| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/OperatingSystemMXBean.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/MonitorInfo.html)   [**NEXT CLASS**](http://docs.google.com/java/lang/management/RuntimeMXBean.html) | [**FRAMES**](http://docs.google.com/index.html?java/lang/management/OperatingSystemMXBean.html)    [**NO FRAMES**](http://docs.google.com/OperatingSystemMXBean.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 OperatingSystemMXBean

public interface **OperatingSystemMXBean**

The management interface for the operating system on which the Java virtual machine is running.

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.getOperatingSystemMXBean()](http://docs.google.com/java/lang/management/ManagementFactory.html#getOperatingSystemMXBean()) 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 operating system within an MBeanServer is:

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

This interface defines several convenient methods for accessing system properties about the operating system on which the Java virtual machine is running.

**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) | [**getArch**](http://docs.google.com/java/lang/management/OperatingSystemMXBean.html#getArch())()            Returns the operating system architecture. |
| int | [**getAvailableProcessors**](http://docs.google.com/java/lang/management/OperatingSystemMXBean.html#getAvailableProcessors())()            Returns the number of processors available to the Java virtual machine. |
| [String](http://docs.google.com/java/lang/String.html) | [**getName**](http://docs.google.com/java/lang/management/OperatingSystemMXBean.html#getName())()            Returns the operating system name. |
| double | [**getSystemLoadAverage**](http://docs.google.com/java/lang/management/OperatingSystemMXBean.html#getSystemLoadAverage())()            Returns the system load average for the last minute. |
| [String](http://docs.google.com/java/lang/String.html) | [**getVersion**](http://docs.google.com/java/lang/management/OperatingSystemMXBean.html#getVersion())()            Returns the operating system version. |

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

### getName

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

Returns the operating system name. This method is equivalent to System.getProperty("os.name").

**Returns:**the operating system 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))

### getArch

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

Returns the operating system architecture. This method is equivalent to System.getProperty("os.arch").

**Returns:**the operating system architecture. **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))

### getVersion

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

Returns the operating system version. This method is equivalent to System.getProperty("os.version").

**Returns:**the operating system 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))

### getAvailableProcessors

int **getAvailableProcessors**()

Returns the number of processors available to the Java virtual machine. This method is equivalent to the [Runtime.availableProcessors()](http://docs.google.com/java/lang/Runtime.html#availableProcessors()) method.

This value may change during a particular invocation of the virtual machine.

**Returns:**the number of processors available to the virtual machine; never smaller than one.

### getSystemLoadAverage

double **getSystemLoadAverage**()

Returns the system load average for the last minute. The system load average is the sum of the number of runnable entities queued to the [available processors](http://docs.google.com/java/lang/management/OperatingSystemMXBean.html#getAvailableProcessors()) and the number of runnable entities running on the available processors averaged over a period of time. The way in which the load average is calculated is operating system specific but is typically a damped time-dependent average.

If the load average is not available, a negative value is returned.

This method is designed to provide a hint about the system load and may be queried frequently. The load average may be unavailable on some platform where it is expensive to implement this method.

**Returns:**the system load average; or a negative value if not available.**Since:** 1.6

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/OperatingSystemMXBean.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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