

Cyber-Securing Honeywell PMT Sites

Case Study

A wide range of Honeywell Process Solutions' technologies and expertise underpin cybersecurity across Honeywell's Performance Materials and Technologies sites, providing a robust but efficient solution for industrial plants.

Background

Honeywell Performance Materials and Technologies (PMT) is a global leader in designing and creating high-purity, high-quality performance chemicals and materials. Through Honeywell Process Solutions and Honeywell UOP it also develops and supplies the software-based systems to safely and efficiently operate these and other complex industrial facilities.



Besides thousands of sites worldwide supported by Honeywell technology, Honeywell PMT has 38 of its own manufacturing plants across the US. Producing and using a wide range of hazardous materials and chemicals, safe, secure operation of these sites is essential for the protection of Honeywell's own people, the local communities it operates in, and the environment.

Like all those running industrial facilities, the last decade has seen Honeywell PMT contending with rising risks from cyber threats. These range from theft and industrial espionage to terrorism and hostile state action.

Challenge

In 2007, Honeywell PMT set out to better secure its manufacturing with a cybersecurity standard to be implemented across all its sites. It asked its experts in the Honeywell Automation Center of Excellence (ACOE) in Morris Plains, New Jersey, to develop and maintain a standard that would keep its sites safe, secure and compliant.

Honeywell ACOE developed this based on the international cybersecurity standard ISA/IEC 62443 and standards of the US Department for Homeland Security. Using this it identified five key functions for the cyber framework:

- Identify risks and vulnerabilities
- Protect against them
- Detect attacks and breaches
- Respond to these
- Recover from cyber attacks and breaches.

The challenge was to identify and implement the right controls to fulfill each of these five functions and therefore the requirements of its cybersecurity standard.

Finally, this standard must also be maintained by a small number of people, so any solution had to be capable of being managed centrally.

Solution

Honeywell ACOE drew on a wide range of Honeywell Process Solutions technologies and services to establish the necessary controls across PMT sites.

Its broad portfolio provided solutions across a range of factors:

- Identification through HPS [Cybersecurity Vulnerability Assessments](#) to help locate gaps, and associated risks; and Profiler to help establish an overview of the cyber posture

“With the increase in threats and capabilities of cyber attackers targeting the industrial sector, we needed to add tools to address these specific concerns and complement our established cybersecurity framework. Honeywell’s Risk Manager and ICS Shield® offerings helped us provide more oversight and improve our detection and protection functions.”
Scott Francy, PMT Lead Automation Engineer

- Protection using the results from the HPS Cybersecurity Assessment and Profiler to target opportunities to improve security. On the strength of this, [Application Whitelisting](#), USB storage protection, and automated patch and anti-virus definition delivery were employed to significantly increase server and workstation security
- Detection of cyber intrusions and threats relies on HPS [Cybersecurity Risk Manager](#) and [ICS Shield®](#). With Cybersecurity Risk Manager, the first solution to proactively monitor, measure and manage cybersecurity risks for industrial environments, ACOE is able to automate detection policy violations by building the policies directly into the application. With [ICS Shield®](#), Honeywell controller performance can be monitored as well Experion-specific applications.

Benefits

Using HPS solutions, Honeywell has been able to fulfill the requirements of the standard developed and put in place a robust cybersecurity strategy across PMT sites. The choice of software and solutions has significantly enhanced the protection available.

With ICS Shield®, for example, ACOE is able to monitor a far wider range of systems, including controllers and Experion-specific applications.

The solution also delivers this enhanced security efficiently: Automated patch delivery saves ACOE time and effort, with pre-tested patches for the Experion system delivered directly to a secure server on-site. Anti-virus DAT files are also pre-tested and automatically delivered, reducing the risk of unintended consequences from the introduction of unknown software on to the system.

PMT lead automation engineer Scott Francy said: “Honeywell Process Solution’s portfolio enables us to ensure the most robust possible cybersecurity for PMT while minimizing maintenance and service requirements. It provides a powerful but efficient answer.”

About Honeywell’s Industrial Cybersecurity Solutions

Honeywell’s Industrial Cybersecurity Solutions help plants and critical infrastructure sectors defend the availability, reliability, and safety of their industrial control systems (ICS) and plant operations.

From assessments and audits to response and recovery, the portfolio of end-to-end solutions leverages Honeywell’s industry-leading expertise and experience in process control and cybersecurity. Having delivered more than 1,000 projects globally, Honeywell’s certified experts help users improve their cybersecurity posture. Its managed services and complete solutions are designed for the specific needs of process control environments including Oil & Gas, Chemicals, Refining & Petrochemicals, Energy & Power, Minerals, Mining & Metals, and Pulp & Paper. With continuous investments in people, processes, and technology, Honeywell is committed to helping industrial users reduce risk and stay ahead of future classes of cyber attacks.

For More Information

Learn more about Honeywell’s cyber solutions - visit www.becybersecure.com or contact your Honeywell Account Manager, Distributor or System Integrator.

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