| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/RuntimeMXBean.html) | [**Tree**](http://docs.google.com/package-tree.html) | [**Deprecated**](http://docs.google.com/deprecated-list.html) | [**Index**](http://docs.google.com/index-files/index-1.html) | [**Help**](http://docs.google.com/help-doc.html) | | --- | --- | --- | --- | --- | --- | --- | --- | | | ***Java™ Platform***  ***Standard Ed. 6*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [**PREV CLASS**](http://docs.google.com/java/lang/management/OperatingSystemMXBean.html)   [**NEXT CLASS**](http://docs.google.com/java/lang/management/ThreadInfo.html) | [**FRAMES**](http://docs.google.com/index.html?java/lang/management/RuntimeMXBean.html)    [**NO FRAMES**](http://docs.google.com/RuntimeMXBean.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | CONSTR | [METHOD](#3znysh7) | DETAIL: FIELD | CONSTR | [METHOD](#2et92p0) |

## **java.lang.management**

Interface RuntimeMXBean

public interface **RuntimeMXBean**

The management interface for the runtime system of the Java virtual machine.

A Java virtual machine has a single instance of the implementation class of this interface. This instance implementing this interface is an [MXBean](http://docs.google.com/ManagementFactory.html#MXBean) that can be obtained by calling the [ManagementFactory.getRuntimeMXBean()](http://docs.google.com/java/lang/management/ManagementFactory.html#getRuntimeMXBean()) method or from the [platform MBeanServer](http://docs.google.com/java/lang/management/ManagementFactory.html#getPlatformMBeanServer()) method.

The ObjectName for uniquely identifying the MXBean for the runtime system within an MBeanServer is:

[java.lang:type=Runtime](http://docs.google.com/java/lang/management/ManagementFactory.html#RUNTIME_MXBEAN_NAME)

This interface defines several convenient methods for accessing system properties about the Java virtual machine.

**Since:** 1.5 **See Also:** [JMX Specification.](http://docs.google.com/javax/management/package-summary.html),  [Ways to Access MXBeans](http://docs.google.com/package-summary.html#examples)

| **Method Summary** | |
| --- | --- |
| [String](http://docs.google.com/java/lang/String.html) | [**getBootClassPath**](http://docs.google.com/java/lang/management/RuntimeMXBean.html#getBootClassPath())()            Returns the boot class path that is used by the bootstrap class loader to search for class files. |
| [String](http://docs.google.com/java/lang/String.html) | [**getClassPath**](http://docs.google.com/java/lang/management/RuntimeMXBean.html#getClassPath())()            Returns the Java class path that is used by the system class loader to search for class files. |
| [List](http://docs.google.com/java/util/List.html)<[String](http://docs.google.com/java/lang/String.html)> | [**getInputArguments**](http://docs.google.com/java/lang/management/RuntimeMXBean.html#getInputArguments())()            Returns the input arguments passed to the Java virtual machine which does not include the arguments to the main method. |
| [String](http://docs.google.com/java/lang/String.html) | [**getLibraryPath**](http://docs.google.com/java/lang/management/RuntimeMXBean.html#getLibraryPath())()            Returns the Java library path. |
| [String](http://docs.google.com/java/lang/String.html) | [**getManagementSpecVersion**](http://docs.google.com/java/lang/management/RuntimeMXBean.html#getManagementSpecVersion())()            Returns the version of the specification for the management interface implemented by the running Java virtual machine. |
| [String](http://docs.google.com/java/lang/String.html) | [**getName**](http://docs.google.com/java/lang/management/RuntimeMXBean.html#getName())()            Returns the name representing the running Java virtual machine. |
| [String](http://docs.google.com/java/lang/String.html) | [**getSpecName**](http://docs.google.com/java/lang/management/RuntimeMXBean.html#getSpecName())()            Returns the Java virtual machine specification name. |
| [String](http://docs.google.com/java/lang/String.html) | [**getSpecVendor**](http://docs.google.com/java/lang/management/RuntimeMXBean.html#getSpecVendor())()            Returns the Java virtual machine specification vendor. |
| [String](http://docs.google.com/java/lang/String.html) | [**getSpecVersion**](http://docs.google.com/java/lang/management/RuntimeMXBean.html#getSpecVersion())()            Returns the Java virtual machine specification version. |
| long | [**getStartTime**](http://docs.google.com/java/lang/management/RuntimeMXBean.html#getStartTime())()            Returns the start time of the Java virtual machine in milliseconds. |
| [Map](http://docs.google.com/java/util/Map.html)<[String](http://docs.google.com/java/lang/String.html),[String](http://docs.google.com/java/lang/String.html)> | [**getSystemProperties**](http://docs.google.com/java/lang/management/RuntimeMXBean.html#getSystemProperties())()            Returns a map of names and values of all system properties. |
| long | [**getUptime**](http://docs.google.com/java/lang/management/RuntimeMXBean.html#getUptime())()            Returns the uptime of the Java virtual machine in milliseconds. |
| [String](http://docs.google.com/java/lang/String.html) | [**getVmName**](http://docs.google.com/java/lang/management/RuntimeMXBean.html#getVmName())()            Returns the Java virtual machine implementation name. |
| [String](http://docs.google.com/java/lang/String.html) | [**getVmVendor**](http://docs.google.com/java/lang/management/RuntimeMXBean.html#getVmVendor())()            Returns the Java virtual machine implementation vendor. |
| [String](http://docs.google.com/java/lang/String.html) | [**getVmVersion**](http://docs.google.com/java/lang/management/RuntimeMXBean.html#getVmVersion())()            Returns the Java virtual machine implementation version. |
| boolean | [**isBootClassPathSupported**](http://docs.google.com/java/lang/management/RuntimeMXBean.html#isBootClassPathSupported())()            Tests if the Java virtual machine supports the boot class path mechanism used by the bootstrap class loader to search for class files. |

| **Method Detail** |
| --- |

### getName

[String](http://docs.google.com/java/lang/String.html) **getName**()

Returns the name representing the running Java virtual machine. The returned name string can be any arbitrary string and a Java virtual machine implementation can choose to embed platform-specific useful information in the returned name string. Each running virtual machine could have a different name.

**Returns:**the name representing the running Java virtual machine.

### getVmName

[String](http://docs.google.com/java/lang/String.html) **getVmName**()

Returns the Java virtual machine implementation name. This method is equivalent to [System.getProperty("java.vm.name")](http://docs.google.com/java/lang/System.html#getProperty(java.lang.String)).

**Returns:**the Java virtual machine implementation name. **Throws:** [SecurityException](http://docs.google.com/java/lang/SecurityException.html) - if a security manager exists and its checkPropertiesAccess method doesn't allow access to this system property.**See Also:**[SecurityManager.checkPropertyAccess(java.lang.String)](http://docs.google.com/java/lang/SecurityManager.html#checkPropertyAccess(java.lang.String)), [System.getProperty(java.lang.String)](http://docs.google.com/java/lang/System.html#getProperty(java.lang.String))

### getVmVendor

[String](http://docs.google.com/java/lang/String.html) **getVmVendor**()

Returns the Java virtual machine implementation vendor. This method is equivalent to [System.getProperty("java.vm.vendor")](http://docs.google.com/java/lang/System.html#getProperty(java.lang.String)).

**Returns:**the Java virtual machine implementation vendor. **Throws:** [SecurityException](http://docs.google.com/java/lang/SecurityException.html) - if a security manager exists and its checkPropertiesAccess method doesn't allow access to this system property.**See Also:**[SecurityManager.checkPropertyAccess(java.lang.String)](http://docs.google.com/java/lang/SecurityManager.html#checkPropertyAccess(java.lang.String)), [System.getProperty(java.lang.String)](http://docs.google.com/java/lang/System.html#getProperty(java.lang.String))

### getVmVersion

[String](http://docs.google.com/java/lang/String.html) **getVmVersion**()

Returns the Java virtual machine implementation version. This method is equivalent to [System.getProperty("java.vm.version")](http://docs.google.com/java/lang/System.html#getProperty(java.lang.String)).

**Returns:**the Java virtual machine implementation version. **Throws:** [SecurityException](http://docs.google.com/java/lang/SecurityException.html) - if a security manager exists and its checkPropertiesAccess method doesn't allow access to this system property.**See Also:**[SecurityManager.checkPropertyAccess(java.lang.String)](http://docs.google.com/java/lang/SecurityManager.html#checkPropertyAccess(java.lang.String)), [System.getProperty(java.lang.String)](http://docs.google.com/java/lang/System.html#getProperty(java.lang.String))

### getSpecName

[String](http://docs.google.com/java/lang/String.html) **getSpecName**()

Returns the Java virtual machine specification name. This method is equivalent to [System.getProperty("java.vm.specification.name")](http://docs.google.com/java/lang/System.html#getProperty(java.lang.String)).

**Returns:**the Java virtual machine specification name. **Throws:** [SecurityException](http://docs.google.com/java/lang/SecurityException.html) - if a security manager exists and its checkPropertiesAccess method doesn't allow access to this system property.**See Also:**[SecurityManager.checkPropertyAccess(java.lang.String)](http://docs.google.com/java/lang/SecurityManager.html#checkPropertyAccess(java.lang.String)), [System.getProperty(java.lang.String)](http://docs.google.com/java/lang/System.html#getProperty(java.lang.String))

### getSpecVendor

[String](http://docs.google.com/java/lang/String.html) **getSpecVendor**()

Returns the Java virtual machine specification vendor. This method is equivalent to [System.getProperty("java.vm.specification.vendor")](http://docs.google.com/java/lang/System.html#getProperty(java.lang.String)).

**Returns:**the Java virtual machine specification vendor. **Throws:** [SecurityException](http://docs.google.com/java/lang/SecurityException.html) - if a security manager exists and its checkPropertiesAccess method doesn't allow access to this system property.**See Also:**[SecurityManager.checkPropertyAccess(java.lang.String)](http://docs.google.com/java/lang/SecurityManager.html#checkPropertyAccess(java.lang.String)), [System.getProperty(java.lang.String)](http://docs.google.com/java/lang/System.html#getProperty(java.lang.String))

### getSpecVersion

[String](http://docs.google.com/java/lang/String.html) **getSpecVersion**()

Returns the Java virtual machine specification version. This method is equivalent to [System.getProperty("java.vm.specification.version")](http://docs.google.com/java/lang/System.html#getProperty(java.lang.String)).

**Returns:**the Java virtual machine specification version. **Throws:** [SecurityException](http://docs.google.com/java/lang/SecurityException.html) - if a security manager exists and its checkPropertiesAccess method doesn't allow access to this system property.**See Also:**[SecurityManager.checkPropertyAccess(java.lang.String)](http://docs.google.com/java/lang/SecurityManager.html#checkPropertyAccess(java.lang.String)), [System.getProperty(java.lang.String)](http://docs.google.com/java/lang/System.html#getProperty(java.lang.String))

### getManagementSpecVersion

[String](http://docs.google.com/java/lang/String.html) **getManagementSpecVersion**()

Returns the version of the specification for the management interface implemented by the running Java virtual machine.

**Returns:**the version of the specification for the management interface implemented by the running Java virtual machine.

### getClassPath

[String](http://docs.google.com/java/lang/String.html) **getClassPath**()

Returns the Java class path that is used by the system class loader to search for class files. This method is equivalent to [System.getProperty("java.class.path")](http://docs.google.com/java/lang/System.html#getProperty(java.lang.String)).

Multiple paths in the Java class path are separated by the path separator character of the platform of the Java virtual machine being monitored.

**Returns:**the Java class path. **Throws:** [SecurityException](http://docs.google.com/java/lang/SecurityException.html) - if a security manager exists and its checkPropertiesAccess method doesn't allow access to this system property.**See Also:**[SecurityManager.checkPropertyAccess(java.lang.String)](http://docs.google.com/java/lang/SecurityManager.html#checkPropertyAccess(java.lang.String)), [System.getProperty(java.lang.String)](http://docs.google.com/java/lang/System.html#getProperty(java.lang.String))

### getLibraryPath

[String](http://docs.google.com/java/lang/String.html) **getLibraryPath**()

Returns the Java library path. This method is equivalent to [System.getProperty("java.library.path")](http://docs.google.com/java/lang/System.html#getProperty(java.lang.String)).

Multiple paths in the Java library path are separated by the path separator character of the platform of the Java virtual machine being monitored.

**Returns:**the Java library path. **Throws:** [SecurityException](http://docs.google.com/java/lang/SecurityException.html) - if a security manager exists and its checkPropertiesAccess method doesn't allow access to this system property.**See Also:**[SecurityManager.checkPropertyAccess(java.lang.String)](http://docs.google.com/java/lang/SecurityManager.html#checkPropertyAccess(java.lang.String)), [System.getProperty(java.lang.String)](http://docs.google.com/java/lang/System.html#getProperty(java.lang.String))

### isBootClassPathSupported

boolean **isBootClassPathSupported**()

Tests if the Java virtual machine supports the boot class path mechanism used by the bootstrap class loader to search for class files.

**Returns:**true if the Java virtual machine supports the class path mechanism; false otherwise.

### getBootClassPath

[String](http://docs.google.com/java/lang/String.html) **getBootClassPath**()

Returns the boot class path that is used by the bootstrap class loader to search for class files.

Multiple paths in the boot class path are separated by the path separator character of the platform on which the Java virtual machine is running.

A Java virtual machine implementation may not support the boot class path mechanism for the bootstrap class loader to search for class files. The [isBootClassPathSupported()](http://docs.google.com/java/lang/management/RuntimeMXBean.html#isBootClassPathSupported()) method can be used to determine if the Java virtual machine supports this method.

**Returns:**the boot class path. **Throws:** [UnsupportedOperationException](http://docs.google.com/java/lang/UnsupportedOperationException.html) - if the Java virtual machine does not support this operation. [SecurityException](http://docs.google.com/java/lang/SecurityException.html) - if a security manager exists and the caller does not have ManagementPermission("monitor").

### getInputArguments

[List](http://docs.google.com/java/util/List.html)<[String](http://docs.google.com/java/lang/String.html)> **getInputArguments**()

Returns the input arguments passed to the Java virtual machine which does not include the arguments to the main method. This method returns an empty list if there is no input argument to the Java virtual machine.

Some Java virtual machine implementations may take input arguments from multiple different sources: for examples, arguments passed from the application that launches the Java virtual machine such as the 'java' command, environment variables, configuration files, etc.

Typically, not all command-line options to the 'java' command are passed to the Java virtual machine. Thus, the returned input arguments may not include all command-line options.

**MBeanServer access**:

The mapped type of List is String[].

**Returns:**a list of String objects; each element is an argument passed to the Java virtual machine. **Throws:** [SecurityException](http://docs.google.com/java/lang/SecurityException.html) - if a security manager exists and the caller does not have ManagementPermission("monitor").

### getUptime

long **getUptime**()

Returns the uptime of the Java virtual machine in milliseconds.

**Returns:**uptime of the Java virtual machine in milliseconds.

### getStartTime

long **getStartTime**()

Returns the start time of the Java virtual machine in milliseconds. This method returns the approximate time when the Java virtual machine started.

**Returns:**start time of the Java virtual machine in milliseconds.

### getSystemProperties

[Map](http://docs.google.com/java/util/Map.html)<[String](http://docs.google.com/java/lang/String.html),[String](http://docs.google.com/java/lang/String.html)> **getSystemProperties**()

Returns a map of names and values of all system properties. This method calls [System.getProperties()](http://docs.google.com/java/lang/System.html#getProperties()) to get all system properties. Properties whose name or value is not a String are omitted.

**MBeanServer access**:

The mapped type of Map is [TabularData](http://docs.google.com/javax/management/openmbean/TabularData.html) with two items in each row as follows:

| Item Name | Item Type |
| --- | --- |
| key | String |
| value | String |

**Returns:**a map of names and values of all system properties. **Throws:** [SecurityException](http://docs.google.com/java/lang/SecurityException.html) - if a security manager exists and its checkPropertiesAccess method doesn't allow access to the system properties.

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/RuntimeMXBean.html) | [**Tree**](http://docs.google.com/package-tree.html) | [**Deprecated**](http://docs.google.com/deprecated-list.html) | [**Index**](http://docs.google.com/index-files/index-1.html) | [**Help**](http://docs.google.com/help-doc.html) | | --- | --- | --- | --- | --- | --- | --- | --- | | | ***Java™ Platform***  ***Standard Ed. 6*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
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| SUMMARY: NESTED | FIELD | CONSTR | [METHOD](#3znysh7) | DETAIL: FIELD | CONSTR | [METHOD](#2et92p0) |

[Submit a bug or feature](http://bugs.sun.com/services/bugreport/index.jsp)

For further API reference and developer documentation, see [Java SE Developer Documentation](http://docs.google.com/webnotes/devdocs-vs-specs.html). That documentation contains more detailed, developer-targeted descriptions, with conceptual overviews, definitions of terms, workarounds, and working code examples.

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