



## **Honeywell Software Service Tools Help Manage Control System Performance, Security and Process Plant Outcomes**

Today's Honeywell LSS software service tools portfolio and the vision to optimize software tool performance delivers a connected application platform for all your service needs.

White Paper

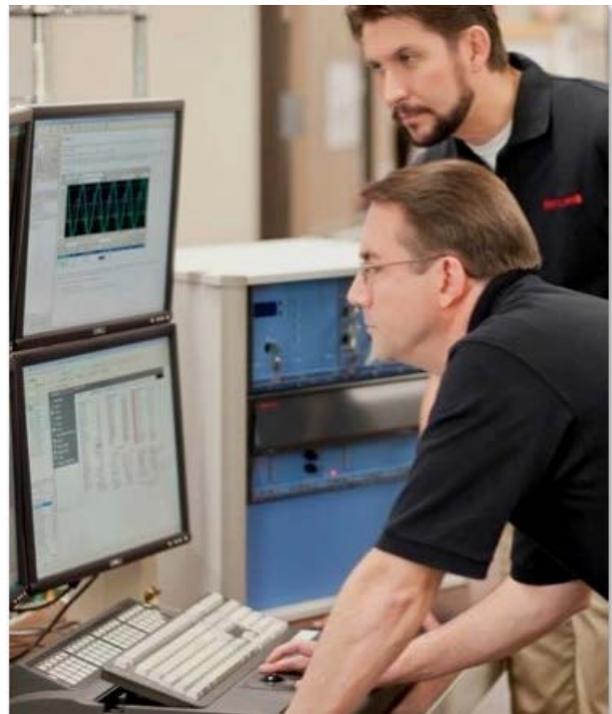
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## Abstract

Plant owners/operators know that nearly every control system has the potential for even greater productivity, reliability, and efficiency. This can be achieved mainly through increased performance monitoring, incremental improvements and system tuning, but also through well-planned migrations and equipment upgrades.

Honeywell's Lifecycle Solutions & Services (with Cyber Security Solutions) meet the needs of industrial organizations that take the lead in system support with on-premise tool access and usability, as well as customers who prefer to utilize Honeywell's premium support services with cloud-based software deployment for data collection and analysis.

Taking advantage of advanced tools for remote monitoring, configuration, documentation, cyber security, maintenance and migration can extend the life of a control system, lower its total cost of ownership, and ultimately reduce the risk of unexpected downtime.



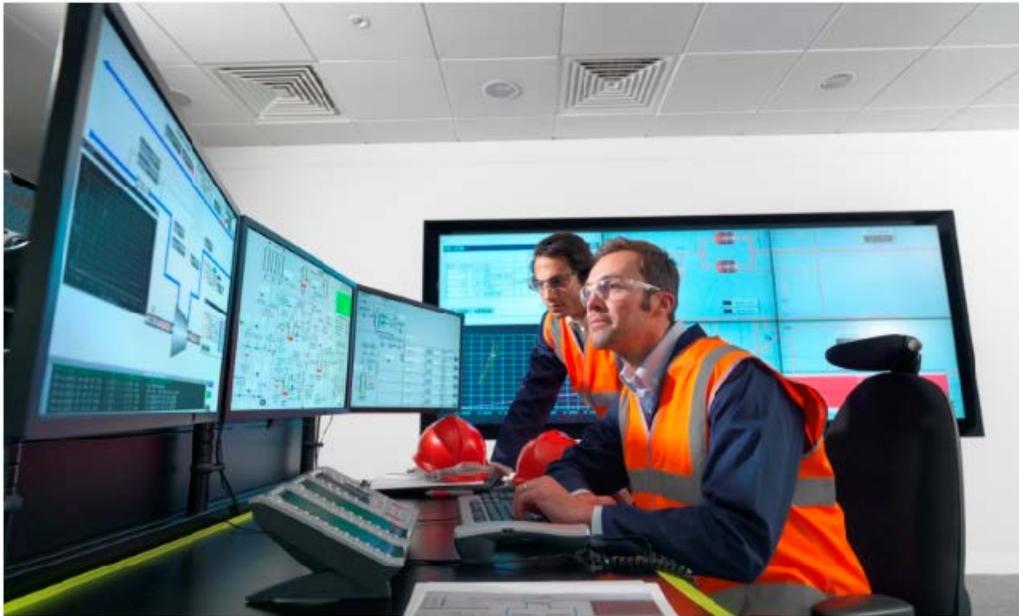
Honeywell has developed individual software applications addressing specific customer support requirements. Honeywell's vision is to transition them to an integrated suite of tools that have a common infrastructure to meet overall needs in the control environment. This vision includes a connected application platform delivering robust and secure data analytics, with cloud services residing either in the Honeywell cloud or the customer's corporate cloud.

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## Background

Honeywell offers our customers software tools and services to help customers manage their system lifecycle through online diagnostics and data analytics, asset management, patching of software, and proper scheduling of maintenance tasks. Taking advantage of advanced tools for remote monitoring, configuration, documentation, cyber security, maintenance and migration can extend the life of a control system, lower its total cost of ownership, and ultimately reduce the risk of unexpected downtime.



*Today, manufacturers must find ways to support, maintain, optimize and change a wide range of control assets across the plant enterprise.*

The modern digital automation and control system is the nexus of plant operations, and is relied upon to keep production processes running safely and efficiently. These critical assets must be maintained and updated on a regular basis to ensure optimal overall performance. This whitepaper provides an overview of the HPS LSS software tools available to our customers today.

## Users of the Advanced Software Tools

Plant owners/operators use Honeywell's software tools to meet requirements for high availability and proper functioning of automation systems, as well as for protection from both intentional and unintentional incidents that can impact safe and reliable operation.

Honeywell service specialists also utilize the latest software technologies to help automate work procedures in the everyday life of the control environment, and to monitor assets and manage equipment maintenance and hardware/software upgrades.

Honeywell offers capabilities and services to help customers manage their system lifecycle through online diagnostics and data analytics, asset management, patching of software, and proper scheduling of maintenance tasks. Taking advantage of advanced tools for remote monitoring, configuration, documentation, cyber security, maintenance and migration can extend the life of a control system, lower its total cost of ownership, and ultimately reduce the risk of unexpected downtime.

## The Tools

### Asset Management Tools

**Trace™** – Improving Process Control Documentation and Change Management

Trace is a powerful data collection software and change management system. Its non-intrusive approach to capturing configuration data is fast enough to update daily. Users can track changes, identify engineering anomalies, and confidently plan for effective maintenance and project activities with reliable, fresh information. Trace helps customers reduce costs, increase reliability and boost performance.

**Field Device Manager (FDM)** – Improving Configuration and Maintenance of Smart Devices

FDM is a centralized asset management system for remote configuration and maintenance of smart field devices based on the HART®, PROFIBUS®, FOUNDATION® Fieldbus, WirelessHART and ISA100 Wireless protocols through an intuitive user interface.

Now tightly integrated with **Asset Sentinel**, FDM improves overall asset effectiveness by simplifying and minimizing effort normally involved in plant debugging. Users can employ a detailed overview of installed hardware and software to better manage risk, compliance, and continuation of the system and plant.

**System Inventory Tool (SIT)** – Managing the Hardware and Software Installed Base

SIT is a self-service tool that Honeywell customers install on their Experion® PKS system to scan the inventory details of the entire system, including network, switches and associated nodes at predefined intervals. The tool generates an inventory file users can upload to [www.honeywellprocess.com/support](http://www.honeywellprocess.com/support) to see their inventory details.

With a detailed overview of their installed hardware and software, customers can better manage risk, compliance, and continuation of their system and plant.

**Preventative Maintenance Tool Service (PM Tool)** – Improving the Effectiveness of Plant



Maintenance Programs, *Used Exclusively by Honeywell Service Specialists.* PM Tool offers the ability to quickly and conveniently view control system and maintenance/service records. It is deployed on

a tablet enabled to capture maintenance activities on the go, saving time and reducing errors, and aiding in fast corrective action. Data are available to the customer in a report format.

## **Reliability, Performance and Productivity Enhancement Tools**

**System Performance Analyzer (SPA)** – A Premium Support Feature that Expands System Performance Insights

SPA performs live system performance monitoring and alert notification, which includes system performance parameters, availability, and capacity. Its interactive dashboard provides performance information at a glance, as well as drill down capabilities to assess trends and alerts, and provide recommended actions. SPA is a feature available only in *A360, SESP VRP and Trace Gold solutions.*

**Predictive SPA (P-SPA)** – Predicting Automation and Control Anomalies, *Exclusively for A360 Customers*

P-SPA is a data analytics-based solution for predicting control system anomalies that could lead to component failures and/or performance degradation. The tool carries out data analytics on a remote, secured cloud platform and relies on System Performance Analyzer (SPA) for collecting the data required for its analysis.

P-SPA is a premium offering only for A360 customers and is hosted in Honeywell's

Sentience cloud environment with Premium Support Center resources providing the



monitoring and oversight as an added layer of confidence and protection for A360 customers.

P-SPA is aimed at providing provisions to benchmark the system performance and identify degradations with respect to the benchmark. It uses AI/ML techniques in detect common server, network and controller issues.

## **Migration Preparation and Planning Tools**

**Integrated Automation Assessment (IAA)** – Analyzing the Health and Performance of Installed Assets

Honeywell service specialists run the IAA tool to collect information, which is used to provide the customer with a complete and detailed analysis report of the health, performance, and supportability of the automation

infrastructure. IAA uses data analytics, best practice benchmarking, and expert analysis to help plants better understand their risks, prevent system failures, and reduce lifecycle costs by 5-10 percent.

**Experion Backup and Restore (EBR)** – Complete Disaster Recovery Protection

Experion Backup and Restore (EBR) protects Experion systems against disasters. It is simple to set up and operate in a running



plant, and provides real-time backup and fast disaster recovery assurance. EBR is available for physical and virtual systems, provides

centralized management, and is designed for easy integration with Experion computing platforms.

### **Experion Migration Assistance (EMA) – Enabling Successful Software Migration**

EMA includes an online, customer-accessible portal integrated into [www.honeywellprocess.com](http://www.honeywellprocess.com) that downloads scripts to the customer's system and performs a scan to determine the readiness of the migration.

The EMA solution performs all pre-migration readiness data collection. It establishes a single location for all interactions with Honeywell for Experion on-process migration.

The largest user of the software and tools described herein is Honeywell's Assurance 360 team, which relies on them to provide the best possible key performance indicator (KPI) results for customers.

## **Cyber Security Management Tools**

### **Industrial Cyber Security Risk Manager – Monitoring the Indicators of Cyber Security Risk**

Risk Manager is a real-time data collection and analytics software platform that continuously monitors the process control system for indicators of cyber security risk. The software runs on both Honeywell and third-party control systems. Risk Manager also integrates with enterprise security platforms, and leading network and endpoint security products.

Risk Manager translates complex indicators of vulnerabilities and threats into metrics used to prioritize resources and workflow. It performs "low-impact" discovery and monitoring of assets without disrupting plant operations or causing network delays. In addition, the tool tracks risks over time and generates reports

based on historical analytics.

### **Application Whitelisting (AWL) – Minimizing Security Risks in Control Applications**

AWL is a software service provided under Honeywell Cyber Security's Endpoint Protection product suite, which expands protection beyond anti-virus to allow access to only approved applications.

AWL allows users to reduce administration of labor-intensive whitelists for servers, stations and removable devices, and instead focus on operational efficiency. This solution assists with the prevention of industrial cyber-attacks by denying any applications that have not been previously identified as non-malicious. The software also protects against Advanced Persistent Threats (APTs).

With the MSS solution, customers gain Increased cyber resilience, improved operating system security, and greater overall robustness and stability to reduce the risk of downtime.



#### **ICS Shield®** – Protecting Remote Field Assets from Cyber Attack

ICS Shield is an operational technology (OT) security management platform that offers multi-vendor, multi-site secure remote access, including monitoring and support from a single operations center to protect industrial control systems and critical infrastructures against cyber-attacks.

ICS Shield automates the deployment and enforcement of plant-wide security policies while focusing on security essentials.

#### **Secure Media Exchange (SMX)** - Enabling Safe, Productive Use of Removable Media

SMX provides for safe and productive use of removable media for industrial customers by providing an intelligent cyber security gateway that protects facilities from USB-borne attacks or misconfigurations.

SMX reduces cyber security risk and limits operational disruptions by monitoring, protecting, and logging use of removable media throughout industrial facilities. The SMX gateway security device simply resides in your physical “front desk” or the site location of your choice. A consumer-driven touch screen – designed to work even with gloves on – intuitively prompts visitors to insert their removable media as part of the check-in procedure. Malware and other security threats are detected before they can be transmitted by USBs to critical infrastructure in the facility.

*Honeywell can assist customers with offloading the interpretation of control performance data to experts at its global support center.*

## **Vision for a Connected Platform**

The availability of multiple Honeywell software tools to address a wide range of control system performance and security concerns can be confusing to customers who need to know which tools are appropriate for their sites. There is also uncertainty about the impact of multiple data collectors on the performance and stability of the source system.

In response to customer input, Honeywell is moving from a series of individual software applications addressing specific support requirements to an integrated suite of tools that have a common infrastructure to meet overall needs in the control environment. This will not only simplify product and service offerings, but also make it easier for customers to receive outcomes that are most relevant for their plant. This vision for the future includes a connected tools platform and software ecosystem providing robust and secure data analytics, with cloud

services residing either in the Honeywell cloud or the customer's corporate data center.

Honeywell's strategy to consolidate and reorganize its software solutions portfolio will enable industrial organizations to take advantage of an optimized data collection approach to send static and dynamic system data to the appropriate applications. Data will be collected once, stored in a secure location, and provided to other applications as required. All tools will consume the same data for their respective purposes.

Furthermore, Honeywell's visionary outlook will meet the needs of industrial firms that continue to take the lead in system support with on-premise tool access and usability, as well as organizations that prefer to utilize premium LSS support services with data center-based software deployment for data collection and analysis.

## **Conclusion**

Honeywell is committed to ensuring plant automation solutions function at the highest level. This has resulted in the development of a broad suite of software tools to help protect customers' capital investments, maximize asset performance, improve operational effectiveness, extend the lifecycle of installed equipment, and reduce total cost of ownership.

Going forward, Honeywell is looking to streamline and unify its software and tools portfolio to provide customers with greater access to critical information, in better context, to make faster and more informed decisions. This includes delivering the critical data needed to manage both control system performance and process plant outcomes.

The Asset Management Tools Matrix below provides a high-level summary of each tool, outlining how data are captured, the frequency of these captures, and how the data are displayed to the end-user.

To learn more about Honeywell HPS LSS tools and services, please see the [LSS Tools Portfolio Overview](#).

## Tools Matrix

Asset Management Tools		Data Capture			Frequency			Results provided via
		Snapshot	Live	Other	Continuous	Scheduled	Other	
Trace	System Configuration and Change Management	✓				✓		Dashboard
Field Device Manager	Smart Field Device Configuration and Maintenance		✓			✓		Dashboard
System Inventory Tool and Portal	Inventory Installed Assets	✓				✓		HON Portal
PM Tool	Maintenance management and compliance			✓		✓		Report

Reliability, Performance and Productivity Enhancement Tools		Data Capture			Frequency			Results provided via
		Snapshot	Live	Other	Continuous	Scheduled	Other	
System Performance Analyzer (SPA)	System Performance Insight		✓		✓			Dashboard on premise
Predictive-SPA (P-SPA)	Predict, Act, Improved KPIs		✓		✓			Dashboard used by HON Premium Support Center Personnel ONLY

Migration Preparation and Planning Tools		Data Capture			Frequency			Results provided via
		Snapshot	Live	Other	Continuous	Scheduled	Other	
<b>Integrated Automation Assessment (IAA)</b>	Audit, Focus Efforts for Stability	✓				✓		Report
<b>Experion Backup and Restore (EBR)</b>	Backups Ensure Accurate, Fast Restoration	✓				✓		Dashboard
<b>Experion Migration Assistance (EMA)</b>	Project Management Steps for Successful Software Migration			Web Data Entry		✓		Dashboard via HON Portal

Cyber Security Management Tools		Data Capture			Frequency			Results provided via
		Snapshot	Live	Other	Continuous	Scheduled	Other	
<b>Risk Manager</b>	Manage Security/Risk		✓		✓			Dashboard
<b>Application Whitelisting (AWL)</b>	Minimize Security Risk						Update as needed by IT	Dashboard
<b>CyberVantage ICS Shield</b>	Secure, multi-site access, data monitoring and support		✓		✓			Dashboard, Reports, and/or HON MSS
<b>Secure media Exchange (SMX)</b>	Secure USB devices within industrial environments	N/A					As needed	SMX device console

**For More Information**

Visit [www.honeywellprocess.com](http://www.honeywellprocess.com) or contact your Honeywell account manager.

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