

Using XLReporter with FactoryTalk® Alarms and Events

Overview

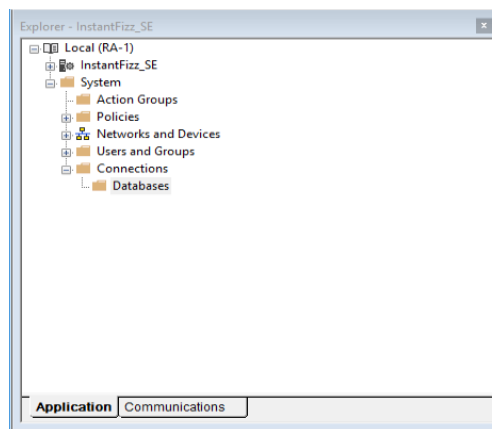
XLReporter takes raw data from the FactoryTalk Alarms and Events database and turns it into actionable information such as the most frequently occurring alarms. A separate technical note is provided for advanced reports that are compliant with the requirements of ISA 18.2.

Setup FactoryTalk Alarms and Events

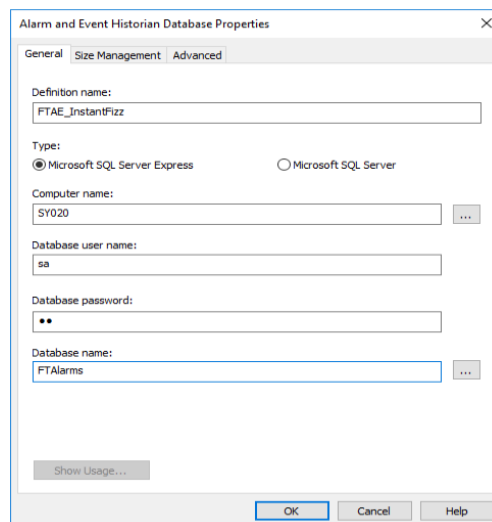
Define a Database

FactoryTalk Alarms and Events are logged to either Microsoft SQL Server or SQL Server Express. This database can be located on the local machine or across the network

To specify the database, open the **FactoryTalk View Studio**, expand **System, Connections, Database**.



Right-click **Database**, and select **New Database**.



Under the **General** tab specify the settings for your available *Microsoft SQL Server Express* or *Microsoft SQL Server* installation. For **Database name** browse to select an existing database or enter a new database name.

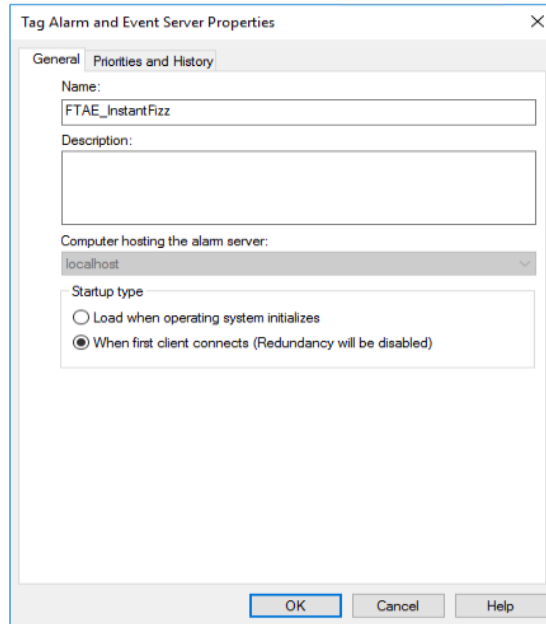
Configure Alarm Monitoring

FactoryTalk Alarms and Events supports device-based monitoring and tag-based monitoring.

Device-based monitoring is configured and downloaded to the controller with built-in alarm instructions.

Tag-based monitoring is configured in FactoryTalk View Studio by first adding a Tag Alarm and Event Server. On the left side of the Studio, right-click an application and select **Add New Server, Tag Alarm and Event Server**.

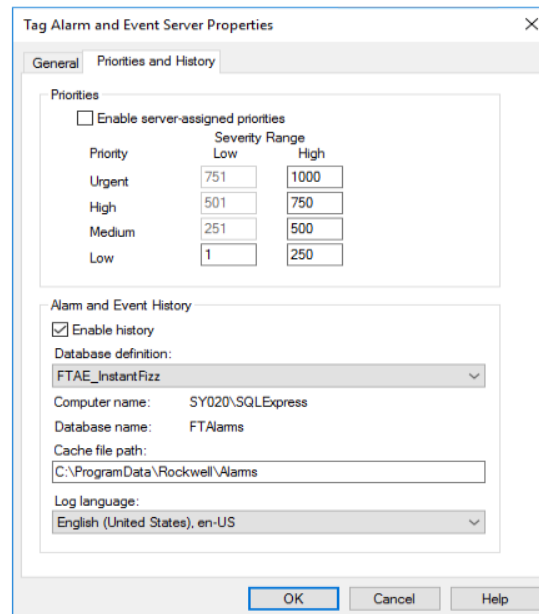
Under the **General** tab specify the **Name** for the server.



The screenshot shows the 'Tag Alarm and Event Server Properties' dialog box with the 'General' tab selected. The 'Name' field contains 'FTAE_InstanFizz'. The 'Description' field is empty. The 'Computer hosting the alarm server' dropdown is set to 'localhost'. Under 'Startup type', the radio button 'When first client connects (Redundancy will be disabled)' is selected. The 'OK', 'Cancel', and 'Help' buttons are at the bottom.

Under the **Priorities and History** tab

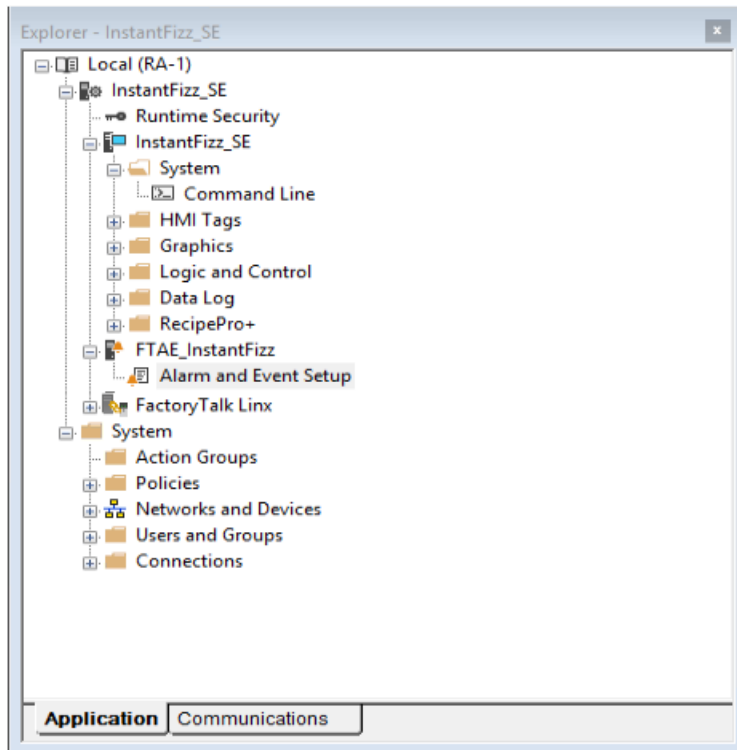
- Check **Enable History**
- Set **Database definition** to the name defined in the previous step



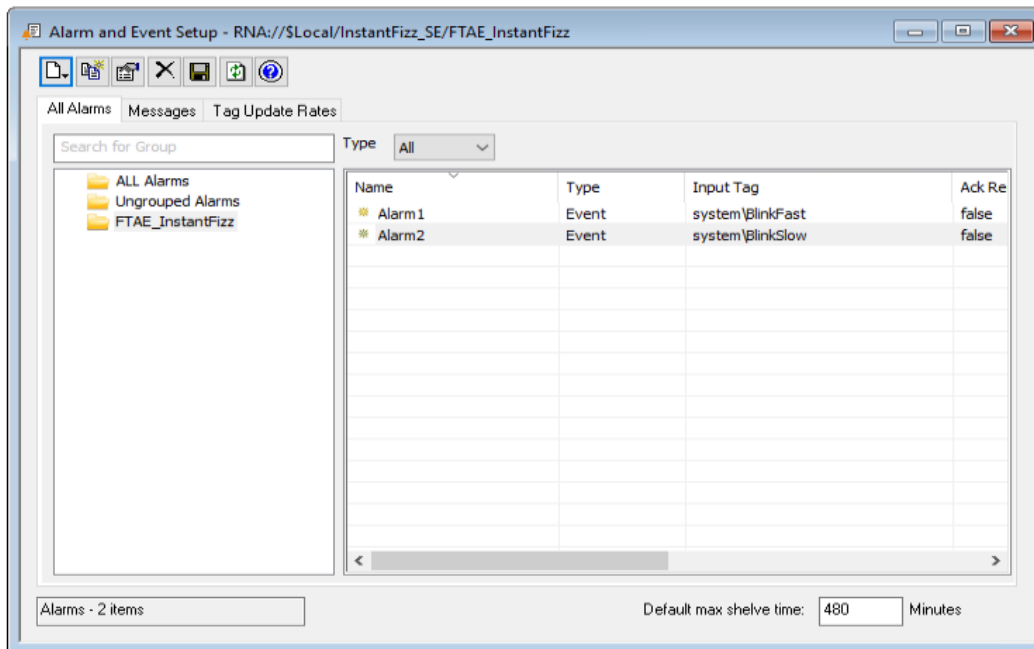
The screenshot shows the 'Tag Alarm and Event Server Properties' dialog box with the 'Priorities and History' tab selected. Under 'Priorities', the checkbox 'Enable server-assigned priorities' is unchecked. A table shows severity ranges for Urgent, High, Medium, and Low. Under 'Alarm and Event History', the checkbox 'Enable history' is checked. The 'Database definition' dropdown is set to 'FTAE_InstanFizz'. Other fields include 'Computer name: SY020\SQLExpress', 'Database name: FTAlarms', 'Cache file path: C:\ProgramData\Rockwell\Alarms', and 'Log language: English (United States), en-US'. The 'OK', 'Cancel', and 'Help' buttons are at the bottom.


Priority	Severity Range	
	Low	High
Urgent	751	1000
High	501	750
Medium	251	500
Low	1	250


Tag-based alarms can now be configured in the Studio. Expand the Tag Alarm and Event Server defined in the previous step and double-click **Alarm and Event Setup**.



Tag-based alarms can be added, modified or removed within this application.



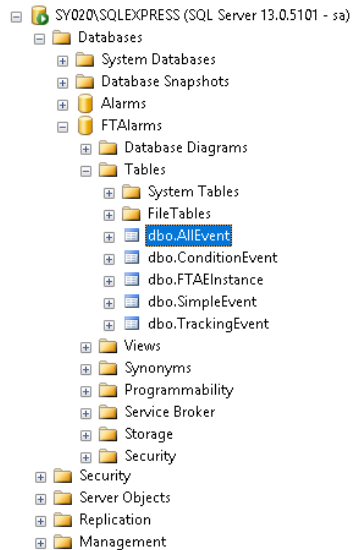
To add a new alarm to the Alarms and Events Server you defined, select it on the left hand side, then select the **New** icon  and choose the type of alarm to configure: *Digital*, *Deviation*, *Level* or *Event*. Refer to the FactoryTalk Alarms and Events System Configuration Guide for details on how to configure each alarm type.

Every alarm configured for the selected server is listed on the right. An existing alarm can be modified by double clicking anywhere on the row. An existing alarm can be deleted by selecting the row and clicking the **Delete** icon .

Prerequisites

Verify Database

Open Microsoft SQL Server Management Studio and connect to the SQL Server or SQL Server Express installation set up for the Alarms and Events Server.



Expand the Database configured for the Alarms and Events Server and expand **Tables**. Right-click *AllEvent* and choose **Select Top 1000 Rows**.

If no data is returned or there is anything described is missing contact Rockwell Automation technical support and correct these issues.

SQL Server Considerations

When using SQL Server there are some things to take into consideration including remote connectivity, instance browsing and user authentication. For information on what to consider, see the technical note: How to Configure Microsoft SQL Server.

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

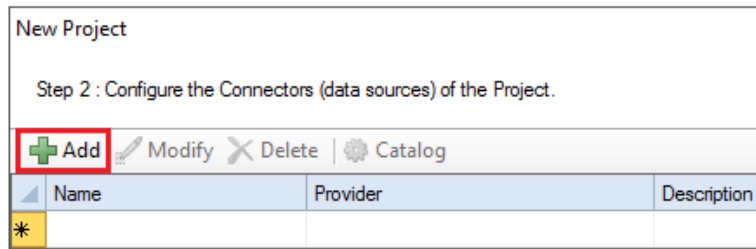
Step 1

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

A screenshot of the 'New Project' dialog box. The title is 'New Project'. Below the title is the instruction 'Step 1 : Specify the Project Name and its Location.'. There are 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 of the dialog are four buttons: '< Back', 'Next >', 'Finish', and 'Cancel'.

Step 2

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



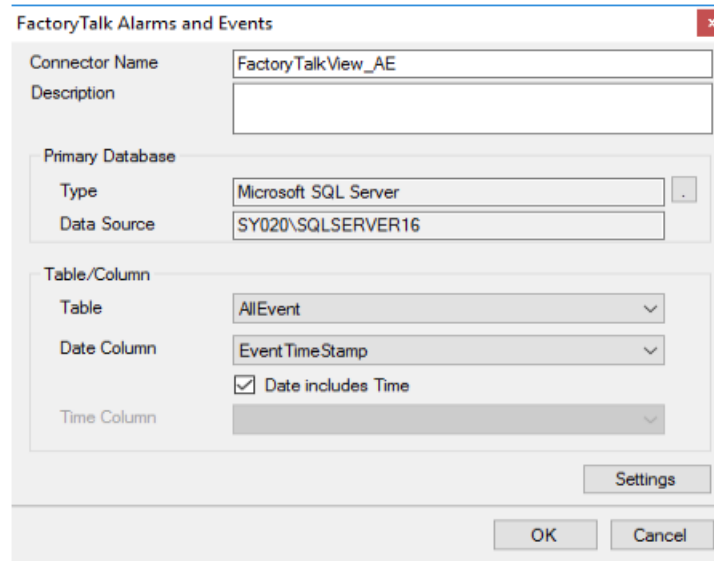
New Project

Step 2 : Configure the Connectors (data sources) of the Project.

Add Modify Delete | Catalog

Name	Provider	Description
*		

Select **Rockwell Automation, FactoryTalk Alarms and Events**.



FactoryTalk Alarms and Events

Connector Name: FactoryTalkView_AE

Description:

Primary Database

Type: Microsoft SQL Server

Data Source: SY020\SQLSERVER16

Table/Column

Table: AllEvent

Date Column: EventTimeStamp

Date includes Time

Time Column:

Settings

OK Cancel

- Set the Primary Database
- Select *AllEvent* table
- Set **Date Column** to *EventTimestamp*.

