

JVM Options cheat sheet

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Standard Options

`$ java`
List all standard options.

`-Dblog=Rebellabs`
Sets a 'blog' system property to 'Rebellabs'.
Retrieve/set it during runtime like this:

```
System.getProperty("blog");  
//Rebellabs
```

```
System.setProperty("blog", "RL");
```

`-javaagent:/path/to/agent.jar`
Loads the java agent in agent.jar.

`-agentpath:pathname`
Loads the native agent library specified by
the absolute path name.

`-verbose:[class/gc/jni]`
Displays information about each loaded
class/gc event/JNI activity.

Non-Standard Options

`$ java -X`
List all non-standard options.

`-Xint`
Runs the application in interpreted-only
mode.

`-Xbootclasspath:path`
Path and archive list of boot class files.

`-Xloggc:filename`
Log verbose GC events to filename.

`-Xms1g`
Set the initial size (in bytes) of the heap.

`-Xmx8g`
Specifies the max size (in bytes) of the heap.

`-Xnoclassgc`
Disables class garbage collection.

`-Xprof`
Profiles the running program.

Advanced Options

BEHAVIOR

`-XX:+UseConcMarkSweepGC`
Enables CMS garbage collection.

`-XX:+UseParallelGC`
Enables parallel garbage collection.

`-XX:+UseSerialGC`
Enables serial garbage collection.

`-XX:+UseG1GC`
Enables G1GC garbage collection.

`-XX:+FlightRecorder` (requires
`-XX:+UnlockCommercialFeatures`)
Enables the use of the Java Flight Recorder.

DEBUGGING

`-XX:ErrorFile=file.log`
Save the error data to file.log.

`-XX:+HeapDumpOnOutOfMemoryError`
Enables heap dump when
`OutOfMemoryError` is thrown.

`-XX:+PrintGC`
Enables printing messages during
garbage collection.

`-XX:+TraceClassLoading`
Enables Trace loading of classes.

`-XX:+PrintClassHistogram`
Enables printing of a class instance histogram
after a `Control+C` event (`SIGTERM`).

PERFORMANCE

`-XX:MaxPermSize=128m` (Java 7 or earlier)
Sets the max perm space size (in bytes).

`-XX:ThreadStackSize=256k`
Sets Thread Stack Size (in bytes).
(Same as `-Xss256k`)

`-XX:+UseStringCache`
Enables caching of commonly
allocated strings.

`-XX:G1HeapRegionSize=4m`
Sets the sub-division size of G1 heap
(in bytes).

`-XX:MaxGCPauseMillis=n`
Sets a target for the maximum GC
pause time.

`-XX:MaxNewSize=256m`
Max size of new generation (in bytes).

`XX:+AggressiveOpts`
Enables the use of aggressive performance
optimization features.

`-XX:OnError="<cmd args>"`
Run user-defined commands
on fatal error.

