Electronic materials company transforms cybersecurity approach

Octave Cyber Integrity provides foundation for new program after spin-off

Key facts:

Industry: Chemical

Octave products used:
Octave Cyber Integrity

Key benefits:

- Comprehensive, accurate, continuous visibility into industrial asset cyber vulnerabilities and risks down to Level 0
- Improved cyber threat protection
- Reduced risk of production outages and safety incidents through improved configuration and change management
- Foundation in place to support future digital transformation initiatives

About the company

This agile, innovation-driven U.S.-based electronic materials company produces advanced materials for the semiconductor, display and LED industries. With operations in North America and Asia, it has safely produced some of the world's most dangerous chemicals for more than 40 years.

Challenge

After a spin-off from its parent company, the company transformed in 2016 from a business unit into a standalone specialty materials company. The new entity had to create — from the ground up and with limited IT/OT cybersecurity team resources — a new, unified, enterprise-wide cybersecurity program across 14 major production facilities in 12 months to avoid a costly extension of a transition services agreement with the parent company.

Initially, the new cybersecurity team felt confident about its understanding of site OT assets. However, gaps in visibility and security controls quickly surfaced. Obtaining OT asset inventory and security posture visibility proved difficult. Accurate control system baseline and configuration information are often missing. Identifying vulnerabilities and patch levels on older equipment was extremely challenging. The team quickly began searching for an enterprise-class cybersecurity solution that could close those gaps and ensure appropriate cybersecurity controls were continuously in place worldwide.

Specific requirements included:

- Automatic generation of both an accurate OT and IT cyber asset inventory (Levels 3 to 0)
- Efficient ICS-CERT vulnerability and patch management across all sites
- Configuration baselines and change tracking
- Site and corporate dashboards for cyber risk visibility
- Integration of OT asset inventory data into a global private cloud infrastructure for digitalization initiatives

Solution

The team selected Cyber Integrity as the foundation for its new cybersecurity program. They first used Octave Cyber Integrity to automatically build a detailed OT asset inventory for each site that included all installed hardware, software, I/O cards, firmware, configuration and control strategies across their multi-vendor control systems. With detailed inventory data, the team was next able to use Cyber Integrity to identify patch levels across systems, including which were patchable and which were not due to the age of the operating system connected to the control system or the age of the control system software itself. The team then focused on implementing Cyber Integrity change management workflows to ensure proper cyber risk assessment and management when changing control system configurations or adding new systems to the environment. Twelve months post spin-off, the new cybersecurity program is up and running, providing full visibility into the assets, where they are, their connections, and their vulnerabilities. They can now focus on further optimizing their assessment, prioritization, and remediation of cyber risks to ensure safe, reliable operations and protect employees and the communities in which the company operates. The foundational inventory and configuration visibility required for future operational digitalization initiatives, including data lakes, 5G and artificial intelligence are also now in place.

About Octave

Octave is a leader in enterprise software, turning data into decisive action and intelligence into your edge. Our software solves for and simplifies complexity, from the design and build to operations and protection of people, property, and assets– for any scope, at any scale. For decades, we've partnered with customers to sharpen performance, elevate efficiency, and amplify results. From factory floors to entire cities, our solutions are tuned to scale up what's possible from day one onward.