

Industrial Automation Professional Services Case Study



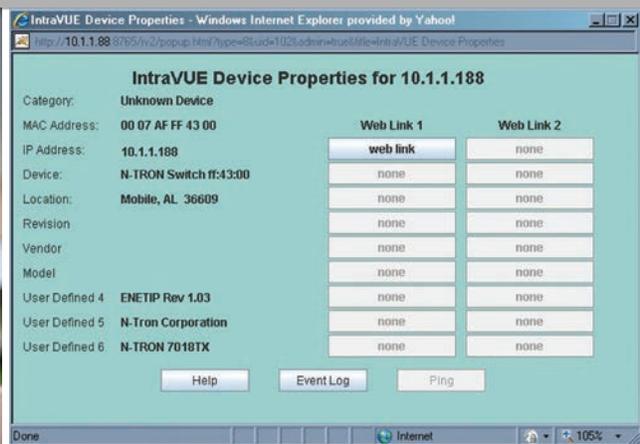
About Panduit Industrial Automation Professional Services

Panduit is a world-class developer and provider of physical infrastructure solutions that improve reliability, security, and safety of Industrial Automation systems, while reducing deployment and operating costs. Working with industry leaders, Panduit bridges the gap between IT and Controls Engineers with a reference building-block solution for connecting, managing, and automating enterprise and industrial networks as well as industrial control systems.

The Panduit Industrial Automation Professional Services team helps customers install validated industrial network and control system designs. The designs reduce deployment time, exceed performance requirements, and reduce operation, maintenance, and repair costs. By utilizing Industrial EtherNet/IP* and IT structured techniques as a common platform for horizontal and vertical integration, Panduit provides customers with additional capabilities that support the convergence of information and control networks.

These techniques help customers manage assets more efficiently and accommodate important application disparities. The techniques also help customers maintain a tiered approach for machine, motion, and process control.

*EtherNet/IP is a registered trademark of ODVA.



Company

Panduit Corp.

Country

Tinley Park, IL, USA

Industry

Global Infrastructure Solutions

Business Challenges

- Quickly identify, troubleshoot, and resolve connectivity issues
- Improve asset utilization and availability
- Improve baseline network performance

Panduit Solution

IntraVUE™ Network Visualization and Analytics

Business Benefits

- Expanded assessment capabilities
- Extended software capability
- Real-time delivery of diagnostic information

Resolving Ethernet Connectivity Issues for a Panduit Industrial Automation Customer

IntraVUE™ software helps Panduit to increase awareness of the physical infrastructure by providing visibility into all levels of devices and connectivity

Business Challenges

One of Panduit’s industrial automation customers faced critical challenges when tasked with deploying and maintaining Ethernet-based networks. Significant challenges included a limited capacity to promptly identify, troubleshoot, and resolve connectivity issues; the lack of skills to recognize and efficiently address underlying reliability risks; and the inability to manage a rapidly increasing number of Ethernet-connected devices within the company’s manufacturing networks. Given these challenges, time spent managing the infrastructure had been driving up the cost of detection, diagnosis, and resolution of connectivity issues.

The Panduit Industrial Automation Professional Services team recognized that its customers would be well served by Panduit’s ability to offer a software diagnostic tool. The tool’s primary functions would include evaluating a network’s capability to effectively perform real-time control, data collection, and device configuration.

“Because the manufacturing environment is extremely unique, most IT networking tools do not adequately evaluate a network’s capacity to meet the environment’s demands,” said Jim Neawedde, Solution Architect, Panduit Industrial Automation Professional Services. “For example, network sniffers and packet analyzer tools are too aggressive, requiring a large amount of bandwidth. This scenario carries with it the potential to flood an industrial automation network, causing downtime if it occurs during production. We needed a tool that was less invasive, and that could safely monitor the networks, especially during production.”

While Panduit has an established Physical Infrastructure Assessment based on industry standards, the team saw an opportunity to deliver premium value to customers by providing quantitative data regarding the network’s health and performance. After evaluating several solutions, Panduit selected IntraVUE™ software.

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Jim Neawedde,
Solution Architect, Panduit Industrial Automation Professional Services

Panduit Solution

“Panduit chose IntraVUE™ software because it was tailored for uncovering risks within automation networks,” said Michael Vermeer, Sr. Business Development Manager within Panduit’s Industrial Automation team. “There are other packages in the market that look at network data, but they are typically designed for use at the top level of the network, and are not as helpful for uncovering risks with the devices at the edge of the network.”

Vermeer added, “In the industrial space, there’s a convergence taking place between the information technology (IT) and the operational technology (OT). The IT tools we considered were simply not suited for helping us diagnose the OT situation regarding plant floor manufacturing.”

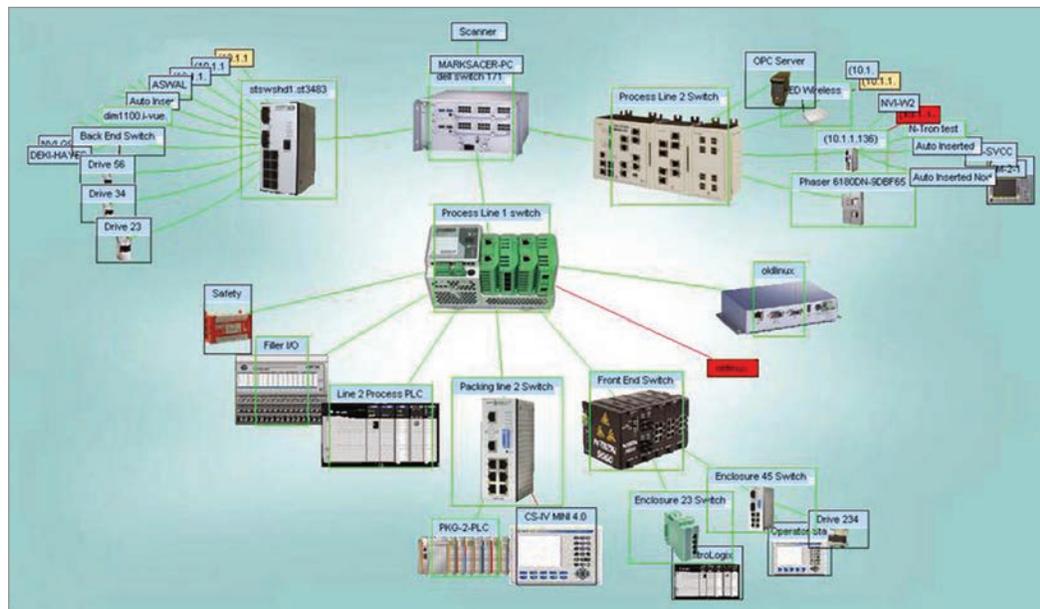
Panduit first used IntraVUE™ software to conduct an on-site assessment for a large food product manufacturer. The resulting report included a map of all devices in the network, how the devices were connected, how much bandwidth they were using, and device-specific problem areas across the network. The quantitative data that IntraVUE™ software produced augmented Panduit’s full Physical Infrastructure Assessment.

“We were able to detect real-time changes in the network utilization. For example, during our assessment we spotted one of the nodes consuming excessive amounts of bandwidth,” Neawedde said. “It turned out they were just performing a Flash upgrade, a short ten minute activity. That event was one of many that served as a good demonstration that this is a powerful, highly valuable tool.”

Neawedde also mentioned, “During this test, IntraVUE™ software identified firmware incompatibility issues and inconsistent network settings that the company has since resolved. The manufacturer was so pleased with the results of the assessment that it intends to standardize across all its facilities.”

What is IntraVUE™ Software?

IntraVUE™ software is an application software tool that provides visibility into all levels of devices and connectivity. It is designed to increase awareness of the physical infrastructure; produce actionable data that speeds documentation and deployment; and more quickly pinpoint and resolve connectivity failures.



Business Benefits

“IntraVUE™ software was the perfect choice to help our industrial automation customers gain more insight into and awareness of their infrastructure,” Neawedde said. “Once we provide the data on where connectivity issues exist, customers can address them more quickly and establish a long-term foundation for increased uptime. That makes IntraVUE™ software invaluable to their operations.”

“Because IntraVUE™ software is more OT focused, it doesn’t use as much IT jargon. It really provides a user-friendly experience for controls engineers, including a user-interface tailored to accommodate how they see the world, as opposed to requiring an IT super user,” Neawedde said.

Moving forward, Panduit will also use the software for inspections at deployment to verify that devices were properly connected and the physical configurations were completed as designed.



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