



CUSTOMER PROFILE

One of the few American owned portland cement plants operating in the United States has been producing high quality cement for the construction of roads, bridges, buildings, energy services, and residential construction since 1927.

The company performs upgrades in both capacity and technology, making it an industry leader in process efficiency, product quality, and environmental controls. The company also adheres to strict quality controls and exceptional environment technologies and safeguards, which contribute to superior cement for a variety of consumer and industrial uses.

COUNTRY

United States

INDUSTRY

Cement Production

CHALLENGES

- Quickly identify, troubleshoot, and resolve network issues across the plant network
- Reduce network downtime

PANDUIT[®] SOLUTIONS

- IntraVUE[™] Industrial Network Visualization and Analytics

BENEFITS

- IntraVUE[™] Software provides a monitoring and analysis tool, extending to proactive detection and documentation of the network, delivering real-time, device-specific diagnostic information on events as they occur

Case Study: Portland Cement Producer

Resolving Ethernet Connectivity Issues and Simplifying Ethernet Management Across the Plant Network

CHALLENGES

A major portland cement production company recognized a need to quickly identify, troubleshoot, and resolve network issues across the plant network to ultimately reduce network downtime.

For several years, the company had trouble with its existing network, which was housed in a dry, dusty environment within an older facility. The concrete mix, heaters, and dryers generated excessive dust that interfered with equipment and caused extensive downtime.



The operations team spent several hours troubleshooting each downtime occurrence, including intermittent switch problems where switches would go down without notice. The downtime was compounded with troubleshooting time, which halted processes while incurring troubleshooting costs. To address these issues, the team patched the network as necessary, until it became apparent that a major overhaul was the only way to effectively tackle the problems.

With eleven physical servers and seven virtual servers to monitor, the company needed to deploy major upgrades to its network infrastructure to reduce the challenges.

The Automation Engineer saw IntraVUE[™] Software at a Panduit customer event and knew it could help simplify their network.

Familiar with Panduit solutions, Rexel and Malisko encouraged the company to explore IntraVUE[™] Software as a possible solution for resolving its network challenges.

SOLUTION

The next occurrence of network downtime occurred the day after the initial IntraVUE™ Software install. With the software in place, the company assessed the situation and quickly identified the faulty network connection. Over the next several months, IntraVUE™ Software provided both real-time documentation to the team on device connections while maintaining a history of system performance. With this in place, the company was well prepared when unexpected downtime hit a portion of its plant.

Seven months later, the company experienced a recurring problem that was unusual and hard to detect because different devices across the network would halt at different times, the devices were not all visible at the same time, and some devices were not affected at all.

The IntraVUE™ Technical Support Team advised operations to perform a data extract. The support team then sorted the data by the switch and port ID number and examined the graph reports to review all IP addresses to that specific network. The software provided historical trends that helped determine the exact IP addresses and names of the devices affected, the days and times they were affected, and the IP addresses and names of the potential devices causing network delays and disruptions. These trends graphed at the hours and days settings showed multiple devices spiking at various intervals, indicating a deeper problem.

The team found a server and a NAS backup I/O device to be the source of intermittently sending data across the network at or around similar times as the devices that spiked. This was the reason the entire network experienced latency and intermittent disruptions. The technical support team recommended the company investigate both the devices in question and to replace the switch closest to the source of the spikes. The team replaced the unmanaged switch with a managed switch, which resolved the problem.

“In both instances, the IntraVUE™ Tool allowed us to quickly assess the problem and gain valuable insight into our network. We feel confident that we can use it for future network troubleshooting,” said the Controls Engineer.

In addition to Panduit’s solution, selected partners for this project were Rexel as the distributor and Malisko Engineering, Panduit® ONE Partner, as the system integrator providing Tier 3 level operational support to the plant. Panduit Certified Installer (PCI) National Network Services performed cabling implementation.

BENEFITS

IntraVUE™ Software has provided this portland cement producer a window into its physical infrastructure that will help the company avoid or shorten unscheduled downtime. It delivered an immediate return on investment as the first two incidents happened within the first seven months of installation.

According to the Automation Engineer, “We were especially impressed with how quickly our network problems were detected and diagnosed. The complete visibility into all devices and connectivity is a valuable asset for understanding the devices and how they perform within the network.”

“IntraVUE™ Software collected the data needed for pinpointing and resolving connectivity failures within our network. The IntraVUE technical support team was valuable with helping us to understand the needs of a robust, reliable network and how to address those needs,” said the Controls Engineer.



ENABLING COLLABORATION

Report details are tailored to help manufacturing IT teams provide relevant information to the critical plant stakeholders while maintaining the secure and robust configuration of their network. Using IntraVUE™ Software, they can provide to plant management the overall uptime of their critical plant network at a glance, enable controls engineers to determine the root cause of production system disruptions, and provide maintenance technicians the tools to proactively care for these critical network-enabled production systems.



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 data that speeds documentation and deployment; and more quickly pinpoint and resolve connectivity failures.

PANDUIT®

For more information

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