



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

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# **Application Notes for FCS VoiceMail and Avaya Communication Manager - Issue 1.0**

### **Abstract**

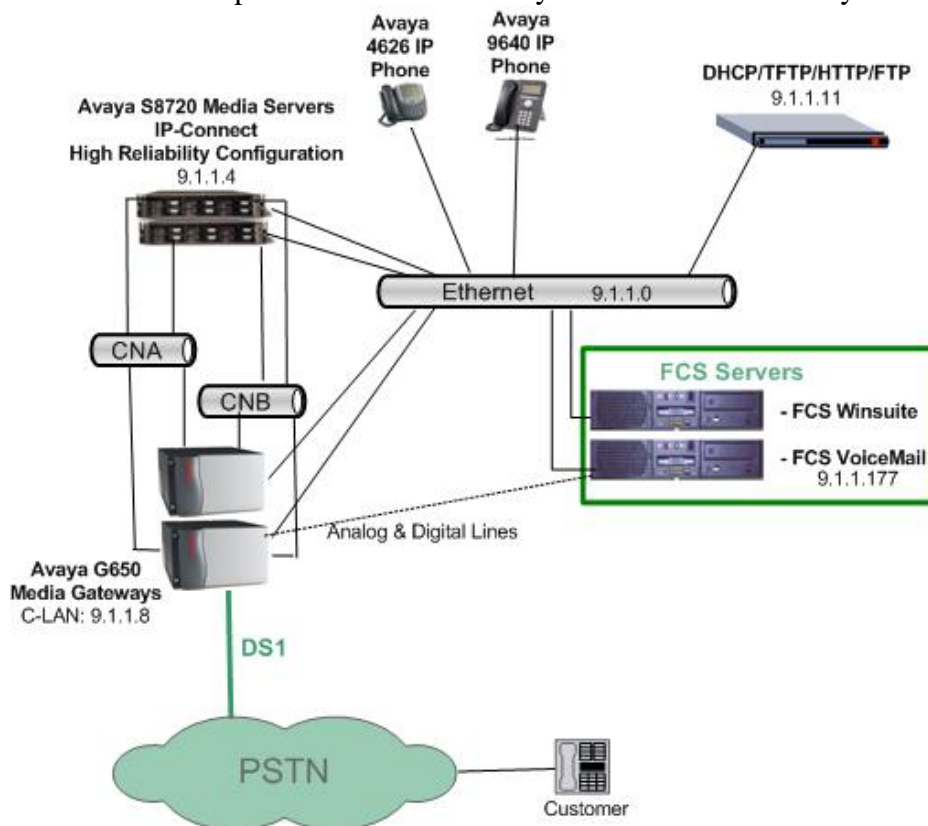
These Application Notes describe the procedures for configuring FCS VoiceMail to interoperate with Avaya Communication Manager. FCS VoiceMail is a Windows-based Voice Messaging system designed specifically for Hospitality environments

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 procedures for configuring FCS VoiceMail to interoperate with Avaya Communication Manager. FCS VoiceMail is a Windows-based Voice Messaging system designed specifically for Hospitality environments. It works seamlessly with a hotel's Avaya Communication Manager and Property Management System. In addition to providing standard Voice Messaging functionality, FCS VoiceMail integrates with FCS WinSuite<sup>1</sup> (a Windows-based Hospitality system that provides a real-time multitasking interface between a PBX and a hotel's Property Management System) to support standard Hospitality feature requests as Automatic Wake-Up (AWU), Housekeeping/Room Status changes, and Minibar charge postings.

The configuration used in performing compliance testing of FCS VoiceMail is shown in **Figure 1**. It shows a network consisting primarily of a pair of Avaya S8720 Servers running Avaya Communication Manager in a High Reliability configuration with two Avaya G650 Media Gateways, an FCS Voicemail server, and Avaya 4626<sup>2</sup> and 9640 IP Telephones (representing guest telephones). In addition, FCS WinSuite<sup>1</sup> was used to exercise specific capabilities in FCS VoiceMail. Analog and digital ports on the corresponding Intel Dialogic cards in the FCS VoiceMail server connect to ports on one of the Avaya G650 Media Gateways.



**Figure 1: Sample Test Configuration**

<sup>1</sup> Configuration details for this product can be found in [2].

<sup>2</sup> This telephone was designed and developed specifically for Hospitality environments.

## 2. Equipment and Software Validated

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

Equipment	Hardware/Firmware/Software Version
Avaya S8720 Server	Avaya Communication Manager 4.0.1 (R014x.00.1.731.2)
Avaya G650 Media Gateway <ul style="list-style-type: none"><li>• TN799DP C-LAN</li><li>• TN2312AP IPSI</li><li>• TN2302AP MedPro</li><li>• TN2224CP 2-Wire Digital</li><li>• TN464HP DS1</li><li>• TN746B Analog Line</li></ul>	26.31.0 HW01 FW156 HW15 FW039 HW02 FW142 HW08 FW015 HW02 FW019 000019
Avaya 4626 IP Telephone	2.4
Avaya 9640 IP Telephone	S1.5
FCS VoiceMail Server <ul style="list-style-type: none"><li>• Dialogic 4-port Analog Line Card</li><li>• Dialogic Digital Line Card</li></ul>	4.0.0 (with Windows 2003 Server SP 2) HW D4PCIUFW
FCS WinSuite Server	3.0.8 (with Windows 2003 Server SP 2)

### 3. Configure Avaya Communication Manager

This section details the steps required to configure Avaya Communication Manager to interoperate with FCS VoiceMail. These Application Notes assume the Avaya Media Gateways (including circuit packs) have already been administered. Please refer to [1] 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.

Step	Description
1.	<p><i>Enable Mode Code interface:</i></p> <p>Since FCS VoiceMail sends signaling information to Avaya Communication Manager inband using DTMF tones that are interpreted as Mode Codes, this feature must be enabled in Avaya Communication Manager. Enter <b>change system-parameters features</b>, advance to <b>Page 6</b>, and set the <b>Mode Code Interface?</b> parameter to <b>y</b>, as shown below:</p> <pre> change system-parameters features                               Page 6 of 17       FEATURE-RELATED SYSTEM PARAMETERS Public Network Trunks on Conference Call: 5                    Auto Start? n Conference Parties with Public Network Trunks: 6              Auto Hold? n Conference Parties without Public Network Trunks: 6           Attendant Tone? y Night Service Disconnect Timer (seconds): 180                Bridging Tone? n Short Interdigit Timer (seconds): 3                          Conference Tone? n Unanswered DID Call Timer (seconds):                          Intrusion Tone? n Line Intercept Tone Timer (seconds): 30                      Mode Code Interface? y Long Hold Recall Timer (seconds): 0 Reset Shift Timer (seconds): 0 Station Call Transfer Recall Timer (seconds): 0              Recall from VDN? n DID Busy Treatment: tone  Allow AAR/ARS Access from DID/DIOD? y Allow ANI Restriction on AAR/ARS? y Use Trunk COR for Outgoing Trunk Disconnect? n 7405ND Numeric Terminal Display? n                          7434ND? y DISTINCTIVE AUDIBLE ALERTING Internal: 1 External: 2 Priority: 3 Attendant Originated Calls: external DTMF Tone Feedback Signal to VRU - Connection:              Disconnection: </pre>

Step	Description
2.	<p><i>Set Mode Code parameters:</i></p> <p>Enter <b>change system-parameters mode-codes</b> and ensure that values are entered in the following fields (these values will be passed to FCS Voicemail as appropriate):</p> <ul style="list-style-type: none"> <li>• Direct Inside Access</li> <li>• Direct Dial Access – Trunk (only needed if DID service is provided to guest extensions)</li> <li>• Internal Coverage</li> <li>• External Coverage (only needed if DID service is provided to guest extensions)</li> </ul> <p>In addition, enter the following values into the fields indicated to enable FCS VoiceMail to interpret incoming Mode Codes properly:</p> <ul style="list-style-type: none"> <li>• DTMF Duration – Off (msec): <b>150</b></li> <li>• Sending Delay (msec): <b>200</b></li> </ul> <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <pre> change system-parameters mode-code                                     Page 1 of 1       MODE CODE RELATED SYSTEM PARAMETERS        MODE CODES (FROM SWITCH TO VMS)       Direct Inside Access: #00 Direct Dial Access - Trunk: #01       Internal Coverage: #02       External Coverage: #03        Refresh MW Lamp: #06        System In Day Service: #11       System In Night Service: #12        OTHER RELATED PARAMETERS DTMF Duration - On (msec): 100   Off (msec): 150   Sending Delay (msec): 200        VMS Hunt Group Extension: Remote VMS Extensions - First:           Second: </pre> </div>

Step	Description
3.	<p><i>Set feature access codes to allow Message Waiting Lamp (MWL) activation/deactivation:</i></p> <p>Enter <b>change feature-access-codes</b> and advance to <b>Page 3</b>. Enter values for <b>Leave Word Calling Send A Message</b> and <b>Leave Word Calling Cancel A Message</b> that are consistent with the administered dial plan. These feature access codes (FACs) will be used by FCS VoiceMail to activate and deactivate the MWLs on users' stations, to be administered in FCS VoiceMail in <b>Section 4, Step 10</b>.</p> <div style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <pre> change feature-access-codes                                     Page 3 of 7                                 FEATURE ACCESS CODE (FAC)       Leave Word Calling Send A Message: *66       Leave Word Calling Cancel A Message: *67 Limit Number of Concurrent Calls Activation:                 Deactivation:       Malicious Call Trace Activation:                       Deactivation:       Meet-me Conference Access Code Change: PASTE (Display PBX data on Phone) Access Code: Personal Station Access (PSA) Associate Code:               Dissociate Code: Per Call CPN Blocking Code Access Code: Per Call CPN Unblocking Code Access Code:       Priority Calling Access Code:       Program Access Code: Refresh Terminal Parameters Access Code: Remote Send All Calls Activation:                           Deactivation:       Self Station Display Activation:       Send All Calls Activation:                             Deactivation: Station Firmware Download Access Code: </pre> </div>


Step	Description
<p><b>4.</b></p>	<p><i>Administer analog ports to FCS Voicemail as Voice Mail Interface (VMI) stations:</i>            (NOTE: <b>Steps 4 and 5</b> should only be completed if analog lines are used between FCS VoiceMail and Avaya Communication Manager.)</p> <p>Enter <b>add station x</b> (where <b>x</b> is a valid unused extension) and specify the following values:</p> <ul style="list-style-type: none"> <li>• Type: <b>VMI</b>.</li> <li>• Port: A port on the analog line card that is connected to FCS Voicemail.</li> <li>• Name: A descriptive name (in this case, <b>FCS Voicemail</b>).</li> </ul> <div style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <pre> add station 40011                                     Page 1 of 4   STATION Extension: 40011                                     Lock Messages? n      BCC: 0 Type: VMI   Security Code:        TN: 1 Port: 01B0404                                       COR: 1 Name: FCS VoiceMail                                   COS: 1   Tests? y  STATION OPTIONS Loss Group: 1 Off Premises Station? n  Time of Day Lock Table:  Survivable COR: internal Survivable Trunk Dest? Y           </pre> </div>
<p><b>5.</b></p>	<p>Repeat <b>Step 4</b> to add additional VMI stations for each of the analog ports connected to FCS VoiceMail.</p>

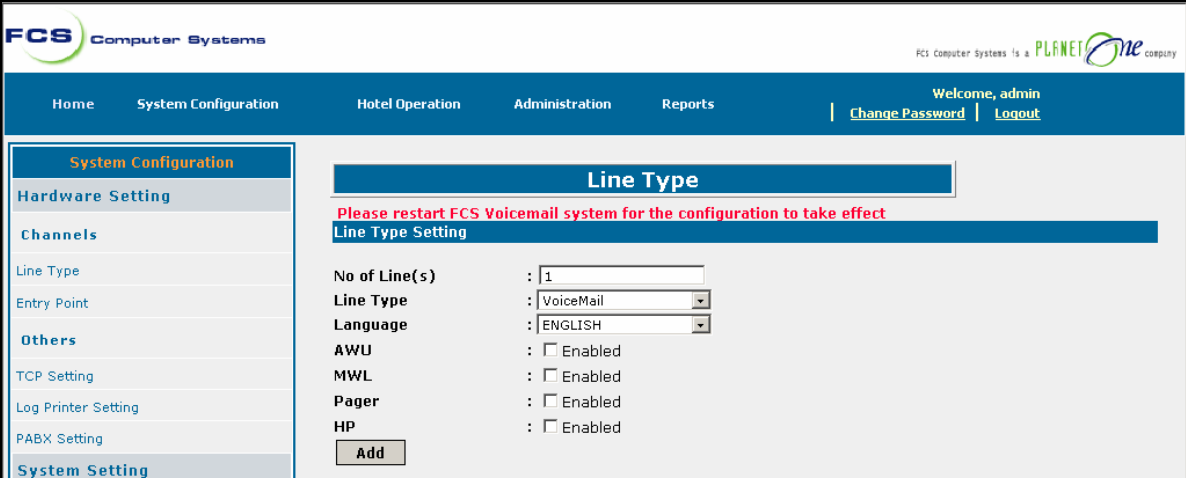
Step	Description
<p><b>6.</b></p>	<p><i>Administer digital ports to FCS Voicemail as 8434D stations:</i></p> <p>(NOTE: <b>Steps 6 and 7</b> should only be completed if digital lines are used between FCS VoiceMail and Avaya Communication Manager.)</p> <p>Enter <b>add station x</b> (where <b>x</b> is a valid unused extension) and specify the following values:</p> <ul style="list-style-type: none"> <li>Type: <b>8434D</b>.</li> <li>Port: A port on the digital line card that is connected to FCS Voicemail.</li> <li>Name: A descriptive name (in this case, <b>FCS Voicemail Digital 1</b>).</li> </ul> <pre> add station 40021                                     Page 1 of 6   STATION Extension: 40021                                     Lock Messages? n          BCC: 0 Type: 8434D   Security Code:            TN: 1 Port: 01B0801   Coverage Path 1:         COR: 1 Name: FCS Voicemail Digital 1                       Coverage Path 2:         COS: 1   Hunt-to Station: STATION OPTIONS Loss Group: 2   Time of Day Lock Table: Data Module? n                                       Personalized Ringing Pattern: 1 Speakerphone: 2-way                                  Message Lamp Ext: 40021 Display Language: english                            Mute Button Enabled? y   Expansion Module? n Survivable COR: internal                             Media Complex Ext: Survivable Trunk Dest? y                             IP SoftPhone? N </pre>
<p><b>7.</b></p>	<p>Repeat <b>Step 6</b> to add additional 8434D stations for each of the digital ports connected to FCS VoiceMail.</p>
<p><b>8.</b></p>	<p>Create a hunt group containing the desired set of stations created in <b>Steps 4-6</b>, and add this hunt group extension as the primary coverage point in the coverage path that will be used by Avaya Communication Manager to direct coverage calls for guest extensions to FCS Voicemail.</p>

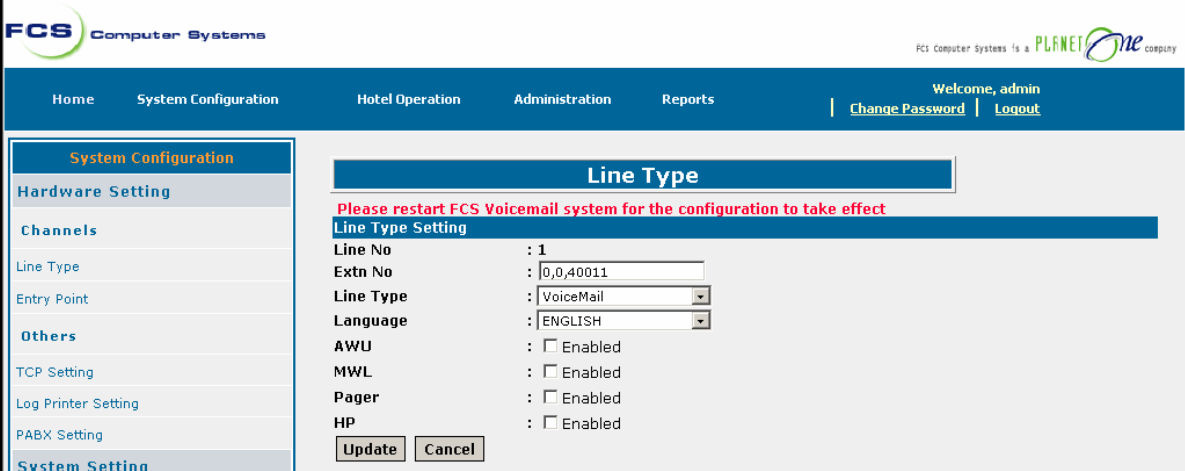


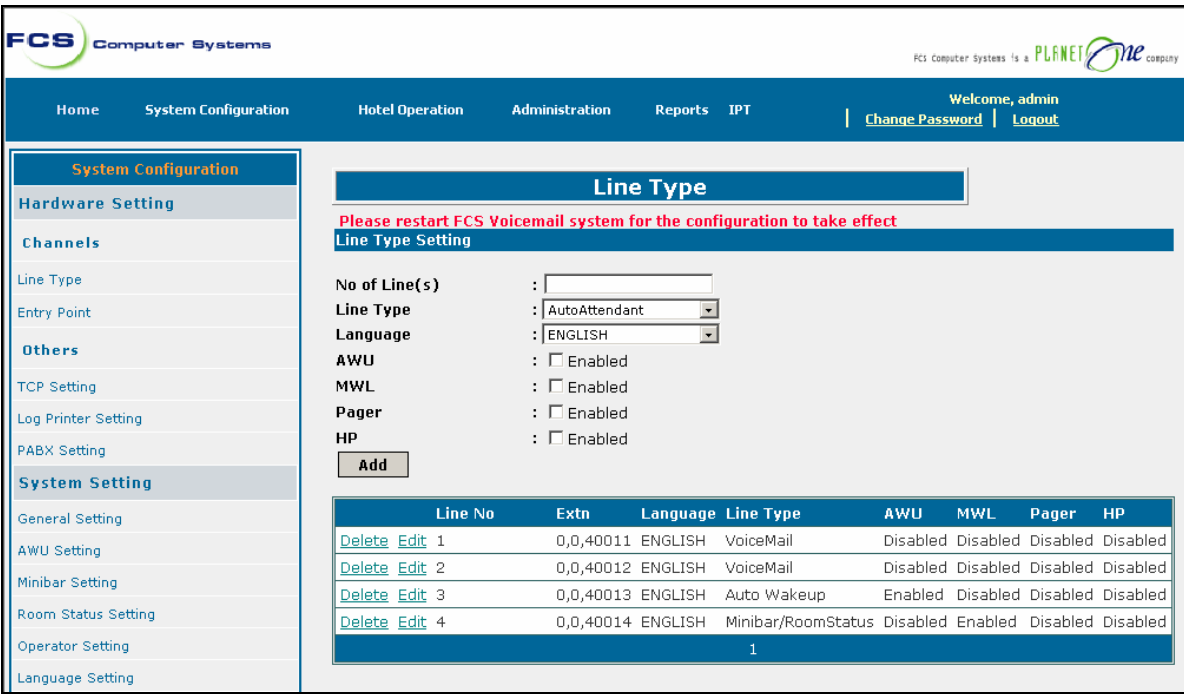
## 4. Configure FCS Voicemail

This section details the steps required to configure FCS VoiceMail to interoperate with Avaya Communication Manager. These Application Notes assume that the FCS Voicemail application has already been properly installed by FCS services personnel.

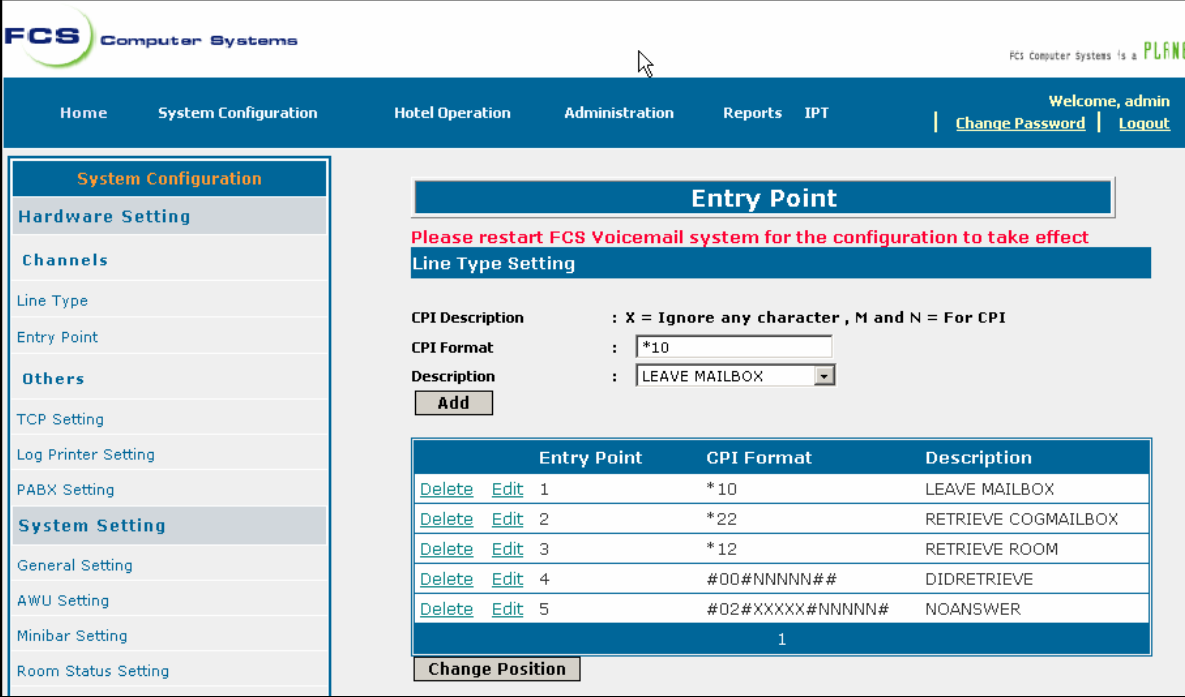
Step	Description
1.	<p>Open the FCS VoiceMail administration client. In the <b>VoiceMail</b> screen that is presented, click the icon to the upper left (illustrated below) to launch the FCS VoiceMail Web GUI login screen.</p> <div data-bbox="810 667 927 785" data-label="Image"></div>
2.	<p>In the <b>Login to FCS Voicemail</b> screen, login with the appropriate administrator credentials.</p>
3.	<p>At the subsequent administrative menu, select the link for <b>System Configuration</b> to launch the <b>System Configuration</b> screen.</p>

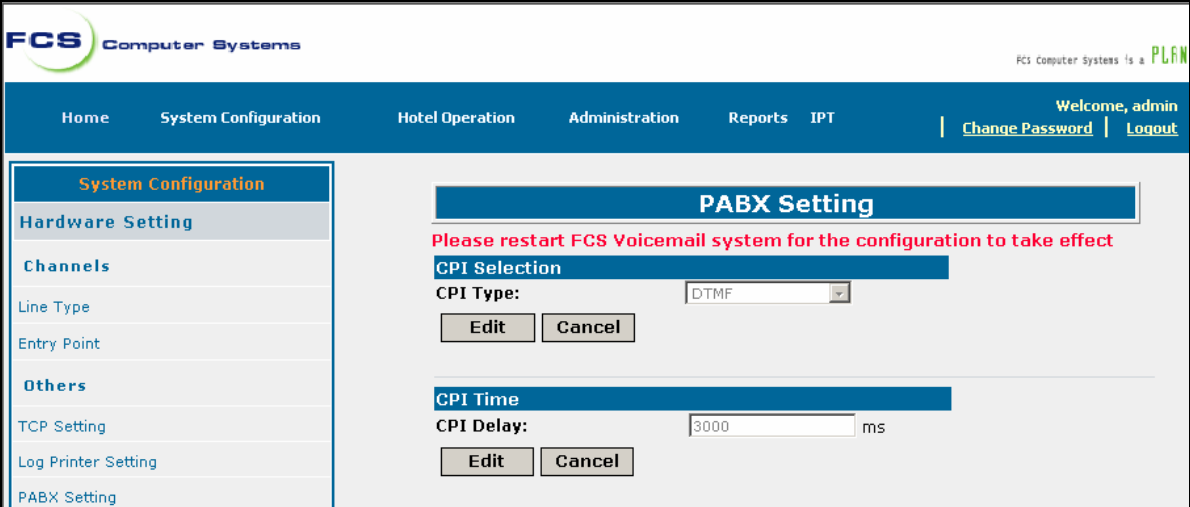
Step	Description
4.	<p><i>Configure channels by line type:</i></p> <p>In the <b>Line Type Setting</b> form that is presented, enter the following values:</p> <ul style="list-style-type: none"> <li>• <b>No. of Line(s):</b> The number of lines to be configured as the desired Line Type (in this example, <b>1</b>).</li> <li>• <b>Line Type:</b> Select the desired value from the drop-down (in this example, <b>VoiceMail</b> lines are being configured).</li> <li>• <b>Language:</b> Select the language to be provided by FCS VoiceMail in prompts to the user (in this example, <b>ENGLISH</b>).</li> <li>• <b>AWU, MWL:</b> Check these boxes if these lines are to be used for making AWU calls or activating MWLs.</li> </ul> <p>Click <b>Add</b> to submit the form.</p> 

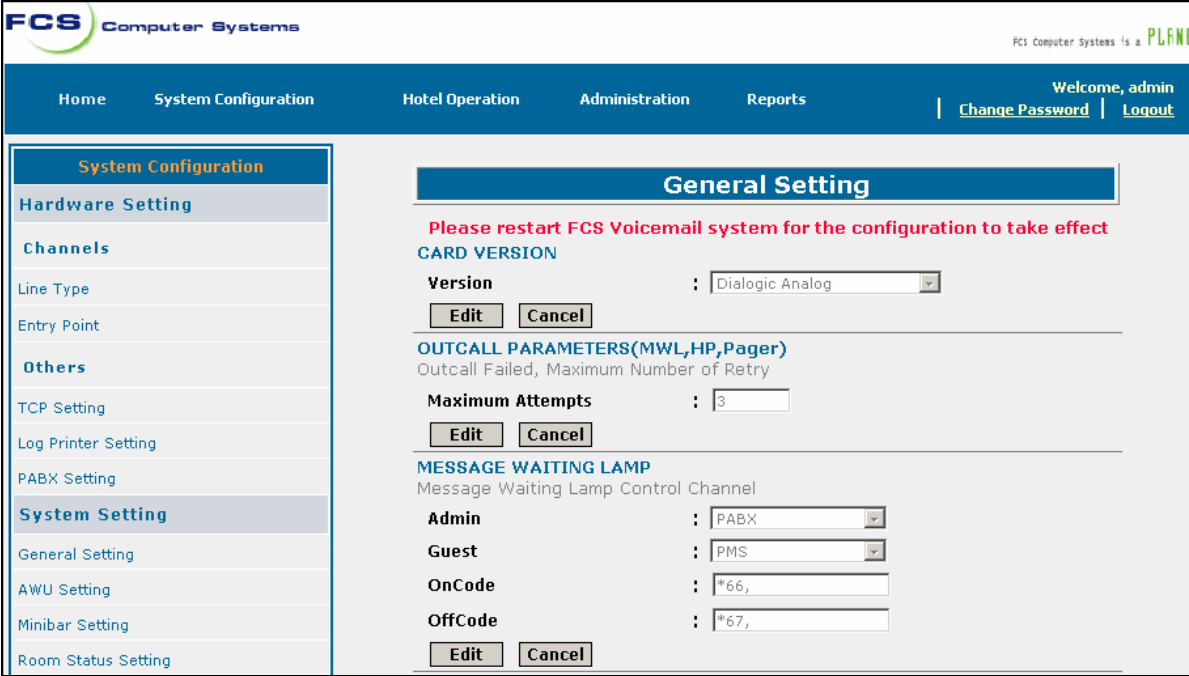
Step	Description
<p>5.</p>	<p><i>Add extension detail to lines:</i></p> <p>The <b>System Configuration</b> screen that follows includes a table listing the lines that have been configured. Select the <b>Edit</b> link next to one of the lines; a modified version of the form from <b>Step 4</b> is presented (see below). In the <b>Extn No</b> field, enter the extension number corresponding to the port from Avaya Communication Manager connected to the Dialogic card in the FCS VoiceMail server (in the example shown below, <b>40011</b>) preceded by the DTMF digits and pauses representing the expected Mode Code (in this case, <b>“0,0,”</b>). Click <b>Update</b> to submit the form.</p> 

Step	Description																																								
6.	<p>Repeat <b>Steps 4 and 6</b> until all lines have been defined and configured. The complete table of all lines and their configured parameters, such as the one shown below, is presented.</p>  <p>The screenshot shows the FCS Computer Systems web interface. The top navigation bar includes 'Home', 'System Configuration', 'Hotel Operation', 'Administration', 'Reports', and 'IPT'. The 'System Configuration' menu is expanded, showing options like 'Hardware Setting', 'Channels', 'Others', and 'System Setting'. The 'Line Type' configuration page is displayed, featuring a form with the following fields:</p> <ul style="list-style-type: none"> <li>No of Line(s): [input field]</li> <li>Line Type: [AutoAttendant]</li> <li>Language: [ENGLISH]</li> <li>AWU: <input type="checkbox"/> Enabled</li> <li>MWL: <input type="checkbox"/> Enabled</li> <li>Pager: <input type="checkbox"/> Enabled</li> <li>HP: <input type="checkbox"/> Enabled</li> </ul> <p>An 'Add' button is located below the form. Below the form is a table with the following data:</p> <table border="1"> <thead> <tr> <th>Line No</th> <th>Extn</th> <th>Language</th> <th>Line Type</th> <th>AWU</th> <th>MWL</th> <th>Pager</th> <th>HP</th> </tr> </thead> <tbody> <tr> <td><a href="#">Delete</a> <a href="#">Edit</a> 1</td> <td>0,0,40011</td> <td>ENGLISH</td> <td>VoiceMail</td> <td>Disabled</td> <td>Disabled</td> <td>Disabled</td> <td>Disabled</td> </tr> <tr> <td><a href="#">Delete</a> <a href="#">Edit</a> 2</td> <td>0,0,40012</td> <td>ENGLISH</td> <td>VoiceMail</td> <td>Disabled</td> <td>Disabled</td> <td>Disabled</td> <td>Disabled</td> </tr> <tr> <td><a href="#">Delete</a> <a href="#">Edit</a> 3</td> <td>0,0,40013</td> <td>ENGLISH</td> <td>Auto Wakeup</td> <td>Enabled</td> <td>Disabled</td> <td>Disabled</td> <td>Disabled</td> </tr> <tr> <td><a href="#">Delete</a> <a href="#">Edit</a> 4</td> <td>0,0,40014</td> <td>ENGLISH</td> <td>Minibar/RoomStatus</td> <td>Disabled</td> <td>Enabled</td> <td>Disabled</td> <td>Disabled</td> </tr> </tbody> </table>	Line No	Extn	Language	Line Type	AWU	MWL	Pager	HP	<a href="#">Delete</a> <a href="#">Edit</a> 1	0,0,40011	ENGLISH	VoiceMail	Disabled	Disabled	Disabled	Disabled	<a href="#">Delete</a> <a href="#">Edit</a> 2	0,0,40012	ENGLISH	VoiceMail	Disabled	Disabled	Disabled	Disabled	<a href="#">Delete</a> <a href="#">Edit</a> 3	0,0,40013	ENGLISH	Auto Wakeup	Enabled	Disabled	Disabled	Disabled	<a href="#">Delete</a> <a href="#">Edit</a> 4	0,0,40014	ENGLISH	Minibar/RoomStatus	Disabled	Enabled	Disabled	Disabled
Line No	Extn	Language	Line Type	AWU	MWL	Pager	HP																																		
<a href="#">Delete</a> <a href="#">Edit</a> 1	0,0,40011	ENGLISH	VoiceMail	Disabled	Disabled	Disabled	Disabled																																		
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<a href="#">Delete</a> <a href="#">Edit</a> 4	0,0,40014	ENGLISH	Minibar/RoomStatus	Disabled	Enabled	Disabled	Disabled																																		

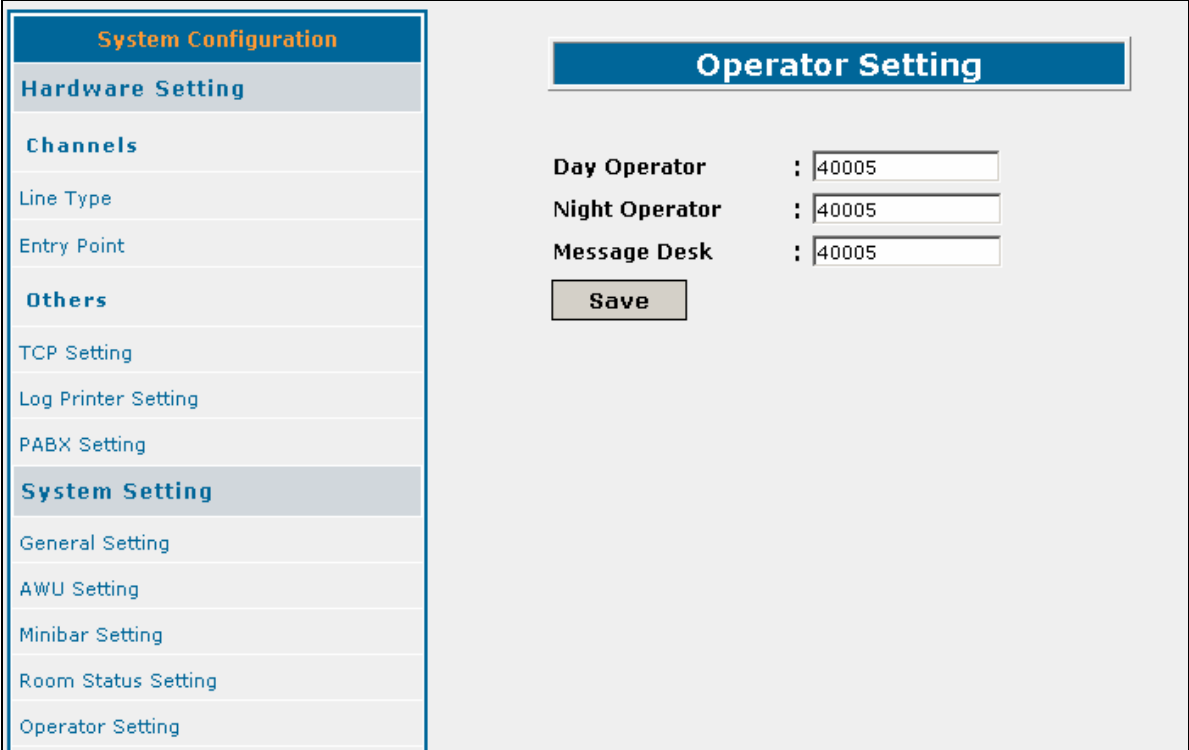
Step	Description
7.	<p><i>Add entry points:</i></p> <p>Entry points map the expected sequences of leading DTMF digits to actions to be taken by FCS VoiceMail. To define an entry point, select <b>Entry Point</b> from the <b>System Configuration</b> menu in the left pane. Enter values in the associated fields as follows:</p> <ul style="list-style-type: none"> <li>• <b>CPI Format:</b> Enter the sequence that will match this entry point (in this example, <b>*10</b>).</li> <li>• <b>Description:</b> Select the desired action to be associated with this entry point. In this example <b>LEAVE MAILBOX</b> (entered by the hotel operator after recording and sending a message to a guest mailbox) is selected. Other valid values include: <ul style="list-style-type: none"> <li>○ <b>RETRIEVE COGMAILBOX</b> (to allow the hotel operator to retrieve a guest mailbox's messages from any phone)</li> <li>○ <b>RETRIEVE ROOM</b> (to allow the hotel operator to retrieve messages from a mailbox associated with a checked-out guest telephone)</li> <li>○ <b>DIDRETRIEVE</b> (specifying the sequence of DTMF digits signaling a retrieval of messages from a checked-in guest telephone)</li> <li>○ <b>NOANSWER</b> (specifying the sequence of DTMF digits signaling a coverage call redirected from an unanswered guest telephone)</li> </ul> </li> </ul> <p>Click <b>Add</b> to submit the form.</p> <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <div style="text-align: center; background-color: #0056b3; color: white; padding: 5px;"><b>Entry Point</b></div> <p style="text-align: center; color: red; font-weight: bold;">Please restart FCS Voicemail system for the configuration to take effect</p> <div style="text-align: center; background-color: #0056b3; color: white; padding: 5px;"><b>Line Type Setting</b></div> <p><b>CPI Description</b> : X = Ignore any character , M and N = For CPI</p> <p><b>CPI Format</b> : <input type="text" value="*10"/></p> <p><b>Description</b> : <input type="text" value="LEAVE MAILBOX"/></p> <p style="text-align: center;"><input type="button" value="Add"/></p> </div>

Step	Description																								
8.	<p>Repeat <b>Step 7</b> to enter the entry points corresponding to all of the expected types of incoming calls. The resultant table of entry points is presented as shown below.</p>  <p>The screenshot shows the FCS Computer Systems web interface. The main content area is titled 'Entry Point' and contains a red warning message: 'Please restart FCS Voicemail system for the configuration to take effect'. Below this is a 'Line Type Setting' form with the following fields:</p> <ul style="list-style-type: none"> <li>CPI Description: : X = Ignore any character , M and N = For CPI</li> <li>CPI Format: : *10</li> <li>Description: : LEAVE MAILBOX</li> </ul> <p>An 'Add' button is located below the form. Below the form is a table of existing entry points:</p> <table border="1" data-bbox="695 848 1427 1062"> <thead> <tr> <th></th> <th>Entry Point</th> <th>CPI Format</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td><a href="#">Delete</a> <a href="#">Edit</a></td> <td>1</td> <td>*10</td> <td>LEAVE MAILBOX</td> </tr> <tr> <td><a href="#">Delete</a> <a href="#">Edit</a></td> <td>2</td> <td>*22</td> <td>RETRIEVE COGMAILBOX</td> </tr> <tr> <td><a href="#">Delete</a> <a href="#">Edit</a></td> <td>3</td> <td>*12</td> <td>RETRIEVE ROOM</td> </tr> <tr> <td><a href="#">Delete</a> <a href="#">Edit</a></td> <td>4</td> <td>#00#NNNNN##</td> <td>DIDRETRIEVE</td> </tr> <tr> <td><a href="#">Delete</a> <a href="#">Edit</a></td> <td>5</td> <td>#02#XXXXX#NNNNN#</td> <td>NOANSWER</td> </tr> </tbody> </table> <p>A 'Change Position' button is located below the table.</p>		Entry Point	CPI Format	Description	<a href="#">Delete</a> <a href="#">Edit</a>	1	*10	LEAVE MAILBOX	<a href="#">Delete</a> <a href="#">Edit</a>	2	*22	RETRIEVE COGMAILBOX	<a href="#">Delete</a> <a href="#">Edit</a>	3	*12	RETRIEVE ROOM	<a href="#">Delete</a> <a href="#">Edit</a>	4	#00#NNNNN##	DIDRETRIEVE	<a href="#">Delete</a> <a href="#">Edit</a>	5	#02#XXXXX#NNNNN#	NOANSWER
	Entry Point	CPI Format	Description																						
<a href="#">Delete</a> <a href="#">Edit</a>	1	*10	LEAVE MAILBOX																						
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<a href="#">Delete</a> <a href="#">Edit</a>	3	*12	RETRIEVE ROOM																						
<a href="#">Delete</a> <a href="#">Edit</a>	4	#00#NNNNN##	DIDRETRIEVE																						
<a href="#">Delete</a> <a href="#">Edit</a>	5	#02#XXXXX#NNNNN#	NOANSWER																						

Step	Description
9.	<p><i>Set parameters for receiving Called Party ID (CPI) on incoming calls:</i></p> <p>Select <b>PABX Setting</b> from the <b>System Configuration</b> menu in the left pane. For each of the fields shown, click <b>Edit</b> and enter the following values:</p> <ul style="list-style-type: none"> <li>• <b>CPI Type:</b> Select <b>DTMF</b> (indicating CPI is sent via in-band signaling) from the drop-down menu.</li> <li>• <b>CPI Delay:</b> Leave the default for this field (does not apply to in-band signaling of CPI).</li> </ul> <p>Click <b>Save</b> in each case to accept the new value.</p> 

Step	Description
10.	<p><i>Set Message Waiting Lamp control parameters:</i></p> <p>From the <b>System Configuration</b> menu in the left pane, select <b>General Setting</b>. Under the <b>MESSAGE WAITING LAMP</b> section, enter the following values in the fields indicated:</p> <ul style="list-style-type: none"> <li>• <b>Admin: PABX</b> (from the drop-down menu), indicating that the MWLs on administrator's telephones will be set using DTMF tones over the voice ports to Avaya Communication Manager.</li> <li>• <b>Guest: PMS</b> (from the drop-down menu), indicating that the MWLs on guest telephones will be set via the PMS data link.</li> <li>• <b>OnCode:</b> The value for the <b>Leave Word Calling Send A Message</b> FAC administered in <b>Section 3, Step 3</b> (in this example, <b>*66</b>).</li> <li>• <b>OffCode:</b> The value for the <b>Leave Word Calling Cancel A Message</b> FAC administered in <b>Section 3, Step 3</b> (in this example, <b>*67</b>).</li> </ul> <p>Click <b>Update</b> to submit the form. The completed screen is shown below.</p>  <p>The screenshot shows the FCS Computer Systems web interface. The top navigation bar includes 'Home', 'System Configuration', 'Hotel Operation', 'Administration', and 'Reports'. The user is logged in as 'admin' and can click 'Change Password' or 'Logout'. The left sidebar shows 'System Configuration' selected, with sub-items like 'Hardware Setting', 'Channels', 'Others', 'TCP Setting', 'Log Printer Setting', 'PABX Setting', 'System Setting', 'General Setting', 'AWU Setting', 'Minibar Setting', and 'Room Status Setting'. The main content area is titled 'General Setting' and contains a red warning: 'Please restart FCS Voicemail system for the configuration to take effect'. Below this are three sections: 'CARD VERSION' with a 'Version' dropdown set to 'Dialogic Analog'; 'OUTCALL PARAMETERS(MWL,HP,Pager)' with a 'Maximum Attempts' input set to '3'; and 'MESSAGE WAITING LAMP' with 'Message Waiting Lamp Control Channel' settings for 'Admin' (PABX), 'Guest' (PMS), 'OnCode' (*66), and 'OffCode' (*67). Each section has 'Edit' and 'Cancel' buttons.</p>

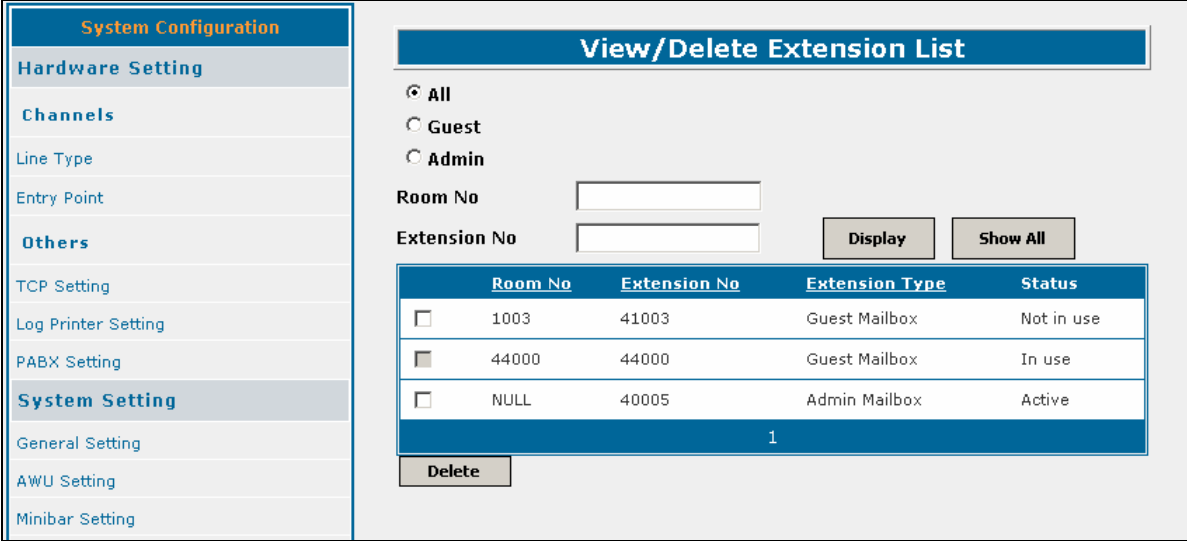


Step	Description
11.	<p><i>Define the hotel operator extensions:</i></p> <p>From the <b>System Configuration</b> menu in the left pane, select <b>Operator Setting</b>. Enter the station extensions in Avaya Communication Manager that correspond to the <b>Day Operator</b>, <b>Night Operator</b> and <b>Message Desk</b>, respectively. Click <b>Save</b> to submit the form.</p> 

Step	Description
12.	<p><i>Add guest mailboxes:</i></p> <p>From the <b>System Configuration</b> menu in the left pane, select <b>Guest Mailbox Setup</b>. Populate the fields in the form as follows:</p> <ul style="list-style-type: none"> <li>• <b>Room No. From, Room No. To:</b> Enter a range of room numbers to be matched in sequence with the extensions administered in the <b>Extension</b> fields below (up to 10 at a time).</li> <li>• <b>Floor No.:</b> Enter the floor in the hotel where the indicated range of rooms is located.</li> <li>• <b>Extension 1-Extension 10:</b> Enter the extension numbers of the guest telephones in the rooms falling in the range specified above.</li> </ul> <div data-bbox="285 737 1468 1476" style="border: 1px solid black; padding: 10px;"> <p>The screenshot shows the 'Guest Mailbox Setup' configuration page. On the left, a sidebar lists 'System Configuration' options, with 'Guest Mailbox Setup' selected under the 'System Setting' category. The main content area is titled 'Guest Mailbox Setup' and contains the following fields:</p> <ul style="list-style-type: none"> <li><b>Room No. From:</b> 1003</li> <li><b>Room No. To:</b> 1003</li> <li><b>Floor No.:</b> 10</li> <li><b>Extension 1:</b> 41003 <input checked="" type="checkbox"/></li> <li><b>Extension 2:</b> <input type="checkbox"/></li> <li><b>Extension 3:</b> <input type="checkbox"/></li> <li><b>Extension 4:</b> <input type="checkbox"/></li> <li><b>Extension 5:</b> <input type="checkbox"/></li> <li><b>Extension 6:</b> <input type="checkbox"/></li> <li><b>Extension 7:</b> <input type="checkbox"/></li> <li><b>Extension 8:</b> <input type="checkbox"/></li> <li><b>Extension 9:</b> <input type="checkbox"/></li> <li><b>Extension 10:</b> <input type="checkbox"/></li> </ul> </div>

Step	Description																																																														
<p data-bbox="196 289 240 317">13.</p>	<p data-bbox="282 289 1459 390">Click the <b>Create</b> button to create the guest mailboxes specified. A list of <b>RoomNO   ExtnNO</b> pairs corresponding to the created mailboxes is displayed in the text box below the administered fields, as shown below.</p> <div data-bbox="282 430 1466 1371" style="border: 1px solid black; padding: 5px;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%; vertical-align: top; border-right: 1px solid black; padding: 5px;"> <p><b>Channels</b></p> <p>Line Type</p> <p>Entry Point</p> <p><b>Others</b></p> <p>TCP Setting</p> <p>Log Printer Setting</p> <p>PABX Setting</p> <p><b>System Setting</b></p> <p>General Setting</p> <p>AWU Setting</p> <p>Minibar Setting</p> <p>Room Status Setting</p> <p>Operator Setting</p> <p>Language Setting</p> <p>Module Setting</p> <p><b>Database Setup</b></p> <p>Guest Mailbox Setup</p> <p>Admin Mailbox Setup</p> <p>View/Delete Extension List</p> <p><b>User Setup</b></p> <p>Create User</p> </td> <td style="padding: 5px;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Room No. From</td> <td style="width: 20%;"><input type="text" value="1003"/></td> <td style="width: 10%;"></td> <td style="width: 20%;">Floor No.</td> <td style="width: 10%;"><input type="text" value="10"/></td> </tr> <tr> <td>Room No. To</td> <td><input type="text" value="1003"/></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Extension 1</td> <td>: <input type="text" value="41003"/></td> <td>:</td> <td><input checked="" type="checkbox"/></td> <td></td> </tr> <tr> <td>Extension 2</td> <td>: <input type="text"/></td> <td>:</td> <td><input type="checkbox"/></td> <td></td> </tr> <tr> <td>Extension 3</td> <td>: <input type="text"/></td> <td>:</td> <td><input type="checkbox"/></td> <td></td> </tr> <tr> <td>Extension 4</td> <td>: <input type="text"/></td> <td>:</td> <td><input type="checkbox"/></td> <td></td> </tr> <tr> <td>Extension 5</td> <td>: <input type="text"/></td> <td>:</td> <td><input type="checkbox"/></td> <td></td> </tr> <tr> <td>Extension 6</td> <td>: <input type="text"/></td> <td>:</td> <td><input type="checkbox"/></td> <td></td> </tr> <tr> <td>Extension 7</td> <td>: <input type="text"/></td> <td>:</td> <td><input type="checkbox"/></td> <td></td> </tr> <tr> <td>Extension 8</td> <td>: <input type="text"/></td> <td>:</td> <td><input type="checkbox"/></td> <td></td> </tr> <tr> <td>Extension 9</td> <td>: <input type="text"/></td> <td>:</td> <td><input type="checkbox"/></td> <td></td> </tr> <tr> <td>Extension 10</td> <td>: <input type="text"/></td> <td>:</td> <td><input type="checkbox"/></td> <td></td> </tr> </table> <div style="border: 1px solid black; 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<p data-bbox="196 1434 240 1461">14.</p>	<p data-bbox="282 1434 1344 1461">Repeat <b>Steps 12 and 13</b> until mailboxes have been created for all guest extensions.</p>																																																														

Step	Description
<p><b>15.</b></p>	<p><i>Create administrator mailboxes:</i></p> <p>From the <b>System Configuration</b> menu in the left pane, select <b>Admin Mailbox Setup</b>. Populate the fields in the form as follows:</p> <ul style="list-style-type: none"> <li>• <b>Extn Range:</b> Enter a range indicating the number of mailbox extensions to be created by this instance of the form (in this case, <b>1</b>).</li> <li>• <b>Extn Type:</b> Select <b>MAILBOX</b> from the drop-down menu.</li> <li>• <b>Language:</b> Select the appropriate language to be used to provide user prompts (in this case, <b>ENGLISH</b>).</li> <li>• <b>Extension1-Extension5:</b> Enter up to 5 mailbox extensions.</li> <li>• <b>Multiple Mailbox Single Extension:</b> Check this box if a single administrator station will have multiple mailboxes associated with it.</li> </ul> <p>Click <b>Create</b> to submit the form.</p> <div data-bbox="347 848 1403 1713" style="border: 1px solid black; padding: 10px;"> <div style="background-color: #0056b3; color: white; text-align: center; padding: 5px; font-weight: bold;">Admin Mailbox Setup</div> <p>Extn Range : <input type="text" value="1"/></p> <p>Extn Type : <input type="text" value="MAILBOX"/></p> <p>Language : <input type="text" value="ENGLISH"/></p> <p>Extension1 : <input type="text" value="40004"/> <input checked="" type="checkbox"/></p> <p>Extension2 : <input type="text"/> <input type="checkbox"/></p> <p>Extension3 : <input type="text"/> <input type="checkbox"/></p> <p>Extension4 : <input type="text"/> <input type="checkbox"/></p> <p>Extension5 : <input type="text"/> <input type="checkbox"/></p> <p><input type="checkbox"/> Multiple Mailbox Single Extension</p> <div style="border: 1px solid gray; padding: 5px; margin-top: 10px;">ExtnNO = 40004   MailBoxID = 40004</div> <div style="text-align: center; margin-top: 10px;"> <input type="button" value="Create"/> <input type="button" value="Update"/> <input type="button" value="Remove"/> <input type="button" value="Clear"/> </div> </div>
<p><b>16.</b></p>	<p>Repeat <b>Step 15</b> until all administrator mailboxes have been created.</p>

Step	Description
17.	<p>To view a list of all mailboxes that have been created, select <b>View/Delete Extension List</b> from the <b>System Configuration</b> menu in the left pane. An example from the test configuration is shown below.</p> 

## 5. Interoperability Compliance Testing

Interoperability compliance testing focused on FCS VoiceMail's ability to work with Avaya Communication Manager. FCS VoiceMail features and capabilities that were verified included the following: voice message delivery/retrieval/deletion and associated MWL activation/deactivation, recording of personal greetings for guest mailboxes, changing of guest mailbox's PIN/password, setting/cancelling AWU calls, and Housekeeping/Room Status and Minibar updates initiated at guest telephones.

### 5.1. General Test Approach

Feature functionality testing was performed manually. Inbound calls were made to the Avaya 4626 and 9640 IP Telephones (i.e. the guest telephones) over T1/PRI trunks, as well as from other local extensions (analog, digital, and IP Telephone).

### 5.2. Test Results

All executed test cases were completed successfully.

## 6. Verification Steps

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

Step	Description
1.	Call the FCS VoiceMail hunt group extension from a checked-in guest telephone. Verify that an announcement summarizing the number of messages in the associated guest mailbox is played, without the need for entering a mailbox extension or password.
2.	Call the FCS VoiceMail hunt group extension from a checked-out guest telephone. Verify that the caller is prompted for a mailbox extension and, once such an extension is provided, a password.
3.	From a checked-in guest telephone, dial the extension of an FCS VoiceMail port that supports AWU. Follow the prompts to request a wake-up call for an upcoming time. Verify that the AWU call is launched to the guest telephone at the appropriate time.
4.	From a checked-in guest telephone, dial the extension of an FCS VoiceMail port that supports Minibar and Room Status updates. Follow the prompts to submit Minibar charges and Room Status changes. Verify using FCS WinSuite that the data are posted accurately.

## 7. Support

For technical support on FCS VoiceMail, contact FCS Computer Systems at <http://www.fcscs.com/support.htm>.

## 8. Conclusion

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

## 9. Additional References

1. "Administration for Network Connectivity for Avaya Communication Manager," Document ID 555-233-504.
2. "Application Notes for FCS WinSuite with Avaya Communication Manager."

Additional product documentation may be found at the following sites:

- Avaya: <http://support.avaya.com>
- FCS: <http://www.fcscs.com>

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