

## FactoryTalk® Alarms and Events

**XLReporter** generates Excel based reports from Rockwell Automation® FactoryTalk® Alarms and Events when the alarms and events are historically logged.

The purpose of this document is to describe the setup of FactoryTalk Alarms and Events for **XLReporter**.

## Defining a Database

FactoryTalk Alarms and Events can be historically logged to either Microsoft SQL Server or SQL Server Express. This database can be located on either the local machine or across the network. Within FactoryTalk View Studio, you must specify the database where the logging will occur.

This is defined from the **Explorer** window by selecting **System, Connections, Database** right-clicking and selecting **New Database**.



Under the **General** tab you specify the settings for the SQL Server or SQL Server Express you have available. For **Database name** you can either browse to select an existing database or enter a new database name.

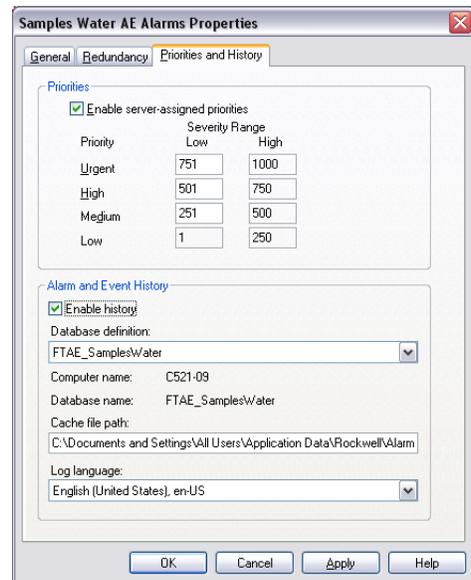
## Configuring Alarm Monitoring

There are two types of alarm monitoring supported by FactoryTalk Alarms and Events: device-based monitoring and tag-based monitoring.

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

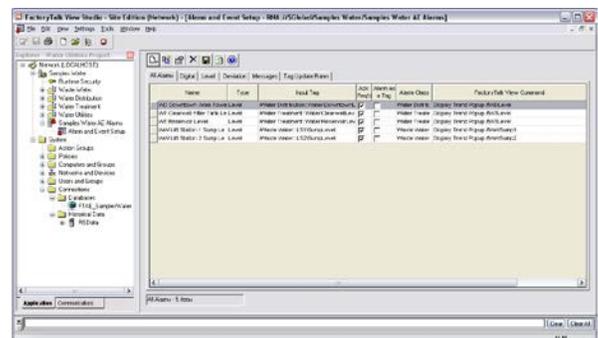
Tag-base monitoring is configured in FactoryTalk View Studio. The first step is adding a Tag Alarm and Event Server. This is done from the **Explorer** window by right-clicking an application or area and selecting **Add New Server, Tag Alarm and Event Server**.

The **General** tab is where you specify the server **Name**.



Under the **Priorities and History** tab be sure to check **Enable history** and set **Database definition** to the **Database Name** you previously defined.

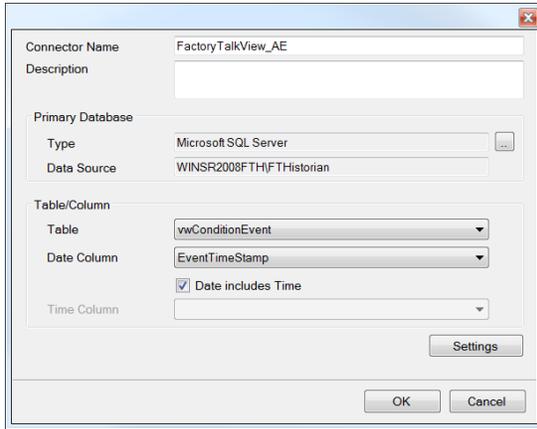
Tag-based alarms can now be configured in the **Explorer** window by expanding the Tag Alarm and Event Server you defined and double-clicking **Alarm and Event Setup**.



Tag-based alarms can be added, modified or removed using the icons at the top.

## Creating an Alarms Connector

In **Project Explorer**, **Data**, **Connectors**, create a new connector by selecting **Add**, **Rockwell Automation**, **FactoryTalk Alarms and Events**. Select the database where your alarms are stored. Then, select the **Table or view** where alarm data is stored, and select the column used to timestamp the alarms as your **Date Column**.



There are a number of tables and views available from the database. In older version of the FactoryTalk Alarms and Events documentation, they recommend retrieving data from the following views.

- vwSimpleEvent
- vwConditionEvent
- vwTrackingEvent
- vwAllEvents

However, in the later versions, data can be retrieved from the following tables:

- SimpleEvent
- ConditionEvent
- TrackingEvent
- AllEvents

For the purposes of this document consider the **ConditionEvent** and the **TrackingEvent** tables. The **ConditionEvent** table returns all the condition-related events like when the alarm changed state. The **TrackingEvent** table returns tracking-related events like an event describing the acknowledgement of an alarm. A typical report would be to show all the alarms over a certain time period along with the acknowledgement information entered by the operator. The alarm record can be retrieved from **ConditionEvent** but the acknowledgement information from the operator is retrieved from **TrackingEvent**.

## Verifying the Alarms Connector

In **Project Explorer**, **Tools**, **Connector Groups**, select your FactoryTalk alarms connector and then select **Add** to add a new connector group.

On the **Columns** tab of the group dialog, select alarm data from the columns available in the table.

On the **Time Period** tab, select the Start Time and End Time for the group as well as restricting the total number of alarms returned. By default this is set to the first 60 alarms over the current day.

Under the **Filters** tab, specify additional filtering to limit the type or amount of alarms returned.

To retrieve data using your configured settings, select **Preview**. In the **Preview** window, use the data picker to select a date/time, and use **Refresh** to retrieve data.

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