

OpcAddReference Members

Namespace: Opc.UaFx

Assemblies: Opc.UaFx.Advanced.dll, Opc.UaFx.Advanced.dll

The [OpcAddReference](#) type exposes the following members.

Constructors

OpcAddReference(OpcNodeId, OpcNodeId, OpcNodeCategory)

Initializes a new instance of the [OpcAddReference](#) class using the identifiers of the nodes which shall reference each other. The new reference will be a [ParentToChild](#) relation using [Organizes](#) as the type of reference.

C#

```
public OpcAddReference(OpcNodeId nodeId, OpcNodeId targetNodeId, OpcNodeCategory targetNodeCategory)
```

Parameters

nodeId [OpcNodeId](#)

The [OpcNodeId](#) through that the source node can be identified and accessed. This identifier refers to the 'child' node.

targetNodeId [OpcNodeId](#)

The [OpcNodeId](#) through that the target node can be identified and accessed. This identifier refers to the 'parent' node.

targetNodeCategory [OpcNodeCategory](#)

One of the members defined by the [OpcNodeCategory](#) enumeration which is used by the server to validate that the reference to be added matches the [OpcNodeCategory](#) of the target node identified by the **targetNodeId**.

Exceptions

[ArgumentException](#)

The **nodeId** or **targetNodeId** is equals [Null](#).

[ArgumentNullException](#)

The **nodeId** or **targetNodeId** is a null reference (Nothing in Visual Basic).

OpcAddReference(OpcNodeId, OpcNodeId, OpcNodeCategory, OpcReferenceDirection)

Initializes a new instance of the [OpcAddReference](#) class using the identifiers of the nodes which shall reference each other using the [direction](#) specified. The new reference will use the relation defined by [direction](#) using the [Organizes](#) as the type of reference.

C#

```
public OpcAddReference(OpcNodeId nodeId, OpcNodeId targetNodeId, OpcNodeCategory targetNodeCategory, OpcReferenceDirection direction)
```

Parameters

[nodeId](#) [OpcNodeId](#)

The [OpcNodeId](#) through that the source node can be identified and accessed.

[targetNodeId](#) [OpcNodeId](#)

The [OpcNodeId](#) through that the target node can be identified and accessed.

[targetNodeCategory](#) [OpcNodeCategory](#)

One of the members defined by the [OpcNodeCategory](#) enumeration which is used by the server to validate that the reference to be added matches the [OpcNodeCategory](#) of the target node identified by the [targetNodeId](#).

[direction](#) [OpcReferenceDirection](#)

One of the members defined by the [OpcReferenceDirection](#) enumeration which defines the kind of relation the reference will construct.

Exceptions

[ArgumentException](#)

The [nodeId](#) or [targetNodeId](#) is equals [Null](#).

[ArgumentNullException](#)

The [nodeId](#) or [targetNodeId](#) is a null reference (Nothing in Visual Basic).

OpcAddReference(OpcNodeId, OpcNodeId, OpcNodeCategory, OpcReferenceDirection, OpcNodeId)

Initializes a new instance of the [OpcAddReference](#) class using the identifiers of the nodes which shall reference each other using the [direction](#) specified. The new reference will use the relation defined by [direction](#) using the type of reference identified by the [referenceTypeId](#) specified.

C#

```
public OpcAddReference(OpcNodeId nodeId, OpcNodeId targetNodeId, OpcNodeCategory targetNodeCategory, OpcReferenceDirection direction, OpcNodeId referenceTypeId)
```

Parameters

nodeId [OpcNodeId](#)

The [OpcNodeId](#) through that the source node can be identified and accessed.

targetNodeId [OpcNodeId](#)

The [OpcNodeId](#) through that the target node can be identified and accessed.

targetNodeCategory [OpcNodeCategory](#)

One of the members defined by the [OpcNodeCategory](#) enumeration which is used by the server to validate that the reference to be added matches the [OpcNodeCategory](#) of the target node identified by the **targetNodeId**.

direction [OpcReferenceDirection](#)

One of the members defined by the [OpcReferenceDirection](#) enumeration which defines the kind of relation the reference will construct.

referenceTypeId [OpcNodeId](#)

The [OpcNodeId](#) which identifies the type of reference to use to setup the reference between the source and the target node identified by the **nodeId** and the **targetNodeId**.

Exceptions

[ArgumentException](#)

The **nodeId**, **targetNodeId** or **referenceTypeId** is equals **Null**.

[ArgumentNullException](#)

The **nodeId**, **targetNodeId** or **referenceTypeId** is a null reference (Nothing in Visual Basic).

OpcAddReference(OpcNodeId, OpcNodeId, OpcNodeCategory, OpcReferenceDirection, OpcReferenceType)

Initializes a new instance of the [OpcAddReference](#) class using the identifiers of the nodes which shall reference each other using the **direction** specified. The new reference will use the relation defined by **direction** using the **referenceType** specified as the type of reference.

C#

```
public OpcAddReference(OpcNodeId nodeId, OpcNodeId targetNodeId, OpcNodeCategory targetNodeCategory, OpcReferenceDirection direction, OpcReferenceType referenceType)
```

Parameters

nodeId [OpcNodeId](#)

The [OpcNodeId](#) through that the source node can be identified and accessed.

targetNodeId [OpcNodeId](#)

The `OpcNodeId` through that the target node can be identified and accessed.

`targetNodeCategory` `OpcNodeCategory`

One of the members defined by the `OpcNodeCategory` enumeration which is used by the server to validate that the reference to be added matches the `OpcNodeCategory` of the target node identified by the `targetNodeId`.

`direction` `OpcReferenceDirection`

One of the members defined by the `OpcReferenceDirection` enumeration which defines the kind of relation the reference will construct.

`referenceType` `OpcReferenceType`

One of the members defined by the `OpcReferenceType` enumeration to use to setup the reference between the source and the target node identified by the `nodeId` and the `targetNodeId`.

Exceptions

`ArgumentException`

The `nodeId` or `targetNodeId` is equals `Null`.

`ArgumentNullException`

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

Properties

Direction

Gets a value indicating the logical direction of the reference to add.

C#

```
public OpcReferenceDirection Direction { get; }
```

Property Value

`OpcReferenceDirection`

One of the members defined by the `OpcReferenceDirection` enumeration. The default value is `ParentToChild`.

ReferenceType

Gets a value which defines a pre-defined used `ReferenceTypeId` as one of the members defined by the `OpcReferenceType` enumeration to simplify querying standard reference types.

C#

```
public OpcReferenceType ReferenceType { get; }
```

Property Value

OpcReferenceType

One of the members defined by the [OpcReferenceType](#) enumeration. The default value is [Organizes](#).

ReferenceTypeId

Gets the identifier which identifies the node that defines the semantic of the reference between the source and the target node and generally reflects an operation between the two, such as "A contains B".

C#

```
public OpcNodeId ReferenceTypeId { get; }
```

Property Value

OpcNodeId

The [OpcNodeId](#) of the reference type node which defines the relation semantic between the source and the target node. The default value is [Organizes](#).

TargetNodeCategory

Gets the [OpcNodeCategory](#) of the target node identified by [TargetNodeId](#). The client shall define the concrete category of node the [TargetNodeId](#) refers to, since the target node might not be accessible directly by the server. Additionally the server uses the category to validate that the reference to be added matches the category of node of the target node identified by the [TargetNodeId](#).

C#

```
public OpcNodeCategory TargetNodeCategory { get; }
```

Property Value

OpcNodeCategory

One of the members defined by the [OpcNodeCategory](#) enumeration which defines the category of node of the target node to reference.

TargetNodeId

Gets the identifier which identifies the target node which acts as the opponent in the reference to construct between the source node (identified by [NodeId](#)) the target node.

C#

```
public OpcNodeId TargetNodeId { get; }
```

Property Value

OpcNodeId

The [OpcNodeId](#) of the target node acting as the opponent of the reference to add.

TargetServerUri

Gets or sets the [Uri](#) of the remote server which provides the node identified by [TargetNodeId](#).

C#

```
public Uri TargetServerUri { get; set; }
```

Property Value

Uri

An instance of the [Uri](#) class which provides the full qualified resource identifier to access the server of the target node identified by the [TargetNodeId](#) or a null reference (Nothing in Visual Basic) if the command receiving server shall execute this command (the default value).

Methods

ToObject(OpcNodeId, OpcNodeId)

Creates a new instance of the [OpcAddReference](#) class using the identifiers of the nodes which shall reference each other. The new reference will be a [ParentToChild](#) relation using [Organizes](#) as the type of reference while the target node shall be a node of the category [Object](#).

C#

```
public static OpcAddReference ToObject(OpcNodeId nodeId, OpcNodeId targetNodeId)
```

Parameters

nodeId [OpcNodeId](#)

The [OpcNodeId](#) through that the source node can be identified and accessed. This identifier refers to the 'child' node.

targetNodeId [OpcNodeId](#)

The [OpcNodeId](#) through that the target object node can be identified and accessed. This identifier refers to the 'parent' node.

Returns

[OpcAddReference](#)

Exceptions

ArgumentException

The `nodeId` or `targetNodeId` is equals `Null`.

ArgumentNullException

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

ToObject(OpcNodeId, OpcNodeId, OpcReferenceDirection)

Creates a new instance of the `OpcAddReference` class using the identifiers of the nodes which shall reference each other using the `direction` specified. The new reference will use the relation defined by `direction` using the `Organizes` as the type of reference while the target node shall be a node of the category `Object`.

C#

```
public static OpcAddReference ToObject(OpcNodeId nodeId, OpcNodeId targetNodeId,
OpcReferenceDirection direction)
```

Parameters

`nodeId` `OpcNodeId`

The `OpcNodeId` through that the source node can be identified and accessed.

`targetNodeId` `OpcNodeId`

The `OpcNodeId` through that the target object node can be identified and accessed.

`direction` `OpcReferenceDirection`

One of the members defined by the `OpcReferenceDirection` enumeration which defines the kind of relation the reference will construct.

Returns

`OpcAddReference`

Exceptions

ArgumentException

The `nodeId` or `targetNodeId` is equals `Null`.

ArgumentNullException

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

ToObject(OpcNodeId, OpcNodeId, OpcReferenceDirection, OpcNodeId)

Creates a new instance of the [OpcAddReference](#) class using the identifiers of the nodes which shall reference each other using the [direction](#) specified. The new reference will use the relation defined by [direction](#) using the type of reference identified by the [referenceTypeId](#) specified while the target node shall be a node of the category [Object](#).

C#

```
public static OpcAddReference ToObject(OpcNodeId nodeId, OpcNodeId targetNodeId,
OpcReferenceDirection direction, OpcNodeId referenceTypeId)
```

Parameters

[nodeId](#) [OpcNodeId](#)

The [OpcNodeId](#) through that the source node can be identified and accessed.

[targetNodeId](#) [OpcNodeId](#)

The [OpcNodeId](#) through that the target object node can be identified and accessed.

[direction](#) [OpcReferenceDirection](#)

One of the members defined by the [OpcReferenceDirection](#) enumeration which defines the kind of relation the reference will construct.

[referenceTypeId](#) [OpcNodeId](#)

The [OpcNodeId](#) which identifies the type of reference to use to setup the reference between the source and the target node identified by the [nodeId](#) and the [targetNodeId](#).

Returns

[OpcAddReference](#)

Exceptions

[ArgumentException](#)

The [nodeId](#), [targetNodeId](#) or [referenceTypeId](#) is equals [Null](#).

[ArgumentNullException](#)

The [nodeId](#), [targetNodeId](#) or [referenceTypeId](#) is a null reference (Nothing in Visual Basic).

ToObject(OpcNodeId, OpcNodeId, OpcReferenceDirection, OpcReferenceType)

Creates a new instance of the [OpcAddReference](#) class using the identifiers of the nodes which shall reference each other using the [direction](#) specified. The new reference will use the relation defined by

direction using the **referenceType** specified as the type of reference while the target node shall be a node of the category **Object**.

C#

```
public static OpcAddReference ToObject(OpcNodeId nodeId, OpcNodeId targetNodeId,
OpcReferenceDirection direction, OpcReferenceType referenceType)
```

Parameters

nodeId **OpcNodeId**

The **OpcNodeId** through that the source node can be identified and accessed.

targetNodeId **OpcNodeId**

The **OpcNodeId** through that the target object node can be identified and accessed.

direction **OpcReferenceDirection**

One of the members defined by the **OpcReferenceDirection** enumeration which defines the kind of relation the reference will construct.

referenceType **OpcReferenceType**

One of the members defined by the **OpcReferenceType** enumeration to use to setup the reference between the source and the target node identified by the **nodeId** and the **targetNodeId**.

Returns

OpcAddReference

Exceptions

ArgumentException

The **nodeId** or **targetNodeId** is equals **Null**.

ArgumentNullException

The **nodeId** or **targetNodeId** is a null reference (Nothing in Visual Basic).

ToVariable(OpcNodeId, OpcNodeId)

Creates a new instance of the **OpcAddReference** class using the identifiers of the nodes which shall reference each other. The new reference will be a **ParentToChild** relation using **Organizes** as the type of reference while the target node shall be a node of the category **Variable**.

C#

```
public static OpcAddReference ToVariable(OpcNodeId nodeId, OpcNodeId targetNodeId)
```

Parameters

nodeId OpcNodeId

The [OpcNodeId](#) through that the source node can be identified and accessed. This identifier refers to the 'child' node.

targetNodeId OpcNodeId

The [OpcNodeId](#) through that the target variable node can be identified and accessed. This identifier refers to the 'parent' node.

Returns

[OpcAddReference](#)

Exceptions

[ArgumentException](#)

The [nodeId](#) or [targetNodeId](#) is equals [Null](#).

[ArgumentNullException](#)

The [nodeId](#) or [targetNodeId](#) is a null reference (Nothing in Visual Basic).

ToVariable(OpcNodeId, OpcNodeId, OpcReferenceDirection)

Creates a new instance of the [OpcAddReference](#) class using the identifiers of the nodes which shall reference each other using the [direction](#) specified. The new reference will use the relation defined by [direction](#) using the [Organizes](#) as the type of reference while the target node shall be a node of the category [Variable](#).

C#

```
public static OpcAddReference ToVariable(OpcNodeId nodeId, OpcNodeId targetNodeId,
OpcReferenceDirection direction)
```

Parameters

nodeId OpcNodeId

The [OpcNodeId](#) through that the source node can be identified and accessed.

targetNodeId OpcNodeId

The [OpcNodeId](#) through that the target variable node can be identified and accessed.

direction OpcReferenceDirection

One of the members defined by the [OpcReferenceDirection](#) enumeration which defines the kind of relation the reference will construct.

Returns

OpcAddReference

Exceptions

ArgumentException

The `nodeId` or `targetNodeId` is equals `Null`.

ArgumentNullException

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

ToVariable(OpcNodeId, OpcNodeId, OpcReferenceDirection, OpcNodeId)

Creates a new instance of the [OpcAddReference](#) class using the identifiers of the nodes which shall reference each other using the `direction` specified. The new reference will use the relation defined by `direction` using the type of reference identified by the `referenceTypeId` specified while the target node shall be a node of the category `Variable`.

C#

```
public static OpcAddReference ToVariable(OpcNodeId nodeId, OpcNodeId targetNodeId,
OpcReferenceDirection direction, OpcNodeId referenceTypeId)
```

Parameters

`nodeId` [OpcNodeId](#)

The [OpcNodeId](#) through that the source node can be identified and accessed.

`targetNodeId` [OpcNodeId](#)

The [OpcNodeId](#) through that the target variable node can be identified and accessed.

`direction` [OpcReferenceDirection](#)

One of the members defined by the [OpcReferenceDirection](#) enumeration which defines the kind of relation the reference will construct.

`referenceTypeId` [OpcNodeId](#)

The [OpcNodeId](#) which identifies the type of reference to use to setup the reference between the source and the target node identified by the `nodeId` and the `targetNodeId`.

Returns

[OpcAddReference](#)

Exceptions

ArgumentException

The `nodeId`, `targetNodeId` or `referenceTypeId` is equals `Null`.

ArgumentNullException

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

ToVariable(OpcNodeId, OpcNodeId, OpcReferenceDirection, OpcReferenceType)

Creates a new instance of the `OpcAddReference` class using the identifiers of the nodes which shall reference each other using the `direction` specified. The new reference will use the relation defined by `direction` using the `referenceType` specified as the type of reference while the target node shall be a node of the category `Variable`.

C#

```
public static OpcAddReference ToVariable(OpcNodeId nodeId, OpcNodeId targetNodeId,
OpcReferenceDirection direction, OpcReferenceType referenceType)
```

Parameters

`nodeId` `OpcNodeId`

The `OpcNodeId` through that the source node can be identified and accessed.

`targetNodeId` `OpcNodeId`

The `OpcNodeId` through that the target variable node can be identified and accessed.

`direction` `OpcReferenceDirection`

One of the members defined by the `OpcReferenceDirection` enumeration which defines the kind of relation the reference will construct.

`referenceType` `OpcReferenceType`

One of the members defined by the `OpcReferenceType` enumeration to use to setup the reference between the source and the target node identified by the `nodeId` and the `targetNodeId`.

Returns

`OpcAddReference`

Exceptions

`ArgumentException`

The `nodeId` or `targetNodeId` is equals `Null`.

`ArgumentNullException`

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

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