

Using XLReporter with CitectSCADA Historian

Overview

XLReporter takes historical values from CitectSCADA Historian to populate workbooks, periodically or on event, without needing Excel. The award-winning reporting software turns raw data into industrial metrics which are used for compliance, regulatory, improvements and operations.

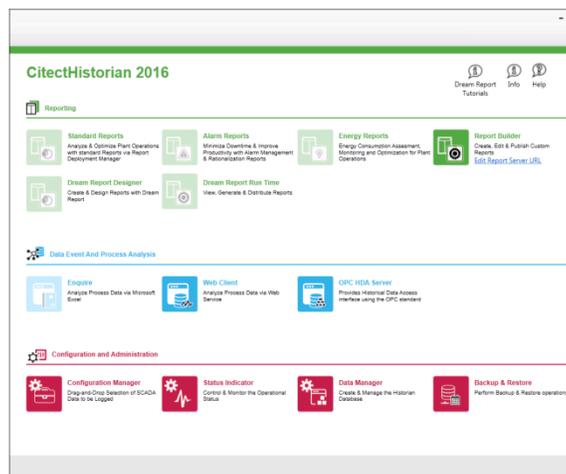
Complete reports are distributed automatically by email, FTP, file server and printers. With the Web Portal, reports are viewed or produced on-demand from any device supporting a web browser such as a mobile phone or tablet.

Set up CitectSCADA

Historian Database

In order 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**.

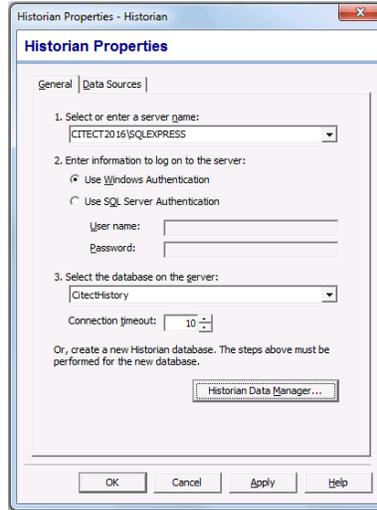


- Select Configuration Manager.

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

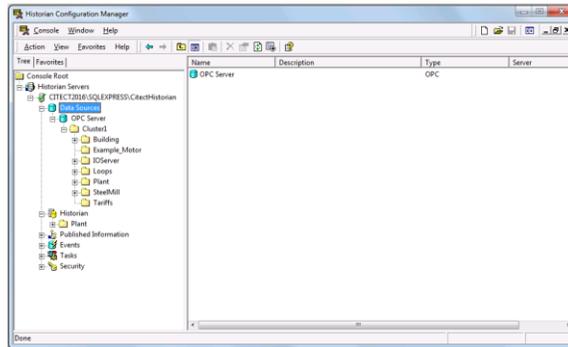


To verify the connection right click **Historian** and verify the **General** properties.



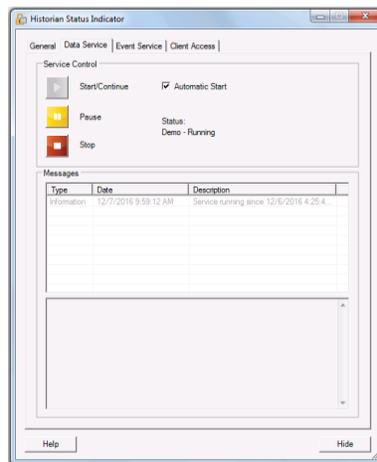
Log Data

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.

SQL Server 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.

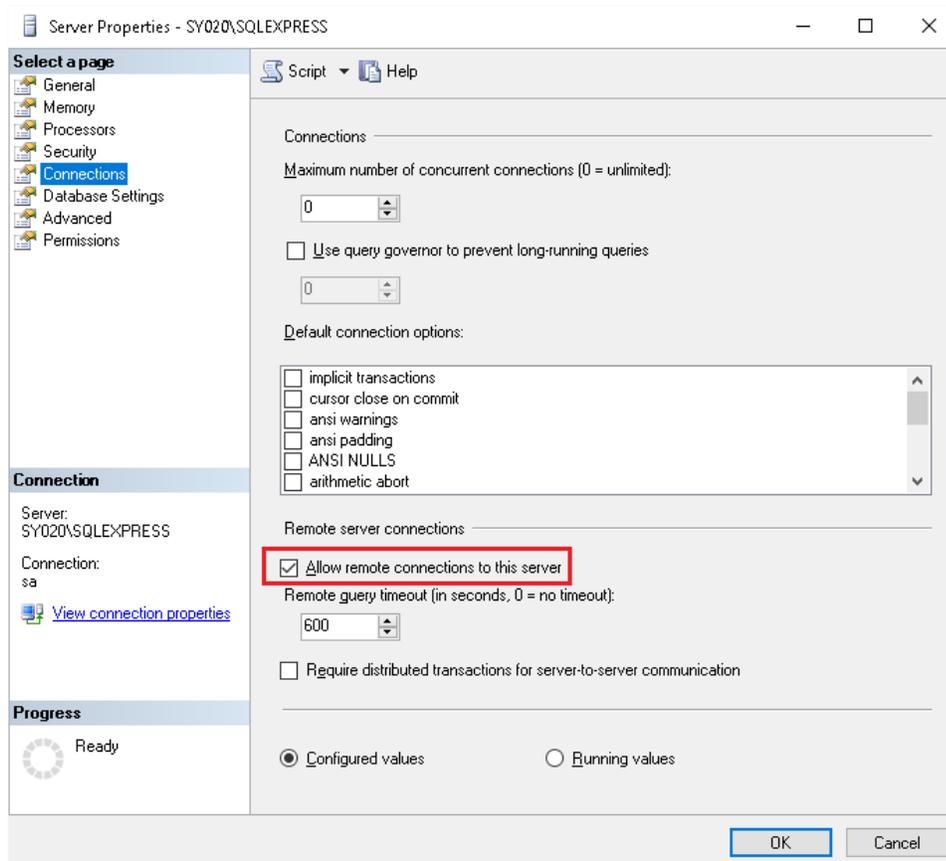
Right click the **Tags** table and choose *SELECT TOP 1000 Rows*. This should display data from the table representing the tags configured in the historian.

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

Remote Connection Considerations

Server Properties

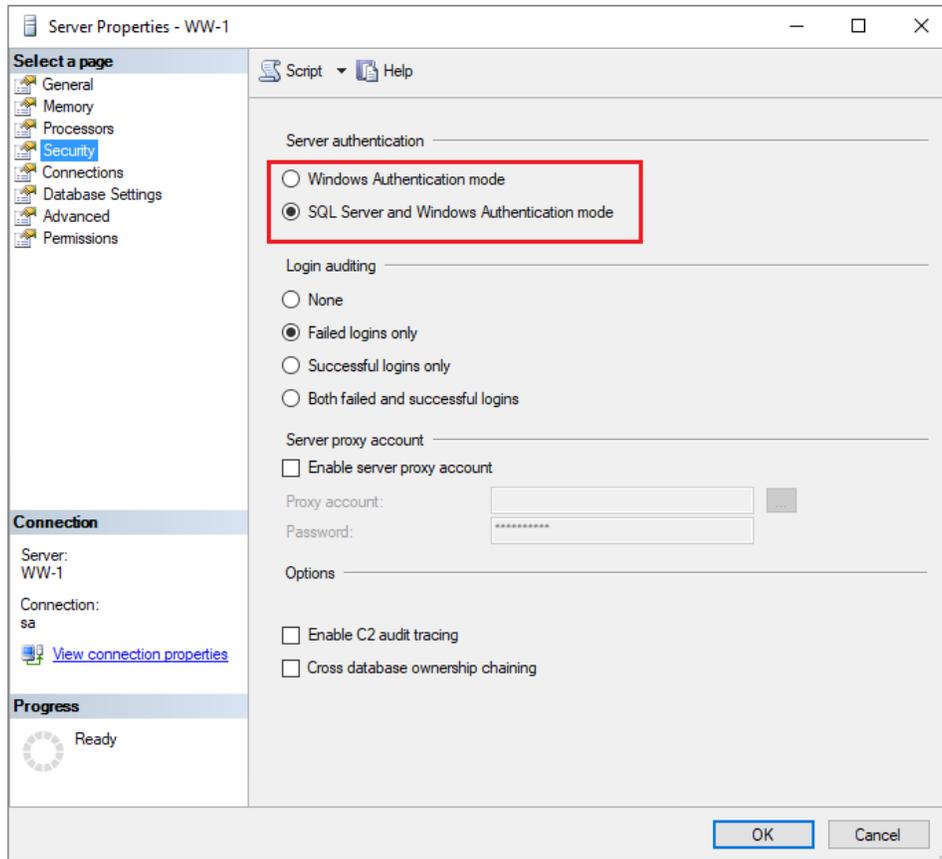
In order for **XLReporter** to communicate to SQL Server remotely, remote server connections must be enabled in SQL Server. Open the SQL Server Management Studio and connect. Right click the server at the top and select **Properties**.



- Under **Select a Page**, select **Connections**.
- In the **Remote server connections** section, check **Allow remote connections to this server**.

Authentication

Depending on the configuration performed during installation, the CitectSCADA Historian may be configured to only allow Windows Authentication. If so, this means that to connect remotely the Windows user on the remote machine must be valid on the machine with SQL Server. Authentication settings are configured from the **Server Properties** menu.

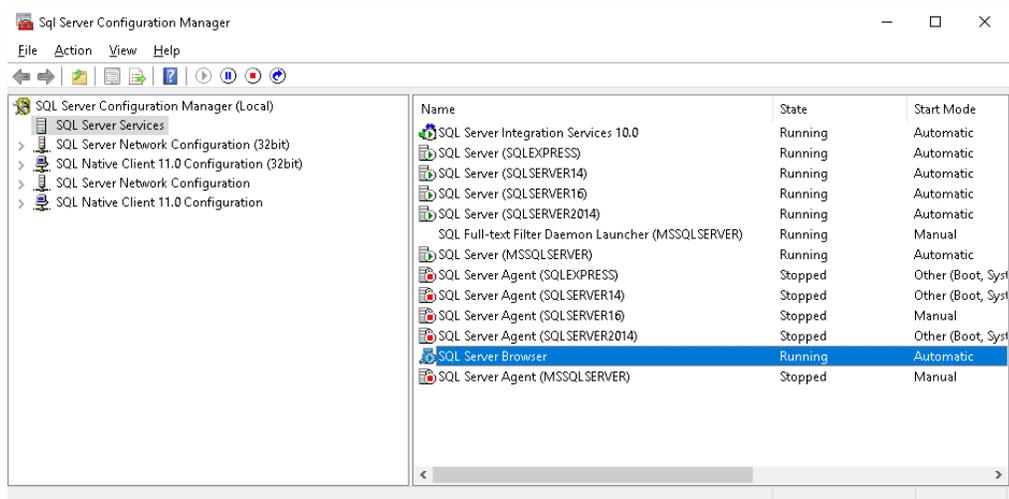


- Under **Select a Page**, select **Security**.
- In the **Server Authentication** section, select **SQL Server and Windows Authentication mode**.

At this point users can be added to SQL Server by expanding **Security** and right-clicking **Logins**.

Browse SQL Server Instance

To browse SQL Server names across the network, the SQL Server Browser Service can be enabled. From the Microsoft SQL Server program group open SQL Server Configuration Manager.



- Under **SQL Server Configuration Manager (Local)** select **SQL Server Services**.
- On the right, right-click **SQL Server Browser** and choose **Start** to start the service.

Now, when configuring connections to SQL Server, the name of this server should appear in the list.

Create a Project

From the **XLReporter Project Explorer** select **File, New** to start the **Project Wizard**. This will give step-by-step instructions on creating a project

Step 1

- Enter a **Project Name** and **Description** (optional).

The screenshot shows the 'New Project' dialog box with the following fields and options:

- Project Name:** XLR_Project
- Project Off Line
- Description:** Customer or Site name
- Project Location:** c:\XLRprojects

At the bottom, there are four buttons: '< Back', 'Next >', 'Finish', and 'Cancel'.

Step 2

- Configure the data connector, click **Add**.

The screenshot shows the 'New Project' dialog box with the following elements:

- Step 2 : Configure the Connectors (data sources) of the Project.**
- A toolbar with buttons: **+ Add** (highlighted with a red box), **Modify**, **Delete**, and **Catalog**.
- A table with columns: **Name**, **Provider**, and **Description**.
- The table contains one row with a yellow asterisk (*) in the first column.

Select **Citect, Citect Historical values**.

- Under **Primary Server** click the browse pushbutton ([...]) for **Name**.
- Select **Microsoft SQL Server**.
- Select the **Server Name** as the machine name for the Historian.
- For **Log on to the server**, specify the proper authentication.
- Set **Database** to the database where Historian is logging data.
- Click **Test Connection** to verify connectivity and return to the connector setup.

In the **Connector**,

- Under **Tables**, set **Tag Table** to *Tags*.
- Set **Float Table** and **String Table** to *AllSamples*.

Verify the Data Connector

XLReporter retrieves data from the **Data Connector** using a **History Group**.

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

Select the *Citect History* 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**.