

Reporting from Point of View

XLReporter generates Excel based reports from Indusoft's Point of View from real time data and historical archives. The purpose of this document is to describe how to interface **XLReporter** to Point of View. This document covers all initialization steps to Point of View.

Process Values

XLReporter can take snapshots of the process values and add them to an existing report worksheet, periodically or on event. To prevent excessive build-up of information in a single worksheet, new workbooks and worksheets can be created automatically.

Process values can be retrieved from Point of View by **XLReporter** via the Studio.Scada.OPC.3 OPC Server.

Before you Begin

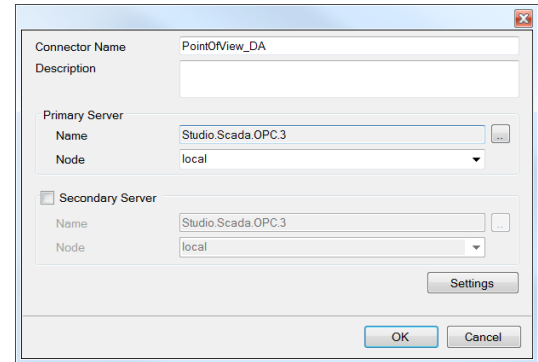
In order for **XLReporter** to communicate with Point of View, the machine where **XLReporter** is installed must also have the OPC core components installed. The OPC core components are provided in the tools folder of the **XLReporter** install CD or from www.OPCFoundation.org.

If **XLReporter** is installed on a PC that is remote to Point of View then a number of settings need to be configured on both the server and client machines. This includes having matching Windows user accounts (with matching passwords) on both machines and enabling DCOM on the machine where Indusoft (Point of View) is installed.

For a detailed explanation of the requirements for remote access, please read the OPC Training Institute document *OPC_and_DCOM_5_things_you_need_to_know* that is provided in the **Tools** folder of the **XLReporter** install CD or from www.SyTech.com.

Creating a Data Connector

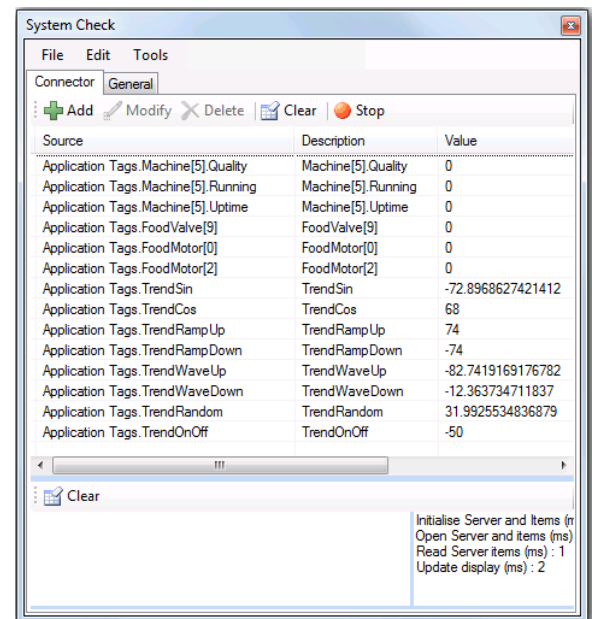
To connect **XLReporter** to Point of View, you will first need to create a **Connector**. To do this, open **XLReporter's Project Explorer**, and open **Connectors** from the **Data** tab. In **Connectors**, select **Add**, and select **Indusoft, Point of View Real-time values**.



Connectors for Point of View require a **Primary Server**. If Point of View is on a remote machine, the **Node** must be specified. The **Node** can be selected from the drop down list or manually entered as a machine name or IP address. Otherwise, set the **Node** to *local*.

Verifying the Data Connector

To verify that the **Data Connector** is functional, open **XLReporter's Project Explorer**. From the **Tools** tab start the **System Check** application and select the **Connector** tab.



System Check

Select **Add**, choose your Point of View Connector from the dropdown list, and click the pushbutton ([...]) next to **Items** to open the **Tag Browser** window.

Select one or more tags and verify that they update with the current value using **Start** in the **System Check** window.

Historical Data

With process data stored in a historian, the variety of reports that can be produced by **XLReporter** increases many fold.

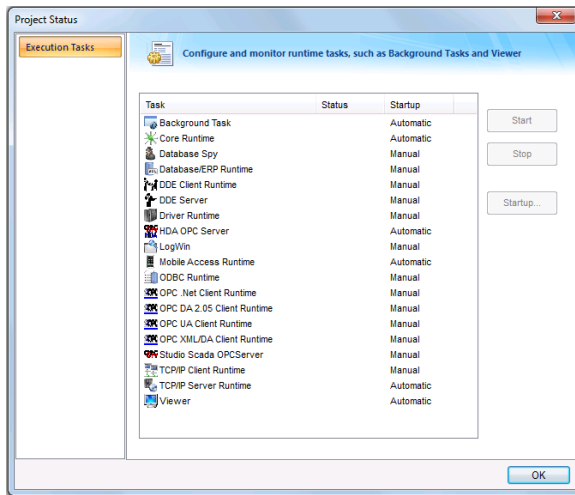
In addition to sample values, informative metrics such as run times and statistics are obtained by simply selecting the tags and time frame of interest. e.g. hourly average, maximum and minimum for each hour of the day.

XLReporter performs time-weighted calculations on the historical data retrieved.

Historical data can be retrieved from Point of View by either the OPCHDA interface or by querying trend data that is logged to a relational database.

Enable OPC HDA Server

To enable the Point of View OPC-HDA Server, select the **Local Management, Tasks** from the **Home** tab. Then set the **HDA OPC Server** to **Startup, Automatic**.

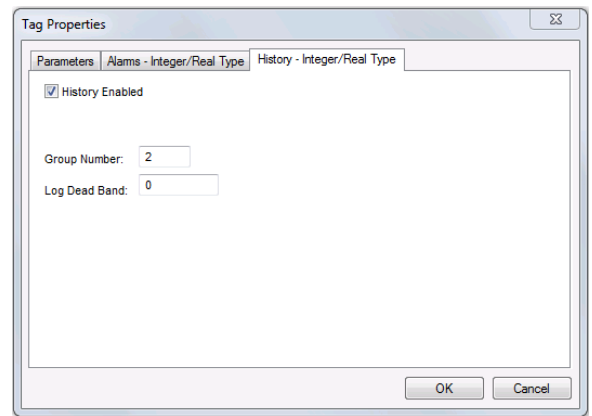


Project Status

Enable Historical Logging

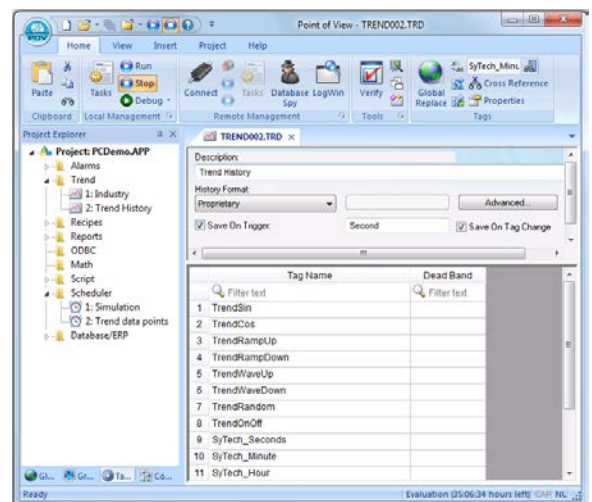
Each integer and real type tag in the tags database has several properties in addition to its actual value. You can set these properties by using the *Project Tags* datasheet, the **Properties** command on the ribbon, or the **Tags Database** functions.

To enable historical logging of the tag select **History Enabled**. The **Group Number** is the trend group to which the project tag is assigned to.



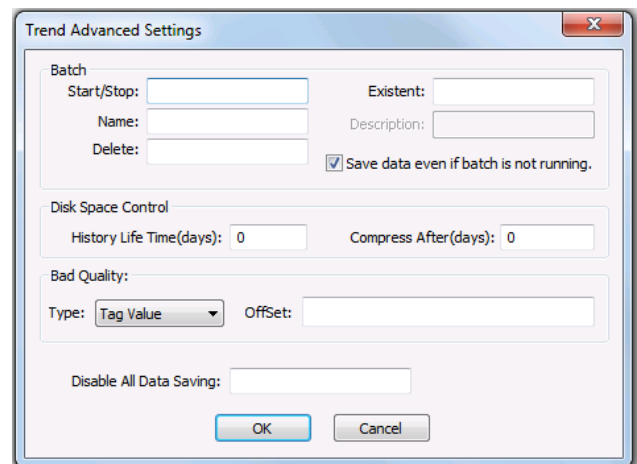
Tag Properties

The trend folder enables which tags have the values stored. To create a new trend file select **Tasks**, then right click **Trend** and select **Insert**. Assign your tags.



Trend

Click the **Advanced...** option and set the **History Life Time (days)** option. This will determine how often Indusoft will delete the trend files. Use 0 to keep all historical files.

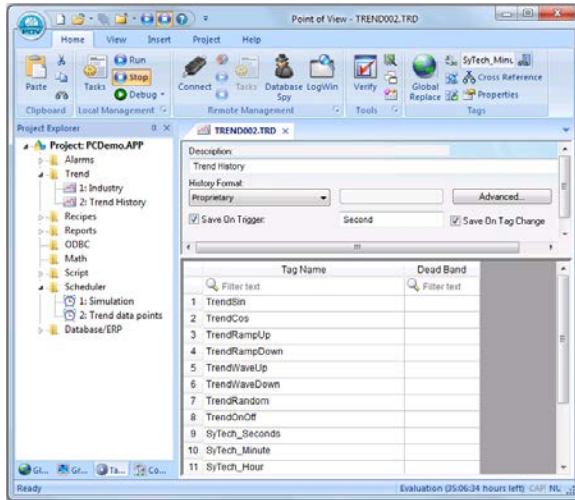


Trend Advanced Settings

Enable Historical Database Log

If you wish to retrieve historical data via trends logged to a relational database, create a new trend file.

To create a new trend file select **Tasks**, then right click **Trend** and select **Insert**. Assign your tags. The trend file can be logged to an external database.



Trend

Change the **History Format** to *Database*. The default name of the **Table** created is the name of the Trend file.

For example the trend file name above is TREND002.TRD. The table name created is TREND002. User can change the table name.

This table is setup with each tag as its own column. The timestamp column is *Time_Stamp* and it is stored in local time.

Creating a Historical Data Connector

To connect **XLReporter** to Point of View historical data you will first need to create a **Connector**. To do this, open **XLReporter's Project Explorer**, and open **Connectors** from the **Data** tab. In **Connectors**, select **Add**, and select **Indusoft** and either **Point of View Historical Values (OPC HDA)** or **Point of View Historical Values (OLEDB/ODBC)**.

Connectors for Point of View via OPC HDA require a **Primary Server**. If Point of View is on a remote machine, the **Node** must be specified. The **Node** can be selected from the drop down list or manually entered as a machine name or IP address. Otherwise, set the **Node** to *local*.

Connectors for Point of View via OLEDB/ODBC require a **Primary Database** to be configured which defines the connection to the database where the trend is logging.

Once the **Primary Database** is defined, in the **Table/Column** section select the **Table** containing the

trend data you would like to receive and the **Date** column (*Time_Stamp*).

Verify the Historical Data Connector

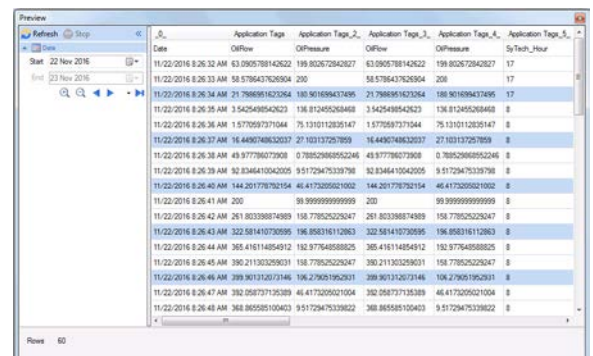
Create a **Connector Group** to verify that data can be retrieved from the connector. **Connector Groups** are designed in **Project Explorer, Tools, Connector Groups**. Select your Indusoft historical connector and then select **Add**. Select the **Type** and click **OK**.

On the **Columns** tab of the group, select the tag **Name** and **Calculation** for each tag in the group.

On the **Time Period** tab, select the **Start Time**, **End Time** and **Interval** for the group. By default this is set to one hour intervals over the current day.

On the **Filters** tab, select tags by which to filter the results returned by the group. The **Criteria** conditions specified are combined with an **OR** relationship horizontally, and an **AND** relationship vertically.

The **Preview** pushbutton at the upper-left of the history group display can be pressed to preview the result of the current configuration.



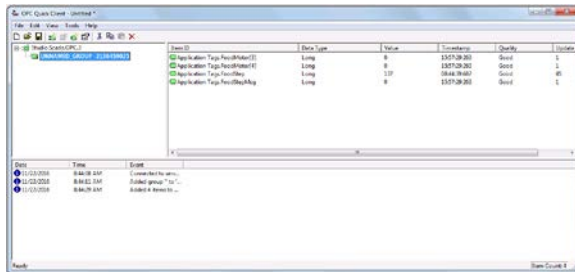
Preview

Troubleshooting - Real Time Data

If you are experiencing issues connecting to or retrieving data from Indusoft with **XLReporter**, 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.



OPC Quick Client

To connect to an OPC server, select **Edit, New Server Connection** to open the **Server Properties** window. Select *Studio.Scada.OPC.3* 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 of 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, it is an indication that there is something wrong with the Indusoft OPC server, since now two OPC clients have demonstrated issues.

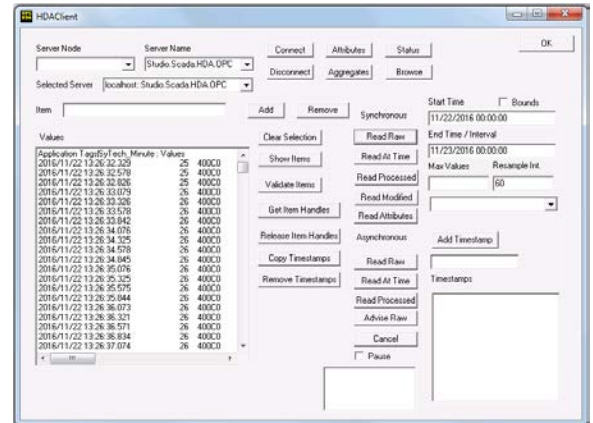
At this point, contact Indusoft technical support to troubleshoot and correct these issues.

Troubleshooting – Historical Data

If you are experiencing issues connecting to or retrieving data from the Indusoft historian with **XLReporter**, a generic OPC-HDA test client is provided to test the Indusoft HDA-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 **SampleClientHDA.exe**. This opens the **HDA Client** window.



HDA Client

To connect to an OPC-HDA server and retrieve historical tag values, select the **Server Name** and click **Connect**. Click **Browse** to open the **Browse Dialog** window.

Choose the desired tags from the window and click **Add** after each selection. When complete, click **Done** to return to the **HDA Client** window.

Click **Show Items** to display the selected tags in the left pane window. Select each tag and click **Validate Items** then **Get Item Handles**.

Enter the **Start Time** and **End Time**. Note this is in UTC (Universal Time Clock) as well as the **Resample Interval**.

To read raw values, click **Read Raw**. The data appears in the left window.

If at any point you experience an issue with this client, it is an indication that there is something wrong with the Point of View OPC-HDA Server, since now two OPC-HDA clients have demonstrated issues.

At this point, contact Indusoft technical support to troubleshoot and correct these issues.