| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/JMX.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/javax/management/JMRuntimeException.html)   [**NEXT CLASS**](http://docs.google.com/javax/management/ListenerNotFoundException.html) | [**FRAMES**](http://docs.google.com/index.html?javax/management/JMX.html)    [**NO FRAMES**](http://docs.google.com/JMX.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#3znysh7) | CONSTR | [METHOD](#2et92p0) | DETAIL: [FIELD](#3dy6vkm) | CONSTR | [METHOD](#44sinio) |

## **javax.management**

Class JMX

[java.lang.Object](http://docs.google.com/java/lang/Object.html)  
 **javax.management.JMX**

public class **JMX**extends [Object](http://docs.google.com/java/lang/Object.html)

Static methods from the JMX API. There are no instances of this class.

**Since:** 1.6

| **Field Summary** | |
| --- | --- |
| static [String](http://docs.google.com/java/lang/String.html) | [**DEFAULT\_VALUE\_FIELD**](http://docs.google.com/javax/management/JMX.html#DEFAULT_VALUE_FIELD)            The name of the [defaultValue](http://docs.google.com/Descriptor.html#defaultValue) field. |
| static [String](http://docs.google.com/java/lang/String.html) | [**IMMUTABLE\_INFO\_FIELD**](http://docs.google.com/javax/management/JMX.html#IMMUTABLE_INFO_FIELD)            The name of the [immutableInfo](http://docs.google.com/Descriptor.html#immutableInfo) field. |
| static [String](http://docs.google.com/java/lang/String.html) | [**INTERFACE\_CLASS\_NAME\_FIELD**](http://docs.google.com/javax/management/JMX.html#INTERFACE_CLASS_NAME_FIELD)            The name of the [interfaceClassName](http://docs.google.com/Descriptor.html#interfaceClassName) field. |
| static [String](http://docs.google.com/java/lang/String.html) | [**LEGAL\_VALUES\_FIELD**](http://docs.google.com/javax/management/JMX.html#LEGAL_VALUES_FIELD)            The name of the [legalValues](http://docs.google.com/Descriptor.html#legalValues) field. |
| static [String](http://docs.google.com/java/lang/String.html) | [**MAX\_VALUE\_FIELD**](http://docs.google.com/javax/management/JMX.html#MAX_VALUE_FIELD)            The name of the [maxValue](http://docs.google.com/Descriptor.html#maxValue) field. |
| static [String](http://docs.google.com/java/lang/String.html) | [**MIN\_VALUE\_FIELD**](http://docs.google.com/javax/management/JMX.html#MIN_VALUE_FIELD)            The name of the [minValue](http://docs.google.com/Descriptor.html#minValue) field. |
| static [String](http://docs.google.com/java/lang/String.html) | [**MXBEAN\_FIELD**](http://docs.google.com/javax/management/JMX.html#MXBEAN_FIELD)            The name of the [mxbean](http://docs.google.com/Descriptor.html#mxbean) field. |
| static [String](http://docs.google.com/java/lang/String.html) | [**OPEN\_TYPE\_FIELD**](http://docs.google.com/javax/management/JMX.html#OPEN_TYPE_FIELD)            The name of the [openType](http://docs.google.com/Descriptor.html#openType) field. |
| static [String](http://docs.google.com/java/lang/String.html) | [**ORIGINAL\_TYPE\_FIELD**](http://docs.google.com/javax/management/JMX.html#ORIGINAL_TYPE_FIELD)            The name of the [originalType](http://docs.google.com/Descriptor.html#originalType) field. |

| **Method Summary** | |
| --- | --- |
| static boolean | [**isMXBeanInterface**](http://docs.google.com/javax/management/JMX.html#isMXBeanInterface(java.lang.Class))([Class](http://docs.google.com/java/lang/Class.html)<?> interfaceClass)            Test whether an interface is an MXBean interface. |
| static   | <T> T | | --- | | [**newMBeanProxy**](http://docs.google.com/javax/management/JMX.html#newMBeanProxy(javax.management.MBeanServerConnection,%20javax.management.ObjectName,%20java.lang.Class))([MBeanServerConnection](http://docs.google.com/javax/management/MBeanServerConnection.html) connection, [ObjectName](http://docs.google.com/javax/management/ObjectName.html) objectName, [Class](http://docs.google.com/java/lang/Class.html)<T> interfaceClass)            Make a proxy for a Standard MBean in a local or remote MBean Server. |
| static   | <T> T | | --- | | [**newMBeanProxy**](http://docs.google.com/javax/management/JMX.html#newMBeanProxy(javax.management.MBeanServerConnection,%20javax.management.ObjectName,%20java.lang.Class,%20boolean))([MBeanServerConnection](http://docs.google.com/javax/management/MBeanServerConnection.html) connection, [ObjectName](http://docs.google.com/javax/management/ObjectName.html) objectName, [Class](http://docs.google.com/java/lang/Class.html)<T> interfaceClass, boolean notificationBroadcaster)            Make a proxy for a Standard MBean in a local or remote MBean Server that may also support the methods of [NotificationEmitter](http://docs.google.com/javax/management/NotificationEmitter.html). |
| static   | <T> T | | --- | | [**newMXBeanProxy**](http://docs.google.com/javax/management/JMX.html#newMXBeanProxy(javax.management.MBeanServerConnection,%20javax.management.ObjectName,%20java.lang.Class))([MBeanServerConnection](http://docs.google.com/javax/management/MBeanServerConnection.html) connection, [ObjectName](http://docs.google.com/javax/management/ObjectName.html) objectName, [Class](http://docs.google.com/java/lang/Class.html)<T> interfaceClass)            Make a proxy for an MXBean in a local or remote MBean Server. |
| static   | <T> T | | --- | | [**newMXBeanProxy**](http://docs.google.com/javax/management/JMX.html#newMXBeanProxy(javax.management.MBeanServerConnection,%20javax.management.ObjectName,%20java.lang.Class,%20boolean))([MBeanServerConnection](http://docs.google.com/javax/management/MBeanServerConnection.html) connection, [ObjectName](http://docs.google.com/javax/management/ObjectName.html) objectName, [Class](http://docs.google.com/java/lang/Class.html)<T> interfaceClass, boolean notificationBroadcaster)            Make a proxy for an MXBean in a local or remote MBean Server that may also support the methods of [NotificationEmitter](http://docs.google.com/javax/management/NotificationEmitter.html). |

| **Methods inherited from class java.lang.**[**Object**](http://docs.google.com/java/lang/Object.html) |
| --- |
| [clone](http://docs.google.com/java/lang/Object.html#clone()), [equals](http://docs.google.com/java/lang/Object.html#equals(java.lang.Object)), [finalize](http://docs.google.com/java/lang/Object.html#finalize()), [getClass](http://docs.google.com/java/lang/Object.html#getClass()), [hashCode](http://docs.google.com/java/lang/Object.html#hashCode()), [notify](http://docs.google.com/java/lang/Object.html#notify()), [notifyAll](http://docs.google.com/java/lang/Object.html#notifyAll()), [toString](http://docs.google.com/java/lang/Object.html#toString()), [wait](http://docs.google.com/java/lang/Object.html#wait()), [wait](http://docs.google.com/java/lang/Object.html#wait(long)), [wait](http://docs.google.com/java/lang/Object.html#wait(long,%20int)) |

| **Field Detail** |
| --- |

### DEFAULT\_VALUE\_FIELD

public static final [String](http://docs.google.com/java/lang/String.html) **DEFAULT\_VALUE\_FIELD**

The name of the [defaultValue](http://docs.google.com/Descriptor.html#defaultValue) field.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#javax.management.JMX.DEFAULT_VALUE_FIELD)

### IMMUTABLE\_INFO\_FIELD

public static final [String](http://docs.google.com/java/lang/String.html) **IMMUTABLE\_INFO\_FIELD**

The name of the [immutableInfo](http://docs.google.com/Descriptor.html#immutableInfo) field.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#javax.management.JMX.IMMUTABLE_INFO_FIELD)

### INTERFACE\_CLASS\_NAME\_FIELD

public static final [String](http://docs.google.com/java/lang/String.html) **INTERFACE\_CLASS\_NAME\_FIELD**

The name of the [interfaceClassName](http://docs.google.com/Descriptor.html#interfaceClassName) field.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#javax.management.JMX.INTERFACE_CLASS_NAME_FIELD)

### LEGAL\_VALUES\_FIELD

public static final [String](http://docs.google.com/java/lang/String.html) **LEGAL\_VALUES\_FIELD**

The name of the [legalValues](http://docs.google.com/Descriptor.html#legalValues) field.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#javax.management.JMX.LEGAL_VALUES_FIELD)

### MAX\_VALUE\_FIELD

public static final [String](http://docs.google.com/java/lang/String.html) **MAX\_VALUE\_FIELD**

The name of the [maxValue](http://docs.google.com/Descriptor.html#maxValue) field.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#javax.management.JMX.MAX_VALUE_FIELD)

### MIN\_VALUE\_FIELD

public static final [String](http://docs.google.com/java/lang/String.html) **MIN\_VALUE\_FIELD**

The name of the [minValue](http://docs.google.com/Descriptor.html#minValue) field.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#javax.management.JMX.MIN_VALUE_FIELD)

### MXBEAN\_FIELD

public static final [String](http://docs.google.com/java/lang/String.html) **MXBEAN\_FIELD**

The name of the [mxbean](http://docs.google.com/Descriptor.html#mxbean) field.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#javax.management.JMX.MXBEAN_FIELD)

### OPEN\_TYPE\_FIELD

public static final [String](http://docs.google.com/java/lang/String.html) **OPEN\_TYPE\_FIELD**

The name of the [openType](http://docs.google.com/Descriptor.html#openType) field.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#javax.management.JMX.OPEN_TYPE_FIELD)

### ORIGINAL\_TYPE\_FIELD

public static final [String](http://docs.google.com/java/lang/String.html) **ORIGINAL\_TYPE\_FIELD**

The name of the [originalType](http://docs.google.com/Descriptor.html#originalType) field.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#javax.management.JMX.ORIGINAL_TYPE_FIELD)

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

### newMBeanProxy

public static <T> T **newMBeanProxy**([MBeanServerConnection](http://docs.google.com/javax/management/MBeanServerConnection.html) connection,  
 [ObjectName](http://docs.google.com/javax/management/ObjectName.html) objectName,  
 [Class](http://docs.google.com/java/lang/Class.html)<T> interfaceClass)

Make a proxy for a Standard MBean in a local or remote MBean Server.

If you have an MBean Server mbs containing an MBean with [ObjectName](http://docs.google.com/javax/management/ObjectName.html) name, and if the MBean's management interface is described by the Java interface MyMBean, you can construct a proxy for the MBean like this:

MyMBean proxy = JMX.newMBeanProxy(mbs, name, MyMBean.class);

Suppose, for example, MyMBean looks like this:

public interface MyMBean {  
 public String getSomeAttribute();  
 public void setSomeAttribute(String value);  
 public void someOperation(String param1, int param2);  
 }

Then you can execute:

* proxy.getSomeAttribute() which will result in a call to mbs.[getAttribute](http://docs.google.com/javax/management/MBeanServerConnection.html#getAttribute(javax.management.ObjectName,%20java.lang.String))(name, "SomeAttribute").
* proxy.setSomeAttribute("whatever") which will result in a call to mbs.[setAttribute](http://docs.google.com/javax/management/MBeanServerConnection.html#setAttribute(javax.management.ObjectName,%20javax.management.Attribute))(name, new Attribute("SomeAttribute", "whatever")).
* proxy.someOperation("param1", 2) which will be translated into a call to mbs.[invoke](http://docs.google.com/javax/management/MBeanServerConnection.html#invoke(javax.management.ObjectName,%20java.lang.String,%20java.lang.Object%5B%5D,%20java.lang.String%5B%5D))(name, "someOperation", <etc>).

The object returned by this method is a [Proxy](http://docs.google.com/java/lang/reflect/Proxy.html) whose InvocationHandler is an [MBeanServerInvocationHandler](http://docs.google.com/javax/management/MBeanServerInvocationHandler.html).

This method is equivalent to [newMBeanProxy(connection, objectName, interfaceClass, false)](http://docs.google.com/javax/management/JMX.html#newMBeanProxy(javax.management.MBeanServerConnection,%20javax.management.ObjectName,%20java.lang.Class,%20boolean)).

**Type Parameters:**T - allows the compiler to know that if the interfaceClass parameter is MyMBean.class, for example, then the return type is MyMBean.**Parameters:**connection - the MBean server to forward to.objectName - the name of the MBean within connection to forward to.interfaceClass - the management interface that the MBean exports, which will also be implemented by the returned proxy. **Returns:**the new proxy instance.

### newMBeanProxy

public static <T> T **newMBeanProxy**([MBeanServerConnection](http://docs.google.com/javax/management/MBeanServerConnection.html) connection,  
 [ObjectName](http://docs.google.com/javax/management/ObjectName.html) objectName,  
 [Class](http://docs.google.com/java/lang/Class.html)<T> interfaceClass,  
 boolean notificationBroadcaster)

Make a proxy for a Standard MBean in a local or remote MBean Server that may also support the methods of [NotificationEmitter](http://docs.google.com/javax/management/NotificationEmitter.html).

This method behaves the same as [newMBeanProxy(MBeanServerConnection, ObjectName, Class)](http://docs.google.com/javax/management/JMX.html#newMBeanProxy(javax.management.MBeanServerConnection,%20javax.management.ObjectName,%20java.lang.Class)), but additionally, if notificationBroadcaster is true, then the MBean is assumed to be a [NotificationBroadcaster](http://docs.google.com/javax/management/NotificationBroadcaster.html) or [NotificationEmitter](http://docs.google.com/javax/management/NotificationEmitter.html) and the returned proxy will implement [NotificationEmitter](http://docs.google.com/javax/management/NotificationEmitter.html) as well as interfaceClass. A call to [NotificationBroadcaster.addNotificationListener(javax.management.NotificationListener, javax.management.NotificationFilter, java.lang.Object)](http://docs.google.com/javax/management/NotificationBroadcaster.html#addNotificationListener(javax.management.NotificationListener,%20javax.management.NotificationFilter,%20java.lang.Object)) on the proxy will result in a call to [MBeanServerConnection.addNotificationListener(ObjectName, NotificationListener, NotificationFilter, Object)](http://docs.google.com/javax/management/MBeanServerConnection.html#addNotificationListener(javax.management.ObjectName,%20javax.management.NotificationListener,%20javax.management.NotificationFilter,%20java.lang.Object)), and likewise for the other methods of [NotificationBroadcaster](http://docs.google.com/javax/management/NotificationBroadcaster.html) and [NotificationEmitter](http://docs.google.com/javax/management/NotificationEmitter.html).

**Type Parameters:**T - allows the compiler to know that if the interfaceClass parameter is MyMBean.class, for example, then the return type is MyMBean.**Parameters:**connection - the MBean server to forward to.objectName - the name of the MBean within connection to forward to.interfaceClass - the management interface that the MBean exports, which will also be implemented by the returned proxy.notificationBroadcaster - make the returned proxy implement [NotificationEmitter](http://docs.google.com/javax/management/NotificationEmitter.html) by forwarding its methods via connection. **Returns:**the new proxy instance.

### newMXBeanProxy

public static <T> T **newMXBeanProxy**([MBeanServerConnection](http://docs.google.com/javax/management/MBeanServerConnection.html) connection,  
 [ObjectName](http://docs.google.com/javax/management/ObjectName.html) objectName,  
 [Class](http://docs.google.com/java/lang/Class.html)<T> interfaceClass)

Make a proxy for an MXBean in a local or remote MBean Server.

If you have an MBean Server mbs containing an MXBean with [ObjectName](http://docs.google.com/javax/management/ObjectName.html) name, and if the MXBean's management interface is described by the Java interface MyMXBean, you can construct a proxy for the MXBean like this:

MyMXBean proxy = JMX.newMXBeanProxy(mbs, name, MyMXBean.class);

Suppose, for example, MyMXBean looks like this:

public interface MyMXBean {  
 public String getSimpleAttribute();  
 public void setSimpleAttribute(String value);  
 public [MemoryUsage](http://docs.google.com/java/lang/management/MemoryUsage.html) getMappedAttribute();  
 public void setMappedAttribute(MemoryUsage memoryUsage);  
 public MemoryUsage someOperation(String param1, MemoryUsage param2);  
 }

Then:

* proxy.getSimpleAttribute() will result in a call to mbs.[getAttribute](http://docs.google.com/javax/management/MBeanServerConnection.html#getAttribute(javax.management.ObjectName,%20java.lang.String))(name, "SimpleAttribute").
* proxy.setSimpleAttribute("whatever") will result in a call to mbs.[setAttribute](http://docs.google.com/javax/management/MBeanServerConnection.html#setAttribute(javax.management.ObjectName,%20javax.management.Attribute))(name, new Attribute("SimpleAttribute", "whatever")).  
    
  Because String is a *simple type*, in the sense of [SimpleType](http://docs.google.com/javax/management/openmbean/SimpleType.html), it is not changed in the context of an MXBean. The MXBean proxy behaves the same as a Standard MBean proxy (see [newMBeanProxy](http://docs.google.com/javax/management/JMX.html#newMBeanProxy(javax.management.MBeanServerConnection,%20javax.management.ObjectName,%20java.lang.Class))) for the attribute SimpleAttribute.
* proxy.getMappedAttribute() will result in a call to mbs.getAttribute("MappedAttribute"). The MXBean mapping rules mean that the actual type of the attribute MappedAttribute will be [CompositeData](http://docs.google.com/javax/management/openmbean/CompositeData.html) and that is what the mbs.getAttribute call will return. The proxy will then convert the CompositeData back into the expected type MemoryUsage using the MXBean mapping rules.
* Similarly, proxy.setMappedAttribute(memoryUsage) will convert the MemoryUsage argument into a CompositeData before calling mbs.setAttribute.
* proxy.someOperation("whatever", memoryUsage) will convert the MemoryUsage argument into a CompositeData and call mbs.invoke. The value returned by mbs.invoke will be also be a CompositeData, and the proxy will convert this into the expected type MemoryUsage using the MXBean mapping rules.

The object returned by this method is a [Proxy](http://docs.google.com/java/lang/reflect/Proxy.html) whose InvocationHandler is an [MBeanServerInvocationHandler](http://docs.google.com/javax/management/MBeanServerInvocationHandler.html).

This method is equivalent to [newMXBeanProxy(connection, objectName, interfaceClass, false)](http://docs.google.com/javax/management/JMX.html#newMXBeanProxy(javax.management.MBeanServerConnection,%20javax.management.ObjectName,%20java.lang.Class,%20boolean)).

**Type Parameters:**T - allows the compiler to know that if the interfaceClass parameter is MyMXBean.class, for example, then the return type is MyMXBean.**Parameters:**connection - the MBean server to forward to.objectName - the name of the MBean within connection to forward to.interfaceClass - the MXBean interface, which will also be implemented by the returned proxy. **Returns:**the new proxy instance.

### newMXBeanProxy

public static <T> T **newMXBeanProxy**([MBeanServerConnection](http://docs.google.com/javax/management/MBeanServerConnection.html) connection,  
 [ObjectName](http://docs.google.com/javax/management/ObjectName.html) objectName,  
 [Class](http://docs.google.com/java/lang/Class.html)<T> interfaceClass,  
 boolean notificationBroadcaster)

Make a proxy for an MXBean in a local or remote MBean Server that may also support the methods of [NotificationEmitter](http://docs.google.com/javax/management/NotificationEmitter.html).

This method behaves the same as [newMXBeanProxy(MBeanServerConnection, ObjectName, Class)](http://docs.google.com/javax/management/JMX.html#newMXBeanProxy(javax.management.MBeanServerConnection,%20javax.management.ObjectName,%20java.lang.Class)), but additionally, if notificationBroadcaster is true, then the MXBean is assumed to be a [NotificationBroadcaster](http://docs.google.com/javax/management/NotificationBroadcaster.html) or [NotificationEmitter](http://docs.google.com/javax/management/NotificationEmitter.html) and the returned proxy will implement [NotificationEmitter](http://docs.google.com/javax/management/NotificationEmitter.html) as well as interfaceClass. A call to [NotificationBroadcaster.addNotificationListener(javax.management.NotificationListener, javax.management.NotificationFilter, java.lang.Object)](http://docs.google.com/javax/management/NotificationBroadcaster.html#addNotificationListener(javax.management.NotificationListener,%20javax.management.NotificationFilter,%20java.lang.Object)) on the proxy will result in a call to [MBeanServerConnection.addNotificationListener(ObjectName, NotificationListener, NotificationFilter, Object)](http://docs.google.com/javax/management/MBeanServerConnection.html#addNotificationListener(javax.management.ObjectName,%20javax.management.NotificationListener,%20javax.management.NotificationFilter,%20java.lang.Object)), and likewise for the other methods of [NotificationBroadcaster](http://docs.google.com/javax/management/NotificationBroadcaster.html) and [NotificationEmitter](http://docs.google.com/javax/management/NotificationEmitter.html).

**Type Parameters:**T - allows the compiler to know that if the interfaceClass parameter is MyMXBean.class, for example, then the return type is MyMXBean.**Parameters:**connection - the MBean server to forward to.objectName - the name of the MBean within connection to forward to.interfaceClass - the MXBean interface, which will also be implemented by the returned proxy.notificationBroadcaster - make the returned proxy implement [NotificationEmitter](http://docs.google.com/javax/management/NotificationEmitter.html) by forwarding its methods via connection. **Returns:**the new proxy instance.

### isMXBeanInterface

public static boolean **isMXBeanInterface**([Class](http://docs.google.com/java/lang/Class.html)<?> interfaceClass)

Test whether an interface is an MXBean interface. An interface is an MXBean interface if it is annotated [@MXBean](http://docs.google.com/javax/management/MXBean.html) or @MXBean(true) or if it does not have an @MXBean annotation and its name ends with "MXBean".

**Parameters:**interfaceClass - The candidate interface. **Returns:**true if interfaceClass is an interface and meets the conditions described. **Throws:** [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - if interfaceClass is null.

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/JMX.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/javax/management/JMRuntimeException.html)   [**NEXT CLASS**](http://docs.google.com/javax/management/ListenerNotFoundException.html) | [**FRAMES**](http://docs.google.com/index.html?javax/management/JMX.html)    [**NO FRAMES**](http://docs.google.com/JMX.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#3znysh7) | CONSTR | [METHOD](#2et92p0) | DETAIL: [FIELD](#3dy6vkm) | CONSTR | [METHOD](#44sinio) |

[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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