| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/ModelMBean.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/modelmbean/InvalidTargetObjectTypeException.html)   [**NEXT CLASS**](http://docs.google.com/javax/management/modelmbean/ModelMBeanAttributeInfo.html) | [**FRAMES**](http://docs.google.com/index.html?javax/management/modelmbean/ModelMBean.html)    [**NO FRAMES**](http://docs.google.com/ModelMBean.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | CONSTR | [METHOD](#3znysh7) | DETAIL: FIELD | CONSTR | [METHOD](#4d34og8) |

## **javax.management.modelmbean**

Interface ModelMBean

**All Superinterfaces:** [DynamicMBean](http://docs.google.com/javax/management/DynamicMBean.html), [ModelMBeanNotificationBroadcaster](http://docs.google.com/javax/management/modelmbean/ModelMBeanNotificationBroadcaster.html), [NotificationBroadcaster](http://docs.google.com/javax/management/NotificationBroadcaster.html), [PersistentMBean](http://docs.google.com/javax/management/PersistentMBean.html) **All Known Implementing Classes:** [RequiredModelMBean](http://docs.google.com/javax/management/modelmbean/RequiredModelMBean.html)

public interface **ModelMBean**extends [DynamicMBean](http://docs.google.com/javax/management/DynamicMBean.html), [PersistentMBean](http://docs.google.com/javax/management/PersistentMBean.html), [ModelMBeanNotificationBroadcaster](http://docs.google.com/javax/management/modelmbean/ModelMBeanNotificationBroadcaster.html)

This interface must be implemented by the ModelMBeans. An implementation of this interface must be shipped with every JMX Agent.

Java resources wishing to be manageable instantiate the ModelMBean using the MBeanServer's createMBean method. The resource then sets the ModelMBeanInfo (with Descriptors) for the ModelMBean instance. The attributes and operations exposed via the ModelMBeanInfo for the ModelMBean are accessible from MBeans, connectors/adaptors like other MBeans. Through the ModelMBeanInfo Descriptors, values and methods in the managed application can be defined and mapped to attributes and operations of the ModelMBean. This mapping can be defined during development in an XML formatted file or dynamically and programmatically at runtime.

Every ModelMBean which is instantiated in the MBeanServer becomes manageable: its attributes and operations become remotely accessible through the connectors/adaptors connected to that MBeanServer. A Java object cannot be registered in the MBeanServer unless it is a JMX compliant MBean. By instantiating a ModelMBean, resources are guaranteed that the MBean is valid.

MBeanException and RuntimeOperationsException must be thrown on every public method. This allows for wrapping exceptions from distributed communications (RMI, EJB, etc.). These exceptions do not have to be thrown by the implementation except in the scenarios described in the specification and javadoc.

**Since:** 1.5

| **Method Summary** | |
| --- | --- |
| void | [**setManagedResource**](http://docs.google.com/javax/management/modelmbean/ModelMBean.html#setManagedResource(java.lang.Object,%20java.lang.String))([Object](http://docs.google.com/java/lang/Object.html) mr, [String](http://docs.google.com/java/lang/String.html) mr\_type)            Sets the instance handle of the object against which to execute all methods in this ModelMBean management interface (MBeanInfo and Descriptors). |
| void | [**setModelMBeanInfo**](http://docs.google.com/javax/management/modelmbean/ModelMBean.html#setModelMBeanInfo(javax.management.modelmbean.ModelMBeanInfo))([ModelMBeanInfo](http://docs.google.com/javax/management/modelmbean/ModelMBeanInfo.html) inModelMBeanInfo)            Initializes a ModelMBean object using ModelMBeanInfo passed in. |

| **Methods inherited from interface javax.management.**[**DynamicMBean**](http://docs.google.com/javax/management/DynamicMBean.html) |
| --- |
| [getAttribute](http://docs.google.com/javax/management/DynamicMBean.html#getAttribute(java.lang.String)), [getAttributes](http://docs.google.com/javax/management/DynamicMBean.html#getAttributes(java.lang.String%5B%5D)), [getMBeanInfo](http://docs.google.com/javax/management/DynamicMBean.html#getMBeanInfo()), [invoke](http://docs.google.com/javax/management/DynamicMBean.html#invoke(java.lang.String,%20java.lang.Object%5B%5D,%20java.lang.String%5B%5D)), [setAttribute](http://docs.google.com/javax/management/DynamicMBean.html#setAttribute(javax.management.Attribute)), [setAttributes](http://docs.google.com/javax/management/DynamicMBean.html#setAttributes(javax.management.AttributeList)) |

| **Methods inherited from interface javax.management.**[**PersistentMBean**](http://docs.google.com/javax/management/PersistentMBean.html) |
| --- |
| [load](http://docs.google.com/javax/management/PersistentMBean.html#load()), [store](http://docs.google.com/javax/management/PersistentMBean.html#store()) |

| **Methods inherited from interface javax.management.modelmbean.**[**ModelMBeanNotificationBroadcaster**](http://docs.google.com/javax/management/modelmbean/ModelMBeanNotificationBroadcaster.html) |
| --- |
| [addAttributeChangeNotificationListener](http://docs.google.com/javax/management/modelmbean/ModelMBeanNotificationBroadcaster.html#addAttributeChangeNotificationListener(javax.management.NotificationListener,%20java.lang.String,%20java.lang.Object)), [removeAttributeChangeNotificationListener](http://docs.google.com/javax/management/modelmbean/ModelMBeanNotificationBroadcaster.html#removeAttributeChangeNotificationListener(javax.management.NotificationListener,%20java.lang.String)), [sendAttributeChangeNotification](http://docs.google.com/javax/management/modelmbean/ModelMBeanNotificationBroadcaster.html#sendAttributeChangeNotification(javax.management.Attribute,%20javax.management.Attribute)), [sendAttributeChangeNotification](http://docs.google.com/javax/management/modelmbean/ModelMBeanNotificationBroadcaster.html#sendAttributeChangeNotification(javax.management.AttributeChangeNotification)), [sendNotification](http://docs.google.com/javax/management/modelmbean/ModelMBeanNotificationBroadcaster.html#sendNotification(javax.management.Notification)), [sendNotification](http://docs.google.com/javax/management/modelmbean/ModelMBeanNotificationBroadcaster.html#sendNotification(java.lang.String)) |

| **Methods inherited from interface javax.management.**[**NotificationBroadcaster**](http://docs.google.com/javax/management/NotificationBroadcaster.html) |
| --- |
| [addNotificationListener](http://docs.google.com/javax/management/NotificationBroadcaster.html#addNotificationListener(javax.management.NotificationListener,%20javax.management.NotificationFilter,%20java.lang.Object)), [getNotificationInfo](http://docs.google.com/javax/management/NotificationBroadcaster.html#getNotificationInfo()), [removeNotificationListener](http://docs.google.com/javax/management/NotificationBroadcaster.html#removeNotificationListener(javax.management.NotificationListener)) |

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

### setModelMBeanInfo

void **setModelMBeanInfo**([ModelMBeanInfo](http://docs.google.com/javax/management/modelmbean/ModelMBeanInfo.html) inModelMBeanInfo)  
 throws [MBeanException](http://docs.google.com/javax/management/MBeanException.html),  
 [RuntimeOperationsException](http://docs.google.com/javax/management/RuntimeOperationsException.html)

Initializes a ModelMBean object using ModelMBeanInfo passed in. This method makes it possible to set a customized ModelMBeanInfo on the ModelMBean as long as it is not registered with the MBeanServer.

Once the ModelMBean's ModelMBeanInfo (with Descriptors) are customized and set on the ModelMBean, the ModelMBean can be registered with the MBeanServer.

If the ModelMBean is currently registered, this method throws a [RuntimeOperationsException](http://docs.google.com/javax/management/RuntimeOperationsException.html) wrapping an [IllegalStateException](http://docs.google.com/java/lang/IllegalStateException.html)

**Parameters:**inModelMBeanInfo - The ModelMBeanInfo object to be used by the ModelMBean. **Throws:** [MBeanException](http://docs.google.com/javax/management/MBeanException.html) - Wraps a distributed communication Exception. [RuntimeOperationsException](http://docs.google.com/javax/management/RuntimeOperationsException.html) -

* Wraps an [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) if the MBeanInfo passed in parameter is null.
* Wraps an [IllegalStateException](http://docs.google.com/java/lang/IllegalStateException.html) if the ModelMBean is currently registered in the MBeanServer.

### setManagedResource

void **setManagedResource**([Object](http://docs.google.com/java/lang/Object.html) mr,  
 [String](http://docs.google.com/java/lang/String.html) mr\_type)  
 throws [MBeanException](http://docs.google.com/javax/management/MBeanException.html),  
 [RuntimeOperationsException](http://docs.google.com/javax/management/RuntimeOperationsException.html),  
 [InstanceNotFoundException](http://docs.google.com/javax/management/InstanceNotFoundException.html),  
 [InvalidTargetObjectTypeException](http://docs.google.com/javax/management/modelmbean/InvalidTargetObjectTypeException.html)

Sets the instance handle of the object against which to execute all methods in this ModelMBean management interface (MBeanInfo and Descriptors).

**Parameters:**mr - Object that is the managed resourcemr\_type - The type of reference for the managed resource. Can be: ObjectReference, Handle, IOR, EJBHandle, RMIReference. If the MBeanServer cannot process the mr\_type passed in, an InvalidTargetTypeException will be thrown. **Throws:** [MBeanException](http://docs.google.com/javax/management/MBeanException.html) - The initializer of the object has thrown an exception. [RuntimeOperationsException](http://docs.google.com/javax/management/RuntimeOperationsException.html) - Wraps an IllegalArgumentException: The managed resource type passed in parameter is null. [InstanceNotFoundException](http://docs.google.com/javax/management/InstanceNotFoundException.html) - The managed resource object could not be found [InvalidTargetObjectTypeException](http://docs.google.com/javax/management/modelmbean/InvalidTargetObjectTypeException.html) - The managed resource type cannot be processed by the ModelMBean or JMX Agent.

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/ModelMBean.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/modelmbean/InvalidTargetObjectTypeException.html)   [**NEXT CLASS**](http://docs.google.com/javax/management/modelmbean/ModelMBeanAttributeInfo.html) | [**FRAMES**](http://docs.google.com/index.html?javax/management/modelmbean/ModelMBean.html)    [**NO FRAMES**](http://docs.google.com/ModelMBean.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | CONSTR | [METHOD](#3znysh7) | DETAIL: FIELD | CONSTR | [METHOD](#4d34og8) |

[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.

Copyright 2006 Sun Microsystems, Inc. All rights reserved. Use is subject to [license terms](http://docs.google.com/legal/license.html). Also see the [documentation redistribution policy](http://java.sun.com/docs/redist.html).