

Reporting from Cimplicity

XLReporter generates Excel based reports from GE Digital's Cimplicity using current process values in the tag database, historical logs and alarm archives.

The purpose of this document is to describe how to setup Cimplicity for **XLReporter**.

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.

XLReporter retrieves process data from Cimplicity using the OPC Server provided.

Before you Begin

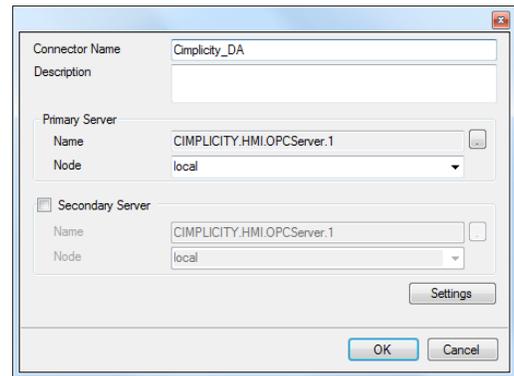
XLReporter requires the OPC core components installed in order to communicate with Cimplicity. These components are usually installed as part of the Cimplicity installation. If the OPC components need to be installed manually, they are provided in the tools folder of the **XLReporter** install CD or from www.OPCFoundation.org.

If **XLReporter** is installed on a PC that is remote to Cimplicity 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 Cimplicity 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 Real Time Data Connector

To connect **XLReporter** to Cimplicity for real time data, you will need to create a **Connector**. To do this, open **XLReporter's Project Explorer**, and open **Connectors** from the **Data** tab. In **Connectors**, select **Add**. Select **GE Digital, Cimplicity Real-time values**.

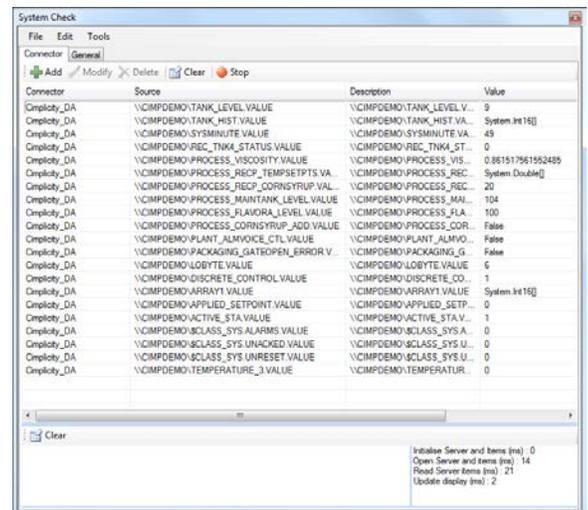


Cimplicity Real Time Connector Configuration

Under **Primary Server**, if the server is on a remote machine, set **Node** to the name of that machine, otherwise leave it set to *local*.

Verifying the Data Connector

To verify the Cimplicity real time interface, open **XLReporter's Project Explorer**. From the **Tools** tab, start the **System Check** application and select the **Connector** tab. Select **Add**, choose your Cimplicity Connector from the dropdown list, and click the browse pushbutton [...] to open the **Tag Browser** window.



System Check

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.

Setting up Data Logging

To set up data logging in Cimplicity, from the **CIMPLICITY Workbench**, double-click **Database Logger**.

To determine what database the historical data is logged to select **Edit, Logging Properties**.

Under the **Default Point Connection** tab, choose an existing **ODBC data source**. If there is not one there that fits your needs, you can create a new ODBC data source from **XLReporter's Project Explorer**, under the **Tools** tab by selecting **Database, DSN Settings**.

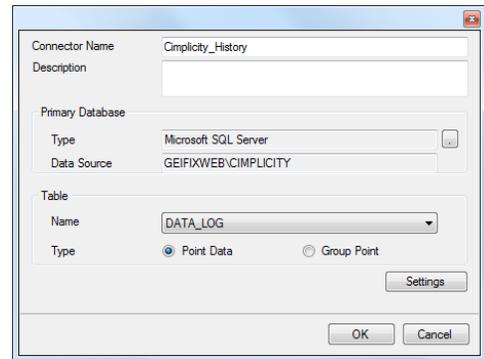
There are 2 methods of historical data logging, **Point Data** logging and **Group Point** logging. With **Point Data** logging every configured point is logged as a separate record. With **Group Point** logging every configured point is logged as a single record at the same time.

Cimplicity has provided a default table for both **Point Data** logging (**DATA_LOG**) and Group Point logging (**GROUP_LOG**). You can either add points to these tables or create your own by selecting **File, New Table**.

To add points to a table, right-click the table and select **Add Points**.

Creating a Historical Data Connector

To connect **XLReporter** to Cimplicity 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 **GE Digital, Cimplicity Historical values**.



Cimplicity History Connector Configuration

Under **Primary Database** click the browse pushbutton [...] and connect to the database where the Cimplicity historical data is being logged.

Under **Table**, set **Name** to the name of the table to retrieve data from as configured in the Cimplicity Database Logger. Set **Type** based on what type of logging the table is configured for.

Verify the Historical Data Connector

XLReporter accesses process values stored in the historian using a connector group.

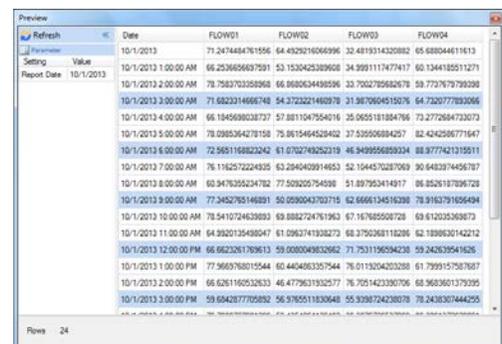
From **XLReporter's Project Explorer**, under the **Tools** tab, select **Diagnostics, Connector Groups**. Select the Cimplicity history connector and click **Add**.

Select the **Type** of group and click **OK**.

On the **Columns** tab, 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.

The **Preview** menu can be selected to preview the result of the current configuration.



Date	FLOW01	FLOW02	FLOW03	FLOW04
10/1/2013	71.2474484761556	64.4929216066996	32.4819314320882	65.688044611613
10/1/2013 1:00:00 AM	66.2536656697591	53.1530425209608	34.9991117477417	60.1346185511271
10/1/2013 2:00:00 AM	78.7583703358968	66.868064498986	33.7992785682678	59.7727679793988
10/1/2013 3:00:00 AM	71.6823314666748	54.3723221460878	31.9870604915076	64.7320777893066
10/1/2013 4:00:00 AM	66.1845688038737	57.8811047954016	25.065181884766	73.2728647320373
10/1/2013 5:00:00 AM	78.0885364278158	78.9615464529402	37.530556884257	82.4242864771647
10/1/2013 6:00:00 AM	72.9651168823242	61.0702749252319	46.9489568859334	88.9777421319511
10/1/2013 7:00:00 AM	76.1162572224935	63.2840409314653	52.1544570287069	90.6483974456787
10/1/2013 8:00:00 AM	60.947835254782	77.509205754588	51.897953414917	86.8526187896728
10/1/2013 9:00:00 AM	77.3452785146891	50.099043703715	62.6666134516388	78.9163791856494
10/1/2013 10:00:00 AM	78.5410724639893	69.8882724761963	67.167865508728	69.612035368873
10/1/2013 11:00:00 AM	64.9520135488047	61.0963741938273	68.3750368118286	62.1898630142212
10/1/2013 12:00:00 PM	66.6223281709613	59.008049832842	71.7531198294238	59.242639541626
10/1/2013 1:00:00 PM	77.966978015544	60.4464863357844	76.0173204203288	61.799915787887
10/1/2013 2:00:00 PM	66.6261160532633	46.4779319125777	76.7051423390706	68.5633601379295
10/1/2013 3:00:00 PM	59.6042877709892	56.9785511830648	55.9398724238078	78.2438307444295

Preview

Preview displays the data exactly the same way it will be written into the report.

Alarm Data

Any point in Cimplicity can be set to generate an alarm whenever it exceeds specified limits. The resulting alarms can be logged in a relational database. If alarms are set up to log this way, **XLReporter** can use alarm data in a report.

Setting up Alarm Logging

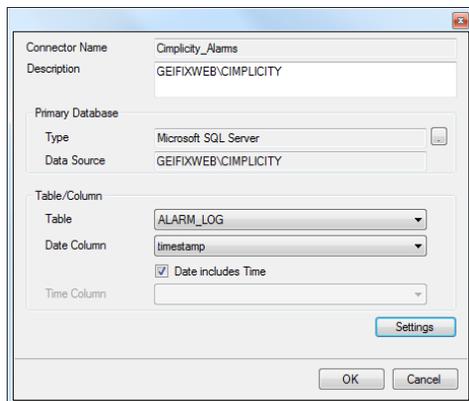
To add points to the Cimplicity alarm log you can do so either through the Point Properties dialog box or by adding to the *ALARM_LOG* table in the **Database Logger**.

Creating an Alarms Connector

To connect **XLReporter** to Cimplicity alarm 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 **GE Digital, Cimplicity Alarms**.

Under **Primary Database**, for **Type**, click the browse pushbutton [...] to define a connection to the alarm database.

Select the appropriate database type and specify the information in order to connect to the database where Cimplicity is set to log the alarms. Click **Test Connection** to verify the settings.



Cimplicity Alarm Connector Configuration

Under **Table/Column**, set **Table** to the **Table Name** as *ALARM_LOG*.

For **Date Column**, select *timestamp*. This is used to filter alarm records based on time.

Verify the Alarm Data Connector

XLReporter accesses alarm data stored in the database using a connector group.

From **XLReporter's Project Explorer**, under the **Tools** tab, select **Diagnostics, Connector Groups**. Select the Cimplicity alarm connector and click **Add**.

On the **Columns** tab, select the **Columns** for the alarm data you wish to retrieve.

On the **Time Period** tab, select the **Start Time**, **End Time** and **Interval** for the group. By default this is set to the first 60 values over the current day.

On the **Filters** tab, specify filtering to limit the type or amount of alarms returned. You can filter based on any available column in the alarm table. This includes filtering on alarm type, tag name, etc.

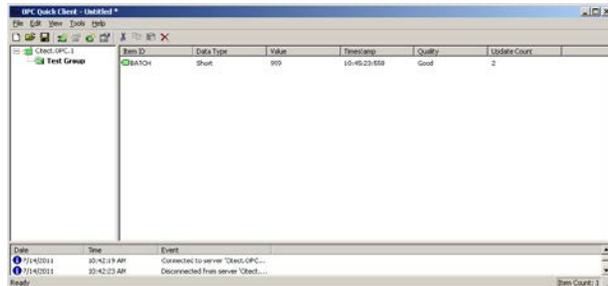
The **Preview** menu can be selected to preview the result of the current configuration.

Troubleshooting - Real Time Data

If you are experiencing issues connecting to or retrieving data from Cimplicity 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** installation disk 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 **CIMPLICITY.HMI.OPCServer.1** 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 Cimplicity OPC server, since now two OPC clients have demonstrated issues.

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