

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 reports within XLReporter that can be used with WIN-911.

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.

Template Library

Creating a push report from XLReporter's Template Library is very straight forward. Open the Template Library by clicking on **Library** in the **Project Explorer** on the right-side **Tools** tab in the **Template Design** section.

| Templates Tabular | | | | | | | | | | | | | |
|---|---------------|----------|-------|----------------|------------|---------|----------------|---------------------|----------------|--------------------------|-----------------|---------------|------------|
| Charts | 2 Hour Lead | Up Sar | nples | | | | | | | | | | |
| 🕀 🧰 Industry | incident | 342645 | | | | | | | | | | | |
| Application | Data and Yong | | R. S. | Mout- | Witer care | anne X. | pres 2 | Entrailer seated | DOPORT | Rofin tara Inviantatu | DW10 HUNC | in the second | 2 |
| H SPC | 12:38:4 | | 75.70 | 31,70 | | 35.69 | 75.70 | 31.31 | 60.70 | 35.68 | 331.90 | 100.00 | |
| | 12:31:8 | | | 32.55 | 95.19 | 42.00 | 80.85 | 72.06 | 82.05 | 56.81 | 320.45 | 17.56 | 22 |
| Push Reports | 12.42.6 | | | 35.28 | | 35.00 | 81.05 | 17.28 | 85.78 | 16.88 | 97.24 | 37.50 | 5 |
| History | 12,464 | | | 32.09 | | 55.04 | 81.60 81.60 | T8.29 74.31 | #5.00 | 35.40 39.45 | 95,55 93,41 | 100.00 | 8 |
| 2 Hour Lead Up Samples | 12:56:0 | | | 11.14 | | 33.88 | 82.31 | 35.28 78.24 | 86.07 36.95 | 66.01 25.00 | \$2.02 90.15 | 100.00 | 84 5 |
| | 12:00-4 | 5 26.93 | 77,79 | 32.47 | 80.33 | 40.00 | 81.79 | 76.47 | 87.16 | 45.00 | 85.32 | 100.00 | |
| 2 Hour Lead Up Min, Max, Average | LED S | | | 31,72 | | | 82.35 | 75.72 | 85.41 | 37.67 | 85,42 | 17.50 | 2 |
| 2 Hour Lead Up Process Trends | 19/23/4 | 78.03 | 77.42 | 84.00 | 78.01 | 55.82 | 81.42 | 78.30 | 35.00 | 38.66 | 82.54 | 37.50 | |
| | 13:28:4 | | | 35.57 | | | 81.92 | 37.57 78.55 | 55.00 | 57.11 | \$3,50 70,58 | 100.00 | 80 |
| 🖻 🛄 Real Time | 18360 | | | 3429 | | 56.88 | 82.71 TT 87 | 38.38 | 85.12 85.47 | 17.80 17.89 | 26.58 | 100.00 | |
| Incident Snaphot | 13:48:4 | | | 34.34 | | | 80.21 | 78.74 | 45.58 | 18.35 | 75.55 | 100.00 | |
| Report Snippets | 1151% | | | 3431 | | | 81.00 | 78.52 | 05.35 05.91 | 55.72 | 70,59 | 37,50 | 2 |
| | 10.01.0 | 5 58.00 | 19.81 | 34.15 | 71.68 | 42.05 | 81.68 | 18.35 | 84.99 | 45.00 | 85.65 | 87.50 | |
| Continuous Process | 14:00:4 | | | 23.09 22.11 | | | 81.35 | 27.88 76.11 | 84.50 82.95 | 56.05 | 84,70 82,78 | 100.00 | - 84 35 |
| . Discrete Manufacturing | 16:16:6 | \$ 83.72 | 76.99 | 22.07 | 69.36 | 55.33 | #1.96 | 34.79 | \$1.62 | 56.40 | 93.99 | 100.00 | |
| DEE | 14314 | 6 83.00 | 79.65 | 33.47 | 98.62 | 8.0 | 82.53 | 74.59 | 91.49 | 67.65 | 59.04 | 87.50 | |
| ⊕ Water Operations ⊕ General Purpose | Report of | first | ample | fron | the l | last 2 | hour | s in 5 | minut | e inte | avals | | |

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.

| Options « | 🚽 Save 🎯 Print 🔹 🖃 Er | nail 📋 Free | eze Panes 📃 | Zoom In | Zoom Out | 🔛 Keypad | i i | | | | | | | |
|------------------------|-----------------------|----------------|----------------|-------------------------|--------------------|---------------------|---------------------|-------------------|-------|-------------------------------|----------------------------|----------------|----------------|--|
| ÷ 0 | 4 | | | | | | | | | | | | | |
| | 2 Hour Lead | Up San | nples | | | | | | | | | | | |
| 2 Hour Lead Up | Incident | 15:06:52 | | | | | | | | | | | | |
| | Date and Time | 1 temperatu | 2 temperatu | Mixer speed (RPM) | Mixer ram pressure | zone 1 temperatu | zone 2 temperatu | Extruder speed | | Batch tank temperatu re | Batch mixer pressure | 1 temperatu | 2 temperatu | |
| | 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 | |
| 💋 Refresh 🛛 🖟 Instance | 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_TEMP/first sample | |
| | MIXER_ZONE2_TEMP | first sample | | MIXER_ZONE2_TEMP first sample | |
| | MIXER_SPEED | first sample | | MIXER_SPEED#irst sample | |
| | MIXER_RAMPRESSURE | first sample | | MIXER_RAMPRESSURE first sample | |
| | EXTR_ZONE1_TEMP | first sample | | EXTR_ZONE1_TEMP first sample | |
| | EXTR_ZONE2_TEMP | first sample | | EXTR_ZONE2_TEMPIfirst sample | |
| | EXTR_SPEED | first sample | | EXTR_SPEED/first sample | |
| | EXTR_PELLETSPEED | first sample | | EXTR_PELLETSPEED/first sample | |
| | BATCH_TANKTEMP | first sample | | BATCH_TANKTEMPIfirst sample | |
| | BATCH_MIXPRESSURE | first sample | | BATCH_MIXPRESSUREIfirst sample | |
| | BATCH_ZONE1 | first sample | | BATCH_ZONE1 first sample | |
| | BATCH_ZONE2 | first sample | | BATCH_ZONE2first sample | |
| - | | | | | |
| | | | | | |

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**.

| Period | | Interval | Bounds to include |
|-----------|-------------------|----------|----------------------|
| Туре | Offset \sim | () Count | None 🗸 |
| | | 60 | |
| Duration: | 2 | | Endpoints to include |
| | hour ~ | | Start Time 🗸 🗸 |
| | | ⊖ All | |
| Start At | | | |
| Day | 1 ~ | | |
| Time | 00:00:00 | Every | |
| | | 5 | |
| Offset: | · ~ 2 | minute 🗸 | |
| | | | |
| | hour \checkmark | | Time Ordering |
| | | | Ascending ~ |

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.

| Value | × |
|-----------|-----------|
| Туре | Offset V |
| Duration: | 2 hour ~ |
| Start At: | |
| Day | 1 ~ |
| Time | 00:00:00 |
| Offset: | - v 2 |
| | OK Cancel |

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

| Discrete Float DateAnd Time Marker Militm Status TagIndex Val Expression Function | ⊕- Numeric ⊕- String ⊕- Date-Time = -> -> -> - - -> | Value List Query | AND AND NOT OR OR NOT |
|---|---|------------------------|--------------------------------|
| Filter Condition DateAndTime >= #{date-2h} {time-2h}# AND DateAndTime < | < DateAdd(h', 2, #{date-2h} (time-2h)#) | | |

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.

Conclusion

Once the Push Report template is complete, it can now be selected in the **WIN-911 Workspace** by selecting **Reporting** then clicking **XLReporter**.