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

## **javax.crypto**

Class KeyGeneratorSpi

[java.lang.Object](http://docs.google.com/java/lang/Object.html)  
 **javax.crypto.KeyGeneratorSpi**

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

This class defines the *Service Provider Interface* (**SPI**) for the KeyGenerator class. All the abstract methods in this class must be implemented by each cryptographic service provider who wishes to supply the implementation of a key generator for a particular algorithm.

**Since:** 1.4 **See Also:**[SecretKey](http://docs.google.com/javax/crypto/SecretKey.html)

| **Constructor Summary** | |
| --- | --- |
| [**KeyGeneratorSpi**](http://docs.google.com/javax/crypto/KeyGeneratorSpi.html#KeyGeneratorSpi())() |

| **Method Summary** | |
| --- | --- |
| protected abstract  [SecretKey](http://docs.google.com/javax/crypto/SecretKey.html) | [**engineGenerateKey**](http://docs.google.com/javax/crypto/KeyGeneratorSpi.html#engineGenerateKey())()            Generates a secret key. |
| protected abstract  void | [**engineInit**](http://docs.google.com/javax/crypto/KeyGeneratorSpi.html#engineInit(java.security.spec.AlgorithmParameterSpec,%20java.security.SecureRandom))([AlgorithmParameterSpec](http://docs.google.com/java/security/spec/AlgorithmParameterSpec.html) params, [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) random)            Initializes the key generator with the specified parameter set and a user-provided source of randomness. |
| protected abstract  void | [**engineInit**](http://docs.google.com/javax/crypto/KeyGeneratorSpi.html#engineInit(int,%20java.security.SecureRandom))(int keysize, [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) random)            Initializes this key generator for a certain keysize, using the given source of randomness. |
| protected abstract  void | [**engineInit**](http://docs.google.com/javax/crypto/KeyGeneratorSpi.html#engineInit(java.security.SecureRandom))([SecureRandom](http://docs.google.com/java/security/SecureRandom.html) random)            Initializes the key generator. |

| **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** |
| --- |

### KeyGeneratorSpi

public **KeyGeneratorSpi**()

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

### engineInit

protected abstract void **engineInit**([SecureRandom](http://docs.google.com/java/security/SecureRandom.html) random)

Initializes the key generator.

**Parameters:**random - the source of randomness for this generator

### engineInit

protected abstract void **engineInit**([AlgorithmParameterSpec](http://docs.google.com/java/security/spec/AlgorithmParameterSpec.html) params,  
 [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) random)  
 throws [InvalidAlgorithmParameterException](http://docs.google.com/java/security/InvalidAlgorithmParameterException.html)

Initializes the key generator with the specified parameter set and a user-provided source of randomness.

**Parameters:**params - the key generation parametersrandom - the source of randomness for this key generator **Throws:** [InvalidAlgorithmParameterException](http://docs.google.com/java/security/InvalidAlgorithmParameterException.html) - if params is inappropriate for this key generator

### engineInit

protected abstract void **engineInit**(int keysize,  
 [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) random)

Initializes this key generator for a certain keysize, using the given source of randomness.

**Parameters:**keysize - the keysize. This is an algorithm-specific metric, specified in number of bits.random - the source of randomness for this key generator **Throws:** [InvalidParameterException](http://docs.google.com/java/security/InvalidParameterException.html) - if the keysize is wrong or not supported.

### engineGenerateKey

protected abstract [SecretKey](http://docs.google.com/javax/crypto/SecretKey.html) **engineGenerateKey**()

Generates a secret key.

**Returns:**the new key

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/KeyGeneratorSpi.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/crypto/KeyGenerator.html)   [**NEXT CLASS**](http://docs.google.com/javax/crypto/Mac.html) | [**FRAMES**](http://docs.google.com/index.html?javax/crypto/KeyGeneratorSpi.html)    [**NO FRAMES**](http://docs.google.com/KeyGeneratorSpi.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
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[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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