



**HONEYWELL
FORGE**

ALARM MANAGEMENT | ALARM PERFORMANCE OPTIMIZER

PRODUCT INFORMATION NOTE

Allows industrial organizations to maintain the health of alarm system configurations across the entire enterprise in one place. Alarm champions can leverage tools and guided recommendations to better ensure adherence to the corporate alarm philosophy.

What is Enterprise Performance Management?

EPM is a set of tools that collect, unify, and take action on operational data to optimize performance, sustainability, and safety at the enterprise level.

CHALLENGES

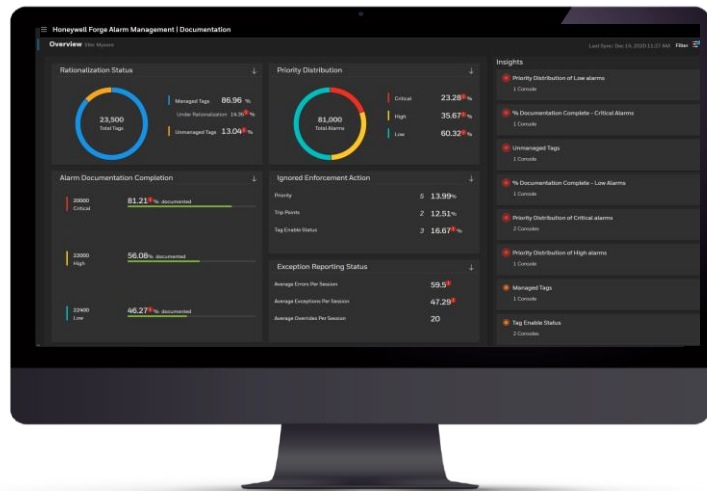
Plant owners are responsible for maintaining the highest standards of safety and productivity at all times; however, they often encounter many other day-to-day challenges such as the need to:

- Increase employee productivity
- Improve communication
- Reduce costs
- Maximized ROI on investments
- Manage skill gaps in the changing workforce

While these concerns aren't new, the focus and urgency has been increasing at an escalated rate. Instability of commodity prices, increasing retirements, tightening of headcount and the continued focus on quarterly results have affected the way we manage our facilities, our people, our technology and our budgets. From digital transformation to the rise of robotic support systems, one thing is clear: innovation and the adoption of technology are the essential building blocks for success.

THE CHALLENGE

Without adequate maintenance, alarm system performance will degrade over time, resulting in higher alarm rates, out-of-date alarm response documentation and an increased risk of incidents. With the health of any alarm system being dependent on each process alarm at each site being configured and maintained as per regulatory guidelines, more organizations are centralizing the alarm management process. Global alarm champions, tasked with driving adherence to corporate alarm philosophies, are presented with the challenge of how to effectively maintain tens of thousands of alarms across multiple sites.



THE SOLUTION

Honeywell Forge Alarm Management | Alarm Performance Optimizer (“Alarm Performance Optimizer”), is part of the suite of industrial-focused products in Honeywell Forge, an Enterprise Performance Management tool. Alarm Performance Optimizer allows alarm champions to centrally assess the health of each site’s alarm system against the corporate alarm philosophy, identify areas of underperformance, follow guided recommendations to ensure operation with consistent alarm settings, and streamline alarm rationalization activities.

BENEFITS

By delivering enhanced tools to streamline the end-to-end enterprise alarm management lifecycle, Alarm Performance Optimizer provides alarm champions with the means to identify and resolve alarm system health issues across their entire enterprise with increased efficiency. The resulting increase in consistency in adherence to the corporate alarm philosophy, combined with the reduced cycle times to perform alarm rationalizations allows organizations to further reduce operator alarm loads and improve operator response times.



***Average results projected based on internal testing**
 * Estimated benefits from 2020 workshops with internal review and customer engagement:
 (1) efficiencies gained compared to using traditional alarm rationalization practices and tools
 (2) improvements compared with systems that don't meet ISA 18.2 recommendations for alarm documentation and priority distribution

KEY FEATURES AND CAPABILITIES

Alarm Performance Optimizer provides a single, industrial-grade user interface to meet the evolving needs of alarm champions within industrial organizations. It takes a modular approach that allows organizations to leverage their existing Honeywell Forge Alarm Management investments to derive further value. Deployable on an organization's business network, Alarm Performance Optimizer can connect to the existing Honeywell Forge Alarm Management | Documentation ("Documentation") instances at multiple sites to enable additional capabilities.

Alarm Configuration Assessment

The core driver for alarm performance excellence is consistent alarm configuration across sites and alignment to the corporate alarm philosophy. Due to scarce availability of alarm management champions and the distributed nature of sites, it becomes painstakingly difficult for an alarm expert to individually access each site and review the alarm configuration. With Alarm Performance Optimizer, these configuration inconsistencies become easy to uncover. Alarm Performance Optimizer enables an enterprise to securely aggregate all disparate site information in the form of a simple, easy to understand, interactive dashboard on the business network that assists alarm champions to answers key questions such as:

- Have all alarms been rationalized, and what is outstanding?
- Are alarm priorities correctly distributed?
- Do my operators have adequate guidance when alarms occur?
- Which operator consoles are deviating from the corporate alarm philosophy?
- Are all rationalized alarm parameters being used on the control system?

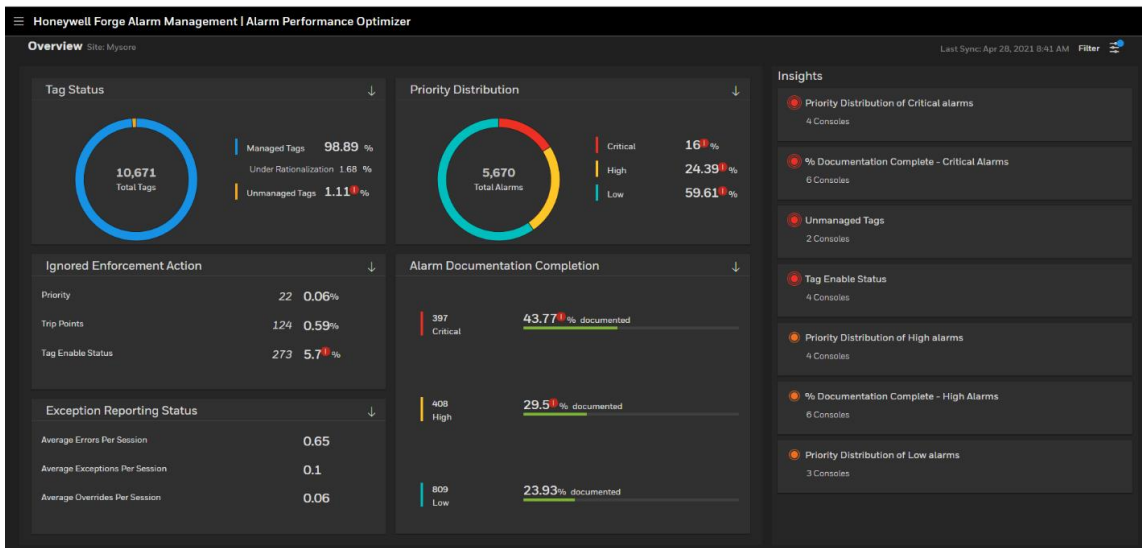


Figure 1: Alarm Configuration Assessment Dashboard

Insights and Recommendations

In addition to providing a clear indication of the various health aspects of each alarm system, Alarm Performance Optimizer helps alarm champions pinpoint the areas where they need to focus their attention. By providing insights and recommendations to the alarm champion, they can focus on resolving issues that will result in increased alarm system performance.

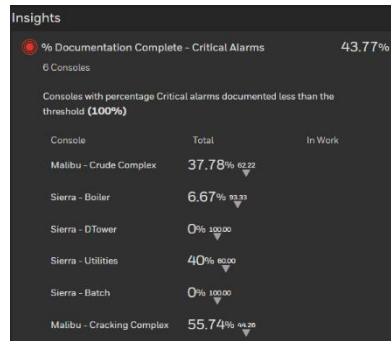


Figure 2: Insights to Assist Rationalization

Rapid Alarm Rationalization

The process of performing alarm rationalization has traditionally been viewed as one that is complex, cumbersome, and time-consuming. By taking inputs and learnings from our customers and alarm management experts all over the world, Honeywell have designed an experience that helps to not only accelerate the alarm rationalization process, but also enables easy collaboration with alarm experts across your enterprise to achieve benefits faster.

Some of the key capabilities of the alarm centric interface include:

- Data filters based on parameters including but not limited to:
 - Site
 - Console
 - Tag name
 - Tag Description
 - Point Type
 - Alarm priority
 - Documentation status
 - Rationalization status
 - Mode
- The ability to select and order columns as required, as well as pin any mandatory columns
- Multiple user-friendly options for editing alarm parameters such as inline, multi-row, copy-paste and drag-drop editing for quick changes, or call up of a detail display to perform more complex changes for single or multiple tags

The screenshot shows the 'Configured Alarms' interface. It features a table with columns: Variable, Alarm Type, Mode, Alarm Trip Point, Priority, Consequence, Time to respond, and Reason. A detailed view for tag 05P1101A is shown on the right, including fields for Alarm Tag, Variable Type, Description, Variable Eng Units, Range, P&ID Drawing, Tag Category, Variable State, Purpose, Verification, Rationalization Detail, and Advanced Alarm Strategy.

Variable	Alarm Type	Mode	Alarm Trip Point	Priority	Consequence	Time to respond	Reason
05P1101A	PV High	Normal	7.9	High	SERIOUS	Less than 15 min	
05P1101A	PV High	Regeneration	8.5	Low			
05P1101A	PV High	Shutdown	-----				
05P1101A	PV Low Low	Normal					
05P1101A	PV Low Low	Regeneration					
05P1101A	PV Low Low	Shutdown					
05P1101A	Unreasonable PV	Normal		Low	MINOR	More than 45 min	
05P1101A	Unreasonable PV	Regeneration		Low	MINOR	More than 45 min	
05P1101A	Unreasonable PV	Shutdown		Journal			
05P1101B	PV High	Normal	5.75	High	MODERATE	More than 45 min	
05P1101B	PV High	Shutdown	5.75	High	MODERATE	More than 45 min	
05P1101B	PV High	Regeneration	8.95	Low			
05P1101B	PV Low	Normal	1.2	Low	MINOR	More than 45 min	
05P1101B	PV Low	Regeneration	1.2	Low	MINOR	More than 45 min	
05P1101B	PV Low	Shutdown		Journal			

Figure 3: Configured Alarm Summary View

Alarm Performance Optimizer also provides a tag centric view for users who need an overall perspective of alarm system tag configurations. Using this view, information on all tag and alarm information is available, along with insights for any issues that may impact alarm health, such as missing alarm documentation

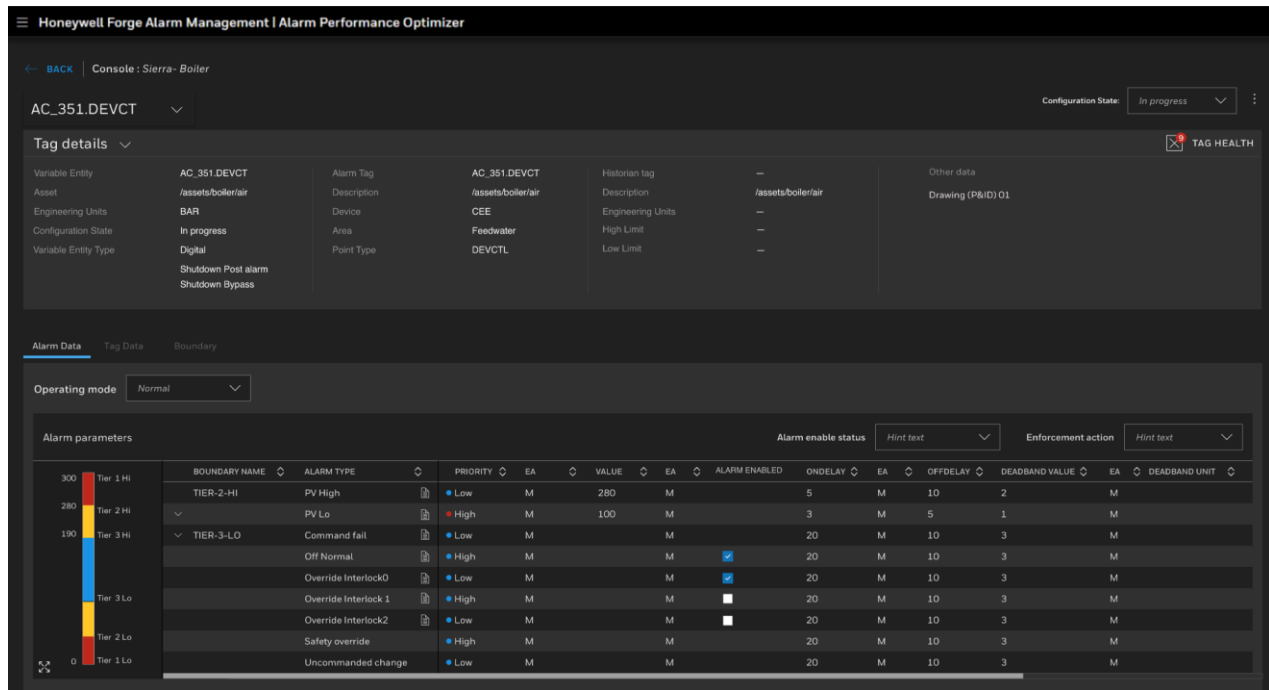


Figure 4: Tag Detail Page

DEPLOYMENT

Alarm Performance Optimizer is built to plug and play with one or more Documentation instances at multiple sites. The product architecture is designed to scale out as required by the enterprise and using leading cybersecurity best practices.

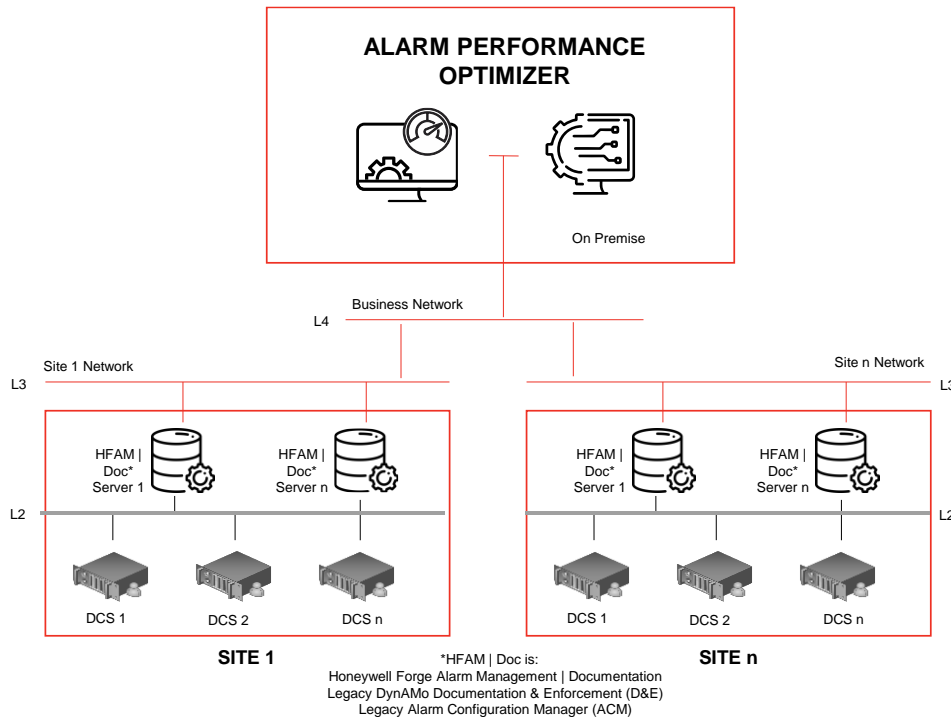


Figure 5: Example Deployment Architecture

THE HONEYWELL FORGE ALARM MANAGEMENT PORTFOLIO

Alarm Performance Optimizer represents Honeywell's first step in a transformative journey to deliver on a vision that paves the Path to Zero Alarms for the enterprise through enhancing end-to-end alarm lifecycle management.

Alarm Performance Optimizer is part of the Honeywell Forge Alarm Management portfolio, a suite of control system agnostic offerings that enable industrial organizations to understand, improve and sustain alarm and safety system performance. Using Honeywell Forge Alarm Management, organizations can cut through the noise to demonstrate compliance, increase operator effectiveness, and minimize operational risk across their industrial operations.

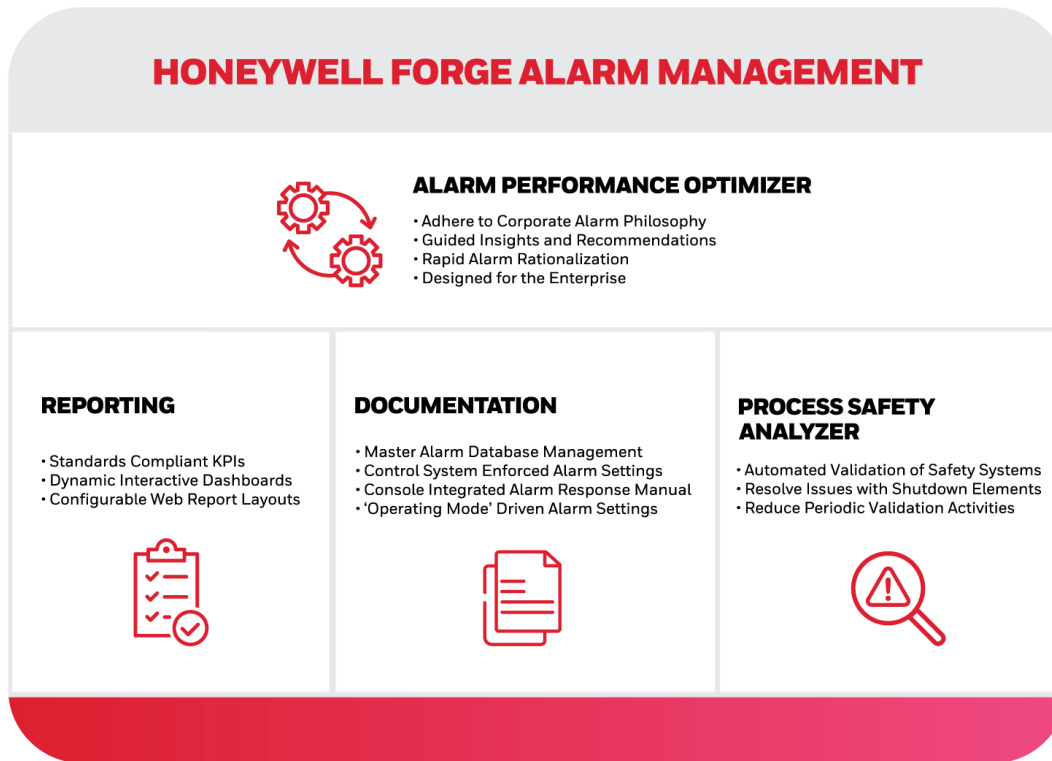


Figure 6: The Honeywell Forge Alarm Management portfolio

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For More Information

To learn more about how Honeywell's alarm management solutions can improve safety and reliability at your plant, visit our website, www.hwll.co/alarmmanagement or contact your Honeywell account manager.

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