



Avaya Solution & Interoperability Test Lab

Application Notes for FCS I-Services with Avaya Communication Manager and Avaya 4626 and 9640 IP Telephones- Issue 1.0

Abstract

These Application Notes describe the procedures for configuring FCS I-Services to interoperate with Avaya Communication Manager and the Avaya 4626 and 9640 IP Telephones. FCS I-Services is an IP telephone application designed for use in a Hotel/Hospitality environment, with features such as Auto Wake-Up, Do Not Disturb activation, Web Services, Text Messaging, Email, and retrieval of Hotel information.

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 I-Services to interoperate with Avaya Communication Manager. FCS I-Services is an IP telephone application designed for use in a Hotel/Hospitality environment, with features such as Auto Wake-Up (AWU), Do Not Disturb (DND) activation, Web Services, Text Messaging, Email, and retrieval of Hotel information. It works in conjunction with FCS WinSuite¹ (a Windows-based Hospitality system that provides a real-time multitasking interface between a PBX and a hotel's Property Management System (PMS)), FCS Connect² (a sophisticated small-scale in-house call center solution that enables hoteliers to implement "on-touch" service request capabilities from all guest telephones) and FCS VoiceMail³ (a Windows-based Voice Messaging system designed specifically for Hospitality environments) to provide a variety of screen-based capabilities to guest telephones.

The configuration used in performing compliance testing of FCS I-Services 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 I-Services server, and Avaya 4626⁴ and 9640 IP Telephones (representing guest telephones). A Windows-based DHCP server is accessed by the Avaya 4626 and 9640 IP Telephones to acquire an IP address and locate and download the appropriate firmware and settings files to register successfully with Avaya Communication Manager. Interfacing with this environment is a wireless telephony network including the following: an Avaya Voice Priority Processor; a Wireless Access Point; Avaya 3600-Series Wireless IP Telephones (specifically the 3616, 3641 and 3645), representing devices used by hotel staff, or "runners"; an FCS Connect server; and a SpectraLink Netlink OAI Gateway, through which FCS Connect sends wireless text messages to, and receives wireless updates from, the runners' phones. (FCS Connect also connects to ports on one of the Avaya G650 Media Gateways via analog ports on an Intel Dialogic card to enable guests to submit service requests via an IVR module, but this interface was not used in the compliance testing of FCS I-Services.) In addition, FCS WinSuite accepts requests from the guest telephones via FCS I-Services to enable features such as DND (forwarded by FCS WinSuite via a PMS data link interface to Avaya Communication Manager), AWU (sent to FCS VoiceMail via TCP/IP), Housekeeping/Room Status/Minibar updates, etc.

These Application Notes assume that all FCS products used in **Figure 1** have been installed and configured by FCS services personnel, and that their respective integrations with Avaya products have been completed. For details on the integration of FCS WinSuite, FCS Connect and FCS VoiceMail with Avaya products, please refer to [2], [3], and [4].

¹ Configuration details for this product can be found in [2].

² Configuration details for this product can be found in [3].

³ Configuration details for this product can be found in [4].

⁴ This telephone was designed and developed specifically for Hospitality environments.

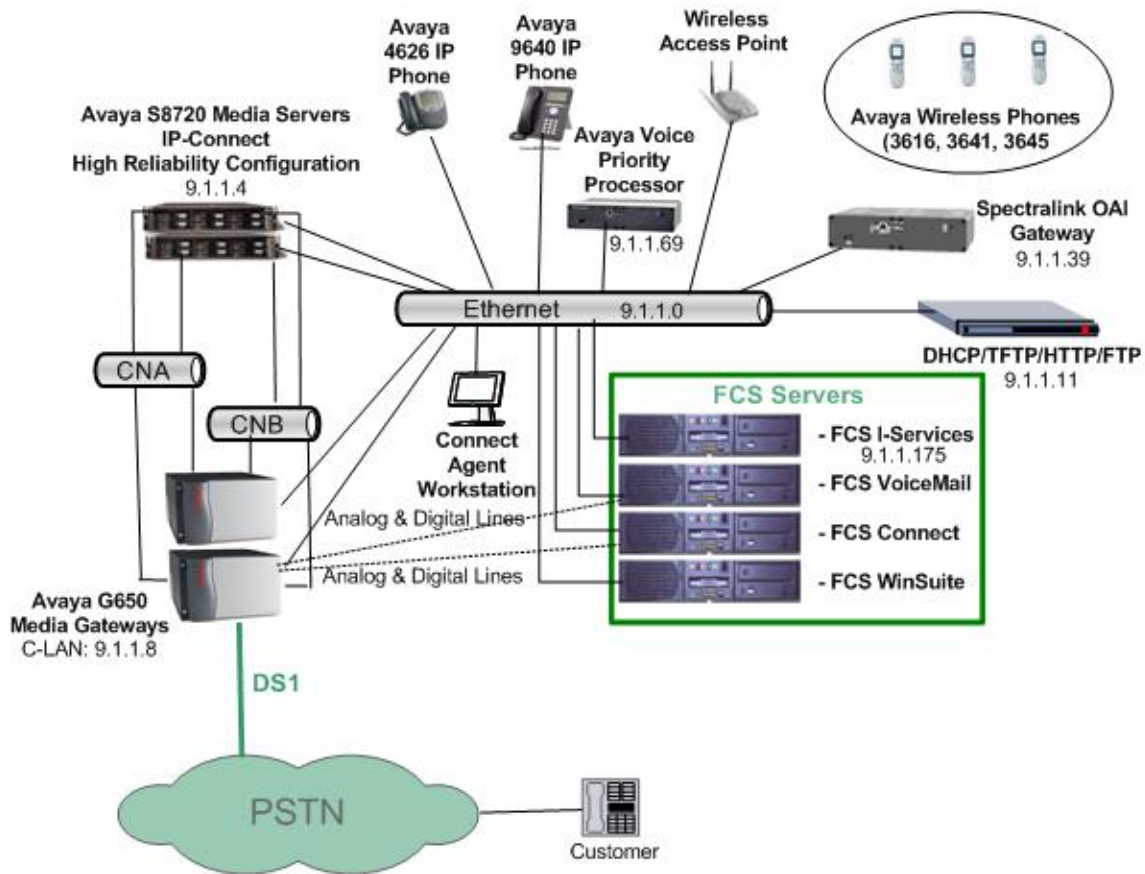


Figure 1: Sample Test Configuration

2. Equipment and Software Validated

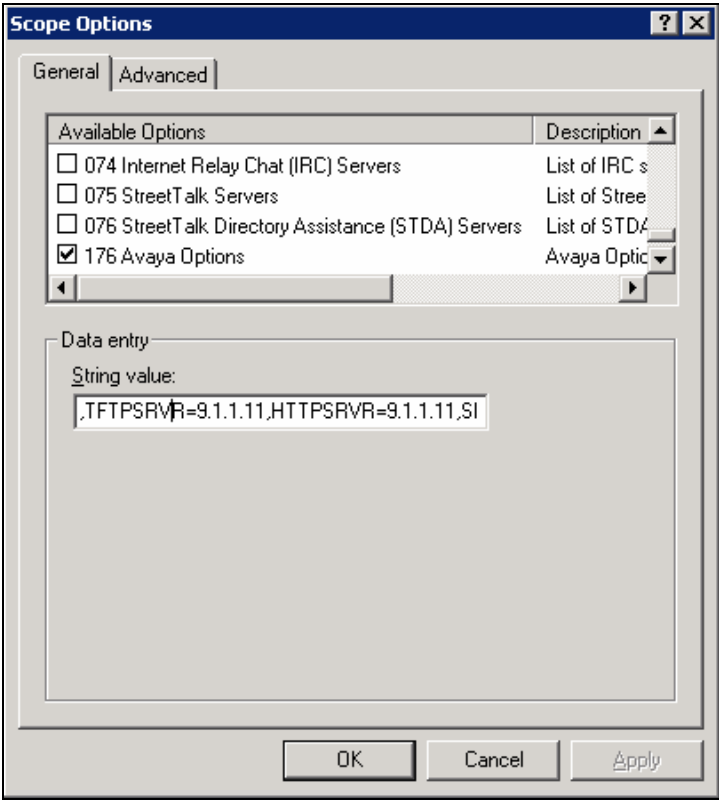
The following equipment and software were used for the sample configuration provided:

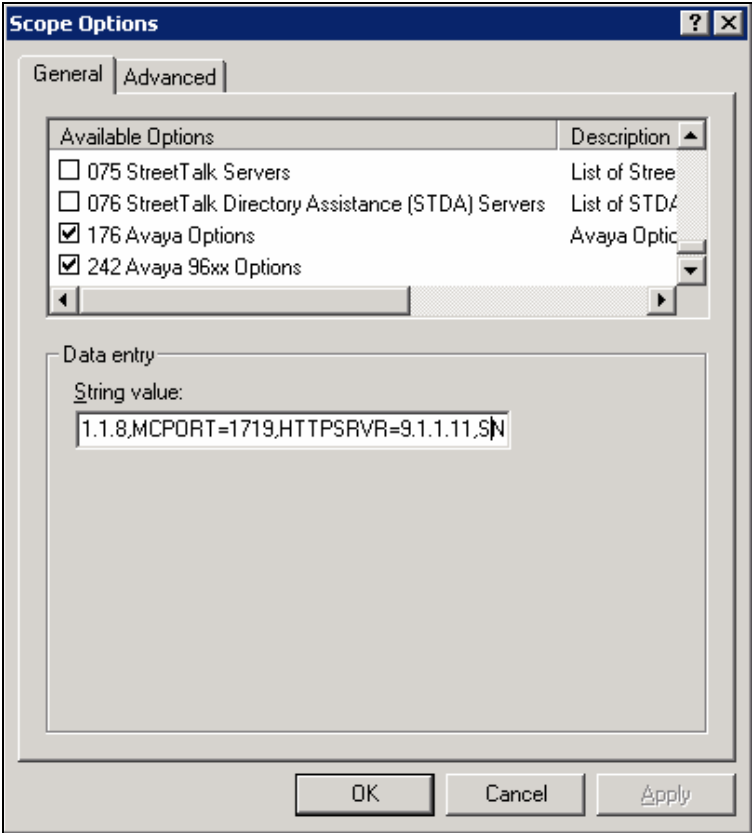
Equipment	Hardware/Firmware/Software Version
Avaya S8720 Server	Avaya Communication Manager 4.0.1 (R014x.00.1.731.2)
Avaya G650 Media Gateway <ul style="list-style-type: none"> • TN799DP C-LAN • TN2312AP IPSI • TN2302AP MedPro • TN2224CP 2-Wire Digital • TN464HP DS1 • TN746B Analog Line 	26.31.0 HW01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

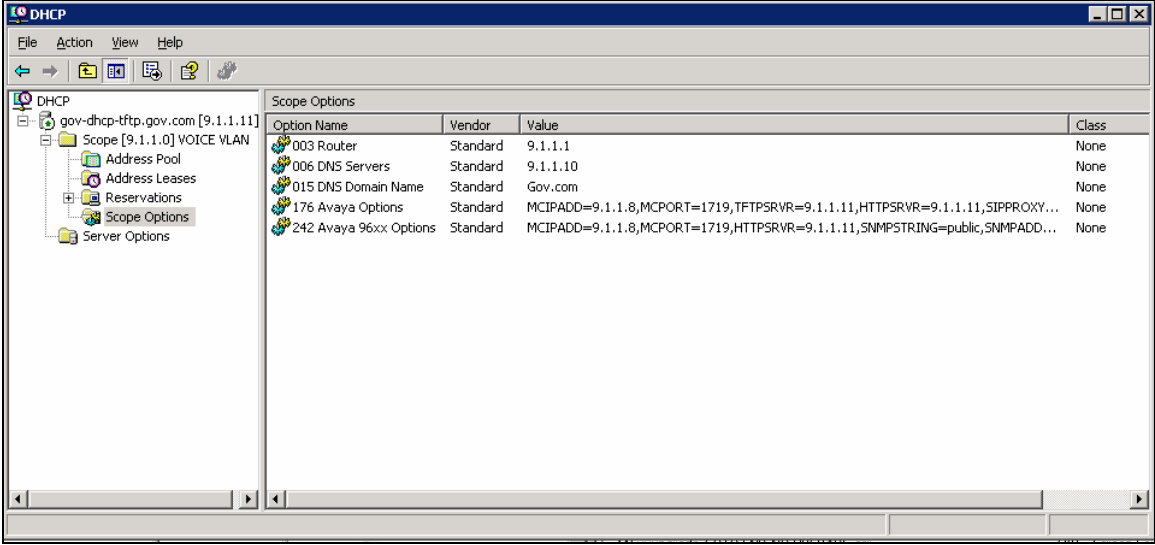
Equipment	Hardware/Firmware/Software Version
Avaya 3616 Wireless IP Telephone	110.064 069.048 106.013
Avaya 3641 Wireless IP Telephone	119.024 117.013 118.018
Avaya 3645 Wireless IP Telephone	119.024 117.013 118.018
Avaya Voice Priority Processor (SVPP Type: 100)	33/02 Factory Page: 230.007 Downloader: 230.157 Table of Contents: 173.027 Functional Code: 174.027 File System: 175.027
SpectraLink Netlink OAI Gateway	06/81 Boot Code: 001.010 (0d7a) Factory Page: 085.001 (02fd) Flash1 Downloader: 031.007 (0233) Functional Code: 082.017 (014f) fncntla.bin 082.017 (014f)
FCS I-Services Server	4.01 (with Windows 2003 Server SP 2)
FCS Connect Server	3.0.0 (with Windows 2003 Server SP 2)
FCS WinSuite Server	3.0.8 (with Windows 2003 Server SP 2)
FCS VoiceMail Server	4.0.0 (with Windows 2003 Server SP 2)

3. Configure DHCP Server for Avaya 4626 and 9640 IP Telephones

The Avaya 4626 and 9640 IP Telephones must load specific parameters in order to access I-Services successfully. This section details the steps required to configure the DHCP server to direct the Avaya 4626 and 9640 IP Telephones to the necessary settings file.

Step	Description
1.	<p><i>Set Scope Options for Avaya 4626 IP Telephone:</i></p> <p>Open the DHCP administrative client (Start -> Programs -> Administrative Tools -> DHCP). In the left pane, select the Scope Options icon under the DHCP Server used by the Avaya 4626 and 9640 IP Telephones. In the table that appears on the right, double-click on the 176 Avaya Options entry: In the Scope Options window that is presented (see below), select the General tab and add HTTPSRVR=a.b.c.d (where a.b.c.d is the IP address of the HTTP server to be used) to the string in the String value field. Click OK.</p> 

Step	Description
2.	<p><i>Set Scope Options for Avaya 9640 IP Telephone:</i></p> <p>Returning to the Scope Options table (see Step 1), double-click on the 242 Avaya 96xx Options entry: In the Scope Options window that is presented (see below), select the General tab and add HTTPSRRV=a.b.c.d (where a.b.c.d is the IP address of the HTTP server to be used) to the string in the String value field. Click OK.</p> 

Step	Description																								
3.	<p>The picture below shows the modified Scope Options in the DHCP administrative client.</p>  <table border="1" data-bbox="565 472 1442 604"> <thead> <tr> <th>Option Name</th> <th>Vendor</th> <th>Value</th> <th>Class</th> </tr> </thead> <tbody> <tr> <td>003 Router</td> <td>Standard</td> <td>9.1.1.1</td> <td>None</td> </tr> <tr> <td>006 DNS Servers</td> <td>Standard</td> <td>9.1.1.10</td> <td>None</td> </tr> <tr> <td>015 DNS Domain Name</td> <td>Standard</td> <td>Gov.com</td> <td>None</td> </tr> <tr> <td>176 Avaya Options</td> <td>Standard</td> <td>MCIPADD=9.1.1.8,MCPORT=1719,TFTPSTVR=9.1.1.11,HTTPSTVR=9.1.1.11,SIPPROXY...</td> <td>None</td> </tr> <tr> <td>242 Avaya 96xx Options</td> <td>Standard</td> <td>MCIPADD=9.1.1.8,MCPORT=1719,HTTPSTVR=9.1.1.11,SNMPSTRING=public,SNMPADD...</td> <td>None</td> </tr> </tbody> </table>	Option Name	Vendor	Value	Class	003 Router	Standard	9.1.1.1	None	006 DNS Servers	Standard	9.1.1.10	None	015 DNS Domain Name	Standard	Gov.com	None	176 Avaya Options	Standard	MCIPADD=9.1.1.8,MCPORT=1719,TFTPSTVR=9.1.1.11,HTTPSTVR=9.1.1.11,SIPPROXY...	None	242 Avaya 96xx Options	Standard	MCIPADD=9.1.1.8,MCPORT=1719,HTTPSTVR=9.1.1.11,SNMPSTRING=public,SNMPADD...	None
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4. Configure Downloadable Web Parameters for Avaya 4626 and 9640 IP Telephones

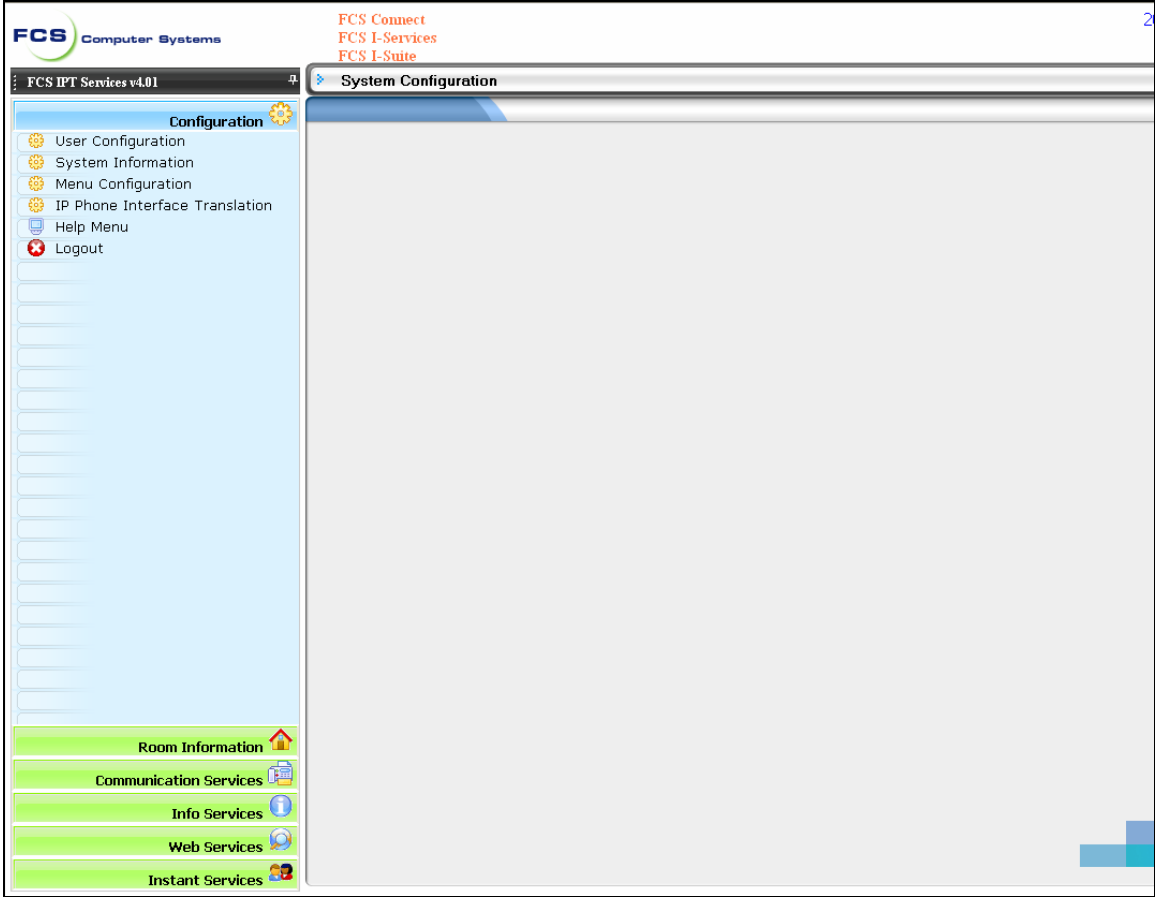
This section describes the steps needed to add the parameters and settings related to FCS I-Services functionality to the set of parameters downloaded from HTTP server to the Avaya 4626 and 9640 IP Telephones in order to enable FCS I-Services to interoperate with these telephones.

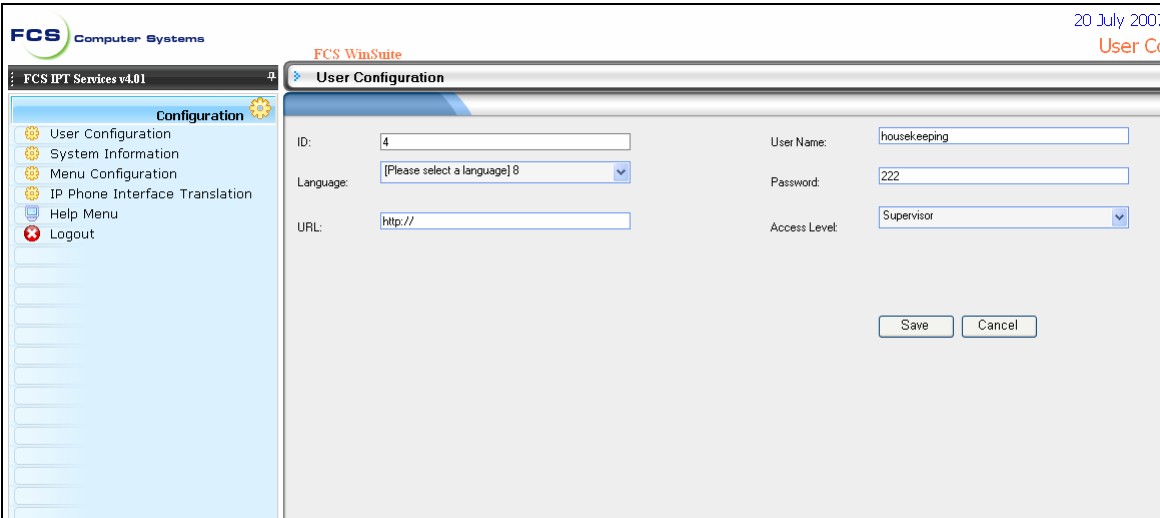
Step	Description
1.	<p data-bbox="284 325 1372 357"><i>Add FCS I-Services parameters for Avaya 4626 IP Telephone to 46xxsettings.txt file:</i></p> <p data-bbox="284 399 1461 535">Edit the 46xxsettings.txt file on the HTTP server that is used by the Avaya 4626 IP Telephone (in C:/FTP_ROOT) and advance to the section of the file where the Web settings are defined for the Avaya 4626 IP Telephone (see below). Define the following variable values using the SET command.</p> <p data-bbox="284 546 1445 609">Note: In the items listed below <i><I-SVCS IP></i> should be replaced with the IP address of the FCS I-Services Server (in this example, 9.1.1.175).</p> <ul data-bbox="381 651 1461 1123" style="list-style-type: none"> • WMLIDLEURI: This is the location of promotional Web pages to be retrieved & displayed after WMLIDLETIME (minutes) is reached; set to http://<I-SVCS IP>:8080/IPTNET/AVAYA/Adver.aspx. • TPSLIST: This is the Trusted Push Server (TPS) location; set to <i><I-SVCS IP></i>. • SUBSCRIBELIST: At startup, the IP telephone navigates to this address to provide ID information (i.e. IP address, phone type, MAC address) to FCS I-Services; set to http://<I-SVCS IP>:8080/IPTNET/AVAYA/getPhoneInfo.aspx. • WMLHOME: This is the main home page to be displayed on the IP telephone; set to http://<I-SVCS IP>:8080/IPTNET/AVAYA/Main.aspx. • WMLIDLETIME: Set to the desired number of minutes of idle time before the promotional Web pages (located at WMLIDLEURI) are retrieved and displayed (in this example, 5). <p data-bbox="284 1165 836 1197">Click File -> Save to preserve the changes.</p> <pre data-bbox="284 1239 1461 1753"> ##### # SETTINGS4626 ##### ##### Web Settings for 4626 IP Phone ##### #SET APPNAME a26d01a2_716.bin #SET APPNAME a26d01a2484.bin #SET APPNAME 4626emulator.bin SET WMLIDLEURI http://9.1.1.175:8080/IPTNET/AVAYA/Adver.aspx SET TPSLIST 9.1.1.175 SET SUBSCRIBELIST http://9.1.1.175:8080/IPTNET/Avaya/getPhoneInfo.aspx SET WMLHOME http://9.1.1.175:8080/IPTNET/AVAYA/Main.aspx SET WMLIDLETIME 5 #SET PROCPSWD 1111111 SET PROCPSWD 31 goto END </pre>

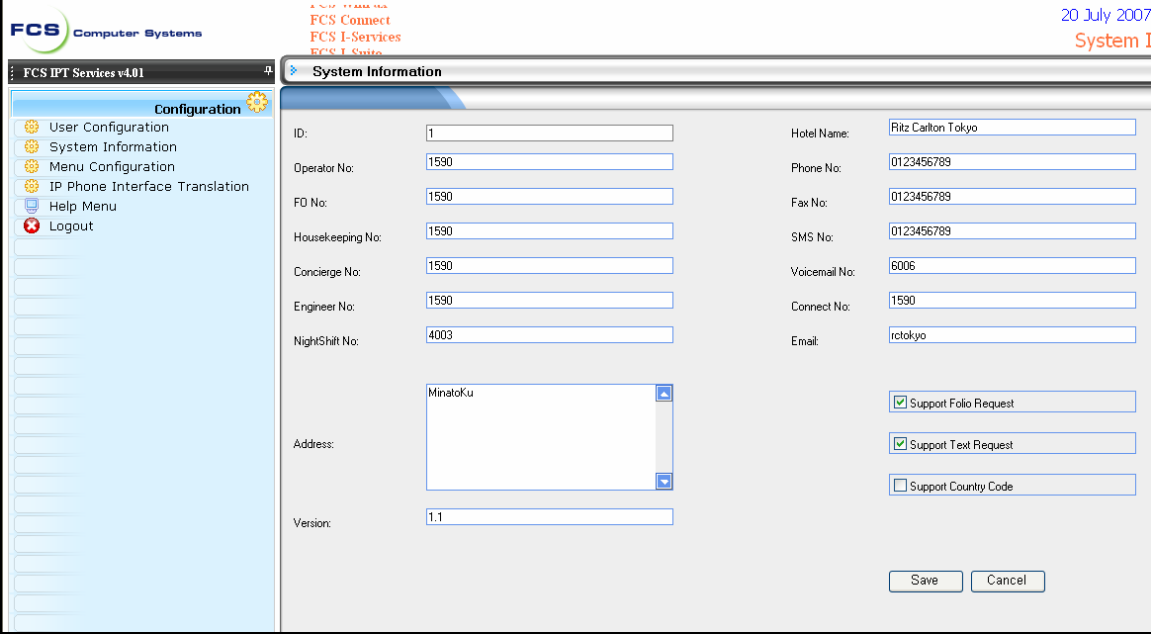
Step	Description
<p>2.</p>	<p><i>Add FCS I-Services parameters for Avaya 9640 IP Telephone to 46xxsettings.txt file:</i></p> <p>Edit the 46xxsettings.txt file that is used by the Avaya 4626 IP Telephone (in C:/HTTP_ROOT) and locate the section of the file with the comment heading</p> <p style="text-align: center;">## Per Model Settings</p> <p>Add a line below this heading, similar to those in this section of the file, that reads as follows:</p> <p style="text-align: center;">IF \$MODEL4 SEQ 9640 goto SETTINGS9640</p> <p>Advance to the section of the file where the Web settings are defined for the Avaya 9640 IP Telephone, or create a section if necessary (see below). Define the same variables with the same values as entered for the Avaya 4626 IP Telephone in Step 1. Click File -> Save to preserve the changes.</p> <div style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <pre>##### # SETTINGS9640 ##### ##### Web Settings for 9640 IP Phone ##### #SET APPNAME a26d01a2_716.bin #SET APPNAME a26d01a2484.bin #SET APPNAME 4626emulator.bin SET WMLIDLEURI http://9.1.1.175:8080/IPTNET/AVAYA/Adver.aspx SET TPSLIST 9.1.1.175 SET SUBSCRIBELIST http://9.1.1.175:8080/IPTNET/Avaya/getPhoneInfo.aspx SET WMLHOME http://9.1.1.175:8080/IPTNET/AVAYA/Main.aspx SET WMLIDLETIME 5 goto END</pre> </div>
<p>3.</p>	<p>Once FCS I-Services has been properly configured (see Section 5), reboot the Avaya IP Telephones to download the added parameters to each telephone.</p>

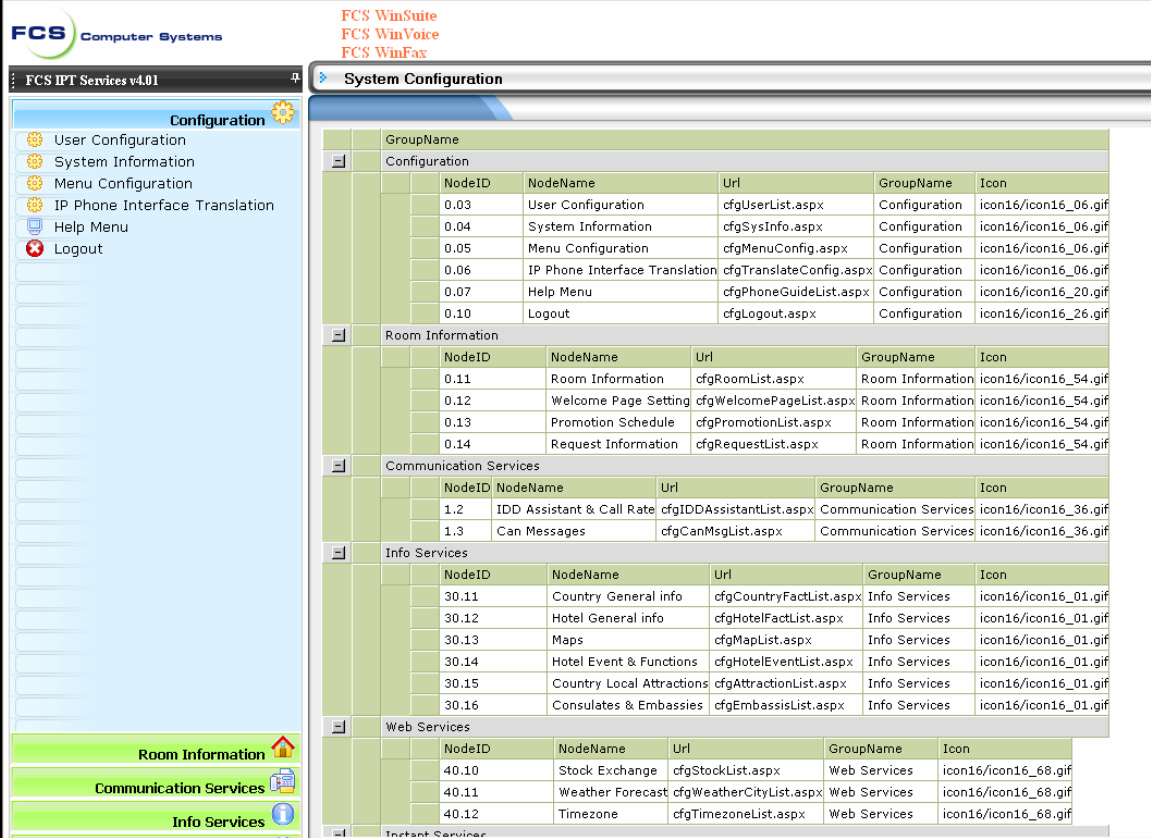
5. Configure FCS I-Services

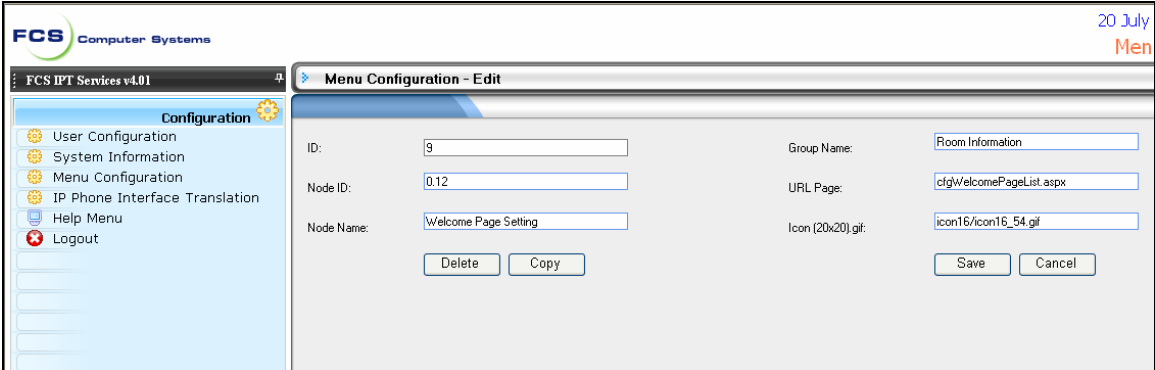
This section details the steps to be taken to configure FCS I-Services to interoperate with Avaya Communication Manager and the Avaya 4626 and 9640 IP Telephones. These Application Notes assume that the FCS I-Services application has already been properly installed by FCS services personnel. Note: Since many of the administrable aspects of FCS I-Services exercise the same functionality of the Avaya 4626 and 9640 IP Telephones (i.e. display/navigation/population of Web-based menus and forms), administration of only a subset of such features is explained here. For details on the full set of features, consult the appropriate FCS I-Services documentation or go to <http://www.fcscs.com>.

Step	Description
1.	<p>From a Web browser, navigate to the FCS I-Services System Configuration utility. At the login screen, provide the appropriate credentials and click Login. The default screen is presented, as shown below.</p> 

Step	Description
2.	<p><i>Add User IDs for hotel staff (e.g. maids, supervisors, etc.):</i></p> <p>From the Configuration menu, select User Configuration. Click the Add button to the upper right to add a user. The User Configuration entry form is presented, as shown below.</p> <p>Populate the fields as follows:</p> <ul style="list-style-type: none"> • ID: This can be left blank (FCS I-Services will assign this automatically). • User Name: Enter a descriptive name (in this example, housekeeping). • Language: Select a language from the drop-down menu. This will determine the format of content to be pushed to the IP telephones. • Password: Enter a string to be used as a password. • URL: Enter a Web location to be associated with this user. (Although this field is mandatory, it can be as simple as http:// (as used in this example).) • Access Level: Select a level of permission for this user (Admin, Supervisor, User or Guest). <p>Click Save to add the new user.</p> 

Step	Description
3.	<p><i>Enable guests to view bills and text messages at their IP telephones:</i></p> <p>From the Configuration menu, click System Configuration. In the form that is presented (see below), select the check boxes next to Support Folio Request (i.e. to allow guests to view their bills) and Support Text Request (to allow guests to view text messages). Note: The text fields in this form are for informational purposes only, and are not used directly by FCS I-Services.</p> <p>Click Save to submit the changes.</p> 

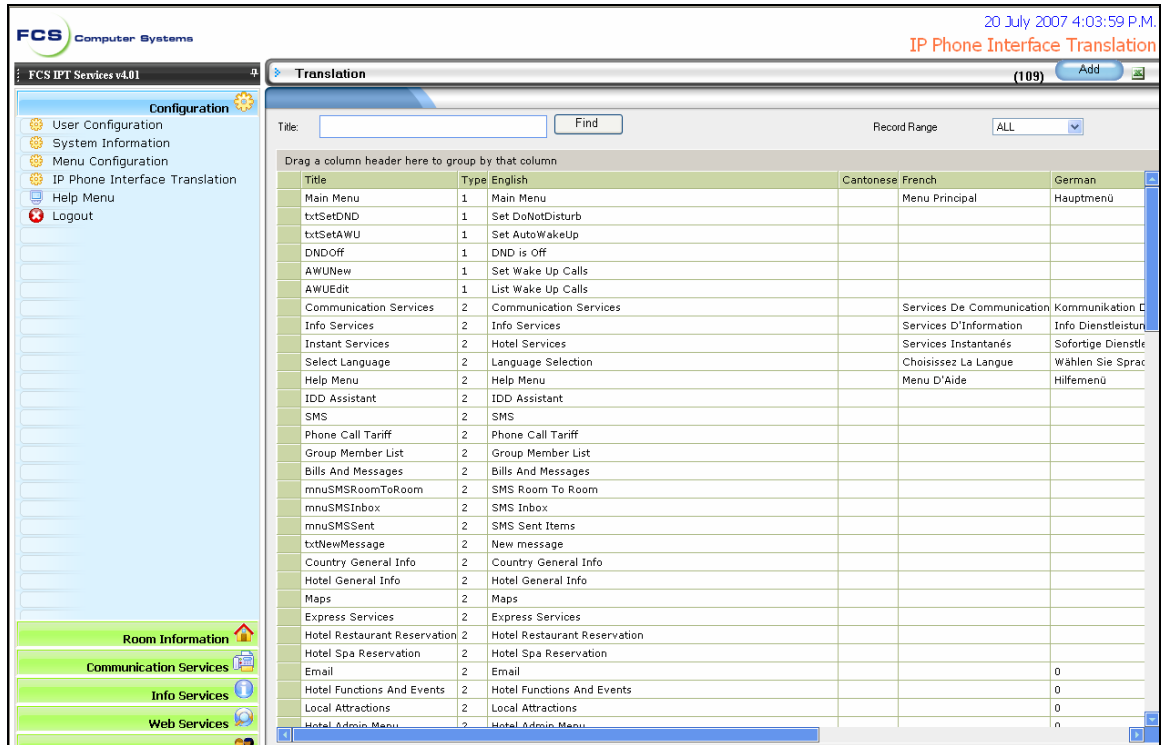
Step	Description																																																																																																																																				
4.	<p data-bbox="282 289 976 321"><i>Add/modify menu items presented to guest telephones:</i></p> <p data-bbox="282 363 1417 468">From the Configuration menu, select Menu Configuration. A table containing details associated with the various default menus and submenus presented to guest telephones is displayed, as shown below.</p>  <p>The screenshot shows the 'System Configuration' window with a table of menu items. The table is organized into several groups: Configuration, Room Information, Communication Services, Info Services, and Web Services. Each group contains a list of menu items with columns for NodeID, NodeName, Url, GroupName, and Icon.</p> <table border="1" data-bbox="618 632 1406 1339"> <thead> <tr> <th>Group Name</th> <th>NodeID</th> <th>NodeName</th> <th>Url</th> <th>GroupName</th> <th>Icon</th> </tr> </thead> <tbody> <tr> <td>Configuration</td> <td>0.03</td> <td>User Configuration</td> <td>cfgUserList.aspx</td> <td>Configuration</td> <td>icon16/icon16_06.gif</td> </tr> <tr> <td>Configuration</td> <td>0.04</td> <td>System Information</td> <td>cfgSysInfo.aspx</td> <td>Configuration</td> <td>icon16/icon16_06.gif</td> </tr> <tr> <td>Configuration</td> <td>0.05</td> <td>Menu Configuration</td> <td>cfgMenuConfig.aspx</td> <td>Configuration</td> <td>icon16/icon16_06.gif</td> </tr> <tr> <td>Configuration</td> <td>0.06</td> <td>IP Phone Interface Translation</td> <td>cfgTranslateConfig.aspx</td> <td>Configuration</td> <td>icon16/icon16_06.gif</td> </tr> <tr> <td>Configuration</td> <td>0.07</td> <td>Help Menu</td> <td>cfgPhoneGuideList.aspx</td> <td>Configuration</td> <td>icon16/icon16_20.gif</td> </tr> <tr> <td>Configuration</td> <td>0.10</td> <td>Logout</td> <td>cfgLogout.aspx</td> <td>Configuration</td> <td>icon16/icon16_26.gif</td> </tr> <tr> <td>Room Information</td> <td>0.11</td> <td>Room Information</td> <td>cfgRoomList.aspx</td> <td>Room Information</td> <td>icon16/icon16_54.gif</td> </tr> <tr> <td>Room Information</td> <td>0.12</td> <td>Welcome Page Setting</td> <td>cfgWelcomePageList.aspx</td> <td>Room Information</td> <td>icon16/icon16_54.gif</td> </tr> <tr> <td>Room Information</td> <td>0.13</td> <td>Promotion Schedule</td> <td>cfgPromotionList.aspx</td> <td>Room Information</td> <td>icon16/icon16_54.gif</td> </tr> <tr> <td>Room Information</td> <td>0.14</td> <td>Request Information</td> <td>cfgRequestList.aspx</td> <td>Room Information</td> <td>icon16/icon16_54.gif</td> </tr> <tr> <td>Communication Services</td> <td>1.2</td> <td>IDD Assistant & Call Rate</td> <td>cfgIDDAssistantList.aspx</td> <td>Communication Services</td> <td>icon16/icon16_36.gif</td> </tr> <tr> <td>Communication Services</td> <td>1.3</td> <td>Can Messages</td> <td>cfgCanMsgList.aspx</td> <td>Communication Services</td> <td>icon16/icon16_36.gif</td> </tr> <tr> <td>Info Services</td> <td>30.11</td> <td>Country General info</td> <td>cfgCountryFactList.aspx</td> <td>Info Services</td> <td>icon16/icon16_01.gif</td> </tr> <tr> <td>Info Services</td> <td>30.12</td> <td>Hotel General info</td> <td>cfgHotelFactList.aspx</td> <td>Info Services</td> <td>icon16/icon16_01.gif</td> </tr> <tr> <td>Info Services</td> <td>30.13</td> <td>Maps</td> <td>cfgMapList.aspx</td> <td>Info Services</td> <td>icon16/icon16_01.gif</td> </tr> <tr> <td>Info Services</td> <td>30.14</td> <td>Hotel Event & Functions</td> <td>cfgHotelEventList.aspx</td> <td>Info Services</td> <td>icon16/icon16_01.gif</td> </tr> <tr> <td>Info Services</td> <td>30.15</td> <td>Country Local Attractions</td> <td>cfgAttractionList.aspx</td> <td>Info Services</td> <td>icon16/icon16_01.gif</td> </tr> <tr> <td>Info Services</td> <td>30.16</td> <td>Consulates & Embassies</td> <td>cfgEmbassList.aspx</td> <td>Info Services</td> <td>icon16/icon16_01.gif</td> </tr> <tr> <td>Web Services</td> <td>40.10</td> <td>Stock Exchange</td> <td>cfgStockList.aspx</td> <td>Web Services</td> <td>icon16/icon16_68.gif</td> </tr> <tr> <td>Web Services</td> <td>40.11</td> <td>Weather Forecast</td> <td>cfgWeatherCityList.aspx</td> <td>Web Services</td> <td>icon16/icon16_68.gif</td> </tr> <tr> <td>Web Services</td> <td>40.12</td> <td>Timezone</td> <td>cfgTimezoneList.aspx</td> <td>Web Services</td> <td>icon16/icon16_68.gif</td> </tr> </tbody> </table>	Group Name	NodeID	NodeName	Url	GroupName	Icon	Configuration	0.03	User Configuration	cfgUserList.aspx	Configuration	icon16/icon16_06.gif	Configuration	0.04	System Information	cfgSysInfo.aspx	Configuration	icon16/icon16_06.gif	Configuration	0.05	Menu Configuration	cfgMenuConfig.aspx	Configuration	icon16/icon16_06.gif	Configuration	0.06	IP Phone Interface Translation	cfgTranslateConfig.aspx	Configuration	icon16/icon16_06.gif	Configuration	0.07	Help Menu	cfgPhoneGuideList.aspx	Configuration	icon16/icon16_20.gif	Configuration	0.10	Logout	cfgLogout.aspx	Configuration	icon16/icon16_26.gif	Room Information	0.11	Room Information	cfgRoomList.aspx	Room Information	icon16/icon16_54.gif	Room Information	0.12	Welcome Page Setting	cfgWelcomePageList.aspx	Room Information	icon16/icon16_54.gif	Room Information	0.13	Promotion Schedule	cfgPromotionList.aspx	Room Information	icon16/icon16_54.gif	Room Information	0.14	Request Information	cfgRequestList.aspx	Room Information	icon16/icon16_54.gif	Communication Services	1.2	IDD Assistant & Call Rate	cfgIDDAssistantList.aspx	Communication Services	icon16/icon16_36.gif	Communication Services	1.3	Can Messages	cfgCanMsgList.aspx	Communication Services	icon16/icon16_36.gif	Info Services	30.11	Country General 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Communication Services	1.3	Can Messages	cfgCanMsgList.aspx	Communication Services	icon16/icon16_36.gif																																																																																																																																
Info Services	30.11	Country General info	cfgCountryFactList.aspx	Info Services	icon16/icon16_01.gif																																																																																																																																
Info Services	30.12	Hotel General info	cfgHotelFactList.aspx	Info Services	icon16/icon16_01.gif																																																																																																																																
Info Services	30.13	Maps	cfgMapList.aspx	Info Services	icon16/icon16_01.gif																																																																																																																																
Info Services	30.14	Hotel Event & Functions	cfgHotelEventList.aspx	Info Services	icon16/icon16_01.gif																																																																																																																																
Info Services	30.15	Country Local Attractions	cfgAttractionList.aspx	Info Services	icon16/icon16_01.gif																																																																																																																																
Info Services	30.16	Consulates & Embassies	cfgEmbassList.aspx	Info Services	icon16/icon16_01.gif																																																																																																																																
Web Services	40.10	Stock Exchange	cfgStockList.aspx	Web Services	icon16/icon16_68.gif																																																																																																																																
Web Services	40.11	Weather Forecast	cfgWeatherCityList.aspx	Web Services	icon16/icon16_68.gif																																																																																																																																
Web Services	40.12	Timezone	cfgTimezoneList.aspx	Web Services	icon16/icon16_68.gif																																																																																																																																

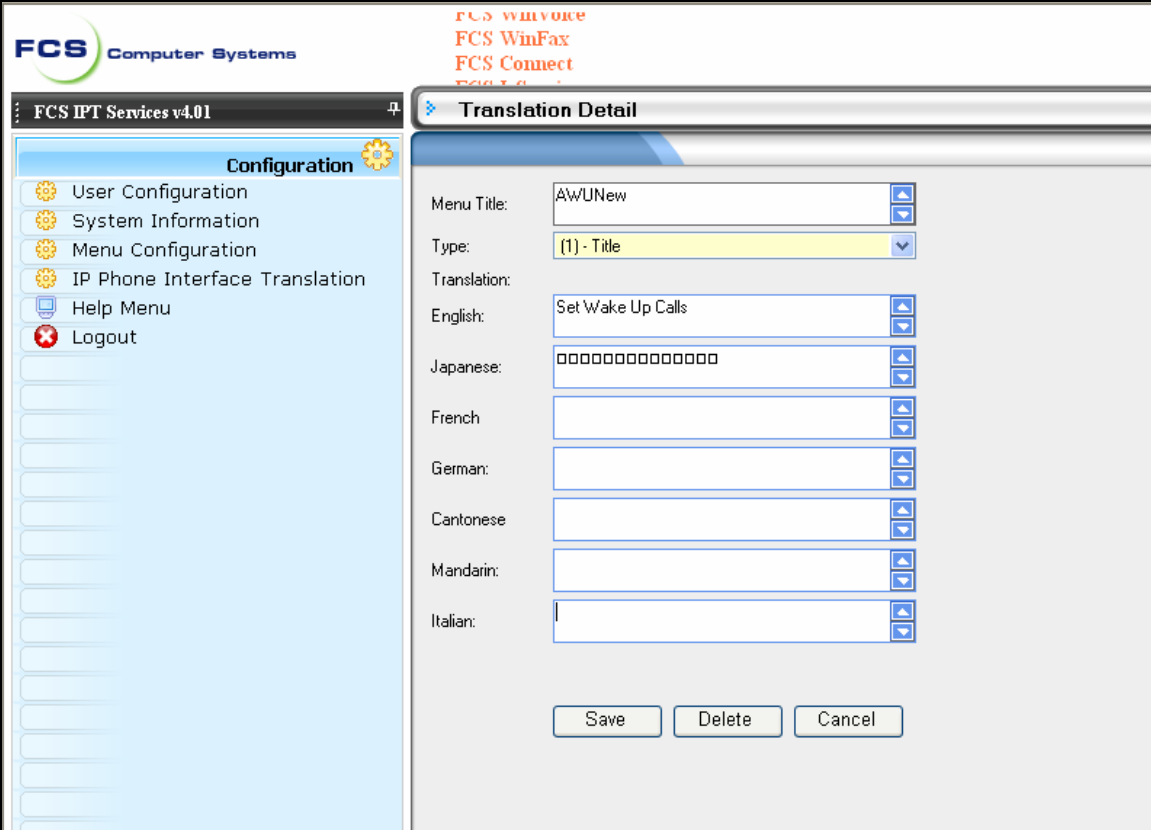
Step	Description
5.	<p>To modify an existing menu item, click next to the associated table entry. The Menu Configuration – Edit screen for that menu item is presented, as shown below. (To add a new menu item, click Add to the upper right.)</p> <p>The fields are defined as follows:</p> <ul style="list-style-type: none"> • ID: This is assigned by FCS I-Services when the item is created. • Group Name: This is the name of the menu group in which this item is to be displayed. • Node ID: This defines the order in which menu items are displayed in the associated group (e.g. x.1 comes before x.2). • URL Page: This is the Web page that is displayed when this menu item is selected. • Node Name: This is the displayed name of this menu item. • Icon (20x20).gif: This is the location of the .gif file containing the image that is to be displayed next to this menu item. <p>Buttons are available to Delete the item, Copy the contents to a new item (which can then be modified), Save any changes, or Cancel any changes.</p> 

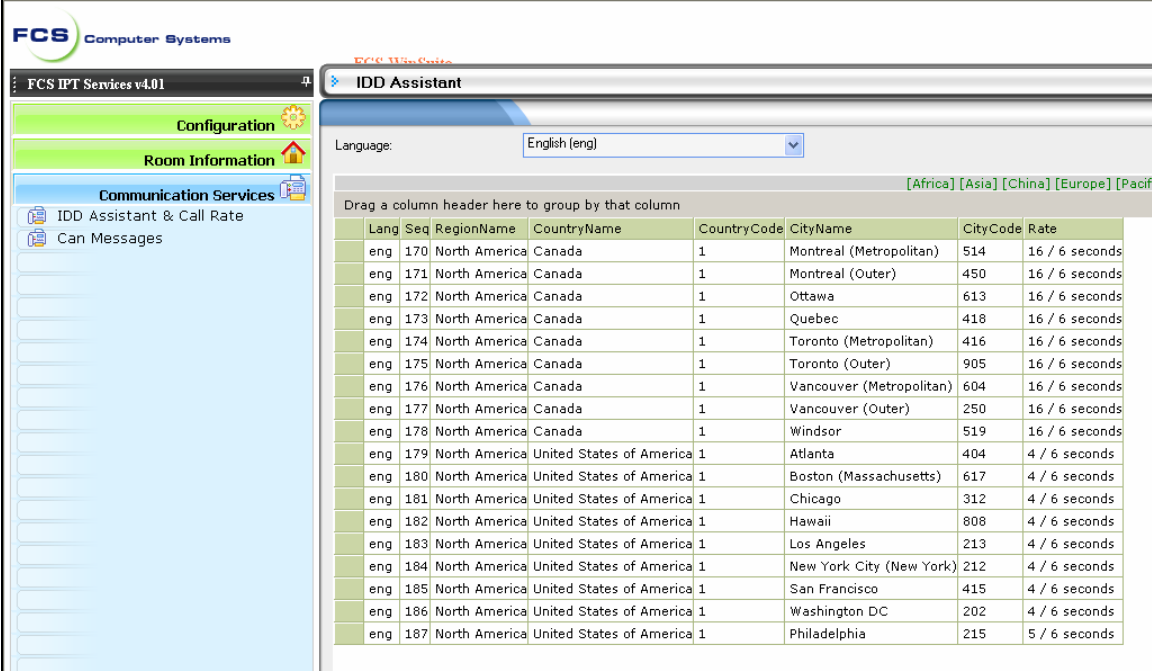
Step	Description
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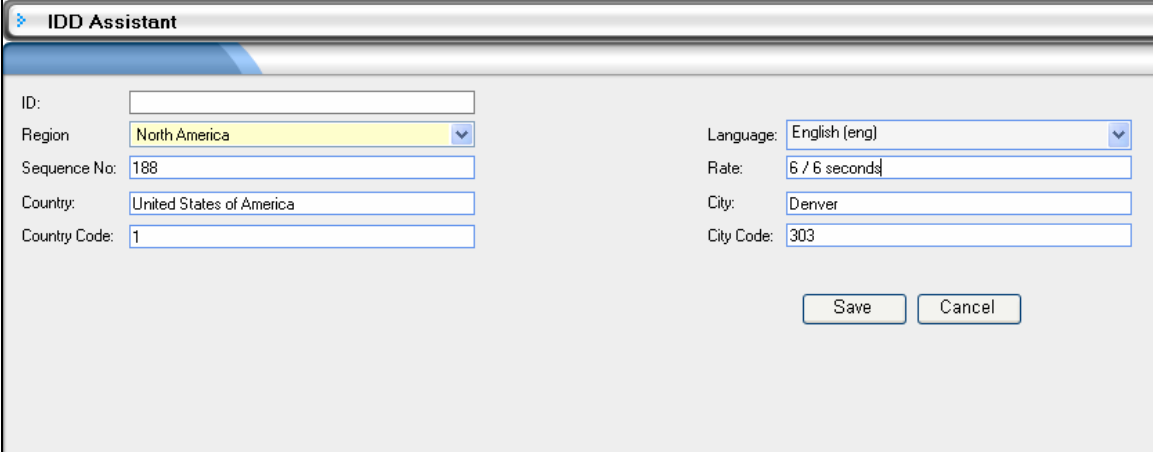
6. *Define display characteristics of guest telephones (e.g. buttons title texts, menus, messages, etc.):*

From the **Configuration** menu, select **IP Phone Interface Translation**. A table of IP telephone display items is presented, as shown below>



Step	Description
7.	<p>To modify an existing display item, click next to the associated table entry. The Translation Detail screen for that display item is presented, as shown below. (To add a new menu item, click Add to the upper right.)</p> <p>The fields are defined as follows:</p> <ul style="list-style-type: none"> • Menu Title: This identifies the display item in the table. • Type: This is one of four values from the drop-down: (1) – Title, (2) – Menu, (3) – Button, (4) – Message. • English, Japanese, French, etc.: These fields define the language-specific text that will be displayed for this item, depending on the language associated with the given guest telephone. <p>Buttons are available to Save any changes, Delete the item, or Cancel any changes.</p> 

Step	Description																																																																																																																																																								
8.	<p><i>Administering the IDD Assistant:</i></p> <p>The IDD Assistant automatically prefixes an IDD (International Direct Dial) call with the country code and city code associated with the specific city selected, as well as informing the user of the rate to be charged for such a call.</p> <p>From the Communication Services menu, select IDD Assistant & Call Rate. The IDD Assistant table is presented (the view shown below is after selecting North America from the set of regions listed above the table).</p>  <table border="1" data-bbox="613 821 1401 1251"> <thead> <tr> <th>Lang</th> <th>Seq</th> <th>RegionName</th> <th>CountryName</th> <th>CountryCode</th> <th>CityName</th> <th>CityCode</th> <th>Rate</th> </tr> </thead> <tbody> <tr><td>eng</td><td>170</td><td>North America</td><td>Canada</td><td>1</td><td>Montreal (Metropolitan)</td><td>514</td><td>16 / 6 seconds</td></tr> <tr><td>eng</td><td>171</td><td>North America</td><td>Canada</td><td>1</td><td>Montreal (Outer)</td><td>450</td><td>16 / 6 seconds</td></tr> <tr><td>eng</td><td>172</td><td>North America</td><td>Canada</td><td>1</td><td>Ottawa</td><td>613</td><td>16 / 6 seconds</td></tr> <tr><td>eng</td><td>173</td><td>North America</td><td>Canada</td><td>1</td><td>Quebec</td><td>418</td><td>16 / 6 seconds</td></tr> <tr><td>eng</td><td>174</td><td>North America</td><td>Canada</td><td>1</td><td>Toronto (Metropolitan)</td><td>416</td><td>16 / 6 seconds</td></tr> <tr><td>eng</td><td>175</td><td>North America</td><td>Canada</td><td>1</td><td>Toronto (Outer)</td><td>905</td><td>16 / 6 seconds</td></tr> <tr><td>eng</td><td>176</td><td>North America</td><td>Canada</td><td>1</td><td>Vancouver (Metropolitan)</td><td>604</td><td>16 / 6 seconds</td></tr> <tr><td>eng</td><td>177</td><td>North America</td><td>Canada</td><td>1</td><td>Vancouver (Outer)</td><td>250</td><td>16 / 6 seconds</td></tr> <tr><td>eng</td><td>178</td><td>North America</td><td>Canada</td><td>1</td><td>Windsor</td><td>519</td><td>16 / 6 seconds</td></tr> <tr><td>eng</td><td>179</td><td>North America</td><td>United States of America</td><td>1</td><td>Atlanta</td><td>404</td><td>4 / 6 seconds</td></tr> <tr><td>eng</td><td>180</td><td>North America</td><td>United States of America</td><td>1</td><td>Boston (Massachusetts)</td><td>617</td><td>4 / 6 seconds</td></tr> <tr><td>eng</td><td>181</td><td>North America</td><td>United States of America</td><td>1</td><td>Chicago</td><td>312</td><td>4 / 6 seconds</td></tr> <tr><td>eng</td><td>182</td><td>North America</td><td>United States of America</td><td>1</td><td>Hawaii</td><td>808</td><td>4 / 6 seconds</td></tr> <tr><td>eng</td><td>183</td><td>North America</td><td>United States of America</td><td>1</td><td>Los Angeles</td><td>213</td><td>4 / 6 seconds</td></tr> <tr><td>eng</td><td>184</td><td>North America</td><td>United States of America</td><td>1</td><td>New York City (New York)</td><td>212</td><td>4 / 6 seconds</td></tr> <tr><td>eng</td><td>185</td><td>North America</td><td>United States of America</td><td>1</td><td>San Francisco</td><td>415</td><td>4 / 6 seconds</td></tr> <tr><td>eng</td><td>186</td><td>North America</td><td>United States of America</td><td>1</td><td>Washington DC</td><td>202</td><td>4 / 6 seconds</td></tr> <tr><td>eng</td><td>187</td><td>North America</td><td>United States of America</td><td>1</td><td>Philadelphia</td><td>215</td><td>5 / 6 seconds</td></tr> </tbody> </table>	Lang	Seq	RegionName	CountryName	CountryCode	CityName	CityCode	Rate	eng	170	North America	Canada	1	Montreal (Metropolitan)	514	16 / 6 seconds	eng	171	North America	Canada	1	Montreal (Outer)	450	16 / 6 seconds	eng	172	North America	Canada	1	Ottawa	613	16 / 6 seconds	eng	173	North America	Canada	1	Quebec	418	16 / 6 seconds	eng	174	North America	Canada	1	Toronto (Metropolitan)	416	16 / 6 seconds	eng	175	North America	Canada	1	Toronto (Outer)	905	16 / 6 seconds	eng	176	North America	Canada	1	Vancouver (Metropolitan)	604	16 / 6 seconds	eng	177	North America	Canada	1	Vancouver (Outer)	250	16 / 6 seconds	eng	178	North America	Canada	1	Windsor	519	16 / 6 seconds	eng	179	North America	United States of America	1	Atlanta	404	4 / 6 seconds	eng	180	North America	United States of America	1	Boston (Massachusetts)	617	4 / 6 seconds	eng	181	North America	United States of America	1	Chicago	312	4 / 6 seconds	eng	182	North America	United States of America	1	Hawaii	808	4 / 6 seconds	eng	183	North America	United States of America	1	Los Angeles	213	4 / 6 seconds	eng	184	North America	United States of America	1	New York City (New York)	212	4 / 6 seconds	eng	185	North America	United States of America	1	San Francisco	415	4 / 6 seconds	eng	186	North America	United States of America	1	Washington DC	202	4 / 6 seconds	eng	187	North America	United States of America	1	Philadelphia	215	5 / 6 seconds
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Step	Description
9.	<p>To add a city, click Add. The IDD Assistant entry form is presented, as shown below. Fill in the form as follows:</p> <ul style="list-style-type: none"> • ID: This is assigned automatically by FCS I-Services. • Region: Select from the drop-down menu the region where this city is located (in this example, North America). • Language: Select from the drop-down menu the language spoken in this city (in this example, English). • Sequence No. Enter the place in the list of cities in this region where this entry will fall; if left blank, it will default to 0 (i.e. at the top of the list). • Rate: Enter a ratio of cost over time (in this example, 6 / 6 seconds). • Country: Enter the country where this city is located (in this case, United States of America). • City: Enter the name of the city (in this case, Denver). • Country Code: Enter the country code to be dialed (in this case, 1). • City Code: Enter the city code or area code of this city (in this case, 303). <p>Click Save to add this new city.</p> 

6. Interoperability Compliance Testing

Interoperability compliance testing focused on FCS I-Services' ability to work with Avaya Communication Manager and the Avaya 4626 and 9640 IP Telephones. FCS I-Services features and capabilities that were verified included the following: general display of Web-based content, creation/delivery/receipt of text messages and emails, outbound dialing using IDD Assistant, creation/activation of speed dial entries via the Web interface, viewing of charges on guest bills, receipt of Housekeeping/Room Status changes initiated at guest telephones and forwarding to a

simulated Property Management System, setting of AWU calls, and DND activation/deactivation.

6.1. General Test Approach

Feature functionality testing was performed manually using the Avaya 4626 and 9640 IP Telephones (i.e. the guest telephones) to navigate the Web-based menus, activate features, and place local and PSTN calls. A simulated PMS application (co-resident with the FCS WinSuite server) was used to provide account information for guest bills. The other FCS products in the configuration provided complementary functionality as described in **Section 1**.

6.2. Test Results

All executed test cases were completed successfully.

7. Verification Steps

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

Step	Description
1.	From the customer's Property Management System, check in one of the Avaya IP Telephones as a guest telephone. Verify that the default Welcome Page is pushed to the telephone's screen by FCS I-Services, and that the navigational buttons on the telephone can be used to transition to different menus.
2.	Select the DND button (i.e. a physical button labeled "DND" by FCS I-Services) and follow the menu prompts to activate DND. Place a call from another local extension and verify that the guest telephone does not ring, and that the call is redirected to the guest's voice mailbox.
3.	From the Main Menu, select Communication Services -> IDD Assistant . Select, in turn, a region, country, and city, then key in only the local telephone number for the selected IDD call and select Submit , then select Dial . Verify that the call is launched to the appropriate destination using the correct prefix information.
4.	To send a pre-defined text message to another guest telephone, select Communication Services -> SMS & Emails -> SMS -> SMS Room to Room . Select one of the messages, enter the destination room number (see [4] for a correlation between room number and telephone extension), complete the message, and select Submit . Verify that the message is delivered to the destination guest telephone, and that the recipient is prompted with an audible alert as well as a shortcut to view the message directly.

8. Support

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

9. Conclusion

These Application Notes describe the procedures for configuring FCS I-Services to interoperate with Avaya Communication Manager and Avaya 4626 and 9640 IP Telephones. All interoperability compliance test cases executed against such a configuration were completed successfully.

10. 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.”
3. “Application Notes for FCS Connect with Avaya Communication Manager and Avaya 3600-Series Wireless IP Telephones.”
4. “Application Notes for FCS Voicemail 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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