

## Using XLReporter with Text Discrete

### Overview

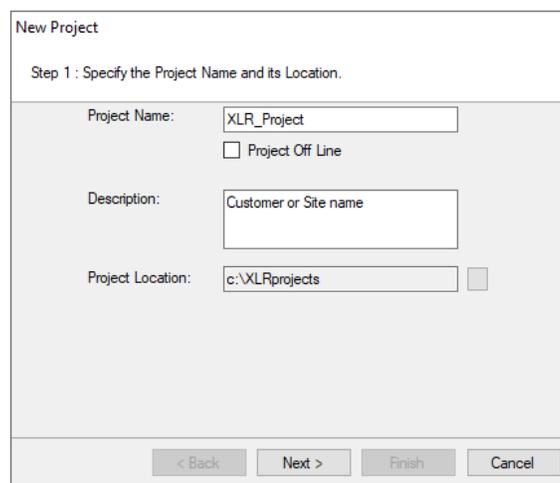
This connector is used to get values from a single text file. While the **Text Historian** expects the file name to reflect the content of the file, this connector expects the file name to be a description of the content e.g., for all the data recorded for a batch a possible name would be *Product123-Lot3*.

### 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

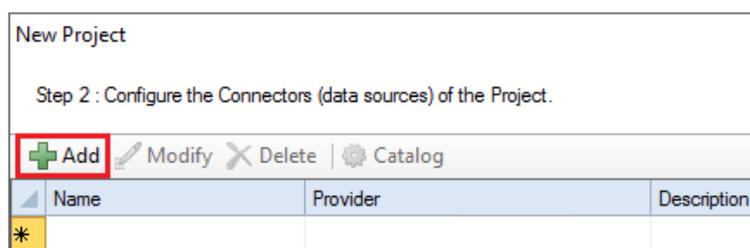
- Enter a **Project Name** and **Description** (optional).



The screenshot shows the 'New Project' dialog box. The title is 'New Project'. Below the title, it says 'Step 1 : Specify the Project Name and its Location.' There are three input fields: 'Project Name' with the text 'XLR\_Project', 'Description' with the text 'Customer or Site name', and 'Project Location' with the text 'c:\XLRprojects'. There is a checkbox labeled 'Project Off Line' which is unchecked. At the bottom, there are four buttons: '< Back', 'Next >', 'Finish', and 'Cancel'.

#### Step 2

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



The screenshot shows the 'New Project' dialog box, Step 2: Configure the Connectors (data sources) of the Project. At the top, it says 'Step 2 : Configure the Connectors (data sources) of the Project.' Below this, there is a toolbar with icons for '+ Add', 'Modify', 'Delete', and 'Catalog'. The 'Add' button is highlighted with a red box. Below the toolbar is a table with three columns: 'Name', 'Provider', and 'Description'. The table is currently empty, with a yellow asterisk icon in the first row.

Select **Text File, Discrete**.

# Connector

The screenshot shows a dialog box titled "Discrete" with the following fields and options:

- Connector Name:** Text\_File\_1
- Description:** (Empty text box)
- Source:**
  - Folder:** C:\XLRprojects\XLR\_Demo\Data\TextFiles
  - Filter:** \*.csv
  - File:** Radio buttons for  Fixed and  Variable. The Variable option has a text box containing {File Name}.
  - Settings:** A button located at the bottom right of the Source section.
- File Content:**
  - Encoding:** A dropdown menu set to ANSI.
  - Separator:** Radio buttons for  Comma,  Semicolon,  Tab, and  Other (with an adjacent empty text box).
  - Decimal Symbol:** A text box containing a period (.)

At the bottom of the dialog are **OK** and **Cancel** buttons.

The **Source** section defines the **Folder** where the text files are located and a **Filter**.

The **File** setting can be:

- **Fixed**

In this case, the connector will always use this file. This would be applicable in cases when the file is overwritten by new content.

- **Variable**

In this case, the connector will use the file name stored in the variable specified, *File Name* by default. The variable is usually set by the scheduler or from an on-demand report.

Usually, the first row of the file contains the headings and the remaining rows the data. If this is not the case, click the **Settings** button in the **Source** section and then refer to the **File Settings** chapter below.

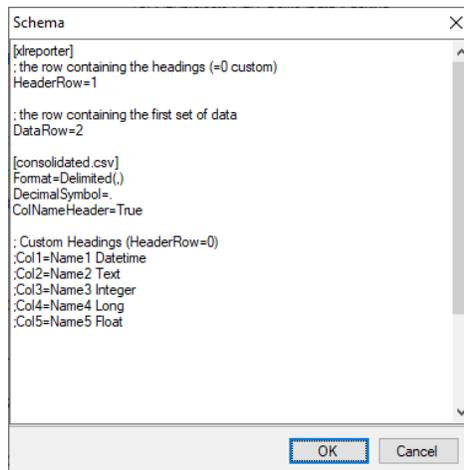
## Encoding

This setting is used to specify the encoding of the files. Only support for files encoded as *ANSI*, *UTF-8 with BOM* or *UNICODE little endian*. If one of these are detected **Encoding** automatically, otherwise it is defaulted to *ANSI*.

Encoding can be specified directly by providing the code page. For example, if the file is encoded as *UNICODE big endian*, set **Encoding** to *1201*. The code pages can be easily found on the internet.

# File Settings

When the text file content is non-standard the **Settings** option in **File Location and Name** can be used for a certain level of customization.



There are two sections in this display, one section is [xlreporter] and the other is [consolidated.csv].

A row starting with semi-colon (;) is treated as a comment.

## [xlreporter]

Usually, the first row of the file contains the headings and the remaining rows the data. If this is not the case, then set **Header Row** and **Data Row** accordingly.

For example, consider the following text file:

```
Date: June 8, 2021
Station: Plant 7
Operator: Jim

LocalDate,LocalTime,Flow,Pressure,Torque,Level,Rate,State,Speed,Temp
6/8/2021,0:00:00,2021,6,8,0,0,0,10,20
6/8/2021,0:01:00,2021,6,8,0,1,0,20,30
6/8/2021,0:02:00,2021,6,8,0,2,0,30,40
6/8/2021,0:03:00,2021,6,8,0,3,0,40,50
6/8/2021,0:04:00,2021,6,8,0,4,0,50,60
6/8/2021,0:05:00,2021,6,8,0,5,0,60,70
6/8/2021,0:06:00,2021,6,8,0,6,0,70,80
6/8/2021,0:07:00,2021,6,8,0,7,0,80,90
6/8/2021,0:08:00,2021,6,8,0,8,0,90,100
6/8/2021,0:09:00,2021,6,8,0,9,0,100,110
6/8/2021,0:10:00,2021,6,8,0,10,0,110,120
6/8/2021,0:11:00,2021,6,8,0,11,0,120,130
6/8/2021,0:12:00,2021,6,8,0,12,0,130,140
6/8/2021,0:13:00,2021,6,8,0,13,0,140,150
```

The following would need to be specified:

*HeaderRow=5*

*DataRow=6*

If the text file does not contain headers, set **HeaderRow** to 0 and, under the **[consolidated.csv]** section, set **ColNameHeader** to *False*. Since there are no headers, you must add each header manually. See **Custom Column Names** below for details.

## [consolidated.csv]

The settings in this section follow those for the **Text File Driver from Microsoft** so a detailed description of each can be found on the internet.

Below are some common settings:

## Custom Column Names

If the text file(s) does not contain headers or the headers that are included are not usable/descriptive, then custom column names can be used.

Add the following **for every column** in the file:

*Colx= Name Type*

- *x* is 1 based
- *Name* is the custom name of the column
- *Type* is the column data type e.g., Text

For example, if the file contains a *Timestamp*, *Speed*, *Pressure*, *Temperature* and *Name*, the following would be set:

*Col1=DateAndTime DateTime*

*Col2='Mixer Speed' Double*

*Col3='Mixer Pressure' Double*

*Col4=Temperature Double*

*Col5='Operator Name' Text*

Enclose column names containing a space with double quotes.

## Custom Date Format

If the format of the date values in the file is not the same as that of the operating system, then the format must be explicitly stated as follows

*DateTimeFormat=Format*

*Format* is a valid *Date* or *Date and Time* format.

For example, if the date format in the text file is in universal format 2010-01-01 but the operating system is not, then the following would be set:

*DateTimeFormat=yyyy-MM-dd*

Note that this format also applies to columns that just contain time. In those cases, the time format should also be added to the setting. For example:

*DateTimeFormat=yyyy-MM-dd hh:nn:ss*

Notice that minute is denoted as *nn*.

## Max Scan Rows

When determining the column type for each column, the first 25 rows are scanned by default. In some cases, the first 25 rows may not accurately represent what the column type should be. If this is the case, the number of rows to scan must be explicitly stated as follows:

*MaxScanRows=X*

When set to *0*, the whole file is scanned.

## 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 *Discrete* 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**.