| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/MBeanOperationInfo.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/MBeanNotificationInfo.html)   [**NEXT CLASS**](http://docs.google.com/javax/management/MBeanParameterInfo.html) | [**FRAMES**](http://docs.google.com/index.html?javax/management/MBeanOperationInfo.html)    [**NO FRAMES**](http://docs.google.com/MBeanOperationInfo.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#3znysh7) | [CONSTR](#tyjcwt) | [METHOD](#3dy6vkm) | DETAIL: [FIELD](#2s8eyo1) | [CONSTR](#35nkun2) | [METHOD](#z337ya) |

## **javax.management**

Class MBeanOperationInfo

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

**All Implemented Interfaces:** [Serializable](http://docs.google.com/java/io/Serializable.html), [Cloneable](http://docs.google.com/java/lang/Cloneable.html), [DescriptorRead](http://docs.google.com/javax/management/DescriptorRead.html) **Direct Known Subclasses:** [ModelMBeanOperationInfo](http://docs.google.com/javax/management/modelmbean/ModelMBeanOperationInfo.html), [OpenMBeanOperationInfoSupport](http://docs.google.com/javax/management/openmbean/OpenMBeanOperationInfoSupport.html)

public class **MBeanOperationInfo**extends [MBeanFeatureInfo](http://docs.google.com/javax/management/MBeanFeatureInfo.html)implements [Cloneable](http://docs.google.com/java/lang/Cloneable.html)

Describes a management operation exposed by an MBean. Instances of this class are immutable. Subclasses may be mutable but this is not recommended.

**Since:** 1.5 **See Also:**[Serialized Form](http://docs.google.com/serialized-form.html#javax.management.MBeanOperationInfo)

| **Field Summary** | |
| --- | --- |
| static int | [**ACTION**](http://docs.google.com/javax/management/MBeanOperationInfo.html#ACTION)            Indicates that the operation is a write-like, and would modify the MBean in some way, typically by writing some value or changing a configuration. |
| static int | [**ACTION\_INFO**](http://docs.google.com/javax/management/MBeanOperationInfo.html#ACTION_INFO)            Indicates that the operation is both read-like and write-like. |
| static int | [**INFO**](http://docs.google.com/javax/management/MBeanOperationInfo.html#INFO)            Indicates that the operation is read-like, it basically returns information. |
| static int | [**UNKNOWN**](http://docs.google.com/javax/management/MBeanOperationInfo.html#UNKNOWN)            Indicates that the operation has an "unknown" nature. |

| **Fields inherited from class javax.management.**[**MBeanFeatureInfo**](http://docs.google.com/javax/management/MBeanFeatureInfo.html) |
| --- |
| [description](http://docs.google.com/javax/management/MBeanFeatureInfo.html#description), [name](http://docs.google.com/javax/management/MBeanFeatureInfo.html#name) |

| **Constructor Summary** | |
| --- | --- |
| [**MBeanOperationInfo**](http://docs.google.com/javax/management/MBeanOperationInfo.html#MBeanOperationInfo(java.lang.String,%20java.lang.reflect.Method))([String](http://docs.google.com/java/lang/String.html) description, [Method](http://docs.google.com/java/lang/reflect/Method.html) method)            Constructs an MBeanOperationInfo object. |
| [**MBeanOperationInfo**](http://docs.google.com/javax/management/MBeanOperationInfo.html#MBeanOperationInfo(java.lang.String,%20java.lang.String,%20javax.management.MBeanParameterInfo%5B%5D,%20java.lang.String,%20int))([String](http://docs.google.com/java/lang/String.html) name, [String](http://docs.google.com/java/lang/String.html) description, [MBeanParameterInfo](http://docs.google.com/javax/management/MBeanParameterInfo.html)[] signature, [String](http://docs.google.com/java/lang/String.html) type, int impact)            Constructs an MBeanOperationInfo object. |
| [**MBeanOperationInfo**](http://docs.google.com/javax/management/MBeanOperationInfo.html#MBeanOperationInfo(java.lang.String,%20java.lang.String,%20javax.management.MBeanParameterInfo%5B%5D,%20java.lang.String,%20int,%20javax.management.Descriptor))([String](http://docs.google.com/java/lang/String.html) name, [String](http://docs.google.com/java/lang/String.html) description, [MBeanParameterInfo](http://docs.google.com/javax/management/MBeanParameterInfo.html)[] signature, [String](http://docs.google.com/java/lang/String.html) type, int impact, [Descriptor](http://docs.google.com/javax/management/Descriptor.html) descriptor)            Constructs an MBeanOperationInfo object. |

| **Method Summary** | |
| --- | --- |
| [Object](http://docs.google.com/java/lang/Object.html) | [**clone**](http://docs.google.com/javax/management/MBeanOperationInfo.html#clone())()            Returns a shallow clone of this instance. |
| boolean | [**equals**](http://docs.google.com/javax/management/MBeanOperationInfo.html#equals(java.lang.Object))([Object](http://docs.google.com/java/lang/Object.html) o)            Compare this MBeanOperationInfo to another. |
| int | [**getImpact**](http://docs.google.com/javax/management/MBeanOperationInfo.html#getImpact())()            Returns the impact of the method, one of INFO, ACTION, ACTION\_INFO, UNKNOWN. |
| [String](http://docs.google.com/java/lang/String.html) | [**getReturnType**](http://docs.google.com/javax/management/MBeanOperationInfo.html#getReturnType())()            Returns the type of the method's return value. |
| [MBeanParameterInfo](http://docs.google.com/javax/management/MBeanParameterInfo.html)[] | [**getSignature**](http://docs.google.com/javax/management/MBeanOperationInfo.html#getSignature())()            Returns the list of parameters for this operation. |
| int | [**hashCode**](http://docs.google.com/javax/management/MBeanOperationInfo.html#hashCode())()            Returns a hash code value for the object. |
| [String](http://docs.google.com/java/lang/String.html) | [**toString**](http://docs.google.com/javax/management/MBeanOperationInfo.html#toString())()            Returns a string representation of the object. |

| **Methods inherited from class javax.management.**[**MBeanFeatureInfo**](http://docs.google.com/javax/management/MBeanFeatureInfo.html) |
| --- |
| [getDescription](http://docs.google.com/javax/management/MBeanFeatureInfo.html#getDescription()), [getDescriptor](http://docs.google.com/javax/management/MBeanFeatureInfo.html#getDescriptor()), [getName](http://docs.google.com/javax/management/MBeanFeatureInfo.html#getName()) |

| **Methods inherited from class java.lang.**[**Object**](http://docs.google.com/java/lang/Object.html) |
| --- |
| [finalize](http://docs.google.com/java/lang/Object.html#finalize()), [getClass](http://docs.google.com/java/lang/Object.html#getClass()), [notify](http://docs.google.com/java/lang/Object.html#notify()), [notifyAll](http://docs.google.com/java/lang/Object.html#notifyAll()), [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** |
| --- |

### INFO

public static final int **INFO**

Indicates that the operation is read-like, it basically returns information.

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

### ACTION

public static final int **ACTION**

Indicates that the operation is a write-like, and would modify the MBean in some way, typically by writing some value or changing a configuration.

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

### ACTION\_INFO

public static final int **ACTION\_INFO**

Indicates that the operation is both read-like and write-like.

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

### UNKNOWN

public static final int **UNKNOWN**

Indicates that the operation has an "unknown" nature.

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

| **Constructor Detail** |
| --- |

### MBeanOperationInfo

public **MBeanOperationInfo**([String](http://docs.google.com/java/lang/String.html) description,  
 [Method](http://docs.google.com/java/lang/reflect/Method.html) method)

Constructs an MBeanOperationInfo object. The [Descriptor](http://docs.google.com/javax/management/Descriptor.html) of the constructed object will include fields contributed by any annotations on the Method object that contain the [DescriptorKey](http://docs.google.com/javax/management/DescriptorKey.html) meta-annotation.

**Parameters:**method - The java.lang.reflect.Method object describing the MBean operation.description - A human readable description of the operation.

### MBeanOperationInfo

public **MBeanOperationInfo**([String](http://docs.google.com/java/lang/String.html) name,  
 [String](http://docs.google.com/java/lang/String.html) description,  
 [MBeanParameterInfo](http://docs.google.com/javax/management/MBeanParameterInfo.html)[] signature,  
 [String](http://docs.google.com/java/lang/String.html) type,  
 int impact)

Constructs an MBeanOperationInfo object.

**Parameters:**name - The name of the method.description - A human readable description of the operation.signature - MBeanParameterInfo objects describing the parameters(arguments) of the method. This may be null with the same effect as a zero-length array.type - The type of the method's return value.impact - The impact of the method, one of INFO, ACTION, ACTION\_INFO, UNKNOWN.

### MBeanOperationInfo

public **MBeanOperationInfo**([String](http://docs.google.com/java/lang/String.html) name,  
 [String](http://docs.google.com/java/lang/String.html) description,  
 [MBeanParameterInfo](http://docs.google.com/javax/management/MBeanParameterInfo.html)[] signature,  
 [String](http://docs.google.com/java/lang/String.html) type,  
 int impact,  
 [Descriptor](http://docs.google.com/javax/management/Descriptor.html) descriptor)

Constructs an MBeanOperationInfo object.

**Parameters:**name - The name of the method.description - A human readable description of the operation.signature - MBeanParameterInfo objects describing the parameters(arguments) of the method. This may be null with the same effect as a zero-length array.type - The type of the method's return value.impact - The impact of the method, one of INFO, ACTION, ACTION\_INFO, UNKNOWN.descriptor - The descriptor for the operation. This may be null which is equivalent to an empty descriptor.**Since:** 1.6

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

### clone

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

Returns a shallow clone of this instance. The clone is obtained by simply calling super.clone(), thus calling the default native shallow cloning mechanism implemented by Object.clone(). No deeper cloning of any internal field is made.

Since this class is immutable, cloning is chiefly of interest to subclasses.

**Overrides:**[clone](http://docs.google.com/java/lang/Object.html#clone()) in class [Object](http://docs.google.com/java/lang/Object.html) **Returns:**a clone of this instance.**See Also:**[Cloneable](http://docs.google.com/java/lang/Cloneable.html)

### getReturnType

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

Returns the type of the method's return value.

**Returns:**the return type.

### getSignature

public [MBeanParameterInfo](http://docs.google.com/javax/management/MBeanParameterInfo.html)[] **getSignature**()

Returns the list of parameters for this operation. Each parameter is described by an MBeanParameterInfo object.

The returned array is a shallow copy of the internal array, which means that it is a copy of the internal array of references to the MBeanParameterInfo objects but that each referenced MBeanParameterInfo object is not copied.

**Returns:**An array of MBeanParameterInfo objects.

### getImpact

public int **getImpact**()

Returns the impact of the method, one of INFO, ACTION, ACTION\_INFO, UNKNOWN.

**Returns:**the impact code.

### toString

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

**Description copied from class:** [**Object**](http://docs.google.com/java/lang/Object.html#toString()) Returns a string representation of the object. In general, the toString method returns a string that "textually represents" this object. The result should be a concise but informative representation that is easy for a person to read. It is recommended that all subclasses override this method.

The toString method for class Object returns a string consisting of the name of the class of which the object is an instance, the at-sign character `@', and the unsigned hexadecimal representation of the hash code of the object. In other words, this method returns a string equal to the value of:

getClass().getName() + '@' + Integer.toHexString(hashCode())

**Overrides:**[toString](http://docs.google.com/java/lang/Object.html#toString()) in class [Object](http://docs.google.com/java/lang/Object.html) **Returns:**a string representation of the object.

### equals

public boolean **equals**([Object](http://docs.google.com/java/lang/Object.html) o)

Compare this MBeanOperationInfo to another.

**Overrides:**[equals](http://docs.google.com/javax/management/MBeanFeatureInfo.html#equals(java.lang.Object)) in class [MBeanFeatureInfo](http://docs.google.com/javax/management/MBeanFeatureInfo.html) **Parameters:**o - the object to compare to. **Returns:**true if and only if o is an MBeanOperationInfo such that its [MBeanFeatureInfo.getName()](http://docs.google.com/javax/management/MBeanFeatureInfo.html#getName()), [getReturnType()](http://docs.google.com/javax/management/MBeanOperationInfo.html#getReturnType()), [MBeanFeatureInfo.getDescription()](http://docs.google.com/javax/management/MBeanFeatureInfo.html#getDescription()), [getImpact()](http://docs.google.com/javax/management/MBeanOperationInfo.html#getImpact()), [MBeanFeatureInfo.getDescriptor()](http://docs.google.com/javax/management/MBeanFeatureInfo.html#getDescriptor()) and [getSignature()](http://docs.google.com/javax/management/MBeanOperationInfo.html#getSignature()) values are equal (not necessarily identical) to those of this MBeanConstructorInfo. Two signature arrays are equal if their elements are pairwise equal.**See Also:**[Object.hashCode()](http://docs.google.com/java/lang/Object.html#hashCode()), [Hashtable](http://docs.google.com/java/util/Hashtable.html)

### hashCode

public int **hashCode**()

**Description copied from class:** [**Object**](http://docs.google.com/java/lang/Object.html#hashCode()) Returns a hash code value for the object. This method is supported for the benefit of hashtables such as those provided by java.util.Hashtable.

The general contract of hashCode is:

* Whenever it is invoked on the same object more than once during an execution of a Java application, the hashCode method must consistently return the same integer, provided no information used in equals comparisons on the object is modified. This integer need not remain consistent from one execution of an application to another execution of the same application.
* If two objects are equal according to the equals(Object) method, then calling the hashCode method on each of the two objects must produce the same integer result.
* It is *not* required that if two objects are unequal according to the [Object.equals(java.lang.Object)](http://docs.google.com/java/lang/Object.html#equals(java.lang.Object)) method, then calling the hashCode method on each of the two objects must produce distinct integer results. However, the programmer should be aware that producing distinct integer results for unequal objects may improve the performance of hashtables.

As much as is reasonably practical, the hashCode method defined by class Object does return distinct integers for distinct objects. (This is typically implemented by converting the internal address of the object into an integer, but this implementation technique is not required by the JavaTM programming language.)

**Overrides:**[hashCode](http://docs.google.com/javax/management/MBeanFeatureInfo.html#hashCode()) in class [MBeanFeatureInfo](http://docs.google.com/javax/management/MBeanFeatureInfo.html) **Returns:**a hash code value for this object.**See Also:**[Object.equals(java.lang.Object)](http://docs.google.com/java/lang/Object.html#equals(java.lang.Object)), [Hashtable](http://docs.google.com/java/util/Hashtable.html)

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