TP-Link Helps Peruvian WISP Overcome Wireless Connectivity Challenges

❤ CUSTOMER PROFILE

Company Name: Kroton

Sector: Wireless Internet Service Provider

Capacity: 150 Subscribers

Location: Peru, South America

❤ BACKGROUND

Kroton is a distributor of IT and telecommunications equipment, based in Peru. Established in 1997, Kroton has since expanded their profile to provide internet services. Due to the terrain and other difficult environmental conditions, large-scale ISPs do not offer services in all areas of the country. In response, Kroton serves Peruvians with Wireless Internet Service, not only in the capital city of Lima, but various smaller areas, such as the district of Villa María del Triunfo, where several challenges limit the viability of internet services.

" **The performance of CPE was better than expected, working stable even with -85 dBm of received power.** " David Grillo, Engineer, Kroton

❤ CHALLENGE

IDue to Villa María del Triunfo's infrastructure limitations, signal interference, installation difficulties and known stability issues, or Kroton's 150 subscribers face constant impediments to network connectivity.

• Wide Dispersal Area
Kroton's target consumers live throughout Villa María, in various concentrations across the district. Lacking proper

wired communication facilities, wired ISP deployment to customers is not viable. This makes wireless internet services the only option.

• Harsh Wireless Environment

As internet providers can only serve wirelessly, several WISPs operate in Villa María, creating an increasingly complex, competitive wireless environment. As a result, signal collisions among wireless devices often hinder or even drop network throughput, causing a severe impact on the end-user experience. To address these problems, Kroton wanted a solution to provide clients with consistent, stronger and faster access to the internet than its competitors.

• Efficient Network Management

In order to achieve a more robust wireless service area and maximum performance, network equipment must be deployed according to the end-user's location, which is always in hard-to-reach areas such as the roof of tall buildings. After installation, a management system must be in place to enable the WISP to effectively communicate with all

equipment, no matter their location.

• Long-Term Reliability

Conventional solutions in the area have a short lifespan, since most existing outdoor wireless devices can only operate for approximately two years. This short-term durability presents long-term hassle, in which WISPs must constantly troubleshoot network devices, and customers often face intermittent signal interruption.

Facing these various challenges, Kroton was eager to discover the right solution in building a reliable and stable network to protect customers' needs for consistent service.

❤ SOLUTION

Although large ISPs declined to overcome the challenges to provide service in areas like Villa María, Kroton was more than happy to unburden customers from these limitations in order to keep them in communication with the rest of the world.

To achieve this, TP-Link looked to the Pharos series, which provide a high-performance, cost-effective, enterprise-class outdoor wireless solution, designed for outdoor wireless backhaul and point-to-multipoint connections. Pharos series products use flexible wireless connections to replace expensive, fixed-wire connections for outdoor networking.

• Reaching Every Customer with Point-to-Multipoint

With Qualcomm Atheros enterprise-level chipsets, high-gain antennas and high-power amplifiers, the Pharos series CPE510 is built to maximize and stabilize long-distance wireless transmission performance.

-Provides PtMP coverage in a large area (3.2 km radius) with many wireless devices

-Uses switches to connect each CPE to 3-20 subscribers

-Provides each subscriber with 1 Mbps bandwidth

-The most remote CPE can be placed 3.2 km from the base station

• Overcoming the Wireless Environment with MAXtream

TP-Link Pharos series developed proprietary MAXtream TDMA Technology to incredibly improve wireless performance in complex wireless environments and eliminate the effects of troublesome wireless competition and collision. These qualities made Pharos the ideal solution for Villa María's digital environment.

• Pharos Control for Overall Ease

TP-Link also delivered to Kroton an effective and easy network tool for the provider, while delivering a better service to their customers.

Pharos Control, TP-Link's intuitive and user-friendly Centralized Management Control Software, allows administrators to easily manage all the devices in the network from any PC, and an easy-to-use interface requires no special training. Functions such as device discovery, status monitoring, firmware upgrading and network maintenance can be all be remotely managed.
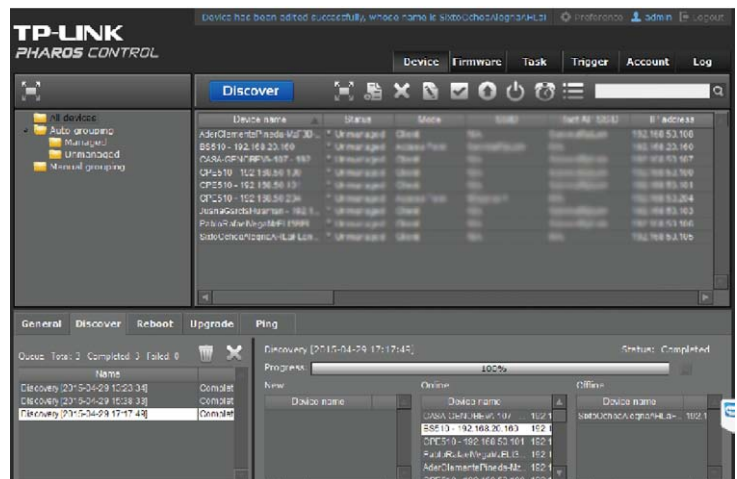
• Durable Design for Outdoor Use

The specially designed weatherproof enclosure and PoE power supply ensure that Pharos series can withstand various weather conditions, from dry to humid, in temperatures from -30°C~70°C (-22°F~158°F). 6KV lightning protection and grounding design also improves the reliability of Pharos series devices in inclement weather, extending service life.

These features and more made the TP-Link Pharos series the most effective, efficient option to meet Kroton's needs to dutifully serve the people of Villa María.

❤ BENEFITS FOR CUSTOMERS

By establishing a stable and reliable network solution, Kroton was able to provide the excellent internet service and solid connectivity their customers deserved. Its centralized management system also gave them the benefit of easy network optimization, no matter how far devices were placed. TP-Link Pharos series products have helped the service provider to build a cost-effective and reliable wireless

network and disperse to the every subscriber in Villa María, helping them to improve the quality of their life. Kroton's entire network has performed well since February 2015, and the performance greatly exceeds the WISP's expectation, building further confidence in TP-Link. Thus, Kroton has prepared for deployment of more Pharos products in the future, as they continue to grow the coverage of their more reliable, stronger, superior internet service.

Kroton's past problems that were solved by TP-Link Pharos include:
Better coverage: Delivering customer service where it could not reach before.
Security: Maintaining a stronger, more stable and more consistent signal than the competition.