| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/XPathFactory.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/xml/xpath/XPathExpressionException.html)   [**NEXT CLASS**](http://docs.google.com/javax/xml/xpath/XPathFactoryConfigurationException.html) | [**FRAMES**](http://docs.google.com/index.html?javax/xml/xpath/XPathFactory.html)    [**NO FRAMES**](http://docs.google.com/XPathFactory.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#3znysh7) | [CONSTR](#2et92p0) | [METHOD](#tyjcwt) | DETAIL: [FIELD](#1t3h5sf) | [CONSTR](#17dp8vu) | [METHOD](#26in1rg) |

## **javax.xml.xpath**

Class XPathFactory

[java.lang.Object](http://docs.google.com/java/lang/Object.html)  
 **javax.xml.xpath.XPathFactory**

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

An XPathFactory instance can be used to create [XPath](http://docs.google.com/javax/xml/xpath/XPath.html) objects.

See [newInstance(String uri)](http://docs.google.com/javax/xml/xpath/XPathFactory.html#newInstance(java.lang.String)) for lookup mechanism.

The [XPathFactory](http://docs.google.com/javax/xml/xpath/XPathFactory.html) class is not thread-safe. In other words, it is the application's responsibility to ensure that at most one thread is using a [XPathFactory](http://docs.google.com/javax/xml/xpath/XPathFactory.html) object at any given moment. Implementations are encouraged to mark methods as synchronized to protect themselves from broken clients.

[XPathFactory](http://docs.google.com/javax/xml/xpath/XPathFactory.html) is not re-entrant. While one of the newInstance methods is being invoked, applications may not attempt to recursively invoke a newInstance method, even from the same thread.

**Since:** 1.5

| **Field Summary** | |
| --- | --- |
| static [String](http://docs.google.com/java/lang/String.html) | [**DEFAULT\_OBJECT\_MODEL\_URI**](http://docs.google.com/javax/xml/xpath/XPathFactory.html#DEFAULT_OBJECT_MODEL_URI)            Default Object Model URI. |
| static [String](http://docs.google.com/java/lang/String.html) | [**DEFAULT\_PROPERTY\_NAME**](http://docs.google.com/javax/xml/xpath/XPathFactory.html#DEFAULT_PROPERTY_NAME)            The default property name according to the JAXP spec. |

| **Constructor Summary** | |
| --- | --- |
| protected | [**XPathFactory**](http://docs.google.com/javax/xml/xpath/XPathFactory.html#XPathFactory())()            Protected constructor as [newInstance()](http://docs.google.com/javax/xml/xpath/XPathFactory.html#newInstance()) or [newInstance(String uri)](http://docs.google.com/javax/xml/xpath/XPathFactory.html#newInstance(java.lang.String)) or [newInstance(String uri, String factoryClassName, ClassLoader classLoader)](http://docs.google.com/javax/xml/xpath/XPathFactory.html#newInstance(java.lang.String,%20java.lang.String,%20java.lang.ClassLoader)) should be used to create a new instance of an XPathFactory. |

| **Method Summary** | |
| --- | --- |
| abstract  boolean | [**getFeature**](http://docs.google.com/javax/xml/xpath/XPathFactory.html#getFeature(java.lang.String))([String](http://docs.google.com/java/lang/String.html) name)            Get the state of the named feature. |
| abstract  boolean | [**isObjectModelSupported**](http://docs.google.com/javax/xml/xpath/XPathFactory.html#isObjectModelSupported(java.lang.String))([String](http://docs.google.com/java/lang/String.html) objectModel)            Is specified object model supported by this XPathFactory? |
| static [XPathFactory](http://docs.google.com/javax/xml/xpath/XPathFactory.html) | [**newInstance**](http://docs.google.com/javax/xml/xpath/XPathFactory.html#newInstance())()            Get a new XPathFactory instance using the default object model, [DEFAULT\_OBJECT\_MODEL\_URI](http://docs.google.com/javax/xml/xpath/XPathFactory.html#DEFAULT_OBJECT_MODEL_URI), the W3C DOM. |
| static [XPathFactory](http://docs.google.com/javax/xml/xpath/XPathFactory.html) | [**newInstance**](http://docs.google.com/javax/xml/xpath/XPathFactory.html#newInstance(java.lang.String))([String](http://docs.google.com/java/lang/String.html) uri)            Get a new XPathFactory instance using the specified object model. |
| static [XPathFactory](http://docs.google.com/javax/xml/xpath/XPathFactory.html) | [**newInstance**](http://docs.google.com/javax/xml/xpath/XPathFactory.html#newInstance(java.lang.String,%20java.lang.String,%20java.lang.ClassLoader))([String](http://docs.google.com/java/lang/String.html) uri, [String](http://docs.google.com/java/lang/String.html) factoryClassName, [ClassLoader](http://docs.google.com/java/lang/ClassLoader.html) classLoader)            Obtain a new instance of a XPathFactory from a factory class name. |
| abstract  [XPath](http://docs.google.com/javax/xml/xpath/XPath.html) | [**newXPath**](http://docs.google.com/javax/xml/xpath/XPathFactory.html#newXPath())()            Return a new XPath using the underlying object model determined when the XPathFactory was instantiated. |
| abstract  void | [**setFeature**](http://docs.google.com/javax/xml/xpath/XPathFactory.html#setFeature(java.lang.String,%20boolean))([String](http://docs.google.com/java/lang/String.html) name, boolean value)            Set a feature for this XPathFactory and XPaths created by this factory. |
| abstract  void | [**setXPathFunctionResolver**](http://docs.google.com/javax/xml/xpath/XPathFactory.html#setXPathFunctionResolver(javax.xml.xpath.XPathFunctionResolver))([XPathFunctionResolver](http://docs.google.com/javax/xml/xpath/XPathFunctionResolver.html) resolver)            Establish a default function resolver. |
| abstract  void | [**setXPathVariableResolver**](http://docs.google.com/javax/xml/xpath/XPathFactory.html#setXPathVariableResolver(javax.xml.xpath.XPathVariableResolver))([XPathVariableResolver](http://docs.google.com/javax/xml/xpath/XPathVariableResolver.html) resolver)            Establish a default variable resolver. |

| **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)) |

| **Field Detail** |
| --- |

### DEFAULT\_PROPERTY\_NAME

public static final [String](http://docs.google.com/java/lang/String.html) **DEFAULT\_PROPERTY\_NAME**

The default property name according to the JAXP spec.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#javax.xml.xpath.XPathFactory.DEFAULT_PROPERTY_NAME)

### DEFAULT\_OBJECT\_MODEL\_URI

public static final [String](http://docs.google.com/java/lang/String.html) **DEFAULT\_OBJECT\_MODEL\_URI**

Default Object Model URI.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#javax.xml.xpath.XPathFactory.DEFAULT_OBJECT_MODEL_URI)

| **Constructor Detail** |
| --- |

### XPathFactory

protected **XPathFactory**()

Protected constructor as [newInstance()](http://docs.google.com/javax/xml/xpath/XPathFactory.html#newInstance()) or [newInstance(String uri)](http://docs.google.com/javax/xml/xpath/XPathFactory.html#newInstance(java.lang.String)) or [newInstance(String uri, String factoryClassName, ClassLoader classLoader)](http://docs.google.com/javax/xml/xpath/XPathFactory.html#newInstance(java.lang.String,%20java.lang.String,%20java.lang.ClassLoader)) should be used to create a new instance of an XPathFactory.

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

### newInstance

public static final [XPathFactory](http://docs.google.com/javax/xml/xpath/XPathFactory.html) **newInstance**()

Get a new XPathFactory instance using the default object model, [DEFAULT\_OBJECT\_MODEL\_URI](http://docs.google.com/javax/xml/xpath/XPathFactory.html#DEFAULT_OBJECT_MODEL_URI), the W3C DOM.

This method is functionally equivalent to:

newInstance(DEFAULT\_OBJECT\_MODEL\_URI)

Since the implementation for the W3C DOM is always available, this method will never fail.

**Returns:**Instance of an XPathFactory. **Throws:** [RuntimeException](http://docs.google.com/java/lang/RuntimeException.html) - When there is a failure in creating an XPathFactory for the default object model.

### newInstance

public static final [XPathFactory](http://docs.google.com/javax/xml/xpath/XPathFactory.html) **newInstance**([String](http://docs.google.com/java/lang/String.html) uri)  
 throws [XPathFactoryConfigurationException](http://docs.google.com/javax/xml/xpath/XPathFactoryConfigurationException.html)

Get a new XPathFactory instance using the specified object model.

To find a XPathFactory object, this method looks the following places in the following order where "the class loader" refers to the context class loader:

1. If the system property [DEFAULT\_PROPERTY\_NAME](http://docs.google.com/javax/xml/xpath/XPathFactory.html#DEFAULT_PROPERTY_NAME) + ":uri" is present, where uri is the parameter to this method, then its value is read as a class name. The method will try to create a new instance of this class by using the class loader, and returns it if it is successfully created.
2. ${java.home}/lib/jaxp.properties is read and the value associated with the key being the system property above is looked for. If present, the value is processed just like above.
3. The class loader is asked for service provider provider-configuration files matching javax.xml.xpath.XPathFactory in the resource directory META-INF/services. See the JAR File Specification for file format and parsing rules. Each potential service provider is required to implement the method:  
    [isObjectModelSupported(String objectModel)](http://docs.google.com/javax/xml/xpath/XPathFactory.html#isObjectModelSupported(java.lang.String))  
    The first service provider found in class loader order that supports the specified object model is returned.
4. Platform default XPathFactory is located in a platform specific way. There must be a platform default XPathFactory for the W3C DOM, i.e. [DEFAULT\_OBJECT\_MODEL\_URI](http://docs.google.com/javax/xml/xpath/XPathFactory.html#DEFAULT_OBJECT_MODEL_URI).

If everything fails, an XPathFactoryConfigurationException will be thrown.

Tip for Trouble-shooting:

See [Properties.load(java.io.InputStream)](http://docs.google.com/java/util/Properties.html#load(java.io.InputStream)) for exactly how a property file is parsed. In particular, colons ':' need to be escaped in a property file, so make sure the URIs are properly escaped in it. For example:

http\://java.sun.com/jaxp/xpath/dom=org.acme.DomXPathFactory

**Parameters:**uri - Identifies the underlying object model. The specification only defines the URI [DEFAULT\_OBJECT\_MODEL\_URI](http://docs.google.com/javax/xml/xpath/XPathFactory.html#DEFAULT_OBJECT_MODEL_URI), http://java.sun.com/jaxp/xpath/dom for the W3C DOM, the org.w3c.dom package, and implementations are free to introduce other URIs for other object models. **Returns:**Instance of an XPathFactory. **Throws:** [XPathFactoryConfigurationException](http://docs.google.com/javax/xml/xpath/XPathFactoryConfigurationException.html) - If the specified object model is unavailable. [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - If uri is null. [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - If uri is null or uri.length() == 0.

### newInstance

public static [XPathFactory](http://docs.google.com/javax/xml/xpath/XPathFactory.html) **newInstance**([String](http://docs.google.com/java/lang/String.html) uri,  
 [String](http://docs.google.com/java/lang/String.html) factoryClassName,  
 [ClassLoader](http://docs.google.com/java/lang/ClassLoader.html) classLoader)  
 throws [XPathFactoryConfigurationException](http://docs.google.com/javax/xml/xpath/XPathFactoryConfigurationException.html)

Obtain a new instance of a XPathFactory from a factory class name. XPathFactory is returned if specified factory class supports the specified object model. This function is useful when there are multiple providers in the classpath. It gives more control to the application as it can specify which provider should be loaded.

## Tip for Trouble-shooting

Setting the jaxp.debug system property will cause this method to print a lot of debug messages to System.err about what it is doing and where it is looking at.

If you have problems try:

java -Djaxp.debug=1 YourProgram ....

**Parameters:**uri - Identifies the underlying object model. The specification only defines the URI [DEFAULT\_OBJECT\_MODEL\_URI](http://docs.google.com/javax/xml/xpath/XPathFactory.html#DEFAULT_OBJECT_MODEL_URI),http://java.sun.com/jaxp/xpath/dom for the W3C DOM, the org.w3c.dom package, and implementations are free to introduce other URIs for other object models.factoryClassName - fully qualified factory class name that provides implementation of javax.xml.xpath.XPathFactory.classLoader - ClassLoader used to load the factory class. If null current Thread's context classLoader is used to load the factory class. **Returns:**New instance of a XPathFactory **Throws:** [XPathFactoryConfigurationException](http://docs.google.com/javax/xml/xpath/XPathFactoryConfigurationException.html) - if factoryClassName is null, or the factory class cannot be loaded, instantiated or the factory class does not support the object model specified in the uri parameter. [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - If uri is null. [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - If uri is null or uri.length() == 0.**Since:** 1.6 **See Also:**[newInstance()](http://docs.google.com/javax/xml/xpath/XPathFactory.html#newInstance()), [newInstance(String uri)](http://docs.google.com/javax/xml/xpath/XPathFactory.html#newInstance(java.lang.String))

### isObjectModelSupported

public abstract boolean **isObjectModelSupported**([String](http://docs.google.com/java/lang/String.html) objectModel)

Is specified object model supported by this XPathFactory?

**Parameters:**objectModel - Specifies the object model which the returned XPathFactory will understand. **Returns:**true if XPathFactory supports objectModel, else false. **Throws:** [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - If objectModel is null. [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - If objectModel.length() == 0.

### setFeature

public abstract void **setFeature**([String](http://docs.google.com/java/lang/String.html) name,  
 boolean value)  
 throws [XPathFactoryConfigurationException](http://docs.google.com/javax/xml/xpath/XPathFactoryConfigurationException.html)

Set a feature for this XPathFactory and XPaths created by this factory.

Feature names are fully qualified [URI](http://docs.google.com/java/net/URI.html)s. Implementations may define their own features. An [XPathFactoryConfigurationException](http://docs.google.com/javax/xml/xpath/XPathFactoryConfigurationException.html) is thrown if this XPathFactory or the XPaths it creates cannot support the feature. It is possible for an XPathFactory to expose a feature value but be unable to change its state.

All implementations are required to support the [XMLConstants.FEATURE\_SECURE\_PROCESSING](http://docs.google.com/javax/xml/XMLConstants.html#FEATURE_SECURE_PROCESSING) feature. When the feature is true, any reference to an external function is an error. Under these conditions, the implementation must not call the [XPathFunctionResolver](http://docs.google.com/javax/xml/xpath/XPathFunctionResolver.html) and must throw an [XPathFunctionException](http://docs.google.com/javax/xml/xpath/XPathFunctionException.html).

**Parameters:**name - Feature name.value - Is feature state true or false. **Throws:** [XPathFactoryConfigurationException](http://docs.google.com/javax/xml/xpath/XPathFactoryConfigurationException.html) - if this XPathFactory or the XPaths it creates cannot support this feature. [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - if name is null.

### getFeature

public abstract boolean **getFeature**([String](http://docs.google.com/java/lang/String.html) name)  
 throws [XPathFactoryConfigurationException](http://docs.google.com/javax/xml/xpath/XPathFactoryConfigurationException.html)

Get the state of the named feature.

Feature names are fully qualified [URI](http://docs.google.com/java/net/URI.html)s. Implementations may define their own features. An [XPathFactoryConfigurationException](http://docs.google.com/javax/xml/xpath/XPathFactoryConfigurationException.html) is thrown if this XPathFactory or the XPaths it creates cannot support the feature. It is possible for an XPathFactory to expose a feature value but be unable to change its state.

**Parameters:**name - Feature name. **Returns:**State of the named feature. **Throws:** [XPathFactoryConfigurationException](http://docs.google.com/javax/xml/xpath/XPathFactoryConfigurationException.html) - if this XPathFactory or the XPaths it creates cannot support this feature. [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - if name is null.

### setXPathVariableResolver

public abstract void **setXPathVariableResolver**([XPathVariableResolver](http://docs.google.com/javax/xml/xpath/XPathVariableResolver.html) resolver)

Establish a default variable resolver.

Any XPath objects constructed from this factory will use the specified resolver by default.

A NullPointerException is thrown if resolver is null.

**Parameters:**resolver - Variable resolver. **Throws:** [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - If resolver is null.

### setXPathFunctionResolver

public abstract void **setXPathFunctionResolver**([XPathFunctionResolver](http://docs.google.com/javax/xml/xpath/XPathFunctionResolver.html) resolver)

Establish a default function resolver.

Any XPath objects constructed from this factory will use the specified resolver by default.

A NullPointerException is thrown if resolver is null.

**Parameters:**resolver - XPath function resolver. **Throws:** [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - If resolver is null.

### newXPath

public abstract [XPath](http://docs.google.com/javax/xml/xpath/XPath.html) **newXPath**()

Return a new XPath using the underlying object model determined when the XPathFactory was instantiated.

**Returns:**New instance of an XPath.

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/XPathFactory.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/xml/xpath/XPathExpressionException.html)   [**NEXT CLASS**](http://docs.google.com/javax/xml/xpath/XPathFactoryConfigurationException.html) | [**FRAMES**](http://docs.google.com/index.html?javax/xml/xpath/XPathFactory.html)    [**NO FRAMES**](http://docs.google.com/XPathFactory.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#3znysh7) | [CONSTR](#2et92p0) | [METHOD](#tyjcwt) | DETAIL: [FIELD](#1t3h5sf) | [CONSTR](#17dp8vu) | [METHOD](#26in1rg) |

[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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