

## NoaNet Case Study

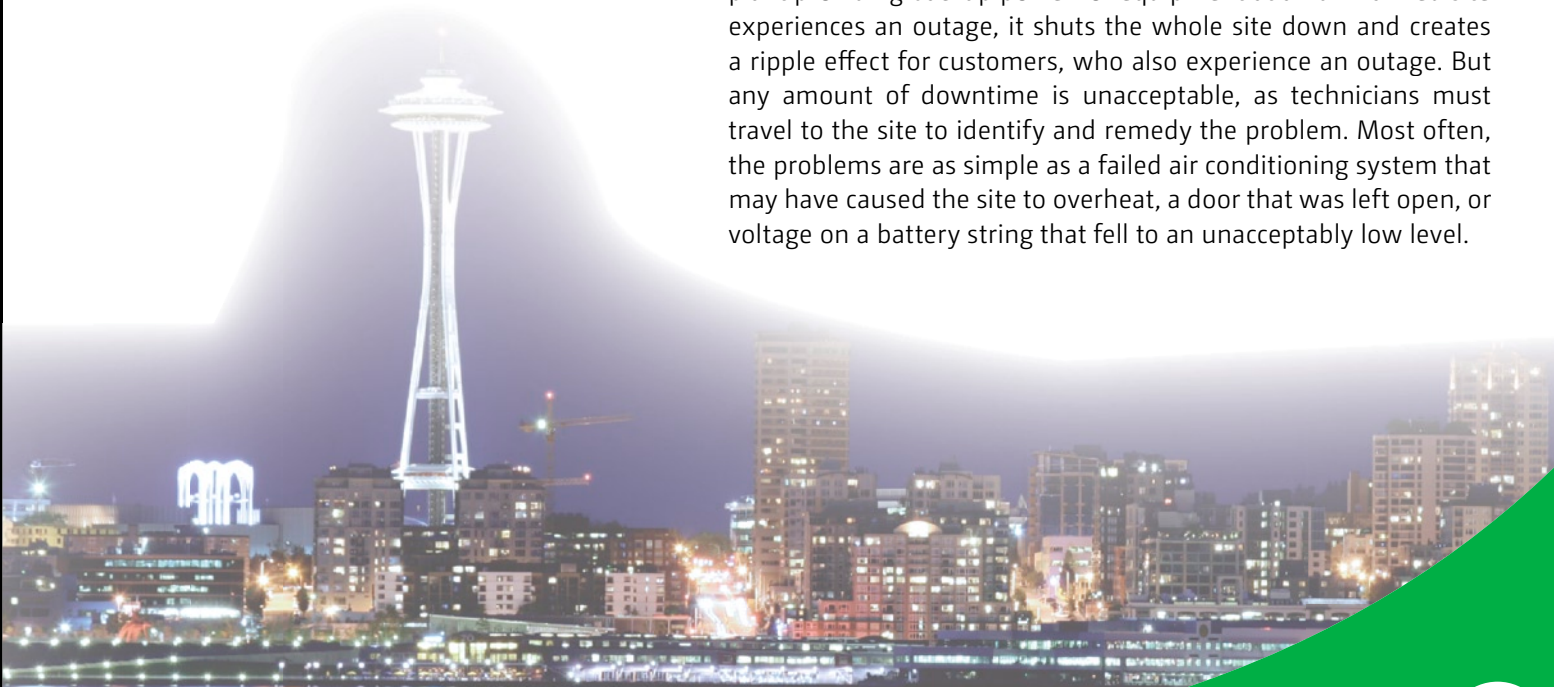
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Northwest Open Access Network (NoaNet) is a mutual non-profit wholesale telecommunications company formed by several Public Utility Districts (PUDs) in Washington State to bring high-speed telecommunication services to underserved communities for utilities to employ and use for their constituents. NoaNet operates a wholesale fiber optic network throughout the state, connecting the local PUD communications networks to each other and to the major carrier connection points in Seattle, Spokane, Wash., and Portland, Ore.

### The Challenge

NoaNet's network snakes for thousands of fiber miles across the Pacific Northwest, connecting metropolitan areas and remote, rural regions in an expansive fiber optic, SONET-based, dense wavelength division multiplexing (DWDM) network with approximately 30 remote sites. This network carries advanced telecommunications and data services not only to highly populated cities, but also to the many under-served communities throughout Washington and Oregon, providing access to advanced telecommunication services for providers serving thousands of users for the very first time.

Needless to say, most of the network's sites are remote, in fact very remote, and hence many are unmanned. When the power plant providing backup power for equipment at an unmanned site experiences an outage, it shuts the whole site down and creates a ripple effect for customers, who also experience an outage. But any amount of downtime is unacceptable, as technicians must travel to the site to identify and remedy the problem. Most often, the problems are as simple as a failed air conditioning system that may have caused the site to overheat, a door that was left open, or voltage on a battery string that fell to an unacceptably low level.



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Driven by its unwavering commitment to maintaining a highly reliable network, NoaNet wanted to find a way to more proactively keep these sites up and running. To do that, it needed a way to see exactly what was going on at each remote location and make any necessary adjustments before a problem occurred, without always having to dispatch a technician.

## The Solution

After careful evaluation, NoaNet selected a solution from Asentria (formerly Omnitronix), a leading provider of remote site monitoring and telemanagement solutions that simplify and enhance the operation of distributed remote equipment sites vital to voice and data networks. Asentria's SNMP-Link SL-81, which enables remote site monitoring, enables NoaNet to integrate its non-SNMP and non-networked devices and on-site environmental conditions into its network management system.

With Asentria's SNMP-Link tools, NoaNet can keep its power sources, on-site security systems, temperature and humidity conditions, and other remote equipment functioning from the convenience of its own network operations center.

Asentria's remote site monitoring solution receives input from various equipment and devices and evaluates the information. Then it forwards the device status and alerts of potential problems to the appropriate operations and engineering personnel, and often proactively and automatically corrects problems. For NoaNet, these capabilities can often spell the difference between an inconsequential event and serious downtime. Powerful control capabilities allow personnel to remotely send commands to enable or disable power plants and relay switches; change equipment configuration parameters; connect remote users to restricted ports; collect, buffer and securely transfer data; and more.

According to David Black, NoaNet's senior network and optical engineer, Asentria solutions have not only helped make NoaNet's network more reliable by enabling it to keep track of environmental conditions that could potentially pose a threat to its remote equipment, but the solutions have also proven to be highly flexible and customizable.

"Most of the other vendors we considered offered one-size-fits-all boxes," Black explains. "But Asentria custom-built a solution for us by engineering it to also monitor building temperatures as one of its many data points. In fact, after we implemented the solution, it caught an air conditioning failure before one of our buildings became too hot and caused other problems."

Black cites a number of business benefits that his company has already seen as a result of implementing the Asentria SNMP-Link. These include everything from productivity increases and labor savings to improved business practices and competitive advantage.

"Our remote site monitoring system enabled us to see in just minutes that the batteries at one of our sites were failing, which would have ultimately led to a major outage," Black says. "Rather than having to spend the time and money to send a technician onsite for a few hours, we were able to see the trouble from our office and resolve it before a serious problem occurred."

"We can also better control unscheduled dispatches, which are costly," he continues. "We send out a technician to look over our remote sites periodically, but if an urgent problem arises that requires a more immediate response, we need to know exactly what it is so we can send out a technician, if needed, before the situation escalates."

One of the subsequent advantages of having improved visibility into remote equipment is that it enables NoaNet to improve its business practices by preventing problems rather than reacting to them. “With remote site monitoring capabilities, we are much more proactive,” Black says. “For example, when a temperature notification went off for one of our sites, I was able to see the details I needed—both temperature and trend—and, in turn, be sure that one of our technicians addressed it during his next visit.”



Black adds that while customers may not see how NoaNet’s remote site monitoring tools impact its service, there is a clear correlation. “Our facilities are more secure because we are able to monitor our door and security alarms and we are more proactive in regulating power and temperature,” he says. “These capabilities are critical in enabling us to ensure the reliability our customers demand and we are committed to delivering.”

As with all service providers, NoaNet values network reliability as paramount. “Our network of remote sites is the backbone of our company’s success,” Black comments. “We continue to build them when and where we can and need them. As we do so, we always plug Asentria into the mix to give us the remote monitoring capabilities we need.”

The network must remain up and running, outages must be prevented, and problems must be proactively identified and resolved as quickly as possible. That’s precisely where Asentria solutions fit in, according to Black. “Reliability is what keeps customers,” he concludes. “Asentria’s remote site monitoring solutions are instrumental in enabling us maintain a highly reliable network throughout the Pacific Northwest.”



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