Case Study:
Oil and Gas Industry Services

GDS helps a service provider for the oil and gas industry deliver secure and reliable LTE cellular connectivity to its customers' remote sites.

In today's high-tech oil and gas industry, workers in the field depend upon voice and data communications with the office.

To meet this need, a provider of rental equipment for the industry has set up a communications network that enables secure connectivity for drilling and completion sites throughout Texas, Louisiana and New Mexico.

Traditionally, that required satellite services, but the company was looking to use LTE cellular for more cost-efficient connectivity. The company lacked the expertise and personnel resources to design, implement and support the network infrastructure, and asked Global Data Systems (GDS) to develop a solution.

"I worked with GDS several times at my previous company and found that they were always on point with everything they did," the company's Communications Manager said. "We enlisted their help in providing LTE coverage for our land sites, as well as backup VSAT connectivity. For me, it was an easy decision to engage them to develop this solution."

Challenge

A primary benefit of VSAT services is near-global availability. LTE cellular, by contrast, isn't as reliable, particularly in remote areas. Oilfield networks that have moved to LTE cellular typically use VSAT for backup, but the company wanted to minimize reliance on satellite services.

The company also needed a streamlined way to deploy network hardware in the field. Ideally, the hardware would be fully configured and kitted out in a plug-and-play unit that could be installed quickly and easily. Uniformity across the units would further simplify operations.

Expert support was critical. Because oilfields operate around the clock, the company needed to ensure that network engineers and technicians were available 24x7x365 to troubleshoot and resolve any issues.

Solution

GDS developed a software-defined WAN (SD-WAN) solution that leverages multiple cellular services for highly reliable connectivity. Dual SIM cards are installed in an "active-active" configuration that automatically switches to the best-quality connection in any given area. The SD-WAN solution monitors each connection for packet loss, jitter, latency or a dropped connection, and initiates a sub-second failover so that voice calls and data connections continue uninterrupted. Quality of Service features optimize the user experience.

"The reliability this solution provides is excellent compared to our competitors that are using single-SIM modems," the Communications Manager said. "The biggest thing with these units is redundancy. We're able to deploy in any environment. If we do find that we cannot use LTE because there are simply no towers available, we deploy our VSAT backup."

GDS created a turnkey solution that includes all the hardware and software needed for connectivity. Everything is fully configured and ready to deploy, with pools of bandwidth that can be allocated to each site. GDS also provide the company with flexible options for procuring the equipment.

"When we first engaged with GDS, we rented the equipment from them until we were able to develop deployment packages," the Communications Manager said. "Now we purchase the equipment from them but they still handle the configuration and testing. They set up everything for us and send it to our location for deployment in the field. We don't have an in-house infrastructure person — GDS does that for us."

The solution is fully managed, with 24x7x365 support through the GDS Network Operations Center (NOC). High-priority issues are escalated to top-level engineers as needed to ensure the highest degree of availability and security.

"They manage the network in the background for us, and my technicians call them when they have an issue," the Communications Manager said.

"From the customer's perspective, the network is just a box with hardware in it. It works. But there's a whole lot going on in the background that GDS does for us. It puts us at a higher level than our competitors."

Security is also built into the GDS solution. Deep packet inspection, application-layer content filtering and other robust controls help protect sensitive applications and data.

"That's another huge difference between us and our competitors. I'm not a subject matter expert when it comes to security, but the people at GDS are," the Communications Manager said. "We have not experienced a security incident."

Results

When the company first implemented the GDS solution, it handled management internally. **However, the company soon determined that GDS could provide support more cost-efficiently with 24x7x365 coverage.**

"After a few months we decided it was in our best interest to go ahead and engage GDS for managed services," the Communications Manager said.

"It makes much more sense than relying on just one person to solve problems. We have access to a whole team of people in the GDS NOC."

GDS also provides the company with one simple bill for all connectivity services, including the satellite backup. That eliminates multiple bills from each carrier for each location.

"That's another win in my book," the Communications Manager said. "It simplifies things for our billing department, which is very busy."

The company started with 32 of the GDS networking units and now has 127. The company continues to scale up the solution to meet growing customer demand.

"We scaled up very quickly initially and are now deploying a steady amount as we grow. GDS supplies us with more units as we need them, with very fast turnaround. That has really helped because we typically know only a week or two in advance that we're going to need them," the Communications Manager said.

In addition to providing a top-notch solution and service, the GDS team is great to work with, the Communications Manager says. If any issues arise, they work diligently to develop a solution that will meet the company's needs.

"They're very professional, and have some very smart individuals," he said. "They are able to create solutions for us to mitigate any problem we might have. They've also given us ideas for other services that can drive growth and things we can do to operate in a more efficient manner."

For More Information

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