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Nirmata accelerates ProSoft Technology's journey to IoT microservices

Learn how Nirmata helped ProSoft Technology revolutionize remote access and machine management in the industrial Internet of things (IIoT) market with a new cloud-based communication platform

ProSoft Technology specializes in communication solutions for industrial automation and control applications. From manufacturing plants, foundries and mines to oil wells, pipelines, and water treatment plants, ProSoft hardware and software enables disparate industrial systems to interoperate and allows skilled technicians to remotely monitor and manage these systems in mission-critical environments where a failure can disrupt production and even endanger lives.

"Helping customers migrate to the latest industrial automation technologies is part of our DNA," explains Daniel Wade, Vice President of Engineering at ProSoft Technology.
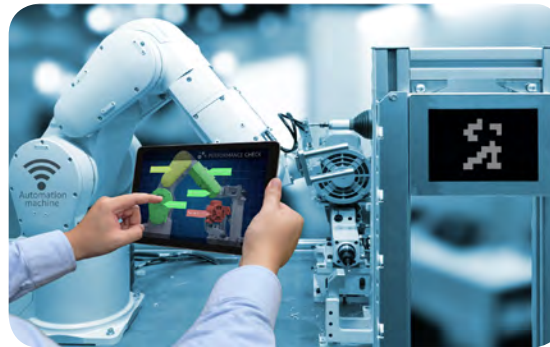
"We facilitate communications between machines on disparate field bus and Ethernet networks. Adding a cloud-native platform to support centralized configuration and secure remote access will help our customers substantially cut maintenance costs while providing greater connectivity and insight between production and the enterprise."

Now is an exciting time for industrial markets with the rise of the Industrial Internet of Things (IIoT) and Industry 4.0 initiative. "Our customers are looking for ways they can leverage the IIoT to reduce costs and increase productivity – without compromising safety and security or adding complexity," Wade notes.

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— Daniel Wade
Vice President Engineering ProSoft Technology

ProSoft needed a faster, easier way to develop and deliver new protocols, processes, and technologies that meet the needs of industrial customers that would marry a secure, flexible cloud- native platform with ProSoft's expertise in industrial automation and ease of use.

HIGHLIGHTS

CHALLENGE:

- Launch a new machine communication and management platform for industrial devices
- Adopt a secure, flexible cloud-native architecture for high availability, easy deployment, and efficient development cycles
- Ensure a simple UX appropriate for users in field environments

SOLUTION:

- AWS IaaS, Docker engine
- Nirmata to automate application delivery and management
- Cloud strategy and architectural advice from the Nirmata team

RESULTS:

- Quicker development cycles and more consistent developer output
- Robust, secure cloud service platform
- Easy upgrades for new integrations and services as innovations emerge
- Cloud platform unlocks new business opportunities for customers

Building the new IIoT communications platform

ProSoft began their new cloud platform project by working closely with a user experience design firm. "Our users are focused on production; they don't have time to learn new systems," Wade explains. "We wanted an intuitive, easy to use interface to make accessing and managing connected devices as painless and efficient as possible."

For the back end of the platform, the team considered several development options: expanding the functionality of an existing product; partnering with another company to OEM a solution; and hiring an outsourcing company. Wade and his team concluded that building the platform internally with a cloud-native microservices and container architec- ture would offer the best flexibility for adding additional services as their customers' needs evolve.

"Containers offer a great approach to secure your appli- cation and provide a significant amount of flexibility and scaling," Wade explains. "Any changes you make are limited to the container. It minimizes the impact of change and speeds up the development cycle. When we do have a bug, we're able to catch it quickly. The impact is minimal since it affects one component, not the entire application."

After a two month pilot, Nirmata's container-native solution became a core element in ProSoft Technology's stack. Nirmata delivers comprehensive policy-based automation for deploying, operating and optimizing the platform across both public and private cloud environments. "Our goal is to eliminate all of the undifferentiated heavy lifting associated with cloud application management for DevOps teams," explains Ritesh Patel, Founder and Vice President Products at Nirmata. "By fully automating the complex operations and management of application containers, Nirmata allows developers to focus their

efforts on the core features that add the most value for their customers."

"We looked at available solutions, and none compared to Nirmata in flexibility and capabilities for application lifecycle management for mission-critical systems," Wade explains.

Nirmata's fine-grained control of applications and resources makes it easy to manage hundreds of microservices.

Support for both cloud environments and on-premises deployments was important since many ProSoft customers have not yet adopted cloud services or prefer to manage critical devices on local networks.

Nirmata takes a customer-centric approach to helping customers manage their cloud/digital transformation journey. "Throughout the development process, Nirmata has been an excellent partner for us. Most vendors focus on the specific issue you're trying to solve, but the Nirmata team helped us look at the broader picture," Wade explains. "We depend on them to deliver a solid container management platform to deploy and manage our cloud service, but they've also been a trusted advisor, helping us navigate challenges in delivering a secure, resilient and scalable cloud-native application. As a result our team was able to launch ProSoft Connect in record time."

"We do what it takes to help our customers succeed with their cloud and application modernization initiatives. Microservices development and container management are evolving quickly so we are committed to sharing our experiences and helping each customer make the right architectural decisions," Patel explains.

The ProSoft Connect Platform: secure, flexible and ready for the future

ProSoft's new cloud service offering strategically positions the company for continued growth. For customers the platform offers a centralized management tool that increases the connectivity and strategic value of ProSoft's existing products. It bolsters security with a redundant VPN tunnel service and the elimination of potentially vulnerable user installed software. Users can begin to troubleshoot malfunctioning connected devices immediately since Nirmata seamlessly spins up additional services in seconds and automatically scales down when demand falls.

For the ProSoft development team, the flexible and efficient microservices architecture saves time. The containerized services make it easy to isolate problems and prevent issues from cascading through other containers or device modules. The team even uses containers to simulate how new devices will work and to quickly and cost effectively stress test the platform.

With a cloud-native platform, adding additional services for ProSoft Connect is easier than ever. The development team is well-prepared to keep delivering value for their customers and leading innovation in the industrial Internet of things market. While they focus on empowering industrial customers, Nirmata ensures their containers and cloud environments keep running smoothly.

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