

Avaya Solution & Interoperability Test Lab

Application Notes for Anhui USTC iFLYTEK InterPhonic and iFLYTEK InterReco with Avaya Voice Portal using iFLYTEK MRCP Server – Issue 1.0

Abstract

These Application Notes describe the configuration steps required to integrate Anhui USTC iFLYTEK InterPhonic and InterReco with Avaya Voice Portal using iFLYTEK MRCP Server. iFLYTEK uses the Media Resource Control Protocol (MRCP) version 2 for its Text-To-Speech (TTS) and Automatic Speech Recognition (ASR) features to interface with VoiceXML applications running on the Avaya Voice Portal.

Information in these Application Notes has been obtained through DevConnect compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.

1. Introduction

These Application Notes describe the configuration steps required to integrate Anhui USTC iFLYTEK InterPhonic and InterReco with Avaya Voice Portal (VP) using iFLYTEK MRCP Server. iFLYTEK uses the Media Resource Control Protocol (MRCP) version 2 for its Text-To-Speech (TTS) and Automatic Speech Recognition (ASR) features to interface with the VoiceXML (VXML) applications running on Avaya VP.

iFLYTEK InterPhonic is an industry-leading Text-To-Speech (TTS) software product capable of automatically converting any text into continuous natural voice in real-time.

InterReco, the speech recognition solution from iFLYTEK, is the essential choice for constructing an efficient, stable, convenient speech service to enhance the service quality and satisfy service requirement.

iFLYTEK MRCP Server is a product based on the MRCP version 2 protocol. It provides rapid integration to self service platforms such as the Avaya Voice Portal, in addition to providing convenient upgrade and expansion, high performance, high quality load balance, simple arrangement and maintenance.

1.1. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing. The feature testing focused on placing calls to Avaya Voice Portal that ran VoiceXML applications that use the ASR and TTS engines on the iFLYTEK speech solution. The compliance test focused on placing calls to verify TTS synthesis and speech recognition.

The serviceability testing focused on verifying the ability of the iFLYTEK speech solution to recover from adverse conditions, such as power failures and disconnecting cables to the IP network.

1.2. Support

For technical support on iFLYTEK speech solutions, contact the iFLYTEK support team at:

- Phone: +86-551-5331813
- Email: tts_support@iFLYtek.com

2. Reference Configuration

Figure 1 illustrates the test configuration used to verify the iFLYTEK solution. The iFLYTEK MRCP Server, iFLYTEK InterPhonic and iFLYTEK InterReco were installed on a Microsoft Windows 2003 Server with Service Pack 2. VoiceXML scripts and VoiceXML applications developed using Avaya Dialog Designer were installed on a second Microsoft Windows 2003 Server running Microsoft Internet Information Services (IIS) and Apache Tomcat and accessed by Avaya Voice Portal. Avaya Voice Portal is connected to Avaya Communication Manager running on the S8500 Server and G650 Media Gateway using H.323 VoIP Connections. Avaya IP telephones were used to place calls to Avaya Voice Portal, which would run the VoiceXML scripts and applications. The applications would use the iFLYTEK MRCP Server for speech synthesis and speech recognition.





3. Equipment and Software Validated

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

Equipment	Software
Avaya Voice Portal running on	5.0
Avaya S8500C Server	(Version: RHE5.0-AV12.4VP11)
Avaya S8500 Server	Avaya Communication Manager
	5.1.2 (R015x.01.2.416.4)
	with Service Pack
	(01.2.416.4-17067)
Avaya G650 Media Gateway	-
• TN2312BP IP Server Interface	HW07, FW044
• TN799DP C-LAN Interface	HW01, FW031
TN2302AP IP Media Processor	HW20, FW118
Avaya 9630 IP Telephones	3.0 (H.323)
Avaya C364T-PWR Converged Stackable Switches	4.5.18
Apache Tomcat	5.5.25
Microsoft Windows Server 2003 Standard Edition	Service Pack 2
iFLYTEK InterPhonic	6.0.0.5900
iFLYTEK InterReco	2.5
iFLYTEK MRCP Server	3.5.0.36

4. Configure Avaya Communication Manager

This section presents the configuration required on Avaya Communication Manager to interface with Avaya VP. The configuration is performed via the System Access Terminal (SAT) on Avaya Communication Manager.

Step	Description
1.	Use the display system-parameters customer-options command to check that Avaya
	Communication Manager has the feature license enabled for Avaya VP connectivity. On
	page 10, verify that the Limit field for IP_API_A has a value greater than or equal to the number of ports configured on Avava VP in Section 5 Step 2. In this configuration, thirty
	VP ports were configured for testing.

Step	Description
	display system-parameters customer-options Page 10 of 11
	MAXIMUM IP REGISTRATIONS BY PRODUCT ID
	Product ID Pol Limit Usod
	IP Agent : 100 0
	IP IR A : 0 0
	IP Phone : 18000 2
	IP_ROMax : 18000 0
	IP_Soft : 100 0
	IP_eCons : 5 0
	oneX_Comm : 18000 0
	: 0 0
	Enter the change surface account on factures and a factor of the T12 (ND
2.	Enter the change system-parameters features command. On page 6, set the 7434ND
	field to y.
	change system-parameters features Page 6 of 17
	FEATURE-RELATED SYSTEM PARAMETERS
	Public Network Trunks on Conference Call: 5 Auto Start? y
	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
	Line Intercent Tone Timer (seconds): 30 Mode Code Interface2 n
	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? n
	Allow ANI Restriction on AAR/ARS? n
	Use Trunk COK for Outgoing Trunk Disconnect? n
	/405ND NUMERIC TERMINAL DISPLAY? N /434ND? Y
	DISIINCIIVE AUDIBLE ALEKTING Internal· 1 Evternal· 2 Priority· 3
	Attendant Originated Calls: external
	DTMF Tone Feedback Signal to VRU - Connection: Disconnection:
3	Enter the add station n command where n is a valid extension to configure the VP port
	as a station with the Type field set to 7434ND Specify the Security Code, which will be
	as a station with the Type herd set to 745410. Speeny the Security Code, which will be
	used in Section 5 Step 2 when doing the configuration on Avaya VP. Set Port to X,
	Display Module to y and IP Softphone to y.
	Repeat for each VP port. In this configuration thirty VP ports were configured with an
	extension range of 10201 to 10230
	CATCHSION TAILED OF 10201 TO 10250.

```
Step
     Description
     add station 102101
                                                                    Page 1 of
                                                                                 6
                                         STATION
                                                                         BCC: 0
     Extension: 10201
                                            Lock Messages? n
                                             Security Code: 12345
          Type: 7434ND
                                                                          TN: 1
                                           Coverage Path 1:
          Port: X
                                                                          COR: 1
          Name: VP #1
                                          Coverage Path 2:
                                                                         COS: 1
                                          Hunt-to Station:
     STATION OPTIONS
                                               Time of Day Lock Table:
                                      Personalized Ringing Pattern: 1
                  Loss Group: 2
                  Data Module? n
                                                    Message Lamp Ext: 10201
              Display Module? y
             Display Language: english
                                                     Coverage Module? n
               Survivable COR: internal
                                                   Media Complex Ext:
                                                    IP SoftPhone? y
        Survivable Trunk Dest? y
                                                  Remote Office Phone? n
                                                  IP Video Softphone? n
     Enter the change ip-codec-set n command where n is a valid IP codec-set associated with
  4.
     the IP network region of the Avaya VP ports. Set Audio Code to an appropriate value
     supported by Avaya VP. In this configuration, the G.711MU codec was used and Media
     Encryption was set to none.
      change ip-codec-set 1
                                                                   Page
                                                                         1 of
                                                                                2
                              TP Codec Set
         Codec Set: 1
         Audio
                    Silence Frames Packet
                     Suppression Per Pkt Size(ms)
         Codec
      1: G.711MU
                      n 2
                                           20
      2:
      3:
      4:
      5:
      6:
      7:
          Media Encryption
      1: none
      2:
      3:
```

5. Configure Avaya Voice Portal

This section covers the configuration of Avaya Voice Portal. Avaya Communication Manager routes incoming calls to Avaya VP using Voice over IP (VoIP) over the data network. Each VoIP channel was assigned a phone number that matched a corresponding extension configured on Avaya Communication Manager in **Section 4 Step 3**. VXML scripts and VXML applications developed using Avaya Dialog Designer was deployed to an Apache Tomcat server. Avaya VP was then configured to access the VXML applications.

JC; Reviewed:	Solution & Interoperability Test Lab Application Notes	6 of 27
SPOC 6/18/2009	©2009 Avaya Inc. All Rights Reserved.	iFLYTEK-VP

The following steps will be covered:

- Configuring an H.323 VoIP connection
- Adding an MPP server
- Configuring the VoIP audio format
- Adding a speech server
- Adding applications
- Starting the MPP server

Step Description Avaya VP is configured via the Voice Portal Management System (VPMS) web interface. 1. To access the web interface, enter https://<ip-addr>/VoicePortal as the URL in an internet browser, where **<ip-addr>** is the IP address of the VPMS. Log in using an account with the Administration role to display the main page. 🗿 Avaya Voice Portal Management System - Microsoft Internet Explorer File Edit View Favorites Tools Help 🔇 Back 🔹 🕥 🖌 📓 🐔 🔎 Search 👷 Favorites 🚱 🔗 🕹 🔳 🕤 📮 饌 🦓 Links 🕑 Google 💣 iFLY MRCP Server Address 餐 https://10.1.10.80/VoicePortal/faces/main.jsf 🗸 🔁 Go Welcome, admin **AVAYA** Last logged in 5/27/09 at 10:31:44 AM SGT Voice Portal 5.0 (VoicePortal) f Home ?- Help 🛚 Logoff Expand All | Collapse All You are here: Home ▼ User Management User Management Roles Users Login Options Real-Time Monitoring System Monitor Active Calls Port Distribution System Maintenance Audit Log Viewer Trace Viewer Log Viewer Voice Portal Management System Version 5.0.0.0.4602 Voice Portal Management System (VPMS) is the consolidated web-based application for administering Voice Portal. Through the VPMS interface, you can configure Voice Portal, check the status of a Voice Portal component, and generate reports related to system operation. Legal Notice Trace Viewer Log Viewer Alarm Manager System Manager MPP Manager Software Upgrade System Backup System Backup System Configuration Alarm Codes Alarm Codes Alarm Codes Alarm Codes Alarm Codes Alarm Codes Shype Servers Report Data SNMP Speech Servers © 2005 - 2009 Avava Inc. All Rights Reserved. ^ Notice While reasonable efforts were made to ensure that the information in this document was complete and accurate at the time of printing, Avaya Inc. can assume no liability for any errors. Changes and corrections to the information in this document might be incorporated in future releases. Documentation disclaimer SNMP Speech Servers VoIP Connections VPMS Servers Avava Inc. is not responsible for any modifications, additions, or deletions to the original published version of this documentation unless such modifications, additions, or deletions were performed by Avaya. Customer and/or End User agree to indemnify and hold harmless Security Certificates Licensing Avaya, Avaya's agents, servants and employees against all claims, Reports Standard Last Login: 5/27/09 10:31:44 AM SGT Custom Scheduled 🔒 🧐 Local intranet

Step	Description	
2.	To configure the H.	323 connection to Avaya Communication Manager, click System
	Configuration > V	oIP Connections in the left pane and click Add from the H.323 tab
	(not shown). In the	Add H.323 Connection page, specify the Name, set Enable to Yes, set
	Gatekeeper Addre	ess to the IP address of the CLAN Interface on the G650 Media
	Gateway (as shown	in Figure 1 in Section 2) and set Media Encryption to No. The
	default values are u	sed for the remaining fields
	default values ale a	sea for the remaining fields.
	To configure the VI	P ports enter the range of extensions for Station and set the Password
	to match the 7434N	D stations created in Section 4 Step 3 Set Station Type to Inhound
	and Outbound and	click Add Click Save to save the configuration for this page
		ener Aud. Cher Save to save the configuration for this page.
	Avaya Voice Portal Manage	ment System - Microsoft Internet Explorer
	File Edit View Favorites To	ols Help
	🔇 Back 🝷 🍙 - 💌 💋	💦 🔎 Search 👷 Favorites 🚱 🔗 - چ 🕋 📃 🎇 💥 🛛 Links 👩 Google 🗿 iFLY MRCP Server 🎽
	Address () https://10.1.10.80/Voice	ePortal/faces/main.jsf 🗸 🗸 🕞 Go
	AN /AN /A	Welcome admin
	AVAYA	Last logged in 5/27/09 at 10:31:44 AM SGT
	Voice Portal 5.0 (VoicePort	al) ff Home ?+Help 🕴 Logoff
	Expand All Collapse All	You are here: Home > System Configuration > VoIP Connections > Add H.323 Connection
	▼ User Management Roles	Add H.323 Connection
	Login Options Real-Time Monitoring	Use this page to add a new H.323 connection.
	System Monitor Active Calls	Name
	Port Distribution • System Maintenance	
	Audit Log Viewer Trace Viewer	Gatekeeper Address: 10.1.10.21
	Alarm Manager ▼ System Management	Alternative Gatekeeper Address:
	MPP Manager Software Upgrade	Gatekeeper Port: 1719
	System Backup ▼ System Configuration Alarm Codes	Media Encryption: O Yes 💿 No
	Alarm/Log Options Applications	New Stations
	MPP Servers Report Data	From To
	Speech Servers VoIP Connections	Station: 10201 10230
	VPMS Servers • Security	Password
	Certificates Licensing	Come Decement
	Standard Custom	Use sequential passwords
	Scheduled	Inbound and Outbound
		Station Type: Inbound Only Add
		Configured Stations (M for Maintenance, I for Inbound Only)
		<no station=""></no>
		Remove
		Save Cancel Help
	٤	🔒 🧐 Local intranet 🦷





o configure the	codec used by the MPP server, click System Configuration > MP
ervers in the lef	t pane and click VoIP Settings.
🗿 Avaya Voice Portal Manag	ement System - Microsoft Internet Explorer
File Edit View Favorites	icols Help
🔇 Back 🔹 🕥 - 💌 👔	💈 🏠 🔎 Search 👷 Favorites 🤣 😥 - 🤤 🔳 - 🛄 🎇 🦓 🛛 Links 🜒 Google 🕘 IFLY MRCP Server 🕘 Avaya - Webmail A
Address 🗃 https://10.1.10.80/Vc	icePortal/faces/main.jsf
AVAVA	Welcome, a
Voice Portal 5.0 (VoicePor	Last rogget in 0/27/09 at 10/32/19
Expand All Collapse All	You are here: Home > System Configuration > MPP Servers
▼ User Management Roles Users	MPP Servers
Login Options Real-Time Monitoring	This page displays the list of Media Processing Platform (MPP) servers in the Voice Portal system. When an MPP receives a call from a PBX invokes a VoiceXML application on an application server and communicates with ASR and TTS servers as necessary to process the call.
Active Calls Port Distribution	
 System Maintenance Audit Log Viewer Trace Viewer 	Name Host Address Network Network Maximum Address Address Simultaneous Trace Level
Log Viewer Alarm Manager	Calls Coresident 10.1.10.80 <default> <default> <default> 30 Use MPP Settings</default></default></default>
MPP Manager Software Upgrade	Add Delete
System Backup System Configuration Alarm Codes	
Alarm/Log Options Applications	MPP Settings AVB Settings Event Handlers Video Settings VoIP Settings Hel
Report Data SNMP	
Speech Servers VoIP Connections	
▼ Security	
et MPP Native match the conf	Format to audio/basic to configure the MPP server for G.711 mu- iguration on Avaya Communication Manager in Section 4 Step 4 .
et MPP Native match the conf own the page an	Format to audio/basic to configure the MPP server for G.711 mu- iguration on Avaya Communication Manager in Section 4 Step 4 . Id click Save (not shown).
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et MPP Native) match the conf own the page an Avaya Voice Portal Man File Edk View Favorites C Back - O - R Address Thtps://10.1.10.600 AVAYA	Format to audio/basic to configure the MPP server for G.711 mu- iguration on Avaya Communication Manager in Section 4 Step 4. Id click Save (not shown).
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et MPP Native o match the conf own the page an and the page and and the page and	Format to audio/basic to configure the MPP server for G.711 mu- iguration on Avaya Communication Manager in Section 4 Step 4. Id click Save (not shown).
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et MPP Native o match the conf own the page ar Address Detroit Man File Edit View Favorites Detroit View Favorites Detroit Statistics Address Detroit Statistics Voice Portal Statistics Users Users Users Users Users Detroit Statistics Port Distribution System Maintenance	Format to audio/basic to configure the MPP server for G.711 mu- iguration on Avaya Communication Manager in Section 4 Step 4. d click Save (not shown). agement System - Microsoft Internet Explorer Tools Help
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et MPP Native o match the confi own the page ar.	Format to audio/basic to configure the MPP server for G.711 mu- iguration on Avaya Communication Manager in Section 4 Step 4. d click Save (not shown).

Step	Description
7.	iFLYTEK InterReco and InterPhonic are not natively included in the set of ASR and TTS
	engines supported by Avava Voice Portal and will not initially appear in the ASR and
	TTS configuration screen To add iELVTEV InterDece and InterDhenic to the list of
	1 1 5 configuration screen. To add IFL 1 1EK Intel Reco and Intel Phonic to the list of
	supported engines, log into the VPMS server, either locally or remotely through Secure
	Shell (SSH), and locate the languages.properties file found in /opt/Tomcat/apache-
	tomcat-6.0.18/webapps/VoicePortal/WEB-INF/classes/messages. Edit the file and add
	the lines shown below to the appropriate section
	NOASR=No ASR
	NoTTS=No TTS
	defaultNetworkAddress= <network address=""></network>
	#
	# MRCP Protocol
	#
	IBMWVSMRCPLabels=MRCP V1
	NuanceMRCPLabels=MRCP V1, MRCP V2
	iFlyTal-MPCDI abol a-MPCP V1, MPCP V2
	mrcpv1=MRCP V1
	mrcpv2=MRCP V2
	# Transport Protocol
	#
	IBMWVSTransportLabels=TCP
	NuanceTransportLabels=TCP, TLS
	tls=TLS
	#
	< remaining lines removed for brevity >
8.	Locate the languages.properties file found in /opt/Tomcat/apache-tomcat-
	6.0.18/webapps/VoicePortal/WEB-INF/classes/config. Edit the file and add the lines
	shown below to the appropriate section.

```
Description
Step
      # Engine Type options displayed on the page
      asrEngines=iFlyTek, IBM WVS, Nuance, Loquendo
      ttsEngines=iFlyTek, IBM WVS, Nuance, Loquendo
      # Engine Type conversion from display to internal data in the databas
      < Some lines removed for brevity >
      iFlyTekASR=iflytek interreco
      iFlyTekTTS=iflytek interphonic
      # Engine Type conversion from internal data in the database to display
      < Some lines removed for brevity >
      iflytekinterreco=iFlyTek
      iflytekinterphonic=iFlyTek
      #
      # Languages
      #
      < Some lines removed for brevity >
      iFlyTekASRlanguages=zh-CN,en-US
      # TTS LANGUAGE
      < Some lines removed for brevity >
      iFlyTekTTSlanguages=zh-CN Xiaoyan F,zh-CN Xiaoyu M,en-US Mary F,en-US Henry M
      # Language Default
      < Some lines removed for brevity >
      iFlyTekASRlanguagesDefault=en-US
      < Some lines removed for brevity >
      iFlyTekTTSlanguagesDefault=en-US Mary F
      # default base port
      #
      < Some lines removed for brevity >
      iFlyTekBasePort=1554
      # default New Connection per Session
      #
      < Some lines removed for brevity >
      iFlyTekPerPort=Yes
```



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Step	Description		
10.	In the Add TTS Se was added by mod section, set Protoc	erver page, select iFlyTek as the Engine Type lifying the languages.properties files in Step col to MRCP V2. Specify the Name, select Ye to the IP address of the iFL XTEK MBCP Ser	e. This engine type option s 7 and 8. In the MRCP es for Enable, set
	Network Address		
	voices used by the	e applications. The Total Number of Licensed	a I I S Resources should
	also be set to the n	umber of InterPhonic licenses available on the	e IFLYTEK MRCP
	Server. All other f	ields were left at their default values. Click Sa	ve.
	Avaya Voice Portal Manag	ement System - Microsoft Internet Explorer	
			»
	Back - 💟 · 🗶	Search 🏋 Favorites 🥹 🖾 🗣 🎑 🖬 🛄 🛄 🦓	Links @ Google @ iFLY MRCP Server
	Address 🕘 https://10.1.10.80/Voi	cePortal/faces/main.jsf	💌 🔁 Go
	AVAVA		Welcome, admin
			Last logged in 5/2//09 at 10:31:44 AM SGI
	Expand All Collapse All	(d)	nr Home 🕫 Help 😡 Logon
	▼ User Management Roles	Add TTS Server	
	Users Login Options	Use this page to configure Voice Portal to communicate with a new TTS server.	
	System Monitor Active Calls	Name:	
	Port Distribution • System Maintenance	Enable: O Yes O No	
	Trace Viewer Log Viewer	Engine Type:	
	Alarm Manager System Management	Network Address: 10.1.10.112	
	MPP Manager Software Upgrade System Backup	Base Port: 5060	
	 System Configuration Alarm Codes 	New Connection per Session:	
	Alarm/Log Options Applications MPD Servers	Chinese(Simplified) zh-CN Xiaoyan F	
	Report Data SNMP	Chinese(Simplified) zh-CN Xiaoyu M English(USA) en-US Mary F	
	Speech Servers VoIP Connections VDMS Servers	English(USA) en-US Henry M	-
	✓ Security Certificates		
	Licensing Reports Standard	MRCP Disc Intervalue 15 access 4(a)	7
	Custom Scheduled	Response Timeout: 4 second(s)	
		Protocol: MRCP V2 V	
		Transport Protocol: TCP 💌	
		Listener Port: 5060	
		Save Cancel Help	
	(a) Dura		A 🛐
	Jone Done		🔲 🤧 Local Intranet



Step	Description	
12.	In the Add ASR	Server page, select iFlyTek as the Engine Type. This engine type option
	was added by mo	odifying the languages, properties files in Steps 7 and 8. In the MRCP
	section set Prot	ocol to MRCP V2. Specify the Name select Ves for Enable set
	Notwork Addro	ss to the ID address of the iEI VTEK MRCD Server and select the desired
		ss to the IF address of the IFL I TEK WIKEF Server and select the desired
	Languages used	by the applications. The Total Number of Licensed ASR Resources
	should also be se	t to the number of InterReco licenses available on the IFLYTEK MRCP
	Server. All other	fields were left at their default values. Click Save.
	🗿 Avaya Voice Portal Manag	ement System - Microsoft Internet Explorer
	File Edit View Favorites T	Tools Help
	🔇 Back 🝷 🜍 🕤 💌 😰	🛐 🏠 🔎 Search 🧙 Favorites 🤣 🔗 - 🌺 🖀 🛄 🎇 🎇 Links 🗃 Google 🗿 FLY MRCP Server
	Address 🗃 https://10.1.10.80/Voi	xicePortal/Faces/main.jsf 💽 🔂 Go
		Welcome, admin
	AVALYA	Last logged in 5/27/09 at 10:31:44 AM SGT
	Voice Portal 5.0 (VoicePort	tal) fi Home 😯 Help 🕲 Logoff
	▼ User Management	You are here: <u>Home</u> > System Configuration > <u>Speech Servers</u> > Add ASR Server
	Roles Users Logio Options	Add ASR Server
	✓ Real-Time Monitoring System Monitor	Use this page to configure Voice Portal to communicate with a new ASR server.
	Active Calls Port Distribution	Name:
	Audit Log Viewer Trace Viewer	Enable: Ves O No
	Log Viewer Alarm Manager	Network Address: 10.1.10.112
	MPP Manager Software Upgrade	Base Port: 5060
	System Backup • System Configuration	Total Number of Licensed ASR Resources: 30
	Alarm Codes Alarm/Log Options Applications	New Connection per Session: Ves O No
	MPP Servers Report Data	Chinese(Simplified) zn-UN English(USA) en-US
	SNMP Speech Servers VoIP Connections	Languages:
	VPMS Servers • Security	
	Certificates Licensing Reports	MRCP
	Standard Custom	Ping Interval: 15 second(s)
	Scheduled	Response limeout: 4 second(s) Protocol: MRCP V2 V
		Listener Port: 5060
		Save Cancel Help
	Cone	🔒 🍕 Local intranet



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6. Configure iFLYTEK MRCP Server

The iFLYTEK MRCP Server requires the iFLYTEK InterPhonic and iFLYTEK InterReco products to be installed on the same server so as to provide the required TTS and ASR functionality. For load balancing, the optional iFLYTEK MRCP Resource Management Server software is required. For this compliance testing, the load balancing feature was not tested.

Step	Description
1.	On the iFLYTEK MRCP Server, edit the file mrs.cfg located in the C:\Program
	Files\iFly Info Tek\IMS3.5\cfg\ directory using Notepad.
	In the [mrcp] section, configure the following parameter to use UTF-8 as the encoding.
	grammar_encoding = UTF-8
	In the [rtp] section, configure the following parameters:
	packet size = 160
	data_flow = 8000
	🖡 mrs.cfg - Notepad
	File Edit Format View Help
	<pre>sensitivity_level = speed_vs_accuracy = no_input_timeout = media_type = speech_complete_timeout = speech_language_r = hotword_max_duration = botword_min_duration =</pre>
	dtmf_buffer_time = grammar_encoding = UTF-8
	; recognization result fromat, allowed formats list following: ; a) application/nlsml+xml ; b) application/x-vnd.iflytek.emma+xml ; default is : application/nlsml+xml result_format =
	; MRCP recognizer vendor specific parameter default values
	com.iflytek.asr.ep.timeout = com.iflytek.asr.rec.wave-filename =
	[rtp] rtp_portbase = 16384 rtp_portrange = 20000 packet_size = 160 social size = 160
	<pre>last_mark = 8000 last_mark = talse #conditions send bye (default: destroy, others: recvbye, suppress) send_bye_mode = #sess_log_path =</pre>
	dtmf_payload_support = true
	Save the file and exit Notepad.

Step	Description
2.	Edit the file res custom intp.cfu located in the C:\Program Files\iFly Info Tek\
	InterPhonic 6.0\lib\ directory using Notepad.
	In the UnterPhonic Resource Custom section configure the following parameter to set
	the appropriate value for codepage
	the appropriate value for codepage.
	🕞 res_custom_intp.cfu - Notepad
	File Edit Format View Help
	~
	[InterPhonic\Resource\Custom]
	ReadEnglish=00000000
	AudioHeadFmt=00000000
	Speed=00000000
	Description=Custom
	Path=custom
	EnterTreat=00000000
	AudioFmt=00000000
	TextType=00000000
	Name=Custom
	Version=65536
	CodePage=00000006
	Pitch=Outubuu
	StallStyle=00000000 OutBufSize=65536
	MaxSenLen=128
	DefaultSR=16000
	VptTreat=00000001
	Save the file and exit Notepad.

Step	Description
3.	Edit the file siegn.cfu located in the C:\Program Files\iFly Info Tek\InterReco
	2.5\conf\ directory using Notepad.
	In the [InterPhonic\Resource\Custom] section, configure the following parameter to set
	the appropriate value for codepage.
	CodePage=0000006
	📕 res_custom_intp.cfu - Notepad 📃 🗖 🔀
	File Edit Format View Help
	DefaultVID=00000002
	ReadEnglish=00000000
	Speed=00000000
	Volume=00000000 Description=Custom
	Path=custom
	EnterTreat=00000000 ReadNum=00000000
	AudioFmt=00000000
	Name=Custom
	ReadPunct=00000000
	CodePage=00000006
	Pitch=00000000
	OutBufSize=65536
	MaxSenLen=128 Defaultsp=16000
	VptTreat=00000001
	BGSound=0000000
	Save the file and exit Notepad.
4.	Reboot the iFLYTEK MRCP Server to effect the changes.

7. General Test Approach and Test Results

The interoperability compliance test included feature and serviceability testing. The feature testing focused on placing calls to Avaya VP that ran VoiceXML applications that use the ASR and TTS engines in the iFLYTEK MRCP Server. The compliance test focused on placing calls to verify TTS and speech recognition.

The serviceability testing focused on verifying the ability of the iFLYTEK MRCP Server to recover from adverse conditions, such as power failures and disconnecting cables to the IP network.

All test cases passed. Avaya VP was successful in running applications that use the ASR and TTS engines of the iFLYTEK MRCP Server.

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8. Verification Steps

This section provides the verification steps that may be performed to verify that Avaya Voice Portal can run VoiceXML applications that use the iFLYTEK MRCP Server for ASR for TTS functionalities.

8.1. Verify Avaya Voice Portal

tep	Description						
1.	From the VPMS web interface, click System Management > MPP Manager . On the MPP Manager page, verify that the MPP server is online and running.						
	🗿 Avaya Voice Portal Managem	ent System - Microsoft Internet Explorer					
	File Edit View Favorites Tools	Help					
	🔇 Back + 🕤 - 🖹 🖻 🏠 🔎 Search 👷 Favorites 🤀 🍰 - 🥁 🎬 - 🛄 🎇 🦓 Links 🔊 Google 🗿 iFLY MRCP Server						
	Address 🗃 https://10.1.10.80/VoiceP	💌 🄁 Go					
	AVAYA		Welcome, admin Last logged in today at 12;32:48 PM SGT				
	Voice Portal 5.0 (VoicePortal		📅 Home 📪 Help 🛛 Logoff				
	Expand All Collapse All User Management Roles Users Login Options Real-Time Monitoring System Monitor Active Calls Port Distribution	You are here: <u>Home</u> > System Management > MPP Manager MPP Manager (5/29/09 4:00:11 PM SGT) This page displays the current state of each MPP in the Voice P select one or more MPPs. To enable the mode commands, the	Refresh Refresh Portal system. To enable the state and mode commands, selected MPPs must also be stopped.				
	 System Maintenance Audit Log Viewer Trace Viewer Log Viewer 	Server Name Mode State Config Auto	Last Poll: 5/29/09 3:59:53 PM SGT Restart Schedule Active Calls				
	Alarm Manager System Management MPP Manager Software Upprade	coresident Online Running OK Yes 🖉	No & None & 0 0				
	System Backup System Configuration	State Commands	Restart/Reboot Options				
	Alarm Codes Alarm/Log Options Applications MPP Servers	Start Stop Restart Reboot Halt Cancel	 One server at a time All selected servers at the same time 				
	Report Data SNMP Speech Servers VoIP Connections VPMS Servers Security Certificates	Mode Commands Offline Test Online					
	Licensing ▼ Reports Standard	Help					
	Custom						

Step	Description							
2.	From the VPMS web interface, click Real-Time Monitoring > Port Distribution . On the							
	Port Distribution page, verify that the ports on the MPP server are in service.							
	1	0, ,		1				
	Avava Voice Portal Manage	A Avava Vnice Dortal Management System - Microsoft Internet Evolorer						
	File Edit View Favorites To	ols Help		and any second				
	🗿 Back 🔹 🍙 - 💌 🛃	Search	Aravoril	tes 🙆 🔗	- 2	· · · · · · · · · · · · · · · · · · ·	Links 🔊 Google	iFLY MRCP Server
	Address Address Address	ePortal/faces/main_isf	~					
	AVAYA						Last logged in t	oday at 12:32:48 PM SGT
	Voice Portal 5.0 (VoicePort	al)					n Home	?• Help 🛛 Logoff
	Expand All Collapse All	You are here: <u>Ho</u>	<u>me</u> > Real	-Time Monitori	ng > Port	Distribution		<u>^</u>
	User Management Roles Users Login Options	Port Distri	ibutior	1 (5/29/09	9 4:03:	48 PM SGT)		Refresh
	▼ Real-Time Monitoring System Monitor Active Calls	This page display telephony resour	ys informat rces on the	tion about how VoIP Connect	the telep ions page	hony resources have b	een distributed to the MF	Ps. You configure the
	▼ System Maintenance	Total Ports: 30	-	26		Last Poll: 5/2	:9/09 4:03:48 PM SGT	
	Audit Log Viewer Trace Viewer	Port 🗘 Mode 🗘	State	Port Group	Protoco	l 🗘 Current Allocatio	n Base Allocation	
	Log Viewer Alarm Manager	10201 Online	In service	S8500-SITEA	H323	coresident		
	▼ System Management	10202 Online	In service In service	S8500-SITEA	H323	coresident		
	Software Upgrade	10204 Online	In service	S8500-SITEA	H323	coresident		
	System Backup System Configuration	10205 Online	In service	S8500-SITEA	H323	coresident		
	Alarm Codes	<u>10206</u> Online	In service	S8500-SITEA	H323	coresident		
	Applications	<u>10207</u> Online	In service	S8500-SITEA	H323	coresident		
	MPP Servers Report Data	<u>10208</u> Online	In service	S8500-SITEA	H323	coresident		
	SNMP	10209 Online	In service	S8500-SITEA	H323	coresident		
	Speech Servers VoIP Connections	10210 Online	In service	S8500-SITEA	H323	coresident		-
	VPMS Servers	10212 Online	In service	\$8500-SITEA	H323	coresident		
	 Security Certificates 	10213 Online	In service	S8500-SITEA	H323	coresident		
	Licensing	10214 Online	In service	S8500-SITEA	H323	coresident		
	Standard	10215 Online	In service	S8500-SITEA	H323	coresident		
	Custom	10216 Online	In service	S8500-SITEA	H323	coresident		
	scheduled	<u>10217</u> Online	In service	S8500-SITEA	H323	coresident		
		<u>10218</u> Online	In service	S8500-SITEA	H323	coresident		
		<u>10219</u> Online	In service	S8500-SITEA	H323	coresident		
		10220 Online	In service	S8500-SITEA	H323	coresident		
		10221 Online	In service	S8500-SITEA	H323	coresident		
		10222 Online	In service	S8500-SITEA	H323	coresident		
		10223 Online	In service	S8500-SITEA	H323	coresident		
		10225 Online	In service	S8500-SITEA	H323	coresident		
		10226 Online	In service	S8500-SITEA	H323	coresident		
		10227 Online	In service	S8500-SITEA	H323	coresident		
		10228 Online	In service	S8500-SITEA	H323	coresident		
		<u>10229</u> Online	In service	S8500-SITEA	H323	coresident		
		<u>10230</u> Online	In service	S8500-SITEA	H323	coresident	<none></none>	~
	A	_					A	Local intrapet
	2							Sector introduce 👔
•	D1 11 4		. 1 .1		* *			
3.	Place a call to Ava	ya Voice Po	ortal tł	nat runs	a Vo	ICEXML SCRI	pt which uses	the iFLYTEK
	MRCP Server for	neech recou	mitio	n and ou	nthac	is Varify the	t the annling	ion answers
	witter Server for S	speech lecog	sinuo	n and sy	nules	is. veiliy the	at the applica	TOH answers
	the call and that the	e application	n is af	ole to an	noun	ce the TTS s	vnthesized pro	ompts to the
			- 15 at	11 -			, pr	
	caller and recogniz	e speech fro	om the	e caller.				

8.2. Verify iFLYTEK MRCP Server

From a web browser, browse to http://<ip_addr>:5080/mrs_self_frame.html, where <ip-addr> is the IP address of the iFLYTEK MRCP Server. Verify that the Status of the iFLYTEK MRCP Server shows running.

IFLY MRCP Server - Mici	rosoft Internet Explorer	
File Edit View Favorites	Tools Help	
🌀 Back 🔹 🕥 🕤 💌	😰 🟠 🔎 Search 📌 Favorites	: 🚱 🔗 - 嫨 🔟 - 📙 👯 🦓 Links 🗃 Google 🗿 iFLY MRCP Server
Address 🗃 http://10.1.10.112:	5080/mrs_self_frame.html	💌 🄁 Go
Ver 3.5	P Server	Home Page Mail to iFLY Support 2009-5-29
MRCP Resource Server		Service Info Config Stop MRS Quit LBS Refresh
1	Node Information	
	SIP LIRI	sin:mrs@10.1.10.112:5060:transnort=tcn
Service Info	Executive File	C:\Program Files\iFly Info Tek\IMS3 5\bin\mrs exe
- 1	Version	3.5.0.37
	Status	running
Engine Info	Start Time	2009-05-19 09:35:51
<u>Engine iniv</u>	IP List	10.1.10.112
	Firewall Check	passed
-	Load Balance Status(LBS)	enabled
Statistic Info	Host Information	
	Host Name	svr12
	CPU Type	Intel Xeon, 4*E5410 @ 2.33GHz
	CPUs	4
	Memory (MB)	4095
	Network Adapters	1
	OS Type	Microsoft Windows Server 2003 Build 3790 Service Pack 2
	Load Information	
	CPU(occupancy/number)	0%/4
	Memory(available/total)(MB)	2618/4095
	Bandwidth(Bps)	1381
		Copyright (C) 2008 IFLYTEK, All Rights Reserved.
é		Second intranet

9. Conclusion

These Application Notes describe the steps required to configure Anhui USTC iFLYTEK InterPhonic and InterReco with Avaya Voice Portal using iFLYTEK MRCP Server. All feature and serviceability test cases were completed successfully.

10. Additional References

The following documents are available at <u>http://support.avaya.com</u>.

[1] Administering Voice Portal, Release 5.0, March 2009

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

The following documents are available from iFLYTEK:

[3] *iFLYTEK MRCP Server 3.5 User Guide*.

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