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

## **java.security.cert**

Class CertPathValidator

[java.lang.Object](http://docs.google.com/java/lang/Object.html)  
 **java.security.cert.CertPathValidator**

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

A class for validating certification paths (also known as certificate chains).

This class uses a provider-based architecture. To create a CertPathValidator, call one of the static getInstance methods, passing in the algorithm name of the CertPathValidator desired and optionally the name of the provider desired.

Once a CertPathValidator object has been created, it can be used to validate certification paths by calling the [validate](http://docs.google.com/java/security/cert/CertPathValidator.html#validate(java.security.cert.CertPath,%20java.security.cert.CertPathParameters)) method and passing it the CertPath to be validated and an algorithm-specific set of parameters. If successful, the result is returned in an object that implements the CertPathValidatorResult interface.

**Concurrent Access**

The static methods of this class are guaranteed to be thread-safe. Multiple threads may concurrently invoke the static methods defined in this class with no ill effects.

However, this is not true for the non-static methods defined by this class. Unless otherwise documented by a specific provider, threads that need to access a single CertPathValidator instance concurrently should synchronize amongst themselves and provide the necessary locking. Multiple threads each manipulating a different CertPathValidator instance need not synchronize.

**Since:** 1.4 **See Also:**[CertPath](http://docs.google.com/java/security/cert/CertPath.html)

| **Constructor Summary** | |
| --- | --- |
| protected | [**CertPathValidator**](http://docs.google.com/java/security/cert/CertPathValidator.html#CertPathValidator(java.security.cert.CertPathValidatorSpi,%20java.security.Provider,%20java.lang.String))([CertPathValidatorSpi](http://docs.google.com/java/security/cert/CertPathValidatorSpi.html) validatorSpi, [Provider](http://docs.google.com/java/security/Provider.html) provider, [String](http://docs.google.com/java/lang/String.html) algorithm)            Creates a CertPathValidator object of the given algorithm, and encapsulates the given provider implementation (SPI object) in it. |

| **Method Summary** | |
| --- | --- |
| [String](http://docs.google.com/java/lang/String.html) | [**getAlgorithm**](http://docs.google.com/java/security/cert/CertPathValidator.html#getAlgorithm())()            Returns the algorithm name of this CertPathValidator. |
| static [String](http://docs.google.com/java/lang/String.html) | [**getDefaultType**](http://docs.google.com/java/security/cert/CertPathValidator.html#getDefaultType())()            Returns the default CertPathValidator type as specified in the Java security properties file, or the string "PKIX" if no such property exists. |
| static [CertPathValidator](http://docs.google.com/java/security/cert/CertPathValidator.html) | [**getInstance**](http://docs.google.com/java/security/cert/CertPathValidator.html#getInstance(java.lang.String))([String](http://docs.google.com/java/lang/String.html) algorithm)            Returns a CertPathValidator object that implements the specified algorithm. |
| static [CertPathValidator](http://docs.google.com/java/security/cert/CertPathValidator.html) | [**getInstance**](http://docs.google.com/java/security/cert/CertPathValidator.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 CertPathValidator object that implements the specified algorithm. |
| static [CertPathValidator](http://docs.google.com/java/security/cert/CertPathValidator.html) | [**getInstance**](http://docs.google.com/java/security/cert/CertPathValidator.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 CertPathValidator object that implements the specified algorithm. |
| [Provider](http://docs.google.com/java/security/Provider.html) | [**getProvider**](http://docs.google.com/java/security/cert/CertPathValidator.html#getProvider())()            Returns the Provider of this CertPathValidator. |
| [CertPathValidatorResult](http://docs.google.com/java/security/cert/CertPathValidatorResult.html) | [**validate**](http://docs.google.com/java/security/cert/CertPathValidator.html#validate(java.security.cert.CertPath,%20java.security.cert.CertPathParameters))([CertPath](http://docs.google.com/java/security/cert/CertPath.html) certPath, [CertPathParameters](http://docs.google.com/java/security/cert/CertPathParameters.html) params)            Validates the specified certification path using the specified algorithm parameter set. |

| **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** |
| --- |

### CertPathValidator

protected **CertPathValidator**([CertPathValidatorSpi](http://docs.google.com/java/security/cert/CertPathValidatorSpi.html) validatorSpi,  
 [Provider](http://docs.google.com/java/security/Provider.html) provider,  
 [String](http://docs.google.com/java/lang/String.html) algorithm)

Creates a CertPathValidator object of the given algorithm, and encapsulates the given provider implementation (SPI object) in it.

**Parameters:**validatorSpi - the provider implementationprovider - the provideralgorithm - the algorithm name

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

### getInstance

public static [CertPathValidator](http://docs.google.com/java/security/cert/CertPathValidator.html) **getInstance**([String](http://docs.google.com/java/lang/String.html) algorithm)  
 throws [NoSuchAlgorithmException](http://docs.google.com/java/security/NoSuchAlgorithmException.html)

Returns a CertPathValidator object that implements the specified algorithm.

This method traverses the list of registered security Providers, starting with the most preferred Provider. A new CertPathValidator object encapsulating the CertPathValidatorSpi 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 name of the requested CertPathValidator algorithm. See Appendix A in the  [Java Certification Path API Programmer's Guide](http://docs.google.com/technotes/guides/security/certpath/CertPathProgGuide.html#AppA)  for information about standard algorithm names. **Returns:**a CertPathValidator object that implements the specified algorithm. **Throws:** [NoSuchAlgorithmException](http://docs.google.com/java/security/NoSuchAlgorithmException.html) - if no Provider supports a CertPathValidatorSpi implementation for the specified algorithm.**See Also:**[Provider](http://docs.google.com/java/security/Provider.html)

### getInstance

public static [CertPathValidator](http://docs.google.com/java/security/cert/CertPathValidator.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 CertPathValidator object that implements the specified algorithm.

A new CertPathValidator object encapsulating the CertPathValidatorSpi 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 name of the requested CertPathValidator algorithm. See Appendix A in the  [Java Certification Path API Programmer's Guide](http://docs.google.com/technotes/guides/security/certpath/CertPathProgGuide.html#AppA)  for information about standard algorithm names.provider - the name of the provider. **Returns:**a CertPathValidator object that implements the specified algorithm. **Throws:** [NoSuchAlgorithmException](http://docs.google.com/java/security/NoSuchAlgorithmException.html) - if a CertPathValidatorSpi 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 is null or empty.**See Also:**[Provider](http://docs.google.com/java/security/Provider.html)

### getInstance

public static [CertPathValidator](http://docs.google.com/java/security/cert/CertPathValidator.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 CertPathValidator object that implements the specified algorithm.

A new CertPathValidator object encapsulating the CertPathValidatorSpi 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 name of the requested CertPathValidator algorithm. See Appendix A in the  [Java Certification Path API Programmer's Guide](http://docs.google.com/technotes/guides/security/certpath/CertPathProgGuide.html#AppA)  for information about standard algorithm names.provider - the provider. **Returns:**a CertPathValidator object that implements the specified algorithm. **Throws:** [NoSuchAlgorithmException](http://docs.google.com/java/security/NoSuchAlgorithmException.html) - if a CertPathValidatorSpi implementation for the specified algorithm is not available from the specified Provider object. [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if the 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 CertPathValidator.

**Returns:**the Provider of this CertPathValidator

### getAlgorithm

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

Returns the algorithm name of this CertPathValidator.

**Returns:**the algorithm name of this CertPathValidator

### validate

public final [CertPathValidatorResult](http://docs.google.com/java/security/cert/CertPathValidatorResult.html) **validate**([CertPath](http://docs.google.com/java/security/cert/CertPath.html) certPath,  
 [CertPathParameters](http://docs.google.com/java/security/cert/CertPathParameters.html) params)  
 throws [CertPathValidatorException](http://docs.google.com/java/security/cert/CertPathValidatorException.html),  
 [InvalidAlgorithmParameterException](http://docs.google.com/java/security/InvalidAlgorithmParameterException.html)

Validates the specified certification path using the specified algorithm parameter set.

The CertPath specified must be of a type that is supported by the validation algorithm, otherwise an InvalidAlgorithmParameterException will be thrown. For example, a CertPathValidator that implements the PKIX algorithm validates CertPath objects of type X.509.

**Parameters:**certPath - the CertPath to be validatedparams - the algorithm parameters **Returns:**the result of the validation algorithm **Throws:** [CertPathValidatorException](http://docs.google.com/java/security/cert/CertPathValidatorException.html) - if the CertPath does not validate [InvalidAlgorithmParameterException](http://docs.google.com/java/security/InvalidAlgorithmParameterException.html) - if the specified parameters or the type of the specified CertPath are inappropriate for this CertPathValidator

### getDefaultType

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

Returns the default CertPathValidator type as specified in the Java security properties file, or the string "PKIX" if no such property exists. The Java security properties file is located in the file named <JAVA\_HOME>/lib/security/java.security. <JAVA\_HOME> refers to the value of the java.home system property, and specifies the directory where the JRE is installed.

The default CertPathValidator type can be used by applications that do not want to use a hard-coded type when calling one of the getInstance methods, and want to provide a default type in case a user does not specify its own.

The default CertPathValidator type can be changed by setting the value of the "certpathvalidator.type" security property (in the Java security properties file) to the desired type.

**Returns:**the default CertPathValidator type as specified in the Java security properties file, or the string "PKIX" if no such property exists.

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/CertPathValidator.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/java/security/cert/CertPathParameters.html)   [**NEXT CLASS**](http://docs.google.com/java/security/cert/CertPathValidatorException.html) | [**FRAMES**](http://docs.google.com/index.html?java/security/cert/CertPathValidator.html)    [**NO FRAMES**](http://docs.google.com/CertPathValidator.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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