

Reporting from InTouch

XLReporter generates Excel based reports from Wonderware's InTouch using current process values in the tag database, historical logs and alarm archives.

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

Process Values

XLReporter can take snapshots of the process values and add them to an existing report worksheet, periodically or on event. To prevent excessive build-up of information in a single worksheet, new workbooks and worksheets can be created automatically.

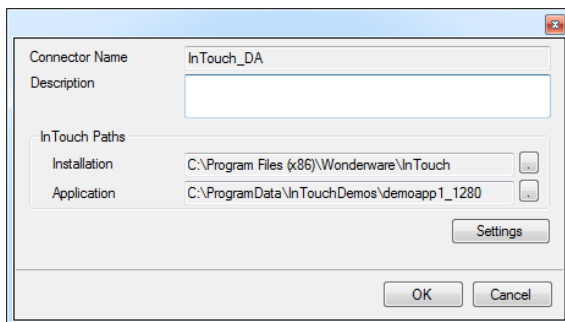
Process values can be retrieved from InTouch by **XLReporter** by either a native interface or via the ArchestrA FSGateway OPC Server. The native interface is only available if **XLReporter** is installed on the same machine as InTouch, whereas the OPC interface is available both locally and remotely.

For more information on ArchestrA FSGateway, see the Wonderware ArchestrA FSGateway Setup Guide.

Creating a Real Time Data Connector

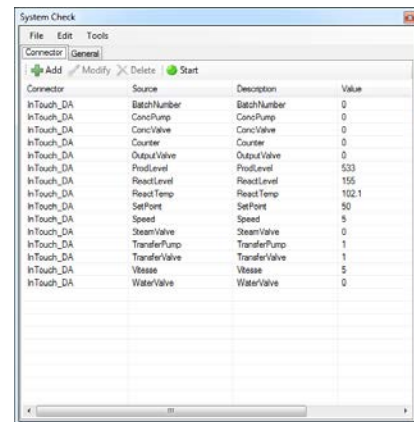
To connect **XLReporter** to InTouch for real time data, you will need to create a **Connector**. To do this, open **XLReporter's Project Explorer**, and open **Connectors** from the **Data** tab. In **Connectors**, select **Add**.

For the native connector, select **Wonderware, InTouch Real-time values (local)**. Under **InTouch Paths**, set **Install** to the directory where InTouch is installed. Set **Application** to the directory where the current InTouch application is located.



Verifying the Data Connector

To verify the InTouch real time interface, open **XLReporter's Project Explorer**, from the **Tools** tab. Start the **System Check** application and select the **Connector** tab. Select **Add**, choose your InTouch Connector from the dropdown list, and click the browse pushbutton [...] to open the **Tag Browser** window.



Select one or more tags and verify that they update with the current value using **Start** in the **System Check** window.

Historical Data

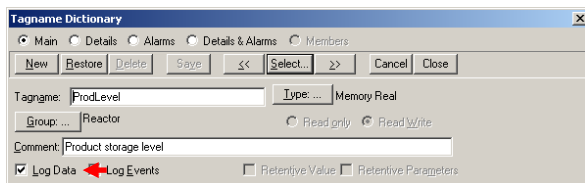
With process data stored in a historian, the variety of reports that can be produced by **XLReporter** increases many fold.

In addition to sample 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 time-weighted calculations on the historical data retrieved.

Setting up Data Logging

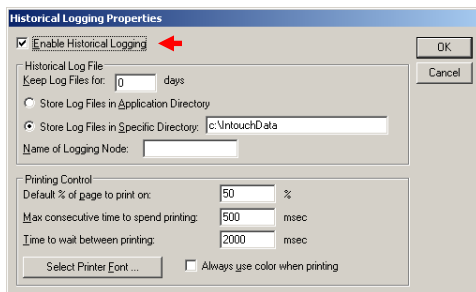
To set up data logging in InTouch from the InTouch **Window Maker**, from the menu select **Special, Tagname Dictionary**.



Tagname Dictionary

For each tag you wish to log, check the **Log Data** option.

In the InTouch **Window Maker** menu, select **Special, Configure, Historical Logging** to open the **Historical Logging Properties** window.

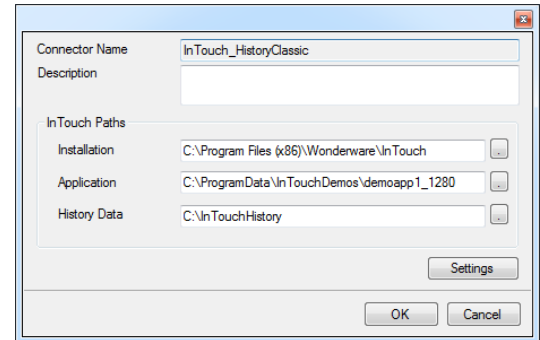


Historical Logging Properties

Check **Enable Historical Logging**. Once checked you can specify where the data log files are stored and how long to keep them. Historical log files have the file extension **.lgh*.

Creating a Historical Data Connector

To connect **XLReporter** to InTouch historical data you will first need to create a **Connector**. To do this, open **XLReporter's Project Explorer**, and open **Connectors** from the **Data** tab. In **Connectors**, select **Add**, and select **Wonderware, InTouch Historical values (classic)**.



Under **InTouch Paths**, set **Install** to the directory where InTouch is installed. Set **Application** to the directory where the current InTouch application is located. Set **History Data** to the directory where the data log files are stored.

Verify the Historical Data Connector

XLReporter accesses process values stored in the historian using a connector group.

From **XLReporter's Project Explorer**, under the **Tools** tab, select **Diagnostics, Connector Groups**. Select the InTouch history connector and click **Add**.

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.

The **Preview** menu can be selected to preview the result of the current configuration.

Date	FLOW01	FLOW02	FLOW03	FLOW04
10/1/2013 1:00:00 AM	66.2536056697591	53.1530425209608	34.9991117477417	60.1344185511271
10/1/2013 2:00:00 AM	78.7583703358968	66.9680634498396	33.7002785682678	59.7727679793938
10/1/2013 3:00:00 AM	71.6823314666748	54.3723221460878	31.9810604915076	64.7202778930066
10/1/2013 4:00:00 AM	66.1845698038737	57.8811047504616	25.0655181884766	73.2722894732073
10/1/2013 5:00:00 AM	78.0985364278158	78.9615464529402	37.5355056884257	82.4242586771647
10/1/2013 6:00:00 AM	72.9651168823242	61.0702749252319	46.9489568593334	88.9777421319511
10/1/2013 7:00:00 AM	76.1162572224935	63.284040914653	52.1344570287069	90.6483974856787
10/1/2013 8:00:00 AM	60.9478255234782	77.508205754538	51.897953414917	86.8528187896728
10/1/2013 9:00:00 AM	77.3452785146891	59.039054703715	62.6866134516288	78.9163781856494
10/1/2013 10:00:00 AM	78.5410724638993	69.888274781963	67.1617685508728	69.6120353688873
10/1/2013 11:00:00 AM	64.9920135489047	61.0963741938273	63.3750368118286	62.1898630142212
10/1/2013 12:00:00 PM	66.8622281709613	59.000049832862	71.7531198294238	59.242635941628
10/1/2013 1:00:00 PM	77.966978015544	65.4464863357644	76.0113204203288	61.7999157587887
10/1/2013 2:00:00 PM	66.6261160526233	46.4779319125777	76.781423390708	68.563601379395
10/1/2013 3:00:00 PM	59.6042877705892	56.9785511830640	55.9398724228078	78.2438307444225

Preview

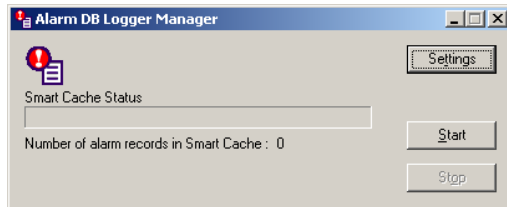
Preview displays the data exactly the same way it will be written into the report.

Alarm Data

Any tag in InTouch can be configured in the **Tagname Dictionary** to generate an alarm whenever it exceeds specified limits. The resulting alarms can be stored in a Microsoft SQL Server or MSDE database that **XLReporter** can use to retrieve alarm data for a report.

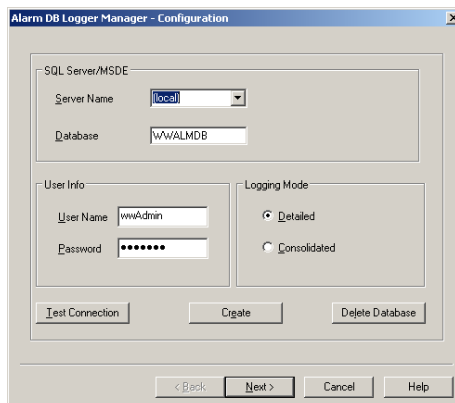
Setting up Alarm Logging

To set up InTouch alarm logging to a database, open the **Alarm DB Logger Manager**. This can be accessed from the Windows **Start** menu, in the **Wonderware** program group under **InTouch**.



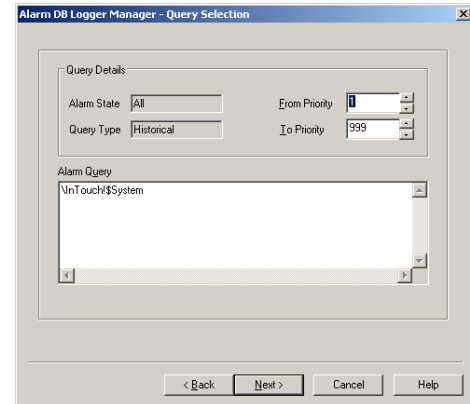
InTouch Alarm DB Logger Manager

Click **Settings** to configure alarm logging.



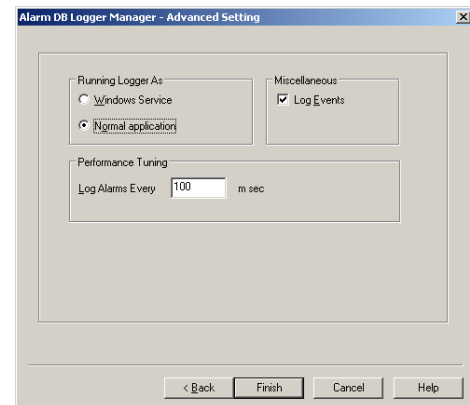
Alarm DB Logger Manager - Configuration

For **Configuration**, specify the Microsoft SQL Server or Microsoft Data Engine (MSDE) **Server Name** to log the alarms to together with the name of the **Database** to create, the **User Info** to connect to the server and the **Logging Mode**. When all is completed, click **Create** to create the database in the specified server. Click **Next**.



Alarm DB Logger Manager - Query Selection

For **Query Selection**, specify the priority of the alarms to log as well as the Alarm Query that determines which alarm groups to log. Each tag in the tagname dictionary can be assigned to an alarm group. Alarm groups can be viewed in the InTouch **Window Maker** under **Configure, Alarm Groups**. Click **Next**.



Alarm DB Logger Manager - Advanced Settings

For **Advanced Settings**, specify how you want the logger to run and how the logger should collect alarms. Click **Finish** to return to the **Alarm DB Logger Manager**.

In the **Alarm DB Logger Manager**, click **Start** to start the logger. It will first export all the alarms stored in the **Smart Cache**, and then proceed to log each alarm to the database specified.

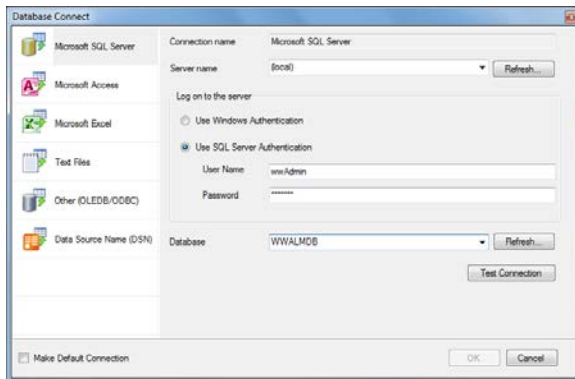
Creating an Alarms Connector

To connect **XLReporter** to InTouch alarm data you will first need to create a **Connector**. To do this, open **XLReporter's Project Explorer**, and open **Connectors** from the **Data** tab. In **Connectors**, select **Add**, and select **Wonderware, InTouch Alarms**.

Under **Primary Database**, for **Type**, click the browse pushbutton [...] to define a connection to the alarm database.

Select **Microsoft SQL Server**.

For **Server name**, you can select the **Server Name** specified previously in the **Alarm DB Logger Manager**.



For **Log on to the server**, specify the credentials to connect to the server.

Click **Test Connection**, to verify the settings and return to the **Connector** settings.

Verify the Alarm Data Connector

XLReporter accesses alarm data stored in the database using a connector group.

From **XLReporter's Project Explorer**, under the **Tools** tab, select **Diagnostics, Connector Groups**. Select the InTouch alarm connector and click **Add**.

On the **Setup** tab, under **Database**, set **Table/View** to *v_AlarmHistory* to retrieve alarm data. Set **Date Column** to *EventStamp*.

On the **Columns** tab, select the **Columns** for the alarm data you wish to retrieve.

On the **Time Period** tab, select the **Start Time**, **End Time** and **Interval** for the group. By default this is set to the first 60 values over the current day.

On the **Filters** tab, specify filtering to limit the type or amount of alarms returned. You can filter based on any available column in *v_AlarmHistory*. This includes filtering on alarm type, tag name, etc.

The **Preview** menu can be selected to preview the result of the current configuration.