JVM Options cheat sheet



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

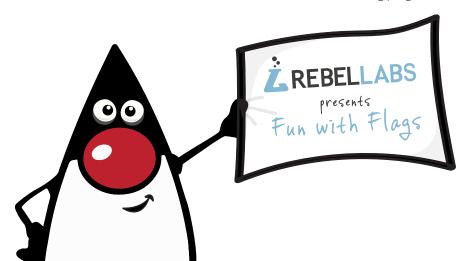
Specifies the max size (in bytes) of the heap.

-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: +HeapDumpOnOutOfMemory

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

