

Using XLReporter with GE Historian

Overview

XLReporter takes historical values from GE 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, tablet.

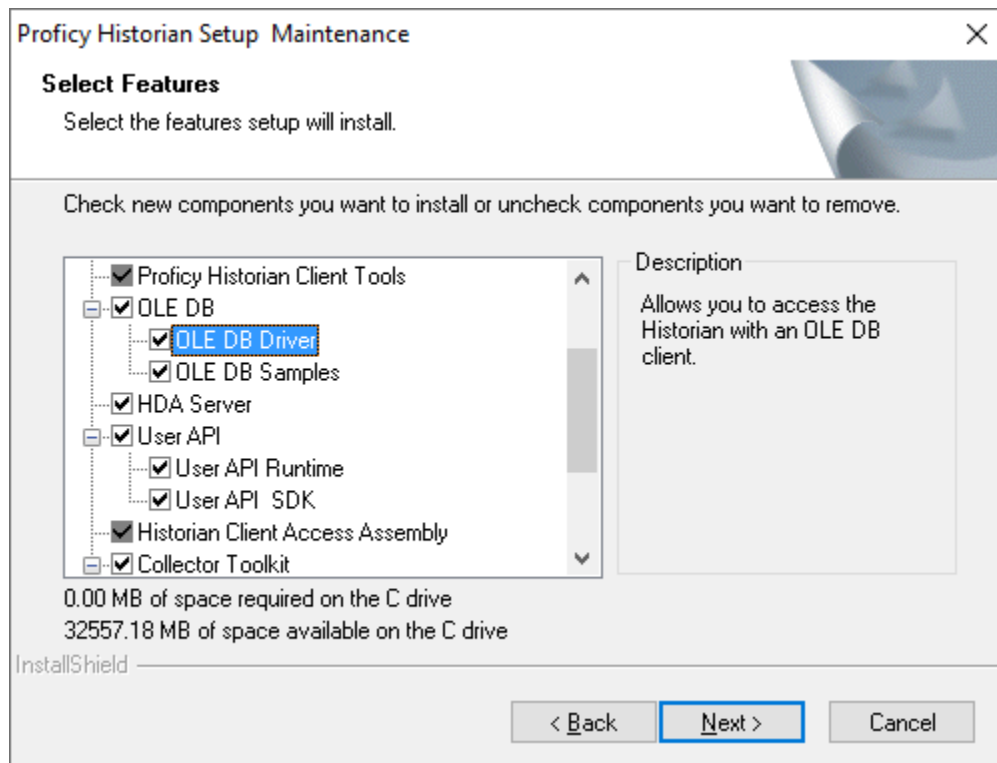
Setup GE Historian

Client Tools

On the machine where **XLReporter** is installed, the Historian Client Tools must also be installed. These are available on the Historian installation CD.

From the **Historian Installation Program**, select **Install Client Tools**.

At minimum, the **OLE DB Driver** must be selected to install. Selecting this forces the **Historian Client Tools** to be selected as well.

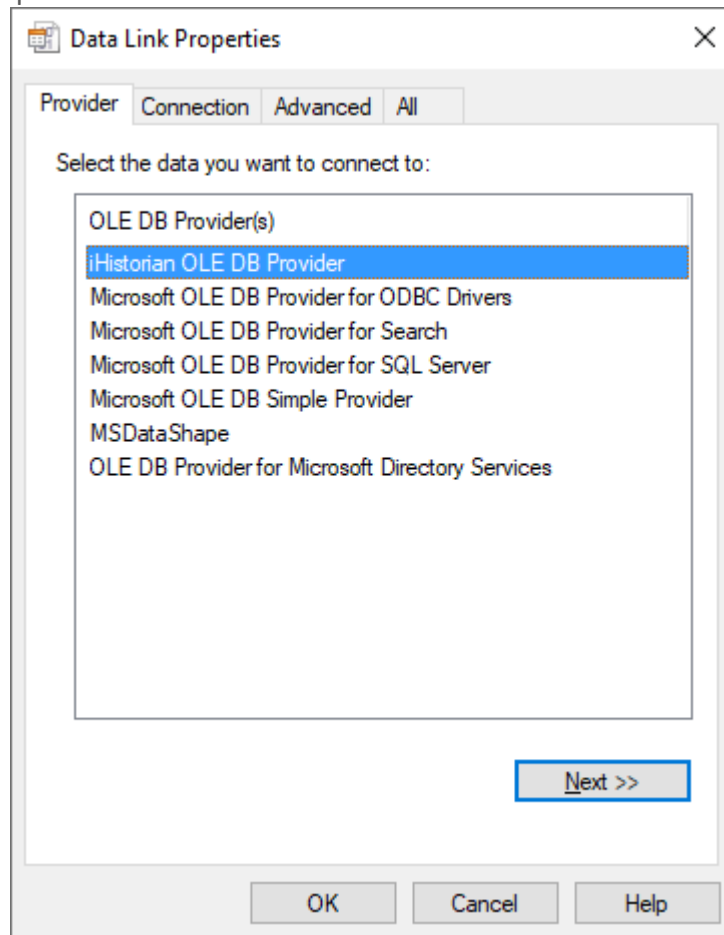


Prerequisites

Verify Driver

To verify the OLE DB Provider exists on the machine,

- On the Windows desktop, create a new text document.
- Rename the text document to *Test.udl*.
- Double click the file to open.



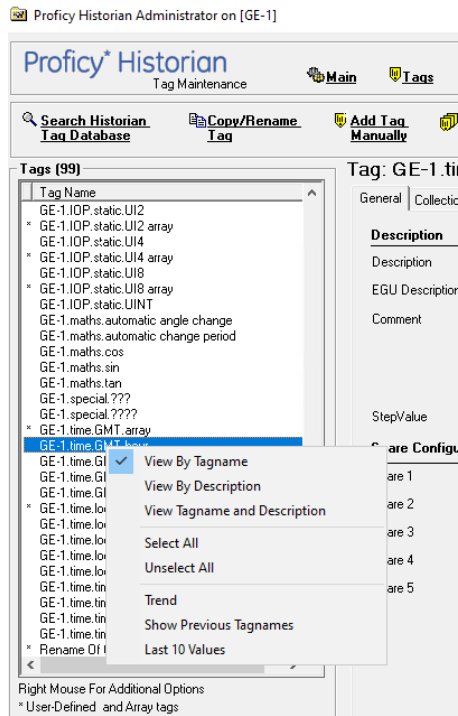
- On the **Provider** tab, verify that the *iHistorian OLE DB Provider* is listed.

Verify Data Storage

From the **GE Historian** program group, select **Historian Administrator**.

After verifying the iHistorian driver is installed, open the **Historian Administrator**.

- At the top click the **Tags** link.
- Click **Search Historian Tag Database**.
- Leave the Search window blank and click **OK**. All the available tags are now listed.



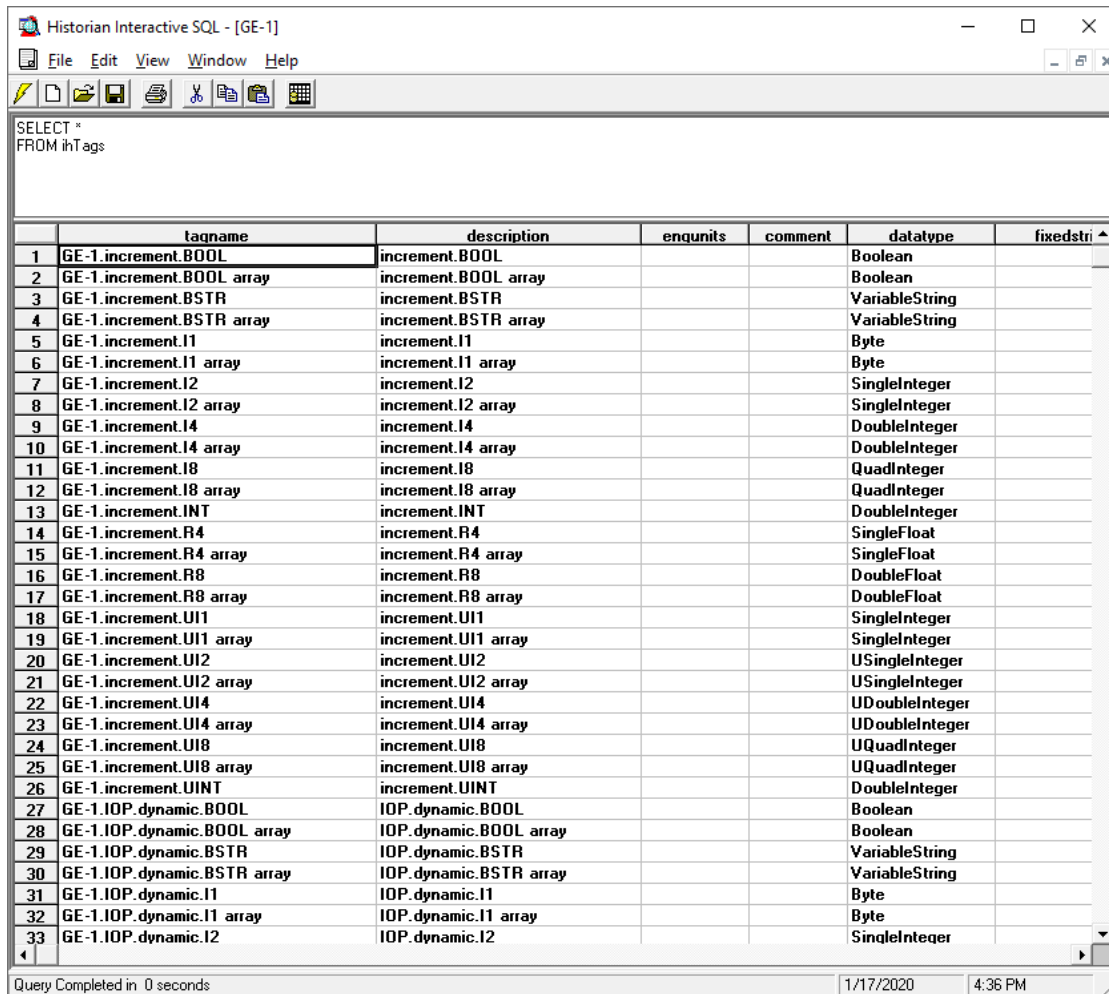
- Right click a tag in the list and choose **Last 10 Values**.

This displays the last 10 values logged to the historian for the selected tag.

Verify Data Retrieval

The **Historian Interactive SQL** application can be used to verify data retrieval. To open, from the GE Historian program group select Historian Interactive SQL.

- Connect to the historian.



The screenshot shows the 'Historian Interactive SQL - [GE-1]' application window. The title bar includes standard window controls and a menu bar with 'File', 'Edit', 'View', 'Window', and 'Help'. Below the menu bar is a toolbar with icons for file operations and execution. The main area contains a text input field with the query 'SELECT * FROM ihTags'. Below the input field is a table with 7 columns: 'tagname', 'description', 'enquits', 'comment', 'datatype', and 'fixedstri'. The table lists 33 rows of tag information. At the bottom of the window, a status bar shows 'Query Completed in 0 seconds', the date '1/17/2020', and the time '4:36 PM'.

	tagname	description	enquits	comment	datatype	fixedstri
1	GE-1.increment.BOOL	increment.BOOL			Boolean	
2	GE-1.increment.BOOL array	increment.BOOL array			Boolean	
3	GE-1.increment.BSTR	increment.BSTR			VariableString	
4	GE-1.increment.BSTR array	increment.BSTR array			VariableString	
5	GE-1.increment.I1	increment.I1			Byte	
6	GE-1.increment.I1 array	increment.I1 array			Byte	
7	GE-1.increment.I2	increment.I2			SingleInteger	
8	GE-1.increment.I2 array	increment.I2 array			SingleInteger	
9	GE-1.increment.I4	increment.I4			DoubleInteger	
10	GE-1.increment.I4 array	increment.I4 array			DoubleInteger	
11	GE-1.increment.I8	increment.I8			QuadInteger	
12	GE-1.increment.I8 array	increment.I8 array			QuadInteger	
13	GE-1.increment.INT	increment.INT			DoubleInteger	
14	GE-1.increment.R4	increment.R4			SingleFloat	
15	GE-1.increment.R4 array	increment.R4 array			SingleFloat	
16	GE-1.increment.R8	increment.R8			DoubleFloat	
17	GE-1.increment.R8 array	increment.R8 array			DoubleFloat	
18	GE-1.increment.UI1	increment.UI1			SingleInteger	
19	GE-1.increment.UI1 array	increment.UI1 array			SingleInteger	
20	GE-1.increment.UI2	increment.UI2			USingleInteger	
21	GE-1.increment.UI2 array	increment.UI2 array			USingleInteger	
22	GE-1.increment.UI4	increment.UI4			UDoubleInteger	
23	GE-1.increment.UI4 array	increment.UI4 array			UDoubleInteger	
24	GE-1.increment.UI8	increment.UI8			UQuadInteger	
25	GE-1.increment.UI8 array	increment.UI8 array			UQuadInteger	
26	GE-1.increment.UINT	increment.UINT			DoubleInteger	
27	GE-1.IOP.dynamic.BOOL	IOP.dynamic.BOOL			Boolean	
28	GE-1.IOP.dynamic.BOOL array	IOP.dynamic.BOOL array			Boolean	
29	GE-1.IOP.dynamic.BSTR	IOP.dynamic.BSTR			VariableString	
30	GE-1.IOP.dynamic.BSTR array	IOP.dynamic.BSTR array			VariableString	
31	GE-1.IOP.dynamic.I1	IOP.dynamic.I1			Byte	
32	GE-1.IOP.dynamic.I1 array	IOP.dynamic.I1 array			Byte	
33	GE-1.IOP.dynamic.I2	IOP.dynamic.I2			SingleInteger	

- Queries can be entered at the top of the window. Enter the following query:

```
SELECT *FROM ihTags
```

- Click the  button to execute the query

This should list all tags configured in the historian.

Historical Interfaces

XLReporter has two interfaces available to retrieve data from GE Historian.

Historian Plus

The **Historian Plus** interface can be used if **XLReporter** is installed on the same machine as Historian. It is a high speed interface capable of retrieving a large amount of data.

Historian OLE DB

The Historian interface can be used if **XLReporter** is not installed on the same machine as Historian. It uses the Historian OLEDB provider to retrieve data.

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

Buttons at the bottom: < Back, Next >, Finish, Cancel

Step 2

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

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

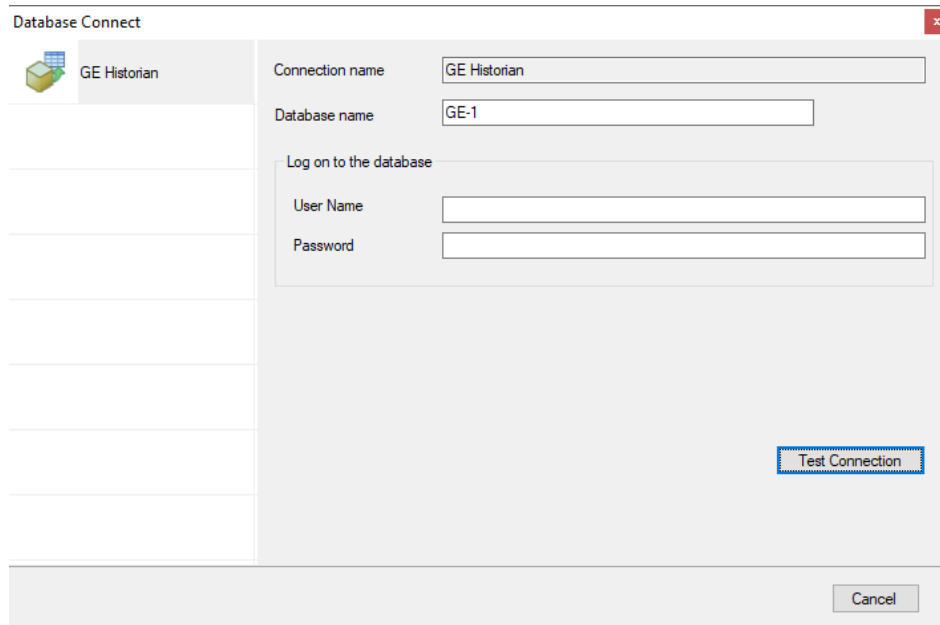
- Step 2 : Configure the Connectors (data sources) of the Project.**
- Buttons: + Add (highlighted with a red box), Modify, X Delete, Catalog
- Table with columns: Name, Provider, Description
- Table content: * (in the Name column)

Select **GE Digital, Historian** or **Historian Plus**.

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

- Connector Name:** GE_Historian
- Description:** GE-1
- Primary Server:**
 - Name:** GE-1
 - User:** (empty)
- Secondary Server:**
 - Name:** (empty)
 - User:** (empty)
- Buttons: Settings, OK, Cancel

- Under **Primary Server**, click the browse pushbutton ([...]) for **Name**.



- Set **Database name** to the name of the machine where the Historian is running. This setting can also be left blank to use the default server as configured in the **Historian Interactive SQL** application.
- Specify the logon credentials if required.
- Click **Test Connection** to verify the settings.

Verify the Data Connector

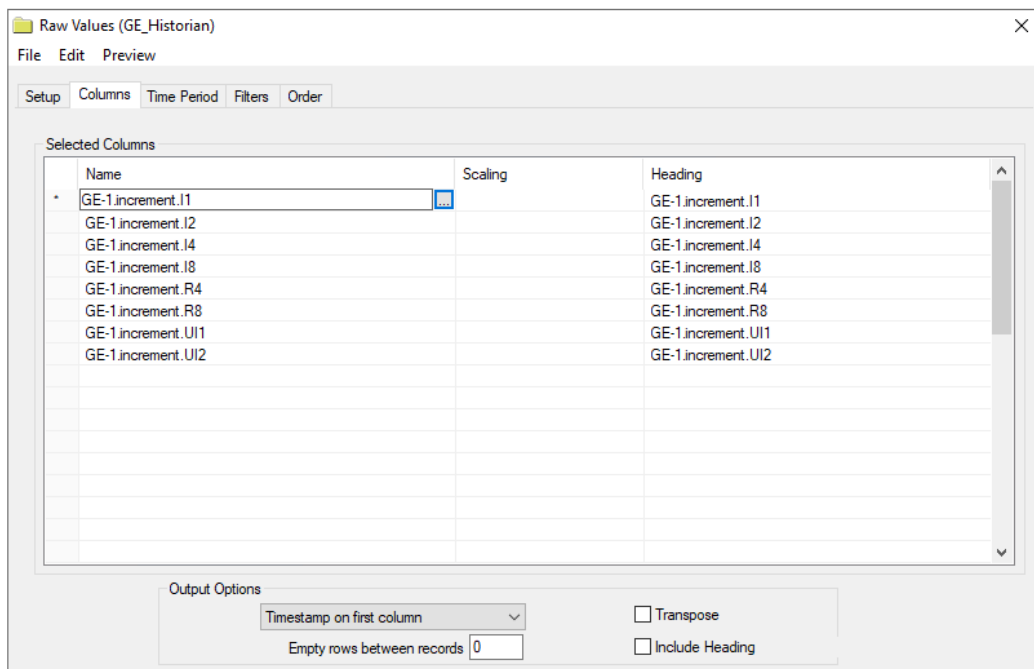
XLReporter retrieves data from the **Data Connector** using a **History Group**.

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

Select the *GE Historian* 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**.

Preview

Refresh Stop

Date

Start Jan 2020

End 21 Jan 2020

Date	GE-1.increment.I1	GE-1.increment.I2	GE-1.increment.I4	GE-1.increment.I
1/20/2020 4:44:40 PM	2	2	2	2
1/20/2020 4:44:41 PM	3	3	3	3
1/20/2020 4:44:42 PM	4	4	4	4
1/20/2020 4:44:43 PM	5	5	5	5
1/20/2020 4:44:44 PM	6	6	6	6
1/20/2020 4:44:45 PM	7	7	7	7
1/20/2020 4:44:46 PM	8	8	8	8
1/20/2020 4:44:47 PM	9	9	9	9
1/20/2020 4:44:48 PM	10	10	10	10
1/20/2020 4:44:49 PM	11	11	11	11
1/20/2020 4:44:50 PM	12	12	12	12
1/20/2020 4:44:51 PM	13	13	13	13
1/20/2020 4:44:52 PM	14	14	14	14
1/20/2020 4:44:53 PM	15	15	15	15
1/20/2020 4:44:54 PM	16	16	16	16
1/20/2020 4:44:55 PM	17	17	17	17
1/20/2020 4:44:56 PM	18	18	18	18
1/20/2020 4:44:57 PM	19	19	19	19
1/20/2020 4:44:58 PM	20	20	20	20
1/20/2020 4:44:59 PM	21	21	21	21
1/20/2020 4:45:00 PM	22	22	22	22
1/20/2020 4:45:01 PM	23	23	23	23
1/20/2020 4:45:02 PM	24	24	24	24

Rows 60