ProSoft Connectors

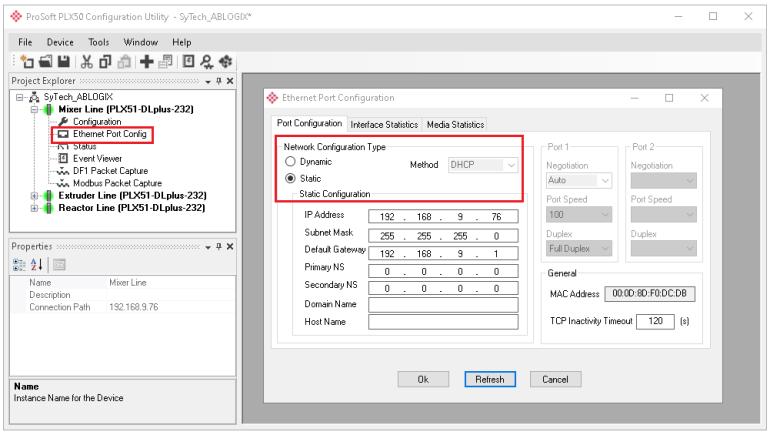
PLX51 Historical Values

This connector is used to download data from one or more PLX51 DLplus 232 data loggers to a local database from which data can be retrieved for reporting.

Configure Data Logging

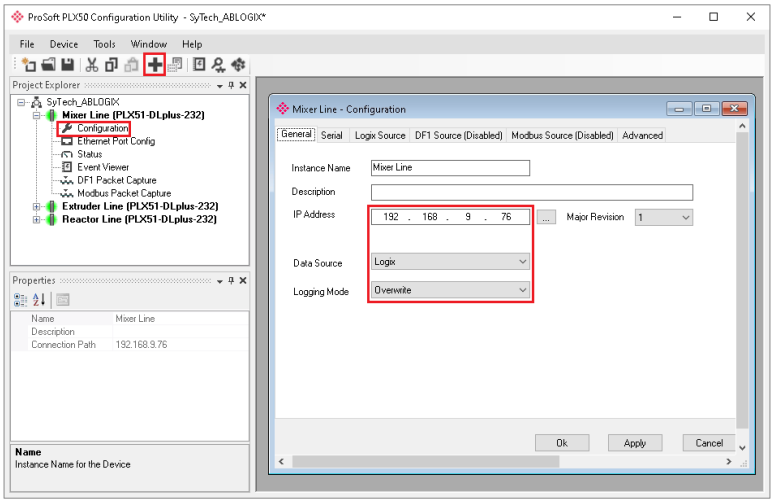
Configuration for the ProSoft Data Logger Plus is performed from the ProSoft PLX50 Configuration Utility. The information below briefly outlines the device configuration. For more detailed setup information, refer to the PLX51-DLPlus-232 User Manual. Both the configuration utility and device user manual are available on the official ProSoft website.

From the Configuration Utility:



- Click the "+" button to add a new device.
- Select *PLX51-DLplus-232*.
- Open the **Ethernet Port Config** menu.
- Set the **Network Configuration Type** based on the network environment where the device is installed.

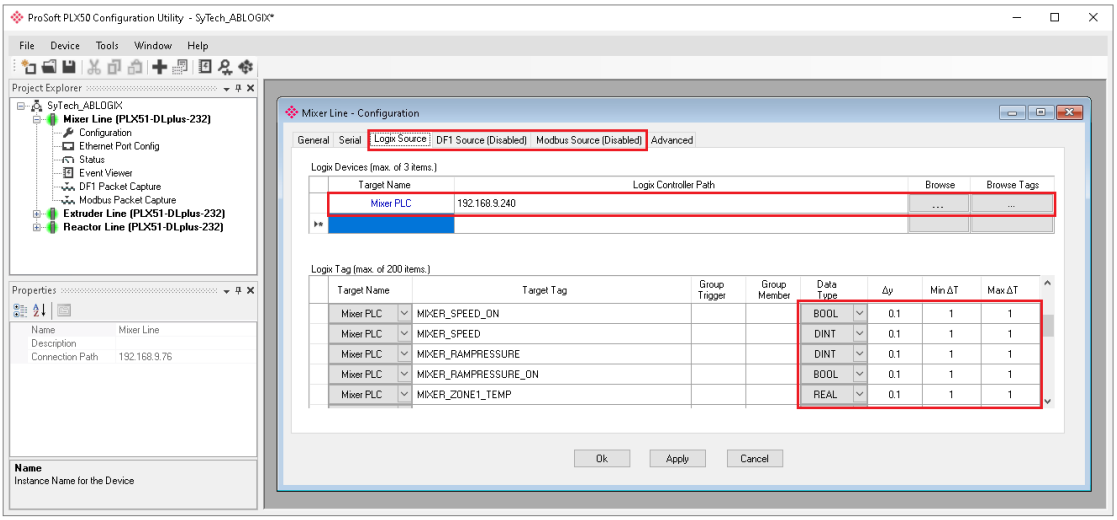
In the **Configuration** menu:



- Assign an **Instance Name** to indicate the nature of the data logged by the device. In this example, the configuration represents a production line which involves mixing machinery.
- Assign a **Data Source** based on the type of PLC connected to the Data Logger.

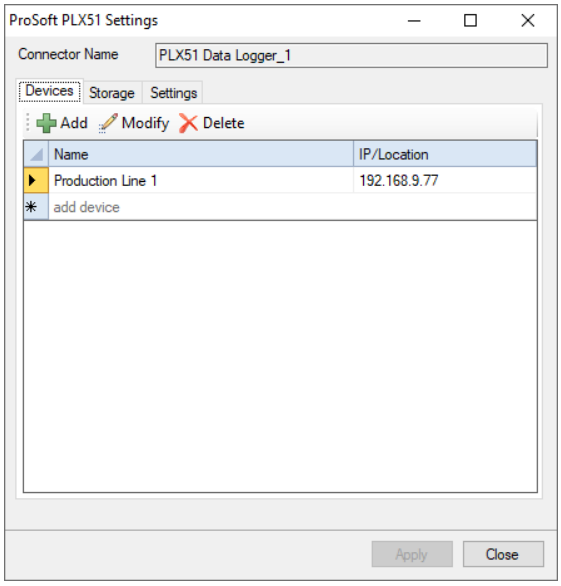
- It is recommended to set **Logging Mode** to *Overwrite* for continuous logging using XLReporter.
- Click **Apply.** Download the configuration to the device.

Based on the **Data Source**, open the corresponding **Source** tab in the Configuration menu. The below example shows configuration for an Allen-Bradley Logix PLC.



- Assign a **Target Name** which indicates the purpose of the connected PLC. In the above example, 192.168.9.240 is the IP address of the PLC.
- Open **Browse** to select the device using network discovery.
- Open **Browse Tags** to select the tags logged by the Data Logger.
- For each tag, assign the value deadband (▲y), minimum, and maximum timed rates at which the tag data is logged. It is recommended to configure logging resolution only as high as is required for reporting. Doing so optimizes the responsiveness of the reporting application.
- Click **Apply** and download the configuration to the device.

Connector

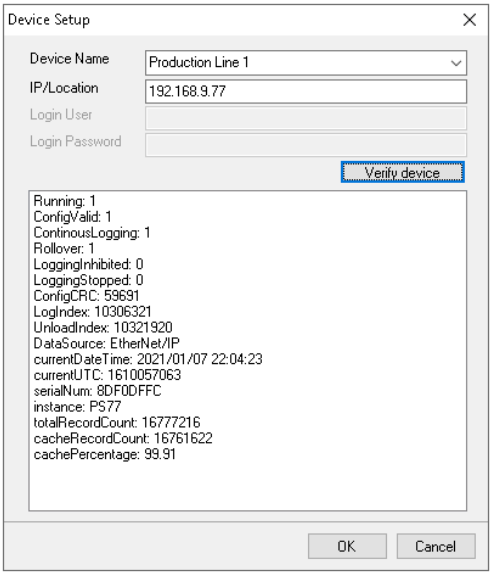


Devices Tab

This tab displays all the devices configured to retrieve data for the connector.

Click **Add** to open the **Device Setup** dialog and add a new device.

Device Setup

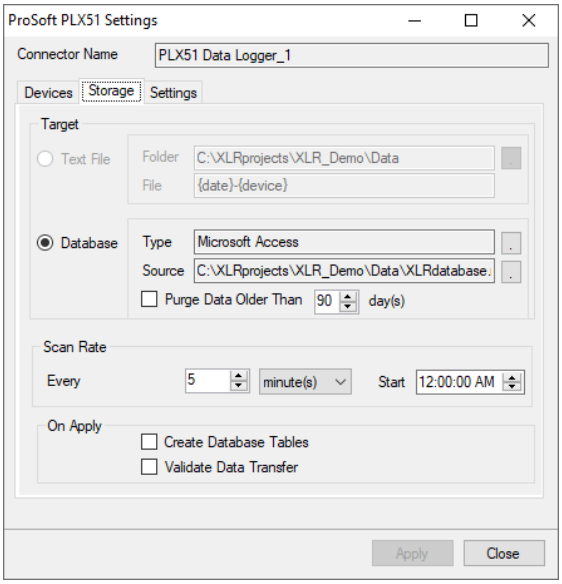


For the device set **Device Name** to a descriptive name for the device. This name appears whenever tags are browsed for the connector.

Set **IP/Location** to the IP address of the device.

Click **Verify Device** to test connectivity and data retrieval from the device.

Storage Tab



This tab displays the settings that determine where the data is stored on the local machine.

Target

The target settings determine the database where the device data is stored. A browse pushbutton […] is provided to define the connection to the database.

For applications with high data volume, a third-party database server such as Microsoft SQL Server is recommended. For small systems, a built-in Microsoft Access database is available in the *\Data* directory of the project.

The **Purge Data** option is provided to help control the size of the database.

Scan Rate

This setting defines the interval at which data is collected from the data logger devices into the **Target Database**.

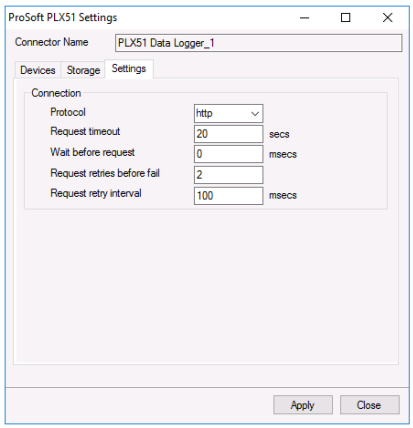
On Apply

These options are triggered when the Apply button is clicked.

Create Database Tables creates all the necessary tables in the Target Database. If these tables already exist they will be overwritten. This setting is enabled default during initial setup of the connector.

Validate Data Transfer validates the connection between **XLReporter** and the REST server on each configured data logger device**.**

Settings Tab



This tab displays the parameters of the HTTP connection to the device(s).

Protocol can be either *http* or *https*. If a secure connection is required, use *https*, otherwise use *http*.

Request timeout is the number of seconds to wait for a request to complete before a timeout error occurs. The default is *20* seconds.

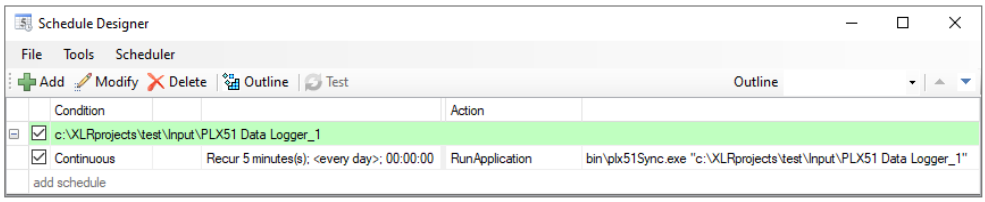
Wait before request is the number of milliseconds to wait between connecting to Talk2M and requesting data. The default is *0* milliseconds.

Request retries before fail is the number of times the request is retried before it is considered an error when the request fails. The default is *2*.

Request retry interval is the number of milliseconds to wait between each retry if a request fails. The default is *100*.

Schedule

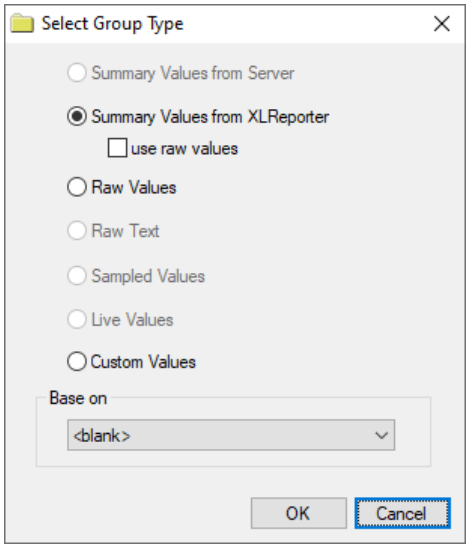
As a consequence of the **Scan Rate** setting, a schedule is added to the **Schedule Designer**.



Data Group

The following describes the historical data group settings specific to the **PLX51 History Values** connector.

Group Types



For **PLX51 History Values** the following group types are available:

Summary Values from XLReporter

This group type retrieves sampled values from the database 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 every numeric value logged to the database between the start and end time specified.

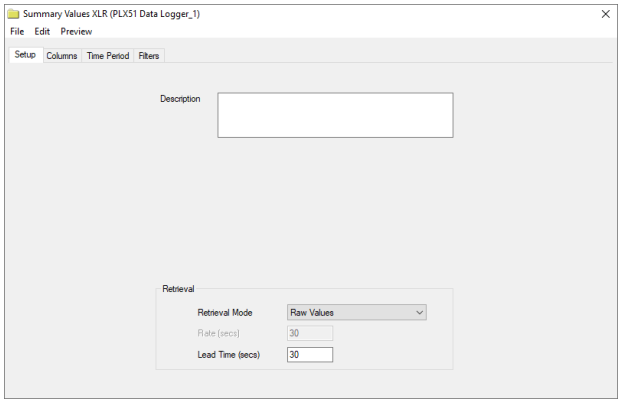
By default, the **Output Options** on the **Columns** tab of the Data Group settings is set to *Timestamp on First Column* which does not display millisecond-resolution timestamps. Millisecond timestamps are enabled with *Timestamp, Millisecond on first column.*

Custom Values

This option opens the Database Group builder where a query can be configured to retrieve data from any table in the database.

Group Settings

Setup Tab



Retrieval (Summary Values for XLReporter Group)

The **Retrieval** settings define how data is retrieved for the calculations selected for the group. The following settings are available:

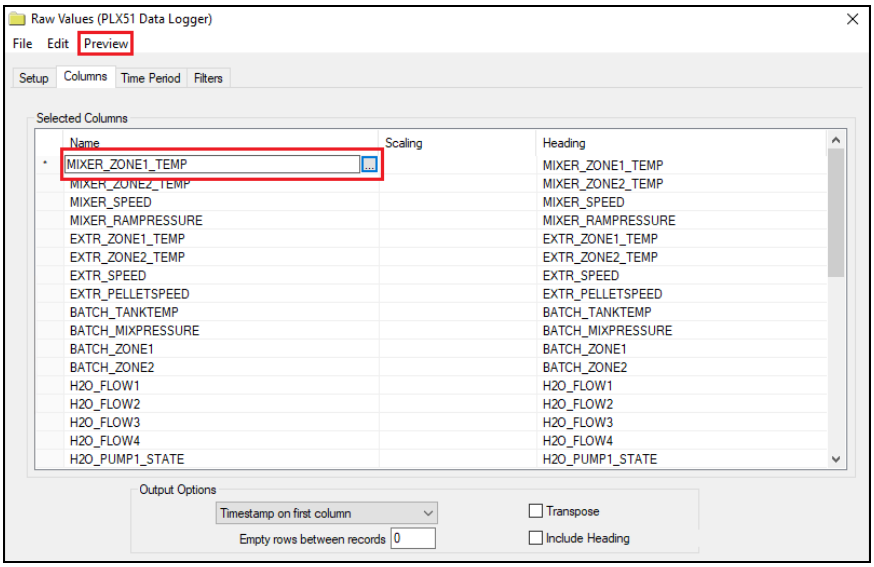
- **Retrieval Mode**
  This setting defines how data is retrieved from the historian. For the PLX51 Data Logger only *Raw Values* are available.
- **Lead Time**
  The amount of time (in seconds) to retrieve data before the start time.

Verify the Data Connector

XLReporter retrieves data for a report using a **History Group**. A quick way to create a **History Group** is from the **XLReporter Project Explorer**.

- Select, **Tools**, **Connector Groups**
- Select the connector
- Select **Add**.
- Set the **Group Type** to **Raw Values** and click **OK**.

On the **Columns** tab of the group, select the tag Name(s).



From the menu bar:

- Click **Preview**
- Enter a Start date
- Click **Refresh**.