VXML Interaction Server Configuration Guide Version 5.3.0 - 5.4.0

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Configuring the VXML Interaction Server (toolkit.properties)

Overview

The configuration information for the VXML Interaction Server is stored in a toolkit.properties file. The toolkit.properties file contains settings that are used to determine routing decisions within the system. The following toolkit.properties template files are located in the Sample_Configuration_*x.x.x.xxx*.zip file on the VXML Interaction Server download location.

- aacc.toolkit.properties
- avp.h323.toolkit.properties (select this when H.323 inbound or outbound is used)
- avp.sip.toolkit.properties (select this when SIP inbound and outbound are used)
- cic.toolkit.properties
- genesys.vxmlidriver.toolkit.properties
- gvp.toolkit.properties
- ivg.avaya.toolkit.properties (select this for either IVG Avaya integrations or IVG Genesys integrations)
- ucce.toolkit.properties
- uccx.toolkit.properties
- voxeo.toolkit.properties
- vtop.toolkit.properties

To configure the VXML Interaction Server, perform the following steps:

1. In Windows systems, create a VirtualHold folder on the same server and same drive that the Apache Tomcat Web server is installed on.
2. In Linux systems, create /etc/VirtualHold folder on the same server and same drive that the Apache Tomcat Web server is installed on.
3. Copy the appropriate toolkit.properties template file to the newly created VirtualHold folder.
4. Rename the template file to **toolkit.properties**.
5. Open the toolkit.properties file in a text editor.
6. Edit the file for your specific configuration based on the comments contained in the sample file.
7. **Save** and **Close** the file.

License Management

Licensing is disabled by default. The com.virtualhold.toolkit.license.mode setting enables or disables License Manager. License files are not required if not using this feature. If using this feature, com.virtualhold.toolkit.license.mode must be

This article applies from version 5.3 to 5.4

set to enabled and license files are required. Contact your Virtual Hold Technology representative for more information.

There are four properties that can be set in the toolkit.properties file to utilize the License Manager if licenesing is desired:

> com.virtualhold.toolkit.license.url=http://localhost:54321/license
> com.virtualhold.toolkit.license.type=sessionId
> com.virtualhold.toolkit.license.request.timeout=10000
> com.virtualhold.toolkit.license.mode=enabled

com.virtualhold.toolkit.license.url	Location of the license management HTTP interface. Default is http://localhost:54321/license
com. virtualhold.toolkit.license.type	Determines what to use as the 'key' to send to the License Manager. The valid options are sessionId and interactionId. By default it will use the VirtualHold interaction id.
com.virtualhold.toolkit.license.request.timeout	Length of time that VIS will wait for a response from the License Manager before timing out the request. The default is 10000 milliseconds (10 seconds).
com.virtualhold.toolkit.license.mode	Licensing is disabled by default. To enable VIS's automatic checking for license, set this setting to *enabled.*

Optional: Changing Location of toolkit.properties File

If you want to store the file in a different location, you have two choices: create an environment variable, or configure the Apache Tomcat Web server to identify the new location. The default location is C:/VirtualHold.
For the environment variable, perform the following steps on the server that contains the VXML Interaction Server:

1. Right-click **My Computer** and select **Properties**.
2. (Windows 7) In the *System* window, click **Advanced system settings** in the left pane.
3. In the *System Properties* window, select the Advanced tab, then click **Environment Variables ...**.
4. Under System Variables, click **New...** to add a new environment variable.
5. Enter the Variable name as **VHT_VIS_PATH**.
6. Enter the Variable value as the path to the toolkit.properties file.
7. Click **OK** twice, then close the *System* window.
8. Restart the server.

Or, on the server that contains Apache Tomcat, perform the following steps:

This article applies from version 5.3 to 5.4

1. Open the **Apache Tomcat Java Properties** and select the Java tab.
2. Select the Advanced tab, then click **Environment Variables ...**.
3. Enter the path to the toolkit.properties file in the Java Options text window.
4. Click **Apply**.

For Linux systems using Apache Tomcat:

1. Enter **/tomcat/bin** in command prompt.
2. Create a file named setenv.sh if not already done (refer here for more information).
3. Open the setenv.sh file.
4. Edit the file with a new location.
   a. Add **export JAVA_OPTS="-DVHT_VIS_PATH=**/var/lib/sample/**"** to the file where /var/lib/sample/ is your specific location.
5. Put the toolkit.properties file in the location specified in the setenv.sh file.
6. Restart Apache Tomcat.

Refer to Using JBoss EAP Web Server for information about systems using JBoss EAP.

This article applies from version 5.3 to 5.4

Configuring Toolkit.properties for External Media Files

Overview

The VXML Interaction Server can play voice prompts hosted on other media servers. These external media servers are configured in the toolkit.properties file.

Below is a sample toolkit.properties file for external media files.

> **Note:** The external media settings are case insensitive.

Number of media servers: (external.mediaserver.count=1)

- When two or more media servers are used, change **external.mediaserver.count=1** to **external.mediaserver.count=X** (where X is the number of servers).

Path to each server: (external.mediaserver.1=http://[path to server])

- Change this to point to the directory where the voice files are stored on the first server.
- Add additional lines for **external.mediaserver.2**, etc. as needed (one line per server).

> **Note:** Both HTTP and HTTPS are supported.

Balanced or failover mode: (external.mediaserver.distribution=)

- balanced: Individual prompts will be played from all media servers in a balanced fashion. (The distribution will be equally spread among all servers.)
- failover: All prompts will be played from the first server only. If the first server is not available, the second server in the list will be used. If the second is not available, the third will be used, and so on. (This setting is only effective if multiple servers are used.)

> **Note:** Balanced mode will automatically handle a failover scenario. If one server fails, the other servers are used and the unavailable server is skipped.
> In systems using Apache Tomcat, the Apache Tomcat log indicates which media servers are configured, but does not log the individual prompts. Prompts are logged in the browser log for GVP, CVP, or AVP (or other voice platform used). Both logs include the path to the server.

Failure log level: (external.mediaserver.logging=)

- none: A failure message will only be logged for the external media files if all servers fail.
- first: A failure message will only be logged for the first server to fail. Subsequent failures for that server are not logged. The other servers are logged upon start, but not fail.
- all: All possible success and failure messages will be logged.

> **Note:** When using Apache Tomcat, refer to Media Server Logging in Apache Tomcat for sample log messages.

This article applies from version 5.3 to 5.4

If this setting does not exist, the log level will default to "first".

This article applies from version 5.3 to 5.4

Configuring Language and Custom Media Fields in EyeQueue

Overview

You must configure the Language and Custom Media fields in the **Adv Settings ⇨ Language Settings** section of EyeQueue for each segment to contain the correct language and custom folder name.

1. In the Select a Segment field, choose the segment.

2. Select the Language option, then enter the name for the language used by this segment exactly as shown here: Dutch, English, FrenchCanadian, SpanishNA or Mandarin Chinese.

3. Select the Custom Media option, then enter the folder name from the media server containing customized voice prompts for this segment.

    > **Note:** If the Custom Media value is blank or is not a valid folder name, the VXML Interaction Server will use the files from the Default folder for the specified language.
    > If the Language value is blank or is not a valid language name, the VXML Interaction Server will use the files from the Default folder for English.

4. Click **Submit**.

The language and custom media settings will will take effect immediately. No restart of Virtual Hold is required.

Customizing External Media Files

Overview

Many clients use customized sets of voice prompts, instead of the standard voice files provided by Virtual Hold. The custom voice prompts must be organized using a specific folder structure so that the VXML Interaction Server will recognize them and play them correctly.

You can stage the voice files on any machine as you copy and arrange them. Then you will deploy the files to the media server(s).

You can use the Voices_*x.x.x.xxx*.zip file for Version 5.x.x provided in the Virtual Hold Download Center as a starting point, or you can create a new parent folder to hold the voice files. This documentation assumes you are starting with the voices folder.

The voices (parent) folder must contain a subfolder for each language used. These folders must be named VHT_Dutch, VHT_English, VHT_FrenchCanadian, and/or VHT_SpanishNA. Each language folder must contain a subfolder named Default, and optionally extra subfolders containing custom files. The VXML Interaction Server will look for a custom voice file first. If a custom file cannot be found, it will use the files from the Default folder.

If you are using the voices folder from Virtual Hold with no changes, you can skip the steps below. Continue with the deployment steps listed in the Deploying External Media Files topic in the VXML Interaction Server Installation Guide.

To set up custom prompts for VXML Interaction Server:

1. Navigate to the voices folder. Open the subfolder for the first language.

2. You will see a Default folder. This folder contains the standard set of voice prompts. We recommend making a copy of this folder under a different name (such as VHT_Defaults). This will preserve the files in case you need to use them later for troubleshooting.

3. Delete the contents of the Default folder and copy the files for the first custom call script here. Be sure this folder contains the full set of voice files.

   > **Note:** The Default folder must also contain these four additional files:
   > - .library
   > - ContactNumber.grxml
   > - ContactNumber.regex
   > - recordtone.wav

4. To set up a second call script, create a new folder (at the same level as Default) and copy the custom prompts for the second call script into it.

5. Repeat step 4 for the remaining call scripts.

   > **Note:** The new folders only need to contain those files which differ from the default. However, you may choose to copy entire prompt sets into the new folders. This will make the copying process simpler, but will result in more .wav files being stored on the media server(s).
   >
   > Any major variation (such as male/female voice or US English/British English) must contain the full prompt set in its folder. It must also include blank .wav files to replace any files that are present in the default set that should not be played. This is to avoid mixing genders or languages. Refer to the **Sample Voice Project** below.

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6. Make sure each subfolder under [first language] contains an empty .library file (size 0 KB). If needed, copy the .library file from the Default folder and paste it into the others.

7. Repeat steps 1-6 for other supported languages.

8. Deploy the voices folder and its contents to the media server(s). Refer to Deploying External Media Files.

9. Configure EyeQueue to contain the correct language and custom folder name. Refer to Configuring Language and Custom Media Fields in EyeQueue.

The changes will take effect immediately. No restart is needed.

Sample Voice Project

A client has six call scripts in English: four in US English and two in British English. The voice project should be set up in \voices\VHT_English as follows:

- The default set of US English prompts in "Default"
- Custom prompts only in US English in "VHTCallScript_2", "VHTCallScript_3", and "VHTCallScript_4"
- Full prompt sets in British English in "VHTCallScript_5" and "VHTCallScript_6"

If any prompt is missing from either 5 or 6, it will be played from "Default", which will be US English instead of British English.

This article applies from version 5.3 to 5.4

Using JBoss EAP Web Server with the the VXML Interaction Server

Overview

This topic explains the procedures and configuration that must be performed in order for the VXML Interaction Server (VIS) to work with the JBoss EAP Web server:
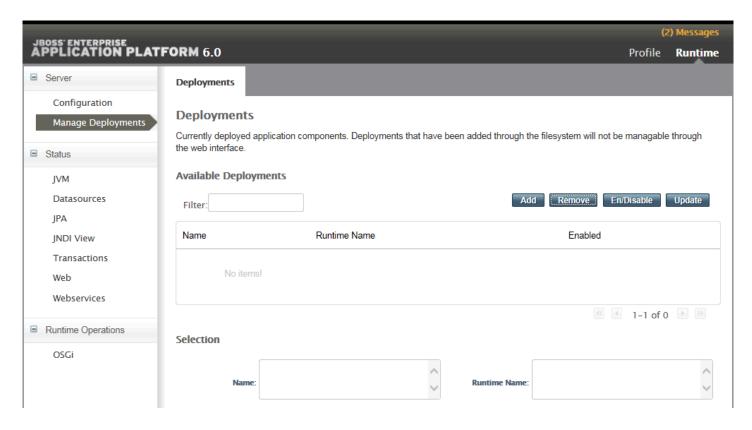
- Deploying VXML Interaction Server .war File
- Creating Voices.war File
- Deploying Voices.war File
- Configuring Toolkit.properties File
- Changing Tookit.properties File Location
- Changing VXML Interaction Server Log Level
- Verifying Log Functuionality

Deploying VXML Interaction Server .war File

To deploy the correct VXM Interaction Server .war file:

1. Locate the VIS_*x.x.x.xxx*.war file within the unzipped VIS_*x.x.x.xxx*_JBOSS.zip file results.
2. Open the JBoss Enterprise Application Platform application found at *jboss_server_ip_address***:9990/console/ App.html#deployments**.
3. Select **Runtime.**
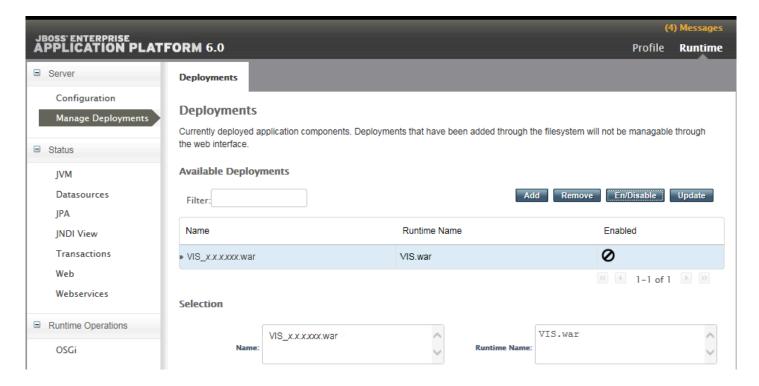4. Select **Manage Deployments**.

This article applies from version 5.3 to 5.4

5. Click **Add**.

6. Click **Browse** in the Upload window.

7. Select the VIS_*x.x.x.xxx*.war file and click **Open**.

8. Click **Next**.

9. Enter the appropriate runtime name (with .war extension) of the VXML Interaction Server application in the Runtime Name field and click **Save**.

Note:

Do not change the Key and Name field values.

This article applies from version 5.3 to 5.4

10. Select the VIS_*x.x.x.xxx*.war file and click **En/Disable** to enable the file.

11. Click **Confirm** when asked if the file should be enabled.

12. Verify the VIS_*x.x.x.xxx*.war file is deployed by using a Web browser to successfully navigate to the VXML Interaction Server application and confirm no errors are generated.

Creating Voices.war File

To create the voices.war file:

1. Copy the Voices_*x.x.x.xxx*.zip file (for Version 5.x.x) to a local directory.

> **Note:**
>
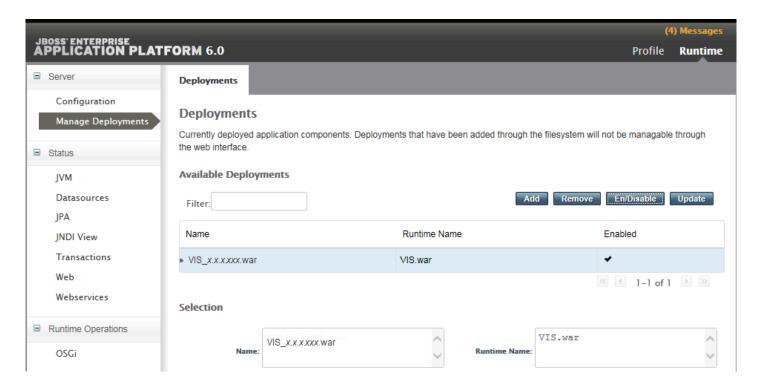> Ensure the zip file does not contain a voices subdirectory!

2. Rename the Voices_*x.x.x.xxx*.zip file to voices.war.

3. Click **Yes** when asked to confirm the name change.

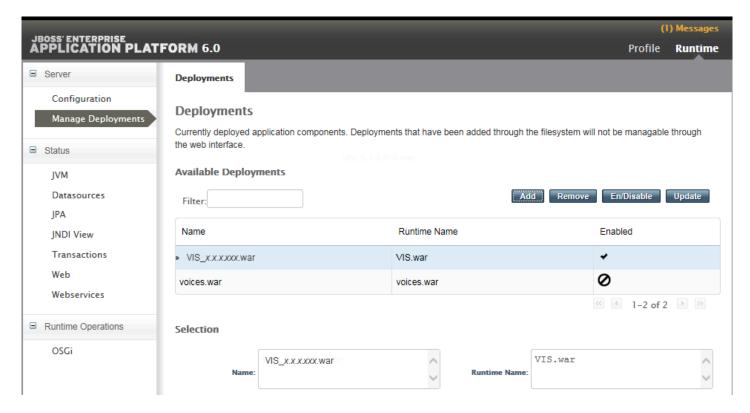This article applies from version 5.3 to 5.4

Deploying Voices.war File

To deploy the correct media files (voices.war file):

1. Locate the user created voices.war file.
2. Open the JBoss Enterprise Application Platform application found at *jboss_server_ip_address***:9990/console/ App.html#deployments**.
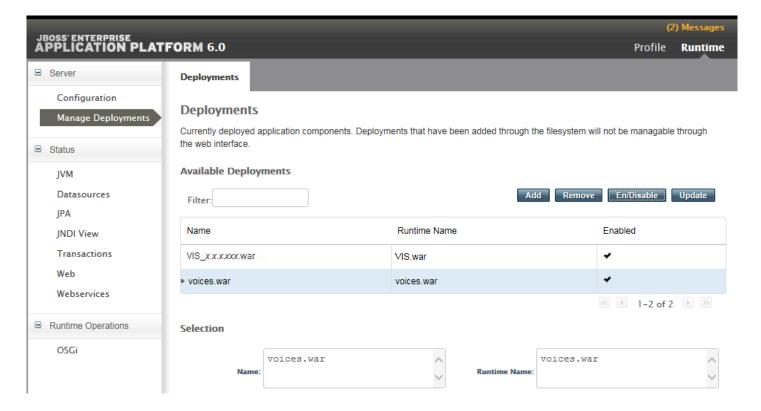3. Select **Runtime**.
4. Select **Manage Deployments**.

5. Click **Add**.
6. Click **Browse** in the Upload window.
7. Select the voices.war file and click **Open**.
8. Click **Next**.
9. Leave all field values unchanged and click **Save**.

This article applies from version 5.3 to 5.4

10.   Select the voices.war file and click **En/Disable** to enable the file.

11.   Click **Confirm** when asked if the file should be enabled.

10. Verify the media files (in the voices.war file) are deployed:

    a. Ue a Web browser to navigate to *jboss_server_ip_address***:8080/voices/***vht_language_name*.

    b. Verify all the media files for that language are listed.

Configuring Toolkit.properties File

To configure the toolkit.properties file:

1. Using a file browser, navigate to the JBoss EAP server.

2. Create and navigate to the .../etc/VirtualHold directory.

3. Copy the toolkit.properties file corresponding to your system type from the Sample_Configuration directory to the .../etc/VirtualHold directory.

4. Open the copied toolkit.properties file (refer to the following example).

> \# Sample configuration file for Genesys Voice Platform integrations
> \# URL for the Platform Toolkit web services
> \# Change the [PTK_server_address] and [PTK_port] to the address and port of the server where the Platform Toolkit software resides
> \# For example, http://10.10.0.158:7000/VHTPlatformWS-v4/
> \# Ensure the path and VHTPlatformWS version is correct by opening it in a web browser
> **com.virtualhold.toolkit.baseurl=http://[PTK_server_address]:[PTK_port]/VHTPlatformWS-v4/**

# Setting to true causes details of Platform Toolkit requests and responses to be included in the web server logs
com.virtualhold.toolkit.debug=false
# Total number of media servers where voice files will be played from
external.mediaserver.count=1
# Media server url configuration
# This url is resolved by the voice browser so localhost will not work
# For additional entries, just increase the number on the end of the property name
# For example, external.mediaserver.2
external.mediaserver.1=http://[media_server_address]:[media_server_port]/voices/
# Distribution method options
# failover - Goes top to bottom attempting to fetch the media file and will play from the location where it first finds the media file
# balanced - Load balances the media file fetching from the media servers, will failover if needed
external.mediaserver.distribution=failover
# Media server failure logging options
# none - will not log any media server failures
# first - will log the first time that a media server error occurs
# all   - will log a media server error every time it occurs
external.mediaserver.logging=first
# Local path to the ASAP and Scheduled callback name files for recording
# Change the [web_server_install_directory] to the local path of the web server
# For example, C:/Program Files/Apache Software Foundation/Tomcat 6.0_Tomcat/webapps/ROOT
com.virtualhold.toolkit.audiopath=[web_server_install_directory]/webapps/ROOT
Web path to the ASAP and Scheduled callback name files for playback
Change the [web_server_address] and [web_server_port] to the URL and port of the web server
For example, http://10.10.0.245:8080/
com.virtualhold.toolkit.webaudiopath=http://[web_server_address]:[web_server_port]/
# Used in day/time selection
# The) and] characters have unique properties when used to define the end of time group ranges
# For example, (12:00 am|6:00 am) includes times starting at 12:00 am through and including 6:00 am)
# For example, (12:00 am|6:00 am] includes times starting at 12:00 am through and including 5:59 am]
com.virtualhold.toolkit.earlymorning=(12:00 am|6:00 am]
com.virtualhold.toolkit.morning=(6:00 am|12:00 pm]
com.virtualhold.toolkit.afternoon=(12:00 pm|5:00 pm]
com.virtualhold.toolkit.evening=(5:00 pm|9:00 pm]
com.virtualhold.toolkit.night=(9:00 pm|11:59 pm)
# Default transfer destination during an inbound call, if destination cannot be retrieved from the Platform Toolkit
# Change the [default_transfer_destination] to the Genesys route point inbound calls should be transferred to if calls default transfer from VIS to queue
# Enter the number of the route point, for example, 44333
com.virtualhold.toolkit.defaultdestination=[default_transfer_destination]
# Default transfer destination during an outbound call, if destination cannot be retrieved from the Platform Toolkit
# Change the [default_transfer_destination] to the Genesys route point outbound calls should be transferred to if calls default transfer from VIS to queue
# Enter the number of the route point, for example, 44333
com.virtualhold.toolkit.outbound.defaultdestination=[default_transfer_destination]
# Inbound call routing control
# Determines whether VIS will control call routing or pass control back to an inbound URS routing strategy or ORS workflow
# Set to true for GVP behind configuration
# VIS will return call to strategy/workflow when inbound treatment ends, strategy/workflow targets agent or
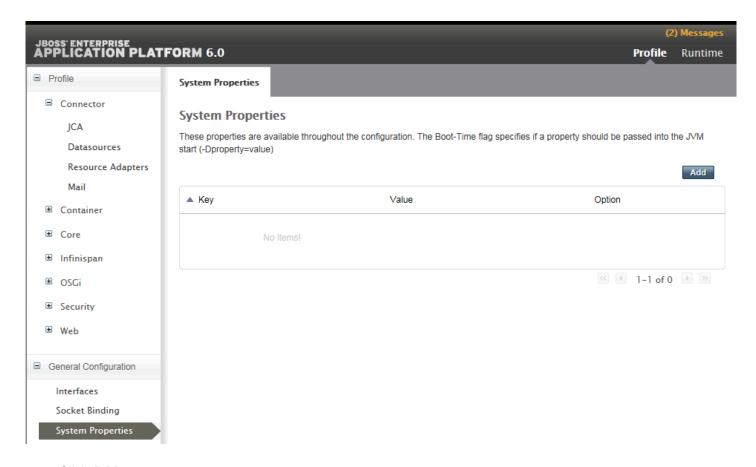
disconnects
# Set to False for GVP in front configuration
# VIS will send call to route point for queuing when inbound treatment ends or disconnects
# This property can be overridden with the URL query string parameter UseExternalRouting
com.virtualhold.toolkit.inbound.useexternalrouting=true
# Outbound call routing control
# Set to false when SSG is used to start the callback, call connected directly to VIS
# VIS sends to route point or disconnects when done
# Set to true when TMakePredictiveCall is used to start the callback (Queue mode PredictiveDial)
# Call goes to strategy/workflow which invokes VIS
# VIS returns call to strategy/workflow when done, strategy/workflow targets agent or disconnects
# This property can be overridden with the URL query string parameter UseExternalRouting
com.virtualhold.toolkit.outbound.useexternalrouting=false

5. Ensure the external media server is configured as follows:

    external.mediaserver.1=http://10.10.3.41:8080/voices/

6. Ensure the URL for Platform Toolkit Web services is configured as follows:

    com.virtualhold.toolkit.baseurl+http://ptk_server_ip_address/VHTPlatformWS-v4/

7. Ensure the name file configuration is set as follows:

    com.virtualhold.toolkit.audiopath=/usr/local/jboss-eap-6.0/welcome-content/namefiles/

    com.virtualhold.toolkit.webaudiopath=http://10.10.3.41:8080/namefiles/

8. Navigate to the welcome-content directory on the JBoss EAP server.

9. Create a subdirectory named **namefiles**.

Optional: Changing Location of Toolkit.properties File

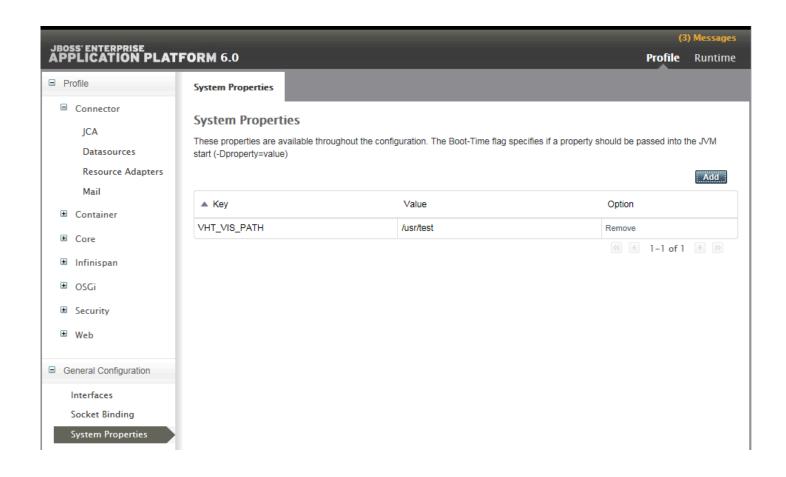To utilize a toolkit.properties file not located in the default location:

1. Open the JBoss Enterprise Application Platform application found at *jboss_server_ip_address***:9990/console/ App.html#deployments**.

2. Select **Profile**.

3. Select **System Properties**.

4. Click **Add**.

5. Enter **VHT_VIS_PATH** in the Name field in the Create System Property window.

6. Enter the path to the directory containing the toolkit.properties file in the Value field.

7. Click **Save**.

This article applies from version 5.3 to 5.4

Changing VXML Interaction Server Log Level

Temporary Change

To change the log level for a short time (for example, when troubleshooting), perform the following steps in a Web browser:

1. On the server where the VXML Interaction Server is installed, navigate to http://server:port/warfile/-/logging. The Current Log Level page is displayed.
2. Select the desired log level in the New Level field and click **Set**.
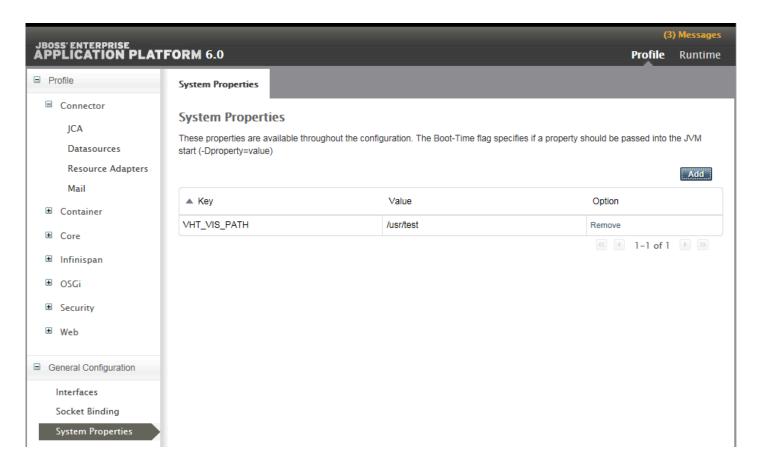3. Change the level back when you are finished.

Note: The log level returns to the default setting when you restart the server or update the VXML Interaction Server application.

This article applies from version 5.3 to 5.4

Permanent Change

To permanently change the default log level:

1. Open the JBoss Enterprise Application Platform application found at *jboss_server_ip_address***:9990/console/App.html#deployments**.
2. Select **Profile**.
3. Select **System Properties**.
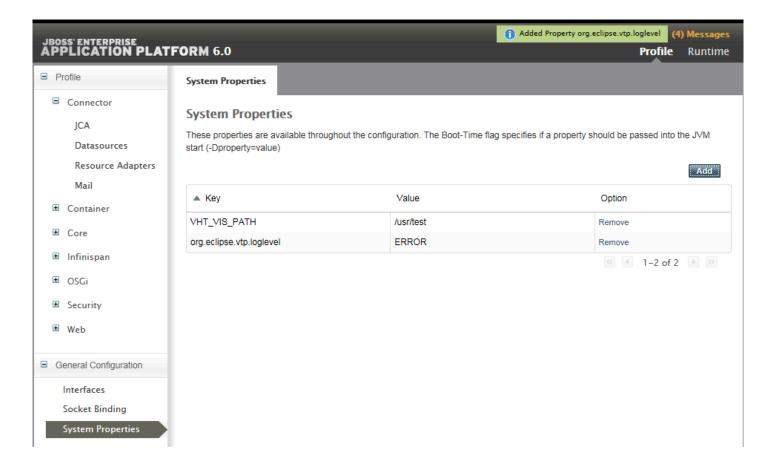

4. Click **Add**.
5. Enter **org.eclipse.vtp.loglevel** in the Name field in the Create System Property window.
6. Enter the desired log level in the Value field. Refer to the following table for more log level information.

Log Level	Information Written to the Log
ERROR	Errors
WARN	Errors and warnings

This article applies from version 5.3 to 5.4

Log Level	Information Written to the Log
INFO (default)	Errors , warnings and informational output
DEBUG	Low level trace information

7. Click **Save**.

Verifying Log Functionality

To verify the JBoss EAP server log exists and is functioning correctly:

1. Using a file browser, navigate to the JBoss server.
2. Open the .../usr/local/jboss_eap-6.0/standalone/log/server.log file and verify it contains application log entries.

This article applies from version 5.3 to 5.4

Configuring the VXML Interaction Server for Monitoring by System Management
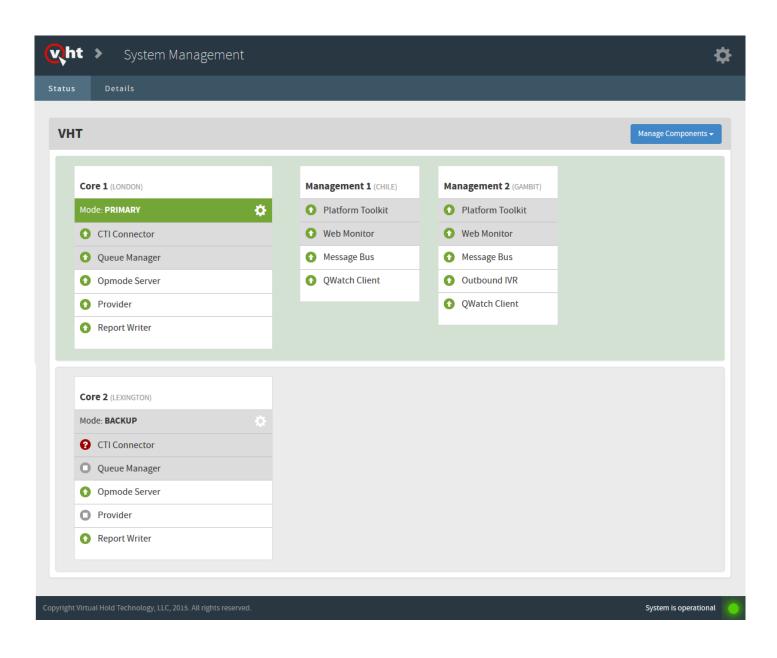
Overview

In Virtual Hold Version 8.1 and above, the VXML Interaction Server (VIS) can be monitored by the System Management interface. This allows administrators to see its status (started, stopped, or unknown) along with the status of other components of Virtual Hold.

When Virtual Hold is installed or updated, it will automatically install a Web Monitor component on each Management Instance. This Web Monitor can be configured to monitor instances of VIS by manually editing the site.config file for the Notification Server.

The System Management UI will display each VIS instance as a component. If VIS is installed on a Management Instance, it will display inside the appropriate Management Instance container. If VIS is installed outside of a Management Instance, it will appear in its own container.

The following image shows System Management monitoring an instance of VIS installed outside of a Management Instance.

System Management

Status Details

VHT

Manage Components ▾

Core 1 (LONDON)
Mode: **PRIMARY** ⚙

- CTI Connector
- Queue Manager
- Opmode Server
- Provider
- Report Writer

Management 1 (CHILE)
- Platform Toolkit
- Web Monitor
- Message Bus
- QWatch Client

Management 2 (GAMBIT)
- Platform Toolkit
- Web Monitor
- Message Bus
- Outbound IVR
- QWatch Client

Core 2 (LEXINGTON)
Mode: **BACKUP** ⚙

- CTI Connector
- Queue Manager
- Opmode Server
- Provider
- Report Writer

System is operational ●

For instructions on configuring System Management to monitor VIS, refer to System Management Notification Server Configuration.