



Achieving network reliability and uptime at LKAB, deep under northern Sweden

LKAB

Geo: EMEAR

Industry: Mining

Locations: Kiruna, Lulea and Malmberget, northern Sweden

Revenues: US\$3.2 billion

Employees: More than 4,000

At LKAB, Europe’s biggest and oldest iron ore mining company, network downtime doesn’t just cause operational and safety issues, downtime means unrecoverable revenue loss. Extraction of iron ore to be shipped worldwide is a 24-hour a-day-by-365 process. Downtime means everything stops. No one can work when the 100-year-old mine in Kiruna effectively shuts down.

“Managing a network of this scale and in this environment, we need visibility 24-7,” says Rory Wikman, IT operations manager at LKAB. “When we blast into new areas, two things happen: Our machinery installs ceiling rods to keep the roof from collapsing, and then we install the network. Without the network we cannot work. Even deep underground, we need complete coverage, so ensuring its uptime is absolutely critical.”

Solutions

- Visibility over network administration and installed base through Cisco® Smart Net Total Care™
- Expert technical support provided by the Cisco Technical Assistance Center (TAC)
- Collaboration tools to enhance communications – video conferencing provides a safer alternative to face-to-face meetings

LKAB extracts ore from underground mines by means of sublevel caving, whereby gravity is exploited to get ore to fall in to the development drifts for subsequent transport on huge vehicles, trains, and hoists up to the surface.

Within the mine is an environment of perpetual darkness; dust, dirt, and dampness. It’s a harsh place to be. With more than 4,000 workers employed at the mining giant and most of them working underground as deep as 1.2 kilometers, LKAB relies on the network to keep everyone safe and to ensure productivity. Technology must work. All within 500 kilometers of twisting and turning tunnels, deep under the unforgiving environment of northern Sweden, operating a reliable network here is difficult.

Extracting more than 71,650 U.S. tonnes of ore per day in a volatile commodities market is a massive undertaking. LKAB runs its operation around the clock, and all workers are tracked and monitored through the network while working underground to ensure their safety. Every time a bucketful of ore is removed from the mine, some of the waste rock from above falls and the surface subsides. If the mine needs to be evacuated for any reason, it is paramount that all staff are accounted for.

Cisco and LKAB Partnership

Enhanced visibility, speed and uptime

Working with LKAB through a support model optimization review, the desired outcome was to bring operations back in-house from an outsourced model. This meant that LKAB could get better visibility into essential services, including network

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LKAB can now proactively diagnose and resolve issues before they become a problem



Safety is a priority – as is the network that keeps everyone safe



LKAB uses Cisco TelePresence – even 1km underground



Multiple Cisco Aironet wireless access points keep things moving

administration, and ultimately ensure there is a faster time to resolution in the event of a problem. To keep the Cisco® network optimal, the Customer Success team recommended the Cisco Smart Net Total Care™ service.

Nils-Oskar Spett is the administrator of the network. He says, “We wanted to bring the management of our own network back in house. With the help of the Cisco Customer Success team and their recommendations, we were able to get full visibility of our 4,000-plus device installed base through Smart Net Total Care. We’re now able to better plan maintenance, ensure coverage through support contracts, as well as proactively diagnose and fix things often before they become a problem for our business.”

The award winning Cisco Smart Net Total Care service helps reduce downtime with fast, expert technical support and flexible hardware coverage provided by the Cisco Technical Assistance Center (TAC). It also offers integrated smart capabilities, providing current information about the installed base, contracts, and security alerts to enhance the efficiency of support workflows.

Products and Services

- Cisco Catalyst 2960 and 4500 Series Switches
- Cisco Industrial Ethernet 3000 and 4000 Series Switches
- Cisco Nexus 5000 Series Switches
- Cisco Aironet® 3700 Series access points
- Cisco TelePresence SX Series
- Cisco TelePresence MX200 Series
- Cisco TelePresence MX300 Series
- Cisco TelePresence MX700 Series
- Cisco Smart Net Total Care (SNTC) Service
- Cisco SNTC Adoption Acceleration Service

“We’re able to do it remotely and at scale, adding and removing devices on a daily basis to make sure our network supports our operations, our staff, and keeps everything running,” says Spett.

The network also supports LKAB’s crucial Cisco TelePresence® infrastructure, something that chief information officer (CIO) Daniel Berglund reflects on as one of LKAB’s vitally important investments.

With more than 70 video endpoints installed throughout LKAB, some of which are more than a kilometer underground, video conferencing provides the company with a safer alternative to in-person meetings.

“The installation of TelePresence within the mines we operate means employees are kept safe and productive, as we don’t need to travel back through the mine complex to the surface to have essential face-to-face meetings,” Berglund comments. “We could not be without it.”

“We hope that the special relationship we enjoy with Cisco continues far into the future as we continue to use technology to benefit our operations and our workforce,” Berglund says.

“That’s why we place so much emphasis on the network. It supports everything we do. It is critical that it’s available all of the time, and that’s why we chose to invest in the quality that Cisco brings. For example, in our latest mine in Svappavaara, the platform we are building on is Cisco as standard.”

Daniel Berglund
CIO, LKAB



Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV Amsterdam,
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