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

## **javax.net.ssl**

Class KeyManagerFactory

[java.lang.Object](http://docs.google.com/java/lang/Object.html)  
 **javax.net.ssl.KeyManagerFactory**

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

This class acts as a factory for key managers based on a source of key material. Each key manager manages a specific type of key material for use by secure sockets. The key material is based on a KeyStore and/or provider specific sources.

**Since:** 1.4 **See Also:**[KeyManager](http://docs.google.com/javax/net/ssl/KeyManager.html)

| **Constructor Summary** | |
| --- | --- |
| protected | [**KeyManagerFactory**](http://docs.google.com/javax/net/ssl/KeyManagerFactory.html#KeyManagerFactory(javax.net.ssl.KeyManagerFactorySpi,%20java.security.Provider,%20java.lang.String))([KeyManagerFactorySpi](http://docs.google.com/javax/net/ssl/KeyManagerFactorySpi.html) factorySpi, [Provider](http://docs.google.com/java/security/Provider.html) provider, [String](http://docs.google.com/java/lang/String.html) algorithm)            Creates a KeyManagerFactory object. |

| **Method Summary** | |
| --- | --- |
| [String](http://docs.google.com/java/lang/String.html) | [**getAlgorithm**](http://docs.google.com/javax/net/ssl/KeyManagerFactory.html#getAlgorithm())()            Returns the algorithm name of this KeyManagerFactory object. |
| static [String](http://docs.google.com/java/lang/String.html) | [**getDefaultAlgorithm**](http://docs.google.com/javax/net/ssl/KeyManagerFactory.html#getDefaultAlgorithm())()            Obtains the default KeyManagerFactory algorithm name. |
| static [KeyManagerFactory](http://docs.google.com/javax/net/ssl/KeyManagerFactory.html) | [**getInstance**](http://docs.google.com/javax/net/ssl/KeyManagerFactory.html#getInstance(java.lang.String))([String](http://docs.google.com/java/lang/String.html) algorithm)            Returns a KeyManagerFactory object that acts as a factory for key managers. |
| static [KeyManagerFactory](http://docs.google.com/javax/net/ssl/KeyManagerFactory.html) | [**getInstance**](http://docs.google.com/javax/net/ssl/KeyManagerFactory.html#getInstance(java.lang.String,%20java.security.Provider))([String](http://docs.google.com/java/lang/String.html) algorithm, [Provider](http://docs.google.com/java/security/Provider.html) provider)            Returns a KeyManagerFactory object that acts as a factory for key managers. |
| static [KeyManagerFactory](http://docs.google.com/javax/net/ssl/KeyManagerFactory.html) | [**getInstance**](http://docs.google.com/javax/net/ssl/KeyManagerFactory.html#getInstance(java.lang.String,%20java.lang.String))([String](http://docs.google.com/java/lang/String.html) algorithm, [String](http://docs.google.com/java/lang/String.html) provider)            Returns a KeyManagerFactory object that acts as a factory for key managers. |
| [KeyManager](http://docs.google.com/javax/net/ssl/KeyManager.html)[] | [**getKeyManagers**](http://docs.google.com/javax/net/ssl/KeyManagerFactory.html#getKeyManagers())()            Returns one key manager for each type of key material. |
| [Provider](http://docs.google.com/java/security/Provider.html) | [**getProvider**](http://docs.google.com/javax/net/ssl/KeyManagerFactory.html#getProvider())()            Returns the provider of this KeyManagerFactory object. |
| void | [**init**](http://docs.google.com/javax/net/ssl/KeyManagerFactory.html#init(java.security.KeyStore,%20char%5B%5D))([KeyStore](http://docs.google.com/java/security/KeyStore.html) ks, char[] password)            Initializes this factory with a source of key material. |
| void | [**init**](http://docs.google.com/javax/net/ssl/KeyManagerFactory.html#init(javax.net.ssl.ManagerFactoryParameters))([ManagerFactoryParameters](http://docs.google.com/javax/net/ssl/ManagerFactoryParameters.html) spec)            Initializes this factory with a source of provider-specific key material. |

| **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** |
| --- |

### KeyManagerFactory

protected **KeyManagerFactory**([KeyManagerFactorySpi](http://docs.google.com/javax/net/ssl/KeyManagerFactorySpi.html) factorySpi,  
 [Provider](http://docs.google.com/java/security/Provider.html) provider,  
 [String](http://docs.google.com/java/lang/String.html) algorithm)

Creates a KeyManagerFactory object.

**Parameters:**factorySpi - the delegateprovider - the provideralgorithm - the algorithm

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

### getDefaultAlgorithm

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

Obtains the default KeyManagerFactory algorithm name.

The default algorithm can be changed at runtime by setting the value of the "ssl.KeyManagerFactory.algorithm" security property (set in the Java security properties file or by calling [Security.setProperty(java.lang.String, java.lang.String)](http://docs.google.com/java/security/Security.html#setProperty(java.lang.String,%20java.lang.String))) to the desired algorithm name.

**Returns:**the default algorithm name as specified in the Java security properties, or an implementation-specific default if no such property exists.**See Also:**[Security.setProperty(java.lang.String, java.lang.String)](http://docs.google.com/java/security/Security.html#setProperty(java.lang.String,%20java.lang.String))

### getAlgorithm

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

Returns the algorithm name of this KeyManagerFactory object.

This is the same name that was specified in one of the getInstance calls that created this KeyManagerFactory object.

**Returns:**the algorithm name of this KeyManagerFactory object.

### getInstance

public static final [KeyManagerFactory](http://docs.google.com/javax/net/ssl/KeyManagerFactory.html) **getInstance**([String](http://docs.google.com/java/lang/String.html) algorithm)  
 throws [NoSuchAlgorithmException](http://docs.google.com/java/security/NoSuchAlgorithmException.html)

Returns a KeyManagerFactory object that acts as a factory for key managers.

This method traverses the list of registered security Providers, starting with the most preferred Provider. A new KeyManagerFactory object encapsulating the KeyManagerFactorySpi implementation from the first Provider that supports the specified algorithm is returned.

Note that the list of registered providers may be retrieved via the [Security.getProviders()](http://docs.google.com/java/security/Security.html#getProviders()) method.

**Parameters:**algorithm - the standard name of the requested algorithm. See the  [Java Secure Socket Extension Reference Guide](http://docs.google.com/technotes/guides/security/jsse/JSSERefGuide.html)  for information about standard algorithm names. **Returns:**the new KeyManagerFactory object. **Throws:** [NoSuchAlgorithmException](http://docs.google.com/java/security/NoSuchAlgorithmException.html) - if no Provider supports a KeyManagerFactorySpi implementation for the specified algorithm.**See Also:**[Provider](http://docs.google.com/java/security/Provider.html)

### getInstance

public static final [KeyManagerFactory](http://docs.google.com/javax/net/ssl/KeyManagerFactory.html) **getInstance**([String](http://docs.google.com/java/lang/String.html) algorithm,  
 [String](http://docs.google.com/java/lang/String.html) provider)  
 throws [NoSuchAlgorithmException](http://docs.google.com/java/security/NoSuchAlgorithmException.html),  
 [NoSuchProviderException](http://docs.google.com/java/security/NoSuchProviderException.html)

Returns a KeyManagerFactory object that acts as a factory for key managers.

A new KeyManagerFactory object encapsulating the KeyManagerFactorySpi implementation from the specified provider is returned. The specified provider must be registered in the security provider list.

Note that the list of registered providers may be retrieved via the [Security.getProviders()](http://docs.google.com/java/security/Security.html#getProviders()) method.

**Parameters:**algorithm - the standard name of the requested algorithm. See the  [Java Secure Socket Extension Reference Guide](http://docs.google.com/technotes/guides/security/jsse/JSSERefGuide.html)  for information about standard algorithm names.provider - the name of the provider. **Returns:**the new KeyManagerFactory object. **Throws:** [NoSuchAlgorithmException](http://docs.google.com/java/security/NoSuchAlgorithmException.html) - if a KeyManagerFactorySpi implementation for the specified algorithm is not available from the specified provider. [NoSuchProviderException](http://docs.google.com/java/security/NoSuchProviderException.html) - if the specified provider is not registered in the security provider list. [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if the provider name is null or empty.**See Also:**[Provider](http://docs.google.com/java/security/Provider.html)

### getInstance

public static final [KeyManagerFactory](http://docs.google.com/javax/net/ssl/KeyManagerFactory.html) **getInstance**([String](http://docs.google.com/java/lang/String.html) algorithm,  
 [Provider](http://docs.google.com/java/security/Provider.html) provider)  
 throws [NoSuchAlgorithmException](http://docs.google.com/java/security/NoSuchAlgorithmException.html)

Returns a KeyManagerFactory object that acts as a factory for key managers.

A new KeyManagerFactory object encapsulating the KeyManagerFactorySpi implementation from the specified Provider object is returned. Note that the specified Provider object does not have to be registered in the provider list.

**Parameters:**algorithm - the standard name of the requested algorithm. See the  [Java Secure Socket Extension Reference Guide](http://docs.google.com/technotes/guides/security/jsse/JSSERefGuide.html)  for information about standard algorithm names.provider - an instance of the provider. **Returns:**the new KeyManagerFactory object. **Throws:** [NoSuchAlgorithmException](http://docs.google.com/java/security/NoSuchAlgorithmException.html) - if a KeyManagerFactorySpi implementation for the specified algorithm is not available from the specified Provider object. [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if provider is null.**See Also:**[Provider](http://docs.google.com/java/security/Provider.html)

### getProvider

public final [Provider](http://docs.google.com/java/security/Provider.html) **getProvider**()

Returns the provider of this KeyManagerFactory object.

**Returns:**the provider of this KeyManagerFactory object

### init

public final void **init**([KeyStore](http://docs.google.com/java/security/KeyStore.html) ks,  
 char[] password)  
 throws [KeyStoreException](http://docs.google.com/java/security/KeyStoreException.html),  
 [NoSuchAlgorithmException](http://docs.google.com/java/security/NoSuchAlgorithmException.html),  
 [UnrecoverableKeyException](http://docs.google.com/java/security/UnrecoverableKeyException.html)

Initializes this factory with a source of key material.

The provider typically uses a KeyStore for obtaining key material for use during secure socket negotiations. The KeyStore is generally password-protected.

For more flexible initialization, please see [init(ManagerFactoryParameters)](http://docs.google.com/javax/net/ssl/KeyManagerFactory.html#init(javax.net.ssl.ManagerFactoryParameters)).

**Parameters:**ks - the key store or nullpassword - the password for recovering keys in the KeyStore **Throws:** [KeyStoreException](http://docs.google.com/java/security/KeyStoreException.html) - if this operation fails [NoSuchAlgorithmException](http://docs.google.com/java/security/NoSuchAlgorithmException.html) - if the specified algorithm is not available from the specified provider. [UnrecoverableKeyException](http://docs.google.com/java/security/UnrecoverableKeyException.html) - if the key cannot be recovered (e.g. the given password is wrong).

### init

public final void **init**([ManagerFactoryParameters](http://docs.google.com/javax/net/ssl/ManagerFactoryParameters.html) spec)  
 throws [InvalidAlgorithmParameterException](http://docs.google.com/java/security/InvalidAlgorithmParameterException.html)

Initializes this factory with a source of provider-specific key material.

In some cases, initialization parameters other than a keystore and password may be needed by a provider. Users of that particular provider are expected to pass an implementation of the appropriate ManagerFactoryParameters as defined by the provider. The provider can then call the specified methods in the ManagerFactoryParameters implementation to obtain the needed information.

**Parameters:**spec - an implementation of a provider-specific parameter specification **Throws:** [InvalidAlgorithmParameterException](http://docs.google.com/java/security/InvalidAlgorithmParameterException.html) - if an error is encountered

### getKeyManagers

public final [KeyManager](http://docs.google.com/javax/net/ssl/KeyManager.html)[] **getKeyManagers**()

Returns one key manager for each type of key material.

**Returns:**the key managers **Throws:** [IllegalStateException](http://docs.google.com/java/lang/IllegalStateException.html) - if the KeyManagerFactory is not initialized

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/KeyManagerFactory.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/net/ssl/KeyManager.html)   [**NEXT CLASS**](http://docs.google.com/javax/net/ssl/KeyManagerFactorySpi.html) | [**FRAMES**](http://docs.google.com/index.html?javax/net/ssl/KeyManagerFactory.html)    [**NO FRAMES**](http://docs.google.com/KeyManagerFactory.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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