

# Working with JConsole



Server uptime and resource utilization



Monitoring the health of the Apache Geronimo server

JConsole is a Java Management eXtension (JMX) compliant GUI tool that can be used to connect to a running Geronimo server instance. In JConsole, you will be able to monitor the JVM memory usage, threads stack trace, loaded classes and VM information as well as Geronimo MBeans.

## Monitoring Geronimo in JConsole

To make Geronimo accessible to JConsole you can simply deactivate both password authentication and secure socket layer (SSL) encryption:

1. If you are running the server with IBM JDK 6, you have to add the following Java options to disable password authentication and SSL connection. Note that the command should be typed on a single line.  
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```
set JAVA_OPTS=-Dcom.sun.management.jmxremote.port=<port> -Dcom.sun.management.jmxremote.
authenticate=false
-Dcom.sun.management.jmxremote.ssl=false
```

where  
\${renderedContent}

```
export JAVA_OPTS="-Dcom.sun.management.jmxremote.port=<port> -Dcom.sun.management.jmxremote.
authenticate=false
-Dcom.sun.management.jmxremote.ssl=false"
```

where

where  
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2. Start the server.
3. Then, run the command `jconsole` from `<JDK_HOME>\bin` directory.
4. In the dialog **New connection** of JConsole, input the connection information in the *Remote Process* field.
  - **<ipaddr>:<port>** for monitoring local server overall information, for example memories, threads, and VM summaries.
  - **service:jmx:rmi:///jndi/rmi://<ipaddr>:1099/JMXConnector** for monitoring Geronimo information in *MBeans* tab. In this case, tabs other than *MBeans* are inactive.
    - where
      - **<ipaddr>** can be **localhost** if you are monitoring the local server, and can be host name if the monitoring remote machine can access the Geronimo server via `ping` command.
      - **<port>** is the port number you specified in Java options.
      - 1099 is the default naming port for Geronimo.
5. Then click **OK**. Note that information may vary when you are using IBM SDK or Sun SDK.

## Monitor Geronimo in JConsole with secure JMX connection enabled

Password authentication over secure sockets layer (SSL) can be used to ensure that unauthorized persons cannot control or monitor your server. Before connecting to the secure JMX server in JConsole, you have to make a few configuration steps to disable the non-secure JMX server and start the jmx-security module.

1. [Enable JMX-security module of the Geronimo server.](#)
2. Then, open a command window and set environment variable.  
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```
set GERONIMO_HOME=<Geronimo_HOME>
```

where  
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```
export GERONIMO_HOME=<Geronimo_HOME>
```

where **<Geronimo\_HOME>** is the installation directory of the Geronimo server

3. Run `<JDK_HOME>/bin/jconsole` via the following command. Note that the command has been split across several lines for readability. The command must be typed on a single line.  
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```
jconsole \-J-D-Dorg.apache.geronimo.keyStoreTrustStorePasswordFile=%myDir%  
/KeystoreTrustSotrePasswordFile.key
```

\${renderedContent}

```
jconsole \-J-D-Dorg.apache.geronimo.keyStoreTrustStorePasswordFile=$myDir/KeystoreTrustSotrePasswordFile.  
key
```

\${renderedContent}

Where

\${renderedContent}

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\_myDir\_ is the location of your trusted keystore file. By default, the content of file is from /var/config/config-substitutions.properties file. See [Creating your keystorefile for SSL authentication](#) for more details.

4. In the dialog **Connect to Agent** of JConsole, click **Advanced**, and input the information:
  - **JMX URL:** service:jmx:rmi:///jndi/rmi://<ipaddr>:1099/JMXSecureConnector
  - **User Name:** system (or user name you set)
  - **Password:** manager (or password you set)where
  - <ipaddr> can be **localhost** if you are monitoring the local server, and can be host name if the monitoring remote machine can access the Geronimo server via ping command.
  - 1099 is the default naming port for Geronimo.
5. Then click **OK**. JConsole will connect to Geronimo MBeans management interface. Switch to *Means* tab for server-wide information. In this case, tabs other than *MBeans* are inactive. Note that information may vary when you are using IBM SDK or Sun SDK.