



Reporting From Multiple Sources

There are times where a report is needed from multiple disparate data sources that need to be married together in order to satisfy the reporting requirement.

To solve this, **XLReporter** has developed the Iterator. The Iterator takes the results of one data set and uses it as input to another data request.

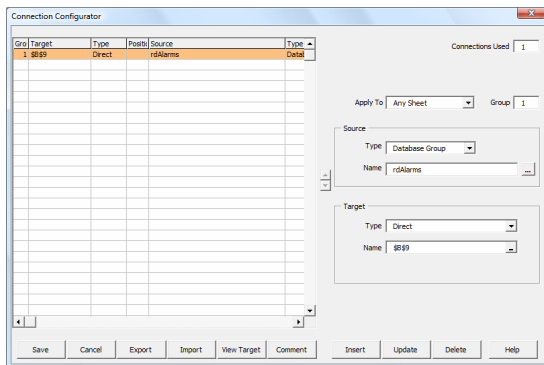
The Iterator is best described using an example.. Suppose we require a daily report that shows the time and date of each alarm that occurred over the day along with value of certain process variables at the time of the alarm.

In this example it is not necessary for the alarm and process data to reside in the same database. The reason is because the retrieval from the alarms database will be performed first and then multiple requests to the process historian will occur based on the alarm timestamps.

Retrieving the Alarm Data

The first step in solving this requirement is to retrieve the alarm data. This is done with a database group.

The database group will retrieve the timestamp of every alarm recorded over day. The connection for this database group is set to B9. The connection is assigned a group number of 1.



Connection to the alarms

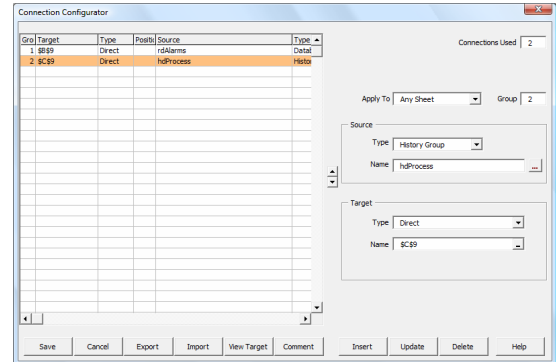
Retrieving the Historical Data

Next, the process values must be brought into the report. This is done with a history group.

The Time Period for the history group must be based on the timestamps returned by the database group. Since those timestamps appear in the report, the Start Time and End Time for the group are set to Cell. However, just pointing these settings to a single cell is not enough. The group needs to run for each timestamp in the alarm list.

To enable this to happen, the cell references is denoted as "\$B\$9:*". The ":" enables the Iterator, instructing it to start at cell B9 and move down the column executing for every value until the list is exhausted.

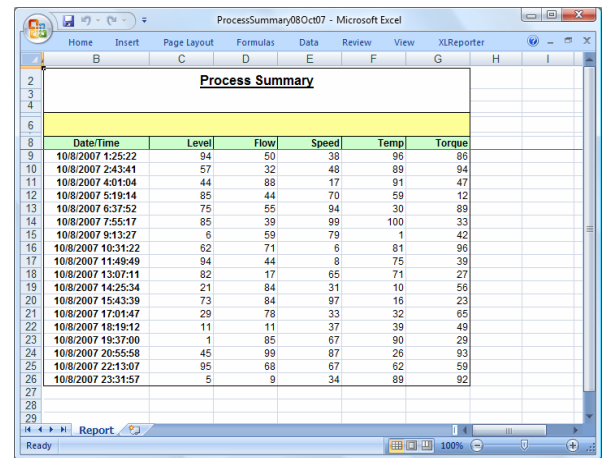
The connection for this history group is set to C9 and assigned to group 2.



Connection to the historian

Running the Report

To run the report, issue an UpdateGroupSheet command for group 1 (alarm data), and then for group 2 (process data).



The Completed Report

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