

# AgileOps™ Operations Management Software

- Monitor operational performance including alarm metrics and operator actions against industry standard KPIs
- Eliminate alarm floods and improve situational awareness of the operator
- Track the integrity of safety systems and operating windows at your facility
- Compatible with multiple control system platforms



## Introduction

Emerson's AgileOps™ software provides consistency and reliability to the control system by keeping it optimally configured for the process state. AgileOps monitors the performance, loading and health of your system while providing a consistent reporting toolset across the enterprise. The software is scalable and modular to meet functionality and size requirements at any given site. Several modules make up the AgileOps suite:

- **AgileOps Performance Analytics** – Monitor alarm and event metrics and track key performance indicators across the unit, site or enterprise with powerful dashboard capabilities and reports.
- **AgileOps Database** – A central repository for viewing, configuring, and managing all collected control system data, process boundaries, and alarm rationalization or design.
- **AgileOps Dynamics** – Allows the alarm configuration to change based on the operating state and process conditions of your facility which eliminates alarm floods and reduces the risk of missed alarms.

- **AgileOps Alarm Shelving** – Advanced alarm shelving capabilities to reduce stale and nuisance alarms, auto re-enable alarms as necessary, and minimize the number of alarms on the operator's alarm interface.
- **AgileOps Safety Integrity** – Monitor bypasses and interlocks to determine if your safety system is operating normally, operating in a degraded state, or if a safety function is active.
- **AgileOps Operational Limits** – Monitor key operational parameters to determine violations from normal condition and time in violation.

## Benefits

- **One solution across the enterprise** – Using the same approach and tools for tracking, KPI reporting, alarm rationalization, and state-based alarming, regardless of the control system, allows for a standardized solution to be implemented across multiple sites in your organization. This also reduces maintenance for upgrades and migrations.

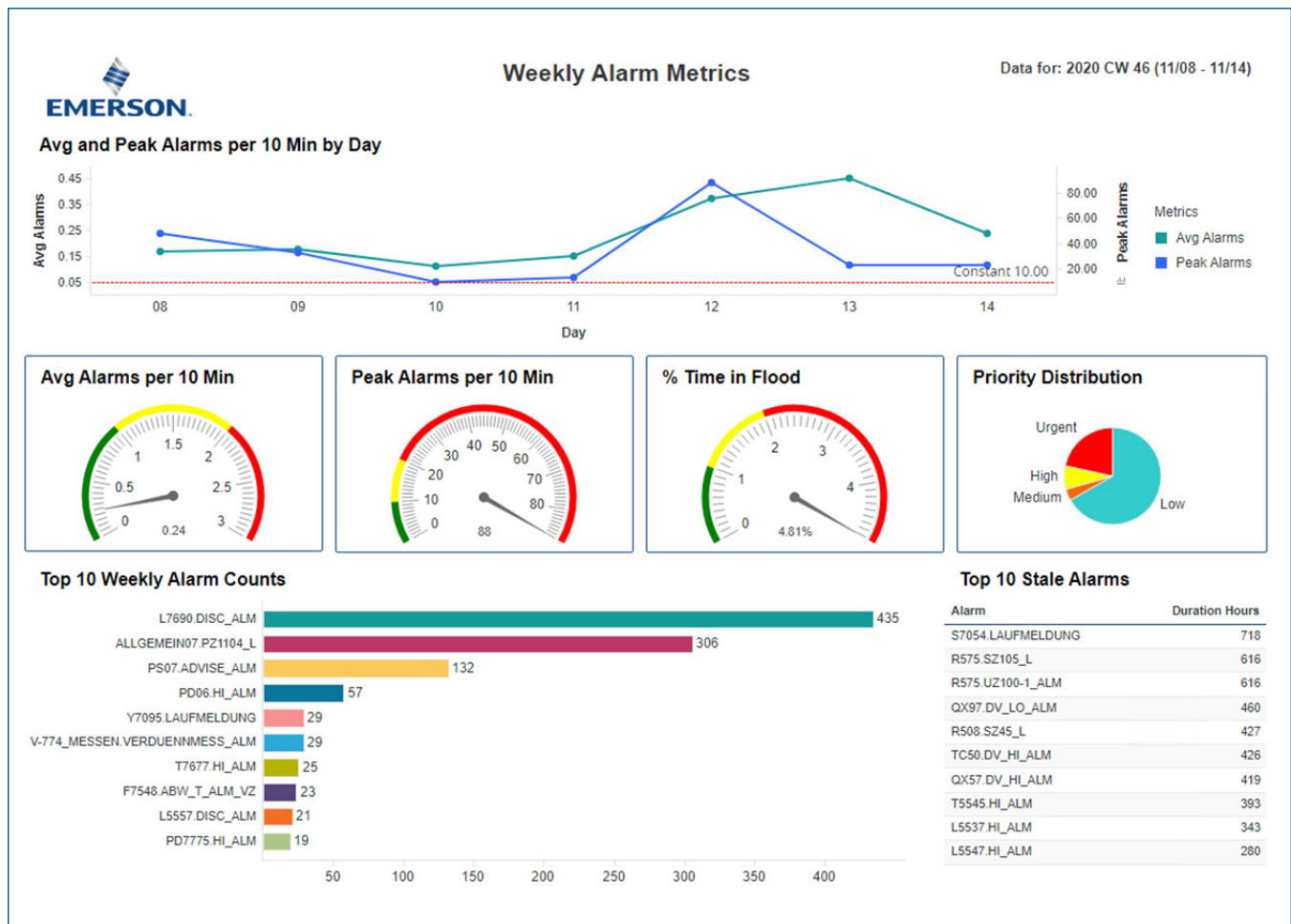
- **Compatible with multiple control systems platforms** – AgileOps is compatible with many control systems including Emerson DeltaV™ and Ovation™, Honeywell Experion® and TDC®, Siemens PCS7® and APACS, ABB 800xA, ABB Advant, DOW's MOD 5, and Schneider Foxboro®, TIS/OMM, ClearSCADA, and Yokogawa Centum VP, thus delivering a complete solution for an entire site with one or multiple control system manufacturers. In addition, AgileOps also offers a generic connector for other systems not listed.
- **Compliant with industry standards** – AgileOps is compliant with ISA 18.2, EEMUA 191, IEC 62682, API RP1167, 49CFR192.631 and 49CFR195.446 standards and is designed to help you meet these standards when coupled with Emerson's alarm rationalization services.
- **Eliminate alarm floods and improve situational awareness of the operator** – Built-in transition management allows for easy and safe state transitions without generating alarm floods or missing critical alarms. AgileOps provides engineered shelving capabilities using advanced auto-shelving for dynamic management of those alarms that are not easily manageable with classic state-based alarm management methods.
- **Built-in rationalization work processes** – The embedded work process provides a consistent and logical approach to both static and dynamic alarm rationalization by aggregating devices into systems. This allows devices to be logically grouped with unit operations with the ability to define operating states in order to simultaneously execute static and dynamic alarm management during rationalization. Auto synchronization between the control system and the AgileOps Database prevents stale data or conflicts when viewing the rationalization. Rationalized data can easily be audited or enforced against the data in the control system runtime.
- **Built-in contention management** – with AgileOps Dynamics, Alarm Shelving and Enforcement Reports allows users to choose which application has write priority over others when a common control system parameter is written to.
- **User friendly interface** – With AgileOps, there is no need for custom displays or programming for dynamic logic on the control system. Maintenance is drastically reduced with easy-to-use, standardized integration into the operator interface.
- **Track the integrity of safety systems at your facility** – Easily identify any safety system in a degraded state and resolve issues before the operation becomes unsafe with the AgileOps Safety Integrity module.
- **Track digital inputs at your facility** – Easily track any digital inputs and aggregate trip and activation duration metrics based on logical groupings relevant for the site or input function. The AgileOps Operational Limits module can be used to track the following kinds of inputs: safety shower activation, BPCS interlocks, bypass activations, gas monitor activation, abnormal controller modes, high or low tank levels, motor starts or stops, etc.
- **Out-of-the-box or customizable reports, as well as multiple data egress options** – In addition to standard reports included in the AgileOps Performance Analytics, Safety Integrity and Operational Limits modules, users have the ability to create custom dashboards or reports. Data can be processed within AgileOps or consumed externally with a number of standard connectors and secure protocols.

## Product Description

The AgileOps suite provides modular and scalable platform-agnostic applications to provide a unified view of all control system settings and performance. With a direct connection to the control system, AgileOps collects live data and contextualizes it for consistent use in the applications that interact with the control system runtime. Event data that is collected from the control system is interpreted, contextualized, and the computed KPI metric results are transformed into consistent reports and dashboards (regardless of the control system) to better understand how your site is performing individually or compared to other sites within your organization.

## AgileOps Performance Analytics

The AgileOps Performance Analytics module allows the measurement, tracking and reporting of key performance indicators for events occurring in your facility. AgileOps reports alarm metrics as a result of data analysis which it automatically collects from one or more control systems. Metrics can be analyzed by the minute, hourly, daily, weekly, monthly or on a yearly basis. AgileOps is designed as an enterprise application that provides the necessary detailed information from local unit personnel up through complex-wide and cross-facility views for the enterprise.



AgileOps Performance Analytics Dashboard.

### AgileOps Database

AgileOps provides the real-time capability to view the control system configuration, recommend and collaborate on design changes, implement changes in the control system, and audit the configuration versus the design. The AgileOps Database module is an online database that monitors the control system for changes, detects new and deleted devices and alarms, and drives the work process for rationalizing alarms and control system settings. The system allows users to audit changes to

alarms and keep detailed operator and engineer data about the alarm configuration. Based on the information provided, AgileOps will recommend the alarm priority based on the alarm priority matrix from your site's alarm philosophy. AgileOps can connect to multiple control systems to allow the user to view and manage alarm configuration in the same way across the site. With a consistent toolset and interface, the same processes can be used for alarm rationalization design and implementation for all control systems across a corporation.

**Manage Devices**

System: MainBoiler

Select	Edit	System	Device	Description	Keyword	Entity	Status	P&ID	Equipment
		MainBoiler	17A101	O2 CEMS Analyzer					
		MainBoiler	17AC102	O2 Trim					
		MainBoiler	17F100	850# Steam Flow			done	123	
		MainBoiler	17F802	DA East Htr Steam Flow					
		MainBoiler	17FAL300	ID Fan Low Speed					
		MainBoiler	17FC103	Midrange Controller					
		MainBoiler	17FC300	Total Air Flow					
		MainBoiler	17FC300A	Undergrate Air Flow					
		MainBoiler	17FC301	Burner Air Flow					
		MainBoiler	17FC401	Natural Gas Flow					

1) 17A101=>17FC401

Parameter Data   Dynamic Management   Boundaries   **Alarms**

View: By Alarm

**Alarms for Selected Point**

Select	Promote	Name	Alarm Type	Boundary	Status
		DV_HI_ALM	DEVHI	[None]	NE
		DV_LO_ALM	DEVLO	[None]	NE
		HI_ALM	PVHI	[None]	NE
		HI_HI_ALM	PVHIHI	[None]	NE
		LO_ALM	PVLO	O-LL	NE
		LO_LO_ALM	PVLOLO	[None]	NE
		PVBAD_ALM	BADEVT	[None]	NE

1) DV\_HI\_ALM=>PVBAD\_ALM

**Property Values for Alarm**

Edit	Enforceable	Promote	System	Name	Last Read	Last Proposed	Last Approved	Details
	<input type="checkbox"/>		N/A	Design Status	Not Evaluated			
	<input type="checkbox"/>		N/A	Suggested Priority	(Not Applicable)		WARNING	
	<input type="checkbox"/>		N/A	Priority Rationale				
	<input type="checkbox"/>		N/A	Eclipsing				
	<input type="checkbox"/>		N/A	Banner Text				
	<input type="checkbox"/>		N/A	SIS Activation	False			
	<input checked="" type="checkbox"/>		MainBoiler	Trip Point	235	234	235	
	<input checked="" type="checkbox"/>		N/A	Source	0			
	<input checked="" type="checkbox"/>		Deceatrz	Priority	WARNING		WARNING	
	<input type="checkbox"/>		MainBoiler	Management Status	Shelved			

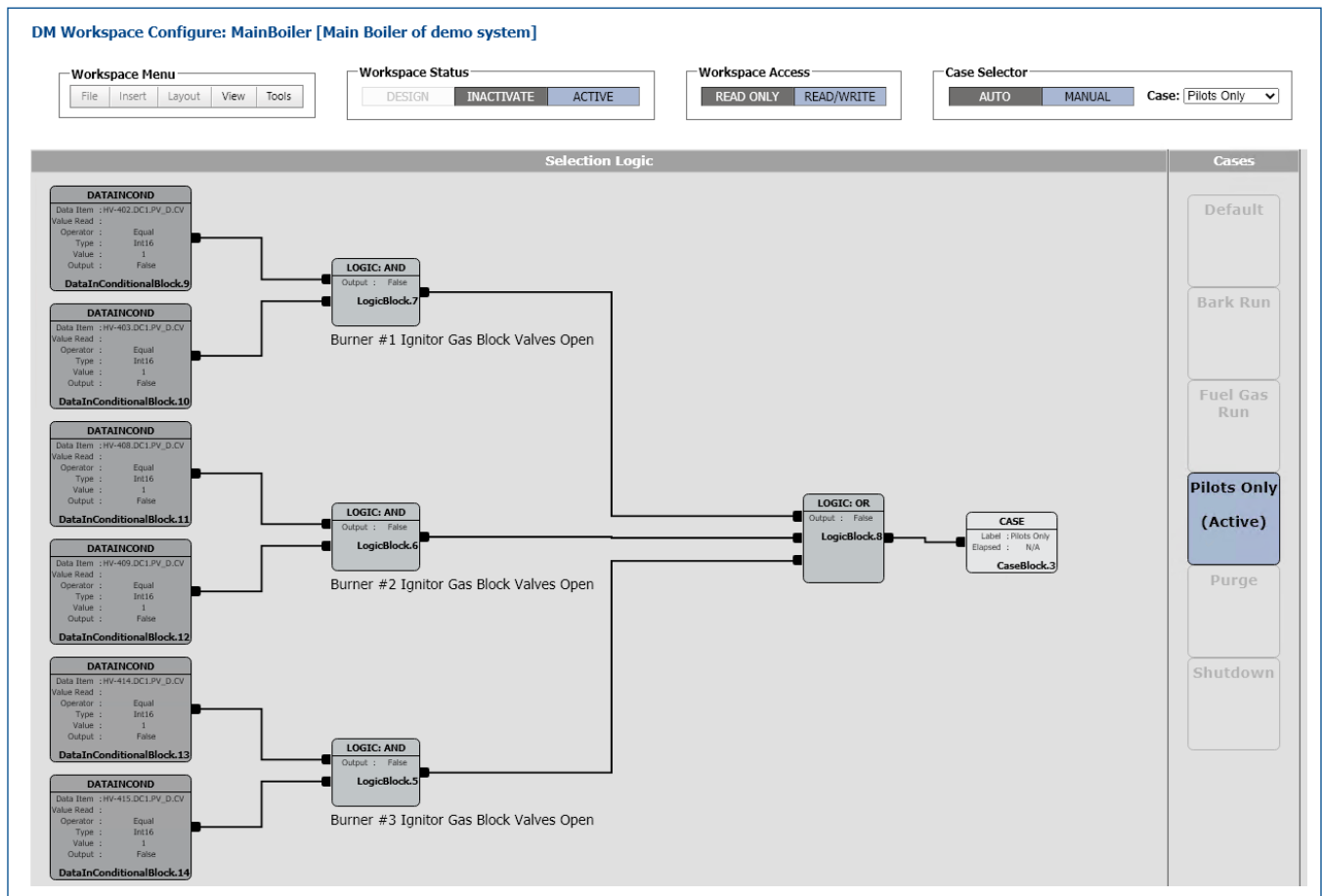
1) Design Status=>Management Status

AgileOps Alarm Settings View.

### AgileOps Dynamics

The AgileOps Dynamics module allows the alarm configuration to change based on the operating state and process conditions of your facility. Built-in transition management ensures smooth and safe alarm transitions from one operating state to another, which effectively eliminates alarm floods during upset conditions and state changes. AgileOps automatically adjusts alarm settings, such as enabled, suppressed, or shelved, and can change alarm priority or trip point, based on operational state of the unit. This allows operators to focus

on optimizing the facility operations rather than responding to unnecessary alarms. The integrated, user-friendly operator interface provides a simple drag and drop system, as well as a canvas, to allow rapid development of the state logic and easy updating when changes are needed. The logic can be built directly in the web interface or imported from Visio. Existing workspace logic can also be directly printed to PDF or exported to Visio. The AgileOps Dynamics module is presented in the operator interface, eliminating the need to build custom interfaces for the operator to interact or view the logic or state of the dynamics.



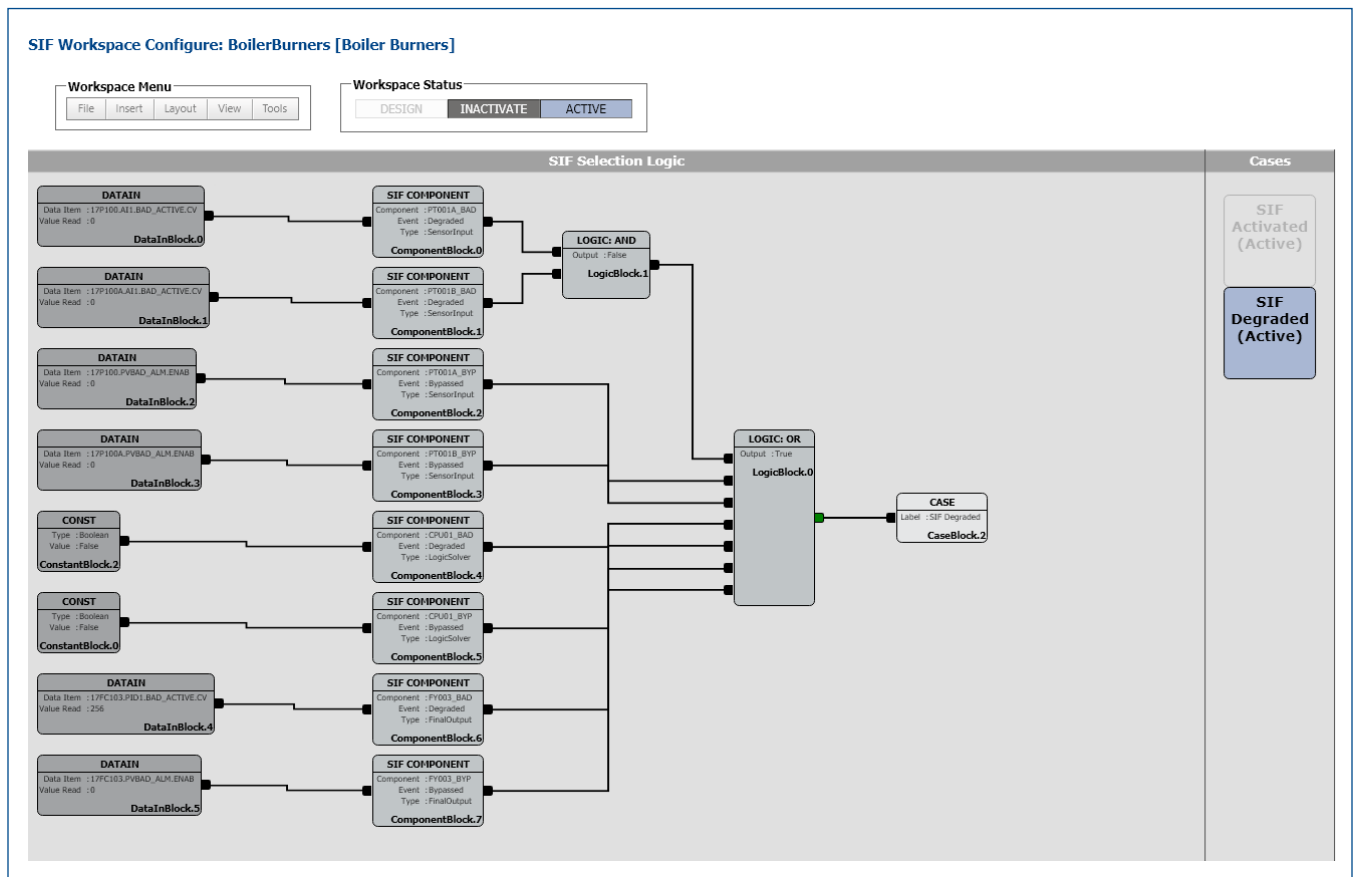
AgileOps Dynamic Logic Workspace for Detecting Changes in State.

### AgileOps Alarm Shelving

Manage malfunctioning alarms, stale alarms, or broken instrumentation with the AgileOps Alarm Shelving module. With advanced alarm shelving capabilities, AgileOps can reduce nuisance alarms, auto re-enable alarms, and minimize the number of alarms on the summary at your facility. Engineered shelving techniques, such as auto-shelving, allow for management of alarms that are not easily incorporated into dynamic alarm suppression techniques. The Alarm Shelving module works hand in hand with the AgileOps Dynamics module to help your site comply with applicable standards.

### AgileOps Safety Integrity

The AgileOps Safety Integrity module monitors the performance of a safety system to determine if that system is operating normally, operating in a degraded state, or if a safety function is active. The detection of whether a safety system is in a degraded state or if a safety function is active are defined as “cases”. Each case contains selection logic built by the user to define what constitutes an activation trigger of the safety system or a degraded operating mode as well as individual contributors to an overall degraded mode of operation (such as active bypasses or bad inputs from field instruments). The results of this monitoring can then be viewed by users in reports presented in the AgileOps Performance Analytics module.

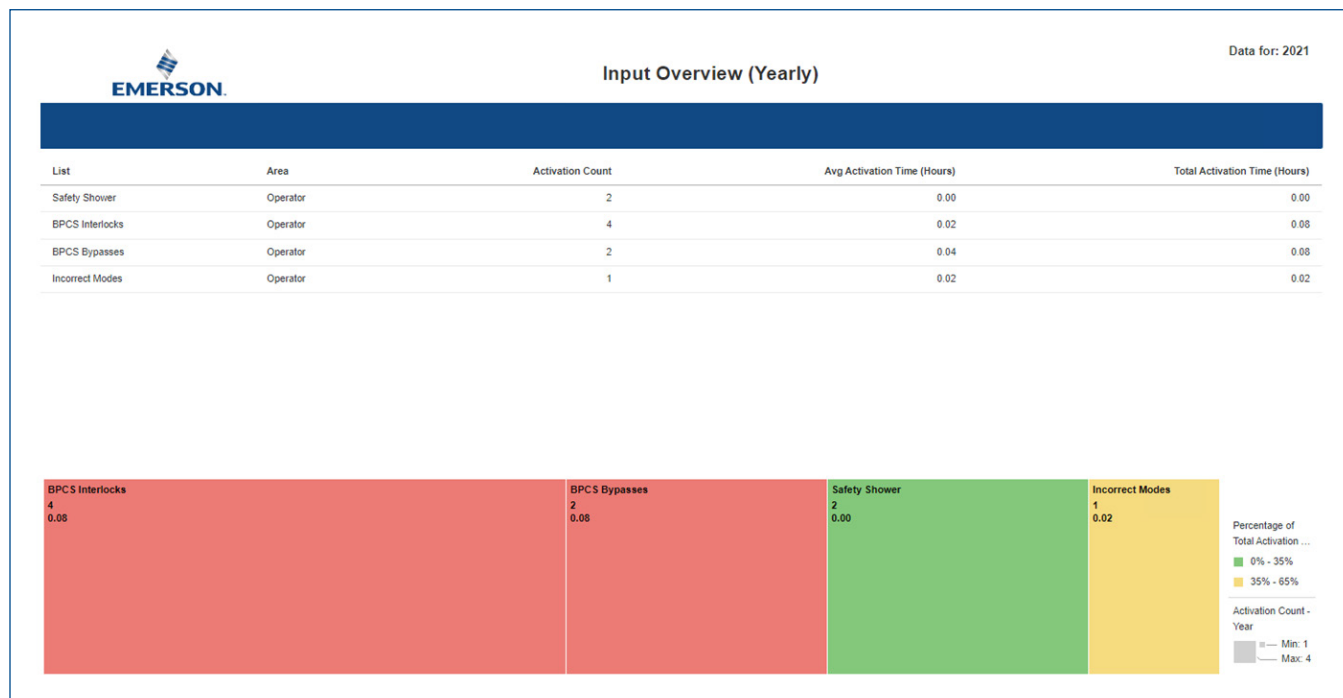


AgileOps Safety Integrity Workspace.

### AgileOps Operational Limits

Monitor and track digital inputs in your control system with the AgileOps Operational Limits module. This allows users to track digital inputs (by user defined names), automatically aggregate them (by user defined named lists) and generate metrics when those inputs enter a specific state. The Operational Limits module monitors inputs, using real-time data, to determine if it

is active, and then tracks the counts and duration of activation. AgileOps will then automatically aggregate that metric based on the list the input is in. The results can be viewed via the AgileOps Performance Analytics module. These reports include data on individual raw events, metrics on individual inputs of lists, and metrics of the overall status of the aggregated lists.



AgileOps Operational Limits Report.

## Requirements

- Hardware Requirements
  - 2.20 GHz 8 core processors
  - 64 GB Ram
  - 512 GB hard drive
- Software Requirements
  - Windows Server 2016 with Microsoft SQL Server 2016 Standard or Windows Server 2019 with Microsoft SQL Server 2019 Standard
- Web browser (Microsoft Edge or Chrome)

## Licensing and Ordering Information

The AgileOps suite includes 6 software modules, each licensed separately. Below are a few example Product ID and descriptions. Contact your local Emerson sales office or representative for pricing specific to your system.

Part no.	Description
COP-AO-MCSD-XX	AgileOps Database
COP-AO-DM-XX	AgileOps Dynamics
COP-AO-LM-XX	AgileOps Alarm Shelving
COP-AO-EKPIBASE-SRV	AgileOps Performance Analytics Server Base License
COP-AO-EKPICOLL-XX	AgileOps Performance Analytics Connector
COP-AO-EKPIUSER-ANL	AgileOps Performance Analytics User - Analyst
COP-AO-SIF-XX	AgileOps Safety Integrity
COP-AO-IPT-XX	AgileOps Operational Limits

## Product Support

AgileOps Product Support is delivered through Guardian™. Guardian is Emerson’s digital platform for addressing the end-to-end lifecycle needs of automation & control software and asset performance management solutions. The Guardian digital experience enables users to quickly connect to product support; securely manage subscriptions; get intuitive views into system health; and explore additional software and services that propel performance.

## Related Products

- AgileOps Alarm Shelving
- AgileOps Database
- AgileOps Dynamics
- AgileOps Operational Limits
- AgileOps Performance Analytics
- AgileOps Safety Integrity
- DeltaV
- Ovation



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