

# Create Push Reports for WIN-911 Alarm Notification

## Overview

Now that XLReporter and WIN-911 are together in the SmartSights family, reports from XLReporter can be generated and delivered as part of an alarm notification or can be requested either through the WIN-911 mobile app or via an email request.

This guide walks through the setup for creating push reports within **XLReporter** and how to add those reports to the WIN-911 Workspace to be used as part of an alarm notification.

## What is a Push Report?

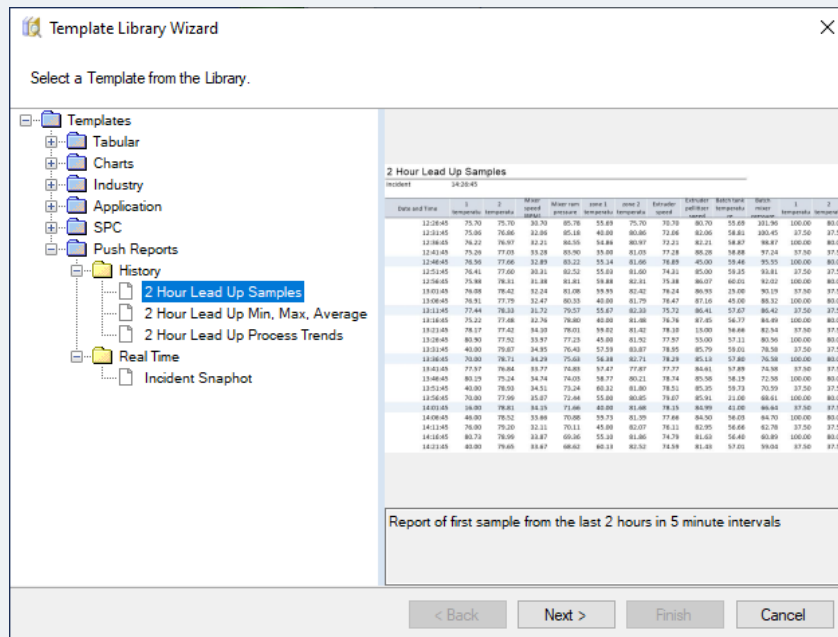
A push report is a report that does not require any user input in order to be generated, e.g., a report that can be generated simply by pushing a button.

This means that the template must be configured to have all the information like tag/column names and filtering as fixed entities. For historical and relational data sources, the time period must be configured relative, e.g., the last 2 hours or last 7 days.

In addition, if a template that can be used to generate multiple reports based on a set of parameters, those reports can also be used as push reports by setting up template instances for each parameter set and specifying the instance name along with the template name when configuring the report for alarm notification.

## Template Library

Creating a push report from XLReporter's Template Library is very straight forward. Open the Template Library by selecting **Home, Template Library**. A **Push Reports** category is available.



The screenshot shows the 'Template Library Wizard' window. On the left is a tree view with categories: Templates, Tabular, Charts, Industry, Application, SPC, Push Reports, History, and Real Time. Under 'Push Reports', '2 Hour Lead Up Samples' is selected. Below the tree is a preview of the report titled '2 Hour Lead Up Samples' for incident '1422045'. The report is a table with columns for 'Date and Time', 'Alarm', 'Alarm 1', 'Alarm 2', 'Alarm 3', 'Alarm 4', 'Alarm 5', 'Alarm 6', 'Alarm 7', 'Alarm 8', 'Alarm 9', 'Alarm 10', 'Alarm 11', 'Alarm 12', 'Alarm 13', 'Alarm 14', 'Alarm 15', 'Alarm 16', 'Alarm 17', 'Alarm 18', 'Alarm 19', 'Alarm 20'. The table contains 20 rows of data. At the bottom of the preview, it says 'Report of first sample from the last 2 hours in 5 minute intervals'. Navigation buttons '< Back', 'Next >', 'Finish', and 'Cancel' are at the bottom.

If the project has any Real Time data connectors defined, all the library templates for **Real Time** are displayed. Likewise, if the project has any Historical data connectors defined, all the library templates for **History** are displayed.

No matter what template is selected, basically all that needs to be specified is the name of the template and a set of tags from which to retrieve data.

The populated report can then be generated **On Demand** just by clicking the **Refresh** button.

Date and Time	1 temperature	2 temperature	Mixer speed (RPM)	Mixer ram pressure	zone 1 temperature	zone 2 temperature	Extruder speed	Extruder pelletizer speed	Batch tank temperature	Batch mixer pressure	1 temperature	2 temperature
13:06:52	18.00	14.00	15.00	82.10	55.45	18.00	19.00	20.00	16.00	92.76	100.00	75.00
13:11:52	48.00	24.00	30.00	82.81	40.00	48.00	54.00	60.00	36.00	94.53	20.00	20.00
13:16:52	78.00	34.00	32.45	83.50	59.17	78.00	73.04	82.04	56.00	96.25	100.00	75.00
13:21:52	76.14	44.00	32.83	84.17	45.00	78.60	73.42	82.42	56.55	97.92	20.00	20.00
13:26:52	80.54	54.00	33.52	84.81	57.55	80.41	74.11	83.11	58.31	99.53	100.00	75.00
13:31:52	40.00	64.00	35.18	85.43	55.54	78.45	75.77	84.77	56.30	101.07	20.00	20.00
13:36:52	70.00	74.00	33.77	86.02	57.12	80.90	74.36	83.36	56.81	102.56	100.00	75.00
13:41:52	16.00	75.36	32.39	86.59	58.68	76.57	72.99	81.99	57.37	103.97	20.00	20.00
13:46:52	46.00	76.33	34.32	87.13	56.79	81.24	74.91	83.91	55.48	105.31	100.00	75.00
13:51:52	76.00	78.02	35.63	87.63	58.43	82.92	76.22	85.22	57.12	106.58	20.00	20.00
13:56:52	81.00	78.67	36.94	88.11	59.03	83.57	77.53	86.53	57.72	107.77	100.00	75.00
14:01:52	40.00	78.44	36.98	88.55	58.75	83.34	77.57	86.57	57.44	108.87	20.00	20.00
14:06:52	70.00	77.44	36.63	88.96	57.69	82.34	77.22	86.22	56.39	109.90	100.00	75.00
14:11:52	76.52	78.71	38.81	89.33	58.92	83.62	79.40	29.00	57.61	110.83	20.00	20.00
14:16:52	77.20	78.38	39.21	89.67	58.54	83.28	79.80	69.00	57.23	111.67	100.00	75.00
14:21:52	77.19	78.57	43.08	89.97	58.68	83.47	83.67	87.05	57.37	112.43	20.00	20.00
14:26:52	76.67	78.85	42.83	90.23	58.91	83.76	83.42	86.79	57.60	113.08	100.00	75.00
14:31:52	76.55	78.14	39.41	90.46	58.15	83.04	80.00	83.37	56.84	113.65	20.00	20.00
14:36:52	77.85	78.34	40.32	90.65	58.29	83.24	80.91	84.28	56.98	114.11	100.00	75.00
14:41:52	76.75	78.46	38.05	90.79	58.37	83.36	78.64	82.01	57.06	114.48	20.00	20.00
14:46:52	77.96	78.30	37.34	90.90	58.16	83.20	77.93	81.31	56.85	114.75	100.00	75.00
14:51:52	77.69	79.57	39.02	90.97	59.38	84.48	79.61	82.98	58.07	114.93	20.00	20.00
14:56:52	77.31	78.92	39.48	91.00	58.67	83.82	80.07	83.45	57.37	115.00	100.00	75.00
15:01:52	77.35	78.67	40.76	90.99	58.38	83.57	81.35	84.72	57.07	114.97	20.00	20.00
15:06:52	77.70	79.84	41.60	90.94	59.50	84.74	82.19	85.56	58.19	114.84	100.00	75.00

## Template Studio

Templates can be built from scratch (or from an existing Excel workbook) using XLReporter's Template Studio. Any Excel feature can be used as part of the template. This includes things like formatting (including conditional formatting), formulas, charts, and graphics.

For more information, see **DESIGN, Template Studio** in the **Document Library**.

## Data Connections

When configuring Data Connections for Push Reports here are a few things to keep in mind:

### Historical Data

Historical data is retrieved by creating a History Data Group.

For more information, see **DESIGN, Historical Data Groups** in the **Document Library**.

Under the **Columns** tab of the History Data Group Builder, all tags must be explicitly specified, no variables can be used.

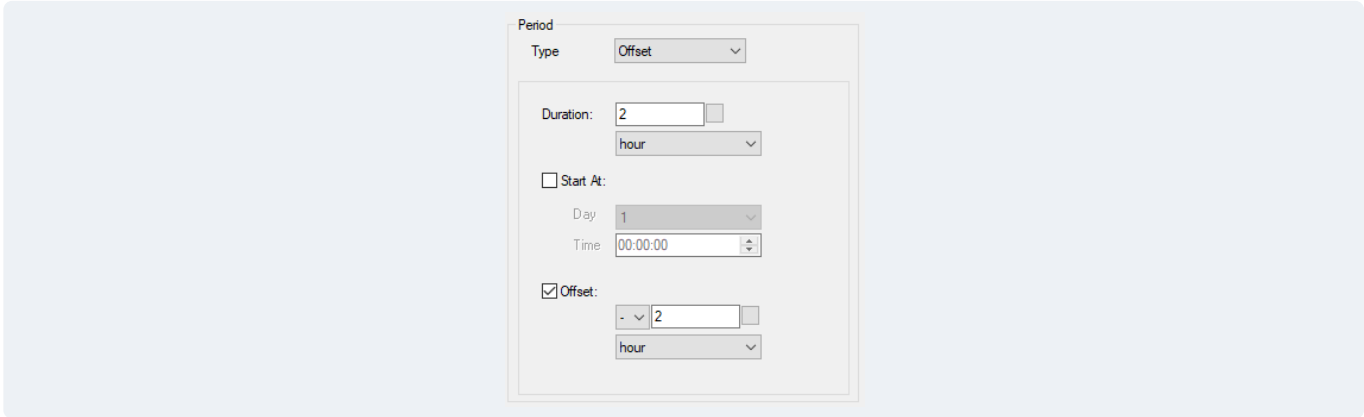
Name	Calculation	Scaling	Heading
MIXER_ZONE1_TEMP	first sample		MIXER_ZONE1_TEMPfirst sample
MIXER_ZONE2_TEMP	first sample		MIXER_ZONE2_TEMPfirst sample
MIXER_SPEED	first sample		MIXER_SPEEDfirst sample
MIXER_RAMPRESSURE	first sample		MIXER_RAMPRESSUREfirst sample
EXTR_ZONE1_TEMP	first sample		EXTR_ZONE1_TEMPfirst sample
EXTR_ZONE2_TEMP	first sample		EXTR_ZONE2_TEMPfirst sample
EXTR_SPEED	first sample		EXTR_SPEEDfirst sample
EXTR_PELLETSPEED	first sample		EXTR_PELLETSPEEDfirst sample
BATCH_TANKTEMP	first sample		BATCH_TANKTEMPfirst sample
BATCH_MIXPRESSURE	first sample		BATCH_MIXPRESSUREfirst sample
BATCH_ZONE1	first sample		BATCH_ZONE1first sample
BATCH_ZONE2	first sample		BATCH_ZONE2first sample

Output Options

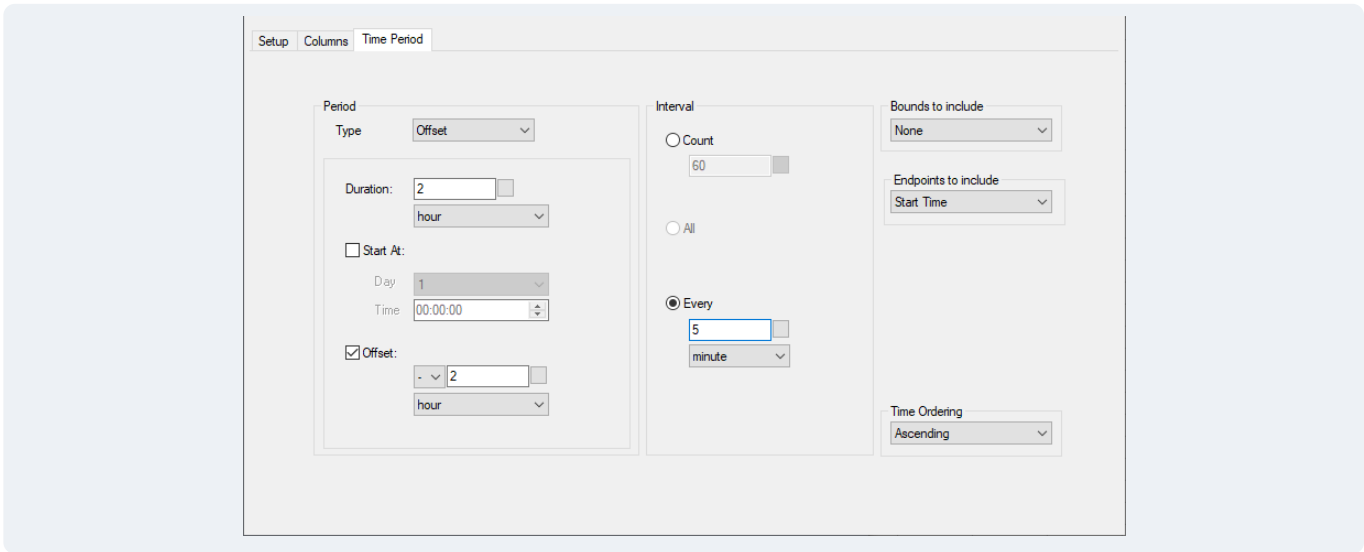
Timestamp on first column  Transpose

Empty rows between records   Include Heading

Under the **Time Period** tab, the **Period Type** should be *Relative*, *Offset* or *Endpoint* as all of these work off the time when the report is generated. For example, these **Period** settings retrieve data from 2 hours before the report is requested to generate.



For **Interval**, if **Count** or **Every** is selected, a fixed value must be specified, this should not be a variable. For example, this **Interval** returns 5-minute values over the **Period**.

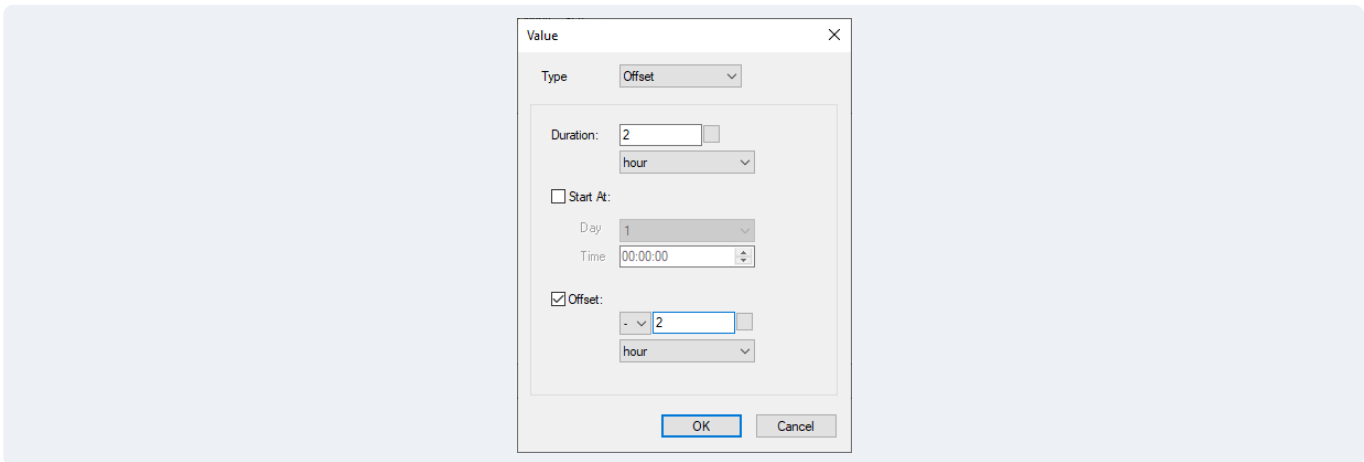


## Database Data

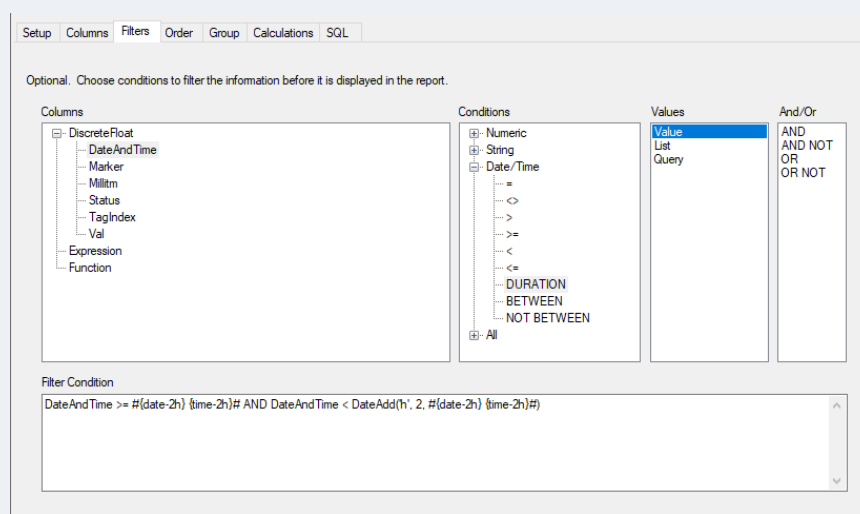
Database data is retrieved by creating a Database Data Group.

For more information, see **DESIGN, Relational Database Data Groups** in the **Document Library**.

Under the **Filters** tab, if a filter is applied to a date/time column and the **Condition** is set to *DURATION*, the value should be *Relative*, *Offset* or *Endpoint* as all of these work off the time when the report is generated. For example, these **Value** settings retrieve data from 2 hours before the report is requested to generate.



Note that these translate into a filter using the keywords *{date}* and *{time}*.



At runtime, these keywords are evaluated based on the current date and time.

Any other non-date/time filter must be set to a fixed value, no variables should be specified.

### Expressions

Expressions can be used as data connections to display elements of the date and time with keywords like *{date}* (current date), *{time}* (current time), *{DD}* (day of the month 1-31), etc. In addition, calculations can be set with these keywords. For example *{datim-2h}* evaluates to the date and time 2 hours ago.

Use any expression available to enhance the information in the Push Report.

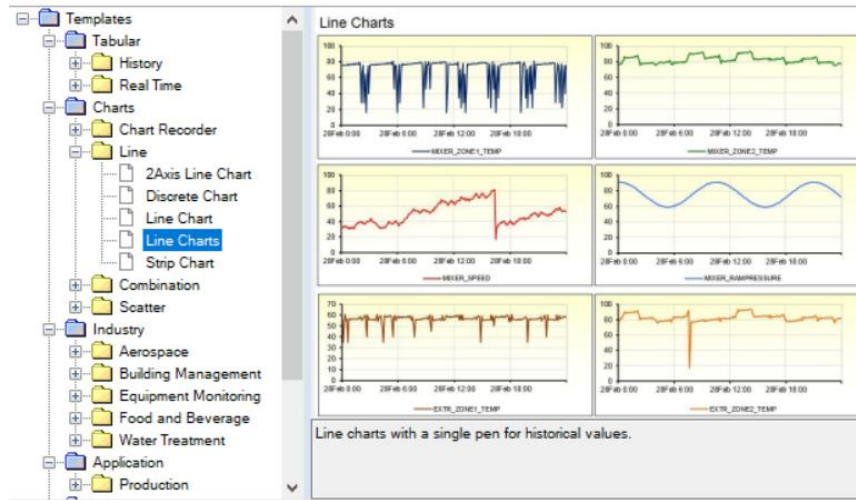
## Template Instances

For any template that requires parameters, one or more instances can be created to provide a set of values for those parameters. Outside of WIN-911 connectivity, these instances are used to preload the On Demand Reports panels when the same set of parameters is used over and over again to save time.

These instances can also be used with a push report to provide a set of parameter values to generate a report. Using this, a single template can be used to generate multiple reports with different content based on the instance specified. This functionality allows re-use of a single template design across many data sets. For example, create a trend template with instances related to tags from different machines in the plant. Then, in WIN-911 the instances can be linked to alarm conditions on those specific machines.

To create a template instance, first create a template that requires parameters. The simplest way to do that is through the Template Library.

Select a Template from the Library.



Once the template is selected, give it a **Name**, select the **Connector** and set the **Reporting Method** to *On Demand*.

Specify the Template Name and Connector(s).

Name  
Process Line Charts

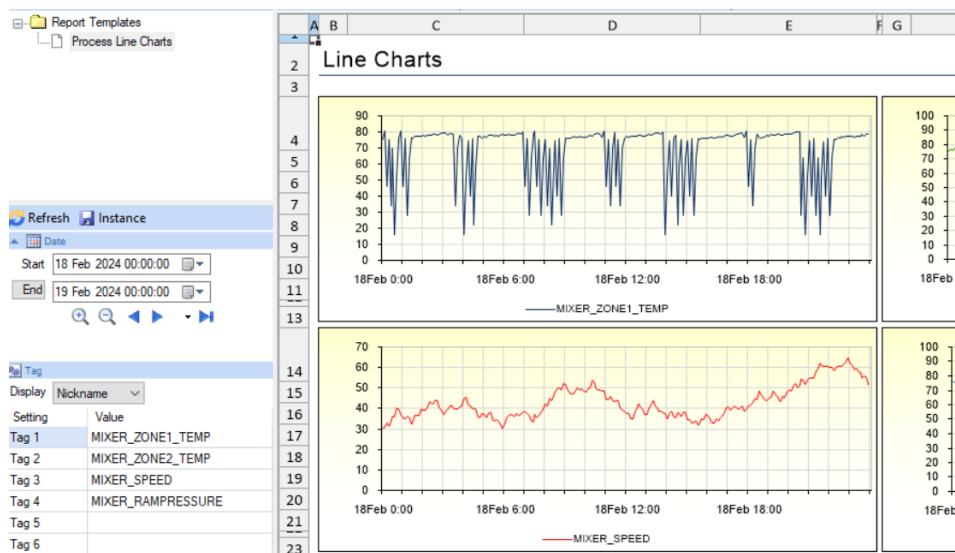
Description  
Line charts with a single pen for historical values.

History connector for the charts  
XLR\_History\_1

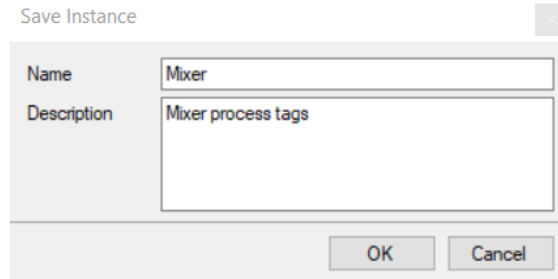
Use Event Frame for Report Period

Reporting Method  
 On Demand  Scheduled

When finished, the **On Demand Reports** application is opened with the new template available.



Set the parameters to values (e.g., select gags and set the time frame) and click **Instance** to save an instance with these settings.

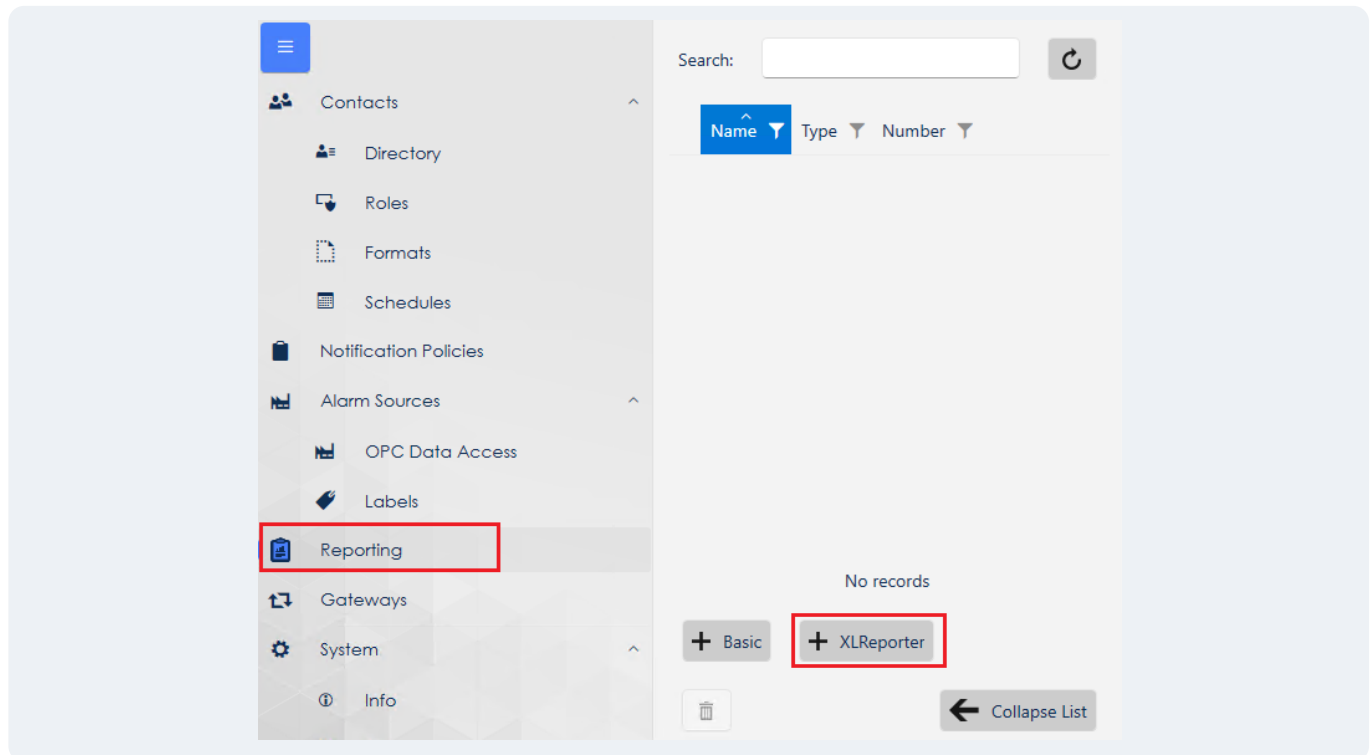


A dialog box titled "Save Instance" with a close button in the top right corner. It contains two input fields: "Name" with the value "Mixer" and "Description" with the value "Mixer process tags". At the bottom, there are "OK" and "Cancel" buttons.

Now, this template and instance is available as a push report in the format *Template | Instance* (e.g., *Process Line Charts | Mixer*).

## WIN-911 Workspace


Now that there are push reports available in XLReporter, they can be integrated into WIN-911. On the machine where WIN-911 is installed, open **WIN-911 Workspace**.



Select the Reporting option on the left. Click the **+XLReporter** button to add a push report from the XLReporter project.

## XLReporter Connector

---

XLReporter Host	<input type="text" value="http://10.1.1.1/xlrweb"/>
Report	<input type="text" value="2 Hour Lead Up"/> 
Name	<input type="text" value="2 Hour Lead Up"/>
Number	<input type="text" value="1"/>
Description	<input type="text"/>

For XLReporter Host, enter the URL to where XLReporter is running then select a push report from the list. Once this is saved, the report can be added as part of an Advanced Notification and can also be accessed and ran from the WIN-911 mobile app.