

Lihir Gold Limited

Exinda Case Study for Satellite Connections



The Challenge

The gold mining industry is employing increasingly sophisticated techniques to locate deeper deposits. Once a target area is identified, it can take up to five years to finalize government approvals and construct the infrastructure to begin mining. The significant investment of time and resources during the initial stages makes it imperative that each phase of each project is managed closely, and large amounts of data is shared regularly between the sites and the company's headquarters.

A fast and reliable network is essential for Lihir Gold Limited (LGL) a major gold mining company with operations in Papua New Guinea, Australia and Cote d'Ivoire. It operates one of the world's largest gold mines and processing facilities on the island of Lihir, located 900 km north-east of Papua New Guinea. Due to the remote location, LGL relies completely on satellite connections to support all communications with its Lihir operations.

In addition to the critical geophysical and geochemical information that must be regularly transmitted from its exploration sites to its processing facilities, LGL relies on its network to handle time-sensitive network traffic such as voice and video. However, the satellite network had a round-trip latency of 550 ms, which is too high to reliably support these applications. The challenge for LGL was to increase its network performance without incurring costs for additional network equipment, or purchasing additional satellite spectrum, which is costly and often difficult to acquire due to reductions and restrictions on availability.

"With 2500 users on our network, LGL requires a very efficient network to support our business activities. Our communications network is integral to achieve both our aggressive production goals and the strict cost controls that enable us to maintain costs within the lowest quartile of producers," said Steve Franklin, Superintendent, IS& Communications, Lihir Gold Limited. "Optimizing the bandwidth in our network is critical to achieving these goals."

The Solution

To ensure the satellite network connecting LGL's operations would not become a bottleneck to the company's productivity, Franklin looked at several options to maximize the available bandwidth without significant financial investments. Furthermore, he needed to find a solution that could be easily integrated without requiring network downtime. Safety is integral to LGL's operations and values, and the communications network is a critical component in the company's many safety processes at each of its operations. After a careful review of available options, Franklin selected Exinda's 2860 and 4860 WAN optimization and acceleration products. Exinda worked closely with the LGL team to incorporate the Exinda solutions in the network, and ensure the network was operating efficiently between sites.

"Exinda has become a trusted partner to LGL. They took the time to fully understand our business and networking needs, recommended a solution that was right for us, and managed the process through to completion without major network disruptions or downtime," said Franklin.

As a result of the Exinda solutions, LGL has seen improved response times for applications across its satellite links. "After analyzing the traffic on the LGL network, we identified the 2800 and 4800 as the best solutions. The installation of these solutions has significantly reduced duplicate data transfers with MAPI, HTTP and SMTP. Equally importantly, the TCP acceleration has reduced the impact of latency in the satellite links, eliminating the need for LGL to purchase additional spectrum," said Kevin Suitor, Vice President of Marketing, Exinda."

With Exinda, LGL has successfully increased the capacity and reliability of its satellite network, while meeting its requirements for strict cost controls. Furthermore, the network traffic controls and visibility that the Exinda products provide enable LGL to continuously monitor its network to ensure the efficient delivery of critical information and communications.

"Lihir Gold operates its entire business over a comparatively small data link due to the available services in the region. The Exinda appliances have enabled us to do this very successfully, resulting in a 55% optimization of our network across our most important business applications and processes. This was no small feat, given the size of the Lihir site and the demands that our applications place on the network," added Franklin.



About Exinda ®

Exinda is a global provider of WAN optimization and application acceleration products. Exinda has helped over 2,000 organizations worldwide reduce network operating costs and ensure consistent application performance over the WAN. The Exinda Unified Performance Management (UPM) solution encompasses application visibility, control, optimization and intelligent acceleration – all within a single network appliance that is affordable and easy to manage.



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