Citect Connectors

Citect Real-time values

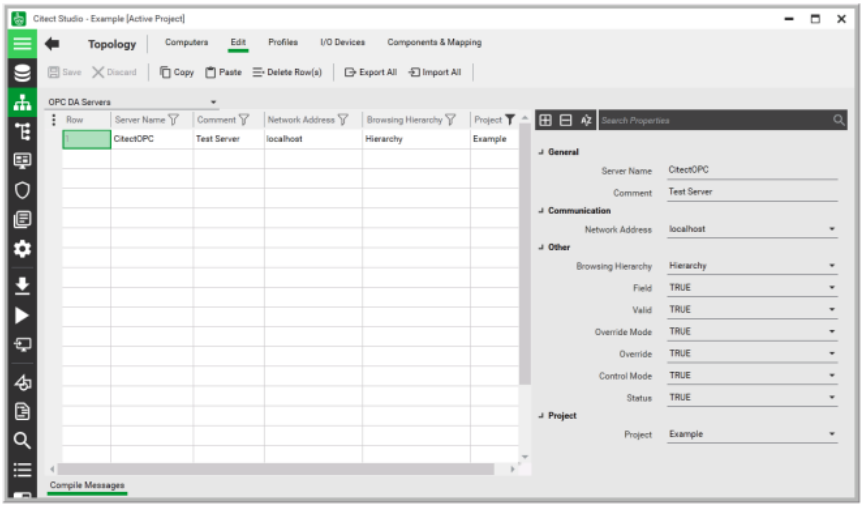
This connector is used to get real time values from Citect via the Citect OPC server.

Set up CitectSCADA

Enable the OPC Server

The OPC server needs to be added to the project; by default, it is not enabled.

To enable,



- From the **Citect Studio** select the **Topology** option.
- In the **Topology** page, click **Edit**.
- Select *OPC DA Servers* from the dropdown menu.

Prerequisites

Verify Communications

To verify communication from CitectSCADA, a generic OPC test client is provided to test the OPC Server.

This client is available from the Tools folder of the **XLReporter** install CD and can be downloaded from **www.SyTech.com**.

To open, double-click **SampleClientDA.exe**. This opens the **OPC Quick Client** window.

To connect to an OPC server, select **Edit**, **New Server Connection** to open the **Server Properties** window. Select the CitectSCADA OPC server and click **OK**.

Once the connection is made, select **Edit**, **New Group**. Specify **Name** and click **OK**.

Click on the group name created, and select **Edit**, **New Item**. This opens the **Add Items** window. Browse for tags and double click any to select. Once tag selection is complete click **OK** to return to the **OPC Quick Client** window.

All the selected tags appear along with their real time values, type, quality, and timestamp.

If at any point you experience an issue with this client, contact Citect technical support to troubleshoot and correct these issues.

Remote Communication

If XLReporter is not installed on the same machine as Citect, the workstation must also have the OPC core components installed. To determine if the core components are installed verify the following file exists:

- C:\Windows\SysWow64\OPCEnum.exe (64-bit OS)
- C:\Windows\system32\OPCEnum.exe (32-bit OS)

If the components are not installed, then they are provided in the XLReporter installation folder under *_repairtools\OPC*. Alternatively, these can be downloaded from www.opcfoundation.org.

Server Settings

To connect to Citect remotely both the machine where the server is running and the machine where the client is running must have matching Windows user accounts and the client must be logged in with a matching account.

In addition, on the machine with Citect, certain DCOM settings must be enabled. For details on what DCOM settings to enable, see OPC and DCOM: 5 Things You Need to Know.

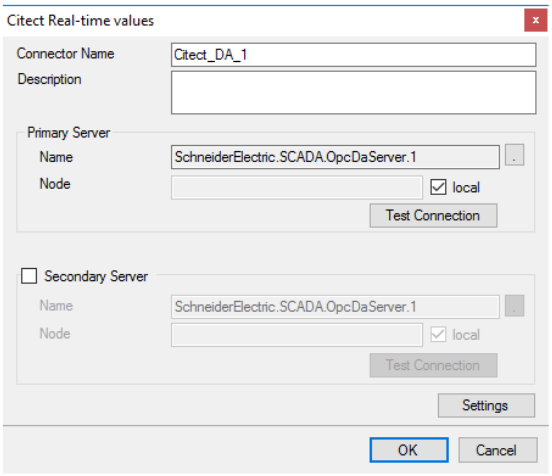
Windows Firewall

If the Windows Firewall is enabled on the machine where Citect is running TCP Port *135* must be opened for remote clients to connect.

Connector

To configure the connector, from the **Project Explorer** select **Data, Connectors**.

- Click **Add**
- Select **Citect**, **Citect Real-time values**
- Click **OK**



Primary Server

These settings define the **Name** and **Node** of the OPC DA server. Typically, the **Name** is defaulted correctly. If the Citect server is on the local machine, leave **local** checked, otherwise uncheck, and specify either the name or IP address of the machine where Citect is running.

Use the **Test Connection** button to verify a connection to the server.

Secondary Server

These settings define the (optional) secondary Citect to connect to if a connection to the **Primary Server** fails.

Settings

For information on the specific settings, see the **DATA CONNECTIVITY, OPC** document.

Verify Data Communication

To verify communication to Citect, open the **Project Explorer** and select the **Tools** tab. Launch the **System Check** application.

- Click **Add**
- Choose the *Citect* connector from the dropdown list
- Click the pushbutton ([…]) next to Items to open the **Tag Browser** window.
- Select one or more tags and click **OK**
- Click **Start** to verify the communication

Citect Historical values

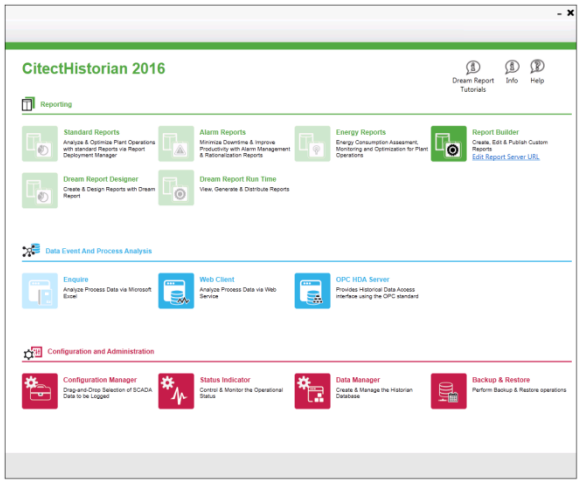
This connector is used to get historical values from the CitectHistorian.

Set up CitectSCADA

Historian Database

To get CitectSCADA Reports to log historical data, the Historian database must be set up in SQL Server.

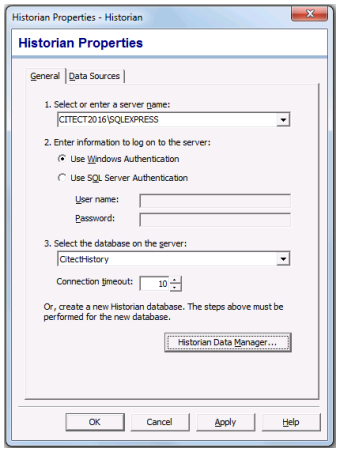
From the **Citect** program group, open **Citect Historian.**



- Select Configuration Manager.

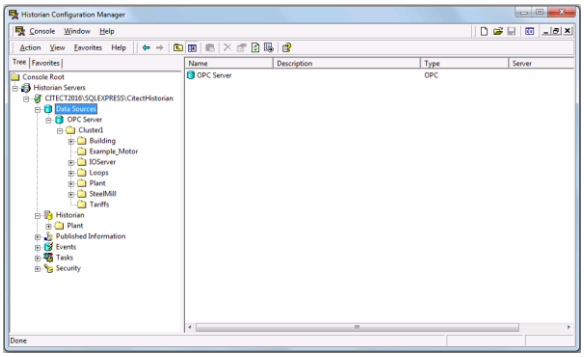
In the **Historian Configuration Manager,** right click **Historian Server** and assign the **New Server**.

To verify the connection right click **Historian** and verify the **General** properties.



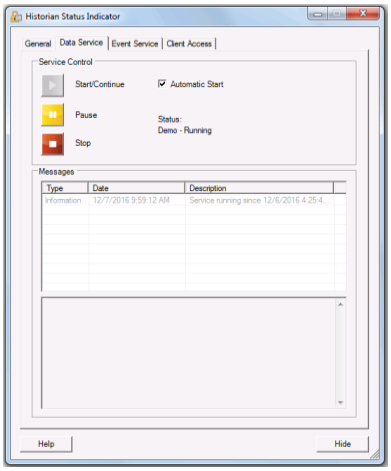
Log Data

Data logging is configured in the **Historian Configuration Manager**. Add the **Data Sources** and then add the Tags to the Historian.



Start the Data Logger

CitectSCADA Reports provides a **Historian Service** to manage the logging and retrieval of Historian data. In the **Historian Configuration Manager**, right click **Historian** then select **Status Indicator**.



The service must be running for data to be logged to the SQL Server database. The Service can be configured to automatically start when the PC is powered up.

Prerequisites

Verify Database

To verify, open **Microsoft SQL Server Management Studio** and connect to the SQL Server instance where the CitectSCADA Historian database is configured.

Once connected,

- Expand the database where the Historian is logging.
- Expand **Tables**.
- Select the **Tags** table.

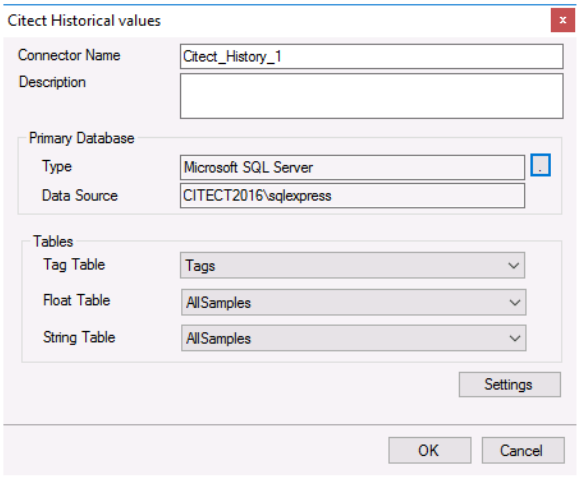
Right click the **Tags** table and choose *SELECT TOP 1000 Rows*. This should display data from the table representing the tags configured in the historian.

If the database or table does not exist or no data is displayed, contact Citect technical support to troubleshoot and correct these issues.

Connector

To configure the connector to the FactoryTalk View SE Historical values, from the **Project Explorer** select **Data, Connectors**.

- Click **Add**
- Select **Citect**, **Citect Historical Values**
- Click **OK**



Primary Database

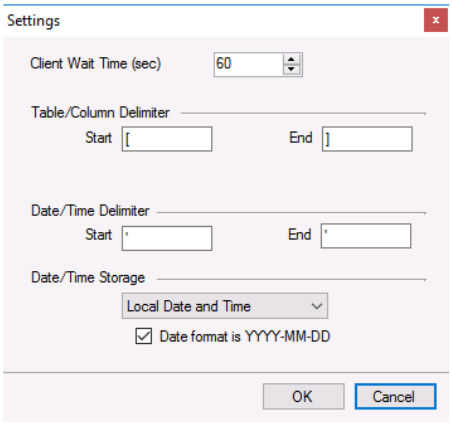
This defines a connection to the database where the **Citect Historian** is logging data. A browse button […] is provided to define.

Tables

Once the connection is established, the **Tag Table**, **Float Table** and **String Table** can be specified. **Tag Table** should be set to *Tag*. **Float Table** and **String Table** should both be set to *AllSamples*.

Settings

The **Settings** button opens the **Settings** dialog that defines characteristics of the database that are used to retrieve data.



Typically, these settings are defaulted correctly based on SQL Server.

If queries timeout, increase the **Client Wait Time**.

The delimiter and timestamp settings are typically filled in automatically for the database and can be modified for other databases.

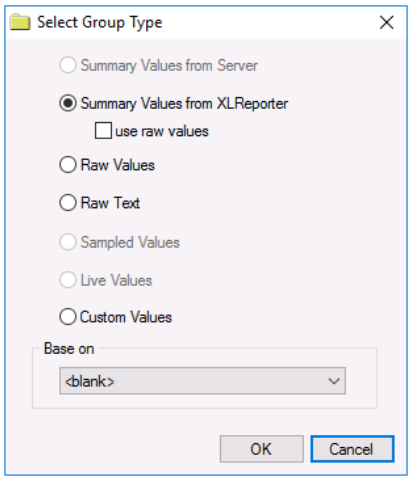
The **Date/Time Storage** settings define how timestamps are stored in the database. Using this setting the timestamps are manipulated when data is retrieved so that local timestamps are submitted in and returned.

Many databases require the Date format to be **YYYY-MM-DD** so that no interpretation needs to occur based on the Region settings of the Windows Operating System. It is recommended to always have this option checked.

Data Group

The following describes the historical data group settings specific to the **Citect Historical Values** connector.

Group Types



For **Citect Historical Values** the following group types are available:

Summary Values from XLReporter

This group type retrieves sampled values from the database and performs calculations on those samples for reporting.

By default, summary values are calculated time weighted, and values are propagated based on the last known value. However, to change this so that summary values are calculated strictly on the data returned check **use raw values**.

Raw Values

This group retrieves every numeric value logged to the database between the start and end time specified.

Raw Text

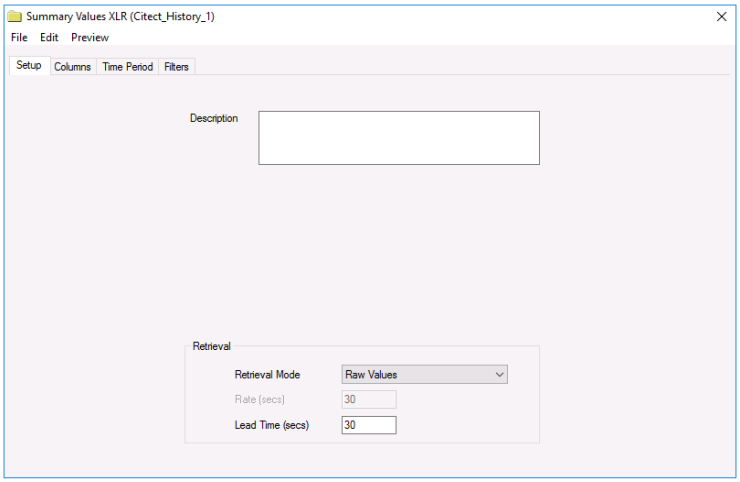
This group retrieves every textual value logged to the database between the start and end time specified.

Custom Values

This option opens the Database Group builder where a query can be configured to retrieve data from any table in the database.

Group Settings

Setup Tab



Retrieval (Summary Values for XLReporter Group)

The **Retrieval** settings define how data is retrieved for the calculations selected for the group. The following settings are available:

- **Retrieval Mode**
  This setting defines how data is retrieved from the historian. For Citect only *Raw Values* are available.
- **Lead Time**
  The amount of time (in seconds) to retrieve data before the start time.

Verify the Data Connector

From the **XLReporter Project Explorer** select**, Tools, Connector Groups.**

Select the *Citect* historical connector and then select **Add.**

- Set the **Type** *Raw Values* and click **OK**

On the **Columns** tab of the group, select the tag **Name**(s).

Select **Preview,** pick a *Start* date and click **Refresh.**

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