

How to modify the Generic JVM Arguments and Java system properties for a WAS server

IBM Techdoc: 7023868

<http://www.ibm.com/support/docview.wss?rs=171&uid=swg27023868>

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+++ Question

You read in a document related to WebSphere MQ Classes for JMS or WebSphere Application Server (such as a technote or an APAR) that an environment variable needs to be set for the Java Virtual Machine (JVM) under the application server. How do you configure such variable?

Some examples of such variables are (this is not an exhaustive list)

java.library.path (for specifying the MQ Native Libraries path):

<http://www.ibm.com/support/docview.wss?uid=swg27017881>

WebSphere MQ V5.3, V6 and V7 as JMS Provider for WebSphere Application Server V5, V6.0, V6.1 and V7

com.ibm.mq.jms.tuning.startupReconnectionRetryCount APAR IZ76343

<http://www.ibm.com/support/docview.wss?uid=swg11Z76343>

IZ76343: WEBSHERE MQ 7: EJB MODULE DOES NOT START IF ANY OF THE MESSAGE ENDPOINTS TO AN ACTIVATION SPECIFICATION FAILS TO ACTIVATE

com.ibm.mq.jms.tuning.eoqTimeout

<http://www-1.ibm.com/support/docview.wss?uid=swg21228320>

Messages remain on JMS destinations for a long time before they are delivered to message-driven beans (MDBs)

com.ibm.mq.tuning.socketGrainTimeout from APAR IC74652:

<http://www-01.ibm.com/support/docview.wss?uid=swg1IC74652>

IC74652: WMQ V7 JVM THREADS STUCK, HUNG, WAITING WHEN HEARTBEAT INTERVAL HBINT IS SET TO 0

com.ibm.mq.jms.tuning.QATVersion

<http://www-01.ibm.com/support/docview.wss?uid=swg21291639>

MDB listener does not retrieve all messages or suffers delays retrieving messages from a WebSphere MQ queue

com.ibm.msg.client.wmq.overrideProviderVersion APAR PM28998

<http://www-01.ibm.com/support/docview.wss?uid=swg1PM28998>

PM28998: WEBSHERE MQ V7 JMSCMQ0001: MQ CALL FAILED WITH CODE 2 REASON CODE 2298 MQRC_FUNCTION_NOT_SUPPORTED

+++ Answer:

There are 2 methods. If the document explicitly mentions one of the methods, then follow that one.

++ Method 1 - How to modify "Generic JVM arguments" field for a WAS server.

+ Summary:

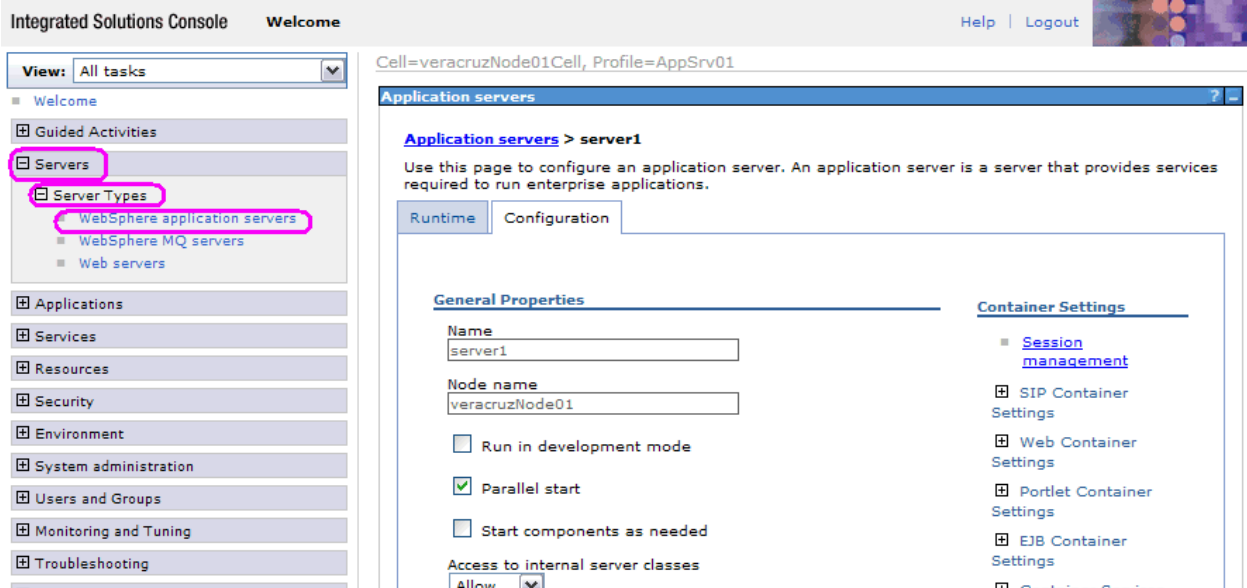
Servers -> Server Types -> <server name> -> Java and Process Management -> Process definition -> Java Virtual Machine -> Generic JVM arguments

+ Details

Bring up the WebSphere Administrative Console, and log in.

In the left hand panel, expand Servers->Server Types and click on WebSphere application servers.

In the main panel in the Administrative Console, click on the entry for your server



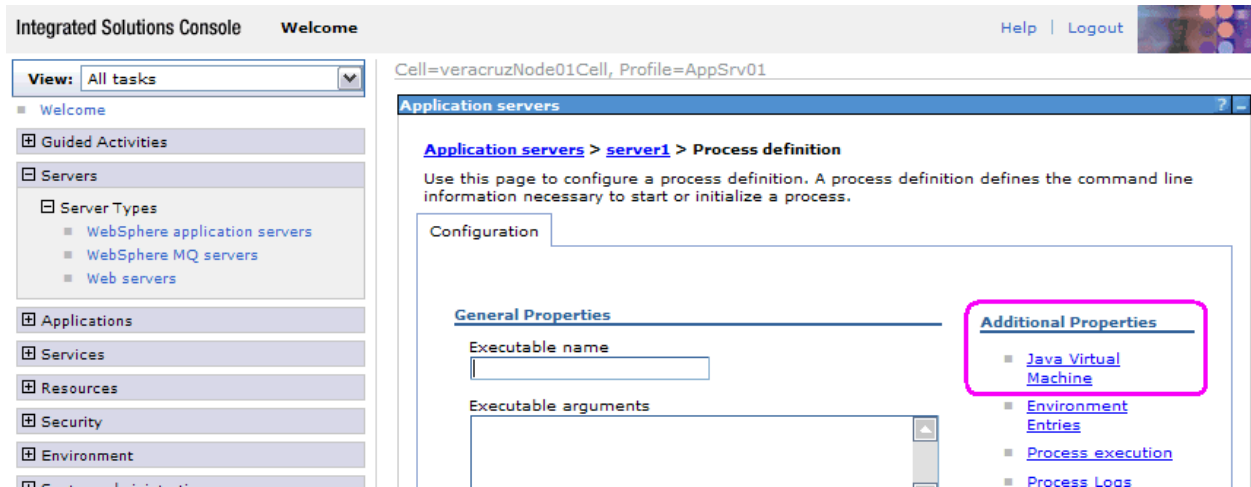
You will need to scroll down and under "Server Infrastructure", click Java and Process Management



Click Java and Process Management > Process definition



Select "Java Virtual Machine"



You will see:

Application servers ?

[Application servers](#) > [server1](#) > [Process definition](#) > [Java Virtual Machine](#)

Use this page to configure advanced Java(TM) virtual machine settings.

Configuration **Runtime**

General Properties

Classpath

Boot Classpath

Additional Properties

- [Custom properties](#)

Scroll down to find "Generic JVM arguments."

Debug Mode

Debug arguments

-agentlib:jdwp=transport=dt_socket,server=y,suspend=n,address=7777

Generic JVM arguments

-Xquickstart -Djava.library.path=/opt/mqm/java/lib:/opt/mqm/java/lib64

Executable JAR file name

Disable JIT

Under “Generic JVM arguments”, enter the desired variables.

For example:

-Djava.library.path=library_path

For Linux 32-bit, it should be:

-Djava.library.path=/opt/mqm/java/lib

For Linux 64-bit, HP-UX and Solaris, the string is:

-Djava.library.path=/opt/mqm/java/lib:/opt/mqm/java/lib64

For AIX, the string is:

-Djava.library.path=/usr/mqm/java/lib:/usr/mqm/java/lib64

Other examples:

-Dcom.ibm.mq.jms.tuning.startupReconnectionRetryCount=<value>

-Dcom.ibm.mq.jms.tuning.startupReconnectionRetryInterval=<time in milliseconds>

- Save the changes, and restart the application server.

++ Method 2 - Custom Properties

In WebSphere Application Server, the JVM system property can be set using the Administrative console:

Servers-> Application Servers (from the left hand menu) then select:
<server name> -> Server Infrastructure -> Java and Process Management -> Process Definition -> Java Virtual Machine -> Custom Properties

+ Details

Follow the steps mentioned in Method 1 and at the "Java Virtual Machine" section, select "Custom properties".

Cell=veracruzNode01Cell, Profile=AppSrv01 [Close page](#)

Application servers ?

[Application servers](#) > [server1](#) > [Process definition](#) > [Java Virtual Machine](#)

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Configuration **Runtime**

General Properties

Classpath

Boot Classpath

Additional Properties

- [Custom properties](#)

You will see the Custom Properties.

Application servers > **server1** > **Process definition** > **Java Virtual Machine** > **Custom properties**

Use this page to specify an arbitrary name and value pair. The value that is specified for the name and value pair is a string that can set internal system configuration properties.

⊕ Preferences

New Delete

⊞ ⊞ ⊞ ⊞

Select	Name	Value	Description
You can administer the following resources:			
<input type="checkbox"/>	com.ibm.security.iqss.debug	off	
<input type="checkbox"/>	com.ibm.security.krb5.Krb5Debug	off	
Total 2			

Click on New. Then you can create the new entry:

Application servers > **server1** > **Process definition** > **Java Virtual Machine** > **Custom properties** > **New**

Use this page to specify an arbitrary name and value pair. The value that is specified for the name and value pair is a string that can set internal system configuration properties.

Configuration

General Properties

* Name

* Value

Description

Apply OK **Reset** Cancel

Name=com.ibm.msg.client.wmq.overrideProviderVersion
 Value=6

- Save the changes, and restart the application server.

+++ end +++