

Solution: Cradlepoint NetCloud Service for Branch ■ **Industry:** Energy ■ **Use Case:** 5G for Remote Sites

In Remote Offices with High-Bandwidth Needs, Oil Company Implements 5G Solutions for Reliability and Performance

Cloud-managed 5G connectivity and data security help Sabinal Energy Operating centralize SCADA system and support digital transformation



Cradlepoint's 5G solution was a game-changer for us. By providing reliable 5G connectivity, Cradlepoint began solving every networking problem we had."

Ben Kokenge,
VP of infrastructure,
Sabinal Energy Operating, LLC

Success story highlights

Challenge — After centralizing its SCADA servers at headquarters and experiencing the woes of rapidly expanding bandwidth needs for technologies used by employees at offices in remote locations, Sabinal Energy saw a need not just for wireless edge solutions in general, but for the high performance and low latency of 5G.

Solution — Sabinal's lean IT team deployed wireless edge routers and 5G adapters at each of its remote offices, delivered as part of Cradlepoint's NetCloud Service for Branch and leveraging the T-Mobile network. This comprehensive solution enables data security and Wireless WAN connectivity — all managed through the cloud rather than with on-site troubleshooting.

Benefits — With these offices in remote areas experiencing high uptime and up to 500 Mbps, Sabinal trusts Cradlepoint as the reliable branch solution it needs to keep its team connected to vital data — anywhere.

Background and challenges

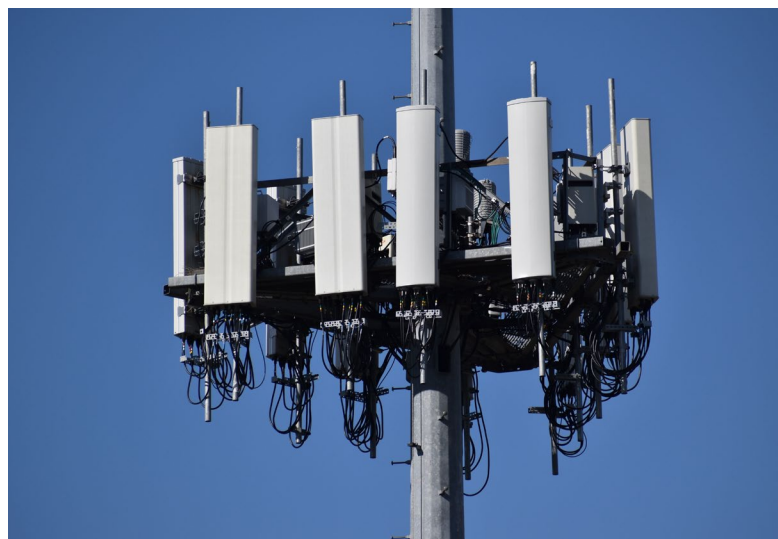
With thousands of producing wells situated across approximately 200,000 acres in the Permian Basin of West Texas and Southeast New Mexico, Sabinal Energy's network connectivity needs go beyond simply connecting Internet of Things (IoT) sensors, pumps, and other devices for SCADA systems. This privately held oil and gas exploration and production company also has widespread offices that face a common challenge: ensuring reliable connectivity in very remote locations.

When Sabinal decided to centralize with one SCADA server at the data center instead of a dedicated SCADA server at each remote office, 24x7 connectivity at these offices became more important than ever. Network disruptions hinder functions such as alerts from the wells, forcing the company to put people on-site for tasks such as watching for spills and other problems.

Insufficiency of wired and satellite links

Originally, Sabinal used T1 wired lines for its remote office edge networking needs, but the uptime had been about 95%, at best. That was unacceptable, given the company's reliance on constant access to SCADA data.

Satellite connectivity was another option, but was less than optimal. Each time the data has to hop to another satellite, it has to reacquire the VPN mesh — creating too much latency.



Rapidly escalating bandwidth needs

The company decided to deploy cellular solutions, using a combination of cellular and satellite links through Cradlepoint's IoT routers — along with custom-built antenna infrastructure. While 4G LTE was a viable solution, the onset of the COVID-19 pandemic in 2020 created an uptick in employees' need for live-streamed video meetings and other online applications.

“With COVID-19, our data needs went through the roof. Now, instead of using normal phones, all of the sudden our staff was using Teams and video calls in these remote locations,” said Ben Kokenge, VP of infrastructure, Sabinal Energy Operating, LLC.

This need for better performance and less latency started the company down a path toward 5G solutions.

Lean IT group in charge of connectivity and data security for large WAN edge

Sabinal's small IT team of just a few staff members is tasked with troubleshooting outages and security events — as well as making intermittent updates — across a quickly growing edge footprint, including remote offices and widespread IoT devices. Each office requires connection to the cloud via an essential VPN mesh.

Solution

To provide the bandwidth and performance they needed in their remote offices, Sabinal deployed Cradlepoint's NetCloud Service through wireless edge routers with 5G adapters. The solution includes a platform for single-pane-of-glass, centralized management of connectivity and data security at each site.

"Cradlepoint's 5G solution was a game-changer for us. By providing reliable 5G connectivity on the T-Mobile network, Cradlepoint began solving every networking problem we had," Kokenge said.

Benefits

Performance and reliability of 5G for Wireless WAN

The high reliability and propagation and excellent performance of T-Mobile's 5G network through Cradlepoint's wireless edge routers and adapters allow Sabinal to confidently run its remote offices with Wireless WAN as primary connectivity. The company now experiences from 200 Mbps and 500 Mbps with latency under 40 milliseconds.

With multiple modems connected at each site, Sabinal can have dual-carrier automatic failover and load balancing while remotely monitoring data usage through NetCloud Manager.



We trusted Cradlepoint enough to centralize our data center and rely on cellular connectivity. There isn't really another product that would have allowed us to solve this problem and trust it."

Ben Kokenge, VP of infrastructure,
Sabinal Energy Operating, LLC

Comprehensive security through one solution

Cradlepoint's wireless edge routers feature built-in next-gen firewall, IPS/IDS, content filtering, and VPN capabilities, and are configurable and manageable through NetCloud Manager. For additional network security, Sabinal uses a carrier-provided APN.

Centralized, cloud-based network control

Cloud-based management gives the IT team centralized control, saving the company significant time and money. NetCloud Manager makes it easy to handle endpoint configurations at the group level, rather than one by one and in person.

"I don't really ever lay hands on the router at all. That's the power of Cradlepoint NetCloud," Kokenge said.

The IT team also uses NetCloud dashboards for visibility from anywhere into actionable statistics about cellular data usage and performance, and frequently runs speed tests to measure throughput.

24x7 technical support from an expert team

When Sabinal's IT team has a question or challenge to address, they reach out for enterprise-level discourse with Cradlepoint's Support Team, which is available 24x7.

"Cradlepoint has human support that you can actually get a hold of. That's unheard of," Kokenge said.

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