

OPC .NET Developer Toolkit FAQs

This document answers questions about the OPC .NET Developer Toolkit

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Introduction

Terminology

This whitepaper answers questions about the implementation of the OPC standard within DeltaV system. In this document, the following terminology is used.

OPC: Open Platform Communications (OPC) is an overarching name for a series of standards and specifications that facilitate interoperability between different vendors in industrial telecommunication applications.

OPC Classic: The OPC specification that uses Windows COM/DCOM to exchange data between software components, clients, and servers.

OPC .NET: The OPC specification that uses Windows WCF to exchange data between software components, clients, and servers.

OPC UA: The OPC specification that is platform independent and uses a service-oriented architecture between software components, clients, and servers.

OPC DA: Data Access (DA) specification defines the exchange of real-time data.

OPC HDA: Historical Data Access (HDA) specification defines the exchange of historical data.

OPC A&E: Alarms and Events (A&E) specification defines the exchange alarm and event type data.

1.1. What is the OPC .NET Developer Toolkit?

The OPC .NET Developer Toolkit is a set of simple sample code snippets written in C# that can be used to create custom client applications to interact with a standard OPC .NET server. This toolkit is meant to be used as a starting point for developers to create their applications for reading and writing OPC data via OPC .NET. It is provided by Emerson and requires that users agree with the Terms and Conditions before downloading.

1.2. Are any DeltaV licenses required to use this toolkit?

Yes, the DeltaV system must be licensed to run DeltaV's OPC server in order to allow communications with the toolkit clients. For more information on the licensing options, refer to the [DeltaV OPC .NET Product Data Sheet](#). For development purposes, an OPC .NET server may be downloaded from the [OPC Foundation website](#).

1.3. Will the toolkit work with any OPC .NET server?

The toolkit sample clients are written with standard OPC .NET interfaces and will work with any compliant OPC .NET server. The only caveat is that the "Client Side DLLs" provided with the toolkit must conform to the application running on the server side. The end user must verify that the client and server side DLLs are compliant and running at the same version. For DeltaV, Emerson has already done this for this toolkit by specifying the version of DeltaV for each sample client in the toolkit.

1.4. What do I need to start developing OPC .NET clients for DeltaV?

All you need is a properly licensed DeltaV system (refer to the [DeltaV OPC .NET Product Data Sheet](#)) and a copy of Microsoft Visual Studio 2010 or Microsoft Visual Studio 2012. At that point it is easy to develop, deploy, and test the OPC .NET client on your DeltaV system.

1.5. What are the “Xi DLLs” in the toolkit code?

The “Xi DLLs” are referred to as the “Client Side DLLs”. Their purpose is to make the client code simpler and easier to implement. Some functions that the “Client Side DLLs” perform for the client are: data conversions, status update, keep-alive messages, notifications, and browsing support. These “Client Side DLLs” are updated regularly and kept evergreen on the [OPC Foundation website](#).

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