Java™ Platform Standard Ed. 7

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java.security

Class Permissions

java.lang.Object java.security.PermissionCollection java.security.Permissions

All Implemented Interfaces:

Serializable

public final class Permissions
extends PermissionCollection
implements Serializable

This class represents a heterogeneous collection of Permissions. That is, it contains different types of Permission objects, organized into PermissionCollections. For example, if any <code>java.io.FilePermission</code> objects are added to an instance of this class, they are all stored in a single PermissionCollection. It is the PermissionCollection returned by a call to the <code>newPermissionCollection</code> method in the FilePermission class. Similarly, any <code>java.lang.RuntimePermission</code> objects are stored in the PermissionCollection returned by a call to the <code>newPermissionCollection</code> method in the RuntimePermission class. Thus, this class represents a collection of PermissionCollections.

When the add method is called to add a Permission, the Permission is stored in the appropriate PermissionCollection. If no such collection exists yet, the Permission object's class is determined and the newPermissionCollection method is called on that class to create the PermissionCollection and add it to the Permissions object. If newPermissionCollection returns null, then a default PermissionCollection that uses a hashtable will be created and used. Each hashtable entry stores a Permission object as both the key and the value.

Enumerations returned via the elements method are not *fail-fast*. Modifications to a collection should not be performed while enumerating over that collection.

See Also:

Permission, PermissionCollection, AllPermission

Constructor Summary

Constructors

Constructor and Description

Permissions()

Creates a new Permissions object containing no PermissionCollections.

Method Summary

Methods

| Modifier and Type | Method and Description |
|---------------------------------------|---|
| void | add(Permission permission) |
| | Adds a permission object to the PermissionCollection for the class the permission belongs to. |
| Enumeration <permission></permission> | elements() |

Returns an enumeration of all the Permission objects in all the PermissionCollections in this Permissions object.

boolean implies(Permission permission)

Checks to see if this object's PermissionCollection for permissions of the specified permission's class implies the permissions expressed in the *permission* object.

Methods inherited from class java.security.PermissionCollection

isReadOnly, setReadOnly, toString

Methods inherited from class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, wait, wait, wait

Constructor Detail

Permissions

public Permissions()

Creates a new Permissions object containing no PermissionCollections.

Method Detail

add

public void add(Permission permission)

Adds a permission object to the PermissionCollection for the class the permission belongs to. For example, if *permission* is a FilePermission, it is added to the FilePermissionCollection stored in this Permissions object. This method creates a new PermissionCollection object (and adds the permission to it) if an appropriate collection does not yet exist.

Specified by:

add in class PermissionCollection

Parameters:

permission - the Permission object to add.

Throws:

SecurityException - if this Permissions object is marked as readonly.

See Also:

PermissionCollection.isReadOnly()

implies

public boolean implies(Permission permission)

Checks to see if this object's PermissionCollection for permissions of the specified permission's class implies the permissions expressed in the *permission* object. Returns true if the combination of permissions in the appropriate PermissionCollection (e.g., a FilePermissionCollection for a FilePermission) together imply the specified permission.

For example, suppose there is a FilePermissionCollection in this Permissions object, and it contains one FilePermission that specifies "read" access for all files in all subdirectories of the "/tmp" directory, and another FilePermission that specifies "write" access for all files in the "/tmp/scratch/foo" directory. Then if the implies method is called with a permission specifying both "read" and "write" access to files in the "/tmp/scratch/foo" directory, true is returned.

Additionally, if this PermissionCollection contains the AllPermission, this method will always return true.

Specified by:

implies in class PermissionCollection

Parameters:

permission - the Permission object to check.

Returns:

true if "permission" is implied by the permissions in the PermissionCollection it belongs to, false if not.

elements

public Enumeration<Permission> elements()

Returns an enumeration of all the Permission objects in all the PermissionCollections in this Permissions object.

Specified by:

elements in class PermissionCollection

Returns:

an enumeration of all the Permissions.

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Submit a bug or feature

For further API reference and developer documentation, see Java SE Documentation. That documentation contains more detailed, developer-targeted descriptions, with conceptual overviews, definitions of terms, workarounds, and working code examples.

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