| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/Util.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/rmi/CORBA/Tie.html)   [**NEXT CLASS**](http://docs.google.com/javax/rmi/CORBA/UtilDelegate.html) | [**FRAMES**](http://docs.google.com/index.html?javax/rmi/CORBA/Util.html)    [**NO FRAMES**](http://docs.google.com/Util.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | CONSTR | [METHOD](#3znysh7) | DETAIL: FIELD | CONSTR | [METHOD](#tyjcwt) |

## **javax.rmi.CORBA**

Class Util

[java.lang.Object](http://docs.google.com/java/lang/Object.html)  
 **javax.rmi.CORBA.Util**

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

Provides utility methods that can be used by stubs and ties to perform common operations.

| **Method Summary** | |
| --- | --- |
| static [Object](http://docs.google.com/java/lang/Object.html) | [**copyObject**](http://docs.google.com/javax/rmi/CORBA/Util.html#copyObject(java.lang.Object,%20org.omg.CORBA.ORB))([Object](http://docs.google.com/java/lang/Object.html) obj, [ORB](http://docs.google.com/org/omg/CORBA/ORB.html) orb)            Copies or connects an object. |
| static [Object](http://docs.google.com/java/lang/Object.html)[] | [**copyObjects**](http://docs.google.com/javax/rmi/CORBA/Util.html#copyObjects(java.lang.Object%5B%5D,%20org.omg.CORBA.ORB))([Object](http://docs.google.com/java/lang/Object.html)[] obj, [ORB](http://docs.google.com/org/omg/CORBA/ORB.html) orb)            Copies or connects an array of objects. |
| static [ValueHandler](http://docs.google.com/javax/rmi/CORBA/ValueHandler.html) | [**createValueHandler**](http://docs.google.com/javax/rmi/CORBA/Util.html#createValueHandler())()            Returns a singleton instance of a class that implements the [ValueHandler](http://docs.google.com/javax/rmi/CORBA/ValueHandler.html) interface. |
| static [String](http://docs.google.com/java/lang/String.html) | [**getCodebase**](http://docs.google.com/javax/rmi/CORBA/Util.html#getCodebase(java.lang.Class))([Class](http://docs.google.com/java/lang/Class.html) clz)            Returns the codebase, if any, for the given class. |
| static [Tie](http://docs.google.com/javax/rmi/CORBA/Tie.html) | [**getTie**](http://docs.google.com/javax/rmi/CORBA/Util.html#getTie(java.rmi.Remote))([Remote](http://docs.google.com/java/rmi/Remote.html) target)            Returns the tie (if any) for a given target object. |
| static boolean | [**isLocal**](http://docs.google.com/javax/rmi/CORBA/Util.html#isLocal(javax.rmi.CORBA.Stub))([Stub](http://docs.google.com/javax/rmi/CORBA/Stub.html) stub)            The isLocal method has the same semantics as the ObjectImpl.\_is\_local method, except that it can throw a RemoteException. |
| static [Class](http://docs.google.com/java/lang/Class.html) | [**loadClass**](http://docs.google.com/javax/rmi/CORBA/Util.html#loadClass(java.lang.String,%20java.lang.String,%20java.lang.ClassLoader))([String](http://docs.google.com/java/lang/String.html) className, [String](http://docs.google.com/java/lang/String.html) remoteCodebase, [ClassLoader](http://docs.google.com/java/lang/ClassLoader.html) loader)            Returns a class instance for the specified class. |
| static [RemoteException](http://docs.google.com/java/rmi/RemoteException.html) | [**mapSystemException**](http://docs.google.com/javax/rmi/CORBA/Util.html#mapSystemException(org.omg.CORBA.SystemException))([SystemException](http://docs.google.com/org/omg/CORBA/SystemException.html) ex)            Maps a SystemException to a RemoteException. |
| static [Object](http://docs.google.com/java/lang/Object.html) | [**readAny**](http://docs.google.com/javax/rmi/CORBA/Util.html#readAny(org.omg.CORBA.portable.InputStream))([InputStream](http://docs.google.com/org/omg/CORBA/portable/InputStream.html) in)            Reads a java.lang.Object as a CORBA any. |
| static void | [**registerTarget**](http://docs.google.com/javax/rmi/CORBA/Util.html#registerTarget(javax.rmi.CORBA.Tie,%20java.rmi.Remote))([Tie](http://docs.google.com/javax/rmi/CORBA/Tie.html) tie, [Remote](http://docs.google.com/java/rmi/Remote.html) target)            Registers a target for a tie. |
| static void | [**unexportObject**](http://docs.google.com/javax/rmi/CORBA/Util.html#unexportObject(java.rmi.Remote))([Remote](http://docs.google.com/java/rmi/Remote.html) target)            Removes the associated tie from an internal table and calls [Tie.deactivate()](http://docs.google.com/javax/rmi/CORBA/Tie.html#deactivate()) to deactivate the object. |
| static [RemoteException](http://docs.google.com/java/rmi/RemoteException.html) | [**wrapException**](http://docs.google.com/javax/rmi/CORBA/Util.html#wrapException(java.lang.Throwable))([Throwable](http://docs.google.com/java/lang/Throwable.html) orig)            Wraps an exception thrown by an implementation method. |
| static void | [**writeAbstractObject**](http://docs.google.com/javax/rmi/CORBA/Util.html#writeAbstractObject(org.omg.CORBA.portable.OutputStream,%20java.lang.Object))([OutputStream](http://docs.google.com/org/omg/CORBA/portable/OutputStream.html) out, [Object](http://docs.google.com/java/lang/Object.html) obj)            Writes a java.lang.Object as either a value or a CORBA Object. |
| static void | [**writeAny**](http://docs.google.com/javax/rmi/CORBA/Util.html#writeAny(org.omg.CORBA.portable.OutputStream,%20java.lang.Object))([OutputStream](http://docs.google.com/org/omg/CORBA/portable/OutputStream.html) out, [Object](http://docs.google.com/java/lang/Object.html) obj)            Writes any java.lang.Object as a CORBA any. |
| static void | [**writeRemoteObject**](http://docs.google.com/javax/rmi/CORBA/Util.html#writeRemoteObject(org.omg.CORBA.portable.OutputStream,%20java.lang.Object))([OutputStream](http://docs.google.com/org/omg/CORBA/portable/OutputStream.html) out, [Object](http://docs.google.com/java/lang/Object.html) obj)            Writes a java.lang.Object as a CORBA Object. |

| **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)) |

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

### mapSystemException

public static [RemoteException](http://docs.google.com/java/rmi/RemoteException.html) **mapSystemException**([SystemException](http://docs.google.com/org/omg/CORBA/SystemException.html) ex)

Maps a SystemException to a RemoteException.

**Parameters:**ex - the SystemException to map. **Returns:**the mapped exception.

### writeAny

public static void **writeAny**([OutputStream](http://docs.google.com/org/omg/CORBA/portable/OutputStream.html) out,  
 [Object](http://docs.google.com/java/lang/Object.html) obj)

Writes any java.lang.Object as a CORBA any.

**Parameters:**out - the stream in which to write the any.obj - the object to write as an any.

### readAny

public static [Object](http://docs.google.com/java/lang/Object.html) **readAny**([InputStream](http://docs.google.com/org/omg/CORBA/portable/InputStream.html) in)

Reads a java.lang.Object as a CORBA any.

**Parameters:**in - the stream from which to read the any. **Returns:**the object read from the stream.

### writeRemoteObject

public static void **writeRemoteObject**([OutputStream](http://docs.google.com/org/omg/CORBA/portable/OutputStream.html) out,  
 [Object](http://docs.google.com/java/lang/Object.html) obj)

Writes a java.lang.Object as a CORBA Object. If obj is an exported RMI-IIOP server object, the tie is found and wired to obj, then written to out.write\_Object(org.omg.CORBA.Object). If obj is a CORBA Object, it is written to out.write\_Object(org.omg.CORBA.Object).

**Parameters:**out - the stream in which to write the object.obj - the object to write.

### writeAbstractObject

public static void **writeAbstractObject**([OutputStream](http://docs.google.com/org/omg/CORBA/portable/OutputStream.html) out,  
 [Object](http://docs.google.com/java/lang/Object.html) obj)

Writes a java.lang.Object as either a value or a CORBA Object. If obj is a value object or a stub object, it is written to out.write\_abstract\_interface(java.lang.Object). If obj is an exported RMI-IIOP server object, the tie is found and wired to obj, then written to out.write\_abstract\_interface(java.lang.Object).

**Parameters:**out - the stream in which to write the object.obj - the object to write.

### registerTarget

public static void **registerTarget**([Tie](http://docs.google.com/javax/rmi/CORBA/Tie.html) tie,  
 [Remote](http://docs.google.com/java/rmi/Remote.html) target)

Registers a target for a tie. Adds the tie to an internal table and calls [Tie.setTarget(java.rmi.Remote)](http://docs.google.com/javax/rmi/CORBA/Tie.html#setTarget(java.rmi.Remote)) on the tie object.

**Parameters:**tie - the tie to register.target - the target for the tie.

### unexportObject

public static void **unexportObject**([Remote](http://docs.google.com/java/rmi/Remote.html) target)  
 throws [NoSuchObjectException](http://docs.google.com/java/rmi/NoSuchObjectException.html)

Removes the associated tie from an internal table and calls [Tie.deactivate()](http://docs.google.com/javax/rmi/CORBA/Tie.html#deactivate()) to deactivate the object.

**Parameters:**target - the object to unexport. **Throws:** [NoSuchObjectException](http://docs.google.com/java/rmi/NoSuchObjectException.html)

### getTie

public static [Tie](http://docs.google.com/javax/rmi/CORBA/Tie.html) **getTie**([Remote](http://docs.google.com/java/rmi/Remote.html) target)

Returns the tie (if any) for a given target object.

**Returns:**the tie or null if no tie is registered for the given target.

### createValueHandler

public static [ValueHandler](http://docs.google.com/javax/rmi/CORBA/ValueHandler.html) **createValueHandler**()

Returns a singleton instance of a class that implements the [ValueHandler](http://docs.google.com/javax/rmi/CORBA/ValueHandler.html) interface.

**Returns:**a class which implements the ValueHandler interface.

### getCodebase

public static [String](http://docs.google.com/java/lang/String.html) **getCodebase**([Class](http://docs.google.com/java/lang/Class.html) clz)

Returns the codebase, if any, for the given class.

**Parameters:**clz - the class to get a codebase for. **Returns:**a space-separated list of URLs, or null.

### loadClass

public static [Class](http://docs.google.com/java/lang/Class.html) **loadClass**([String](http://docs.google.com/java/lang/String.html) className,  
 [String](http://docs.google.com/java/lang/String.html) remoteCodebase,  
 [ClassLoader](http://docs.google.com/java/lang/ClassLoader.html) loader)  
 throws [ClassNotFoundException](http://docs.google.com/java/lang/ClassNotFoundException.html)

Returns a class instance for the specified class.

The spec for this method is the "Java to IDL language mapping", ptc/00-01-06.

In Java SE Platform, this method works as follows:

* Find the first non-null ClassLoader on the call stack and attempt to load the class using this ClassLoader.
* If the first step fails, and if remoteCodebase is non-null and useCodebaseOnly is false, then call java.rmi.server.RMIClassLoader.loadClass(remoteCodebase, className).
* If remoteCodebase is null or useCodebaseOnly is true, then call java.rmi.server.RMIClassLoader.loadClass(className).
* If a class was not successfully loaded by step 1, 2, or 3, and loader is non-null, then call loader.loadClass(className).
* If a class was successfully loaded by step 1, 2, 3, or 4, then return the loaded class, else throw ClassNotFoundException.  
  **Parameters:**className - the name of the class.remoteCodebase - a space-separated list of URLs at which the class might be found. May be null.loader - a ClassLoader that may be used to load the class if all other methods fail. **Returns:**the Class object representing the loaded class. **Throws:** [ClassNotFoundException](http://docs.google.com/java/lang/ClassNotFoundException.html) - if class cannot be loaded.

### isLocal

public static boolean **isLocal**([Stub](http://docs.google.com/javax/rmi/CORBA/Stub.html) stub)  
 throws [RemoteException](http://docs.google.com/java/rmi/RemoteException.html)

The isLocal method has the same semantics as the ObjectImpl.\_is\_local method, except that it can throw a RemoteException. The \_is\_local() method is provided so that stubs may determine if a particular object is implemented by a local servant and hence local invocation APIs may be used.

**Parameters:**stub - the stub to test. **Returns:**The \_is\_local() method returns true if the servant incarnating the object is located in the same process as the stub and they both share the same ORB instance. The \_is\_local() method returns false otherwise. The default behavior of \_is\_local() is to return false. **Throws:** [RemoteException](http://docs.google.com/java/rmi/RemoteException.html) - The Java to IDL specification does not specify the conditions that cause a RemoteException to be thrown.

### wrapException

public static [RemoteException](http://docs.google.com/java/rmi/RemoteException.html) **wrapException**([Throwable](http://docs.google.com/java/lang/Throwable.html) orig)

Wraps an exception thrown by an implementation method. It returns the corresponding client-side exception.

**Parameters:**orig - the exception to wrap. **Returns:**the wrapped exception.

### copyObjects

public static [Object](http://docs.google.com/java/lang/Object.html)[] **copyObjects**([Object](http://docs.google.com/java/lang/Object.html)[] obj,  
 [ORB](http://docs.google.com/org/omg/CORBA/ORB.html) orb)  
 throws [RemoteException](http://docs.google.com/java/rmi/RemoteException.html)

Copies or connects an array of objects. Used by local stubs to copy any number of actual parameters, preserving sharing across parameters as necessary to support RMI semantics.

**Parameters:**obj - the objects to copy or connect.orb - the ORB. **Returns:**the copied or connected objects. **Throws:** [RemoteException](http://docs.google.com/java/rmi/RemoteException.html) - if any object could not be copied or connected.

### copyObject

public static [Object](http://docs.google.com/java/lang/Object.html) **copyObject**([Object](http://docs.google.com/java/lang/Object.html) obj,  
 [ORB](http://docs.google.com/org/omg/CORBA/ORB.html) orb)  
 throws [RemoteException](http://docs.google.com/java/rmi/RemoteException.html)

Copies or connects an object. Used by local stubs to copy an actual parameter, result object, or exception.

**Parameters:**obj - the object to copy.orb - the ORB. **Returns:**the copy or connected object. **Throws:** [RemoteException](http://docs.google.com/java/rmi/RemoteException.html) - if the object could not be copied or connected.

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

[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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