| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | [**Class**](http://docs.google.com/java/security/SecureRandom.html) | **Use** | [**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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| PREV   NEXT | [**FRAMES**](http://docs.google.com/index.html?java/security//class-useSecureRandom.html)    [**NO FRAMES**](http://docs.google.com/SecureRandom.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |

**Uses of Class**

**java.security.SecureRandom**

| Packages that use [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) | |
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| [**java.security**](#3znysh7) | Provides the classes and interfaces for the security framework. |
| [**java.security.interfaces**](#2et92p0) | Provides interfaces for generating RSA (Rivest, Shamir and Adleman AsymmetricCipher algorithm) keys as defined in the RSA Laboratory Technical Note PKCS#1, and DSA (Digital Signature Algorithm) keys as defined in NIST's FIPS-186. |
| [**javax.crypto**](#tyjcwt) | Provides the classes and interfaces for cryptographic operations. |
| [**javax.net.ssl**](#3dy6vkm) | Provides classes for the secure socket package. |

| Uses of [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) in [java.security](http://docs.google.com/java/security/package-summary.html) | |
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| Fields in [java.security](http://docs.google.com/java/security/package-summary.html) declared as [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) | |
| --- | --- |
| protected  [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) | **SignatureSpi.**[**appRandom**](http://docs.google.com/java/security/SignatureSpi.html#appRandom)            Application-specified source of randomness. |

| Methods in [java.security](http://docs.google.com/java/security/package-summary.html) that return [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) | |
| --- | --- |
| static [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) | **SecureRandom.**[**getInstance**](http://docs.google.com/java/security/SecureRandom.html#getInstance(java.lang.String))([String](http://docs.google.com/java/lang/String.html) algorithm)            Returns a SecureRandom object that implements the specified Random Number Generator (RNG) algorithm. |
| static [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) | **SecureRandom.**[**getInstance**](http://docs.google.com/java/security/SecureRandom.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 SecureRandom object that implements the specified Random Number Generator (RNG) algorithm. |
| static [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) | **SecureRandom.**[**getInstance**](http://docs.google.com/java/security/SecureRandom.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 SecureRandom object that implements the specified Random Number Generator (RNG) algorithm. |

| Methods in [java.security](http://docs.google.com/java/security/package-summary.html) with parameters of type [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) | |
| --- | --- |
| protected abstract  void | **AlgorithmParameterGeneratorSpi.**[**engineInit**](http://docs.google.com/java/security/AlgorithmParameterGeneratorSpi.html#engineInit(java.security.spec.AlgorithmParameterSpec,%20java.security.SecureRandom))([AlgorithmParameterSpec](http://docs.google.com/java/security/spec/AlgorithmParameterSpec.html) genParamSpec, [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) random)            Initializes this parameter generator with a set of algorithm-specific parameter generation values. |
| protected abstract  void | **AlgorithmParameterGeneratorSpi.**[**engineInit**](http://docs.google.com/java/security/AlgorithmParameterGeneratorSpi.html#engineInit(int,%20java.security.SecureRandom))(int size, [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) random)            Initializes this parameter generator for a certain size and source of randomness. |
| protected  void | **SignatureSpi.**[**engineInitSign**](http://docs.google.com/java/security/SignatureSpi.html#engineInitSign(java.security.PrivateKey,%20java.security.SecureRandom))([PrivateKey](http://docs.google.com/java/security/PrivateKey.html) privateKey, [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) random)            Initializes this signature object with the specified private key and source of randomness for signing operations. |
| void | **AlgorithmParameterGenerator.**[**init**](http://docs.google.com/java/security/AlgorithmParameterGenerator.html#init(java.security.spec.AlgorithmParameterSpec,%20java.security.SecureRandom))([AlgorithmParameterSpec](http://docs.google.com/java/security/spec/AlgorithmParameterSpec.html) genParamSpec, [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) random)            Initializes this parameter generator with a set of algorithm-specific parameter generation values. |
| void | **AlgorithmParameterGenerator.**[**init**](http://docs.google.com/java/security/AlgorithmParameterGenerator.html#init(int,%20java.security.SecureRandom))(int size, [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) random)            Initializes this parameter generator for a certain size and source of randomness. |
| void | **KeyPairGenerator.**[**initialize**](http://docs.google.com/java/security/KeyPairGenerator.html#initialize(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 pair generator with the given parameter set and source of randomness. |
| void | **KeyPairGeneratorSpi.**[**initialize**](http://docs.google.com/java/security/KeyPairGeneratorSpi.html#initialize(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 pair generator using the specified parameter set and user-provided source of randomness. |
| void | **KeyPairGenerator.**[**initialize**](http://docs.google.com/java/security/KeyPairGenerator.html#initialize(int,%20java.security.SecureRandom))(int keysize, [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) random)            Initializes the key pair generator for a certain keysize with the given source of randomness (and a default parameter set). |
| abstract  void | **KeyPairGeneratorSpi.**[**initialize**](http://docs.google.com/java/security/KeyPairGeneratorSpi.html#initialize(int,%20java.security.SecureRandom))(int keysize, [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) random)            Initializes the key pair generator for a certain keysize, using the default parameter set. |
| void | **Signature.**[**initSign**](http://docs.google.com/java/security/Signature.html#initSign(java.security.PrivateKey,%20java.security.SecureRandom))([PrivateKey](http://docs.google.com/java/security/PrivateKey.html) privateKey, [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) random)            Initialize this object for signing. |

| Uses of [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) in [java.security.interfaces](http://docs.google.com/java/security/interfaces/package-summary.html) | |
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| Methods in [java.security.interfaces](http://docs.google.com/java/security/interfaces/package-summary.html) with parameters of type [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) | |
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| void | **DSAKeyPairGenerator.**[**initialize**](http://docs.google.com/java/security/interfaces/DSAKeyPairGenerator.html#initialize(java.security.interfaces.DSAParams,%20java.security.SecureRandom))([DSAParams](http://docs.google.com/java/security/interfaces/DSAParams.html) params, [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) random)            Initializes the key pair generator using the DSA family parameters (p,q and g) and an optional SecureRandom bit source. |
| void | **DSAKeyPairGenerator.**[**initialize**](http://docs.google.com/java/security/interfaces/DSAKeyPairGenerator.html#initialize(int,%20boolean,%20java.security.SecureRandom))(int modlen, boolean genParams, [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) random)            Initializes the key pair generator for a given modulus length (instead of parameters), and an optional SecureRandom bit source. |

| Uses of [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) in [javax.crypto](http://docs.google.com/javax/crypto/package-summary.html) | |
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| Methods in [javax.crypto](http://docs.google.com/javax/crypto/package-summary.html) with parameters of type [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) | |
| --- | --- |
| protected abstract  void | **KeyGeneratorSpi.**[**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 | **CipherSpi.**[**engineInit**](http://docs.google.com/javax/crypto/CipherSpi.html#engineInit(int,%20java.security.Key,%20java.security.spec.AlgorithmParameterSpec,%20java.security.SecureRandom))(int opmode, [Key](http://docs.google.com/java/security/Key.html) key, [AlgorithmParameterSpec](http://docs.google.com/java/security/spec/AlgorithmParameterSpec.html) params, [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) random)            Initializes this cipher with a key, a set of algorithm parameters, and a source of randomness. |
| protected abstract  void | **CipherSpi.**[**engineInit**](http://docs.google.com/javax/crypto/CipherSpi.html#engineInit(int,%20java.security.Key,%20java.security.AlgorithmParameters,%20java.security.SecureRandom))(int opmode, [Key](http://docs.google.com/java/security/Key.html) key, [AlgorithmParameters](http://docs.google.com/java/security/AlgorithmParameters.html) params, [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) random)            Initializes this cipher with a key, a set of algorithm parameters, and a source of randomness. |
| protected abstract  void | **CipherSpi.**[**engineInit**](http://docs.google.com/javax/crypto/CipherSpi.html#engineInit(int,%20java.security.Key,%20java.security.SecureRandom))(int opmode, [Key](http://docs.google.com/java/security/Key.html) key, [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) random)            Initializes this cipher with a key and a source of randomness. |
| protected abstract  void | **KeyGeneratorSpi.**[**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 | **KeyAgreementSpi.**[**engineInit**](http://docs.google.com/javax/crypto/KeyAgreementSpi.html#engineInit(java.security.Key,%20java.security.spec.AlgorithmParameterSpec,%20java.security.SecureRandom))([Key](http://docs.google.com/java/security/Key.html) key, [AlgorithmParameterSpec](http://docs.google.com/java/security/spec/AlgorithmParameterSpec.html) params, [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) random)            Initializes this key agreement with the given key, set of algorithm parameters, and source of randomness. |
| protected abstract  void | **KeyAgreementSpi.**[**engineInit**](http://docs.google.com/javax/crypto/KeyAgreementSpi.html#engineInit(java.security.Key,%20java.security.SecureRandom))([Key](http://docs.google.com/java/security/Key.html) key, [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) random)            Initializes this key agreement with the given key and source of randomness. |
| protected abstract  void | **KeyGeneratorSpi.**[**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. |
| void | **KeyGenerator.**[**init**](http://docs.google.com/javax/crypto/KeyGenerator.html#init(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 this key generator with the specified parameter set and a user-provided source of randomness. |
| void | **Cipher.**[**init**](http://docs.google.com/javax/crypto/Cipher.html#init(int,%20java.security.cert.Certificate,%20java.security.SecureRandom))(int opmode, [Certificate](http://docs.google.com/java/security/cert/Certificate.html) certificate, [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) random)            Initializes this cipher with the public key from the given certificate and a source of randomness. |
| void | **Cipher.**[**init**](http://docs.google.com/javax/crypto/Cipher.html#init(int,%20java.security.Key,%20java.security.spec.AlgorithmParameterSpec,%20java.security.SecureRandom))(int opmode, [Key](http://docs.google.com/java/security/Key.html) key, [AlgorithmParameterSpec](http://docs.google.com/java/security/spec/AlgorithmParameterSpec.html) params, [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) random)            Initializes this cipher with a key, a set of algorithm parameters, and a source of randomness. |
| void | **Cipher.**[**init**](http://docs.google.com/javax/crypto/Cipher.html#init(int,%20java.security.Key,%20java.security.AlgorithmParameters,%20java.security.SecureRandom))(int opmode, [Key](http://docs.google.com/java/security/Key.html) key, [AlgorithmParameters](http://docs.google.com/java/security/AlgorithmParameters.html) params, [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) random)            Initializes this cipher with a key, a set of algorithm parameters, and a source of randomness. |
| void | **Cipher.**[**init**](http://docs.google.com/javax/crypto/Cipher.html#init(int,%20java.security.Key,%20java.security.SecureRandom))(int opmode, [Key](http://docs.google.com/java/security/Key.html) key, [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) random)            Initializes this cipher with a key and a source of randomness. |
| void | **KeyGenerator.**[**init**](http://docs.google.com/javax/crypto/KeyGenerator.html#init(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 a user-provided source of randomness. |
| void | **KeyAgreement.**[**init**](http://docs.google.com/javax/crypto/KeyAgreement.html#init(java.security.Key,%20java.security.spec.AlgorithmParameterSpec,%20java.security.SecureRandom))([Key](http://docs.google.com/java/security/Key.html) key, [AlgorithmParameterSpec](http://docs.google.com/java/security/spec/AlgorithmParameterSpec.html) params, [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) random)            Initializes this key agreement with the given key, set of algorithm parameters, and source of randomness. |
| void | **KeyAgreement.**[**init**](http://docs.google.com/javax/crypto/KeyAgreement.html#init(java.security.Key,%20java.security.SecureRandom))([Key](http://docs.google.com/java/security/Key.html) key, [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) random)            Initializes this key agreement with the given key and source of randomness. |
| void | **KeyGenerator.**[**init**](http://docs.google.com/javax/crypto/KeyGenerator.html#init(java.security.SecureRandom))([SecureRandom](http://docs.google.com/java/security/SecureRandom.html) random)            Initializes this key generator. |

| Uses of [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) in [javax.net.ssl](http://docs.google.com/javax/net/ssl/package-summary.html) | |
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| Methods in [javax.net.ssl](http://docs.google.com/javax/net/ssl/package-summary.html) with parameters of type [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) | |
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| protected abstract  void | **SSLContextSpi.**[**engineInit**](http://docs.google.com/javax/net/ssl/SSLContextSpi.html#engineInit(javax.net.ssl.KeyManager%5B%5D,%20javax.net.ssl.TrustManager%5B%5D,%20java.security.SecureRandom))([KeyManager](http://docs.google.com/javax/net/ssl/KeyManager.html)[] km, [TrustManager](http://docs.google.com/javax/net/ssl/TrustManager.html)[] tm, [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) sr)            Initializes this context. |
| void | **SSLContext.**[**init**](http://docs.google.com/javax/net/ssl/SSLContext.html#init(javax.net.ssl.KeyManager%5B%5D,%20javax.net.ssl.TrustManager%5B%5D,%20java.security.SecureRandom))([KeyManager](http://docs.google.com/javax/net/ssl/KeyManager.html)[] km, [TrustManager](http://docs.google.com/javax/net/ssl/TrustManager.html)[] tm, [SecureRandom](http://docs.google.com/java/security/SecureRandom.html) random)            Initializes this context. |

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | [**Class**](http://docs.google.com/java/security/SecureRandom.html) | **Use** | [**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   NEXT | [**FRAMES**](http://docs.google.com/index.html?java/security//class-useSecureRandom.html)    [**NO FRAMES**](http://docs.google.com/SecureRandom.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |

[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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