



Avaya Solution & Interoperability Test Lab

Application Notes for eWings Technologies Communication Assistant 1.3.0 with Avaya Communication Manager using Avaya Communication Manager Application Programming Interface - Issue 1.0

Abstract

These Application Notes describe the procedures for configuring eWings Technologies Communication Assistant (ComAssistant) to successfully interoperate with Avaya Communication Manager using the Avaya Communication Manager Application Programming Interface.

ComAssistant is a value-added total solution providing multiple speech-based services in one box. It enhances business efficiency and productivity by self-service and automation.

In the configuration described in these Application Notes, ComAssistant employs the Avaya Communication Manager Application Programming Interface (CMAPI) to setup IP Softphone extensions as the voice lines. ComAssistant services are accessed by calls to hunt groups provisioned with these "voice lines" as members. During compliance testing, ComAssistant services – Auto Attendant, Auto Dialer, Personal Dialer and Voice Mail – were verified to be working.

Testing was conducted via the *DeveloperConnection* Program at the Avaya Solution and Interoperability Test Lab.

1. Introduction

These Application Notes describe a compliance-tested configuration comprised of Avaya Communication Manager, Avaya Communication Manager Application Programming Interface (API) and eWings Technologies ComAssistant.

ComAssistant 1.3.0 is a Windows 2000-based voice application providing enterprise-wide comprehensive voice applications. It uses speech-recognition technology to provide Auto Dialer, Personal Dialer, Auto Attendant, Voice Mail, Fax Server and Information Alert services.

For the Auto Attendant service, the Avaya Communication Manager is configured to route incoming calls to a hunt group that consists of the Communication Manager API stations configured on the ComAssistant. When ComAssistant receives a call, it determines the destination through speech-recognition or DTMF digits entered. It then transfers the call to the destination extension by performing a call transfer. If the calling or called parties use the Avaya 4600 Series IP Telephones that supports data push, the calling and called party information will be pushed to the respective IP Telephones. More hunt groups are configured in the same way for the other ComAssistant services such as Auto Dialer, Personal Dialer and Voice Mail.

The Interoperability Compliance Testing included CMAPI and feature functionality testing only. For Voice Mail service, the ComAssistant was tested for dial in voice recording/playback only (no voicemail call coverage testing or message waiting lamp update).

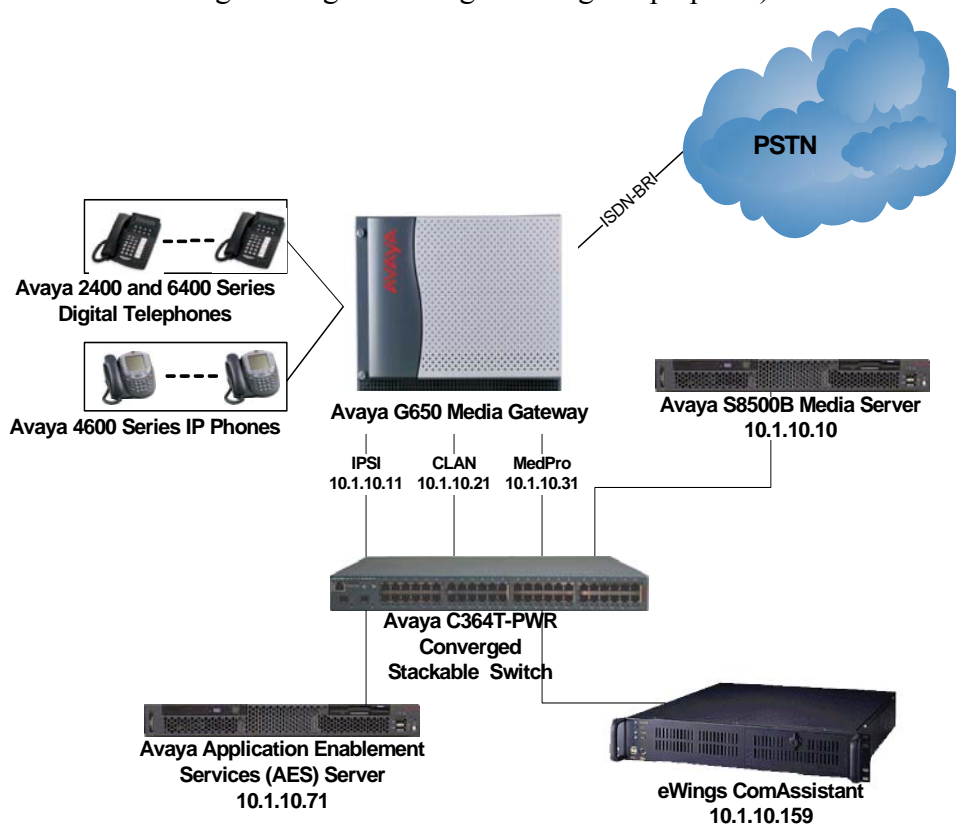


Figure 1: eWings ComAssistant Compliance Test Sample Configuration

2. Equipment and Software Validated

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

Equipment	Software
Avaya S8500B Media Server	3.0 (R013x.00.0.340.3)
Avaya G650 Media Gateway	-
• TN2312BP IP Server Interface	21
• TN799DP C-LAN Interface	15
• TN2302AP IP Media Processor	105
Avaya 4600 Series IP Telephones	2.2.3 (4610SW) 2.2.3 (4620SW) 2.2.3 (4621SW) 2.5 (4625SW)
Avaya 6400 Series Digital Telephones	-
Avaya 2400 Series Digital Telephones	-
Avaya Application Enablement Services	r3-0-0-build-46-0
Avaya C364T-PWR Converged Stackable Switch	4.3.12
eWings ComAssistant Server	1.3.0

3. Configure Avaya Communication Manager

This section describes the steps for configuring the voice lines, hunt groups, IP codecs and SNMP parameters on Avaya Communication Manager. The steps are performed through the System Access Terminal (SAT) interface and via the Media Server Web Interface. The IP Telephones' settings file (46xxsettings.txt) is also modified to allow the ComAssistant server to push data to the IP Telephones.

3.1. Voice Lines

The voice lines in this configuration are Communication Manager API stations that essentially appear as IP Softphones to Avaya Communication Manager. Each Communication Manager API station requires an "IP_API_A" license. Note that this is separate and independent of Avaya IP Softphone licenses, which are required for Avaya IP Softphones, but not required for Communication Manager API stations.

Step	Description
1.	Enter the display system-parameters customer-options command and verify that there are sufficient IP_API_A licenses. If not, contact an authorized Avaya account representative to obtain these licenses.

Step	Description
	<pre> display system-parameters customer-options MAXIMUM IP REGISTRATIONS BY PRODUCT ID Product ID Rel. Limit Used IP_API_A : 500 5 IP_API_B : 0 0 IP_API_C : 0 0 IP_Agent : 100 0 IP_Phone : 2400 3 IP_ROMax : 2400 0 IP_Soft : 100 0 IP_eCons : 2 0 : 0 0 : 0 0 : 0 0 : 0 0 : 0 0 : 0 0 : 0 0 </pre> <p style="text-align: right;">Page 10 of 11</p>
2.	<p>Enter the add station s command, where s is an extension valid under the provisioned dial plan. On Page 1 of the station form, set Type to an IP telephone set type, enter a descriptive Name, specify the Security Code, and set IP Softphone to “y.” Enter the duplicate station s command, where s is the extension used above, to create the rest of the stations.</p> <p>Note: ComAssistant requires a block of consecutive extension numbers for the Communication Manager API Softphones that it uses. The Security Code must also be set to the same for all extensions.</p>
	<pre> display station 11001 STATION Extension: 11001 Lock Messages? n BCC: 0 Type: 4620 Security Code: 11000 TN: 1 Port: S00004 Coverage Path 1: COR: 1 Name: eWings #1 Coverage Path 2: COS: 1 Hunt-to Station: STATION OPTIONS Loss Group: 19 Personalized Ringing Pattern: 1 Message Lamp Ext: 11001 Speakerphone: 2-way Mute Button Enabled? y Display Language: english Expansion Module? n Survivable GK Node Name: Survivable COR: internal Media Complex Ext: Survivable Trunk Dest? y IP SoftPhone? y IP Video Softphone? n </pre> <p style="text-align: right;">Page 1 of 4</p>

3.2. Hunt Groups

The following steps describe the configuration of hunt groups in Avaya Communication Manager. Seven hunt groups are created, with each hunt group corresponding to a ComAssistant service. The voice lines created in Section 3.1 are assigned as members in all the hunt groups so that the lines are shared among all ComAssistant services.

Step	Description
1.	<p>Enter the add hunt-group n command, where n is an unused hunt group number. On page 1 of the hunt group form, assign a Group Name and Group Extension valid under the provisioned dial plan.</p> <p>Note: ComAssistant requires the Group Name to be set the same as the Group Extension.</p>
	<pre> add hunt-group 1 Page 1 of 60 HUNT GROUP Group Number: 1 ACD? n Group Name: 11000 Queue? y Group Extension: 11000 Vector? n Group Type: ucd-mia Coverage Path: TN: 1 Night Service Destination: COR: 1 MM Early Answer? n Security Code: Local Agent Preference? n ISDN/SIP Caller Display: Queue Limit: unlimited Calls Warning Threshold: Port: Time Warning Threshold: Port: </pre>
	<p>On page 3, assign the extensions created in Section 3.1 Step 2.</p>
	<pre> add hunt-group 1 Page 3 of 60 HUNT GROUP Group Number: 1 Group Extension: 11000 Group Type: ucd-mia Member Range Allowed: 1 - 1500 Administered Members (min/max): 1 /4 Total Administered Members: 4 GROUP MEMBER ASSIGNMENTS Ext Name (24 characters) Ext Name (24 characters) 1: 11001 eWings #1 14: 2: 11002 eWings #2 15: 3: 11003 eWings #3 16: 4: 11004 eWings #4 17: 5: 18: 6: 19: 7: 20: 8: 21: 9: 22: 10: 23: 11: 24: 12: 25: 13: 26: At End of Member List </pre>

3.3. Codec Configuration

Enter the **change ip-codec-set t** command, where **t** will be the ip-codec-set used for communication to the eWings ComAssistant Server. In the first row, enter “**G.711MU**” for **Audio Codec** and “**3**” for **Frames Per Pkt**. The codec configured on the eWings Communication Server in Section 4, Step 12 and 13, must match this value.

```
change ip-codec-set 1                                     Page 1 of 2

                                IP Codec Set

Codec Set: 1

Audio      Silence      Frames      Packet
Codec      Suppression  Per Pkt    Size(ms)
1: G.711MU      n          3         30
2:
3:
4:
5:
6:
7:
```

Enter the **change ip-network-region u** command, where **u** is a number between 1 and 250, inclusive. Set **Codec Set** to the ip-codec-set number configured above. In the compliance-tested configuration, all devices were in network region 1, including the Communication Manager API Softphones used by the eWings ComAssistant server.

```
change ip-network-region 1                               Page 1 of 19

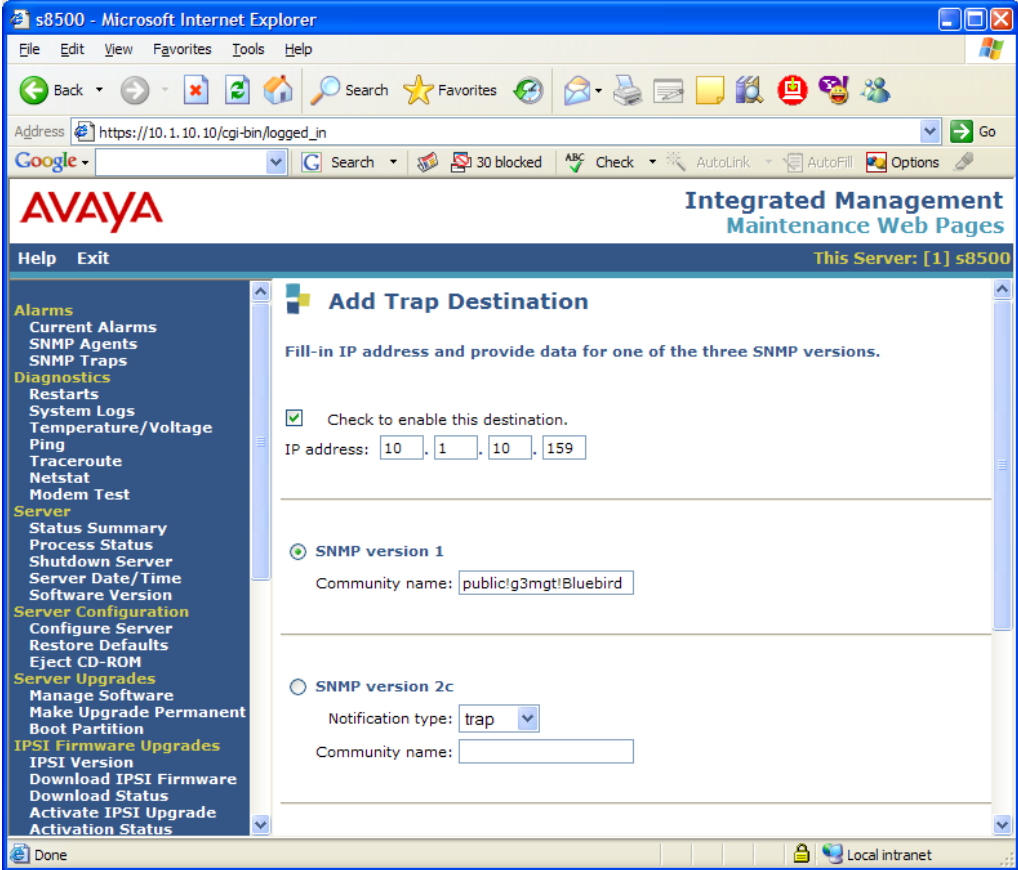
                                IP NETWORK REGION

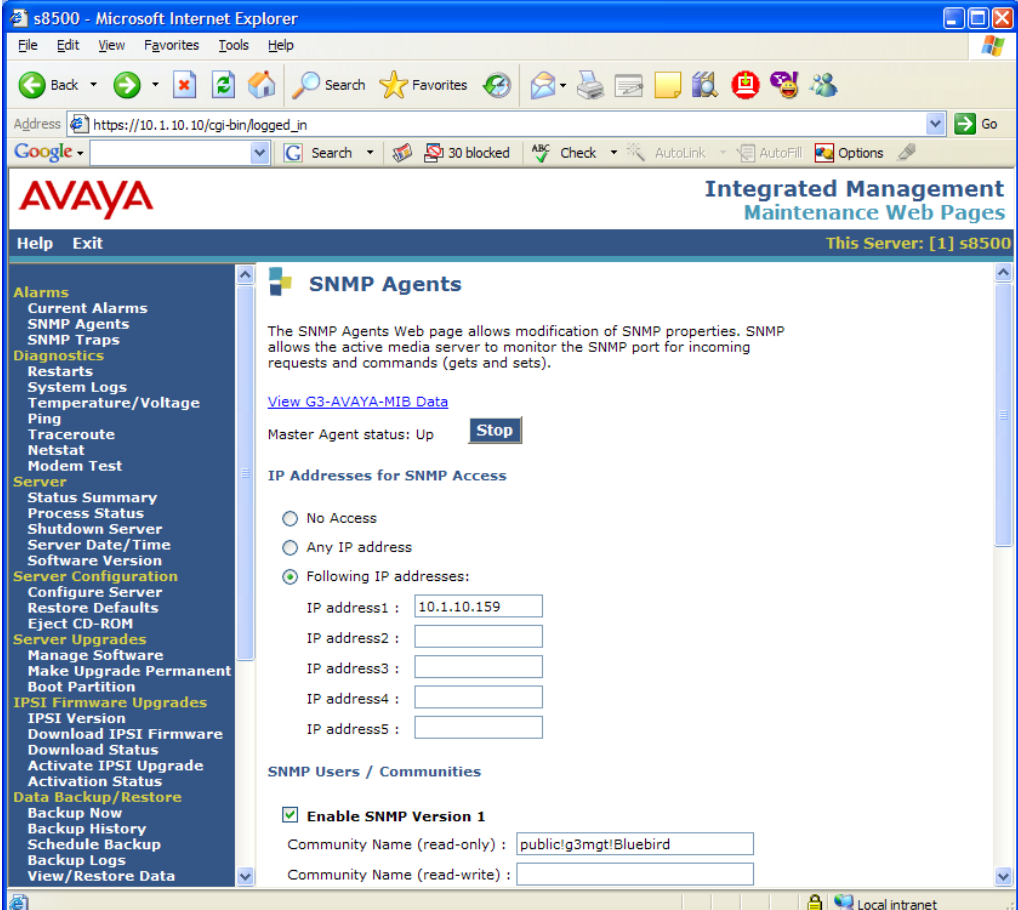
Region: 1
Location:                               Home Domain:
    Name: Site A - Main

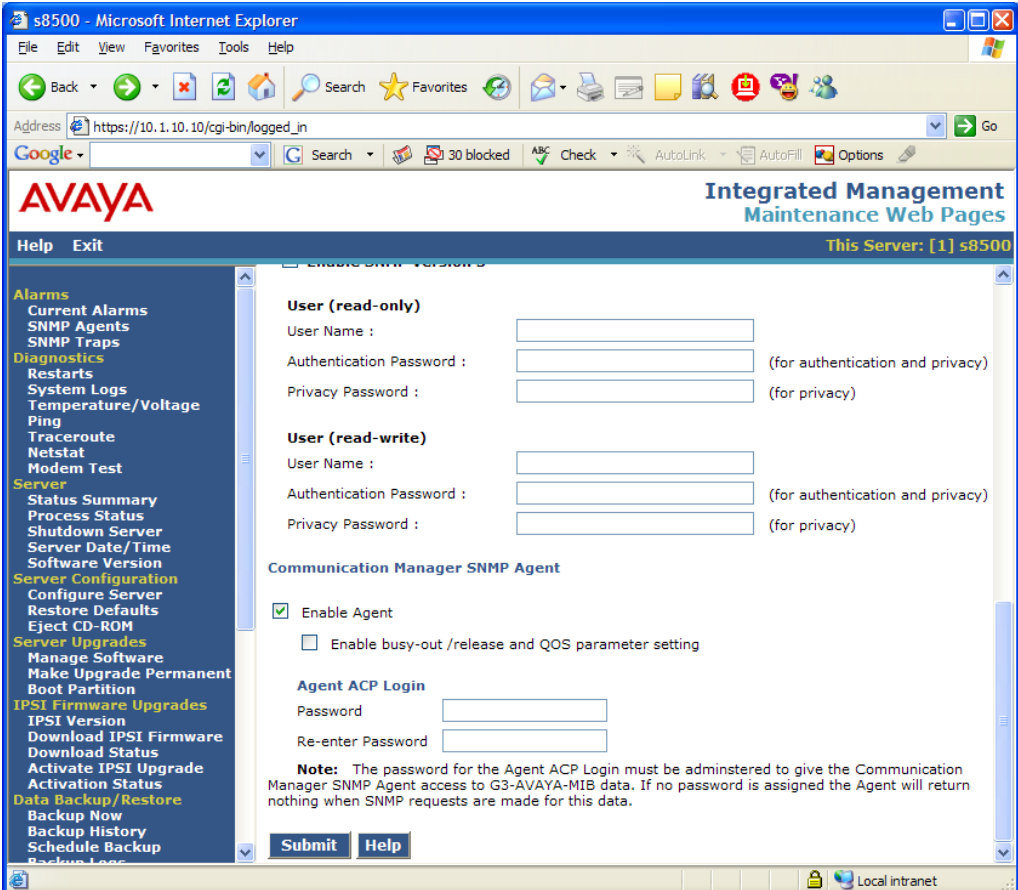
                                Intra-region IP-IP Direct Audio: no
AUDIO PARAMETERS                       Inter-region IP-IP Direct Audio: no
    Codec Set: 1                               IP Audio Hairpinning? y
UDP Port Min: 2048
UDP Port Max: 3029                       RTCP Reporting Enabled? y
                                RTCP MONITOR SERVER PARAMETERS
DIFFSERV/TOS PARAMETERS                 Use Default Server Parameters? y
    Call Control PHB Value: 34
    Audio PHB Value: 46
802.1P/Q PARAMETERS
    Call Control 802.1p Priority: 7
    Audio 802.1p Priority: 6             AUDIO RESOURCE RESERVATION PARAMETERS
H.323 IP ENDPOINTS                       RSVP Enabled? n
    H.323 Link Bounce Recovery? y
    Idle Traffic Interval (sec): 20
    Keep-Alive Interval (sec): 5
    Keep-Alive Count: 5
```

3.4. SNMP Configuration

Step	Description
1.	<p data-bbox="277 285 1341 352">Enter the change permissions acpsnmp command. Set both Display Admin. and Maint. Data and System Measurements to “y”.</p> <pre data-bbox="277 394 1430 1052"> change permissions acpsnmp Page 1 of 1 COMMAND PERMISSION CATEGORIES Login Name: acpsnmp COMMON COMMANDS Display Admin. and Maint. Data? y System Measurements? y System Mgmt Data Transfer Only? n ADMINISTRATION COMMANDS Administer Stations? n Administer Features? n Administer Trunks? n Administer Permissions? n Additional Restrictions? n MAINTENANCE COMMANDS Maintain Stations? n Maintain Switch Circuit Packs? n Maintain Trunks? n Maintain Process Circuit Packs? n Maintain System? n Maintain Enhanced DSL? n </pre>

Step	Description
2.	<p>Using Internet Explorer, log in to the Media Server Web Interface and browse to the Maintenance Web Interface pages. Under Alarms, click on SNMP Traps and then click Add. Check the box Check to enable this destination. Enter the IP address of the ComAssistant Server for IP address. Select SNMP version 1 and assign a name for Community name. The Community name configured on the eWings Communication Server in Section 4 Step 21 must match this value.</p> 

Step	Description
3.	<p>Under Alarms, click on SNMP Agents. Select Following IP addresses and enter the IP address of the ComAssistant Server. Select SNMP version 1 and assign a name for Community name. Check on Enable SNMP Version 1 and assign a string for Community Name (read-only).</p> 

Step	Description
4.	Scroll to the bottom of the SNMP Agents screen. Check Enable Agent and assign a new password for Agent ACP Login . Click on Submit to complete the settings.
	

3.5. IP Telephones Configuration

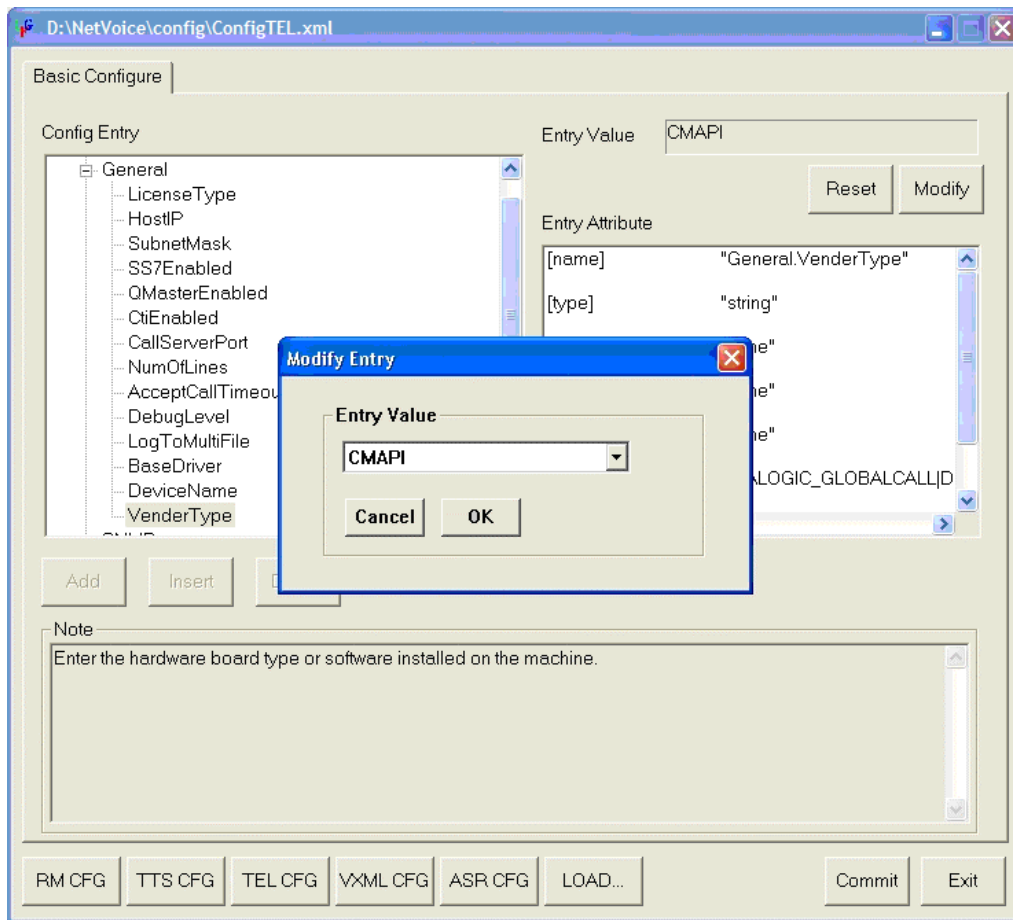
In the IP Telephones settings file (46xxsettings.txt), add the ComAssistant server IP address to the TPSLIST for all IP Telephone models that support data push. This will allow ComAssistant to push the calling and called party information to the IP Telephones. Below is an example for the 4620SW IP Telephone. The other models used in this test configuration (4610SW, 4621SW, 4625SW) are modified in the same way.

```
#####
# SETTINGS4620
#####
SET WMLHOME http://10.1.10.103/home.wml
SET WMLCODING ASCII
SET TPSLIST "10.1.10.159"
goto END
##### END OF 4620 IP Phone Settings #####
```

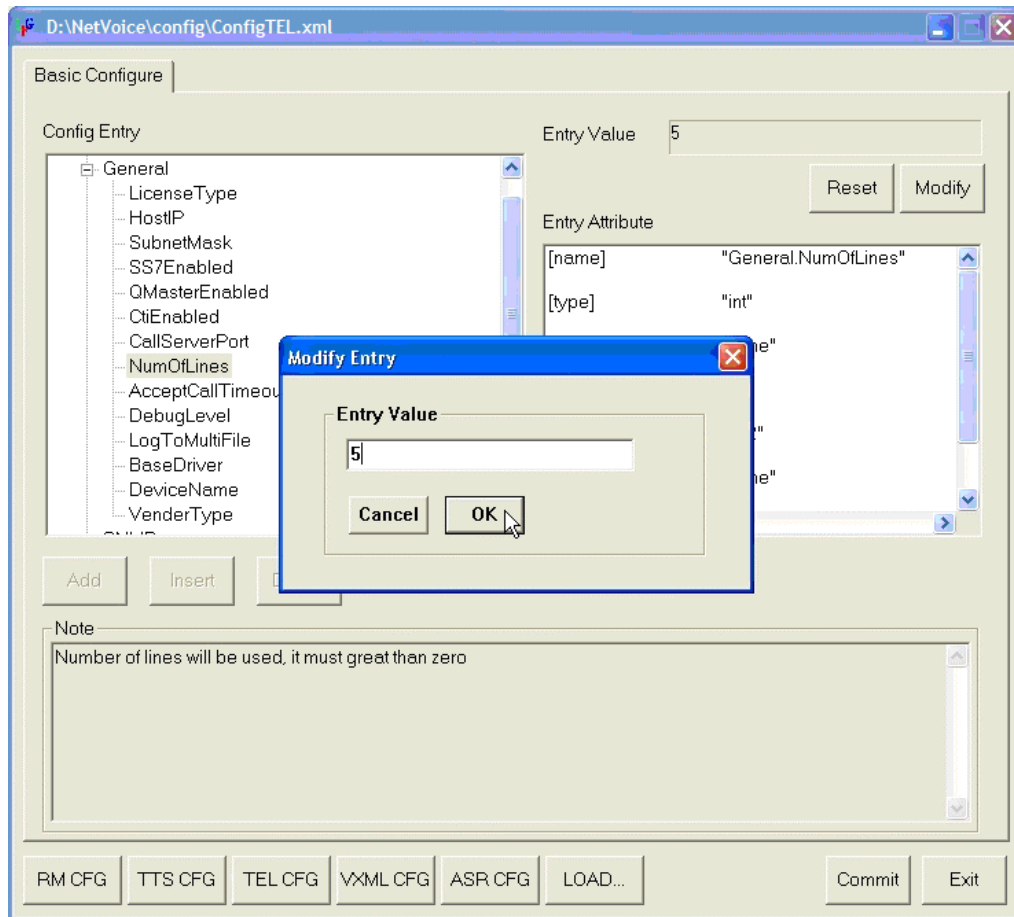
4. Configure the eWings ComAssistant

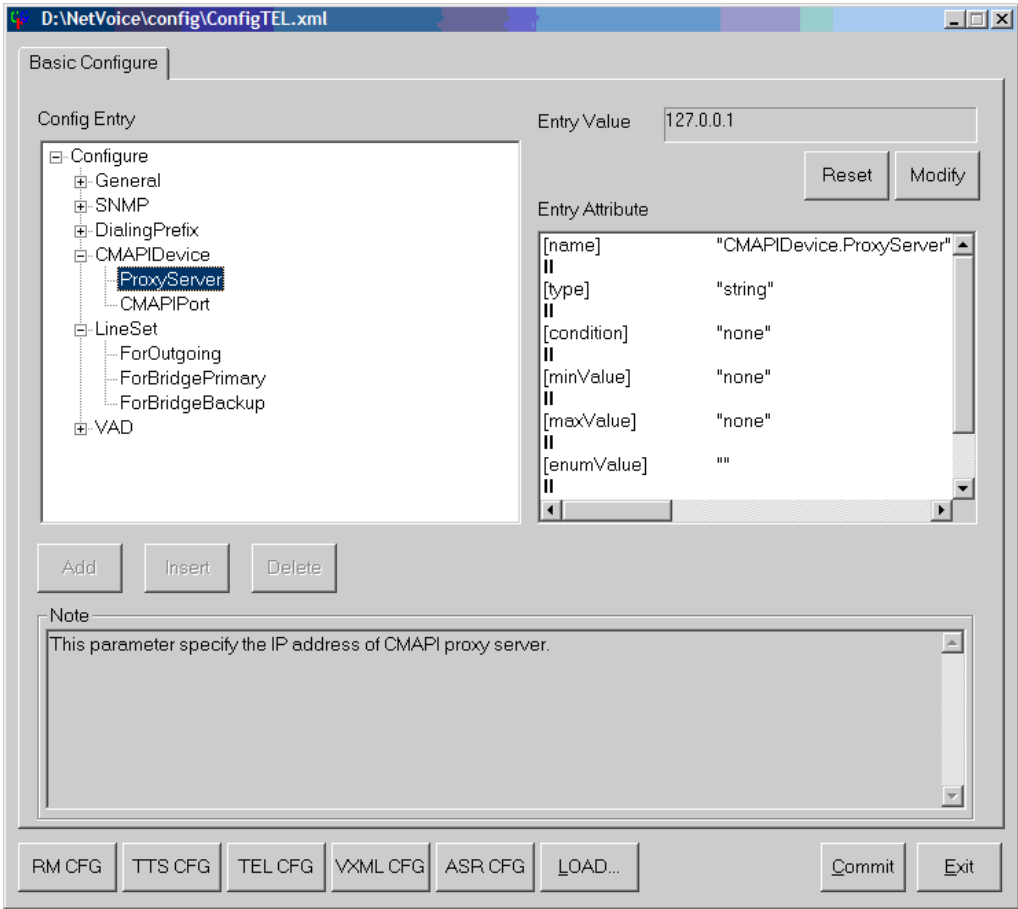
These Application Notes address provisioning of the eWings ComAssistant as it relates to the integration with Avaya Communication Manager using the Communication Manager API. For all other provisioning information such as eWings ComAssistant software installation, Speech Recognition assignment, Telephone Directory creation and License Key installation, please refer to the eWings ComAssistant Administrator Guide available on the eWings Software Installation CD.

Step	Description
	Configuring PBX Connection
1.	Log in to the ComAssistant server as administrator and go to Start → Run . In the Run window that appears, type D:\NetVoice\ConfigTool.exe to execute the configuration tool.
2.	Click on TEL CFG and expand the node Configure .
3.	Expand the node General and click on VenderType . Then click Modify to set the PBX connection interface. In the Modify Entry window that appears, select CMAPI from the drop-down list and click OK .

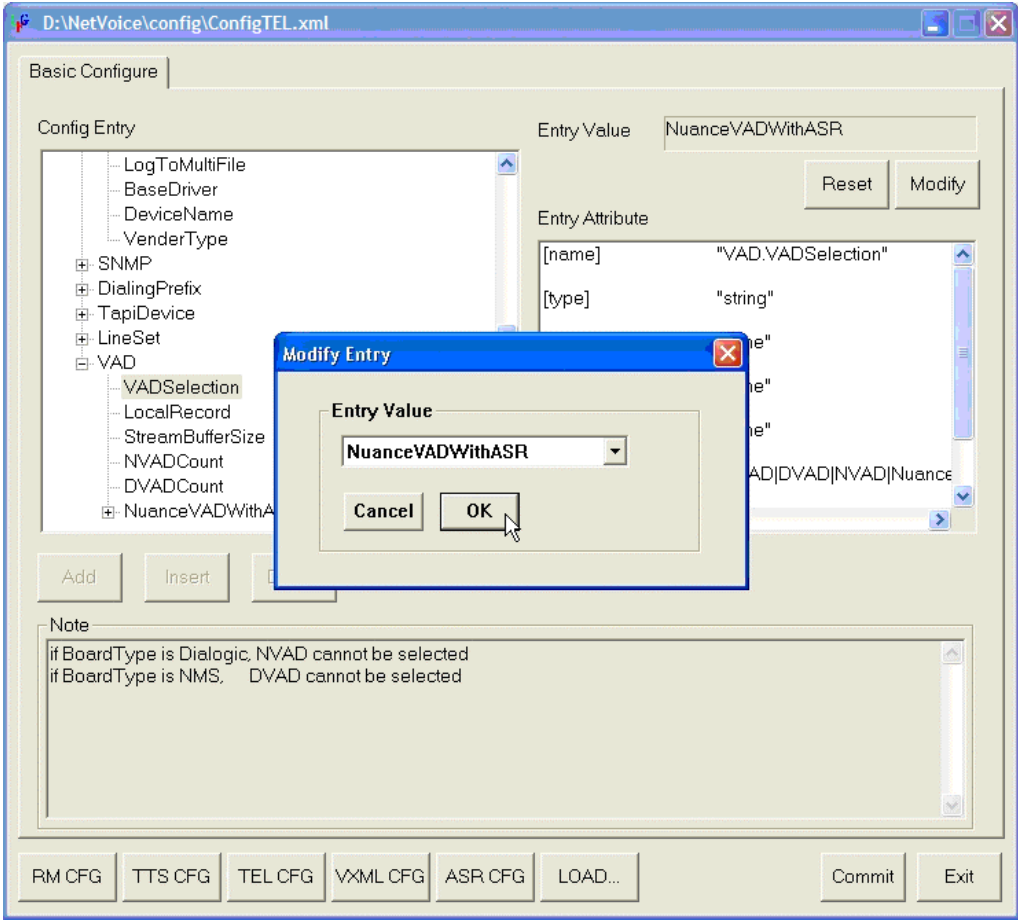


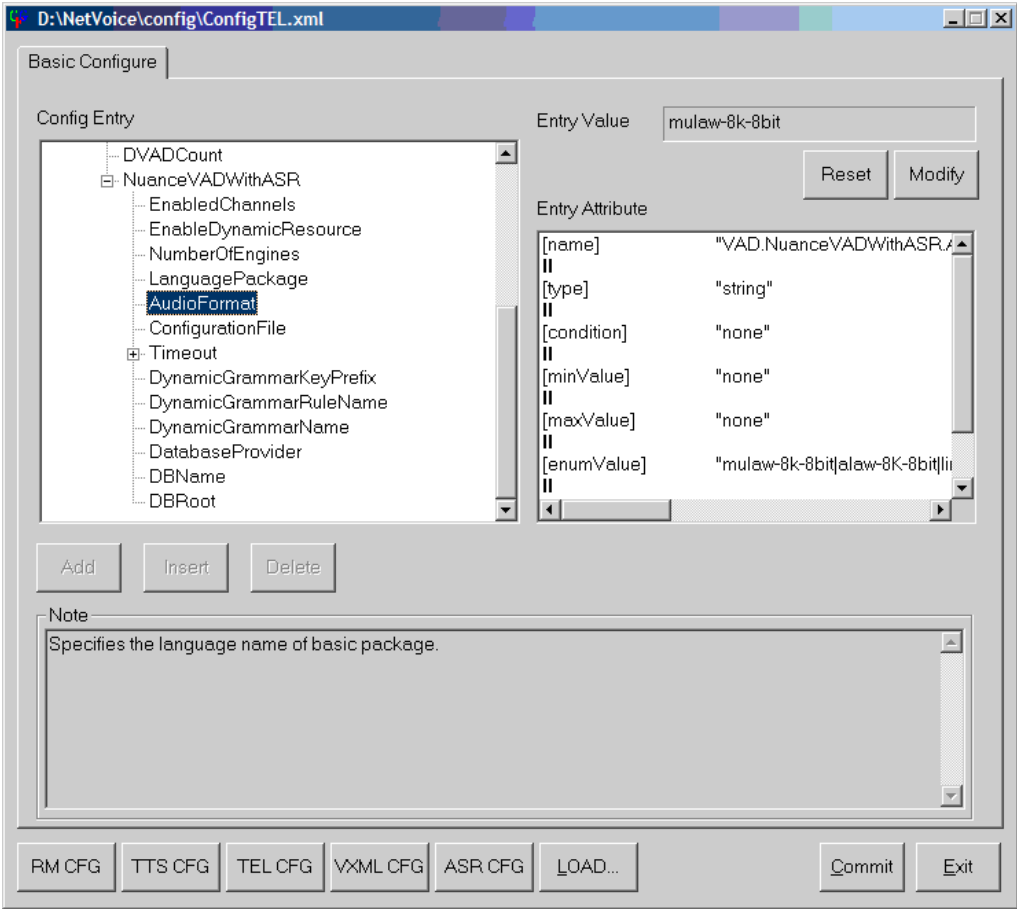
Step	Description
4.	<p>To set the number of ports that ComAssistant will use, expand the node General and click on NumOfLines. Click Modify and in the Modify Entry window that appears, enter 5 (or a number corresponding to the number of Communication Manager API extensions used by ComAssistant) and click OK.</p>

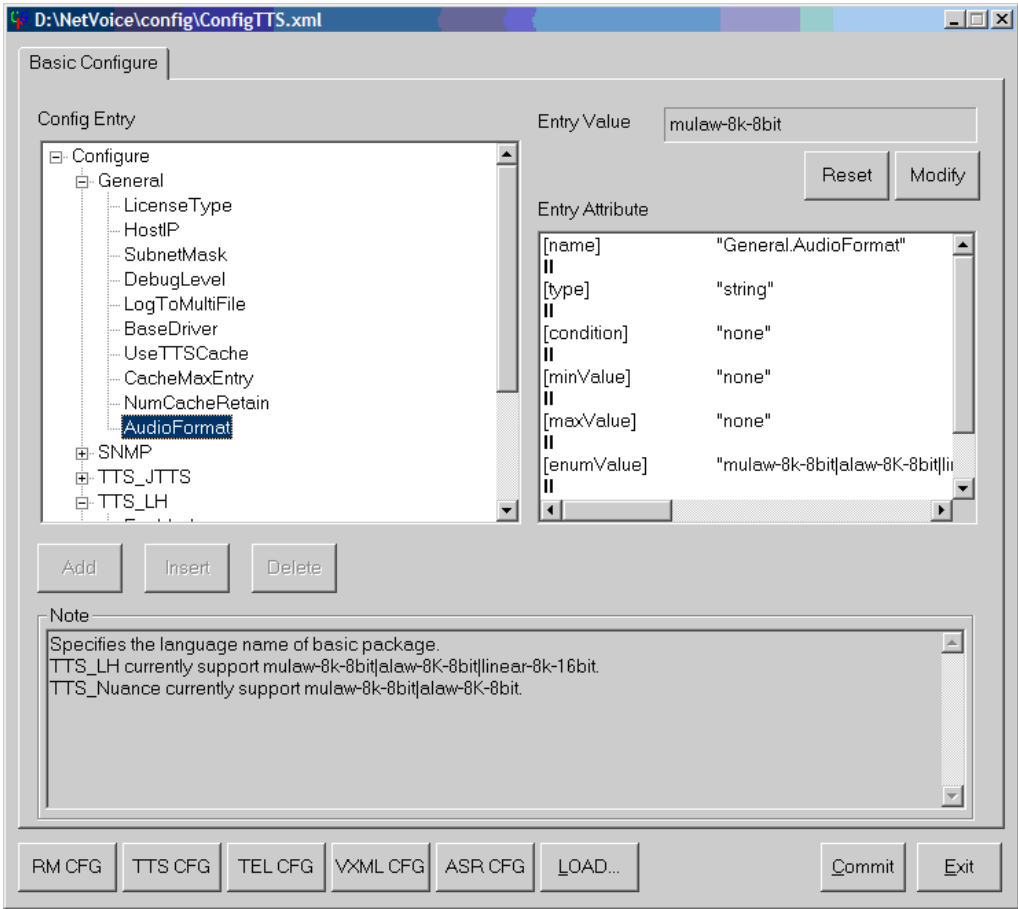


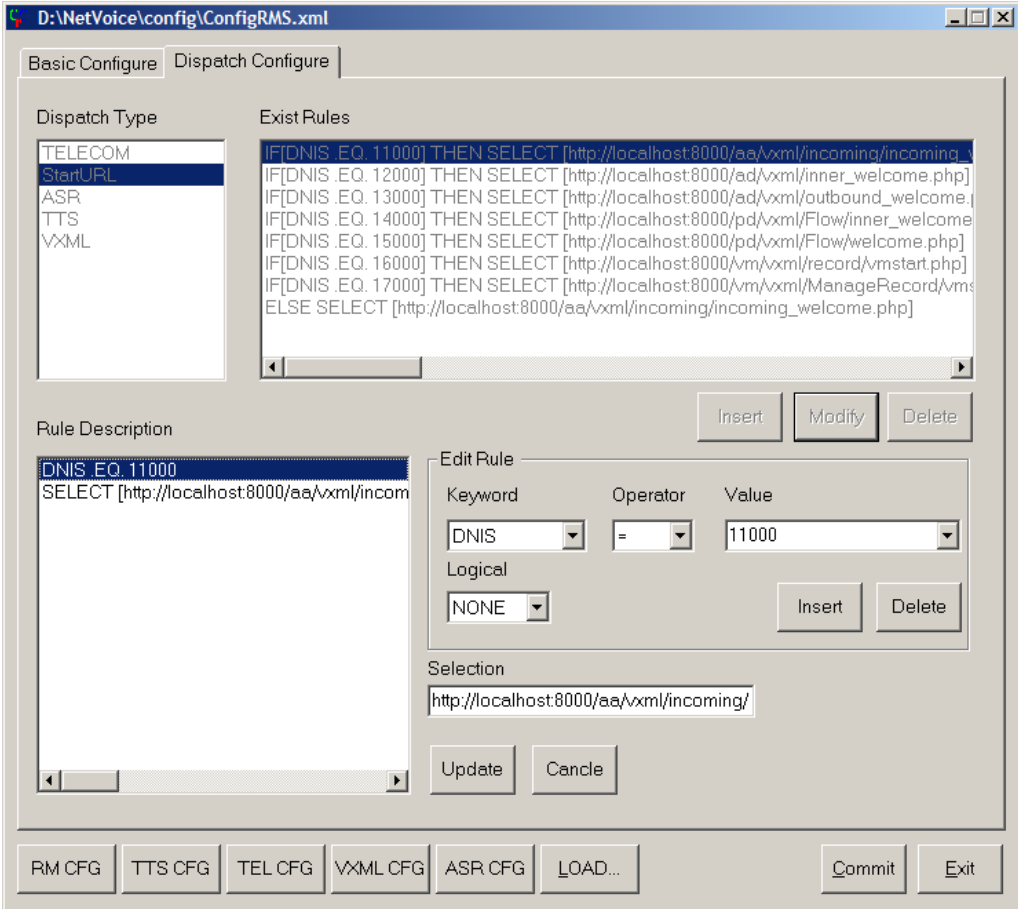
Step	Description
5.	<p>Expand the node CMAPIDevice and click on ProxyServer. Click Modify and in the Modify Entry window that appears, enter 127.0.0.1 and click OK. In the same way, set CMAPIPort to 10998.</p> 

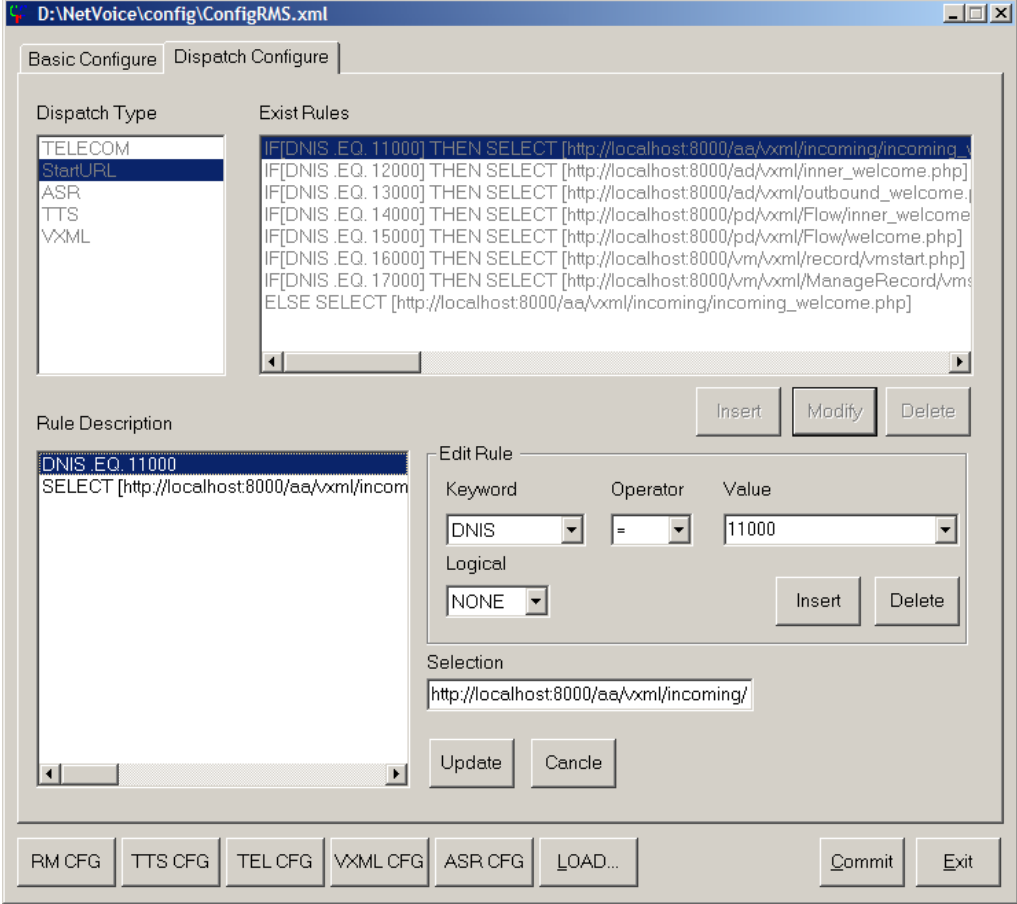
Step	Description
6.	<p>Edit the file CMAPI.properties located in the directory D:\avaya_server to set the following parameters.</p> <div data-bbox="310 338 773 648" style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre> callserver=10.1.10.21 extension_list_start=11001 extension_list_end=11004 mwi_extension=11005 DSN=ca offcode=*35 oncode=*34 password=11000 cmapi_proxy_port=10998 </pre> </div> <p>callserver – IP Address of the CLAN extension_list_start – Start of the block of CMAPI extensions extension_list_end – Second to last extension in the block mwi_extension – Last extension in the block. DSN – Default value of <i>ca</i> offcode – Feature Access Code for <i>Leave Word Calling Cancel A Message</i> oncode – Feature Access Code for <i>Leave Word Calling Send A Message</i> password – Security Code for the CMAPI extensions cmapi_proxy_port – Default value of <i>10998</i></p> <p>Note: The extension_list_start, extension_list_end and mwi_extension fields must correspond to the extensions created in Communication in Section 3.1 Step 2. The offcode and oncode fields were not used in this release of ComAssistant.</p>
7.	<p>Edit the file cmapi-client.properties located in the directory D:\avaya_server to set the following parameters.</p> <div data-bbox="310 1262 773 1425" style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre> cmapi.username=cmapiapp cmapi.password=password cmapi.server_ip=10.1.10.71 cmapi.server_port=4721 </pre> </div> <p>cmapi.username – Username of the application (Not currently verified) cmapi.password – Password of the application (Not currently verified) cmapi.server_ip – IP address or hostname of the AES server cmapi.server_port – Port number of the AES server (Default 4721)</p>
Configuring TTS and ASR Audio Format	
8.	Expand VAD to set voice activity detection and speech recognition parameters.

Step	Description
9.	<p>Click VADSelection and then click Modify. In the Modify Entry window that appears, select NuanceVADWithASR from the drop-down list and click OK.</p> 
10.	<p>Expand the node NuanceVADWithASR and click on EnableDynamicResource. Click Modify and select TRUE.</p>
11.	<p>Click on NumberOfEngines. Then click Modify and type the number of ASR ports purchased for the system.</p>

Step	Description
12.	<p>Click on AudioFormat. Click Modify and in the Modify Entry window that appears, select mulaw-8k-8bit from the drop-down list and click OK.</p> 

Step	Description														
13.	<p>Click on TTS CFG and expand the node Configure. Expand the node General and click on AudioFormat. Click Modify and in the Modify Entry window that appears, select mulaw-8k-8bit from the drop-down list and click OK.</p>  <p>The screenshot shows the 'Basic Configure' window for 'ConfigTTS.xml'. The 'Configure' tree on the left shows 'General' expanded with 'AudioFormat' selected. The 'Entry Value' field contains 'mulaw-8k-8bit'. The 'Entry Attribute' table shows details for 'General.AudioFormat':</p> <table border="1" data-bbox="878 604 1317 892"> <thead> <tr> <th>Attribute</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>[name]</td> <td>"General.AudioFormat"</td> </tr> <tr> <td>[type]</td> <td>"string"</td> </tr> <tr> <td>[condition]</td> <td>"none"</td> </tr> <tr> <td>[minValue]</td> <td>"none"</td> </tr> <tr> <td>[maxValue]</td> <td>"none"</td> </tr> <tr> <td>[enumValue]</td> <td>"mulaw-8k-8bit alaw-8K-8bit lin"</td> </tr> </tbody> </table> <p>Buttons for 'Add', 'Insert', 'Delete', 'Commit', and 'Exit' are visible at the bottom of the window.</p>	Attribute	Value	[name]	"General.AudioFormat"	[type]	"string"	[condition]	"none"	[minValue]	"none"	[maxValue]	"none"	[enumValue]	"mulaw-8k-8bit alaw-8K-8bit lin"
Attribute	Value														
[name]	"General.AudioFormat"														
[type]	"string"														
[condition]	"none"														
[minValue]	"none"														
[maxValue]	"none"														
[enumValue]	"mulaw-8k-8bit alaw-8K-8bit lin"														
14.	Click Commit to apply and save all configurations. Restart the ComAssistant system services to activate the changes.														
Configuring Call Route Rules															
15.	Log in to the ComAssistant server as administrator and go to Start → Run . In the Run window that appears, type D:\NetVoice\ConfigTool.exe to execute configuration tool.														

Step	Description
16.	<p>Click on RM CFG and click on the tab Dispatch Configure. Select StartURL in the <i>Dispatch Type</i> list. eWings ComAssistant is a VoiceXML platform and uses the web technology to provide service. The VoiceXML start URL for each service is as follows:</p> <ul style="list-style-type: none"> • Auto Attendant Service URL http://localhost:8000/aa/vxml/incoming/incoming_welcome.php • Auto Dialer Internal Service URL http://localhost:8000/ad/vxml/inner_welcome.php • Auto Dialer External Service URL http://localhost:8000/ad/vxml/outbound_welcome.php • Personal Dialer Internal Service URL http://localhost:8000/pd/vxml/flow/inner_welcome.php • Personal Dialer External Service URL http://localhost:8000/pd/vxml/flow/welcome.php • Voice Message Recording Service URL http://localhost:8000/vm/vxml/Record/vmstart.php • Voice Message Retrieval Service URL http://localhost:8000/vm/vxml/ManageRecord/vmstart.php 

Step	Description									
17.	<p>In the <i>Exist Rules</i> list, select the rule for Auto Attendant Service and click Modify. Set <i>Keyword</i> to DNIS, <i>Operator</i> to = and <i>Value</i> to 11000. This must correspond to the Hunt Group extension created for the Auto Attendant service on Communication Manager. Then click on Update.</p>  <p>The screenshot shows a window titled 'D:\NetVoice\config\ConfigRMS.xml' with two tabs: 'Basic Configure' and 'Dispatch Configure'. The 'Dispatch Configure' tab is active. On the left, under 'Dispatch Type', 'TELECOM' is selected. The main area shows a list of 'Exist Rules' with the following text: <pre>IF[DNIS.EQ.11000] THEN SELECT [http://localhost:8000/aa/vxml/incoming/] IF[DNIS.EQ.12000] THEN SELECT [http://localhost:8000/ad/vxml/inner_welcome.php] IF[DNIS.EQ.13000] THEN SELECT [http://localhost:8000/ad/vxml/outbound_welcome.php] IF[DNIS.EQ.14000] THEN SELECT [http://localhost:8000/pd/vxml/Flow/inner_welcome.php] IF[DNIS.EQ.15000] THEN SELECT [http://localhost:8000/pd/vxml/Flow/welcome.php] IF[DNIS.EQ.16000] THEN SELECT [http://localhost:8000/vm/vxml/record/vmstart.php] IF[DNIS.EQ.17000] THEN SELECT [http://localhost:8000/vm/vxml/ManageRecord/vmstart.php] ELSE SELECT [http://localhost:8000/aa/vxml/incoming/incoming_welcome.php]</pre> Below this list are 'Insert', 'Modify', and 'Delete' buttons. The 'Modify' button is highlighted. Below the list is a 'Rule Description' area showing 'DNIS.EQ.11000' and 'SELECT [http://localhost:8000/aa/vxml/incoming/]'. To the right is an 'Edit Rule' dialog box with the following fields: <table border="1" data-bbox="776 856 1312 1056"> <tr> <td>Keyword</td> <td>Operator</td> <td>Value</td> </tr> <tr> <td>DNIS</td> <td>=</td> <td>11000</td> </tr> <tr> <td>Logical</td> <td colspan="2">NONE</td> </tr> </table> Below the dialog are 'Insert' and 'Delete' buttons. At the bottom of the dialog is a 'Selection' field containing 'http://localhost:8000/aa/vxml/incoming/'. Below the dialog are 'Update' and 'Cancel' buttons. At the bottom of the window are buttons for 'RM CFG', 'TTS CFG', 'TEL CFG', 'VXML CFG', 'ASR CFG', 'LOAD...', 'Commit', and 'Exit'. </p>	Keyword	Operator	Value	DNIS	=	11000	Logical	NONE	
Keyword	Operator	Value								
DNIS	=	11000								
Logical	NONE									
18.	Repeat Step 17 for the rest of the ComAssistant services.									
19.	Click Commit to apply and save all configurations.									
20.	Click Basic Configure to check the DNIS number table. Expand the node DNIS1 and select Callee . Click Modify to change the value “*” (star) and click Commit to save the setting.									

Step	Description
21.	<p>Using Internet Explorer, login to the ComAssistant Administration Interface. Set Integration PBX Type to Avaya Media Server. Set Avaya SNMP Host to the IP address of the Media Server and set Avaya SNMP Community to the string assigned in Section 3.4 Step 3. Set the Transfer Type to Blind Transfer. Click Submit.</p>



5. Interoperability Compliance Testing

The Interoperability Compliance Testing included CMAPI and feature functionality testing only. Performance load testing was not performed. Feature functionality testing examined the ComAssistant's ability to properly transfer inbound and internal calls to the appropriate destination extension (digital, IP Telephone). For Voice Mail service, the ComAssistant was tested for dial in voice recording/playback only (no voicemail call coverage testing or message waiting lamp update).

5.1. General Test Approach

Feature functionality testing was performed manually. Inbound calls were made to the system from ISDN-BRI trunks connected to the central office as well as internal extensions. The following call scenarios were tested using the test configuration diagram shown in Figure 1:

- Auto Dialer - ability to make calls to other user extensions using speech and DTMF.
- Personal Dialer - ability to make calls to other user extensions using speech and DTMF.
- Auto Attendant - ability to serve incoming calls and transfer them to user extensions using speech and DTMF.
- Voice Mail - ability to record and play back voice messages.

Results were tabulated based on whether the call was being transferred successfully to the correct extension. Voice Mail service was tested by leaving voice messages for different voice mailboxes. The voice messages were then played back and verified.

5.2. Test Results

All test cases passed successfully.

6. Verification Steps

The following steps can be used to verify system operation after a field installation:

- Place a call to the Auto Attendant service hunt group from an internal extension. Verify that the Auto Attendant Welcome greeting plays and either speak a name or department, or enter a valid extension number. Verify the call is transferred to the correct extension.
- Place a call to the Auto Dialer service hunt group from an internal extension. Verify that the Auto Dialer Welcome greeting plays and either speak a name or department, or enter a valid extension number. Verify the call is transferred to the correct extension.
- Place a call to the Voice Message Recording service hunt group from an internal extension. Verify that the Voice Message Recording Welcome greeting plays and enter a valid mailbox extension to leave a voice message.
- Place a call to the Voice Message Retrieval service hunt group from an internal extension. Verify that the Voice Message Retrieval Welcome greeting plays and follow the prompts to retrieve the voice message.

7. Support

For technical support on eWings ComAssistant, contact eWings Support Team at:

- Phone: +886 (2) 27973088 Extension 1133
- Fax: +886 (2) 27973800
- Email: etac@ewingstech.com

8. Conclusion

These Application Notes describe the required configuration steps for eWings Communication Assistant to successfully interoperate with Avaya Communication Manager using Avaya Communication Manager Application Programming Interface. All test cases were completed successfully.

9. Additional References

The following documents can be found at <http://support.avaya.com>:

- Administrator Guide for Avaya Communication Manager, 03-300509, Issue 1, June 2005

The following documents are available from eWings:

- eWings ComAssistant 1.3 Installation Guide
- eWings ComAssistant 1.3 Administration Guide
- eWings ComAssistant 1.3 User Guide

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