Iconics Connectors

GENESIS64 Real-time values

This connector is used to get real time values from the GENESIS64 OPC Server.

Prerequisites

Verify Communication

Communication between the OPC server and an OPC client must be verified. Some OPC Server vendors like Kepware and Rockwell Automation provide OPC clients with their servers. These clients can be used to validate.
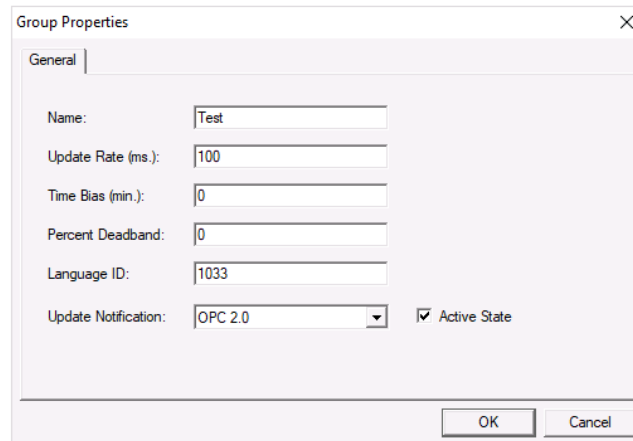
If an OPC client is not provided with the server, **XLReporter** provides an independent OPC client to verify connectivity and data retrieval from any OPC DA server. This client is found on **XLReporter's** product CD under **Tools, OPC, OPC_DA**. It can also be downloaded from www.SyTech.com.
To run, double-click **SampleClientDA.exe**.

To connect to an OPC server, select **Edit**, **New Server Connection** to open the **Server Properties window**.

Expand the **OPC Data Access Servers**, select *ICONICS.FwxServerOPC.1* and click **OK**.

From the **Edit** menu select **New Group**.

Specify **Name** and click **OK**.

Click on the group name created, and select **Edit**, **New Item**.

This opens the **Add Items** window. In the browsing section drill into the tree and select Leaf items on the right. For each leaf you want to view data for, click the Add Leaves button. Click **OK** when you have selected the tags to read.

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

If the client does not respond as described, contact Iconics technical support to troubleshoot and correct these issues.

Remote Connectivity

OPC Core Components

If **XLReporter** is not installed on the same machine as the OPC DA Server, the **XLReporter** machine must 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 an OPC DA server 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 the OPC DA server, 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 the OPC DA server 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 **ICONICS**, **GENESIS64 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 server is on the local machine, leave **local** checked, otherwise uncheck, and specify either the name or IP address of the machine where the server is running.

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

Secondary Server

These settings define the (optional) secondary server 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, open the **Project Explorer** and select the **Tools** tab. Launch the **System Check** application.

- Click **Add**
- Choose the *GENESIS64 Real-time values* connector from the dropdown list
- Click the pushbutton ([…]) next to Items to open the **Tag Browser** window
- Select one or more tags, click **OK**
- Click **Start** to verify the communication

Hyper Historian Historical Values

This connector is used to get historical values from the Hyper Historian OPC HDA Server.

Prerequisites

Verify Communication

Communication between the OPC server and an OPC client must be verified. Some OPC Server vendors provide OPC HDA clients with their servers. These clients can be used to validate.

If an OPC HDA client is not provided with the server, **XLReporter** provides an independent OPC HDA client to verify connectivity and data retrieval from any OPC HDA server. This client is found on **XLReporter's** product CD under **Tools, OPC, OPC_HDA**. It can also be downloaded from www.SyTech.com.

To run, double-click **SampleClientHDA.exe**.

To connect to HyperHistorian, select ICONICS.HyperHistorian.1 from the **Server Name** dropdown list and click **Connect**.

Click **Browse** to open the **Browse Dialog** window.

The easiest way to get a list of tags is to set **OPCHDA_BROWSETYPE** to *OPCHDA_FLAT*. Choose each tag to test by selecting it and clicking **Add**. When complete, click **Done** to return to the **HDA Client** window.

Click **Show Items** to display the selected tags in the left pane window. Click **Validate Items** then **Get Item Handles** to register these tags with the server.

Enter the **Start Time** and **End Time** . Note this is in UTC(Universal Time Clock) and click **Read Raw**. The raw values for each selected tag will appear on the left along with a timestamp and quality.

To read processed data, click **Aggregates**, select the appropriate aggregate (e.g., maximum, minimum, etc.). and click **Read Processed**. One minute calculations between the start and end time should appear for each selected tag.

If the client does not respond as described contact the OPC HDA Server vendor technical support to troubleshoot and correct these issues.

Remote Connectivity

OPC Core Components

If **XLReporter** is not installed on the same machine as the OPC HDA Server, the **XLReporter** machine must 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 an OPC HDA server 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 the OPC HDA server, 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 the OPC HDA server 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 **ICONICS**, **Hyper Historian Historical values**
- Click **OK**

Primary Server

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

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

Secondary Server

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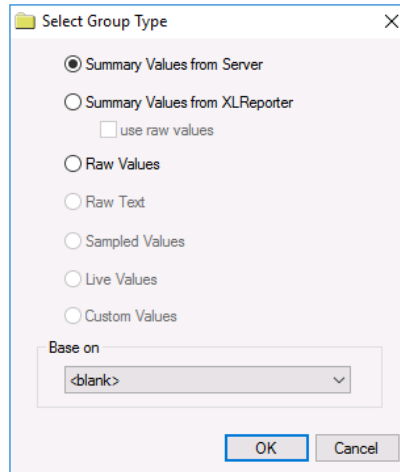
Settings

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

Data Group

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

Group Types

The following group types are available:

Summary Values from Server

This group type retrieves summary calculations directly from the historian. The following calculations are available:

- Interpolated
- Average
- Maximum
- Time of Maximum
- Minimum
- Time of Minimum
- Range
- Standard Deviation
- Variance
- Total
- Count
- Raw Average
- Start Value
- End Value
- Delta Value
- Regression Slope
- Regression Constant
- Regression Deviation
- Annotation Count
- Duration Good
- Duration Bad
- Percent Good
- Percent Bad
- Worst Quality

Summary Values from XLReporter

This group type retrieves sampled values from the historian 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 values logged to the historian between the start and end time specified.

Group Settings

Setup Tab (Summary Values for XLReporter)
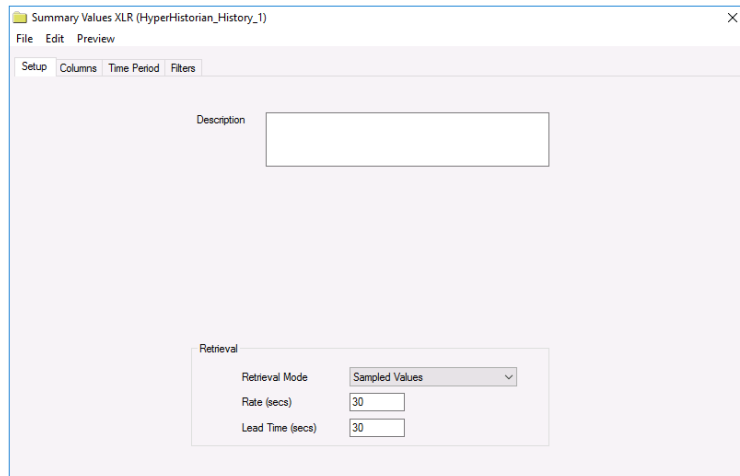
The **Retrieval** settings define how data is retrieved for the calculations selected for the group. The following settings are available:

- **Retrieval Mode**
  This setting defines how data is retrieved from the historian. Both *Sampled Values* and *Raw Values* are available where *Sampled Values* uses the *Interpolated* calculation.
- **Rate**
  The interval (in seconds) that sampled values are retrieved from the historian.
- **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 *Hyper Historian Historical Values* 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.**

Information in this document is subject to change without notice. SyTech assumes no responsibility for any errors or omissions that may be in this document. No part of this document may be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose, without the prior written permission of SyTech.