| CASE STUDY

In a Factory, Every Device on the Network Has to Work

How Global Process Automation uses NetAlly to assess and validate the mission-critical networks that run factories

CUSTOMER

Global Process Automation (GPA), Wilmington, North Carolina. 80 employees, four offices, supporting process transformation initiatives across 17 industries.

CHALLENGE

Assessing wired and wireless networks inside large industrial plants, driving digital transformation initiatives across complex industrial systems.

REQUIREMENTS

Handheld testers capable of testing any vendor's equipment across both wired and wireless, with built-in reporting capabilities.

SOLUTION

NetAlly LinkRunner® AT 4000, CyberScope®, Test Accessory, and Link-Live™.

RESULTS

Combined wired discovery, wireless surveys, throughput checks, and spectrum analysis into one assessment supported by actual measurements rather than assumptions.

When the network is down, industrial manufacturing stops

An industrial manufacturing network carries the instructions between machines: the command that tells a motor to start, a valve to open, a robot to move, and the readings that tell a human operator what is happening. It cannot afford interruptions.

Global Process Automation (GPA) is an engineering firm based in Wilmington, North Carolina that helps manufacturers modernize their operations. Much of that work starts with the network. Its operational technology group assesses, designs, and secures networks for paper mills, chemical plants, and other manufacturers. To validate links, troubleshoot problems, and document what relies on those networks, GPA's network engineers carry NetAlly handheld testers.

GPA specializes in modernizing manufacturing facilities that may have outgrown the operational technology (OT) networks they were built on. Before any of it can be upgraded or secured, someone has to map what is actually there, and after the upgrade, every link and every device connection has to be validated.

Scott McNeil is GPA's Industrial Network and Security Architect II. His job is to walk into a plant and tell the client what is on the network, how it is performing, and what to do next. He assesses, designs, troubleshoots, and secures plant networks for clients in paper mills, chemical plants, and other manufacturing sites.

What makes a plant network hard to assess

The documentation is out of date. Before anyone can fix, secure, or upgrade a plant network, they need to know what is on it: every switch, every device plugged into every switch, and which VLAN each link belongs to. Scott doesn't rely on the drawings alone. "Many industrial networks have evolved over years or even decades. Equipment gets added, production areas expand, and new technologies are introduced alongside legacy systems. Unfortunately, network documentation does not always keep up with those changes." His rule: "I do not want to base an assessment entirely on what someone believes is installed."

> *"Unlike traditional IT networks, the size of an OT network is not always best measured by the number of users. A network supporting a relatively small number of industrial devices can be considerably more demanding than one supporting hundreds of office users, particularly when those devices are involved in production control, safety, or applications with strict communication requirements."*
>
> **Scott McNeil, Industrial Network and Security Architect II**
> **Global Process Automation**



> *"The tools are sophisticated enough to provide the detailed information I need as a network architect, but approachable enough for a junior engineer to learn how to collect meaningful data without needing years of specialized networking experience."*
>
> Scott McNeil

To see what NetAlly would show you in your manufacturing facility, visit netally.com.

netAlly
Faster to fixed.

Wi-Fi is doing more on the plant floor. Self-driving carts, handheld scanners, and tablets now move around the plant, surrounded by steel. "Wireless networks introduce additional challenges, particularly in heavy industrial environments. Large metal structures, machinery, changing production conditions, and competing wireless systems can all affect communications." A coverage plan made in advance cannot predict all of that. Someone has to walk the plant and measure it.

Site visits are expensive, so assumptions are expensive. A visit, as Scott describes it, "may involve considerable travel, coordination with plant personnel, safety requirements, and access to equipment located throughout the facility." Some locations require a safety permit. "Discovering after the fact that additional testing is required can create scheduling difficulties and additional expense."

How GPA uses NetAlly

Here is how Scott runs a plant assessment, from the first cabinet to the final report.

First, establish what is there. "When I arrive at a facility, one of the first things I need to establish is an accurate understanding of the existing network environment." At each cabinet, the LinkRunner AT 4000 confirms the link, identifies the switch and port, reads the VLAN, tests whether traffic gets through, and records the devices on that segment, on any vendor's equipment. "Instead of making assumptions about the network, I can validate what is happening."

Then, walk the floor. The CyberScope identifies the Wi-Fi networks, access points, channels, and security settings, then records signal and coverage as Scott walks the plant. Where he suspects interference from a machine or another radio, a spectrum check shows what activity is actually on those frequencies.

Then, test the links that matter. Throughput tests used to mean two laptops running test software, each able to skew the results. Now the LinkRunner is one end and a Test Accessory the other, with nothing to configure. "The benefit is not just completing a test faster. It is being able to perform the same test repeatedly, with fewer variables, and have the results automatically documented."

Then, turn the data into the report. Where the client's confidentiality and cybersecurity requirements permit it, Scott uploads everything the testers collected to Link-Live, NetAlly's cloud platform: the wired discovery, the wireless survey, the spectrum checks, and the test results, in one place (where the client's policies permit). That is where the analysis happens and where the client's documentation comes from. "For me, Link-Live is much more than a place to store test results. It is a valuable resource for turning collected network information into useful engineering documentation."

Simple enough for a junior engineer. GPA bought a LinkRunner for a junior engineer, who can now run the first step of establishing the baseline network data on his own. "He has done a fantastic job, and this has been extremely valuable because it allows us to divide assessment responsibilities more effectively."

Results

- An accurate, documented picture of the network. Wired and wireless results in one place. As Scott says, "a more accurate assessment supported by actual measurements rather than assumptions."
- Wi-Fi measured where it is used. Metal structures, machinery, competing radios, and shift changes can all affect a plant's wireless performance. With NetAlly, coverage and interference are recorded on the floor, where the people and devices need to connect, instead of estimated.
- Fewer return trips, more done per visit. Site visits mean travel, permits, and coordination, so GPA collects everything it can the first time. Two engineers gather data the same way, and with results saved in Link-Live, Scott can review them from the office "without necessarily having to return just to repeat a basic test."

©2026 NetAlly®, LLC