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

## **javax.xml.transform**

Class TransformerFactory

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

**Direct Known Subclasses:** [SAXTransformerFactory](http://docs.google.com/javax/xml/transform/sax/SAXTransformerFactory.html)

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

A TransformerFactory instance can be used to create [Transformer](http://docs.google.com/javax/xml/transform/Transformer.html) and [Templates](http://docs.google.com/javax/xml/transform/Templates.html) objects.

The system property that determines which Factory implementation to create is named "javax.xml.transform.TransformerFactory". This property names a concrete subclass of the TransformerFactory abstract class. If the property is not defined, a platform default is be used.

| **Constructor Summary** | |
| --- | --- |
| protected | [**TransformerFactory**](http://docs.google.com/javax/xml/transform/TransformerFactory.html#TransformerFactory())()            Default constructor is protected on purpose. |

| **Method Summary** | |
| --- | --- |
| abstract  [Source](http://docs.google.com/javax/xml/transform/Source.html) | [**getAssociatedStylesheet**](http://docs.google.com/javax/xml/transform/TransformerFactory.html#getAssociatedStylesheet(javax.xml.transform.Source,%20java.lang.String,%20java.lang.String,%20java.lang.String))([Source](http://docs.google.com/javax/xml/transform/Source.html) source, [String](http://docs.google.com/java/lang/String.html) media, [String](http://docs.google.com/java/lang/String.html) title, [String](http://docs.google.com/java/lang/String.html) charset)            Get the stylesheet specification(s) associated with the XML Source document via the  [xml-stylesheet processing instruction](http://www.w3.org/TR/xml-stylesheet/) that match the given criteria. |
| abstract  [Object](http://docs.google.com/java/lang/Object.html) | [**getAttribute**](http://docs.google.com/javax/xml/transform/TransformerFactory.html#getAttribute(java.lang.String))([String](http://docs.google.com/java/lang/String.html) name)            Allows the user to retrieve specific attributes on the underlying implementation. |
| abstract  [ErrorListener](http://docs.google.com/javax/xml/transform/ErrorListener.html) | [**getErrorListener**](http://docs.google.com/javax/xml/transform/TransformerFactory.html#getErrorListener())()            Get the error event handler for the TransformerFactory. |
| abstract  boolean | [**getFeature**](http://docs.google.com/javax/xml/transform/TransformerFactory.html#getFeature(java.lang.String))([String](http://docs.google.com/java/lang/String.html) name)            Look up the value of a feature. |
| abstract  [URIResolver](http://docs.google.com/javax/xml/transform/URIResolver.html) | [**getURIResolver**](http://docs.google.com/javax/xml/transform/TransformerFactory.html#getURIResolver())()            Get the object that is used by default during the transformation to resolve URIs used in document(), xsl:import, or xsl:include. |
| static [TransformerFactory](http://docs.google.com/javax/xml/transform/TransformerFactory.html) | [**newInstance**](http://docs.google.com/javax/xml/transform/TransformerFactory.html#newInstance())()            Obtain a new instance of a TransformerFactory. |
| static [TransformerFactory](http://docs.google.com/javax/xml/transform/TransformerFactory.html) | [**newInstance**](http://docs.google.com/javax/xml/transform/TransformerFactory.html#newInstance(java.lang.String,%20java.lang.ClassLoader))([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 TransformerFactory from factory class name. |
| abstract  [Templates](http://docs.google.com/javax/xml/transform/Templates.html) | [**newTemplates**](http://docs.google.com/javax/xml/transform/TransformerFactory.html#newTemplates(javax.xml.transform.Source))([Source](http://docs.google.com/javax/xml/transform/Source.html) source)            Process the Source into a Templates object, which is a a compiled representation of the source. |
| abstract  [Transformer](http://docs.google.com/javax/xml/transform/Transformer.html) | [**newTransformer**](http://docs.google.com/javax/xml/transform/TransformerFactory.html#newTransformer())()            Create a new Transformer that performs a copy of the Source to the Result. |
| abstract  [Transformer](http://docs.google.com/javax/xml/transform/Transformer.html) | [**newTransformer**](http://docs.google.com/javax/xml/transform/TransformerFactory.html#newTransformer(javax.xml.transform.Source))([Source](http://docs.google.com/javax/xml/transform/Source.html) source)            Process the Source into a Transformer Object. |
| abstract  void | [**setAttribute**](http://docs.google.com/javax/xml/transform/TransformerFactory.html#setAttribute(java.lang.String,%20java.lang.Object))([String](http://docs.google.com/java/lang/String.html) name, [Object](http://docs.google.com/java/lang/Object.html) value)            Allows the user to set specific attributes on the underlying implementation. |
| abstract  void | [**setErrorListener**](http://docs.google.com/javax/xml/transform/TransformerFactory.html#setErrorListener(javax.xml.transform.ErrorListener))([ErrorListener](http://docs.google.com/javax/xml/transform/ErrorListener.html) listener)            Set the error event listener for the TransformerFactory, which is used for the processing of transformation instructions, and not for the transformation itself. |
| abstract  void | [**setFeature**](http://docs.google.com/javax/xml/transform/TransformerFactory.html#setFeature(java.lang.String,%20boolean))([String](http://docs.google.com/java/lang/String.html) name, boolean value)            Set a feature for this TransformerFactory and Transformers or Templates created by this factory. |
| abstract  void | [**setURIResolver**](http://docs.google.com/javax/xml/transform/TransformerFactory.html#setURIResolver(javax.xml.transform.URIResolver))([URIResolver](http://docs.google.com/javax/xml/transform/URIResolver.html) resolver)            Set an object that is used by default during the transformation to resolve URIs used in document(), xsl:import, or xsl:include. |

| **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** |
| --- |

### TransformerFactory

protected **TransformerFactory**()

Default constructor is protected on purpose.

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

### newInstance

public static [TransformerFactory](http://docs.google.com/javax/xml/transform/TransformerFactory.html) **newInstance**()  
 throws [TransformerFactoryConfigurationError](http://docs.google.com/javax/xml/transform/TransformerFactoryConfigurationError.html)

Obtain a new instance of a TransformerFactory. This static method creates a new factory instance This method uses the following ordered lookup procedure to determine the TransformerFactory implementation class to load:

* Use the javax.xml.transform.TransformerFactory system property.
* Use the properties file "lib/jaxp.properties" in the JRE directory. This configuration file is in standard java.util.Properties format and contains the fully qualified name of the implementation class with the key being the system property defined above. The jaxp.properties file is read only once by the JAXP implementation and it's values are then cached for future use. If the file does not exist when the first attempt is made to read from it, no further attempts are made to check for its existence. It is not possible to change the value of any property in jaxp.properties after it has been read for the first time.
* Use the Services API (as detailed in the JAR specification), if available, to determine the classname. The Services API will look for a classname in the file META-INF/services/javax.xml.transform.TransformerFactory in jars available to the runtime.
* Platform default TransformerFactory instance.

Once an application has obtained a reference to a TransformerFactory it can use the factory to configure and obtain transformer instances.

**Returns:**new TransformerFactory instance, never null. **Throws:** [TransformerFactoryConfigurationError](http://docs.google.com/javax/xml/transform/TransformerFactoryConfigurationError.html) - Thrown if the implementation is not available or cannot be instantiated.

### newInstance

public static [TransformerFactory](http://docs.google.com/javax/xml/transform/TransformerFactory.html) **newInstance**([String](http://docs.google.com/java/lang/String.html) factoryClassName,  
 [ClassLoader](http://docs.google.com/java/lang/ClassLoader.html) classLoader)  
 throws [TransformerFactoryConfigurationError](http://docs.google.com/javax/xml/transform/TransformerFactoryConfigurationError.html)

Obtain a new instance of a TransformerFactory from factory class name. 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.

Once an application has obtained a reference to a TransformerFactory it can use the factory to configure and obtain transformer instances.

## 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:**factoryClassName - fully qualified factory class name that provides implementation of javax.xml.transform.TransformerFactory.classLoader - ClassLoader used to load the factory class. If null current Thread's context classLoader is used to load the factory class. **Returns:**new TransformerFactory instance, never null. **Throws:** [TransformerFactoryConfigurationError](http://docs.google.com/javax/xml/transform/TransformerFactoryConfigurationError.html) - if factoryClassName is null, or the factory class cannot be loaded, instantiated.**Since:** 1.6 **See Also:**[newInstance()](http://docs.google.com/javax/xml/transform/TransformerFactory.html#newInstance())

### newTransformer

public abstract [Transformer](http://docs.google.com/javax/xml/transform/Transformer.html) **newTransformer**([Source](http://docs.google.com/javax/xml/transform/Source.html) source)  
 throws [TransformerConfigurationException](http://docs.google.com/javax/xml/transform/TransformerConfigurationException.html)

Process the Source into a Transformer Object. The Source is an XSLT document that conforms to  [XSL Transformations (XSLT) Version 1.0](http://www.w3.org/TR/xslt). Care must be taken not to use this Transformer in multiple Threads running concurrently. Different TransformerFactories can be used concurrently by different Threads.

**Parameters:**source - Source of XSLT document used to create Transformer. Examples of XML Sources include [DOMSource](http://docs.google.com/javax/xml/transform/dom/DOMSource.html), [SAXSource](http://docs.google.com/javax/xml/transform/sax/SAXSource.html), and [StreamSource](http://docs.google.com/javax/xml/transform/stream/StreamSource.html). **Returns:**A Transformer object that may be used to perform a transformation in a single Thread, never null. **Throws:** [TransformerConfigurationException](http://docs.google.com/javax/xml/transform/TransformerConfigurationException.html) - Thrown if there are errors when parsing the Source or it is not possible to create a Transformer instance.**See Also:** [XSL Transformations (XSLT) Version 1.0](http://www.w3.org/TR/xslt)

### newTransformer

public abstract [Transformer](http://docs.google.com/javax/xml/transform/Transformer.html) **newTransformer**()  
 throws [TransformerConfigurationException](http://docs.google.com/javax/xml/transform/TransformerConfigurationException.html)

Create a new Transformer that performs a copy of the Source to the Result. i.e. the "*identity transform*".

**Returns:**A Transformer object that may be used to perform a transformation in a single thread, never null. **Throws:** [TransformerConfigurationException](http://docs.google.com/javax/xml/transform/TransformerConfigurationException.html) - When it is not possible to create a Transformer instance.

### newTemplates

public abstract [Templates](http://docs.google.com/javax/xml/transform/Templates.html) **newTemplates**([Source](http://docs.google.com/javax/xml/transform/Source.html) source)  
 throws [TransformerConfigurationException](http://docs.google.com/javax/xml/transform/TransformerConfigurationException.html)

Process the Source into a Templates object, which is a a compiled representation of the source. This Templates object may then be used concurrently across multiple threads. Creating a Templates object allows the TransformerFactory to do detailed performance optimization of transformation instructions, without penalizing runtime transformation.

**Parameters:**source - An object that holds a URL, input stream, etc. **Returns:**A Templates object capable of being used for transformation purposes, never null. **Throws:** [TransformerConfigurationException](http://docs.google.com/javax/xml/transform/TransformerConfigurationException.html) - When parsing to construct the Templates object fails.

### getAssociatedStylesheet

public abstract [Source](http://docs.google.com/javax/xml/transform/Source.html) **getAssociatedStylesheet**([Source](http://docs.google.com/javax/xml/transform/Source.html) source,  
 [String](http://docs.google.com/java/lang/String.html) media,  
 [String](http://docs.google.com/java/lang/String.html) title,  
 [String](http://docs.google.com/java/lang/String.html) charset)  
 throws [TransformerConfigurationException](http://docs.google.com/javax/xml/transform/TransformerConfigurationException.html)

Get the stylesheet specification(s) associated with the XML Source document via the  [xml-stylesheet processing instruction](http://www.w3.org/TR/xml-stylesheet/) that match the given criteria. Note that it is possible to return several stylesheets, in which case they are applied as if they were a list of imports or cascades in a single stylesheet.

**Parameters:**source - The XML source document.media - The media attribute to be matched. May be null, in which case the prefered templates will be used (i.e. alternate = no).title - The value of the title attribute to match. May be null.charset - The value of the charset attribute to match. May be null. **Returns:**A Source Object suitable for passing to the TransformerFactory. **Throws:** [TransformerConfigurationException](http://docs.google.com/javax/xml/transform/TransformerConfigurationException.html) - An Exception is thrown if an error occurings during parsing of the source.**See Also:** [Associating Style Sheets with XML documents Version 1.0](http://www.w3.org/TR/xml-stylesheet/)

### setURIResolver

public abstract void **setURIResolver**([URIResolver](http://docs.google.com/javax/xml/transform/URIResolver.html) resolver)

Set an object that is used by default during the transformation to resolve URIs used in document(), xsl:import, or xsl:include.

**Parameters:**resolver - An object that implements the URIResolver interface, or null.

### getURIResolver

public abstract [URIResolver](http://docs.google.com/javax/xml/transform/URIResolver.html) **getURIResolver**()

Get the object that is used by default during the transformation to resolve URIs used in document(), xsl:import, or xsl:include.

**Returns:**The URIResolver that was set with setURIResolver.

### setFeature

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

Set a feature for this TransformerFactory and Transformers or Templates 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 [TransformerConfigurationException](http://docs.google.com/javax/xml/transform/TransformerConfigurationException.html) is thrown if this TransformerFactory or the Transformers or Templates it creates cannot support the feature. It is possible for an TransformerFactory 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: the implementation will limit XML processing to conform to implementation limits and behave in a secure fashion as defined by the implementation. Examples include resolving user defined style sheets and functions. If XML processing is limited for security reasons, it will be reported via a call to the registered [ErrorListener.fatalError(TransformerException exception)](http://docs.google.com/javax/xml/transform/ErrorListener.html#fatalError(javax.xml.transform.TransformerException)). See [setErrorListener(ErrorListener listener)](http://docs.google.com/javax/xml/transform/TransformerFactory.html#setErrorListener(javax.xml.transform.ErrorListener)).
* false: the implementation will processing XML according to the XML specifications without regard to possible implementation limits.

**Parameters:**name - Feature name.value - Is feature state true or false. **Throws:** [TransformerConfigurationException](http://docs.google.com/javax/xml/transform/TransformerConfigurationException.html) - if this TransformerFactory or the Transformers or Templates it creates cannot support this feature. [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - If the name parameter is null.

### getFeature

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

Look up the value of a feature.

Feature names are fully qualified [URI](http://docs.google.com/java/net/URI.html)s. Implementations may define their own features. false is returned if this TransformerFactory or the Transformers or Templates it creates cannot support the feature. It is possible for an TransformerFactory to expose a feature value but be unable to change its state.

**Parameters:**name - Feature name. **Returns:**The current state of the feature, true or false. **Throws:** [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - If the name parameter is null.

### setAttribute

public abstract void **setAttribute**([String](http://docs.google.com/java/lang/String.html) name,  
 [Object](http://docs.google.com/java/lang/Object.html) value)

Allows the user to set specific attributes on the underlying implementation. An attribute in this context is defined to be an option that the implementation provides. An IllegalArgumentException is thrown if the underlying implementation doesn't recognize the attribute.

**Parameters:**name - The name of the attribute.value - The value of the attribute. **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - When implementation does not recognize the attribute.

### getAttribute

public abstract [Object](http://docs.google.com/java/lang/Object.html) **getAttribute**([String](http://docs.google.com/java/lang/String.html) name)

Allows the user to retrieve specific attributes on the underlying implementation. An IllegalArgumentException is thrown if the underlying implementation doesn't recognize the attribute.

**Parameters:**name - The name of the attribute. **Returns:**value The value of the attribute. **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - When implementation does not recognize the attribute.

### setErrorListener

public abstract void **setErrorListener**([ErrorListener](http://docs.google.com/javax/xml/transform/ErrorListener.html) listener)

Set the error event listener for the TransformerFactory, which is used for the processing of transformation instructions, and not for the transformation itself. An IllegalArgumentException is thrown if the ErrorListener listener is null.

**Parameters:**listener - The new error listener. **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - When listener is null

### getErrorListener

public abstract [ErrorListener](http://docs.google.com/javax/xml/transform/ErrorListener.html) **getErrorListener**()

Get the error event handler for the TransformerFactory.

**Returns:**The current error handler, which should never be null.

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/TransformerFactory.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/transform/TransformerException.html)   [**NEXT CLASS**](http://docs.google.com/javax/xml/transform/TransformerFactoryConfigurationError.html) | [**FRAMES**](http://docs.google.com/index.html?javax/xml/transform/TransformerFactory.html)    [**NO FRAMES**](http://docs.google.com/TransformerFactory.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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