Cambium Networks™

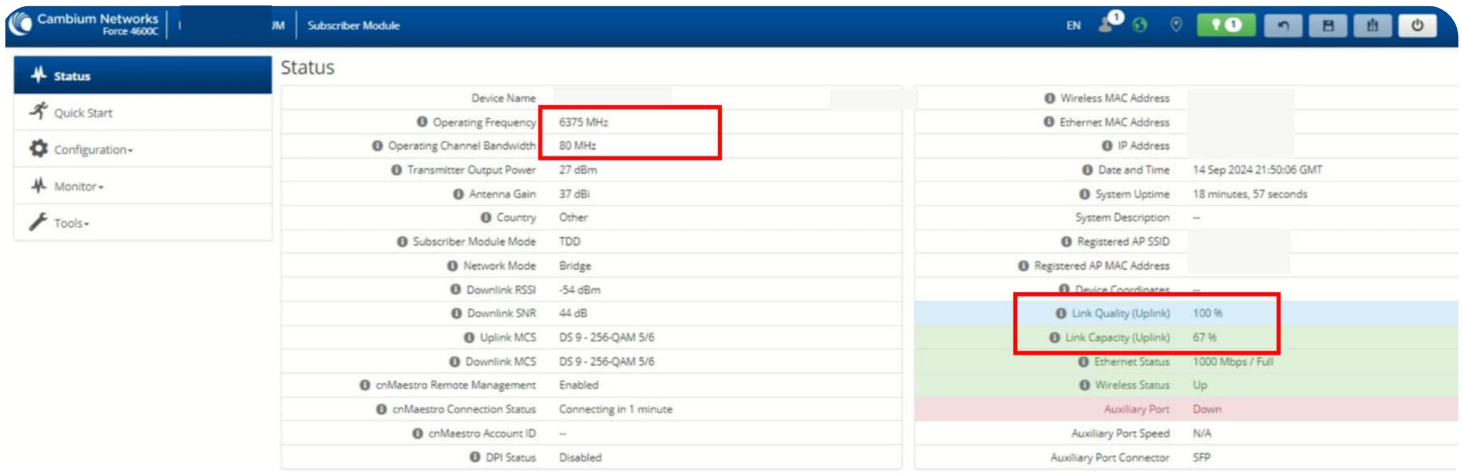
CASE STUDY

Reliable Connectivity in the Colombian Amazon

NetPoint

Customer Overview

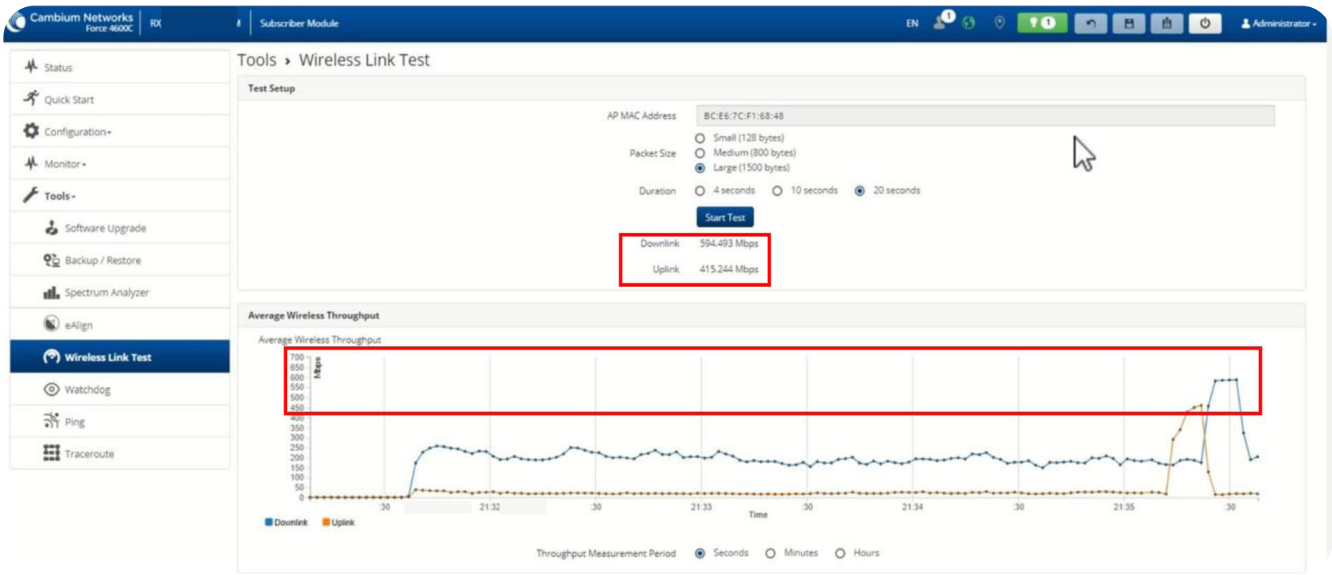
In the remote Colombian Amazon, an Internet Service Provider (ISP) delivers crucial connectivity to over 2,000 users. Operating in a dense, challenging jungle environment, the ISP sought to improve the reliability of its network. The region's difficult terrain made fiber deployment costly and time-consuming, driving the ISP to explore alternatives to strengthen its infrastructure and ensure continuous service.



Business Challenge

The ISP's primary challenge was maintaining consistent service over its fiber optic backbone, which spanned the jungle. The main fiber line was vulnerable to physical disruptions, and site noise levels reached as high as -70 dBm. A backup solution was necessary to guarantee network redundancy and prevent service outages. Extending the fiber further into the jungle posed significant financial and logistical hurdles, prompting the ISP to look for a more efficient alternative to meet their redundancy and performance needs.

Sergio M., the project lead, emphasized the importance of redundancy in their operations: *"The region is quite favorable for us because large carriers struggle to reach here. However, providers like me must ensure redundancy in case of any cut or loss in our main fiber link."*



Technology Solution

To tackle the issue, the ISP deployed a Point-to-Point (PTP) backhaul link that spanned 50.16 miles (80.4 km) to their central hub. This solution avoided the complexity and costs associated with extending fiber through dense rainforest terrain, ensuring a reliable backup for their primary infrastructure.

The deployment featured the following Cambium Networks technology:

- **Antenna:** NetPoint NPX 5-SHP-4FT
- **Radio:** Cambium Force 4600C

These products were specifically selected for their capacity to operate efficiently in harsh environmental conditions and over long distances. The system's performance in the 6 GHz band provided robust reliability even in the region's humid climate.

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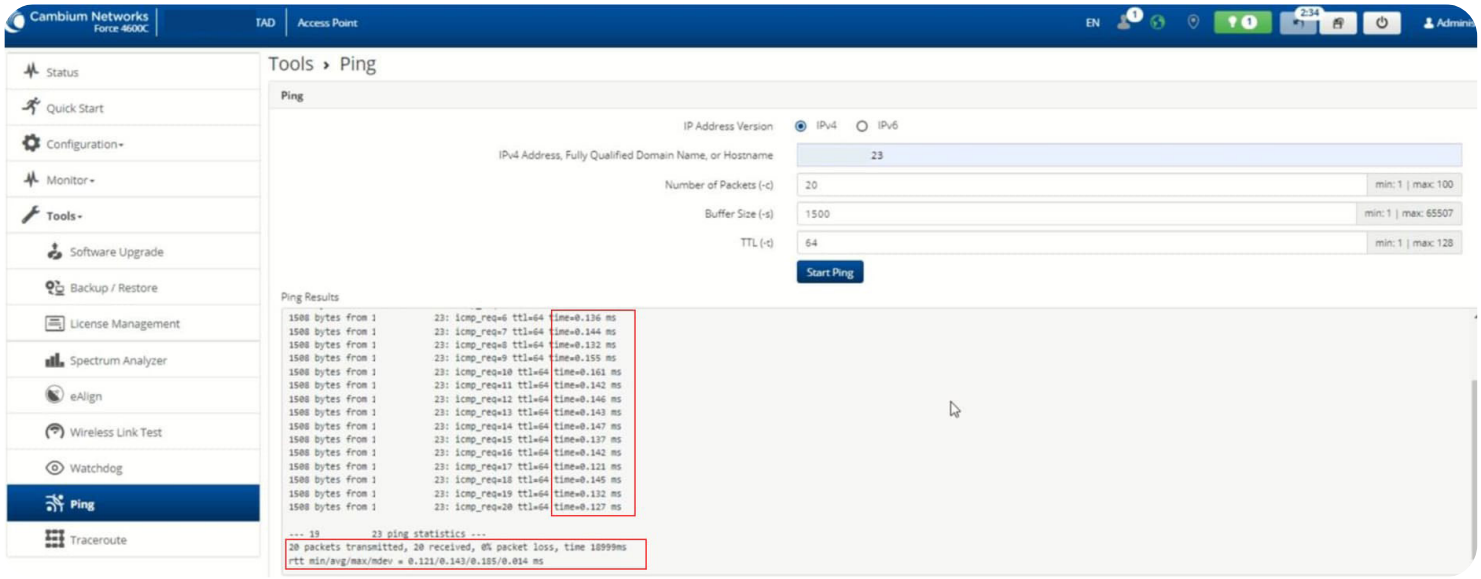
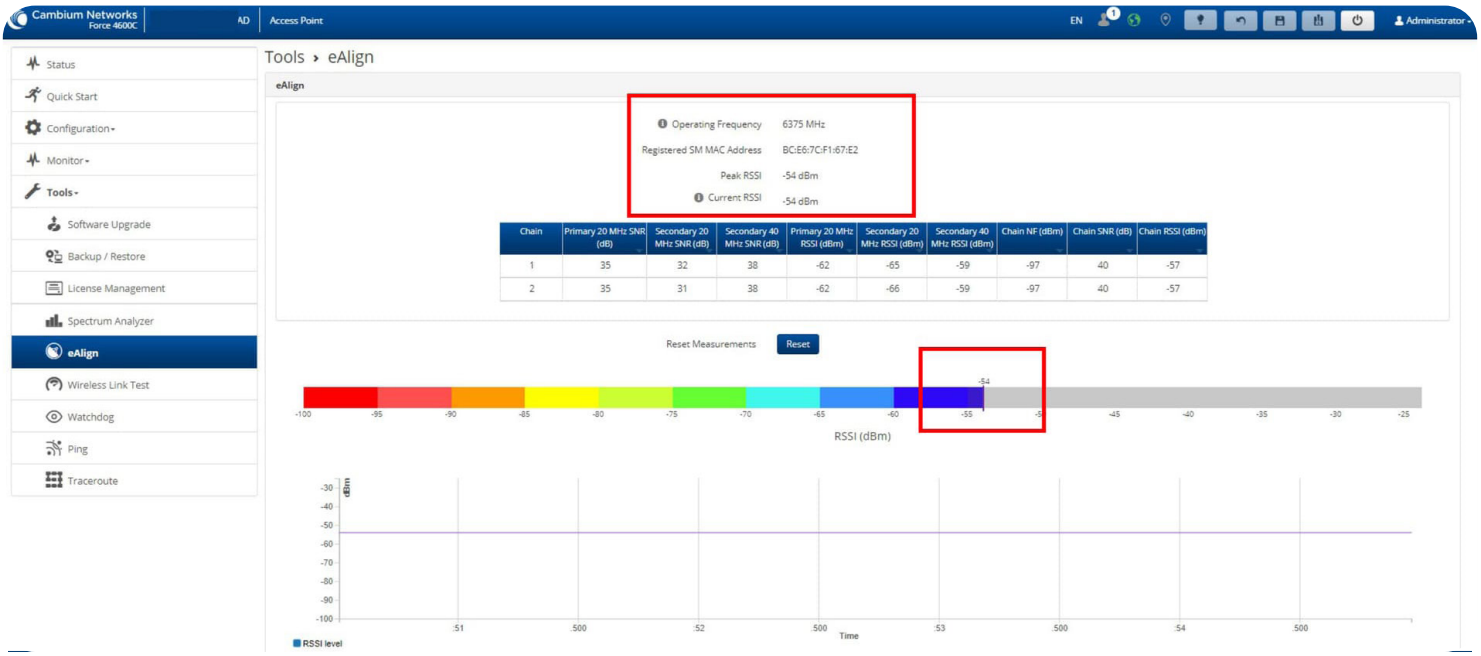


Field Results

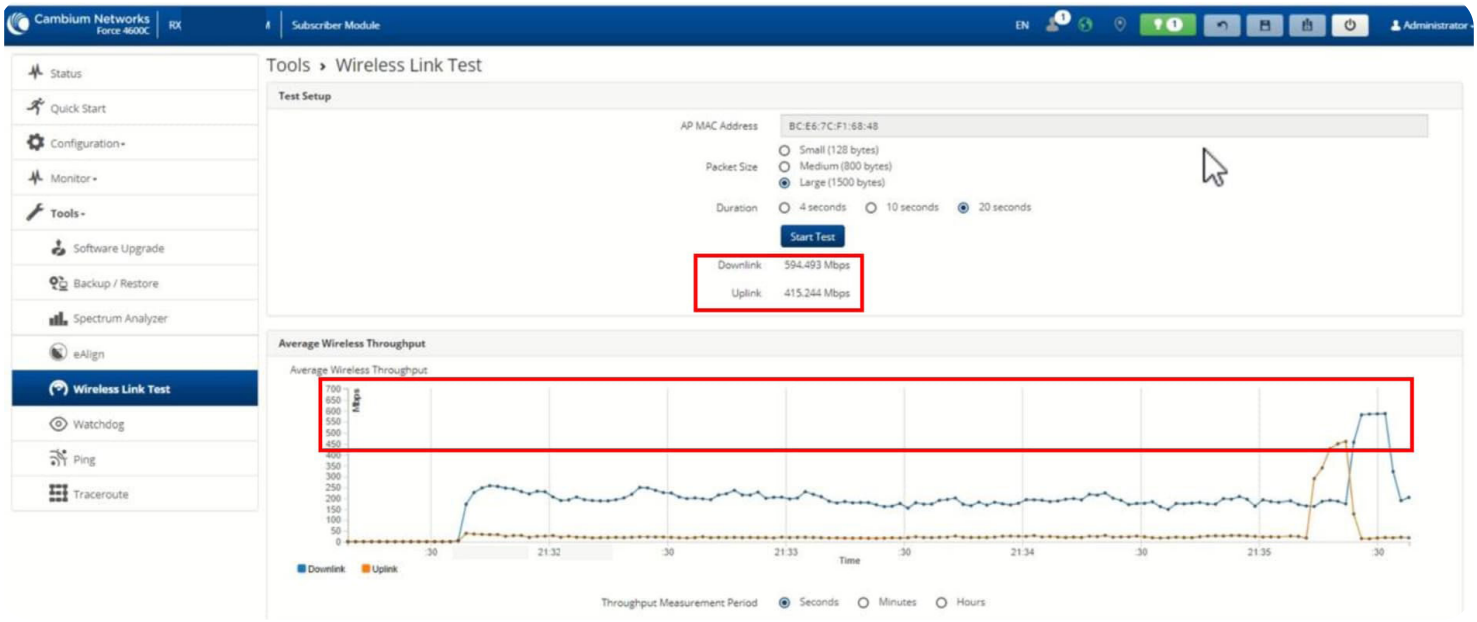
Initial tests of the PTP link demonstrated solid performance with a Received Signal Strength Indicator (RSSI) of -51 dBm. Although environmental factors such as high humidity limited the use of the 160 MHz channel, the system maintained impressive latency performance using an 80 MHz channel. This stability was achieved despite the considerable link distance of 50.16 miles, showcasing the strength of Cambium's technology in delivering high-performance connectivity across challenging terrain.

Key performance outcomes:

- **Latency:** Low, ensuring redundancy and support for high-capacity data flow.
- **RSSI:** -51 dBm, a strong signal level for a long-distance link.
- **Link Availability:** 100%, ensuring uninterrupted service.



The ability to maintain reliable connectivity, even with environmental constraints, has paved the way for potential capacity increases in the future.



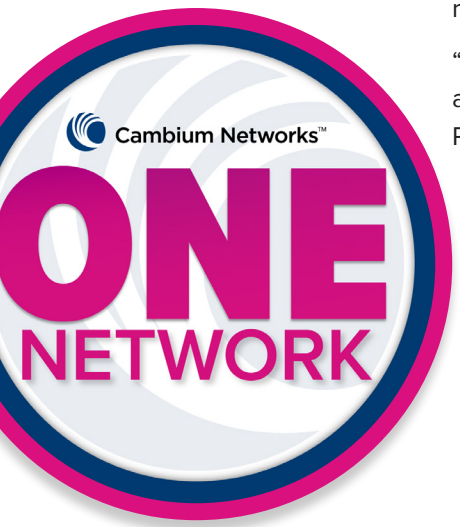
Business Value

By deploying Cambium Networks' technology, the ISP avoided the significant costs and complexity of extending fiber infrastructure deep into the jungle. The PTP backhaul link provided a dependable, high-performance alternative to fiber, ensuring the ISP could deliver consistent service without worrying about downtime or fiber cuts.

This solution significantly improved the ISP's network resilience and offered the opportunity for future scalability. The implementation not only addressed immediate needs but also positioned the ISP to expand its service offering as demand grows.

Cambium Networks' ONE Network platform played a pivotal role in simplifying network management for the ISP. The platform's integrated wired and wireless broadband technologies allowed the ISP to focus on growing their business rather than managing network complexities.

"Cambium's solution has provided us with a reliable backup option, ensuring our customers are always connected—even in one of the most remote areas in the world." — Sergio M., Project Lead



About Cambium Networks

Cambium Networks enables service providers, enterprises, industrial organizations, and governments to deliver exceptional digital experiences, and device connectivity, with compelling economics. Our ONE Network platform simplifies management of Cambium Networks' wired and wireless broadband and network edge technologies. Our customers can focus more resources on managing their business rather than the network. We make connectivity that just works.

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