CASE STUDY

APAC ENERGY LEADER MODERNIZES COMMUNICATION NETWORK WITH CERAGON

ENERGY

APAC

A major energy operator in APAC, responsible for an extensive gas pipeline network, faced growing challenges from an aging communications system. Decades of use and a patchwork of 'end of life' technology had left the network unable to meet modern connectivity needs, resulting in frequent outages and escalating repair costs. Previous ad-hoc upgrades provided temporary relief and failed to deliver the reliability required for seamless daily operations.

To achieve lasting improvements, the energy provider needed a comprehensive network upgrade that would strengthen connectivity, boost safety, and enhance operational efficiency for the future.

THE CHALLENGES
Aging End-of-Life Infrastructure | Limited Support for Modern Technologies | Need for Increased Reliability and Safety
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The operator's aging communications network posed several critical challenges. Most importantly, there was an urgent need to minimize the costs associated with network downtime. From reduced production capacity to the expense of dispatching trained maintenance teams across vast distances, network failure costs were quickly adding up.

Any network outages would reduce operational efficiency and raise safety concerns. In the energy sector, real-time data is essential to monitor gas flow, detect potential leaks, and ensure safe operations. Yet, with aging infrastructure and the real risk of communication interruptions and system failures, along with the need for real-time responsiveness, a full end-to-end overhaul was required.

Additionally, the old network lacked the flexibility to support modern, data-intensive applications such as real-time telemetry and predictive analytics. Without these capabilities, the operator missed opportunities to proactively address issues, meet regulatory standards, and improve operational efficiency. Altogether, these challenges highlighted the urgent need for a reliable, future-ready connectivity solution to maintain operational efficiency, safety, and regulatory compliance.

THE SOLUTION
High-Powered Radio Links | Advanced Network Management System | End-to-End Network Rollout
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Ceragon worked closely with the energy operator to design a high-performance IP-based network solution tailored to their needs. The solution includes a range of high-power, IP-compatible radios, including the IP-50FX, all supported by Ceragon Insight NMS (Network Management System). The new network provides the operator with real-time data analytics, predictive maintenance, and rapid issue resolution, significantly improving network reliability while reducing operational costs. The solution also supports advanced telemetry and remote monitoring tools, which are essential for safe and efficient pipeline operations.

Beyond providing advanced technology, Ceragon's solution includes end-to-end support, covering everything from initial network design and factory acceptance testing (FAT) to on-site integration and team training. Moving forward, the energy operator is considering several of Ceragon's Managed Services to maintain and operate their network, giving them peace of mind that their connectivity is in expert hands.

THE RESULT

Ceragon's high-capacity networking solution is designed to deliver significant enhancements in network reliability, monitoring capabilities, and operational efficiency for the energy operator. The addition of an AI-powered management system coupled with an End-to-End Network Services solution ensures that monitoring, management, and maintenance are all handled in the most efficient way possible.

Ceragon's solution for the energy operator focuses on several key areas:

+ Long-Range Connectivity
Deploying high-powered radio links across nearly 2000kms of pipeline reduces the need for multiple repeater sites or hops, cutting down both operational and maintenance costs.

+ Enhanced Signal Quality with High-Performance Antennas
Ceragon's solution includes high-performance antennas that extend network coverage and improve signal quality across long distances, ensuring stable connectivity even in remote areas.

+ Cost-Saving Measures
Ceragon's expertise in energy-efficient technologies like SDN (Software-Defined Networking) allows the operator to optimize bandwidth, automate operations, and reduce energy consumption, all resulting in reduced CAPEX and OPEX.