicorn server, and a pair of phones for each guest room, which are either analog or digital with an Avaya IP Telephone. Beside G650 Media Gateway, G450 or G430 Media Gateways can also be used. If they are used, the FCS Unicorn would be connected directly to the “Procr” interface on the Avaya S8800 servers. The CDR and PMS data links from FCS Unicorn are carried over the IP network and terminated in Avaya Aura® Communication Manager as IP services.

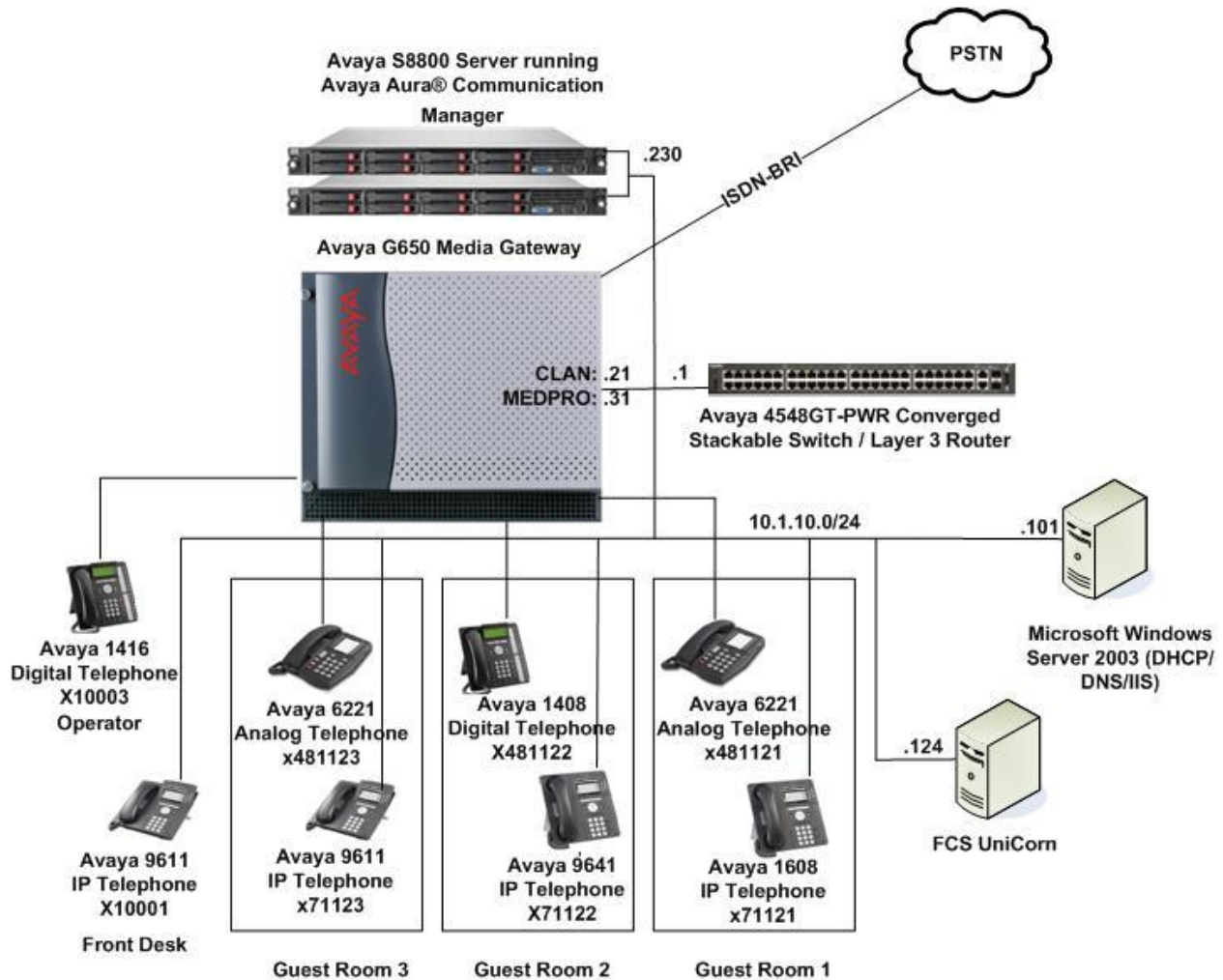


Figure 1: Sample Test Configuration

4. Equipment and Software Validated

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

Equipment/Software	Release Version
Avaya Aura® Communication Manager on S8800 Server	R6.2 SP4
Avaya G650 Media Gateway <ul style="list-style-type: none"> TN2312BP IP Server Interface TN799DP C-LAN Interface TN2602AP IP Media Processor 	- HW07, FW057 HW01, FW041 HW02, FW063
Avaya 4548GT-PWR Converged Stackable Switch	v5.6.1.052
Avaya 9621 IP Telephone	6.2 SP5
Avaya 9611 IP Telephone	6.2 SP5

Equipment/Software	Release Version
Avaya 9640 IP Telephone	3.1 SP3
Avaya 1608 IP Telephone	1.32
Avaya 6221 Analog Telephone	-
Avaya 1416 Digital Telephone	-
Avaya 1408 Digital Telephone	-
FCS Unicorn Server on Windows Server 2008 R2 SP1	1.1.0.98
• AvayaASCII.PBX.exe	1.0.98.8
• Generic.CDR.exe	1.0.0.13

5. Configure Avaya Aura® Communication Manager

This section details the steps required to configure Avaya Aura® Communication Manager to interoperate with FCS Unicorn. These Application Notes assume the Avaya Media Gateway (including circuit packs) has already been administered. Please refer to [0] for additional details.

The commands listed in this section were issued at the Avaya System Access Terminal (SAT) screen. For all steps where data are modified, submit the completed administration form for the changes to take effect.

5.1. Turn On Special Applications

Special-applications feature is required for this compliance testing in order to expand the numbering and character names for PMS from 5-digit extensions and 15 character names to 7-digit extensions and 27 character names. **(SA8662) – Expanded PMS Name and Number special-applications feature is changed from n→y.**

```

change system-parameters special-applications                               Page 5 of 10
                                SPECIAL APPLICATIONS

                                (SA8652) - No Hold Consult? n
(SA8654) - Crisis Alert Call Monitoring and Recording? n
                                (SA8661) - Increased Automatic Wakeup Calls? n
                                (SA8662) - Expanded PMS Name & Number? y
                                (SA8684) - PMS Wakeup Message? n
(SA8693) - Connectivity Check for Direct IP Shuffling? n

                                (SA8697) - 3rd Party H.323 Endpoint Support? n
(SA8701) - Net Region Support H.323 Endpoints Behind ALG? n
                                (SA8702) - CDR Enhancements for Network? n
(SA8731) - Block Outgoing Bridged Call Display? n
                                (SA8734) - Enhanced Extension Display? n
(SA8741) - CDR Identifier for IP Station Calls? n
                                (SA8744) - Block Name for Room to Room Calls? n
(SA8747) - Softphone Indication on DCP Terminals? n

```

5.2. Set Hospitality Parameters

Enter **change system-parameters hospitality**. On **Page 1**, set the following values:

- Message Waiting Configuration: **act-pms**.
- Controlled Restrictions Configuration: **act-pms**.
- Housekeeper Information Configuration: **act-pms**.
- Client Room Coverage Path Configuration: **act-pms**.
- Default Coverage Path for Client Rooms: Set to the number of a coverage path that provides the appropriate coverage treatment for an unoccupied guest room, e.g., coverage to the hotel operator (in this example, coverage path **100** is used).
- PMS Endpoint: **PMS**.
- Seconds before PMS Link Idle Timeout: Set the timeout to be greater than the FCS Unicorn keep alive for Communication Manager to determine if the link is still alive (in this example, **15** seconds is used)
- Milliseconds before PMS Link Acknowledgement Timeout: **1000** (to allow for longer PMS response time)

```
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-pms
      Default Coverage Path for Client Rooms: 100
      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: 15
      Milliseconds before PMS Link Acknowledgement Timeout: 1000
      PMS Link Maximum Retransmissions: 3
      PMS Link Maximum Retransmission Requests: 3
      Take Down Link for Lost Messages? y
```

- Number of Digits from PMS: **Blank** for mixed numbering as guest rooms has extension of 5 and 6 digit length.
- Number of Digits in PMS Coverage Path: Set the number of digits for coverage path (in this example, **3** digits is used for coverage path)

```

change system-parameters hospitality                               Page 2 of 3
                                HOSPITALITY

Dual Wakeups? y      Daily Wakeup? y      VIP Wakeup? y
                                VIP Wakeups Per 5 Minutes: 5
                                Room Activated Wakeup With Tones? y
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:

```

5.3. Set Room Status Values

Advance to **Page 3** and enter the following values for the fields indicated:

- Definition for Rooms in State 1: **Vacant Dirty**
- Definition for Rooms in State 2: **Vacant Ready**
- Definition for Rooms in State 3: **Occupied Dirty**
- Definition for Rooms in State 4: **Occupied Clean**

```

change system-parameters hospitality                               Page 3 of 3
ROOM STATES                                HOSPITALITY

Definition for Rooms in State 1: Vacant Dirty
Definition for Rooms in State 2: Vacant Ready
Definition for Rooms in State 3: Occupied Dirty
Definition for Rooms in State 4: Occupied Clean
Definition for Rooms in State 5:
Definition for Rooms in State 6:

HOSPITALITY FEATURES
                                Suite Check-in? n
Cancel Do-Not-Disturb for Wakeup Calls? y

```

5.4. Administer Feature Access Codes for Entering Housekeeping Status:

Enter **change feature-access-codes** (FACs) and advance to **Page 8**. Enter unique FACs for each of the six **Housekeeping Status (Client Room) Access Code** listed, each of which will correspond to the room status values administered in **Section 5.3** (in this example, ***78, *79, *80 and *81** were used, respectively). Also, enter unique FACs for each of the four **Housekeeping Status (Station) Access Code** listed, each of which will correspond to the first four room status values administered in **Section 5.3** (in this example, ***84, *85, *86 and *87** were used, respectively). This is for the housekeeper or hotel staff using phones not in the guest rooms to update housekeeping status. The corresponding room number needs to be entered after the feature code.

```
change feature-access-codes                                     Page 8 of 9
                                     FEATURE ACCESS CODE (FAC)
                                     Hospitality Features

Automatic Wakeup Call Access Code: *77
Housekeeping Status (Client Room) Access Code: *78
Housekeeping Status (Client Room) Access Code: *79
Housekeeping Status (Client Room) Access Code: *80
Housekeeping Status (Client Room) Access Code: *81
Housekeeping Status (Client Room) Access Code:
Housekeeping Status (Client Room) Access Code:
Housekeeping Status (Station) Access Code: *84
Housekeeping Status (Station) Access Code: *85
Housekeeping Status (Station) Access Code: *86
Housekeeping Status (Station) Access Code: *87
Verify Wakeup Announcement Access Code: *88
Voice Do Not Disturb Access Code: *89
```

5.5. Define the FCS Unicorn Server as an IP Node Name

Enter **change node-names ip** and add an entry for the FCS Unicorn server using an appropriately descriptive value for the **Name** (in this case, **FCSUni**) and the corresponding **IP Address** (in this example, **10.1.10.124**).

```
change node-names ip                                         Page 1 of 2
                                     IP NODE NAMES

Name          IP Address
FCSUni      10.1.10.124
Gateway001    10.1.10.1
Gateway002    10.1.50.1
IPOffice      10.1.30.10
PC2           10.1.10.152
aes1          10.1.10.71
cms1          10.1.10.85
default       0.0.0.0
msgserver     10.1.10.10
n             10.3.10.253
procr         10.1.10.230
procr6        ::
( 16 of 30 administered node-names were displayed )
Use 'list node-names' command to see all the administered node-names
Use 'change node-names ip xxx' to change a node-name 'xxx' or add a node-name
```


5.6. Define IP services in support of the PMS and CDR data links:

Enter **change ip-services** and add entries with a Service Type of **PMS** and **CDR1** (or, if a CDR1 service is already defined, **CDR2**), respectively. In each case, enter the following values in the remaining fields:

- Local Node: The IP Node Name of a C-LAN board or PROCR (in this example, **procr** is used for IP service definition).
- Remote Node: The IP Node Name of the FCS Unicorn server, as defined in **Section 5.5**.
- Remote Port: A valid unused port (in this example, the value needs to tally with the FCS Unicorn setup where **5053** is used for **PMS**, while **5052** is used for **CDR1**).

```
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	FCSUni	5053
CDR1		procr	0	FCSUni	5052

5.7. Administer CDR Output Format

Enter **change system-parameters cdr** and choose one of the standard output formats for the **Primary Output Format** field (in this example, **customized** was entered). This selection will determine the expected call detail record format that will be administered in FCS Unicorn. For more information on CDR output formats in Avaya Aura® Communication Manager, please refer to [0].

```
change system-parameters cdr Page 1 of 2
```

CDR SYSTEM PARAMETERS	
Node Number (Local PBX ID): 1	CDR Date Format: day/month
Primary Output Format: customized	Primary Output Endpoint: CDR1
Secondary Output Format:	
Use ISDN Layouts? n	Enable CDR Storage on Disk? y
Use Enhanced Formats? n	Condition Code 'T' For Redirected Calls? n
Use Legacy CDR Formats? n	Remove # From Called Number? n
Modified Circuit ID Display? n	Intra-switch CDR? y
Record Outgoing Calls Only? n	Outg Trk Call Splitting? y
Suppress CDR for Ineffective Call Attempts? y	Outg Attd Call Record? y
Disconnect Information in Place of FRL? n	Interworking Feat-flag? n
Force Entry of Acct Code for Calls Marked on Toll Analysis Form? n	Calls to Hunt Group - Record: member-ext
Record Called Vector Directory Number Instead of Group or Member? n	
Record Agent ID on Incoming? n	Record Agent ID on Outgoing? y
Inc Trk Call Splitting? y	Inc Attd Call Record? n
Record Non-Call-Assoc TSC? n	Call Record Handling Option: warning
Record Call-Assoc TSC? n	Digits to Record for Outgoing Calls: dialed
Privacy - Digits to Hide: 0	CDR Account Code Length: 15

CDR SYSTEM PARAMETERS

Data Item - Length	Data Item - Length	Data Item - Length
1: date - 6	17: in-trk-code - 4	33: -
2: time - 4	18: node-num - 2	34: -
3: sec-dur - 5	19: ins - 5	35: -
4: cond-code - 1	20: ixc-code - 3	36: -
5: code-dial - 4	21: bcc - 1	37: -
6: code-used - 4	22: ma-uui - 1	38: -
7: dialed-num - 23	23: res_flag - 1	39: -
8: calling-num - 10	24: tsc_ct - 4	40: -
9: acct-code - 15	25: tsc_flag - 1	41: -
10: auth-code - 7	26: space - 1	42: -
11: space - 1	27: return - 1	43: -
12: frl - 1	28: line-feed - 1	44: -
13: in-crt-id - 3	29: null - 1	45: -
14: out-crt-id - 3	30: null - 1	46: -
15: feat-flag - 1	31: null - 1	47: -
16: attd-console - 4	32: -	48: -

Record length = 120

5.8. Add Client Room Properties to a Class of Service

Enter **change cos x** (where **x** is Class of Service **5** as shown below), and for the Class of Service to be assigned to guest telephones, set the **Client Room** field to **y**.

CLASS OF SERVICE

COS Group: 5 COS Name: Guest

	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	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	n	n	n	y	n	n	n	n	n	n	n	n	n	n
Restrict Call Fwd-Off Net	y	y	y	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
Automatic Exclusion	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n

5.9. Create default Coverage Path

Enter **add coverage path x**, where **x** is the number of the default coverage path define in **Section 5.2**. In this example, the coverage is set to the operator.

```

add coverage path 100                                     Page 1 of 1
                                COVERAGE PATH

                                Coverage Path Number: 100
                                Cvg Enabled for VDN Route-To Party? n      Hunt after Coverage? n
                                Next Path Number:                          Linkage

COVERAGE CRITERIA
  Station/Group Status   Inside Call   Outside Call
    Active?              n             n
    Busy?                y             y
    Don't Answer?       y             y      Number of Rings: 2
    All?                 n             n
  DND/SAC/Goto Cover?   y             y
  Holiday Coverage?     n             n

COVERAGE POINTS
  Terminate to Coverage Pts. with Bridged Appearances? n
  Point1: 10003          Rng:         Point2:
  Point3:                Point4:
  Point5:                Point6:
  
```

5.10. Set Guest Room Calling Party Restrictions in a Class of Restriction (COR)

Enter **change cor n**, where **n** is the number of the Class of Restriction to be assigned to guest telephones (in this example, COR 5 is used). In the **Calling Party Restriction** field, enter **all-toll**.

```

change cor 5                                             Page 1 of 23
                                CLASS OF RESTRICTION

                                COR Number: 5
                                COR Description: Guest Room

                                FRL: 0                                  APLT? y
                                Can Be Service Observed? n              Calling Party Restriction: all-toll
                                Can Be A Service Observer? n           Called Party Restriction: none
                                Time of Day Chart: 1                   Forced Entry of Account Codes? n
                                Priority Queuing? n                     Direct Agent Calling? n
                                Restriction Override: none              Facility Access Trunk Test? n
                                Restricted Call List? n                 Can Change Coverage? n
                                Unrestricted Call List:
                                Access to MCT? y                       Fully Restricted Service? n
                                Group II Category For MFC: 7           Hear VDN of Origin Annc.? n
                                Send ANI for MFE? n                   Add/Remove Agent Skills? n
                                MF ANI Prefix:                         Automatic Charge Display? n
                                Hear System Music on Hold? y          PASTE (Display PBX Data on Phone)? n
                                Can Be Picked Up By Directed Call Pickup? n
                                Can Use Directed Call Pickup? n
                                Group Controlled Restriction: inactive
  
```

5.11. Assign Class of Service and Class of Restriction Values to Guest Telephones

For each guest telephone extension *x*, enter **change station x** and enter in the **COR** and **COS** fields the values corresponding to the Class of Service and Class of Restriction administered in **Section 5.9 and 5.10**, respectively.

```

change station 481121                                     Page 1 of 4
                                     STATION
Extension: 481121                                         Lock Messages? n      BCC: 0
Type: 2500                                                Security Code:         TN: 1
Port: 01A0605                                             Coverage Path 1: 100  COR: 5
Name: Check In Test                                       Coverage Path 2:      COS: 5
                                                           Hunt-to Station:      Tests? y

STATION OPTIONS
  XOIP Endpoint type: auto                               Time of Day Lock Table:
  Loss Group: 1                                          Message Waiting Indicator: led
Off Premises Station? n                                  Message Lamp Ext: 481121

  Survivable COR: internal
  Survivable Trunk Dest? y

  Remote Office Phone? n

Passive Signalling Station? n
  
```

5.12. Do Not Disturb (DND) Termination Restriction

Enter **change system-parameters features** and in **Page 4**, at the Controlled Termination Restriction (Do Not Disturb) field, enter **coverage**. This selection will determine the type of intercept treatment the caller receives when the call is placed to a guest room when DND is activated by PMS. In this example, caller is placed to the default coverage path **100** of the guest room define in **Section 5.2**.

```

Change system-parameters features                       Page 4 of 19
                                     FEATURE-RELATED SYSTEM PARAMETERS
  Reserved Slots for Attendant Priority Queue: 5
    Time before Off-hook Alert: 10
  Emergency Access Redirection Extension:
Number of Emergency Calls Allowed in Attendant Queue: 5
  Drop Parking User From the Call After Timeout? n
  Deluxe Paging and Call Park Timeout to Originator? y
  Controlled Outward Restriction Intercept Treatment: tone
  Controlled Termination Restriction (Do Not Disturb): coverage
  Controlled Station to Station Restriction: tone

AUTHORIZATION CODE PARAMETERS
  Authorization Codes Enabled? y
  Authorization Code Length: 7
  Authorization Code Cancellation Symbol: #
  Attendant Time Out Flag? n
  Display Authorization Code? n
  Controlled Toll Restriction Replaces: none
  
```

6. Configure FCS Unicorn

This section details the essential portion of the FCS Unicorn configuration to interoperate with Avaya Aura® Communication Manager. These Application Notes assume that the FCS Unicorn application has already been properly installed by FCS services personnel. Further details of the FCS Unicorn setup can be found in the Unicorn (Standard) v1.1 - Installation Manual v1.0 [3].

1. The Unicorn Avaya PMSi interface module port and data configuration is defined in the AvayaAscii-PBX.xml located in the “C:\Program Files (x86)\FCS\Unicorn\Control\” directory. The host is set as **tcp.ip** type listening to port **5053**. This corresponds with the setup of Communication Manager at **Section 5.6** for the **PMS** service type.

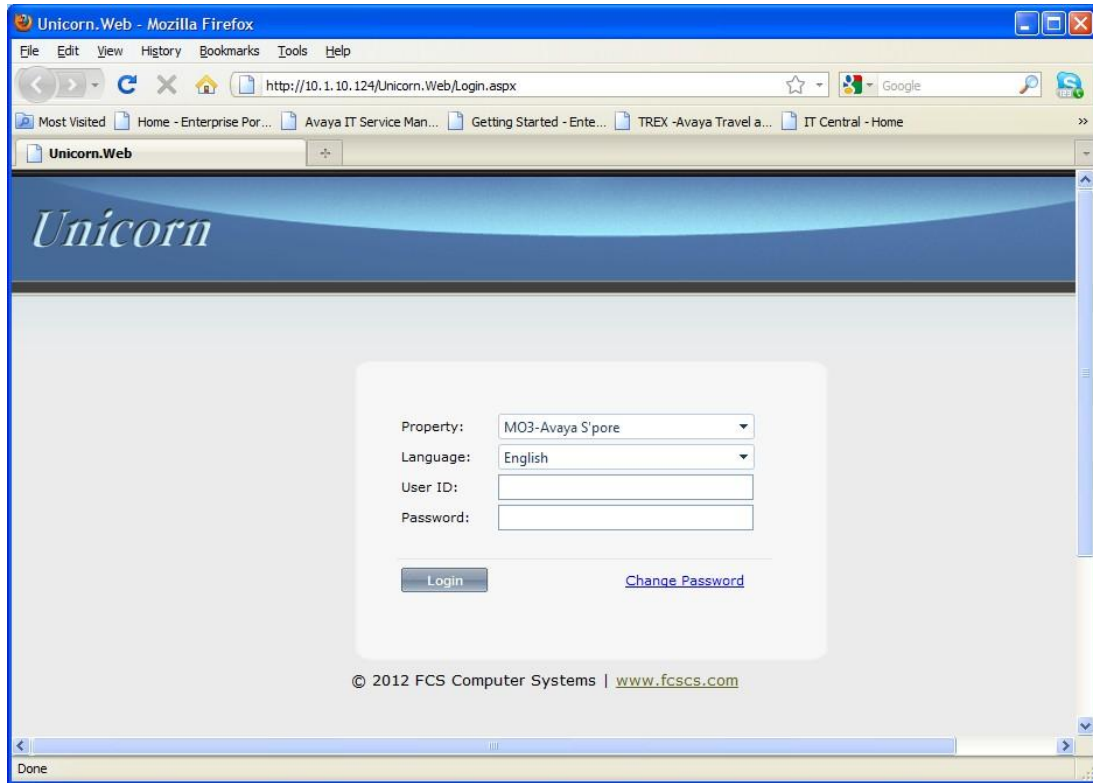
```
- <PBX ID="AvayaAscii">
- <!--
  need to match with the XML filename
  -->
- <CommunicationSetting>
  <Name>Avaya Ascii</Name>

:
:
-->
<InterfaceType>2</InterfaceType>
<InterfaceSetting>H,10.1.10.124:5053</InterfaceSetting>
<UDPSvrInterfaceSetting />
- <!--
  if tcp.ip, interfaceSetting could be
  "X,192.168.1.12:5600",
  where X = H = host, C=client
```

2. The Unicorn Avaya CDR interface module port & data configuration is defined in the Generic-CDR.xml located in the “C:\Program Files (x86)\FCS\Unicorn\Control\” directory. The host is set as **tcp.ip** type listening to port **5052**. This corresponds with the setup of Communication Manager at **Section 5.6** for the **CDR1** service type.

```
- <PBX ID="CDR1">
- <!--
  need to match with the XML filename
  -->
- <CommunicationSetting>
  <Name>Avaya</Name>
  <ProtocolFormat>2</ProtocolFormat>
- <!--
  1=[STX]xxxxx[ETX], 2=xxxxxxxx[13][10] 3=[13][10]xxxxxxxx, 4=Fixed Length
  -->
  <InterfaceType>2</InterfaceType>
- <!--
  1 = RS232, 2=tcp.ip 3=udp, 4=telnet,5=bisync 6=file sharing
  -->
  <InterfaceSetting>H,127.0.0.1:5052</InterfaceSetting>
- <!--
  if tcp.ip, interfaceSetting could be "X,192.168.1.12:5600" , where X = H = host, C=client
  -->
- <!--
  3,9600,n,8,1 - com. port 3, baud rate 9600,n,8,1
  -->
  <UDPSvrInterfaceSetting />
```

3. FCS Unicorn provides a web interface for posting and reporting. Administrator can log in with the appropriate credentials from <http://<server name or ip address>/Unicorn.Web/Login.aspx> as shown below by substituting the appropriate server ip address where the FCS Unicorn is installed.



- The **Posting** tab below shows the various PMS features such as DND, Check In/Out, Guest Profile, etc that can administered from the web interface. Further details can be referred from the “Unicorn (Standard) v1.1 - User Manual v1.0” [4].

The screenshot displays the Unicorn PMS web interface. At the top, there is a header with the Unicorn logo, business date (14-Feb-2012), language (English), and user information (Hi, Administrator). The main navigation bar includes Home, Posting (selected), Reporting, and Configuration. The Posting tab is active, showing three columns of options: Guest (Check In/Out, Edit Profile, Room Change), Room Extension (Mobility, Do Not Disturb, Wake Up Call, Class of Service, Room Status, Message Waiting, Batch Upload PMS), and Charges (Calls, Minibar Total, Minibar Itemized, Failed Posting, Batch Upload CDR). Below these options is a form with fields for Check Out (calendar icon, 12, 00), Folio No., Group No., VIP No., Password, Language (EN-English), and COS (UA-Unbar all (IDD/Intl and STD/Domestic and local call)). Submit and Reset buttons are at the bottom.

7. Verification Steps

This section describes steps that may be used to verify the configuration.

To verify that the PMS data link between Avaya Aura® Communication Manager and FCS Unicorn is operational, enter **status pms-link** at the SAT and look for a status of **up** in the **Physical Link State** and **Protocol State** fields.

```
status pms-link
                                PMS LINK STATUS

Physical Link State: up
Protocol State: up

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

To verify that the CDR data link between Avaya Aura® Communication Manager and FCS Unicorn is operational, enter **status cdr-link** at the SAT and look for a status of **up** in the **Link State** field of the CDR link to FCS Unicorn (in this example, the **Primary** link).

```
status cdr-link
                                CDR LINK STATUS

Primary                               Secondary

Link State: up                       CDR not administered

Date & Time: 2012/12/17 15:52:56     0000/00/00 00:00:00
Forward Seq. No: 0                     0
Backward Seq. No: 0                     0
CDR Buffer % Full: 0.00                  0.00
Reason Code: OK
```

To verify the ability to check in guest extension *x*, initiate such a request from the associated Property Management System. At Avaya Aura® Communication Manager SAT, enter **status station x** and verify that **Room Status** is **occupied** and **User Cntrl Restr** is **none**.

GENERAL STATUS

Administered Type: 2500 Service State: in-srv/on-hook or disc
 Connected Type: N/A
 Extension: 481121
 Port: 01A0605 Parameter Download: not-applicable
 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:
 Connected Ports:
 Limit Incoming Calls? no

User Cntrl Restr: none
 Group Cntrl Restr: none

HOSPITALITY STATUS

Awaken at:
 User DND: not activated
 Group DND: not activated
Room Status: occupied

8. Conclusion

These Application Notes describe the procedures for configuring FCS Unicorn to interoperate with Avaya Aura® Communication Manager. All interoperability compliance test cases executed against such a configuration were completed successfully with observations noted in **Section 2.2**.

9. Additional References

- [1] *Administering Network Connectivity on Avaya Aura® Communication Manager*, Feb 2012, Document ID 555-233-504 Issue 16.0, available at <http://support.avaya.com>.
- [2] *Administering Avaya Aura® Communication Manager Release 6.2*, Feb 2012, Document ID 03-300509 Issue 7.0, available at <http://support.avaya.com>.
- [3] *Unicorn (Standard) v1.1 - Installation Manual v1.0*, available at <http://www.fcscs.com>
- [4] *Unicorn (Standard) v1.1 - User Manual v1.0*, available at <http://www.fcscs.com>

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