



Correlate SCADA/DCS alarms & events with PI

Alarm Sentinel pulls together SCADA/DCS alarms and traditional PI data in a fully interactive, browser based environment. Obtain valuable insights for post event analysis. Trend alarms, identify past occurrences, and receive notifications.

FEATURES

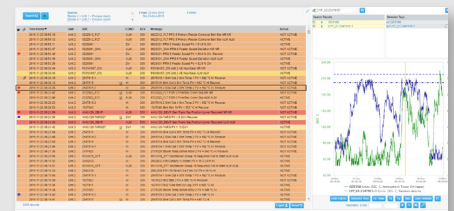
- Uses existing PI infrastructure.
- One tag per datasource.
- Alarm grouping.
- Live updates.
- Full search features.
- Trending with zoom and trend cursors.
- Scalable to multiple sites and plants.
- Easily save to Excel for further analysis.
- Configure email notifications & reports.
- Supports column sorting and selection, filtering, PI time formats.
- Save search favorites, add comments and links.
- User defined conditional formatting.
- Associate documents and links to alarm source.
- Alarm Management KPI's and reports aligning to the ISA TR 18.2 alarm management standard.
- Integrates into our web portal.
- View alarms in context of AF structure.

BENEFITS

- Correlate operator logs, notifications, analytic results and DCS alarms into one searchable log.
- Post event and ad-hoc analysis.
- Correlations with PI data.
- Data reporting to determine top alarms, priority distribution, alarm rates, etc.
- Scales to multiple sites and plants.
- Configurable data processing from different control system sources.
- Chronological log of plant events.
- Manage operator situational awareness by analysing alarm rates, nuisance alarms, safety critical alarms, etc.
- Fast and easy rollout with zero client side deployment.
- Fully configurable.

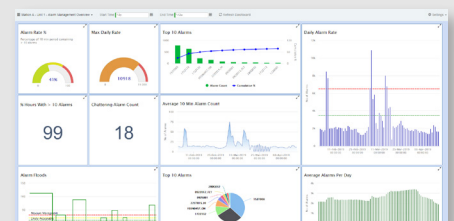
ALARM CONTEXT

Display alarms in context of your PI data



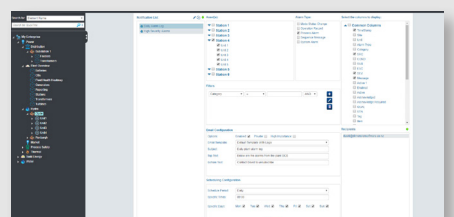
ALARMS AND EVENTS KPI'S

Configurable alarm management KPI dashboards using our extendable TR 18.2 metrics



SELF SERVICE NOTIFICATIONS

Configure email and other workflow based on any alarm field or keyword



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ALARM KPI'S

Alarm KPI's are available through the browser portal. User comments can be associated with each KPI.

- ➔ Annunciated alarm rate
- ➔ Flood conditions
- ➔ Top 10 most frequent alarms
- ➔ Chattering and fleeting alarms
- ➔ Standing alarms
- ➔ Priority distribution

MINIMUM REQUIREMENTS

PI WebAPI 2016 license
Modern browse

Application server with IIS
MS SQL Server



ALL OF YOUR ALARMS IN ONE PLACE

View, filter, correlate, trend and analyze all of your SCADA, HMI and DCS alarms via the PI system using our HTML5 solution.



DEEP ALARM ANALYSIS TOOLS

Summarized data reporting, post event and ad-hoc analysis, trending features to assist with alarm analysis.



ALARM MANAGEMENT KPI'S

Gain insights into your problematic alarms. Associate user comments and actions with each alarm Key Performance Indicator.



SITUATIONAL AWARENESS

Attach documents and links, categorize your alarms, or drill into your data to gain valuable insights.



AUTOMATIC ALARM NOTIFICATIONS

Get alarm notifications when certain alarms are received.

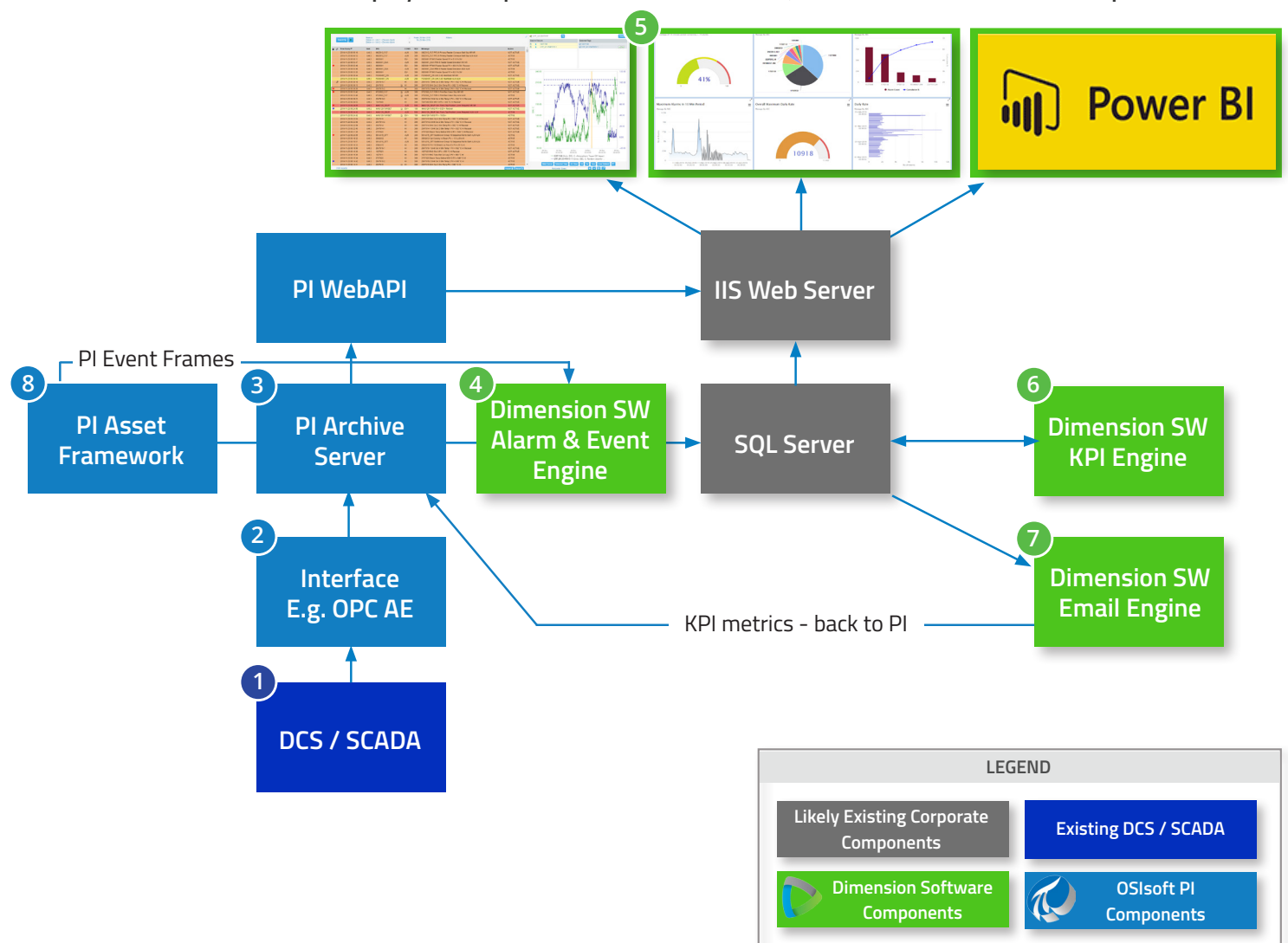


PI NOTIFICATION AND EVENT FRAMES

Now includes the ability to view your PI Notification and Event Frames.

Architectural Overview

Alarm Sentinel uses your existing PI infrastructure. In many cases, it simply augments onto your existing PI servers. Data is collected using common PI interfaces such as OPC AE, UFL, RDBMS or our PI Event Frame integrator. All user interfaces are browser based with no client side deployment required. Data is stored in a SQL database and data from PI is pulled on demand.





Architectural Overview

1

The alarms and events typically come out of your DCS and SCADA system. These are the operator alarms, including active, inactive and acknowledged times.

2

These are collected by the standard OSIsoft interface, such as the OPC AE interface (UFL interface, RDBMS etc.)

3

Data is sent to PI in real-time. Typically a single string tag for each SCADA or DCS system. Single string tag required, not an individual tag for each alarm.

4

The Dimension Software Alarm Sentinel engine collects the data from PI and processes it into a SQL Server database via configurable rules, exceptions, conditional formatting, string paths, etc. The engine runs as a Windows Service via a simple set-up kit.

5

Users are then able to view the data using HTML5 interfaces available in the browser.

6

The KPI engine, which runs as a Windows Service, calculates configurable KPI's such as rates, top 10 alarms, standing alarms, chattering alarms, floods, etc. That data is then pushed back into the SQL database. It is also optionally sent to the PI archive as tags which you can show in PI Vision. Configurable dashboards can be created in BI tools such as Power BI and Tableau.

7

The email engine sends emails to end users, configured via self-service browser based interface. Use cases include an email of high severity alarms or a daily email of environmental or safety critical alarms.

8

Alarm Sentinel can incorporate Event Frames from the PI Asset Framework. Event Frames can represent many different use cases: i.e. events coming from the analytics, manual data entry, operator logs, PI notifications etc. Alarm Sentinel ingests these via the Alarm Sentinel engine, allowing users to correlate data from the DCS and SCADA system along with your Event Frames in PI. Check out how our Asset Intellect can be used in many of these use cases.