

OpcDataVariableNode<T> Class

Namespace: Opc.UaFx

Assemblies: Opc.UaFx.Advanced.dll

Provides a generic implementation of the [OpcDataVariableNode](#) to represent complex data structures expose their information as complex data types, as well as components in the address space.

C#

```
public class OpcDataVariableNode<T> : OpcDataVariableNode, IOpcNode, IOpcNodeInfo
```

Inheritance [Object](#) > [OpcNode](#) > [OpcInstanceNode](#) > [OpcVariableNode](#) > [OpcDataVariableNode](#) > [OpcDataVariableNode<T>](#)

Derived

- [OpcDataTypeDictionaryNode](#)

Implements [IOpcNode](#), [IOpcNodeInfo](#)

Remarks

The data variable node is a specialization of the [OpcVariableNode](#) there its reference type is [HasComponent](#) and its type definition is [BaseDataVariable](#).

Constructors

| Name | Description |
|--|---|
| OpcDataVariableNode`1 (IOpcNode, OpcName) | Initializes a new instance of the OpcDataVariableNode`1 class accessible by the name specified as a child node of the parent node given. |
| OpcDataVariableNode`1 (IOpcNode, OpcName, OpcNodeId) | Initializes a new instance of the OpcDataVariableNode`1 class accessible by the name and id specified as a child node of the parent node given. |
| OpcDataVariableNode`1 (IOpcNode, OpcName, OpcNodeId,) | Initializes a new instance of the OpcDataVariableNode`1 class accessible by the name and id specified with the initial value defined by value as a child node of the parent node given. |
| OpcDataVariableNode`1 (IOpcNode, OpcName,) | Initializes a new instance of the OpcDataVariableNode`1 class accessible by the name specified with the initial value defined by value as a child node of the parent node given. |
| OpcDataVariableNode`1 (OpcName) | Initializes a new instance of the OpcDataVariableNode`1 class accessible by the name specified. |
| OpcDataVariableNode`1 (OpcName, OpcNodeId) | Initializes a new instance of the OpcDataVariableNode`1 class accessible by the name and id specified. |

| Name | Description |
|--|---|
| <code>OpcDataVariableNode`1(OpcName, OpcNodeId,)</code> | Initializes a new instance of the <code>OpcDataVariableNode`1</code> class accessible by the <code>name</code> and <code>id</code> specified with the initial value given by <code>value</code> . |
| <code>OpcDataVariableNode`1(OpcName,)</code> | Initializes a new instance of the <code>OpcDataVariableNode`1</code> class accessible by the <code>name</code> specified with the initial value given by <code>value</code> . |

Events

| Name | Description |
|---------------------------------|--|
| <code>AfterApplyChanges</code> | Occurs after one or more changes on the node has been notified. (Inherited from <code>OpcNode</code>) |
| <code>BeforeApplyChanges</code> | Occurs before one or more changes on the node are notified. (Inherited from <code>OpcNode</code>) |

Properties

| Name | Description |
|--------------------------------------|--|
| <code>AccessLevel</code> | Gets or sets a value which indicates in which ways the <code>Value</code> attribute of the variable node can be accessed (read/write) and if it provides current and/or historic data. (Inherited from <code>OpcVariableNode</code>) |
| <code>ArrayDimensions</code> | Gets the number/lengths of dimensions for an array <code>Value</code> with one or more fixed dimensions. (Inherited from <code>OpcVariableNode</code>) |
| <code>Category</code> | Gets the <code>NodeCategoryOpcAttribute</code> which identifies the kind of node and is therefore used to classify the node regarding its use and purpose. (Inherited from <code>OpcNode</code>) |
| <code>DataType</code> | Gets or sets a value which defines a pre-defined used <code>DataTypeId</code> as one of the members defined by the <code>OpcDataType</code> enumeration to simplify querying standard data types. |
| <code>DataType</code> | Gets or sets a value which defines a pre-defined used <code>DataTypeId</code> as one of the members defined by the <code>OpcDataType</code> enumeration to simplify querying standard data types. (Inherited from <code>OpcVariableNode</code>) |
| <code>DataTypeId</code> | Gets or sets the identifier which identifies the node that defines the type of data represented by the variable node. (Inherited from <code>OpcVariableNode</code>) |
| <code>DefaultReferenceTypeId</code> | Gets the default identifier which identifies the type that defines the underlying node reference within this <code>OpcInstanceNode</code> is referenced by its parent node. (Inherited from <code>OpcInstanceNode</code>) |
| <code>DefaultReferenceTypeId</code> | Gets the default identifier which identifies the type that defines the underlying node reference within this <code>OpcInstanceNode</code> is referenced by its parent node. (Inherited from <code>OpcVariableNode</code>) |
| <code>DefaultTypeDefinitionId</code> | Gets the default identifier which identifies the node that defines the underlying node type from that this <code>OpcInstanceNode</code> has been created. (Inherited from <code>OpcInstanceNode</code>) |
| <code>DefaultTypeDefinitionId</code> | Gets the default identifier which identifies the node that defines the underlying node type from that this <code>OpcInstanceNode</code> has been created. (Inherited from <code>OpcVariableNode</code>) |

| Name | Description |
|-----------------------------|--|
| DefaultTypeDefinitionId | Gets the default identifier which identifies the node that defines the underlying node type from that this OpcInstanceNode has been created. (Inherited from OpcDataVariableNode) |
| Description | Gets or sets the value of the optional DescriptionOpcAttribute which shall explain the meaning of the node. (Inherited from OpcNode) |
| Descriptions | Gets the OpcNodeGlobalization instance used to control the localization and other globalization related tasks for the Description attribute of the current node. (Inherited from OpcNode) |
| DisplayName | Gets or sets the value of the DisplayNameOpcAttribute which defines the localizable name of the node. (Inherited from OpcNode) |
| DisplayNames | Gets the OpcNodeGlobalization instance used to control the localization and other globalization related tasks for the DisplayName attribute of the current node. (Inherited from OpcNode) |
| HasPendingChanges | Gets a value indicating whether there exists any pending change on the node. (Inherited from OpcNode) |
| HistoryConfiguration | (Inherited from OpcVariableNode) |
| Id | Gets the value of the NodeIdOpcAttribute which unambiguously identifies the node. (Inherited from OpcNode) |
| IsArray | Gets a value indicating whether the Value of the OpcVariableNode represented is an array. (Inherited from OpcVariableNode) |
| IsHistorizing | (Inherited from OpcVariableNode) |
| ModellingRuleId | Gets or sets the identifier which defines how the OpcInstanceNode is used for instantiation. (Inherited from OpcInstanceNode) |
| Name | Gets or sets the value of the BrowseNameOpcAttribute which defines the non-localizable human-readable name used when browsing the address space. (Inherited from OpcNode) |
| Namespace | (Inherited from OpcNode) |
| Parent | Gets the parent node of the node. (Inherited from OpcNode) |
| Parent | Gets the parent node of the node. (Inherited from OpcInstanceNode) |
| PendingChanges | Gets a value indicating the most recent changes performed on the node since their last notification. (Inherited from OpcNode) |
| QueryEventsCallback | Gets or sets a callback used to query any event information which belongs to the node. (Inherited from OpcNode) |
| ReadAccessLevelCallback | (Inherited from OpcVariableNode) |
| ReadArrayDimensionsCallback | (Inherited from OpcVariableNode) |
| ReadDataTypeCallback | (Inherited from OpcVariableNode) |
| ReadDescriptionCallback | (Inherited from OpcNode) |
| ReadDisplayNameCallback | (Inherited from OpcNode) |
| ReadIsHistorizingCallback | (Inherited from OpcVariableNode) |

| Name | Description |
|--|---|
| ReadUserAccessLevelCallback | (Inherited from OpcVariableNode) |
| ReadUserWriteAccessCallback | (Inherited from OpcNode) |
| ReadValueRankCallback | (Inherited from OpcVariableNode) |
| ReadVariableValueCallback | Gets or sets a callback used to read the variable value. (Inherited from OpcVariableNode) |
| ReadWriteAccessCallback | (Inherited from OpcNode) |
| 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. (Inherited from OpcInstanceNode) |
| ReferenceTypeId | Gets or sets the identifier which identifies the node that defines the semantic of the reference between a source and a target node and generally reflects an operation between the two, such as "A contains B". (Inherited from OpcInstanceNode) |
| Status | (Inherited from OpcVariableNode) |
| SymbolicName | (Inherited from OpcNode) |
| Tag | Gets or sets the object that contains additional user data about the node. (Inherited from OpcNode) |
| Timestamp | (Inherited from OpcVariableNode) |
| TypeDefinitionId | Gets or sets the identifier which identifies the node that defines the underlying node type from that this OpcInstanceNode has been created. (Inherited from OpcInstanceNode) |
| UserAccessLevel | Gets or sets a value which indicates in which ways the Value attribute of the variable node can be accessed (read/write) and if it provides current and/or historic data taking user access rights into account. (Inherited from OpcVariableNode) |
| UserWriteAccess | Gets or sets the value of the optional UserWriteAccessOpcAttribute which exposes the possibilities of a client to write the attributes of the node taking user access rights into account. (Inherited from OpcNode) |
| Value | Gets or sets the value of the data variable node. |
| Value | Gets or sets the value of the variable node which may be simple or complex. (Inherited from OpcVariableNode) |
| ValueRank | (Inherited from OpcVariableNode) |
| WriteAccess | Gets or sets the value of the optional WriteAccessOpcAttribute which exposes the possibilities of a client to write the attributes of the node. (Inherited from OpcNode) |
| WriteAccessLevelCallback | (Inherited from OpcVariableNode) |
| WriteArrayDimensionsCallback | (Inherited from OpcVariableNode) |
| WriteDataTypeCallback | (Inherited from OpcVariableNode) |
| WriteDescriptionCallback | (Inherited from OpcNode) |
| WriteDisplayNameCallback | (Inherited from OpcNode) |
| WritesHistorizingCallback | (Inherited from OpcVariableNode) |
| WriteUserAccessLevelCallback | (Inherited from OpcVariableNode) |
| WriteUserWriteAccessCallback | (Inherited from OpcNode) |
| WriteValueRankCallback | (Inherited from OpcVariableNode) |
| WriteVariableValueCallback | Gets or sets a callback used to write the variable value. (Inherited from OpcVariableNode) |
| WriteWriteAccessCallback | (Inherited from OpcNode) |

Methods

| Name | Description |
|--|---|
| AddChild(OpcContext, OpcInstanceNode) | (Inherited from OpcInstanceNode) |
| AddNotifier(OpcContext, IOpcNode) | (Inherited from OpcNode) |
| ApplyChanges(OpcContext) | Notifies about changes performed on the node since the last notification and resets the pending changes to None . (Inherited from OpcNode) |
| ApplyChanges(OpcContext, Boolean) | Notifies about changes performed on the node (and optionally on its children) since the last notification and resets the pending changes to None . (Inherited from OpcNode) |
| AttributeValue(OpcAttribute) | Retrieves the value of the attribute specified. (Inherited from OpcNode) |
| AttributeValue`1(OpcAttribute) | Retrieves the value of the attribute specified. (Inherited from OpcNode) |
| Child(OpcContext, OpcName) | Retrieves the child node its Name property matches exactly the name specified. (Inherited from OpcNode) |
| Children(OpcContext) | Retrieves a sequence of all nodes organized as children of this node. (Inherited from OpcNode) |
| InitializeDefaults | Initializes the default values used by the OpcDataVariableNode`1 . |
| InitializeDefaults | Initializes the default values used by the node implementation represented / required. (Inherited from OpcNode) |
| InitializeDefaults | Initializes the default values used by the OpcInstanceNode . (Inherited from OpcInstanceNode) |
| InitializeDefaults | Initializes the default values used by the OpcVariableNode . (Inherited from OpcVariableNode) |
| IsChangePending(OpcNodeChanges) | (Inherited from OpcNode) |
| OnAfterApplyChanges(OpcNodeChangesEventArgs) | Raises the AfterApplyChanges event using the event data specified. (Inherited from OpcNode) |
| OnBeforeApplyChanges(OpcNodeChangesEventArgs) | Raises the BeforeApplyChanges event using the event data specified. (Inherited from OpcNode) |
| QueryEventsCore(OpcNodeContext, OpcEventCollection) | (Inherited from OpcNode) |
| ReadAttributeValueCore`1(OpcReadAttributeValueContext, OpcAttribute) | (Inherited from OpcNode) |
| ReadAttributeValueCore`1(OpcReadAttributeValueContext, OpcAttribute) | (Inherited from OpcVariableNode) |

| Name | Description |
|---|---|
| ReadGenericValue(OpcReadVariableValueContext) | Reads the data variable node value using the context specified. |
| ReadValue(OpcReadVariableValueContext) | Reads the variable node value using the context specified. (Inherited from OpcVariableNode) |
| ReadVariableValue(OpcReadVariableValueContext) | (Inherited from OpcVariableNode) |
| ReadVariableValueCore(OpcReadVariableValueContext, OpcVariableValue) | Reads the value of the variable node using the context and value information specified. (Inherited from OpcVariableNode) |
| RemoveChild(OpcContext, OpcInstanceNode) | (Inherited from OpcInstanceNode) |
| RemoveNotifier(OpcContext, IOpcNode) | (Inherited from OpcNode) |
| RemoveNotifier(OpcContext, IOpcNode) | (Inherited from OpcInstanceNode) |
| ReportEvent(OpcContext, OpcEvent) | (Inherited from OpcNode) |
| UpdateChanges(OpcContext, OpcNodeChanges) | Notifies about the changes on behalf of the node and removes pending changes which intersect with the changes specified. (Inherited from OpcNode) |
| UpdateChanges(OpcContext, OpcNodeChanges, Boolean) | Notifies about the changes on behalf of the node (and optionally on its children) and removes pending changes which intersect with the changes specified. (Inherited from OpcNode) |
| WriteAttributeValueCore`1(OpcWriteAttributeValueContext, OpcAttributeValue) | (Inherited from OpcNode) |
| WriteAttributeValueCore`1(OpcWriteAttributeValueContext, OpcAttributeValue) | (Inherited from OpcVariableNode) |
| WriteGenericValue(OpcWriteVariableValueContext,) | Writes the value to the data variable node value using the context specified. |
| WriteValue(OpcWriteVariableValueContext, Object) | Writes the value to the variable node value using the context specified. (Inherited from OpcVariableNode) |
| WriteVariableValue(OpcWriteVariableValueContext, OpcVariableValue) | (Inherited from OpcVariableNode) |
| WriteVariableValueCore(OpcWriteVariableValueContext, OpcVariableValue) | Writes the value of the variable node using the context and value information specified. (Inherited from OpcVariableNode) |

Table of Contents

| | |
|---------------------------|---|
| Remarks | 1 |
| Constructors | 1 |
| Events | 2 |
| Properties | 2 |
| Methods | 5 |

