| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/KerberosKey.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/security/auth/kerberos/DelegationPermission.html)   [**NEXT CLASS**](http://docs.google.com/javax/security/auth/kerberos/KerberosPrincipal.html) | [**FRAMES**](http://docs.google.com/index.html?javax/security/auth/kerberos/KerberosKey.html)    [**NO FRAMES**](http://docs.google.com/KerberosKey.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | [CONSTR](#3znysh7) | [METHOD](#2et92p0) | DETAIL: FIELD | [CONSTR](#3dy6vkm) | [METHOD](#2s8eyo1) |

## **javax.security.auth.kerberos**

Class KerberosKey

[java.lang.Object](http://docs.google.com/java/lang/Object.html)  
 **javax.security.auth.kerberos.KerberosKey**

**All Implemented Interfaces:** [Serializable](http://docs.google.com/java/io/Serializable.html), [Key](http://docs.google.com/java/security/Key.html), [SecretKey](http://docs.google.com/javax/crypto/SecretKey.html), [Destroyable](http://docs.google.com/javax/security/auth/Destroyable.html)

public class **KerberosKey**extends [Object](http://docs.google.com/java/lang/Object.html)implements [SecretKey](http://docs.google.com/javax/crypto/SecretKey.html), [Destroyable](http://docs.google.com/javax/security/auth/Destroyable.html)

This class encapsulates a long term secret key for a Kerberos principal.

All Kerberos JAAS login modules that obtain a principal's password and generate the secret key from it should use this class. Where available, the login module might even read this secret key directly from a Kerberos "keytab". Sometimes, such as when authenticating a server in the absence of user-to-user authentication, the login module will store an instance of this class in the private credential set of a [Subject](http://docs.google.com/javax/security/auth/Subject.html) during the commit phase of the authentication process.

It might be necessary for the application to be granted a [PrivateCredentialPermission](http://docs.google.com/javax/security/auth/PrivateCredentialPermission.html) if it needs to access the KerberosKey instance from a Subject. This permission is not needed when the application depends on the default JGSS Kerberos mechanism to access the KerberosKey. In that case, however, the application will need an appropriate [ServicePermission](http://docs.google.com/javax/security/auth/kerberos/ServicePermission.html).

**Since:** 1.4 **See Also:**[Serialized Form](http://docs.google.com/serialized-form.html#javax.security.auth.kerberos.KerberosKey)

| **Constructor Summary** | |
| --- | --- |
| [**KerberosKey**](http://docs.google.com/javax/security/auth/kerberos/KerberosKey.html#KerberosKey(javax.security.auth.kerberos.KerberosPrincipal,%20byte%5B%5D,%20int,%20int))([KerberosPrincipal](http://docs.google.com/javax/security/auth/kerberos/KerberosPrincipal.html) principal, byte[] keyBytes, int keyType, int versionNum)            Constructs a KerberosKey from the given bytes when the key type and key version number are known. |
| [**KerberosKey**](http://docs.google.com/javax/security/auth/kerberos/KerberosKey.html#KerberosKey(javax.security.auth.kerberos.KerberosPrincipal,%20char%5B%5D,%20java.lang.String))([KerberosPrincipal](http://docs.google.com/javax/security/auth/kerberos/KerberosPrincipal.html) principal, char[] password, [String](http://docs.google.com/java/lang/String.html) algorithm)            Constructs a KerberosKey from a principal's password. |

| **Method Summary** | |
| --- | --- |
| void | [**destroy**](http://docs.google.com/javax/security/auth/kerberos/KerberosKey.html#destroy())()            Destroys this key. |
| boolean | [**equals**](http://docs.google.com/javax/security/auth/kerberos/KerberosKey.html#equals(java.lang.Object))([Object](http://docs.google.com/java/lang/Object.html) other)            Compares the specified Object with this KerberosKey for equality. |
| [String](http://docs.google.com/java/lang/String.html) | [**getAlgorithm**](http://docs.google.com/javax/security/auth/kerberos/KerberosKey.html#getAlgorithm())()            Returns the standard algorithm name for this key. |
| byte[] | [**getEncoded**](http://docs.google.com/javax/security/auth/kerberos/KerberosKey.html#getEncoded())()            Returns the key material of this secret key. |
| [String](http://docs.google.com/java/lang/String.html) | [**getFormat**](http://docs.google.com/javax/security/auth/kerberos/KerberosKey.html#getFormat())()            Returns the name of the encoding format for this secret key. |
| int | [**getKeyType**](http://docs.google.com/javax/security/auth/kerberos/KerberosKey.html#getKeyType())()            Returns the key type for this long-term key. |
| [KerberosPrincipal](http://docs.google.com/javax/security/auth/kerberos/KerberosPrincipal.html) | [**getPrincipal**](http://docs.google.com/javax/security/auth/kerberos/KerberosKey.html#getPrincipal())()            Returns the principal that this key belongs to. |
| int | [**getVersionNumber**](http://docs.google.com/javax/security/auth/kerberos/KerberosKey.html#getVersionNumber())()            Returns the key version number. |
| int | [**hashCode**](http://docs.google.com/javax/security/auth/kerberos/KerberosKey.html#hashCode())()            Returns a hashcode for this KerberosKey. |
| boolean | [**isDestroyed**](http://docs.google.com/javax/security/auth/kerberos/KerberosKey.html#isDestroyed())()            Determines if this key has been destroyed. |
| [String](http://docs.google.com/java/lang/String.html) | [**toString**](http://docs.google.com/javax/security/auth/kerberos/KerberosKey.html#toString())()            Returns a string representation of the object. |

| **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()), [finalize](http://docs.google.com/java/lang/Object.html#finalize()), [getClass](http://docs.google.com/java/lang/Object.html#getClass()), [notify](http://docs.google.com/java/lang/Object.html#notify()), [notifyAll](http://docs.google.com/java/lang/Object.html#notifyAll()), [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** |
| --- |

### KerberosKey

public **KerberosKey**([KerberosPrincipal](http://docs.google.com/javax/security/auth/kerberos/KerberosPrincipal.html) principal,  
 byte[] keyBytes,  
 int keyType,  
 int versionNum)

Constructs a KerberosKey from the given bytes when the key type and key version number are known. This can be used when reading the secret key information from a Kerberos "keytab".

**Parameters:**principal - the principal that this secret key belongs tokeyBytes - the raw bytes for the secret keykeyType - the key type for the secret key as defined by the Kerberos protocol specification.versionNum - the version number of this secret key

### KerberosKey

public **KerberosKey**([KerberosPrincipal](http://docs.google.com/javax/security/auth/kerberos/KerberosPrincipal.html) principal,  
 char[] password,  
 [String](http://docs.google.com/java/lang/String.html) algorithm)

Constructs a KerberosKey from a principal's password.

**Parameters:**principal - the principal that this password belongs topassword - the password that should be used to compute the keyalgorithm - the name for the algorithm that this key will be used for. This parameter may be null in which case the default algorithm "DES" will be assumed. **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if the name of the algorithm passed is unsupported.

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

### getPrincipal

public final [KerberosPrincipal](http://docs.google.com/javax/security/auth/kerberos/KerberosPrincipal.html) **getPrincipal**()

Returns the principal that this key belongs to.

**Returns:**the principal this key belongs to.

### getVersionNumber

public final int **getVersionNumber**()

Returns the key version number.

**Returns:**the key version number.

### getKeyType

public final int **getKeyType**()

Returns the key type for this long-term key.

**Returns:**the key type.

### getAlgorithm

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

Returns the standard algorithm name for this key. For example, "DES" would indicate that this key is a DES key. See Appendix A in the  [Java Cryptography Architecture API Specification & Reference](http://docs.google.com/technotes/guides/security/crypto/CryptoSpec.html#AppA)  for information about standard algorithm names.

**Specified by:**[getAlgorithm](http://docs.google.com/java/security/Key.html#getAlgorithm()) in interface [Key](http://docs.google.com/java/security/Key.html) **Returns:**the name of the algorithm associated with this key.

### getFormat

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

Returns the name of the encoding format for this secret key.

**Specified by:**[getFormat](http://docs.google.com/java/security/Key.html#getFormat()) in interface [Key](http://docs.google.com/java/security/Key.html) **Returns:**the String "RAW"

### getEncoded

public final byte[] **getEncoded**()

Returns the key material of this secret key.

**Specified by:**[getEncoded](http://docs.google.com/java/security/Key.html#getEncoded()) in interface [Key](http://docs.google.com/java/security/Key.html) **Returns:**the key material

### destroy

public void **destroy**()  
 throws [DestroyFailedException](http://docs.google.com/javax/security/auth/DestroyFailedException.html)

Destroys this key. A call to any of its other methods after this will cause an IllegalStateException to be thrown.

**Specified by:**[destroy](http://docs.google.com/javax/security/auth/Destroyable.html#destroy()) in interface [Destroyable](http://docs.google.com/javax/security/auth/Destroyable.html) **Throws:** [DestroyFailedException](http://docs.google.com/javax/security/auth/DestroyFailedException.html) - if some error occurs while destorying this key.

### isDestroyed

public boolean **isDestroyed**()

Determines if this key has been destroyed.

**Specified by:**[isDestroyed](http://docs.google.com/javax/security/auth/Destroyable.html#isDestroyed()) in interface [Destroyable](http://docs.google.com/javax/security/auth/Destroyable.html) **Returns:**true if this Object has been destroyed, false otherwise.

### toString

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

**Description copied from class:** [**Object**](http://docs.google.com/java/lang/Object.html#toString()) Returns a string representation of the object. In general, the toString method returns a string that "textually represents" this object. The result should be a concise but informative representation that is easy for a person to read. It is recommended that all subclasses override this method.

The toString method for class Object returns a string consisting of the name of the class of which the object is an instance, the at-sign character `@', and the unsigned hexadecimal representation of the hash code of the object. In other words, this method returns a string equal to the value of:

getClass().getName() + '@' + Integer.toHexString(hashCode())

**Overrides:**[toString](http://docs.google.com/java/lang/Object.html#toString()) in class [Object](http://docs.google.com/java/lang/Object.html) **Returns:**a string representation of the object.

### hashCode

public int **hashCode**()

Returns a hashcode for this KerberosKey.

**Overrides:**[hashCode](http://docs.google.com/java/lang/Object.html#hashCode()) in class [Object](http://docs.google.com/java/lang/Object.html) **Returns:**a hashCode() for the KerberosKey**Since:** 1.6 **See Also:**[Object.equals(java.lang.Object)](http://docs.google.com/java/lang/Object.html#equals(java.lang.Object)), [Hashtable](http://docs.google.com/java/util/Hashtable.html)

### equals

public boolean **equals**([Object](http://docs.google.com/java/lang/Object.html) other)

Compares the specified Object with this KerberosKey for equality. Returns true if the given object is also a KerberosKey and the two KerberosKey instances are equivalent.

**Overrides:**[equals](http://docs.google.com/java/lang/Object.html#equals(java.lang.Object)) in class [Object](http://docs.google.com/java/lang/Object.html) **Parameters:**other - the Object to compare to **Returns:**true if the specified object is equal to this KerberosKey, false otherwise. NOTE: Returns false if either of the KerberosKey objects has been destroyed.**Since:** 1.6 **See Also:**[Object.hashCode()](http://docs.google.com/java/lang/Object.html#hashCode()), [Hashtable](http://docs.google.com/java/util/Hashtable.html)

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/KerberosKey.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/security/auth/kerberos/DelegationPermission.html)   [**NEXT CLASS**](http://docs.google.com/javax/security/auth/kerberos/KerberosPrincipal.html) | [**FRAMES**](http://docs.google.com/index.html?javax/security/auth/kerberos/KerberosKey.html)    [**NO FRAMES**](http://docs.google.com/KerberosKey.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | [CONSTR](#3znysh7) | [METHOD](#2et92p0) | DETAIL: FIELD | [CONSTR](#3dy6vkm) | [METHOD](#2s8eyo1) |

[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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