OpcNodeReference Members

Namespace: Opc.UaFx
Assemblies: Opc.UaFx.Advanced.dll, Opc.UaFx.Advanced.dll
The OpcNodeReference type exposes the following members.

Constructors

OpcNodeReference(IOpcNode)

Initializes a new instance of the OpcNodeReference class using the `node` specified.

C#

```
public OpcNodeReference(IOpcNode node)
```

Parameters

`node` IOpcNode

The IOpcNode instance its references are organized by the new OpcNodeReference.

Exceptions

ArgumentNullException

The `node` is a null reference (Nothing in Visual Basic).

OpcNodeReference(IOpcNode, IEnumerable<OpcReference>)

Initializes a new instance of the OpcNodeReference class using the `node` and its `references` specified.

C#

```
public OpcNodeReference(IOpcNode node, IEnumerable<OpcReference> references)
```

Parameters

`node` IOpcNode

The IOpcNode instance its `references` are organized by the new OpcNodeReference.

`references` IEnumerable<OpcReference>

A sequence of OpcReference instances belonging to the `node`.

Exceptions

ArgumentNullException

The `node` or `references` is a null reference (Nothing in Visual Basic).

OpcNodeReference(IOpcNode, OpcReference[])

Initializes a new instance of the OpcNodeReference class using the `node` and its `references` specified.

C#

```
public OpcNodeReference(IOpcNode node, params OpcReference[] references)
```

Parameters

`node` IOpcNode

The IOpcNode instance its `references` are organized by the new OpcNodeReference.

`references` OpcReference[]

An array of OpcReference instances belonging to the `node`.

Exceptions

ArgumentNullException

The `node` or `references` is a null reference (Nothing in Visual Basic).

OpcNodeReference(OpcNodeId)

Initializes a new instance of the OpcNodeReference class using the `nodeId` specified.

C#

```
public OpcNodeReference(OpcNodeId nodeId)
```

Parameters

`nodeId` OpcNodeId

The OpcNodeId which identifies the node its references are organized by the new OpcNodeReference.

Exceptions

ArgumentNullException

The `nodeId` is a null reference (Nothing in Visual Basic).

OpcNodeReference(OpcNodeId,

IEnumerable<OpcReference>)

Initializes a new instance of the OpcNodeReference class using the `nodeId` and its node specific `references` specified.

C#

```
public OpcNodeReference(OpcNodeId nodeId, IEnumerable<OpcReference> references)
```

Parameters

`nodeId` OpcNodeId

The OpcNodeId which identifies the node its `references` are organized by the new OpcNodeReference.

`references` IEnumerable<OpcReference>

A sequence of OpcReference instances belonging to the `nodeId`.

Exceptions

ArgumentNullException

The `nodeId` or `references` is a null reference (Nothing in Visual Basic).

OpcNodeReference(OpcNodeId, OpcReference[])

Initializes a new instance of the OpcNodeReference class using the `nodeId` and its node specific `references` specified.

C#

```
public OpcNodeReference(OpcNodeId nodeId, params OpcReference[] references)
```

Parameters

`nodeId` OpcNodeId

The OpcNodeId which identifies the node its `references` are organized by the new OpcNodeReference.

`references` OpcReference[]

An array of OpcReference instances belonging to the `nodeId`.

Exceptions

ArgumentNullException

The `nodeId` or `references` is a null reference (Nothing in Visual Basic).

Properties

Node

Gets the node to which the References belong to.

C#

```
public IOpcNode Node { get; }
```

Property Value

IOpcNode

The IOpcNode which is used as the source node of the References or a null refernce (Nothing in Visual Basic) in case there this OpcNodeReference has been initialized using a OpcNodeId which identifies the node the References belong to.

NodeId

Gets the identifier of the node to which the References belong to.

C#

```
public OpcNodeId NodeId { get; }
```

Property Value

OpcNodeId

The OpcNodeId which identifies the node to which the References belong to.

References

Gets a collection of OpcReference instances which belong the node identified by the NodeId or refered to in the Node property.

C#

```
public OpcReferenceCollection References { get; }
```

Property Value

OpcReferenceCollection

An instance of the OpcReferenceCollection class which contains the OpcReference instances which belong to the node its references are maintained by this OpcNodeReference.

Methods

From(IOpcNode)

Provides a new OpcNodeReferenceSource initialized with the `node` specified to construct OpcNodeReference instances using the `node` as the source node for the subsequent defined OpcNodeReference instances.

C#

```
public static OpcNodeReferenceSource From(IOpcNode node)
```

Parameters

`node` IOpcNode

The IOpcNode from which the references constructed originate from.

Returns

OpcNodeReferenceSource

A new instance of the OpcNodeReferenceSource class initialized with the `node` specified.

Exceptions

ArgumentNullException

The `node` is a null reference (Nothing in Visual Basic).

From(OpcNodeId)

Provides a new OpcNodeReferenceSource initialized with the `nodeId` specified to construct OpcNodeReference instances using the `nodeId` as the identifier of the source node for the subsequent defined OpcNodeReference instances.

C#

```
public static OpcNodeReferenceSource From(OpcNodeId nodeId)
```

Parameters

`nodeId` OpcNodeId

The OpcNodeId which identifies the node from which the references constructed originate from.

Returns

OpcNodeReferenceSource

A new instance of the OpcNodeReferenceSource class initialized with the `nodeId` specified.

Exceptions

ArgumentNullException

The `nodeId` is a null reference (Nothing in Visual Basic).

To(IOpcNode)

Provides a bidirectional reference using the `targetNode` as the target of the reference. The reference created represents a ParentToChild and ChildToParent relation using Organizes as the type of reference.

C#

```
public static OpcBidirectionalReference To(IOpcNode targetNode)
```

Parameters

`targetNode` IOpcNode

The IOpcNode in which the reference constructed ceases.

Returns

OpcBidirectionalReference

A new instance of the OpcBidirectionalReference class initialized with the `targetNode` specified and setup using the Organizes in a bidirectional manner.

Exceptions

ArgumentNullException

The `targetNode` is a null reference (Nothing in Visual Basic).

To(IOpcNode, OpcNodeId)

Provides a bidirectional reference using the `targetNode` as the target of the reference. The reference created represents a ParentToChild and ChildToParent relation using the type of reference identified by the `referenceTypeId` specified.

C#

```
public static OpcBidirectionalReference To(IOpcNode targetNode, OpcNodeId referenceTypeId)
```

Parameters

`targetNode` IOpcNode

The IOpcNode in which the reference constructed ceases.

`referenceTypeId` OpcNodeId

The OpcNodeId which identifies the type of reference to represent between the `targetNode` and its opponent.

Returns

OpcBidirectionalReference

A new instance of the OpcBidirectionalReference class initialized with the `targetNode` specified and setup using the `referenceTypeId` passed in a bidirectional manner.

Exceptions

ArgumentNullException

The `targetNode` or `referenceTypeId` is a null reference (Nothing in Visual Basic).

To(IOpcNode, OpcReferenceType)

Provides a bidirectional reference using the `targetNode` as the target of the reference. The reference created represents a ParentToChild and ChildToParent relation using the `referenceType` as the type of reference.

C#

```
public static OpcBidirectionalReference To(IOpcNode targetNode, OpcReferenceType
referenceType)
```

Parameters

`targetNode` IOpcNode

The IOpcNode in which the reference constructed ceases.

`referenceType` OpcReferenceType

One of the members defined by the OpcReferenceType enumeration to use to setup the type of reference represented.

Returns

OpcBidirectionalReference

A new instance of the OpcBidirectionalReference class initialized with the `targetNode` specified and setup using the `referenceType` passed in a bidirectional manner.

Exceptions

ArgumentNullException

The `targetNode` is a null reference (Nothing in Visual Basic).

To(OpcNodeId)

Provides a bidirectional reference using the `targetNodeId` as the identifier of the target of the reference. The reference created represents a ParentToChild and ChildToParent relation using Organizes as the type of reference.

C#

```
public static OpcBidirectionalReference To(OpcNodeId targetNodeId)
```

Parameters

`targetNodeId` OpcNodeId

The OpcNodeId which identifies the node in which the reference constructed ceases.

Returns

OpcBidirectionalReference

A new instance of the OpcBidirectionalReference class initialized with the `targetNodeId` specified and setup using the Organizes in a bidirectional manner.

Exceptions

ArgumentNullException

The `targetNodeId` is a null reference (Nothing in Visual Basic).

To(OpcNodeId, OpcNodeId)

Provides a bidirectional reference using the `targetNodeId` as the identifier of target of the reference. The reference created represents a ParentToChild and ChildToParent relation using the type of reference identified by the `referenceTypeId` specified.

C#

```
public static OpcBidirectionalReference To(OpcNodeId targetNodeId, OpcNodeId
referenceTypeId)
```

Parameters

`targetNodeId` OpcNodeId

The OpcNodeId which identifies the node in which the reference constructed ceases.

`referenceTypeId` OpcNodeId

The OpcNodeId which identifies the type of reference to represent between the target identified by the `targetNodeId` and its opponent.

Returns

OpcBidirectionalReference

A new instance of the OpcBidirectionalReference class initialized with the `targetNodeId` specified and setup using the `referenceTypeId` passed in a bidirectional manner.

Exceptions

ArgumentNullException

The `targetNodeId` or `referenceTypeId` is a null reference (Nothing in Visual Basic).

To(OpcNodeId, OpcReferenceType)

Provides a bidirectional reference using the `targetNodeId` as the identifier of the target of the reference. The reference created represents a ParentToChild and ChildToParent relation using the `referenceType` as the type of reference.

C#

```
public static OpcBidirectionalReference To(OpcNodeId targetNodeId, OpcReferenceType
referenceType)
```

Parameters

`targetNodeId` OpcNodeId

The OpcNodeId which identifies the node in which the reference constructed ceases.

`referenceType` OpcReferenceType

One of the members defined by the OpcReferenceType enumeration to use to setup the type of reference represented.

Returns

OpcBidirectionalReference

A new instance of the OpcBidirectionalReference class initialized with the `targetNodeId` specified and setup using the `referenceType` passed in a bidirectional manner.

Exceptions

ArgumentNullException

The `targetNodeId` is a null reference (Nothing in Visual Basic).

ToChild(IOpcNode)

Provides a unidirectional reference using the `targetNode` as the target of the reference. The reference created represents a ParentToChild relation using Organizes as the type of reference.

C#

```
public static OpcReference ToChild(IOpcNode targetNode)
```

Parameters

`targetNode` IOpcNode

The IOpcNode in which the reference constructed ceases.

Returns

OpcReference

A new instance of the OpcReference class initialized with the `targetNode` specified and setup using the Organizes in a unidirectional manner.

Exceptions

ArgumentNullException

The `targetNode` is a null reference (Nothing in Visual Basic).

ToChild(IOpcNode, OpcNodeId)

Provides a unidirectional reference using the `targetNode` as the target of the reference. The reference created represents a ParentToChild relation using the type of reference identified by the `referenceTypeId` specified.

C#

```
public static OpcReference ToChild(IOpcNode targetNode, OpcNodeId referenceTypeId)
```

Parameters

`targetNode` IOpcNode

The IOpcNode in which the reference constructed ceases.

`referenceTypeId` OpcNodeId

The OpcNodeId which identifies the type of reference to represent between the `targetNode` and its opponent.

Returns

OpcReference

A new instance of the OpcReference class initialized with the `targetNode` specified and setup using the `referenceTypeId` passed in a unidirectional manner.

Exceptions

ArgumentNullException

The `targetNode` or `referenceTypeId` is a null reference (Nothing in Visual Basic).

ToChild(IOpcNode, OpcReferenceType)

Provides a unidirectional reference using the `targetNode` as the target of the reference. The reference created represents a ParentToChild relation using the `referenceType` as the type of reference.

C#

```
public static OpcReference ToChild(IOpcNode targetNode, OpcReferenceType referenceType)
```

Parameters

`targetNode` IOpcNode

The IOpcNode in which the reference constructed ceases.

`referenceType` OpcReferenceType

One of the members defined by the OpcReferenceType enumeration to use to setup the type of reference represented.

Returns

OpcReference

A new instance of the OpcReference class initialized with the `targetNode` specified and setup using the `referenceType` passed in a unidirectional manner.

Exceptions

ArgumentNullException

The `targetNode` is a null reference (Nothing in Visual Basic).

ToChild(OpcNodeId)

Provides a unidirectional reference using the `targetNodeId` as the identifier of the target of the reference. The reference created represents a ParentToChild relation using Organizes as the type of reference.

C#

```
public static OpcReference ToChild(OpcNodeId targetNodeId)
```

Parameters

`targetNodeId` OpcNodeId

The OpcNodeId which identifies the node in which the reference constructed ceases.

Returns

OpcReference

A new instance of the OpcReference class initialized with the `targetNodeId` specified and setup using the Organizes in a unidirectional manner.

Exceptions

ArgumentNullException

The `targetNodeId` is a null reference (Nothing in Visual Basic).

ToChild(OpcNodeId, OpcNodeId)

Provides a unidirectional reference using the `targetNodeId` as the identifier of target of the reference. The reference created represents a ParentToChild relation using the type of reference identified by the `referenceTypeId` specified.

C#

```
public static OpcReference ToChild(OpcNodeId targetNodeId, OpcNodeId referenceTypeId)
```

Parameters

`targetNodeId` OpcNodeId

The OpcNodeId which identifies the node in which the reference constructed ceases.

`referenceTypeId` OpcNodeId

The OpcNodeId which identifies the type of reference to represent between the target identified by the `targetNodeId` and its opponent.

Returns

OpcReference

A new instance of the OpcReference class initialized with the `targetNodeId` specified and setup using the `referenceTypeId` passed in a unidirectional manner.

Exceptions

ArgumentNullException

The `targetNodeId` or `referenceTypeId` is a null reference (Nothing in Visual Basic).

ToChild(OpcNodeId, OpcReferenceType)

Provides a unidirectional reference using the `targetNodeId` as the identifier of the target of the reference. The reference created represents a ParentToChild relation using the `referenceType` as the type of reference.

C#

```
public static OpcReference ToChild(OpcNodeId targetNodeId, OpcReferenceType referenceType)
```

Parameters

`targetNodeId` OpcNodeId

The OpcNodeId which identifies the node in which the reference constructed ceases.

`referenceType` OpcReferenceType

One of the members defined by the OpcReferenceType enumeration to use to setup the type of reference represented.

Returns

OpcReference

A new instance of the OpcReference class initialized with the `targetNodeId` specified and setup using the `referenceType` passed in a unidirectional manner.

Exceptions

ArgumentNullException

The `targetNodeId` is a null reference (Nothing in Visual Basic).

ToParent(IOpcNode)

Provides a unidirectional reference using the `targetNode` as the target of the reference. The reference created represents a ChildToParent relation using Organizes as the type of reference.

C#

```
public static OpcReference ToParent(IOpcNode targetNode)
```

Parameters

`targetNode` IOpcNode

The IOpcNode in which the reference constructed ceases.

Returns

OpcReference

A new instance of the OpcReference class initialized with the `targetNode` specified and setup using the Organizes in a unidirectional manner.

Exceptions

ArgumentNullException

The `targetNode` is a null reference (Nothing in Visual Basic).

ToParent(IOpcNode, OpcNodeId)

Provides a unidirectional reference using the `targetNode` as the target of the reference. The reference created represents a ChildToParent relation using the type of reference identified by the `referenceTypeId` specified.

C#

```
public static OpcReference ToParent(IOpcNode targetNode, OpcNodeId referenceTypeId)
```

Parameters

`targetNode` IOpcNode

The IOpcNode in which the reference constructed ceases.

`referenceTypeId` OpcNodeId

The OpcNodeId which identifies the type of reference to represent between the `targetNode` and its opponent.

Returns

OpcReference

A new instance of the OpcReference class initialized with the `targetNode` specified and setup using the `referenceTypeId` passed in a unidirectional manner.

Exceptions

ArgumentNullException

The `targetNode` or `referenceTypeId` is a null reference (Nothing in Visual Basic).

ToParent(IOpcNode, OpcReferenceType)

Provides a unidirectional reference using the `targetNode` as the target of the reference. The reference

created represents a ChildToParent relation using the `referenceType` as the type of reference.

C#

```
public static OpcReference ToParent(IOpcNode targetNode, OpcReferenceType referenceType)
```

Parameters

`targetNode` IOpcNode

The IOpcNode in which the reference constructed ceases.

`referenceType` OpcReferenceType

One of the members defined by the OpcReferenceType enumeration to use to setup the type of reference represented.

Returns

OpcReference

A new instance of the OpcReference class initialized with the `targetNode` specified and setup using the `referenceType` passed in a unidirectional manner.

Exceptions

ArgumentNullException

The `targetNode` is a null reference (Nothing in Visual Basic).

ToParent(OpcNodeId)

Provides a unidirectional reference using the `targetNodeId` as the identifier of the target of the reference. The reference created represents a ChildToParent relation using Organizes as the type of reference.

C#

```
public static OpcReference ToParent(OpcNodeId targetNodeId)
```

Parameters

`targetNodeId` OpcNodeId

The OpcNodeId which identifies the node in which the reference constructed ceases.

Returns

OpcReference

A new instance of the OpcReference class initialized with the `targetNodeId` specified and setup using the Organizes in a unidirectional manner.

Exceptions

ArgumentNullException

The `targetNodeId` is a null reference (Nothing in Visual Basic).

ToParent(OpcNodeId, OpcNodeId)

Provides a unidirectional reference using the `targetNodeId` as the identifier of target of the reference. The reference created represents a ChildToParent relation using the type of reference identified by the `referenceTypeId` specified.

C#

```
public static OpcReference ToParent(OpcNodeId targetNodeId, OpcNodeId referenceTypeId)
```

Parameters

`targetNodeId` OpcNodeId

The OpcNodeId which identifies the node in which the reference constructed ceases.

`referenceTypeId` OpcNodeId

The OpcNodeId which identifies the type of reference to represent between the target identified by the `targetNodeId` and its opponent.

Returns

OpcReference

A new instance of the OpcReference class initialized with the `targetNodeId` specified and setup using the `referenceTypeId` passed in a unidirectional manner.

Exceptions

ArgumentNullException

The `targetNodeId` or `referenceTypeId` is a null reference (Nothing in Visual Basic).

ToParent(OpcNodeId, OpcReferenceType)

Provides a unidirectional reference using the `targetNodeId` as the identifier of the target of the reference. The reference created represents a ChildToParent relation using the `referenceType` as the type of reference.

C#

```
public static OpcReference ToParent(OpcNodeId targetNodeId, OpcReferenceType referenceType)
```

Parameters

`targetNodeId` OpcNodeId

The OpcNodeId which identifies the node in which the reference constructed ceases.

`referenceType` OpcReferenceType

One of the members defined by the OpcReferenceType enumeration to use to setup the type of reference represented.

Returns

OpcReference

A new instance of the OpcReference class initialized with the `targetNodeId` specified and setup using the `referenceType` passed in a unidirectional manner.

Exceptions

ArgumentNullException

The `targetNodeId` is a null reference (Nothing in Visual Basic).

ToString()

Returns a string representing the information contained in the OpcNodeReference.

C#

```
public override string ToString()
```

Returns

String

A string which describes the information in this OpcNodeReference.

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