

Reporting from eSync

XLReporter generates Excel based reports from historical logs and alarm archives stored in the MySQL database provided by eWON's eSync application.

The purpose of this document is to describe how to set up **XLReporter** to connect to the eSync database.

Before You Begin

eWON devices can be configured to log historical data by defining a logging schedule from the configuration web page of the eWON. The eWON must then be configured to upload this historical data to the Talk2M cloud storage service. Finally, the eSync software must be installed and configured to download the Talk2M data to its local MySQL database.

Before **XLReporter** can connect to the eSync database, both the 32-bit and 64-bit ODBC Connector drivers for MySQL must be installed on the machine where **XLReporter** is running. These drivers can be downloaded from the official MySQL web site.

Historical Data

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.

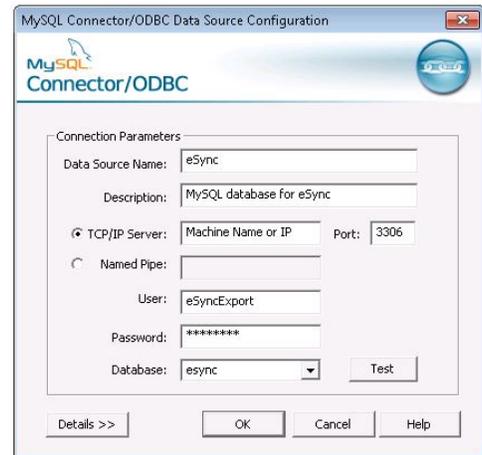
XLReporter performs raw calculations and time weighted calculations. The time weighted calculations would be used when the data is not logged periodically e.g. logging on change.

Creating a Historical Data Connector

From **XLReporter's Project Explorer**, open the **Data** tab, select **Connectors** and then **Add**.

From the **eWON** folder, select *eWON Historical Values*. Click **OK**.

In **Database Connect**, select *MySQL*. **XLReporter** uses a data source name (DSN) to reference the database eSync is using to store its information. Click **New** to create a DSN.



MySQL DSN Configuration

Assign a name to the DSN, and enter the server where eSync is running. Enter login credentials. The default credentials provided for data collection from the eSync database are *eSyncExport/eSyncPwd*. For the database, select *esync*. Click **Test Connection** to verify the connection parameters.

Verifying the Historical Data Connector

Create a **Connector Group** to verify that data can be retrieved from the connector. **Connector Groups** are designed in **Project Explorer, Tools, Connector Groups**. Select your eWON historical connector and then select **Add**. Select the **Type** and click **OK**.

On the **Columns** tab of the group, select the tag **Name** and **Calculation** for each tag in the group. The tag browser should display a list of all eWON stations detected in the eSync database that can be expanded/collapsed to reveal the tags logged in that station. Data from multiple stations can be collected in a single 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.

On the **Filters** tab, select tags by which to filter the results returned by the group. The **Criteria** conditions specified are combined with an OR relationship horizontally, and an AND relationship vertically.

With eSync, **Server Filtering** is also available. This can be done as a single filter condition that applies to all tags in the group. If the group type is **Raw Values**, then server filtering can also be performed using the **Quality** column. This means that values that have been marked with the qualities **Good**, **Bad**, or **Initial Value** can be discretely included or excluded from the data returned by the connector group.

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

Station	Tagname	AlarmStatus	Priority	Unit
station 1	temp1	OK	1	100
station 1	temp2	OK	1	100
station 1	temp3	OK	1	100
station 1	temp4	OK	1	100
station 1	temp5	OK	1	100
station 1	temp6	OK	1	100
station 1	temp7	OK	1	100
station 1	temp8	OK	1	100
station 1	temp9	OK	1	100
station 1	temp10	OK	1	100
station 1	temp11	OK	1	100
station 1	temp12	OK	1	100
station 1	temp13	OK	1	100
station 1	temp14	OK	1	100
station 1	temp15	OK	1	100
station 1	temp16	OK	1	100
station 1	temp17	OK	1	100
station 1	temp18	OK	1	100
station 1	temp19	OK	1	100
station 1	temp20	OK	1	100
station 1	temp21	OK	1	100
station 1	temp22	OK	1	100
station 1	temp23	OK	1	100
station 1	temp24	OK	1	100
station 1	temp25	OK	1	100
station 1	temp26	OK	1	100
station 1	temp27	OK	1	100
station 1	temp28	OK	1	100
station 1	temp29	OK	1	100
station 1	temp30	OK	1	100
station 1	temp31	OK	1	100
station 1	temp32	OK	1	100
station 1	temp33	OK	1	100
station 1	temp34	OK	1	100
station 1	temp35	OK	1	100
station 1	temp36	OK	1	100
station 1	temp37	OK	1	100
station 1	temp38	OK	1	100
station 1	temp39	OK	1	100
station 1	temp40	OK	1	100
station 1	temp41	OK	1	100
station 1	temp42	OK	1	100
station 1	temp43	OK	1	100
station 1	temp44	OK	1	100
station 1	temp45	OK	1	100
station 1	temp46	OK	1	100
station 1	temp47	OK	1	100
station 1	temp48	OK	1	100
station 1	temp49	OK	1	100
station 1	temp50	OK	1	100
station 1	temp51	OK	1	100
station 1	temp52	OK	1	100
station 1	temp53	OK	1	100
station 1	temp54	OK	1	100
station 1	temp55	OK	1	100
station 1	temp56	OK	1	100
station 1	temp57	OK	1	100
station 1	temp58	OK	1	100
station 1	temp59	OK	1	100
station 1	temp60	OK	1	100
station 1	temp61	OK	1	100
station 1	temp62	OK	1	100
station 1	temp63	OK	1	100
station 1	temp64	OK	1	100
station 1	temp65	OK	1	100
station 1	temp66	OK	1	100
station 1	temp67	OK	1	100
station 1	temp68	OK	1	100
station 1	temp69	OK	1	100
station 1	temp70	OK	1	100
station 1	temp71	OK	1	100
station 1	temp72	OK	1	100
station 1	temp73	OK	1	100
station 1	temp74	OK	1	100
station 1	temp75	OK	1	100
station 1	temp76	OK	1	100
station 1	temp77	OK	1	100
station 1	temp78	OK	1	100
station 1	temp79	OK	1	100
station 1	temp80	OK	1	100
station 1	temp81	OK	1	100
station 1	temp82	OK	1	100
station 1	temp83	OK	1	100
station 1	temp84	OK	1	100
station 1	temp85	OK	1	100
station 1	temp86	OK	1	100
station 1	temp87	OK	1	100
station 1	temp88	OK	1	100
station 1	temp89	OK	1	100
station 1	temp90	OK	1	100
station 1	temp91	OK	1	100
station 1	temp92	OK	1	100
station 1	temp93	OK	1	100
station 1	temp94	OK	1	100
station 1	temp95	OK	1	100
station 1	temp96	OK	1	100
station 1	temp97	OK	1	100
station 1	temp98	OK	1	100
station 1	temp99	OK	1	100
station 1	temp100	OK	1	100

Historical Data Preview

Preview displays the data exactly the same way it will be written into the report. Notice that the data is displayed in a wide format despite it being logged in a narrow format in the database.

Alarm Data

Any tag in a compatible eWON device can be configured to generate an alarm whenever it exceeds specified limits. The resulting alarms can be logged to the Talk2M interface so they are available in the eSync database.

Creating an Alarms Connector

In **Project Explorer, Data, Connectors**, create a new connector by selecting **Add, eWON, eWON Alarms**. Create or select a DSN that represents the esync database. Note, this can be the same DSN used for the eWON Historical connector.

Connector Name: eWON_Alarms
 Description: esyncd
 Primary Database Type: MySQL
 Data Source: esync

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.

Alarms in the eSync database are presented in two different formats. On the setup tab of the group, select either the *esync_livealarms* table, or the *esync_alarmshistory* table. The live alarms table contains the active alarms in the system at the time it was last synchronized to the Talk2M servers. The alarms history table contains archived alarms.

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.

Date	StationName	TagName	AlarmStatus	Priority	Unit	Description
5/6/2019	station-2	spch_alarmtag02	PreFapper	High	1	Tag 52 Station-2
5/6/2019 12:07:36 AM	station-2	spch_alarmtag02	ALM	Low	1	Tag 52 Station-2
5/6/2019 12:12:36 AM	station-2	spch_alarmtag02	ACK	Level	1	Tag 52 Station-2
5/6/2019 12:13:36 AM	station-2	spch_alarmtag02	ETN	Info	1	Tag 52 Station-2
5/6/2019 12:14:36 AM	station-2	spch_alarmtag02	END	Info	1	Tag 52 Station-2
5/6/2019 12:15:36 AM	station-2	spch_alarmtag02	PreFapper	High	1	Tag 52 Station-2
5/6/2019 12:16:36 AM	station-2	spch_alarmtag02	ALM	Low	1	Tag 52 Station-2
5/6/2019 12:17:36 AM	station-2	spch_alarmtag02	ACK	Level	1	Tag 52 Station-2
5/6/2019 12:18:36 AM	station-2	spch_alarmtag02	ETN	Info	1	Tag 52 Station-2
5/6/2019 12:19:36 AM	station-2	spch_alarmtag02	END	Info	1	Tag 52 Station-2
5/6/2019 12:20:36 AM	station-2	spch_alarmtag02	PreFapper	High	1	Tag 52 Station-2
5/6/2019 12:21:36 AM	station-2	spch_alarmtag02	ALM	Low	1	Tag 52 Station-2
5/6/2019 12:22:36 AM	station-2	spch_alarmtag02	ACK	Level	1	Tag 52 Station-2
5/6/2019 12:23:36 AM	station-2	spch_alarmtag02	ETN	Info	1	Tag 52 Station-2
5/6/2019 12:24:36 AM	station-2	spch_alarmtag02	END	Info	1	Tag 52 Station-2
5/6/2019 12:25:36 AM	station-2	spch_alarmtag02	PreFapper	High	1	Tag 52 Station-2
5/6/2019 12:26:36 AM	station-2	spch_alarmtag02	ALM	Low	1	Tag 52 Station-2
5/6/2019 12:27:36 AM	station-2	spch_alarmtag02	ACK	Level	1	Tag 52 Station-2
5/6/2019 12:28:36 AM	station-2	spch_alarmtag02	ETN	Info	1	Tag 52 Station-2
5/6/2019 12:29:36 AM	station-2	spch_alarmtag02	END	Info	1	Tag 52 Station-2
5/6/2019 12:30:36 AM	station-2	spch_alarmtag02	PreFapper	High	1	Tag 52 Station-2
5/6/2019 12:31:36 AM	station-2	spch_alarmtag02	ALM	Low	1	Tag 52 Station-2
5/6/2019 12:32:36 AM	station-2	spch_alarmtag02	ACK	Level	1	Tag 52 Station-2
5/6/2019 12:33:36 AM	station-2	spch_alarmtag02	ETN	Info	1	Tag 52 Station-2
5/6/2019 12:34:36 AM	station-2	spch_alarmtag02	END	Info	1	Tag 52 Station-2
5/6/2019 12:35:36 AM	station-2	spch_alarmtag02	PreFapper	High	1	Tag 52 Station-2
5/6/2019 12:36:36 AM	station-2	spch_alarmtag02	ALM	Low	1	Tag 52 Station-2
5/6/2019 12:37:36 AM	station-2	spch_alarmtag02	ACK	Level	1	Tag 52 Station-2
5/6/2019 12:38:36 AM	station-2	spch_alarmtag02	ETN	Info	1	Tag 52 Station-2
5/6/2019 12:39:36 AM	station-2	spch_alarmtag02	END	Info	1	Tag 52 Station-2
5/6/2019 12:40:36 AM	station-2	spch_alarmtag02	PreFapper	High	1	Tag 52 Station-2
5/6/2019 12:41:36 AM	station-2	spch_alarmtag02	ALM	Low	1	Tag 52 Station-2
5/6/2019 12:42:36 AM	station-2	spch_alarmtag02	ACK	Level	1	Tag 52 Station-2
5/6/2019 12:43:36 AM	station-2	spch_alarmtag02	ETN	Info	1	Tag 52 Station-2
5/6/2019 12:44:36 AM	station-2	spch_alarmtag02	END	Info	1	Tag 52 Station-2
5/6/2019 12:45:36 AM	station-2	spch_alarmtag02	PreFapper	High	1	Tag 52 Station-2
5/6/2019 12:46:36 AM	station-2	spch_alarmtag02	ALM	Low	1	Tag 52 Station-2
5/6/2019 12:47:36 AM	station-2	spch_alarmtag02	ACK	Level	1	Tag 52 Station-2
5/6/2019 12:48:36 AM	station-2	spch_alarmtag02	ETN	Info	1	Tag 52 Station-2
5/6/2019 12:49:36 AM	station-2	spch_alarmtag02	END	Info	1	Tag 52 Station-2
5/6/2019 12:50:36 AM	station-2	spch_alarmtag02	PreFapper	High	1	Tag 52 Station-2
5/6/2019 12:51:36 AM	station-2	spch_alarmtag02	ALM	Low	1	Tag 52 Station-2
5/6/2019 12:52:36 AM	station-2	spch_alarmtag02	ACK	Level	1	Tag 52 Station-2
5/6/2019 12:53:36 AM	station-2	spch_alarmtag02	ETN	Info	1	Tag 52 Station-2
5/6/2019 12:54:36 AM	station-2	spch_alarmtag02	END	Info	1	Tag 52 Station-2
5/6/2019 12:55:36 AM	station-2	spch_alarmtag02	PreFapper	High	1	Tag 52 Station-2
5/6/2019 12:56:36 AM	station-2	spch_alarmtag02	ALM	Low	1	Tag 52 Station-2
5/6/2019 12:57:36 AM	station-2	spch_alarmtag02	ACK	Level	1	Tag 52 Station-2
5/6/2019 12:58:36 AM	station-2	spch_alarmtag02	ETN	Info	1	Tag 52 Station-2
5/6/2019 12:59:36 AM	station-2	spch_alarmtag02	END	Info	1	Tag 52 Station-2
5/6/2019 1:00:36 AM	station-2	spch_alarmtag02	PreFapper	High	1	Tag 52 Station-2
5/6/2019 1:01:36 AM	station-2	spch_alarmtag02	ALM	Low	1	Tag 52 Station-2
5/6/2019 1:02:36 AM	station-2	spch_alarmtag02	ACK	Level	1	Tag 52 Station-2
5/6/2019 1:03:36 AM	station-2	spch_alarmtag02	ETN	Info	1	Tag 52 Station-2
5/6/2019 1:04:36 AM	station-2	spch_alarmtag02	END	Info	1	Tag 52 Station-2
5/6/2019 1:05:36 AM	station-2	spch_alarmtag02	PreFapper	High	1	Tag 52 Station-2
5/6/2019 1:06:36 AM	station-2	spch_alarmtag02	ALM	Low	1	Tag 52 Station-2
5/6/2019 1:07:36 AM	station-2	spch_alarmtag02	ACK	Level	1	Tag 52 Station-2
5/6/2019 1:08:36 AM	station-2	spch_alarmtag02	ETN	Info	1	Tag 52 Station-2
5/6/2019 1:09:36 AM	station-2	spch_alarmtag02	END	Info	1	Tag 52 Station-2
5/6/2019 1:10:36 AM	station-2	spch_alarmtag02	PreFapper	High	1	Tag 52 Station-2
5/6/2019 1:11:36 AM	station-2	spch_alarmtag02	ALM	Low	1	Tag 52 Station-2
5/6/2019 1:12:36 AM	station-2	spch_alarmtag02	ACK	Level	1	Tag 52 Station-2
5/6/2019 1:13:36 AM	station-2	spch_alarmtag02	ETN	Info	1	Tag 52 Station-2
5/6/2019 1:14:36 AM	station-2	spch_alarmtag02	END	Info	1	Tag 52 Station-2
5/6/2019 1:15:36 AM	station-2	spch_alarmtag02	PreFapper	High	1	Tag 52 Station-2
5/6/2019 1:16:36 AM	station-2	spch_alarmtag02	ALM	Low	1	Tag 52 Station-2
5/6/2019 1:17:36 AM	station-2	spch_alarmtag02	ACK	Level	1	Tag 52 Station-2
5/6/2019 1:18:36 AM	station-2	spch_alarmtag02	ETN	Info	1	Tag 52 Station-2
5/6/2019 1:19:36 AM	station-2	spch_alarmtag02	END	Info	1	Tag 52 Station-2
5/6/2019 1:20:36 AM	station-2	spch_alarmtag02	PreFapper	High	1	Tag 52 Station-2
5/6/2019 1:21:36 AM	station-2	spch_alarmtag02	ALM	Low	1	Tag 52 Station-2
5/6/2019 1:22:36 AM	station-2	spch_alarmtag02	ACK	Level	1	Tag 52 Station-2
5/6/2019 1:23:36 AM	station-2	spch_alarmtag02	ETN	Info	1	Tag 52 Station-2
5/6/2019 1:24:36 AM	station-2	spch_alarmtag02	END	Info	1	Tag 52 Station-2
5/6/2019 1:25:36 AM	station-2	spch_alarmtag02	PreFapper	High	1	Tag 52 Station-2
5/6/2019 1:26:36 AM	station-2	spch_alarmtag02	ALM	Low	1	Tag 52 Station-2
5/6/2019 1:27:36 AM	station-2	spch_alarmtag02	ACK	Level	1	Tag 52 Station-2
5/6/2019 1:28:36 AM	station-2	spch_alarmtag02	ETN	Info	1	Tag 52 Station-2
5/6/2019 1:29:36 AM	station-2	spch_alarmtag02	END	Info	1	Tag 52 Station-2
5/6/2019 1:30:36 AM	station-2	spch_alarmtag02	PreFapper	High	1	Tag 52 Station-2
5/6/2019 1:31:36 AM	station-2	spch_alarmtag02	ALM	Low	1	Tag 52 Station-2
5/6/2019 1:32:36 AM	station-2	spch_alarmtag02	ACK	Level	1	Tag 52 Station-2
5/6/2019 1:33:36 AM	station-2	spch_alarmtag02	ETN	Info	1	Tag 52 Station-2
5/6/2019 1:34:36 AM	station-2	spch_alarmtag02	END	Info	1	Tag 52 Station-2
5/6/2019 1:35:36 AM	station-2	spch_alarmtag02	PreFapper	High	1	Tag 52 Station-2
5/6/2019 1:36:36 AM	station-2	spch_alarmtag02	ALM	Low	1	Tag 52 Station-2
5/6/2019 1:37:36 AM	station-2	spch_alarmtag02	ACK	Level	1	Tag 52 Station-2
5/6/2019 1:38:36 AM	station-2	spch_alarmtag02	ETN	Info	1	Tag 52 Station-2
5/6/2019 1:39:36 AM	station-2	spch_alarmtag02	END	Info	1	Tag 52 Station