



Reporting from Historian

XLReporter generates Excel based reports from the Wonderware Historian (formerly known as IndustrialSQL Server or InSQL) using historical logged data.

The purpose of this document is to describe how to setup Wonderware Historian for **XLReporter**.

Historical Data

With process data stored in a historian, the variety of reports that can be produced by **XLReporter** increases many fold.

In addition to raw values, informative metrics such as run times and statistics are obtained by simply selecting the tags and time frame of interest. e.g., hourly average, maximum and minimum for each hour of the day.

XLReporter performs raw calculations and time weighted calculations. The time weighted calculations would be used when the data is not logged periodically e.g. logging on change.

Setting up Data Logging

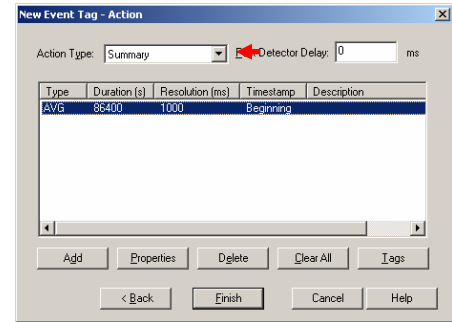
Wonderware Historian is designed to log data to Microsoft SQL Server. When installed, Historian creates the Runtime database in SQL Server for its use.

As part of configuring the Historian, you can configure summary calculations that are triggered and stored by the Historian. These calculations can be retrieved by **XLReporter** as part of a report.

Summary calculations are configured in the **System Management Console**. This can be accessed from the Windows **Start** menu in the **Wonderware** program group.

In the **System Management Console**, expand **Configuration Editor** and **System Configuration**. Right-click **Tag Configuration** and select **New Event Tag**.

Configure the **Event Tag** as a **Summary** action, specifying the calculations to perform, the frequency to perform them over and the tags that provide the data to calculate.



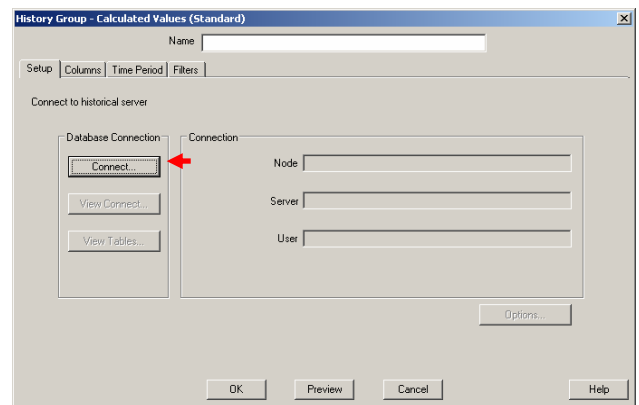
New Event Tag - Action

Configured summaries can be accessed in the **System Management Console** under **Tag Configuration, Summaries**.

Retrieving Historical Data

XLReporter accesses values stored in the Wonderware Historian using a history group.

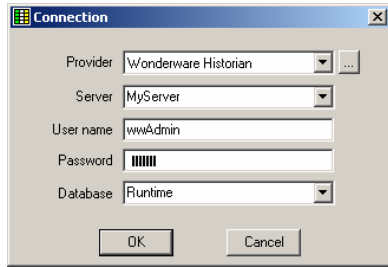
From **XLReporter's Project Explorer**, double click on **History Group** to list the groups already configured in the project. Select **New...** and select the type of group. The standard calculations are calculations performed by Historian whereas the advanced calculations are client-side calculated derived from samples retrieved from Historian.



History Group Builder

After selecting the group type, the history group must be connected to the database. From the **Setup** tab, click **Connect...** to open the **Connection** window.

For **Server**, select the Server where Historian is running.



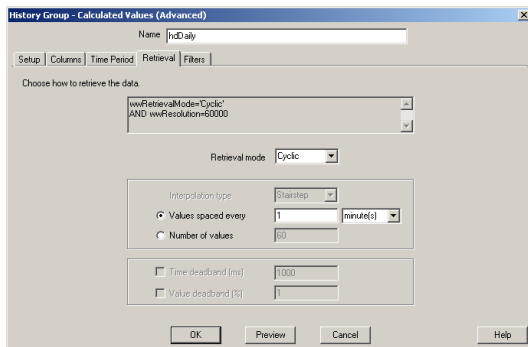
History Group Builder - Connection

If the Server requires a log on, enter a valid **User name** and **Password**. Specify the **Database** as **Runtime**. Click **OK** to return to the history group **Setup** tab.

On the **Columns** tab, select the tag **Name** and **Calculation** for each tag in the group.

On the **Time Period** tab, select the **Start Time**, **End Time** and **Interval** for the group. By default this is set to one hour intervals over the current day.

For advanced calculation history groups (as well as summary calculation, raw value and raw text groups) the **Retrieval** tab is provided.

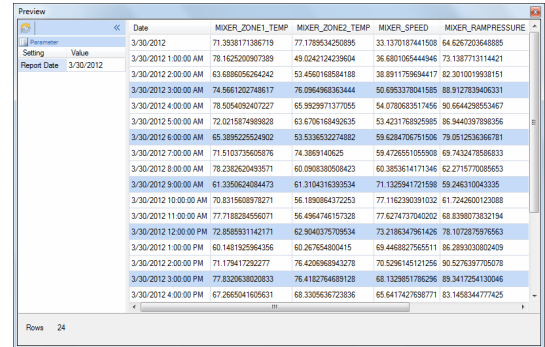


History Group Builder – Retrieval Tab

Here, you can specify exactly how much data to retrieve, or for advanced calculations, how much data to factor into the calculations. Based on the **Retrieval mode** set, different options become enabled.

On the **Filters** tab, you can specify conditions to limit the number of records returned by the history group. Filters can be based on value and on quality.

The **Preview** pushbutton at the bottom of the history group display can be pressed to preview the result of the current configuration.



Preview

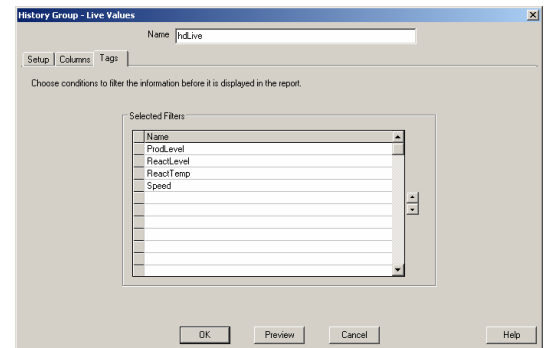
Preview displays the data exactly the same way it will be written into the report.

Retrieving Live Data

The Wonderware Historian also provides access to live data. In this case “live” refers to the last value stored by Historian.

XLReporter can retrieve this data via a history group with the type specified as **Live Values**.

After connecting to the database as described previously, under the **Columns** tab, select each column to display on your report. This can include the timestamp, tag name, value and quality.



History Group Builder – Tags Tab

Under the **Tags** tab, specify each tag to retrieve the live value for.

Use **Preview** to preview the results of the configuration.