

## Reporting from the Ewon Flexy

When Ewon Flexy devices are located off-premise, **XLReporter** creates reports from one central location using historical and alarm logs available in the **Talk2M DataMailbox** which is a secure cloud storage service.



## Before You Begin

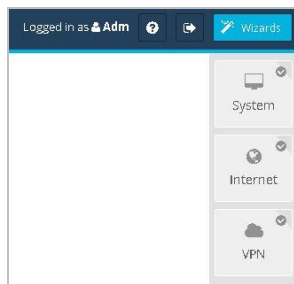
For off-premise data collection, a Talk2M account must be created, and the Flexy device(s) must be connected to the Talk2M VPN to upload data. Historical and/or alarm logging must be configured on each tag required for reporting purposes.

### Create a Talk2M Account

Download the **eCatcher** application (from HMS) to create a Talk2M account which will also create a Talk2M “DataMailbox”. It is the DataMailbox which will be used to store the data and alarms from the Flexy device. For **XLReporter** to connect to the DataMailbox, configure at least one **User** that does not have **Two-factor User authentication** enabled.

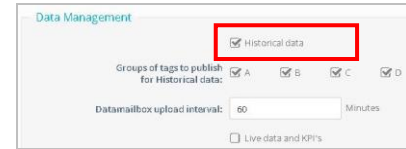
### Configure VPN Connection

In order to upload data, a Flexy device must be connected to the Talk2M VPN. This is done from **Wizards** → **VPN** in the web interface of the device.



### Enable Data Logging

After the VPN connection is configured, configure automatic data upload. Open **Setup** → **Main** → **Data Management** from the Ewon web interface and enable **Historical Data** which also enables alarm data upload (if configured). Specify the upload interval to the DataMailbox.



### Configure Historical Logging

Data logging configuration for each tag is done in the web interface of the device from **Tags** → **Values** → **Setup Mode**.



Data can be logged based on a value **Deadband** and/or a timed **Interval**.

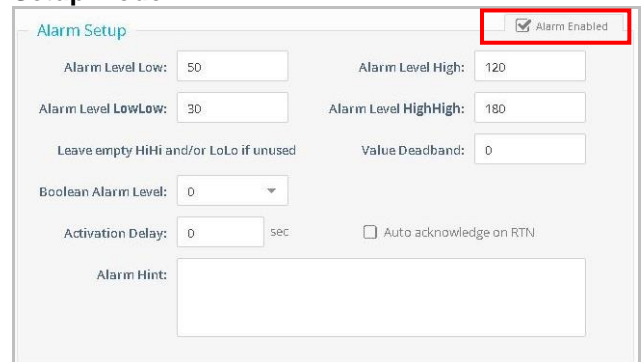
With historical data, **XLReporter** produces reports containing informative metrics. The metrics are “out-of-box” by simply selecting tags and time frame of interest e.g., hourly averages, daily run-times.

**XLReporter** supports two types of calculations, raw and time weighted. The time weighted calculations are used when the data is logged on a **Deadband**.

### Configure Alarm Logging

Any tag in a Ewon device can be configured to generate an alarm whenever it exceeds specified limits. The resulting alarms are logged to the DataMailbox and used by **XLReporter** as another source of data for reporting.

The configuration of the alarm logs is done in the web display of the device from **Tags** → **Values** → **Setup Mode**.



With alarm data, **XLReporter** produces reports containing informative alarm metrics and filters.

## Create a Data Connector

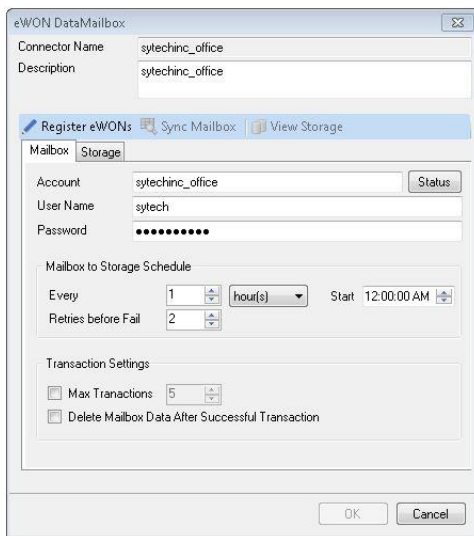
The **Ewon DataMailbox Connector** automatically synchronizes data from the temporary storage of the **Talk2M DataMailbox** with a permanent storage database on the local network.

To create the **Data Connector**, open **XLReporter's Project Explorer**. From the **Data** tab select **Connectors**.

In **Connectors**, select **Add** and then **HMS, Ewon DataMailbox**.

Configuration of the connector is in two parts; the **Mailbox** and the **Storage**.

### Mailbox Tab



Enter the **DataMailbox Account, User Name and Password** (as entered in eCatcher).

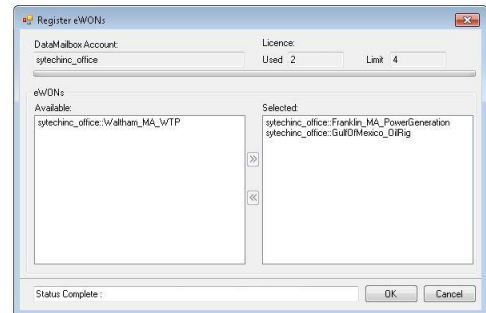
Leave all the other settings to their default values noting that the default scan of the mailbox is *Every 1 hour(s)* which means the scheduler will scan the mailbox for new data every hour.

To validate the communication to the DataMailbox, click **Status**.

Date	Description
2/4/2019 8:07:19 AM	Status Complete
2/4/2019 8:07:19 AM	Waltham_MA_WTP : 12/31/2018 1:34:02 AM to 1/26/2019 8:58:56 AM
2/4/2019 8:07:19 AM	Waltham_MA_WTP : count 104945
2/4/2019 8:07:19 AM	GulfOMexico_OilRig : 12/29/2018 2:47:24 AM to 2/4/2019 7:32:13 AM
2/4/2019 8:07:19 AM	GulfOMexico_OilRig : count 418037
2/4/2019 8:07:19 AM	Franklin_MA_PowerGeneration : 12/31/2018 1:34:08 AM to 2/4/2019 7:31:14 AM
2/4/2019 8:07:19 AM	Franklin_MA_PowerGeneration : count 361379
2/4/2019 8:07:19 AM	sytechinc_office: count 884361
2/4/2019 8:07:19 AM	Processing eWON : Waltham_MA_WTP
2/4/2019 8:07:19 AM	Processing eWON : GulfOMexico_OilRig
2/4/2019 8:07:19 AM	Processing eWON : Franklin_MA_PowerGeneration
2/4/2019 8:07:18 AM	Requesting Status from Mailbox : sytechinc_office
2/4/2019 8:07:18 AM	Connector Loaded : sytechinc_office

The display shows a list of the Ewons that log to the mailbox together with the timeframe and quantity of data logged.

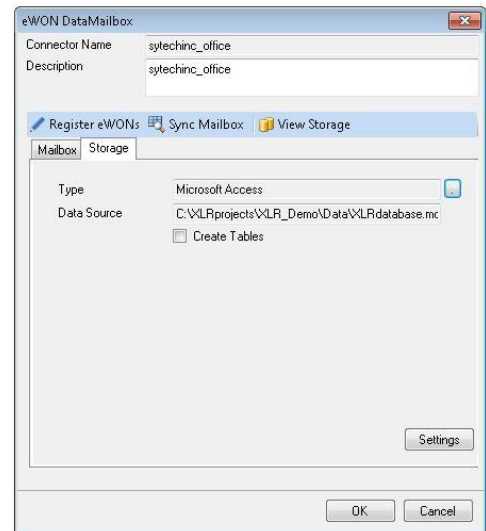
Select **Register Ewons**.



The display is used to select the Ewon devices that will be synchronized to the on-premise Storage. The display shows the number of devices that can be registered according to the **XLReporter** licence \*\*.

### Storage Tab

The Storage tab is used to specify the database used for local storage.



Select a database. If a database is not accessible, use the Microsoft Access database *XLDatabase* provided in the **Data** folder of the project.

With the storage configured, click **Sync Mailbox** and manually start the data transfer \*\*\* (in a running system the synchronization is done automatically by the scheduler).

Description  
 Saving History for I\_N\_AVERAGELOAD  
 Start Date 1/24/2019 9:02:47 PM: Record Count 60  
 Saving History for B\_N\_RUNNINGSTATUS  
 Start Date 1/24/2019 9:02:47 PM: Record Count 60  
 Saving History for F\_H\_WINDSPEEDAVG\_1HR  
 Start Date 1/24/2019 9:02:47 PM: Record Count 60  
 Saving History for D\_M\_BATTERYVOLTAGE  
 Start Date 1/24/2019 9:02:47 PM: Record Count 60  
 Saving History for A\_B\_SYS\_MONTH  
 Start Date 1/24/2019 9:02:47 PM: Record Count 60  
 Saving History for B\_H\_PLANRUNNING  
 Start Date 1/24/2019 9:02:47 PM: Record Count 60  
 Saving History for A\_B\_SYS\_DAY  
 Start Date 1/24/2019 9:02:47 PM: Record Count 60  
 Saving History for D\_N\_FREQUENCY  
 Start Date 1/24/2019 9:02:47 PM: Record Count 60  
 Saving History for A\_BS\_TIDTEST1  
 Start Date 1/24/2019 9:02:47 PM: Record Count 60

The display shows the tags of each Ewon device being saved to the storage.

At any time click **Stop** to stop the synchronization.

To view the contents of the storage, click **View Storage** to view the current values of the tags together with their historical values and alarms

## Template Library – Tag History

Use the Template Library to produce a historical report template in just a few clicks.

Open **XLReporter's Project Explorer**. From the **Home** tab, start the **Template Library Wizard**,

Select **Line Charts** under **History, Trend Charts**.

Click **Next**, and give the template a **Name**. Make sure the **Connector** is the Ewon DataMailbox connector created in the previous section. Click **Next** then **Finish** to create the report template and close the wizard.

From the **Home** tab select **On-Demand Reports**. Open the template created in the previous section, make selections using the tag browser and click **Refresh** to update the report.

## Template Library – Alarm History

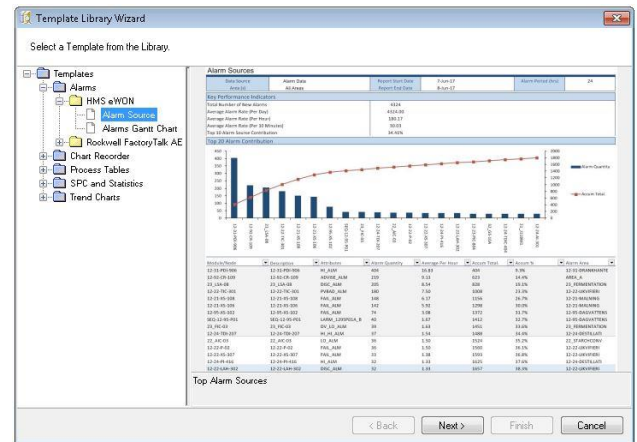
Use the Template Library to produce an alarm report template in just a few clicks.

Open **XLReporter's Project Explorer**. From the **Home** tab, start the **Template Library Wizard**.

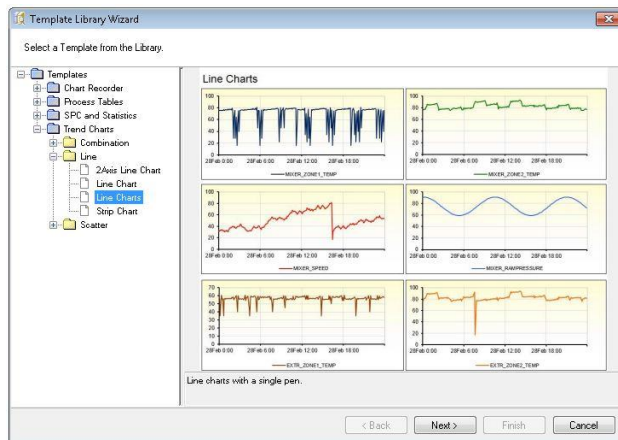
Select **Vendor Specific, HMS and Alarm Source**.

Click **Next**, and give the template a **Name**. Make sure the **Connector** is the Ewon DataMailbox connector. Click **Next** then **Finish** to create the report template and close the wizard.

From the **Home** tab select **On-Demand Reports**. Open the template created in the previous section. Enter a date range where alarm activity has occurred and click **Refresh** to update the report.



The dashboard shows the alarm count over each device. Use the filter dropdown options to customize the display.



## Reporting from Real Time Data

When **XLReporter** is on the same network as the Ewon device, reports can be generated from live data using the Ewon OPC-UA server.

### Before You Begin

To connect to live data in the Ewon device, its OPC UA server must be enabled. From the web interface of the device, open **Setup → Main → OPCUA** and enable the server.

## Create a Data Connector

To connect to this server you will need to create a **Connector**. Open **XLReporter's Project Explorer**, and then **Connectors** from the **Data** tab.

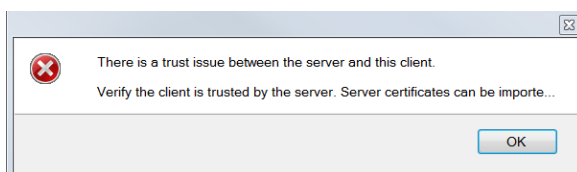
In **Connectors**, select **Add** and then **HMS, Ewon Real-time Values**. Under Primary Server, click the [...] button to open the following setup display.

Node: 192.168.8.254  
Port: 48020  
Server: ua.opc.tcp://192.168.8.254:48020  
Credentials:  
 Anonymous Access  
 Specific User  
User Name: sytechwtp  
Password: \*\*\*\*\*  
Domain:   
Buttons: Test Connection, OK, Cancel

Enter the **Node** IP address of the device, the **Port** and select the **Server** from the drop-down list.

In **Credentials**, select the method that has been configured in the device. If **Specific User** is selected, use the settings that are used to log into the web display of the device.

Click **Test Connection**. If the following message appears, then the Server needs to be configured to trust this connection.



Open the web interface of the flexy device. In **Setup → Main → OPCUA → Certificate Management** there should be an entry for this connection. If the **Status** is **Rejected**, modify the setting to **Trusted**. Once the certificate is trusted, **Test Connection** should return with a "success" message.

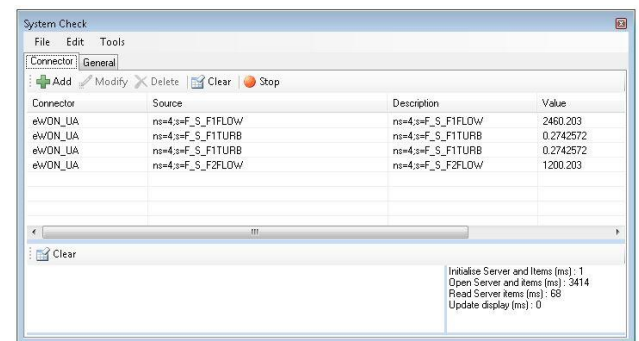
## Verify the Data Connector

To verify that the **Data Connector**, open **XLReporter's Project Explorer**.

From the **Tools** tab, start the **System Check** application and select the **Connector** tab.

Select **Add**, choose your **Ewon Connector** from the dropdown list, and click the pushbutton ([...]) next to **Items** to open the **Tag Browser** window.

Select a tag and click **Start**.

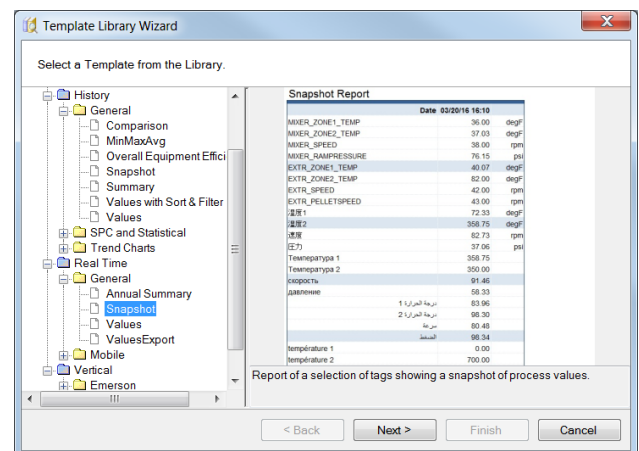


## Template Library – Real Time Data

Use the Template Library to produce a report template in just a few clicks.

Open **XLReporter's Project Explorer**. From the **Home** tab, start the **Template Library Wizard**.

Select **Snapshot** under **Real Time**.



Click **Next**, give the template a **Name**. Make sure the **Connector** is the Ewon connector. Click **Next** then **Finish** to create the report template and close the wizard.

From the **Home** tab select **On-Demand Reports**. Open the template created above and notice that up to 40 tags can be selected. Make your selections

using the tag browser and click **Refresh** to update the report.

The display shows the tags of each device being saved to the storage.

At any time click **Stop** to stop the synchronization.

To view the contents of the storage, click **View Storage** to view the current values of the tags together, their historical values and alarms

*\*\* The device **Limit** is determined by the software license. Trial mode allows 1 transaction from 1 Flexy device per data sync operation, and automatic synchronization is limited to a 2-hour grace period. When the **XLReporter** installation is registered, the trial limitations are removed.*

*\*\*\* The retrieval from the DataMailbox is segmented into **Transactions**, which are portions of the overall data storage. The first time data is synchronized, there may be a large number of transactions required and so it is recommended to disable **Maximum Transactions** during initial synchronization.*