| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/RMIClassLoaderSpi.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/rmi/server/RMIClassLoader.html)   [**NEXT CLASS**](http://docs.google.com/java/rmi/server/RMIClientSocketFactory.html) | [**FRAMES**](http://docs.google.com/index.html?java/rmi/server/RMIClassLoaderSpi.html)    [**NO FRAMES**](http://docs.google.com/RMIClassLoaderSpi.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | [CONSTR](#3znysh7) | [METHOD](#2et92p0) | DETAIL: FIELD | [CONSTR](#3dy6vkm) | [METHOD](#4d34og8) |

## **java.rmi.server**

Class RMIClassLoaderSpi

[java.lang.Object](http://docs.google.com/java/lang/Object.html)  
 **java.rmi.server.RMIClassLoaderSpi**

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

RMIClassLoaderSpi is the service provider interface for RMIClassLoader. In particular, an RMIClassLoaderSpi instance provides an implementation of the following static methods of RMIClassLoader:

* [RMIClassLoader.loadClass(URL,String)](http://docs.google.com/java/rmi/server/RMIClassLoader.html#loadClass(java.net.URL,%20java.lang.String))
* [RMIClassLoader.loadClass(String,String)](http://docs.google.com/java/rmi/server/RMIClassLoader.html#loadClass(java.lang.String,%20java.lang.String))
* [RMIClassLoader.loadClass(String,String,ClassLoader)](http://docs.google.com/java/rmi/server/RMIClassLoader.html#loadClass(java.lang.String,%20java.lang.String,%20java.lang.ClassLoader))
* [RMIClassLoader.loadProxyClass(String,String[],ClassLoader)](http://docs.google.com/java/rmi/server/RMIClassLoader.html#loadProxyClass(java.lang.String,%20java.lang.String%5B%5D,%20java.lang.ClassLoader))
* [RMIClassLoader.getClassLoader(String)](http://docs.google.com/java/rmi/server/RMIClassLoader.html#getClassLoader(java.lang.String))
* [RMIClassLoader.getClassAnnotation(Class)](http://docs.google.com/java/rmi/server/RMIClassLoader.html#getClassAnnotation(java.lang.Class))

When one of those methods is invoked, its behavior is to delegate to a corresponding method on an instance of this class. The details of how each method delegates to the provider instance is described in the documentation for each particular method. See the documentation for [RMIClassLoader](http://docs.google.com/java/rmi/server/RMIClassLoader.html) for a description of how a provider instance is chosen.

**Since:** 1.4 **See Also:**[RMIClassLoader](http://docs.google.com/java/rmi/server/RMIClassLoader.html)

| **Constructor Summary** | |
| --- | --- |
| [**RMIClassLoaderSpi**](http://docs.google.com/java/rmi/server/RMIClassLoaderSpi.html#RMIClassLoaderSpi())() |

| **Method Summary** | |
| --- | --- |
| abstract  [String](http://docs.google.com/java/lang/String.html) | [**getClassAnnotation**](http://docs.google.com/java/rmi/server/RMIClassLoaderSpi.html#getClassAnnotation(java.lang.Class))([Class](http://docs.google.com/java/lang/Class.html)<?> cl)            Provides the implementation for [RMIClassLoader.getClassAnnotation(Class)](http://docs.google.com/java/rmi/server/RMIClassLoader.html#getClassAnnotation(java.lang.Class)). |
| abstract  [ClassLoader](http://docs.google.com/java/lang/ClassLoader.html) | [**getClassLoader**](http://docs.google.com/java/rmi/server/RMIClassLoaderSpi.html#getClassLoader(java.lang.String))([String](http://docs.google.com/java/lang/String.html) codebase)            Provides the implementation for [RMIClassLoader.getClassLoader(String)](http://docs.google.com/java/rmi/server/RMIClassLoader.html#getClassLoader(java.lang.String)). |
| abstract  [Class](http://docs.google.com/java/lang/Class.html)<?> | [**loadClass**](http://docs.google.com/java/rmi/server/RMIClassLoaderSpi.html#loadClass(java.lang.String,%20java.lang.String,%20java.lang.ClassLoader))([String](http://docs.google.com/java/lang/String.html) codebase, [String](http://docs.google.com/java/lang/String.html) name, [ClassLoader](http://docs.google.com/java/lang/ClassLoader.html) defaultLoader)            Provides the implementation for [RMIClassLoader.loadClass(URL,String)](http://docs.google.com/java/rmi/server/RMIClassLoader.html#loadClass(java.net.URL,%20java.lang.String)), [RMIClassLoader.loadClass(String,String)](http://docs.google.com/java/rmi/server/RMIClassLoader.html#loadClass(java.lang.String,%20java.lang.String)), and [RMIClassLoader.loadClass(String,String,ClassLoader)](http://docs.google.com/java/rmi/server/RMIClassLoader.html#loadClass(java.lang.String,%20java.lang.String,%20java.lang.ClassLoader)). |
| abstract  [Class](http://docs.google.com/java/lang/Class.html)<?> | [**loadProxyClass**](http://docs.google.com/java/rmi/server/RMIClassLoaderSpi.html#loadProxyClass(java.lang.String,%20java.lang.String%5B%5D,%20java.lang.ClassLoader))([String](http://docs.google.com/java/lang/String.html) codebase, [String](http://docs.google.com/java/lang/String.html)[] interfaces, [ClassLoader](http://docs.google.com/java/lang/ClassLoader.html) defaultLoader)            Provides the implementation for [RMIClassLoader.loadProxyClass(String,String[],ClassLoader)](http://docs.google.com/java/rmi/server/RMIClassLoader.html#loadProxyClass(java.lang.String,%20java.lang.String%5B%5D,%20java.lang.ClassLoader)). |

| **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)) |

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

### RMIClassLoaderSpi

public **RMIClassLoaderSpi**()

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

### loadClass

public abstract [Class](http://docs.google.com/java/lang/Class.html)<?> **loadClass**([String](http://docs.google.com/java/lang/String.html) codebase,  
 [String](http://docs.google.com/java/lang/String.html) name,  
 [ClassLoader](http://docs.google.com/java/lang/ClassLoader.html) defaultLoader)  
 throws [MalformedURLException](http://docs.google.com/java/net/MalformedURLException.html),  
 [ClassNotFoundException](http://docs.google.com/java/lang/ClassNotFoundException.html)

Provides the implementation for [RMIClassLoader.loadClass(URL,String)](http://docs.google.com/java/rmi/server/RMIClassLoader.html#loadClass(java.net.URL,%20java.lang.String)), [RMIClassLoader.loadClass(String,String)](http://docs.google.com/java/rmi/server/RMIClassLoader.html#loadClass(java.lang.String,%20java.lang.String)), and [RMIClassLoader.loadClass(String,String,ClassLoader)](http://docs.google.com/java/rmi/server/RMIClassLoader.html#loadClass(java.lang.String,%20java.lang.String,%20java.lang.ClassLoader)). Loads a class from a codebase URL path, optionally using the supplied loader. Typically, a provider implementation will attempt to resolve the named class using the given defaultLoader, if specified, before attempting to resolve the class from the codebase URL path.

An implementation of this method must either return a class with the given name or throw an exception.

**Parameters:**codebase - the list of URLs (separated by spaces) to load the class from, or nullname - the name of the class to loaddefaultLoader - additional contextual class loader to use, or null **Returns:**the Class object representing the loaded class **Throws:** [MalformedURLException](http://docs.google.com/java/net/MalformedURLException.html) - if codebase is non-null and contains an invalid URL, or if codebase is null and a provider-specific URL used to load classes is invalid [ClassNotFoundException](http://docs.google.com/java/lang/ClassNotFoundException.html) - if a definition for the class could not be found at the specified location

### loadProxyClass

public abstract [Class](http://docs.google.com/java/lang/Class.html)<?> **loadProxyClass**([String](http://docs.google.com/java/lang/String.html) codebase,  
 [String](http://docs.google.com/java/lang/String.html)[] interfaces,  
 [ClassLoader](http://docs.google.com/java/lang/ClassLoader.html) defaultLoader)  
 throws [MalformedURLException](http://docs.google.com/java/net/MalformedURLException.html),  
 [ClassNotFoundException](http://docs.google.com/java/lang/ClassNotFoundException.html)

Provides the implementation for [RMIClassLoader.loadProxyClass(String,String[],ClassLoader)](http://docs.google.com/java/rmi/server/RMIClassLoader.html#loadProxyClass(java.lang.String,%20java.lang.String%5B%5D,%20java.lang.ClassLoader)). Loads a dynamic proxy class (see [Proxy](http://docs.google.com/java/lang/reflect/Proxy.html) that implements a set of interfaces with the given names from a codebase URL path, optionally using the supplied loader.

An implementation of this method must either return a proxy class that implements the named interfaces or throw an exception.

**Parameters:**codebase - the list of URLs (space-separated) to load classes from, or nullinterfaces - the names of the interfaces for the proxy class to implementdefaultLoader - additional contextual class loader to use, or null **Returns:**a dynamic proxy class that implements the named interfaces **Throws:** [MalformedURLException](http://docs.google.com/java/net/MalformedURLException.html) - if codebase is non-null and contains an invalid URL, or if codebase is null and a provider-specific URL used to load classes is invalid [ClassNotFoundException](http://docs.google.com/java/lang/ClassNotFoundException.html) - if a definition for one of the named interfaces could not be found at the specified location, or if creation of the dynamic proxy class failed (such as if [Proxy.getProxyClass(ClassLoader,Class[])](http://docs.google.com/java/lang/reflect/Proxy.html#getProxyClass(java.lang.ClassLoader,%20java.lang.Class...)) would throw an IllegalArgumentException for the given interface list)

### getClassLoader

public abstract [ClassLoader](http://docs.google.com/java/lang/ClassLoader.html) **getClassLoader**([String](http://docs.google.com/java/lang/String.html) codebase)  
 throws [MalformedURLException](http://docs.google.com/java/net/MalformedURLException.html)

Provides the implementation for [RMIClassLoader.getClassLoader(String)](http://docs.google.com/java/rmi/server/RMIClassLoader.html#getClassLoader(java.lang.String)). Returns a class loader that loads classes from the given codebase URL path.

If there is a security manger, its checkPermission method will be invoked with a RuntimePermission("getClassLoader") permission; this could result in a SecurityException. The implementation of this method may also perform further security checks to verify that the calling context has permission to connect to all of the URLs in the codebase URL path.

**Parameters:**codebase - the list of URLs (space-separated) from which the returned class loader will load classes from, or null **Returns:**a class loader that loads classes from the given codebase URL path **Throws:** [MalformedURLException](http://docs.google.com/java/net/MalformedURLException.html) - if codebase is non-null and contains an invalid URL, or if codebase is null and a provider-specific URL used to identify the class loader is invalid [SecurityException](http://docs.google.com/java/lang/SecurityException.html) - if there is a security manager and the invocation of its checkPermission method fails, or if the caller does not have permission to connect to all of the URLs in the codebase URL path

### getClassAnnotation

public abstract [String](http://docs.google.com/java/lang/String.html) **getClassAnnotation**([Class](http://docs.google.com/java/lang/Class.html)<?> cl)

Provides the implementation for [RMIClassLoader.getClassAnnotation(Class)](http://docs.google.com/java/rmi/server/RMIClassLoader.html#getClassAnnotation(java.lang.Class)). Returns the annotation string (representing a location for the class definition) that RMI will use to annotate the class descriptor when marshalling objects of the given class.

**Parameters:**cl - the class to obtain the annotation for **Returns:**a string to be used to annotate the given class when it gets marshalled, or null **Throws:** [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - if cl 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/RMIClassLoaderSpi.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/rmi/server/RMIClassLoader.html)   [**NEXT CLASS**](http://docs.google.com/java/rmi/server/RMIClientSocketFactory.html) | [**FRAMES**](http://docs.google.com/index.html?java/rmi/server/RMIClassLoaderSpi.html)    [**NO FRAMES**](http://docs.google.com/RMIClassLoaderSpi.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | [CONSTR](#3znysh7) | [METHOD](#2et92p0) | DETAIL: FIELD | [CONSTR](#3dy6vkm) | [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.

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