| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/SecureClassLoader.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/security/PublicKey.html)   [**NEXT CLASS**](http://docs.google.com/java/security/SecureRandom.html) | [**FRAMES**](http://docs.google.com/index.html?java/security/SecureClassLoader.html)    [**NO FRAMES**](http://docs.google.com/SecureClassLoader.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | [CONSTR](#3znysh7) | [METHOD](#2et92p0) | DETAIL: FIELD | [CONSTR](#1t3h5sf) | [METHOD](#17dp8vu) |

## **java.security**

Class SecureClassLoader

[java.lang.Object](http://docs.google.com/java/lang/Object.html)  
 [java.lang.ClassLoader](http://docs.google.com/java/lang/ClassLoader.html)  
 **java.security.SecureClassLoader**

**Direct Known Subclasses:** [URLClassLoader](http://docs.google.com/java/net/URLClassLoader.html)

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

This class extends ClassLoader with additional support for defining classes with an associated code source and permissions which are retrieved by the system policy by default.

| **Constructor Summary** | |
| --- | --- |
| protected | [**SecureClassLoader**](http://docs.google.com/java/security/SecureClassLoader.html#SecureClassLoader())()            Creates a new SecureClassLoader using the default parent class loader for delegation. |
| protected | [**SecureClassLoader**](http://docs.google.com/java/security/SecureClassLoader.html#SecureClassLoader(java.lang.ClassLoader))([ClassLoader](http://docs.google.com/java/lang/ClassLoader.html) parent)            Creates a new SecureClassLoader using the specified parent class loader for delegation. |

| **Method Summary** | |
| --- | --- |
| protected  [Class](http://docs.google.com/java/lang/Class.html)<?> | [**defineClass**](http://docs.google.com/java/security/SecureClassLoader.html#defineClass(java.lang.String,%20byte%5B%5D,%20int,%20int,%20java.security.CodeSource))([String](http://docs.google.com/java/lang/String.html) name, byte[] b, int off, int len, [CodeSource](http://docs.google.com/java/security/CodeSource.html) cs)            Converts an array of bytes into an instance of class Class, with an optional CodeSource. |
| protected  [Class](http://docs.google.com/java/lang/Class.html)<?> | [**defineClass**](http://docs.google.com/java/security/SecureClassLoader.html#defineClass(java.lang.String,%20java.nio.ByteBuffer,%20java.security.CodeSource))([String](http://docs.google.com/java/lang/String.html) name, [ByteBuffer](http://docs.google.com/java/nio/ByteBuffer.html) b, [CodeSource](http://docs.google.com/java/security/CodeSource.html) cs)            Converts a [ByteBuffer](http://docs.google.com/java/nio/ByteBuffer.html) into an instance of class Class, with an optional CodeSource. |
| protected  [PermissionCollection](http://docs.google.com/java/security/PermissionCollection.html) | [**getPermissions**](http://docs.google.com/java/security/SecureClassLoader.html#getPermissions(java.security.CodeSource))([CodeSource](http://docs.google.com/java/security/CodeSource.html) codesource)            Returns the permissions for the given CodeSource object. |

| **Methods inherited from class java.lang.**[**ClassLoader**](http://docs.google.com/java/lang/ClassLoader.html) |
| --- |
| [clearAssertionStatus](http://docs.google.com/java/lang/ClassLoader.html#clearAssertionStatus()), [defineClass](http://docs.google.com/java/lang/ClassLoader.html#defineClass(byte%5B%5D,%20int,%20int)), [defineClass](http://docs.google.com/java/lang/ClassLoader.html#defineClass(java.lang.String,%20byte%5B%5D,%20int,%20int)), [defineClass](http://docs.google.com/java/lang/ClassLoader.html#defineClass(java.lang.String,%20byte%5B%5D,%20int,%20int,%20java.security.ProtectionDomain)), [defineClass](http://docs.google.com/java/lang/ClassLoader.html#defineClass(java.lang.String,%20java.nio.ByteBuffer,%20java.security.ProtectionDomain)), [definePackage](http://docs.google.com/java/lang/ClassLoader.html#definePackage(java.lang.String,%20java.lang.String,%20java.lang.String,%20java.lang.String,%20java.lang.String,%20java.lang.String,%20java.lang.String,%20java.net.URL)), [findClass](http://docs.google.com/java/lang/ClassLoader.html#findClass(java.lang.String)), [findLibrary](http://docs.google.com/java/lang/ClassLoader.html#findLibrary(java.lang.String)), [findLoadedClass](http://docs.google.com/java/lang/ClassLoader.html#findLoadedClass(java.lang.String)), [findResource](http://docs.google.com/java/lang/ClassLoader.html#findResource(java.lang.String)), [findResources](http://docs.google.com/java/lang/ClassLoader.html#findResources(java.lang.String)), [findSystemClass](http://docs.google.com/java/lang/ClassLoader.html#findSystemClass(java.lang.String)), [getPackage](http://docs.google.com/java/lang/ClassLoader.html#getPackage(java.lang.String)), [getPackages](http://docs.google.com/java/lang/ClassLoader.html#getPackages()), [getParent](http://docs.google.com/java/lang/ClassLoader.html#getParent()), [getResource](http://docs.google.com/java/lang/ClassLoader.html#getResource(java.lang.String)), [getResourceAsStream](http://docs.google.com/java/lang/ClassLoader.html#getResourceAsStream(java.lang.String)), [getResources](http://docs.google.com/java/lang/ClassLoader.html#getResources(java.lang.String)), [getSystemClassLoader](http://docs.google.com/java/lang/ClassLoader.html#getSystemClassLoader()), [getSystemResource](http://docs.google.com/java/lang/ClassLoader.html#getSystemResource(java.lang.String)), [getSystemResourceAsStream](http://docs.google.com/java/lang/ClassLoader.html#getSystemResourceAsStream(java.lang.String)), [getSystemResources](http://docs.google.com/java/lang/ClassLoader.html#getSystemResources(java.lang.String)), [loadClass](http://docs.google.com/java/lang/ClassLoader.html#loadClass(java.lang.String)), [loadClass](http://docs.google.com/java/lang/ClassLoader.html#loadClass(java.lang.String,%20boolean)), [resolveClass](http://docs.google.com/java/lang/ClassLoader.html#resolveClass(java.lang.Class)), [setClassAssertionStatus](http://docs.google.com/java/lang/ClassLoader.html#setClassAssertionStatus(java.lang.String,%20boolean)), [setDefaultAssertionStatus](http://docs.google.com/java/lang/ClassLoader.html#setDefaultAssertionStatus(boolean)), [setPackageAssertionStatus](http://docs.google.com/java/lang/ClassLoader.html#setPackageAssertionStatus(java.lang.String,%20boolean)), [setSigners](http://docs.google.com/java/lang/ClassLoader.html#setSigners(java.lang.Class,%20java.lang.Object%5B%5D)) |

| **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** |
| --- |

### SecureClassLoader

protected **SecureClassLoader**([ClassLoader](http://docs.google.com/java/lang/ClassLoader.html) parent)

Creates a new SecureClassLoader using the specified parent class loader for delegation.

If there is a security manager, this method first calls the security manager's checkCreateClassLoader method to ensure creation of a class loader is allowed.

**Parameters:**parent - the parent ClassLoader **Throws:** [SecurityException](http://docs.google.com/java/lang/SecurityException.html) - if a security manager exists and its checkCreateClassLoader method doesn't allow creation of a class loader.**See Also:**[SecurityManager.checkCreateClassLoader()](http://docs.google.com/java/lang/SecurityManager.html#checkCreateClassLoader())

### SecureClassLoader

protected **SecureClassLoader**()

Creates a new SecureClassLoader using the default parent class loader for delegation.

If there is a security manager, this method first calls the security manager's checkCreateClassLoader method to ensure creation of a class loader is allowed.

**Throws:** [SecurityException](http://docs.google.com/java/lang/SecurityException.html) - if a security manager exists and its checkCreateClassLoader method doesn't allow creation of a class loader.**See Also:**[SecurityManager.checkCreateClassLoader()](http://docs.google.com/java/lang/SecurityManager.html#checkCreateClassLoader())

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

### defineClass

protected final [Class](http://docs.google.com/java/lang/Class.html)<?> **defineClass**([String](http://docs.google.com/java/lang/String.html) name,  
 byte[] b,  
 int off,  
 int len,  
 [CodeSource](http://docs.google.com/java/security/CodeSource.html) cs)

Converts an array of bytes into an instance of class Class, with an optional CodeSource. Before the class can be used it must be resolved.

If a non-null CodeSource is supplied a ProtectionDomain is constructed and associated with the class being defined.

**Parameters:**name - the expected name of the class, or null if not known, using '.' and not '/' as the separator and without a trailing ".class" suffix.b - the bytes that make up the class data. The bytes in positions off through off+len-1 should have the format of a valid class file as defined by the [Java Virtual Machine Specification](http://java.sun.com/docs/books/vmspec/).off - the start offset in b of the class datalen - the length of the class datacs - the associated CodeSource, or null if none **Returns:**the Class object created from the data, and optional CodeSource. **Throws:** [ClassFormatError](http://docs.google.com/java/lang/ClassFormatError.html) - if the data did not contain a valid class [IndexOutOfBoundsException](http://docs.google.com/java/lang/IndexOutOfBoundsException.html) - if either off or len is negative, or if off+len is greater than b.length. [SecurityException](http://docs.google.com/java/lang/SecurityException.html) - if an attempt is made to add this class to a package that contains classes that were signed by a different set of certificates than this class, or if the class name begins with "java.".

### defineClass

protected final [Class](http://docs.google.com/java/lang/Class.html)<?> **defineClass**([String](http://docs.google.com/java/lang/String.html) name,  
 [ByteBuffer](http://docs.google.com/java/nio/ByteBuffer.html) b,  
 [CodeSource](http://docs.google.com/java/security/CodeSource.html) cs)

Converts a [ByteBuffer](http://docs.google.com/java/nio/ByteBuffer.html) into an instance of class Class, with an optional CodeSource. Before the class can be used it must be resolved.

If a non-null CodeSource is supplied a ProtectionDomain is constructed and associated with the class being defined.

**Parameters:**name - the expected name of the class, or null if not known, using '.' and not '/' as the separator and without a trailing ".class" suffix.b - the bytes that make up the class data. The bytes from positions b.position() through b.position() + b.limit() -1 should have the format of a valid class file as defined by the [Java Virtual Machine Specification](http://java.sun.com/docs/books/vmspec/).cs - the associated CodeSource, or null if none **Returns:**the Class object created from the data, and optional CodeSource. **Throws:** [ClassFormatError](http://docs.google.com/java/lang/ClassFormatError.html) - if the data did not contain a valid class [SecurityException](http://docs.google.com/java/lang/SecurityException.html) - if an attempt is made to add this class to a package that contains classes that were signed by a different set of certificates than this class, or if the class name begins with "java.".**Since:** 1.5

### getPermissions

protected [PermissionCollection](http://docs.google.com/java/security/PermissionCollection.html) **getPermissions**([CodeSource](http://docs.google.com/java/security/CodeSource.html) codesource)

Returns the permissions for the given CodeSource object.

This method is invoked by the defineClass method which takes a CodeSource as an argument when it is constructing the ProtectionDomain for the class being defined.

**Parameters:**codesource - the codesource. **Returns:**the permissions granted to the codesource.

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/SecureClassLoader.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/security/PublicKey.html)   [**NEXT CLASS**](http://docs.google.com/java/security/SecureRandom.html) | [**FRAMES**](http://docs.google.com/index.html?java/security/SecureClassLoader.html)    [**NO FRAMES**](http://docs.google.com/SecureClassLoader.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | [CONSTR](#3znysh7) | [METHOD](#2et92p0) | DETAIL: FIELD | [CONSTR](#1t3h5sf) | [METHOD](#17dp8vu) |

[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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