

## Using XLReporter with FactoryTalk® SE Data Logs - ODBC

### Overview

**XLReporter** takes historical values from the FactoryTalk Data Logs to populate workbooks, periodically or on event, without needing Excel. The award reporting 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, desktop or FactoryTalk ViewPoint.

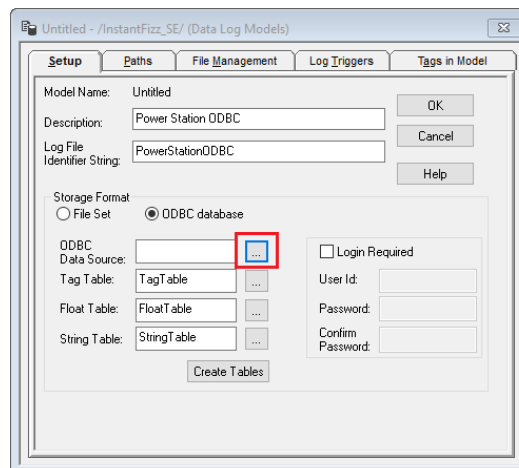
### Setup FactoryTalk View SE Data Log Models

#### Defining Data Log Models

Open the **FactoryTalk View SE Studio** from the **Rockwell Software** or **FactoryTalk View** program group then open the current application.

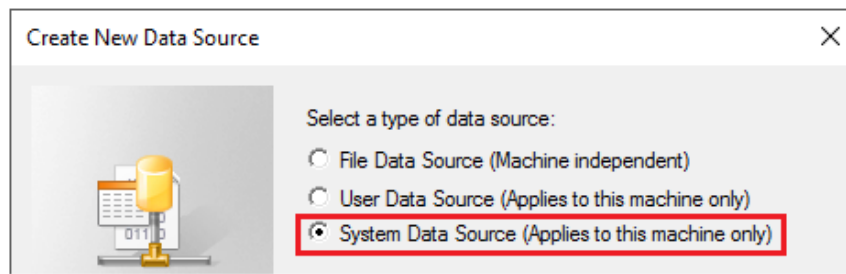
Under the **Data Log** folder in the **Explorer**, select the **Data Log Models** icon.

Under the **Setup** tab,

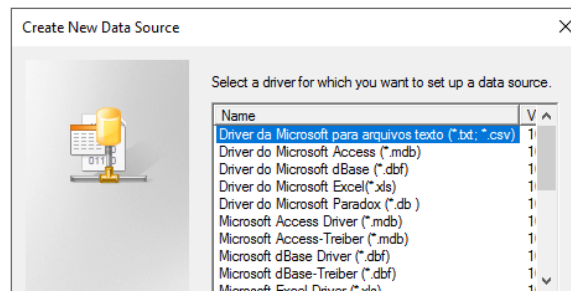


- Add a **Description** and *Log File Identifier String*.
- Set the **Storage Format** to *ODBC database*.
- For **ODBC Data Source** click the browse pushbutton [...]

Select the **System Data Source** tab. Use an existing DSN or select **New** to create a new one. For a new DSN,



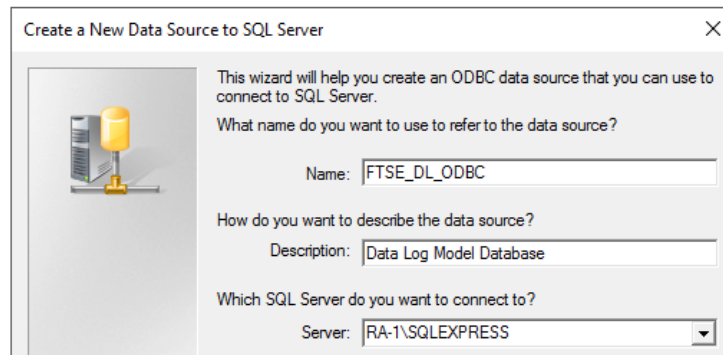
- Select **System Data Source**.
- Click **Next**.



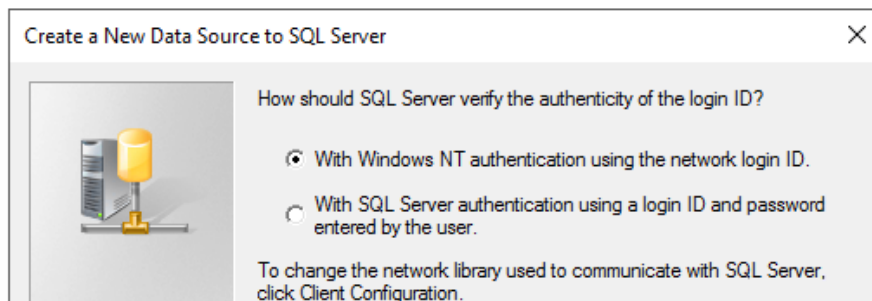
- Select the driver to make the connection the data source.

## SQL Server\SQL Express Configuration

It is highly recommended to use SQL Server or SQL Server Express as the data source for the Data Log Model. SQL Server Express is a free and downloadable from Microsoft's website. For SQL Server or SQL Server Express,

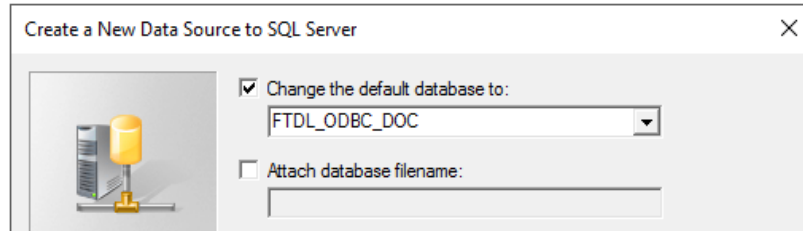


- Enter a **Name**, **Description** and select **Server**. If the *Server* is not listed, enter it manually.
- Click **Next**.



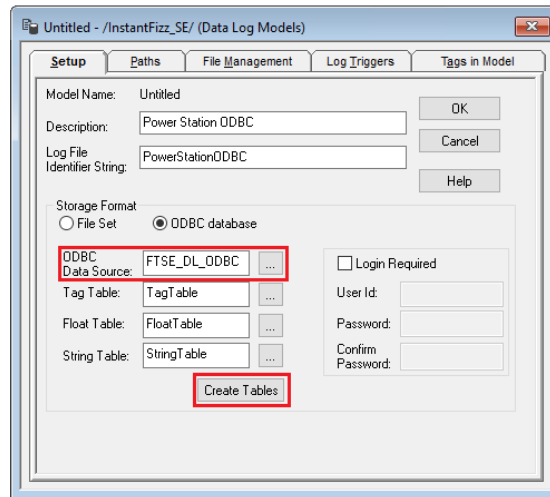
- Select the authentication type

- Click Next.



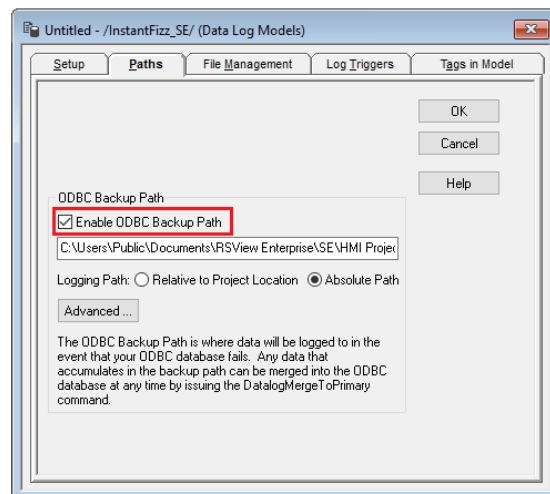
- Select the default database.
- Click **Finish**.

The DSN configured should now be set as the **ODBC Data Source**.



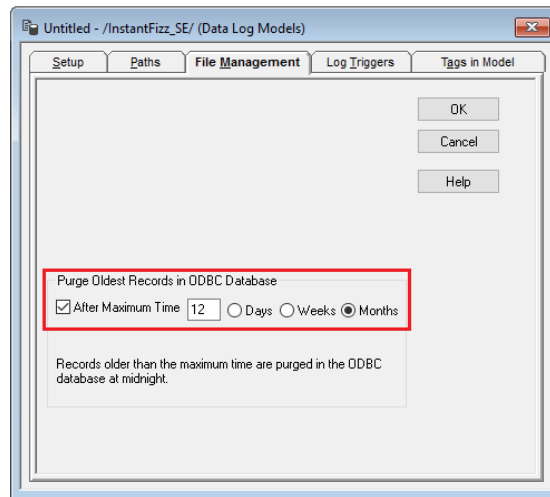
- Click **Create Tables**.

Under the **Paths** tab the **ODBC Backup Path** can be enabled so that if the database is unavailable, data is not lost.

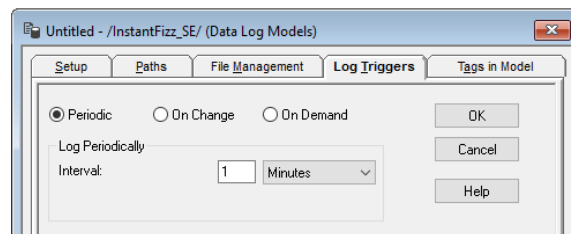


The total number of characters and spaces allowed for the path and name is 255.

Under the **File Management** tab the **Purge Oldest Records in ODBC Database** option is available to periodically remove old historical data from the database.

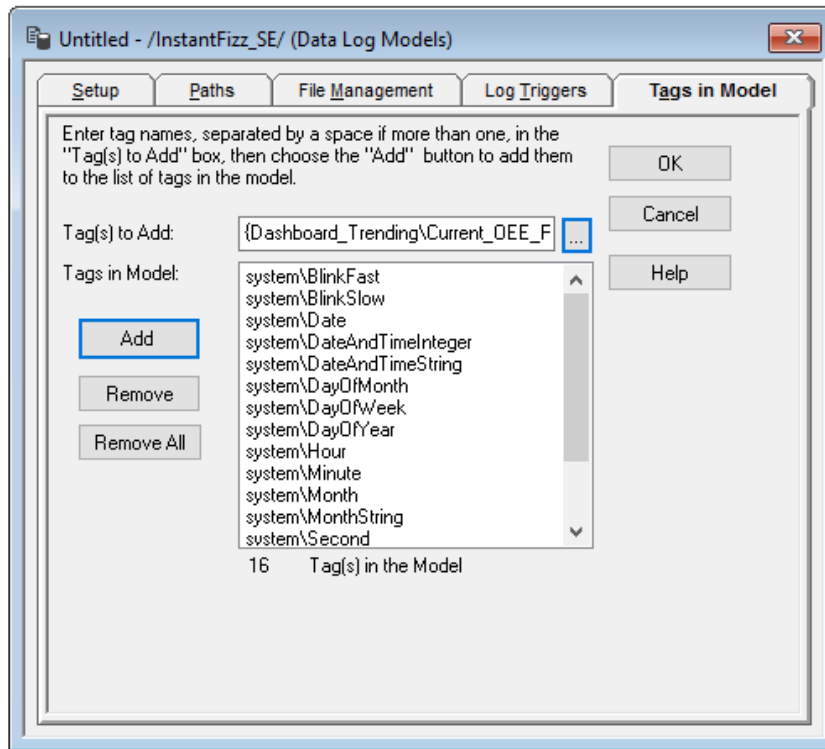


Under the **Log Triggers** tab,



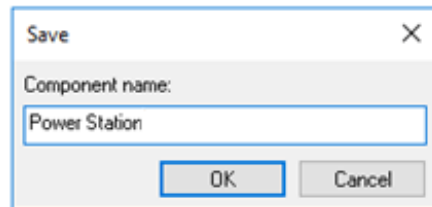
- Specify how the logging of tag values will be triggered i.e. periodically, on change or on demand. The **On Demand** option will log data when the **DataLogSnapshot** command is issued. This command can be issued from anywhere that commands and macros are supported. For example, it could be typed in the command line or specified as the action for an event. If **Periodic** or **On Change** is selected, on demand logging can still be used whenever it is appropriate.

Under the **Tags in Model** tab,



- Specify the tags to be logged.  
The maximum number of tags that can be logged by one data log model is 10,000.
- Close the dialog.

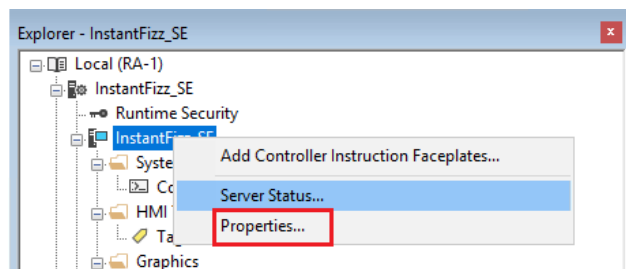
On close the **Save** dialog is opened.



Add a *Component* name. This is the name of the Data Log Model.

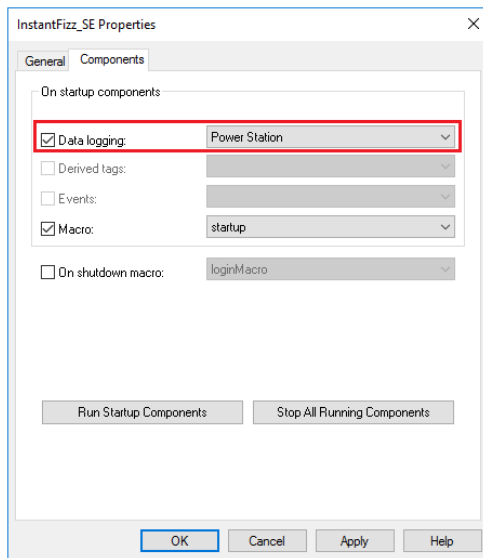
## Start Data Log

To start the data log when FactoryTalk View SE starts, access the **HMI Properties** dialog.



- Right click on the application and select *Properties*.

Under the **Components** tab,



- Check **Data Logging** and select the data log model.

If more than one data log model needs to be started, they can be started using the command:

**DataLogOn "Component name"**

Where "*Component name*" is the data log model name. If the model name has a space in it, enclose the name in quotes. The command can be issued from the command line or from a startup or login macro. For example:

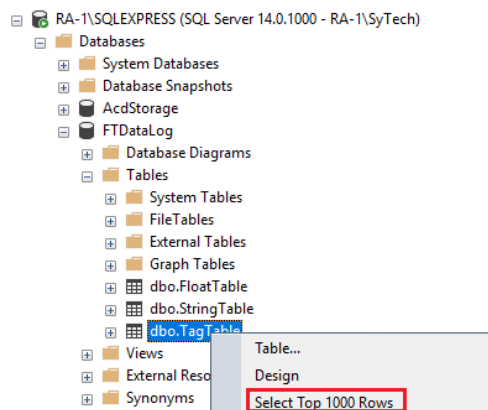
**DataLogOn "Power Station"**

Note that in FactoryTalk View SE, a HMI server can have up to 20 data log models running at one time.

## Prerequisites

### Verify Database

Open **Microsoft SQL Server Management Studio** and connect to the SQL Server or SQL Server Express instance set up for the Data Log Model.



Expand **Database** and then the database configured for the Data Log Model and expand **Tables**. Right-click the *tag* and *float tables* and choose **Select Top 1000 Rows**.

If no data is returned contact Rockwell Automation technical support and correct these issues.

# 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 Name column)

## Select Rockwell Automation, FactoryTalk View SE Historical Values

The screenshot shows the 'FactoryTalk View SE Historical values' dialog box with the following fields and options:

- Connector Name:** FactoryTalkViewSE\_History
- Description:** RA-1\SQLEXPRESS
- Primary Database:**
  - Type: Microsoft SQL Server
  - Data Source: RA-1\SQLEXPRESS
- Tables:**
  - Tag Table: TagTable
  - Float Table: FloatTable
  - String Table: StringTable

Buttons: Settings, OK, Cancel

- Set **Primary Database** to the database where the data log model is configured.

## Verify the Data Connector

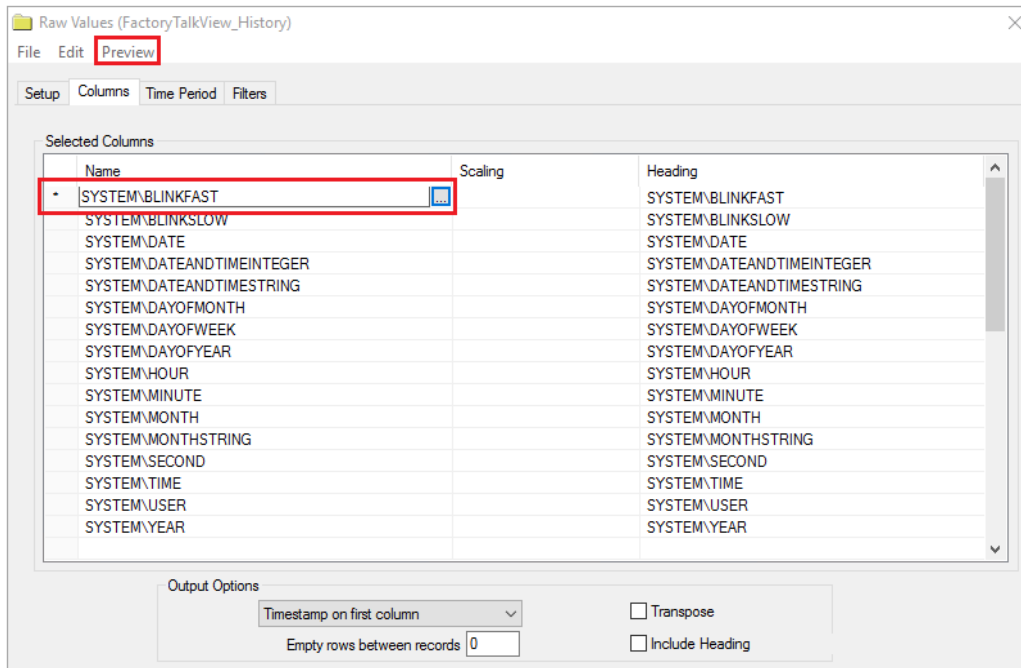
**XLReporter** retrieves data from the **Data Connector** using a **History Group**.

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

Select the *FactoryTalk historical 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**.

