

## Heap Memory Usage

Memory used by the JVM for class instances and arrays. Heap memory is reclaimed by an automatic memory management system known as a garbage collector. The "Used" Heap memory usage bar indicates how much memory is utilized. If the "Used" Heap memory bar continues to display in the red color for a long duration, you should consider increasing the Heap memory. Expect occasional spikes in the red color.

The table below outlines the usage types for both Heap and Non-heap memory.

| Type       | Description   |
|------------|---|
| Init*      | The initial amount of memory that the JVM requests from the operating system during start-up.   |
| Used*      | The amount of memory already in use.  |
| Committed* | The amount of memory that will be available for use by the JVM. This memory may change. The Committed memory will always be greater than or equal to Used memory. |
| Max*       | The maximum amount of memory available for use by the JVM. The Used memory plus the Committed memory will be less than or equal to Max memory.                    |

\*Memory in megabytes.

MySQL and Tomcat require a special configuration to make use of additional memory. Most likely, the situation to change the heap memory size arises on the Tomcat. For example, running Java Virtual Machine applications such as Tomcat with the parameter `-Xmx5120m` establishes a maximum heap size of 5GB for Tomcat's use. Make sure to specify a maximum heap size that is well under the physical memory of the server.

For information about changing the heap size for Tomcat, please follow the steps given below:

1. Go to the `%AGILIANCE_HOME%\Tomcat\bin` directory and double-click the file `tomcat8w.exe` to launch the RiskVision Tomcat Properties dialog.
2. Click the **Java** tab and enter a value, in megabyte as required, in the Maximum memory pool field.
3. Click **Apply** and click **OK** to save and close the dialog.
4. Restart the RiskVision Tomcat service to apply the latest changes.

Also, you may want to change the MySQL configuration to utilize the system memory of the host in which you have installed the MySQL database. If you have deployed the MySQL database on a host with at least 8 GB of system memory, run the script `%AGILIANCE_HOME%\install\mysql\use_4CPU_8GB_mysql_ini.bat`. Otherwise, change the `%AGILIANCE_HOME%\install\mysql\my.ini` file.

Run the script `%AGILIANCE_HOME%\install\mysql\use_default_mysql_ini.bat` if you want to revert the changed MySQL configuration to the default configuration.

