



## **Avaya Solution & Interoperability Test Lab**

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# **Application Notes for Etesalat Innovations Call Management Server with Avaya Communication Manager - Issue 1.0**

### **Abstract**

These Application Notes describe the configuration steps required for Etesalat Innovations Call Management Server to interoperate with Avaya Communication Manager.

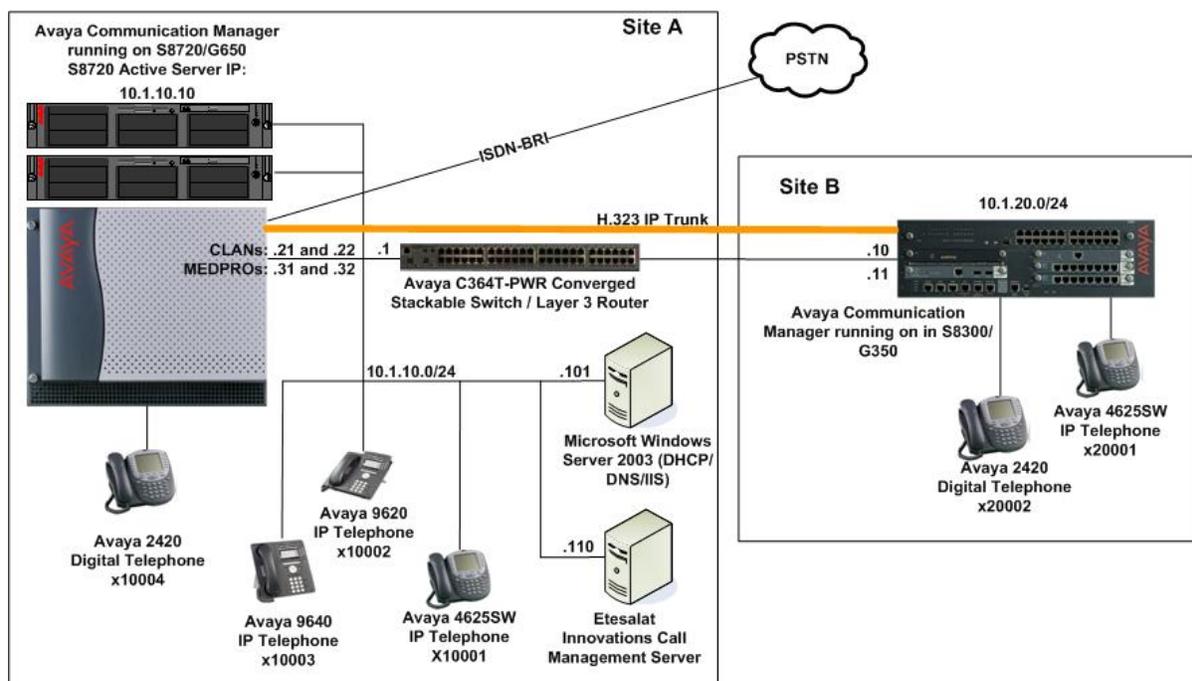
Etesalat Innovations Call Management Server is a hospitality system that provides call accounting and real-time interface between Avaya Communication Manager and a hotel's Property Management System (PMS).

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 Etesalat Innovations Call Management Server 3.0 to interoperate with Avaya Communication Manager 5.0. Etesalat Innovations Call Management Server is a hospitality system that provides call accounting and real-time interface between Avaya Communication Manager and a hotel's Property Management System (PMS). Call Management Server supports hospitality feature requests to/from a PMS such as guest room check-in/check-out, guest room swap/move, call restriction, Message Waiting Indicator (MWI) control and housekeeping status changes. The call accounting functionality is facilitated by a Call Detail Recording (CDR) interface to Avaya Communication Manager, while the Hospitality features are enabled by a PMS data link to Avaya Communication Manager.

**Figure 1** illustrates the network configuration used to verify the Etesalat Innovations Call Management Server solution. Site A is comprised of a pair of Avaya S8720 Servers and Avaya G650 Media Gateway, and has connections to the following: Avaya 4600 and 9600 Series IP Telephones, Avaya 2400 Series Digital Telephones, and an ISDN-BRI trunk to the PSTN. Etesalat Innovations Call Management Server is installed on a server running Microsoft Windows Server 2003 with Service Pack 2. Site B is comprised of an Avaya S8300 Server with Avaya G350 Media Gateway, and has connections to an Avaya 4600 Series IP Telephone and an Avaya 2400 Series Digital Telephone. The Avaya C364T-PWR Converged Stackable Switch provides Ethernet connectivity to the servers and IP telephones and Layer 3 IP routing between the two sites. An H.323 IP trunk is configured between Site A and B for the users to call between the two sites.



**Figure 1: Test configuration**

## 2. Equipment and Software Validated

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

Equipment	Software
Avaya S8720 Servers	Avaya Communication Manager 5.0 (Service Pack 3 00.0.825.4- 15759)
Avaya G650 Media Gateway - TN2312BP IP Server Interface - TN799DP C-LAN Interface - TN2302AP IP Media Processor - TN2602AP IP Media Processor - TN2214CP Digital Line - TN2793B Analog Line	- HW07, FW043 HW01, FW026 HW20, FW117 HW02, FW034 HW08, FW015 000013
Avaya S8300 Server	Avaya Communication Manager 5.0 (Service Pack 3 00.0.825.4- 15759)
Avaya G350 Media Gateway	27.27.0
Avaya 4600 Series IP Telephones - 4625SW	2.8.8.7 (H.323)
Avaya 9600 Series IP Telephones - 9620 - 9640	1.5 (H.323) 1.5 (H.323)
Avaya 2400 Series Digital Telephone	-
Avaya C364T-PWR Converged Stackable Switch	4.5.18
Etesalat Innovations Call Management Server	3.0

## 3. Configure Avaya Communication Manager

### 3.1. Call Detail Recording Interface

This section provides the procedures for configuring Call Detail Recording (CDR) in Avaya Communication Manager. All configuration changes in Avaya Communication Manager are performed through the System Access Terminal (SAT). For this configuration, the CDR links are configured to originate from the IP addresses of the C-LAN board and terminates at the IP address of the Etesalat Innovations Call Management Server. These steps describe the procedure used for the Avaya S8720 Server only. The highlights in the following screens indicate the parameter values used during the compliance test.

Step	Description
1.	<p>Use the <b>change node-names ip</b> command to add a new node name for the Etesalat Innovations Call Management Server.</p> <pre> change node-names ip                                     Page 1 of 1                                      IP NODE NAMES Name                IP Address default             0.0.0.0 CLAN-01A02          10.1.10.21 CLAN-01A11          10.1.10.22 MEDPRO-01A13        10.1.10.32 MEDPRO-01A14        10.1.10.31 <b>EICMS</b>             <b>10.1.10.110</b> </pre>
2.	<p>Use the <b>change ip-services</b> command to define the CDR link. To define a primary CDR link, the following information should be provided:</p> <ul style="list-style-type: none"> <li>• <b>Service Type: CDR1</b></li> <li>• <b>Local Node:</b> The IP Node Name of a C-LAN board (in this example, CLAN-01A02 is used for each IP service definition).</li> <li>• <b>Local Port: 0</b> [The Local Port is fixed to 0 because Avaya Communication Manager initiates the CDR link.]</li> <li>• <b>Remote Node: EICMS</b> [The Remote Node is set to the node name previously defined in <b>Step 1.</b>]</li> <li>• <b>Remote Port: 9000</b> [The Remote Port may be set to a value between 5000 and 64500 inclusive, and must match the port configured in Etesalat Innovations Call Management Server in <b>Section 4 Step 4.</b>]</li> </ul> <pre> change ip-services                                     Page 1 of 4                                      IP SERVICES Service  Enabled   Local   Local   Remote   Remote Type     Type        Node    Port    Node     Port <b>CDR1</b>    <b>CLAN-01A02</b> <b>0</b>     <b>EICMS</b> <b>9000</b> </pre> <p>On Page 3 of the IP SERVICES form, enable the Reliable Session Protocol (RSP) for the CDR link by setting the <b>Reliable Protocol</b> field to <b>y</b>.</p> <pre> change ip-services                                     Page 3 of 4                                      SESSION LAYER TIMERS Service  Reliable  Packet  Resp   Session  Connect  SPDU  Connectivity Type     Protocol  Timer   Timer  Message  Cntr    Cntr   Timer CDR1     <b>y</b>       30     3      3        3       60 </pre>

Step	Description
3.	<p>Enter the <b>change system-parameters cdr</b> command to set the parameters for the type of calls to track and the format of the CDR data. The following settings were used during the compliance test.</p> <ul style="list-style-type: none"> <li>• <b>CDR Date Format: month/day</b></li> <li>• <b>Primary Output Format: customized</b></li> <li>• <b>Primary Output Endpoint: CDR1</b></li> </ul> <p>The remaining parameters define the type of calls that will be recorded and what data will be included in the record. See reference [2] for a full explanation of each field. The test configuration used some of the more common fields described below.</p> <ul style="list-style-type: none"> <li>• <b>Use Legacy CDR Formats? n</b> [Specify the use of the new Avaya Communication Manager 4.0.1 and later formats in the CDR records produced by the system.]</li> <li>• <b>Intra-switch CDR: y</b> [Allows call records for internal calls involving specific stations. Those stations must be specified in the INTRA-SWITCH-CDR form.]</li> <li>• <b>Record Outgoing Calls Only? n</b> [Allows incoming trunk calls to appear in the CDR records along with the outgoing trunk calls.]</li> <li>• <b>Outg Trk Call Splitting? y</b> [Allows a separate call record for any portion of an outgoing call that is transferred or conferenced.]</li> <li>• <b>Inc Trk Call Splitting? y</b> [Allows a separate call record for any portion of an incoming call that is transferred or conferenced.]</li> </ul>
	<pre> change system-parameters cdr                                     Page 1 of 2                                 CDR SYSTEM PARAMETERS  Node Number (Local PBX ID): 1                                CDR Date Format: month/day Primary Output Format: customized                            Primary Output Endpoint: CDR1 Secondary Output Format:     Use ISDN Layouts? n                                     Enable CDR Storage on Disk? n     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? y                             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: group-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: 5 </pre>
	<p>On page 2 of the CDR SYSTEM PARAMETERS form, define the customized CDR format as shown.</p>

Step	Description
	<pre> change system-parameters cdr                                 Page 2 of 2                                 CDR SYSTEM PARAMETERS  Data Item - Length      Data Item - Length      Data Item - Length 1: date                 - 6      17: auth-code           - 7      33:                    - 2: space                - 1      18: space               - 1      34:                    - 3: time                 - 4      19: acct-code          - 7      35:                    - 4: space                - 1      20: space               - 1      36:                    - 5: duration             - 4      21: in-crt-id          - 3      37:                    - 6: space                - 1      22: space               - 1      38:                    - 7: cond-code            - 1      23: out-crt-id         - 3      39:                    - 8: space                - 1      24: space               - 1      40:                    - 9: code-used            - 4      25: frl                 - 1      41:                    - 10: space               - 1      26: return              - 1      42:                    - 11: in-trk-code         - 4      27: line-feed           - 1      43:                    - 12: space               - 1      28:                     -         44:                    - 13: dialed-num          - 18     29:                     -         45:                    - 14: space               - 1      30:                     -         46:                    - 15: calling-num         - 10     31:                     -         47:                    - 16: space               - 1      32:                     -         48:                    -  Record length = 86 </pre>
4.	<p>If the <b>Intra-switch CDR</b> field is set to <b>y</b> on Page 1 of the CDR SYSTEM PARAMETERS form, then use the <b>change intra-switch-cdr</b> command to define the extensions that will be subjected to call detail records. In the <b>Assigned Members</b> field, enter the specific extensions whose usage will be tracked with the CDR records.</p> <pre> change intra-switch-cdr                                 Page 1 of 3                                 INTRA-SWITCH CDR  Assigned Members: 4 of 5000 administered Extension      Extension      Extension      Extension 10001 10002 10003 10004 </pre>
5.	<p>For each trunk group for which CDR records are desired, verify that CDR reporting is enabled. Use the <b>change trunk-group n</b> command, where <b>n</b> is the trunk group number, to verify that the CDR Reports field is set to <b>y</b>. This applies to all types of trunk groups.</p> <pre> change trunk-group 2                                 Page 1 of 21                                 TRUNK GROUP  Group Number: 2      Group Type: isdn      CDR Reports: y Group Name: To PSTN      COR: 95      TN: 1      TAC: 702 Direction: two-way      Outgoing Display? n      Carrier Medium: PRI/BRI Dial Access? y      Busy Threshold: 255      Night Service: 10004 Queue Length: 0 Service Type: public-ntwrk      Auth Code? n      TestCall ITC: rest Far End Test Line No: TestCall BCC: 4 </pre>

### 3.2. PMS Data Link

This section provides the procedures for configuring the Property Management System (PMS) interface in Avaya Communication Manager. All configuration changes in Avaya Communication Manager are performed through the System Access Terminal (SAT). These steps describe the procedure used for the Avaya S8720 Server. For this configuration, the PMS Data Link is configured to originate from the IP addresses of the C-LAN board and terminates at the IP address of the Etesalat Innovations Call Management Server. The highlights in the following screens indicate the parameter values used during the compliance test.

Step	Description
1.	<p>Enter the <b>change system-parameters hospitality</b> command to configure the Hospitality features. The following settings were used during the compliance test.</p> <ul style="list-style-type: none"> <li>• <b>Message Waiting Configuration: act-pms</b></li> <li>• <b>Controlled Restrictions Configuration: act-pms</b></li> <li>• <b>Housekeeper Information Configuration: act-pms</b></li> <li>• <b>PMS Endpoint: PMS</b></li> <li>• <b>PMS Protocol Mode: transparent</b></li> <li>• <b>ASCII mode: n</b></li> <li>• <b>Seconds before PMS Link Idle Timeout: 20</b></li> <li>• <b>Milliseconds before PMS Link Acknowledgement Timeout: 500</b></li> </ul> <pre> 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? n                                 Seconds before PMS Link Idle Timeout: 20                                 Milliseconds before PMS Link Acknowledgement Timeout: 500                                 PMS Link Maximum Retransmissions: 3                                 PMS Link Maximum Retransmission Requests: 3                                 Take Down Link for Lost Messages? y </pre> <p>On Page 3 of the HOSPITALITY form, configure the definition for the Room States as shown below. The status defined here must match the status defined in the PMS.</p>

Step	Description
	<pre> change system-parameters hospitality ROOM STATES          HOSPITALITY Page 3 of 3  Definition for Rooms in State 1: Housekeeper in Room Definition for Rooms in State 2: Room Clean - Vacant Definition for Rooms in State 3: Room Clean - Occupied Definition for Rooms in State 4: Room Not Clean - Vacant Definition for Rooms in State 5: Room Not Clean - Occupied Definition for Rooms in State 6: Room Clean - Needs Inpection  HOSPITALITY FEATURES Suite Check-in? n Cancel Do-Not-Disturb for Wakeup Calls? Y </pre>
2.	<p>Enter the <b>change feature-access-codes</b> command. On page 7 of the FEATURE ACCESS CODE (FAC) form, enter a unique FAC for each of the six <b>Housekeeping Status (Client Room) Access Codes</b> listed, which corresponds to the room status definition administered in Step 1. These FACs are dialed by the using the telephone in the Client Room to update the housekeeping status. At the same time, enter a unique FAC for each of the four <b>Housekeeping Status (Station) Access Codes</b> listed. These FACs are dialed from designated stations (e.g. phone in housekeeping department) to update the housekeeping status of a room.</p>
	<pre> change feature-access-codes FEATURE ACCESS CODE (FAC) Hospitality Features Page 7 of 8  Automatic Wakeup Call Access Code: Housekeeping Status (Client Room) Access Code: *41 Housekeeping Status (Client Room) Access Code: *42 Housekeeping Status (Client Room) Access Code: *43 Housekeeping Status (Client Room) Access Code: *44 Housekeeping Status (Client Room) Access Code: *45 Housekeeping Status (Client Room) Access Code: *46 Housekeeping Status (Station) Access Code: *51 Housekeeping Status (Station) Access Code: *52 Housekeeping Status (Station) Access Code: *53 Housekeeping Status (Station) Access Code: *54 Verify Wakeup Announcement Access Code: Voice Do Not Disturb Access Code: </pre>

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3.	<p>Use the <b>change ip-services</b> command to define the PMS data link. To define the link, the following information should be provided:</p> <ul style="list-style-type: none"> <li>• <b>Service Type: PMS</b></li> <li>• <b>Local Node:</b> The IP Node Name of a C-LAN board (in this example, CLAN-01A02 is used for each IP service definition).</li> <li>• <b>Local Port: 0</b> [The Local Port is fixed to 0 because Avaya Communication Manager initiates the CDR link.]</li> <li>• <b>Remote Node: EICMS</b> [The Remote Node is set to the node name previously defined in <b>Section 3.1 Step 1.</b>]</li> <li>• <b>Remote Port: 5050</b> [The Remote Port may be set to a value between 5000 and 64500 inclusive, and must match the port configured in Etesalat Innovations Call Management Server in Section 4 Step 7.]</li> </ul>																																																																																																																																																																																																																																																																																
	<pre>change ip-services                                     Page 1 of 3</pre> <table border="1"> <thead> <tr> <th rowspan="2">Service Type</th> <th rowspan="2">Enabled</th> <th rowspan="2">Local Node</th> <th colspan="3">IP SERVICES</th> </tr> <tr> <th>Local Port</th> <th>Remote Node</th> <th>Remote Port</th> </tr> </thead> <tbody> <tr> <td>CDR1</td> <td></td> <td>CLAN-01A02</td> <td>0</td> <td>EICMS</td> <td>9000</td> </tr> <tr> <td><b>PMS</b></td> <td></td> <td><b>CLAN-01A02</b></td> <td><b>0</b></td> <td><b>EICMS</b></td> <td><b>5050</b></td> </tr> </tbody> </table>	Service Type	Enabled	Local Node	IP SERVICES			Local Port	Remote Node	Remote Port	CDR1		CLAN-01A02	0	EICMS	9000	<b>PMS</b>		<b>CLAN-01A02</b>	<b>0</b>	<b>EICMS</b>	<b>5050</b>																																																																																																																																																																																																																																																											
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4.	<p>Enter the <b>change cos</b> command, and for the Class of Service to be assigned to guest telephones, set the <b>Client Room</b> field to <b>y</b> (as shown below for Class of Service <b>1</b>). For the Class of Service to be assigned to the designated stations, set the <b>Console Permissions</b> to <b>y</b> (as shown below for Class of Service <b>2</b>).</p>																																																																																																																																																																																																																																																																																
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Step	Description
5.	<p data-bbox="277 233 1414 338">For each guest telephone extension <math>x</math>, enter <b>change station <math>x</math></b> and enter the Class of Service administered in Step 5 in the <b>COS</b> field. The <b>Name</b> field should be left blank for an unoccupied guest room.</p> <pre data-bbox="277 394 1414 940"> change station 1401                                     Page 1 of 5                                      STATION Extension: 1401   Lock Messages? n      BCC: 0 Type: 4625   Security Code: *      TN: 1 Port: IP   Coverage Path 1: 1    COR: 1 Name:  Coverage Path 2:      COS: 1                                      Hunt-to Station: STATION OPTIONS                                      Time of Day Lock Table: Loss Group: 19   Personalized Ringing Pattern: 1                                      Message Lamp Ext: 1401 Speakerphone: 2-way                                    Mute Button Enabled? y Display Language: english                             Expansion Module? n Survivable GK Node Name:                               Media Complex Ext: Survivable COR: internal                               IP SoftPhone? n Survivable Trunk Dest? y                               Customizable Labels? y </pre>

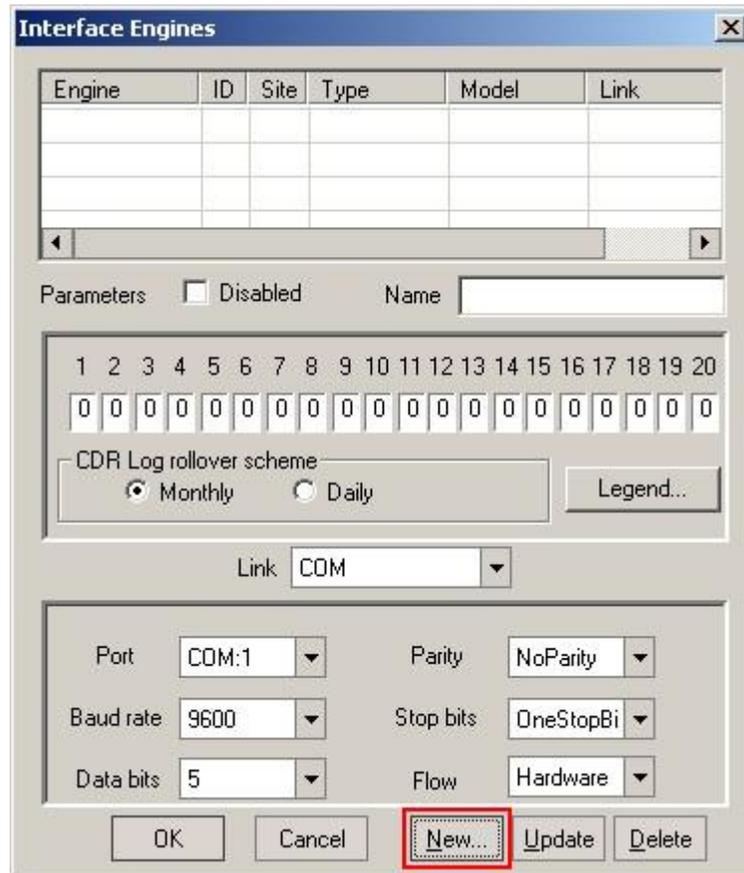
## 4. Configure Etesalat Innovations Call Management Server

This section details the steps required to configure Etesalat Innovations Call Management Server to interoperate with Avaya Communication Manager. These Application Notes assume that the Call Management Server application has already been properly installed by Etesalat Innovations personnel.

Step	Description
1.	<p>From the Call Management Server, click <b>Start &gt; All Programs &gt; EtesalatSoft &gt; Call Server &gt; Call Management Server</b> to launch the Call Management Server application.</p> <p>Click <b>Setting &gt; Engines</b> to start the configuration.</p> 

Step	Description
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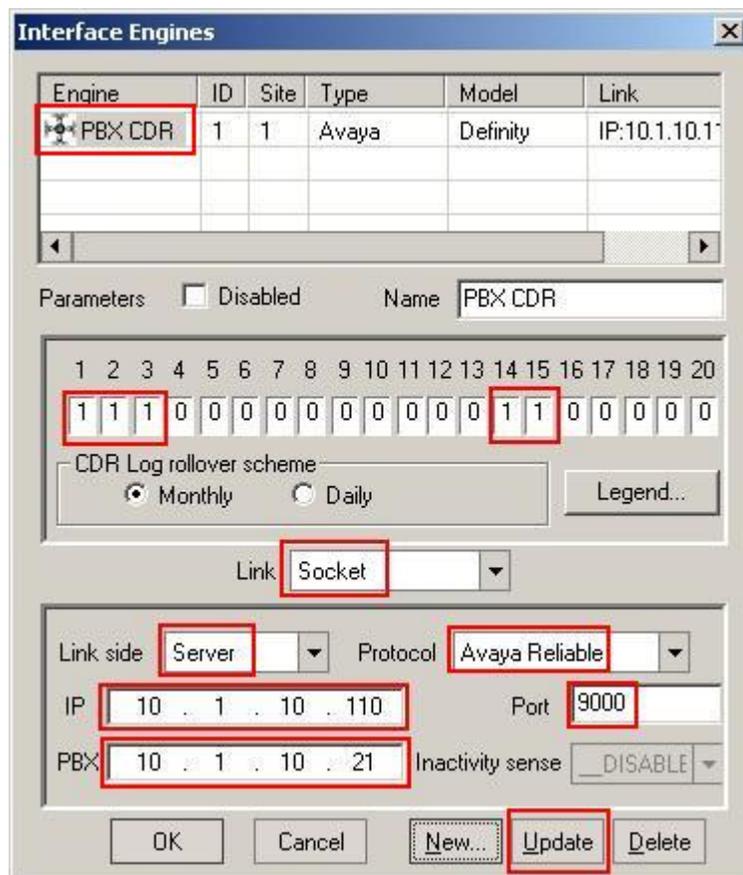
2. At the Interface Engines window, click **New**.



3. At the New Engine window, select **PBX CDR** for **Engine**, **Avaya** for **Type** and **Definity** for **Model** to create the engine to collect CDR from the Avaya Communication Manager. Click **OK**.

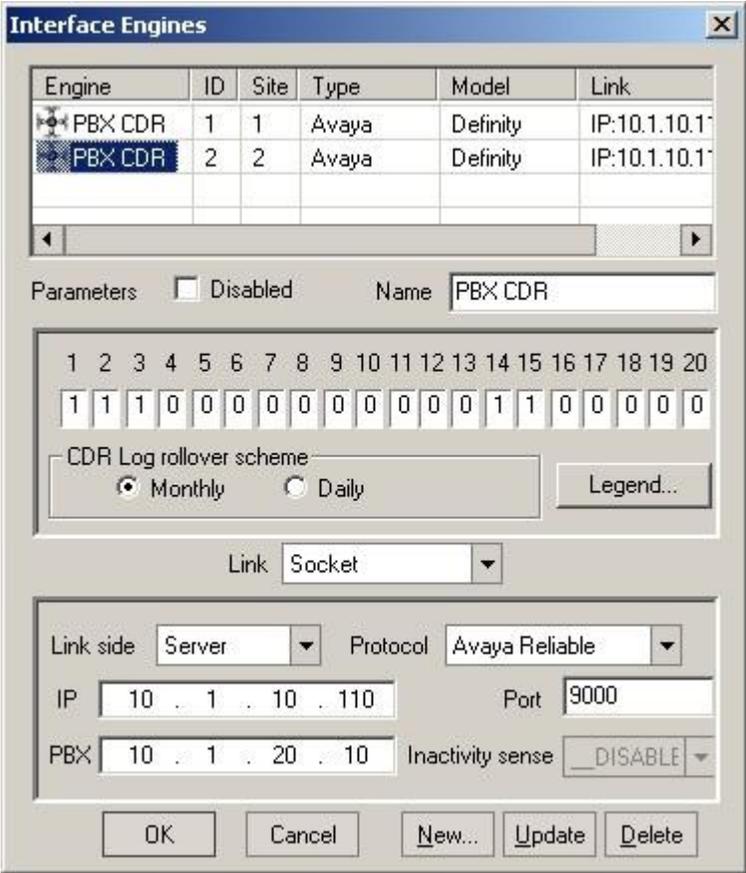


Step	Description
4.	<p>At the Interface Engines window, click on the <b>PBX CDR</b> engine created in <b>Step 3</b> to configure it. In the Parameters section, set the fields <b>1, 2, 3, 14</b> and <b>15</b> to <b>1</b>. To define the CDR link, the following settings are used. Click <b>Update</b> to save the settings.</p> <ul style="list-style-type: none"> <li>• <b>Link: Socket</b></li> <li>• <b>Link side: Server</b></li> <li>• <b>Protocol: Avaya Reliable</b></li> <li>• <b>IP:</b> The IP address of the Call Management Server.</li> <li>• <b>Port:</b> The port that Call Management Server listens on, and must match the <b>Remote Port</b> field configured in Section 3.1 Step 2.</li> <li>• <b>PBX:</b> The IP address of the C-LAN board configured in Section 3.1 Step 2.</li> </ul>



**Step**    **Description**

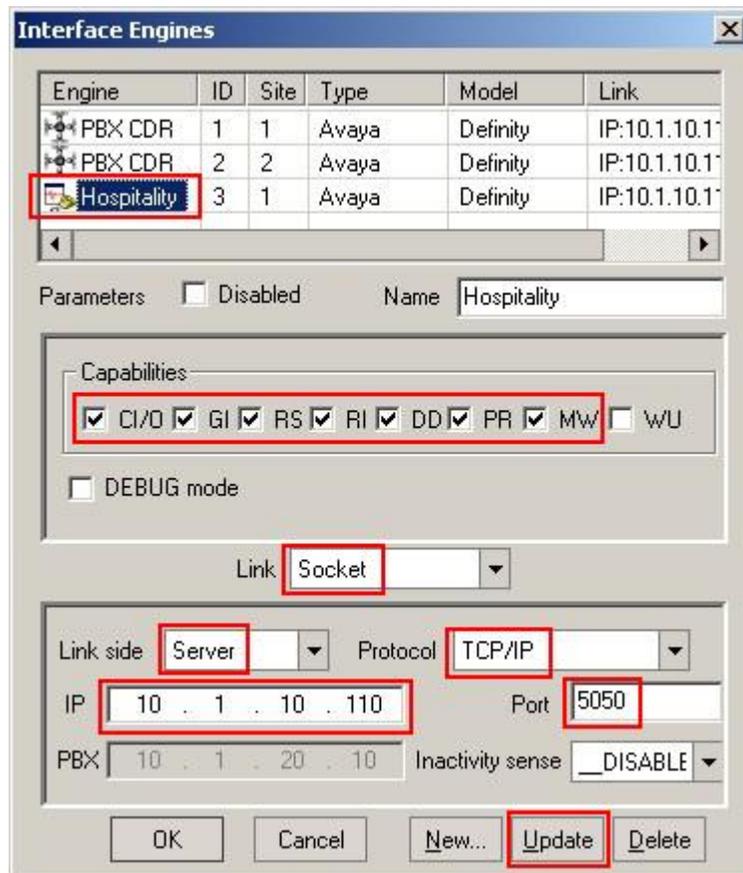
5. Repeat **Steps 2 to 4** to create a second CDR engine for the Avaya Communication Manager system at Site B.



6. Repeat **Steps 2** to create a new Hospitality engine for the Avaya Communication Manager systems. At the New Engine window, select **Hospitality** for **Engine**, **Avaya** for **Type** and **Definity** for **Model** to create the engine to interface with the Avaya Communication Manager PMS data link. Click **OK**.



Step	Description
7.	<p data-bbox="277 237 1393 373">At the Interface Engines window, click on the <b>Hospitality</b> engine created in <b>Step 6</b> to configure it. In the Capabilities section, fields <b>CI/O, GI, RS, RI, DD, PR</b> and <b>MW</b> are checked for Avaya. To define the Hospitality engine, the following settings are used. Click <b>Update</b> to save the settings and click <b>OK</b> to close the Interface Engines window.</p> <ul data-bbox="326 422 1338 642" style="list-style-type: none"> <li>• <b>Link: Socket</b></li> <li>• <b>Link side: Server</b></li> <li>• <b>Protocol: TCP/IP</b></li> <li>• <b>IP:</b> The IP address of the Call Management Server.</li> <li>• <b>Port:</b> The port that Call Management Server listens on, and must match the <b>Remote Port</b> field configured in Section 3.2 Step 3.</li> </ul>



Step	Description
8.	<p>From <b>Setting</b> menu click <b>EPIX...</b> to configure hospitality features.</p> <ul style="list-style-type: none"> <li>• <b>MWI procedure:</b> select via Hospitality.</li> <li>• <b>Wake Up procedure:</b> if there is a SoftVoice© Etesalat-innovations voicemail system, select via Voicemail, otherwise Not Supported.</li> <li>• <b>Use map PMS extension module:</b> when PMS Rooms numbers doesn't map directly to PBX extensions (as in the case i.e. Room has two or more extensions, while PMS only see the Room number), you need to activate a mapping module.</li> <li>• <b>Guest name max length:</b> Avaya PBX puts a restriction on guest name length, so Call Management Server will truncate guest name sent from PMS system to such length when submitting Check-In to PBX.</li> <li>• <b>Embed extension in guest name:</b> some integration devices i.e. VoiceBridge II needs extension of Phone set be embedded in the name.</li> </ul> <div data-bbox="483 724 1224 1205" style="text-align: center;"> </div>

## 5. Interoperability Compliance Testing

The interoperability compliance testing included feature and serviceability testing. The feature testing evaluated Etesalat Innovations Call Management Server's ability to collect and process CDR records and interoperate with Avaya Communication Manager's PMS features. The serviceability test introduced failure scenarios to see if Etesalat Innovations Call Management Server can resume operation after failure recovery.

### 5.1. General Test Approach

Feature functionality testing was performed manually. Inbound calls were made to the Avaya telephones (i.e. the guest telephones) over ISDN-BRI trunks, as well as from other local extensions (digital, and IP Telephone). A simulated PMS application from Etesalat Innovations was used to check-in, check-out and do room change for guest telephones, make changes to the telephone's calling privileges and MWIs, and receive room status updates initiated at guest and designated telephones. Intra-switch calls, inter-switch calls, inbound and outbound PSTN trunk calls to and from guest telephones were placed and the CDR records collected and processed by

Etesalat Innovations Call Management Server were verified for accuracy. For serviceability testing, the CDR links on Avaya Communication Managers were disabled and re-enabled and the Avaya S8720 and S8300 servers were also rebooted.

## 5.2. Test Results

All feature and serviceability tests passed.

## 6. Verification Steps

The following steps may be used to verify the configuration.

Step	Description
1.	<p>To verify that the PMS data link between Avaya Communication Manager and Etesalat Innovations Call Management Server is operational, enter <b>status pms-link</b> at the SAT and look for a status of <b>up</b> in the <b>Physical Link State</b> and <b>Protocol State</b> fields.</p> <pre> status pms-link                                 PMS LINK STATUS  Physical Link State: up Protocol State: up  Maintenance Busy? no Data Base Swapping? No </pre>
2.	<p>To verify that the CDR data link between Avaya Communication Manager and Etesalat Innovations Call Management Server is operational, enter <b>status cdr-link</b> at the SAT and look for a status of <b>up</b> in the <b>Link State</b> field of the CDR link to Etesalat Innovations Call Management Server (in this example, the <b>Primary</b> link).</p> <pre> status cdr-link                                 CDR LINK STATUS                                  Primary          Secondary  Link State: up                    CDR not administered  Date &amp; Time: 2008/8 /20 17:41:32    0 /0 /0 0 :0 :0 Forward Seq. No: 0                    0 Backward Seq. No: 0                    0 CDR Buffer % Full: 0.00                0.00 Reason Code: OK </pre>
3.	<p>To verify the ability to check in a guest extension <i>x</i>, initiate a request from the associated Property Management System. At the Avaya Communication Manager SAT, enter <b>status station x</b> and verify that <b>Room Status</b> is <b>occupied</b> and <b>User Cntrl Restr</b> is <b>none</b>.</p>

Step	Description
	<pre> status station 1401 Page 1 of 6 GENERAL STATUS Administered Type: 4625      Service State: in-service/on-hook Connected Type: 4625      TCP Signal Status: connected Extension: 1401 Port: S00062      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: none Group Cntrl Restr: none  HOSPITALITY STATUS Awaken at: User DND: not activated Group DND: not activated Room Status: occupied </pre>

## 7. Support

Technical support for Etesalat Innovations Call Management Server can be obtained by sending an email to [support@etesalat-innovations.com](mailto:support@etesalat-innovations.com).

## 8. Conclusion

These Application Notes describe the procedures for configuring Etesalat Innovations Call Management Server to interoperate with Avaya Communication Manager. All interoperability compliance test cases executed against such a configuration were completed successfully.

## 9. Additional References

This section references the Avaya and Etesalat Innovations documentation that are relevant to these Application Notes.

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

[1] *Feature Description and Implementation For Avaya Communication Manager*, Release 5.0, Issue 6, January 2008, Document Number 555-245-205.

[2] *Administrator Guide for Avaya Communication Manager*, Release 5.0, Issue 4.0, January 2008, Document Number 03-300509.

The following Call Management Server documentations are provided by Etesalat Innovations on request.

[3] Call Management Server EPIX System, Version 3.0, June 2008.

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