

Oil and Gas Companies Need Reliable Connectivity

IoT, Daily Communications, and COVID Highlight Traditional Connectivity Issues

On a daily basis, most of us don't give much thought to how our utilities are managed and operated. And why would we? Everyday oil and natural gas companies manage their operations - from exploration and production to actual service provisioning - seamlessly.

But that seamless operation and service isn't always easy to achieve.

Service areas that spread over hundreds of square miles and numerous branch locations mean that utility companies must ensure that their offices and equipment have reliable connectivity - even in the most distant and remote locations. For companies handling exploration in the Mid-Continent Oil Producing Area, connectivity issues can mount quickly and be difficult to overcome without the right technologies in place.

The machinery and equipment that keeps their physical operations running — including IoT devices such as pumps, sensors, and other SCADA devices — require near-constant uptime.

So too do the networks that team members use to communicate both internally and externally.

The Challenge | COVID-19 Impacted Connectivity and Downtime

Connecting remote locations and various branches has always been a bit of a challenge for oil and gas companies. But when the Covid-19 pandemic shutdowns required companies to immediately pivot to a Work From Home model, data needs across all industries increased rapidly. At businesses around the world, team members now needed to use video conferencing software (Teams, Zoom, etc.) and instant messaging platforms (Teams, Slack) in place of in-person meetings and desk-side chats.

Even those team members who remained in the office as essential workers were increasingly relying on video conferencing to communicate with their colleagues both internally and externally. And, of course, the need to manage IoT devices while also adding oversight capabilities for WFH equipment increased.

Due to oil and gas companies' constant reliance on SCADA data, any connectivity and downtime issues can mean huge problems for their operations. Even the most robust T1 wired connections can still have downtime as high as 5%. Satellite connectivity is another option, but the high latency required each time data has to hop to another satellite is less than ideal. Any interruption in connectivity can delay alerts from wells, which then requires people to be on-site physically monitoring for incidents.

The Solution | Centralized Connectivity Management with Cradlepoint and NetCloud

One of our solutions for these issues is Cradlepoint's NetCloud Service through wireless 5G edge routers (E3000, E300, and E102), CBRS routers (R500-PLTE) 5G wide-band adapters (W2000 and W2005). The NetCloud Service includes platform centralized management of connectivity and data security at each site. Combined, these solutions available from USAT, are powerful enough to allow for a centralized data center that relies solely on cellular connectivity.

The Results | A 5G Solution for Reliable Connectivity

Built-in next-gen features, including firewall, IPS/IDS, content filtering, and VPN capabilities, are all able to be configured and managed through the NetCloud manager, while the cloud-based system gives the IT team centralized control - saving significant time and money for the organization. Oil and gas companies have been able to successfully create the high bandwidth, lightning fast, networks they need to manage and monitor their entire infrastructure with Cradlepoint's NetCloud Services for Branch and IoT.

The Team | Device Provisioning, Activation and Installation Services

For over 30 years, MCA has served our nation's critical infrastructure by creating secure communication networks that pass data wirelessly between key systems - linking remote personnel, locations, and machine assets. MCA is an Elite and 5G Certified Resale Partner of Cradlepoint that sells, designs, configures, and installs wireless data communications hardware and software, providing targeted IoT connectivity solutions that fit our clients' exacting needs.



Industry Profile

- Public and Private Utilities
- Petrochemical Companies

Technology Solutions

- NetCloud for Branch
- Office/Home Connectivity
- NetCloud for IoT
- Sensor/Site Monitoring
- Cradlepoint 5G Routers
- Cradlepoint 5G Adapters
- Cradlepoint CBRS Routers

Targeted Results

- Vastly Improved Security
- Real-Time Sensor Data
- Remote Management
- Cost Savings and ROI
- 99.99% System Uptime



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