

Using XLReporter with Ignition Historical Values

Overview

XLReporter takes historical values from the Ignition data logs 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.

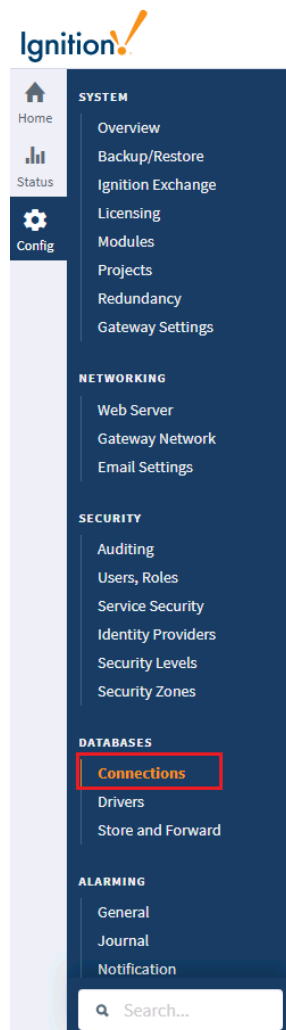
Complete reports are distributed automatically by email, FTP, file server and printers. With the Web Portal, reports are viewed or produced on-demand from any device supporting a web browser such as a mobile phone, tablet or desktop.

Set Up Historical Value Log

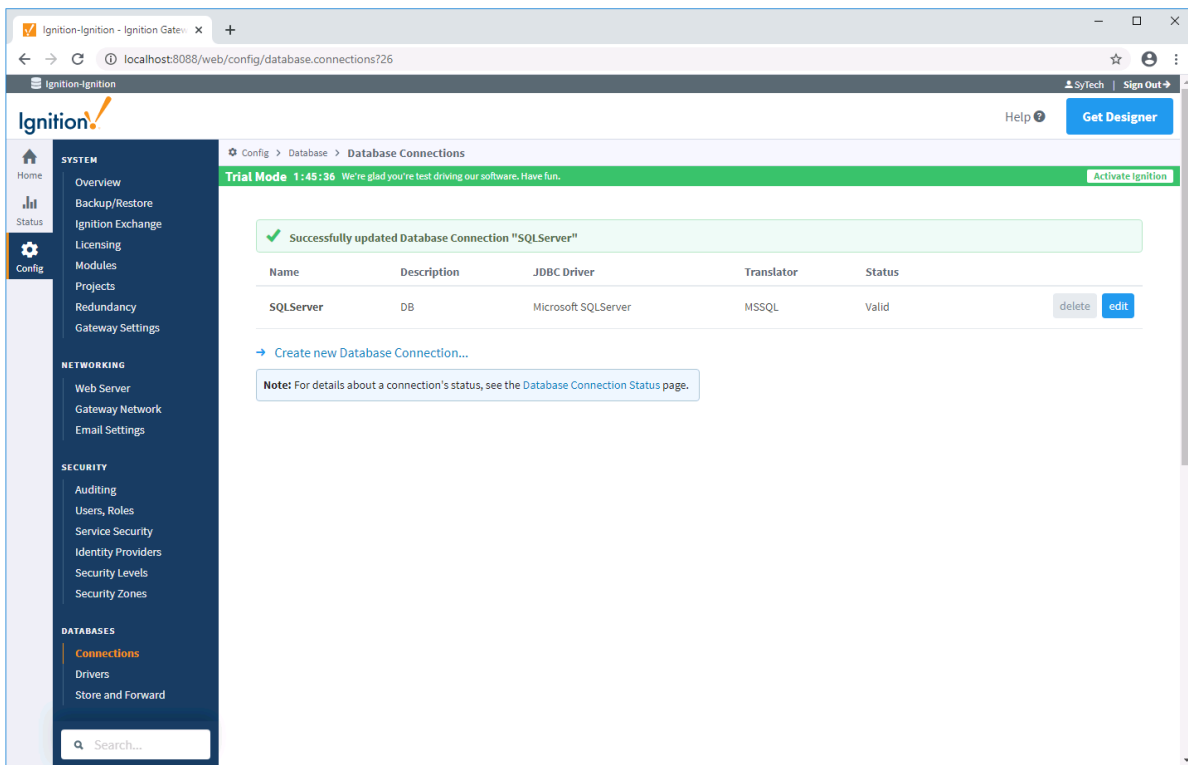
Ignition settings are available through a web browser. Open a web browser and navigate to:

localhost:8088

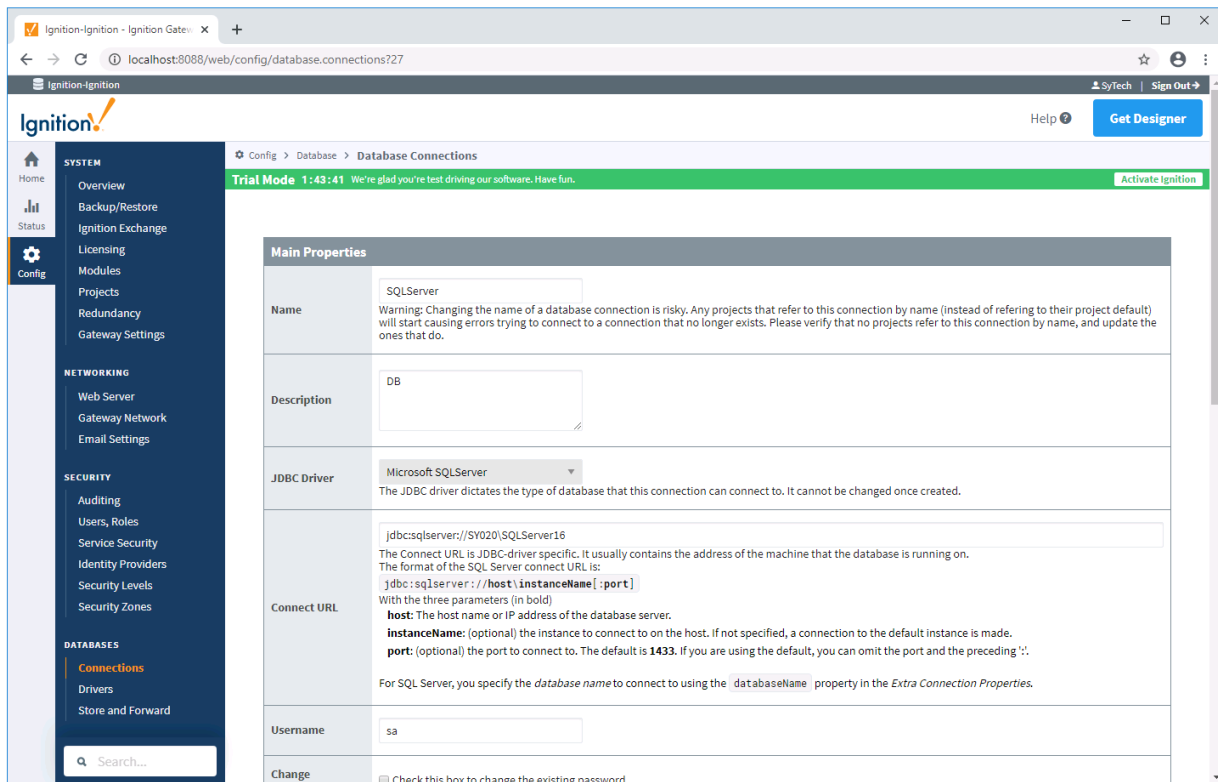
Log in to Ignition.



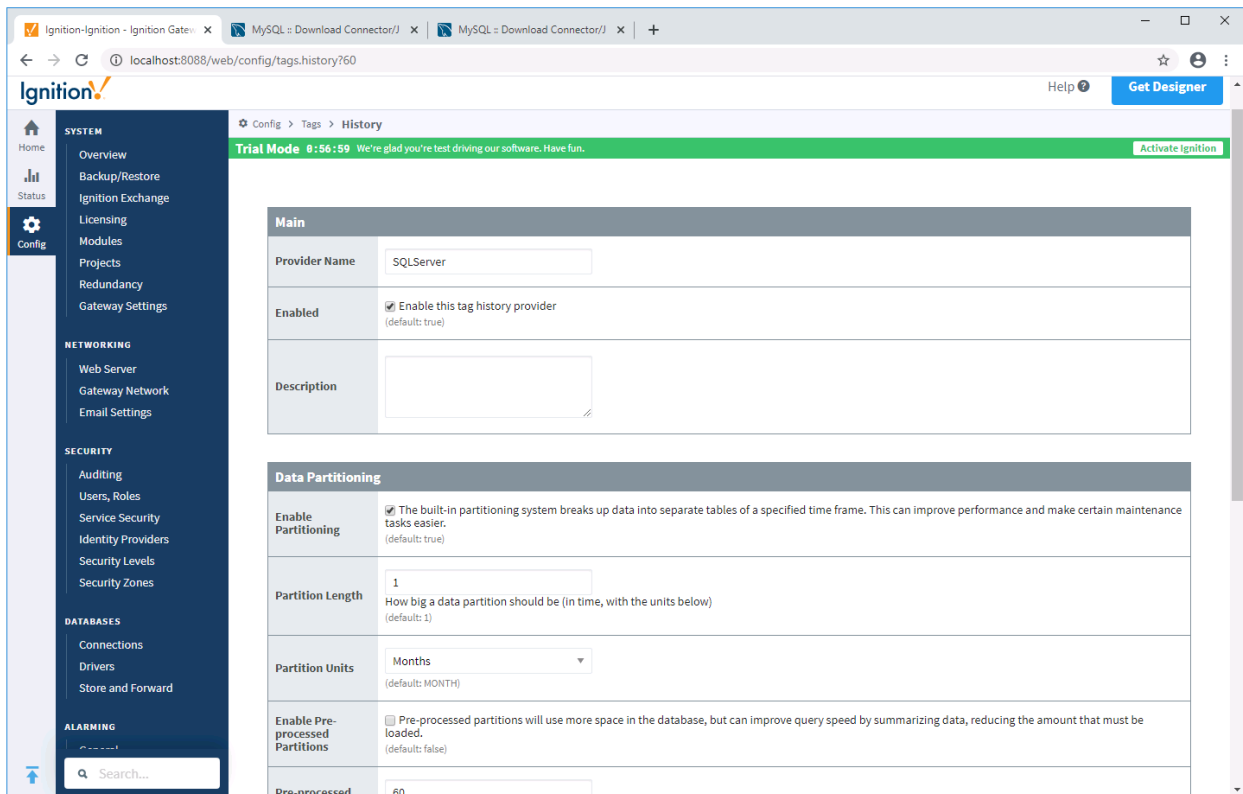
On the left, select **Config**, then under **Databases** select **Connections**.



- Click *Create new Database Connection...*



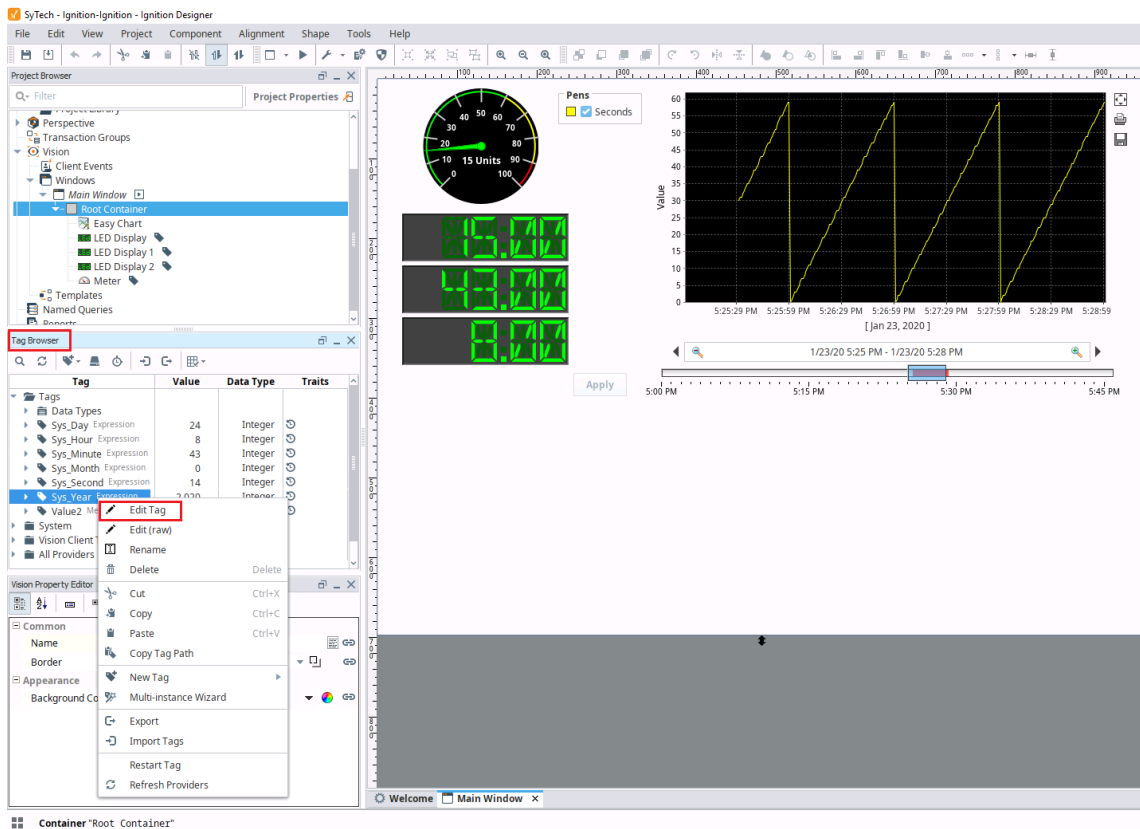
Make the connection to an available database like MySQL or Microsoft SQL Server/SQL Server Express. Under the **Configure** tab, on the left, click **Tags, History** and create a new **Historical Tag Provider**.



Inductive Automation recommends enabling **Partitioning** to make data retrieval faster. This is supported by **XLReporter** at any **Unit** and **Length** available.

Enable Tag History

Select the **Design Launcher** from the program group and launch the project.



Under the **Tag Browser** panel select each tag to log historically, right click and select **Edit Tag**.

| History | |
|--------------------------|-----------|
| History Enabled | true |
| Storage Provider | SQLServer |
| Deadband Style | Auto |
| Deadband Mode | Absolute |
| Historical Deadband | 0.01 |
| Sample Mode | On Change |
| Min Time Between Samples | 1 |
| Min Time Units | Seconds |
| Max Time Between Samples | 0 |

- Select the **History** category on the left
- Set **History Enabled** to *true*.
- Set **Storage Provider** to the database connection configured. Click **Apply** when finished.

Prerequisites

Verify Database

Open the database configured as the database connector using the tool provided by the database vendor. If the database is Microsoft SQL Server or SQL Server Express, the **SQL Server Management Studio** is provided. Open the application and connect to the database.

| tagid | intvalue | floatvalue | stringvalue | datevalue | dataintegrity | t_stamp |
|-------|----------|------------|-------------|-----------|---------------|---------------|
| 1 | 2 | NULL | NULL | NULL | 192 | 1579816539416 |
| 2 | 23 | NULL | NULL | NULL | 192 | 1579818255264 |
| 3 | 5 | NULL | NULL | NULL | 192 | 1579818271784 |
| 4 | 24 | NULL | NULL | NULL | 192 | 1579818287469 |
| 5 | 25 | NULL | NULL | NULL | 192 | 1579818300479 |
| 6 | 26 | NULL | NULL | NULL | 192 | 1579818360567 |
| 7 | 27 | NULL | NULL | NULL | 192 | 1579818420629 |
| 8 | 28 | NULL | NULL | NULL | 192 | 1579818490797 |
| 9 | 29 | NULL | NULL | NULL | 192 | 1579818540392 |
| 10 | 30 | NULL | NULL | NULL | 192 | 1579818600444 |
| 11 | 31 | NULL | NULL | NULL | 192 | 1579818660518 |
| 12 | 32 | NULL | NULL | NULL | 192 | 1579818720566 |
| 13 | 33 | NULL | NULL | NULL | 192 | 1579818780613 |

Expand the Database configured for the history logs, then expand **Tables**. Right-click the *sqlth_te* and *sqlt_data* table with the most recent date on it and choose **Select Top 1000 Rows**.

If no data is returned contact Inductive 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 a dialog box titled "New Project" with the subtitle "Step 1 : Specify the Project Name and its Location." It contains three input fields: "Project Name" with the value "XLR_Project", "Description" with the value "Customer or Site name", and "Project Location" with the value "c:\XLRprojects". There is a checkbox for "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 a dialog box titled "New Project" with the subtitle "Step 2 : Configure the Connectors (data sources) of the Project." It features a toolbar with icons for "Add" (highlighted with a red box), "Modify", "Delete", and "Catalog". Below the toolbar is a table with three columns: "Name", "Provider", and "Description". The table has one row with an asterisk (*) in the "Name" column.

Select Inductive Automation, Ignition Historical Values

The screenshot shows a dialog box titled "Ignition Historical values" with a close button (X) in the top right corner. It contains several input fields: "Connector Name" with the value "Ignition_History", "Description" with the value "SY020\SQLSERVER16", "Primary Server" section with "Name" as "SY020\SQLSERVER16" and "User" as "sa", and a "Secondary Server" section which is currently unchecked. There are "Settings", "OK", and "Cancel" buttons at the bottom.

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

Verify the Data Connector

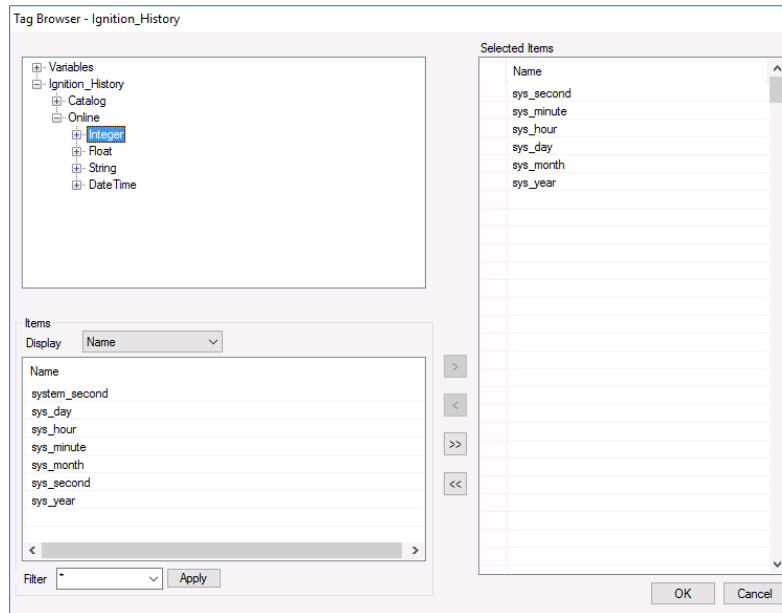
XLReporter retrieves data from the **Data Connector** using a **History Group**.

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

Select the *Ignition 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**.

Preview

Refresh Stop

Date

Start 23 Jan 2020

End 24 Jan 2020

| Date | sys_second | sys_minute | sys_hour | sys_day | sys_month | sys_yea |
|----------------------|------------|------------|----------|---------|-----------|---------|
| 1/23/2020 5:24:15 PM | | | | 23 | | |
| 1/23/2020 5:24:31 PM | | | 5 | | | |
| 1/23/2020 5:24:47 PM | | 24 | | | | |
| 1/23/2020 5:25:00 PM | | 25 | | | | |
| 1/23/2020 5:25:12 PM | | | | 0 | | |
| 1/23/2020 5:25:30 PM | 30 | | | | | |
| 1/23/2020 5:25:31 PM | 31 | | | | | |
| 1/23/2020 5:25:32 PM | 32 | | | | | |
| 1/23/2020 5:25:33 PM | 33 | | | | | |
| 1/23/2020 5:25:34 PM | 34 | | | | | |
| 1/23/2020 5:25:35 PM | 35 | | | | | |
| 1/23/2020 5:25:36 PM | 36 | | | | | |
| 1/23/2020 5:25:37 PM | 37 | | | | | |
| 1/23/2020 5:25:38 PM | 38 | | | | | |
| 1/23/2020 5:25:39 PM | 39 | | | | | |
| 1/23/2020 5:25:40 PM | 40 | | | | | |
| 1/23/2020 5:25:41 PM | 41 | | | | | |
| 1/23/2020 5:25:42 PM | 42 | | | | | |
| 1/23/2020 5:25:43 PM | 43 | | | | | |
| 1/23/2020 5:25:43 PM | | | | | | 2020 |

Rows 60