| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/Transform.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/crypto/dsig/SignedInfo.html)   [**NEXT CLASS**](http://docs.google.com/javax/xml/crypto/dsig/TransformException.html) | [**FRAMES**](http://docs.google.com/index.html?javax/xml/crypto/dsig/Transform.html)    [**NO FRAMES**](http://docs.google.com/Transform.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#3znysh7) | CONSTR | [METHOD](#2et92p0) | DETAIL: [FIELD](#1t3h5sf) | CONSTR | [METHOD](#lnxbz9) |

## **javax.xml.crypto.dsig**

Interface Transform

**All Superinterfaces:** [AlgorithmMethod](http://docs.google.com/javax/xml/crypto/AlgorithmMethod.html), [XMLStructure](http://docs.google.com/javax/xml/crypto/XMLStructure.html) **All Known Subinterfaces:** [CanonicalizationMethod](http://docs.google.com/javax/xml/crypto/dsig/CanonicalizationMethod.html) **All Known Implementing Classes:** [TransformService](http://docs.google.com/javax/xml/crypto/dsig/TransformService.html)

public interface **Transform**extends [XMLStructure](http://docs.google.com/javax/xml/crypto/XMLStructure.html), [AlgorithmMethod](http://docs.google.com/javax/xml/crypto/AlgorithmMethod.html)

A representation of the XML Transform element as defined in the  [W3C Recommendation for XML-Signature Syntax and Processing](http://www.w3.org/TR/xmldsig-core/). The XML Schema Definition is defined as:

<element name="Transform" type="ds:TransformType"/>  
 <complexType name="TransformType" mixed="true">  
 <choice minOccurs="0" maxOccurs="unbounded">  
 <any namespace="##other" processContents="lax"/>  
 <!-- (1,1) elements from (0,unbounded) namespaces -->  
 <element name="XPath" type="string"/>  
 </choice>  
 <attribute name="Algorithm" type="anyURI" use="required"/>  
 </complexType>

A Transform instance may be created by invoking the [newTransform](http://docs.google.com/javax/xml/crypto/dsig/XMLSignatureFactory.html#newTransform(java.lang.String,%20javax.xml.crypto.dsig.spec.TransformParameterSpec)) method of the [XMLSignatureFactory](http://docs.google.com/javax/xml/crypto/dsig/XMLSignatureFactory.html) class.

**Since:** 1.6 **See Also:**[XMLSignatureFactory.newTransform(String, TransformParameterSpec)](http://docs.google.com/javax/xml/crypto/dsig/XMLSignatureFactory.html#newTransform(java.lang.String,%20javax.xml.crypto.dsig.spec.TransformParameterSpec))

| **Field Summary** | |
| --- | --- |
| static [String](http://docs.google.com/java/lang/String.html) | [**BASE64**](http://docs.google.com/javax/xml/crypto/dsig/Transform.html#BASE64)            The [Base64](http://www.w3.org/2000/09/xmldsig#base64) transform algorithm URI. |
| static [String](http://docs.google.com/java/lang/String.html) | [**ENVELOPED**](http://docs.google.com/javax/xml/crypto/dsig/Transform.html#ENVELOPED)            The  [Enveloped Signature](http://www.w3.org/2000/09/xmldsig#enveloped-signature) transform algorithm URI. |
| static [String](http://docs.google.com/java/lang/String.html) | [**XPATH**](http://docs.google.com/javax/xml/crypto/dsig/Transform.html#XPATH)            The [XPath](http://www.w3.org/TR/1999/REC-xpath-19991116) transform algorithm URI. |
| static [String](http://docs.google.com/java/lang/String.html) | [**XPATH2**](http://docs.google.com/javax/xml/crypto/dsig/Transform.html#XPATH2)            The  [XPath Filter 2](http://www.w3.org/2002/06/xmldsig-filter2) transform algorithm URI. |
| static [String](http://docs.google.com/java/lang/String.html) | [**XSLT**](http://docs.google.com/javax/xml/crypto/dsig/Transform.html#XSLT)            The [XSLT](http://www.w3.org/TR/1999/REC-xslt-19991116) transform algorithm URI. |

| **Method Summary** | |
| --- | --- |
| [AlgorithmParameterSpec](http://docs.google.com/java/security/spec/AlgorithmParameterSpec.html) | [**getParameterSpec**](http://docs.google.com/javax/xml/crypto/dsig/Transform.html#getParameterSpec())()            Returns the algorithm-specific input parameters associated with this Transform. |
| [Data](http://docs.google.com/javax/xml/crypto/Data.html) | [**transform**](http://docs.google.com/javax/xml/crypto/dsig/Transform.html#transform(javax.xml.crypto.Data,%20javax.xml.crypto.XMLCryptoContext))([Data](http://docs.google.com/javax/xml/crypto/Data.html) data, [XMLCryptoContext](http://docs.google.com/javax/xml/crypto/XMLCryptoContext.html) context)            Transforms the specified data using the underlying transform algorithm. |
| [Data](http://docs.google.com/javax/xml/crypto/Data.html) | [**transform**](http://docs.google.com/javax/xml/crypto/dsig/Transform.html#transform(javax.xml.crypto.Data,%20javax.xml.crypto.XMLCryptoContext,%20java.io.OutputStream))([Data](http://docs.google.com/javax/xml/crypto/Data.html) data, [XMLCryptoContext](http://docs.google.com/javax/xml/crypto/XMLCryptoContext.html) context, [OutputStream](http://docs.google.com/java/io/OutputStream.html) os)            Transforms the specified data using the underlying transform algorithm. |

| **Methods inherited from interface javax.xml.crypto.**[**XMLStructure**](http://docs.google.com/javax/xml/crypto/XMLStructure.html) |
| --- |
| [isFeatureSupported](http://docs.google.com/javax/xml/crypto/XMLStructure.html#isFeatureSupported(java.lang.String)) |

| **Methods inherited from interface javax.xml.crypto.**[**AlgorithmMethod**](http://docs.google.com/javax/xml/crypto/AlgorithmMethod.html) |
| --- |
| [getAlgorithm](http://docs.google.com/javax/xml/crypto/AlgorithmMethod.html#getAlgorithm()) |

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

### BASE64

static final [String](http://docs.google.com/java/lang/String.html) **BASE64**

The [Base64](http://www.w3.org/2000/09/xmldsig#base64) transform algorithm URI.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#javax.xml.crypto.dsig.Transform.BASE64)

### ENVELOPED

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

The  [Enveloped Signature](http://www.w3.org/2000/09/xmldsig#enveloped-signature) transform algorithm URI.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#javax.xml.crypto.dsig.Transform.ENVELOPED)

### XPATH

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

The [XPath](http://www.w3.org/TR/1999/REC-xpath-19991116) transform algorithm URI.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#javax.xml.crypto.dsig.Transform.XPATH)

### XPATH2

static final [String](http://docs.google.com/java/lang/String.html) **XPATH2**

The  [XPath Filter 2](http://www.w3.org/2002/06/xmldsig-filter2) transform algorithm URI.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#javax.xml.crypto.dsig.Transform.XPATH2)

### XSLT

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

The [XSLT](http://www.w3.org/TR/1999/REC-xslt-19991116) transform algorithm URI.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#javax.xml.crypto.dsig.Transform.XSLT)

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

### getParameterSpec

[AlgorithmParameterSpec](http://docs.google.com/java/security/spec/AlgorithmParameterSpec.html) **getParameterSpec**()

Returns the algorithm-specific input parameters associated with this Transform.

The returned parameters can be typecast to a [TransformParameterSpec](http://docs.google.com/javax/xml/crypto/dsig/spec/TransformParameterSpec.html) object.

**Specified by:**[getParameterSpec](http://docs.google.com/javax/xml/crypto/AlgorithmMethod.html#getParameterSpec()) in interface [AlgorithmMethod](http://docs.google.com/javax/xml/crypto/AlgorithmMethod.html) **Returns:**the algorithm-specific input parameters (may be null if not specified)

### transform

[Data](http://docs.google.com/javax/xml/crypto/Data.html) **transform**([Data](http://docs.google.com/javax/xml/crypto/Data.html) data,  
 [XMLCryptoContext](http://docs.google.com/javax/xml/crypto/XMLCryptoContext.html) context)  
 throws [TransformException](http://docs.google.com/javax/xml/crypto/dsig/TransformException.html)

Transforms the specified data using the underlying transform algorithm.

**Parameters:**data - the data to be transformedcontext - the XMLCryptoContext containing additional context (may be null if not applicable) **Returns:**the transformed data **Throws:** [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - if data is null [TransformException](http://docs.google.com/javax/xml/crypto/dsig/TransformException.html) - if an error occurs while executing the transform

### transform

[Data](http://docs.google.com/javax/xml/crypto/Data.html) **transform**([Data](http://docs.google.com/javax/xml/crypto/Data.html) data,  
 [XMLCryptoContext](http://docs.google.com/javax/xml/crypto/XMLCryptoContext.html) context,  
 [OutputStream](http://docs.google.com/java/io/OutputStream.html) os)  
 throws [TransformException](http://docs.google.com/javax/xml/crypto/dsig/TransformException.html)

Transforms the specified data using the underlying transform algorithm. If the output of this transform is an OctetStreamData, then this method returns null and the bytes are written to the specified OutputStream. Otherwise, the OutputStream is ignored and the method behaves as if [transform(Data, XMLCryptoContext)](http://docs.google.com/javax/xml/crypto/dsig/Transform.html#transform(javax.xml.crypto.Data,%20javax.xml.crypto.XMLCryptoContext)) were invoked.

**Parameters:**data - the data to be transformedcontext - the XMLCryptoContext containing additional context (may be null if not applicable)os - the OutputStream that should be used to write the transformed data to **Returns:**the transformed data (or null if the data was written to the OutputStream parameter) **Throws:** [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - if data or os is null [TransformException](http://docs.google.com/javax/xml/crypto/dsig/TransformException.html) - if an error occurs while executing the transform

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/Transform.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/crypto/dsig/SignedInfo.html)   [**NEXT CLASS**](http://docs.google.com/javax/xml/crypto/dsig/TransformException.html) | [**FRAMES**](http://docs.google.com/index.html?javax/xml/crypto/dsig/Transform.html)    [**NO FRAMES**](http://docs.google.com/Transform.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#3znysh7) | CONSTR | [METHOD](#2et92p0) | DETAIL: [FIELD](#1t3h5sf) | CONSTR | [METHOD](#lnxbz9) |

[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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