

Infinet Wireless helps to improve health and care services in Cartagena de Indias



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Rising demand for both primary and secondary healthcare services from across Cartagena, Colombia, was placing intolerable strain on the city's existing broadband network. Realizing the need to expand its connectivity and unify its information to improve patient care, the Social Company of the State Local Hospital Cartagena de Indias (ESE HLCI) had the help of Fibraxo S.A.S, local partner of Infinet Wireless, to establish a network to connect more than 43 hospital branches and headquarters.

For better medical care in Cartagena

The aim of the network upgrade was to ensure quality, efficiency and competitiveness in the provision of medical care to the population of the district of Cartagena and the department of Bolívar. Connectivity points were located at health centres in rural areas and in some of the most vulnerable places in the city. The aim was to deliver good quality services to the entire population, especially in areas with extreme poverty, such as Arroyo Grande, Arroyo de Piedra and Arroyo de las Canoas.

Infinet Wireless solutions replaced a wireless platform which suffered from major delays for data transfers and sharing, resulting in poor service, however, with the implementation of the new Infinet equipment, greater operational efficiency was achieved as well as optimization of the service, reducing the number of technical supports attended.

Reliable, high performing wireless solutions

Avantec Colombia acted as an intermediary between Fibraxo S.A.S. and Infinet Wireless in commercial matters. By providing a wireless solution service, all offices could be linked to the administrative ESE HLCI.

The new network provided by Fibraxo S.A.S consisted of two types of overlay platforms: a cabled layer based on fibre optics, and a wireless layer using multiple radio links and Wi-Fi zones operating in frequency bands between 2.4 GHz and 5 GHz. Unprecedented service quality and performance was achieved over the entire territory covered, especially in remote and rural areas.

The heart and hub of this platform was deployed in the strategic location of Cerro de la Popa, where point-to-point (PtP) links and point-to-multipoint (PtmP) base stations were installed. They used the InfiMAN 2x2 R5000-Qmxb beamforming technology, as well as several high-capacity InfiLINK 2x2 R5000-Lmn and R5000-Smn wireless units. All remote subscribers are now able to enjoy a bandwidth of up to 50Mbps.

Serving the vulnerable

The new data network was implemented to cater for the increased number of patients attending emergency centres on a daily basis, which had risen to an average of an extra 300 people a day. Unprecedented service quality and performance was achieved in the entire territory, especially on regions with extreme poverty like Arroyo Grande, Arroyo de Piedra and Arroyo de las Canoas y the insular zone: Caño del Oro, Punta Arena, Bocachica y Tierra Bomba.

Further benefits include providing ESE HLCI with the ability to upload patient data more quickly and more accurately. ESE's Local Hospitals of Cartagena are now able to synchronize digital clinical records to the data centres of the administrative headquarters, via a Health Manager application that allows the browsing of patients' clinical histories.

"We chose Infinet Wireless' solutions because of its fiber optic-like productivity and high performance, even at the subscriber end, and their ultra-low latency. The technology also offers interference mitigation and lightning protection solutions, as well as advanced data management utilities such as traffic prioritization, full Quality of Service (QoS), firewalling and routing,"

said Wilmer Fabián Barros González, Project Manager at Fibraxo SAS.

González also said his firm intention is to expand the deployment of Infinet Wireless solutions in future projects to reach more urban and rural areas, for example to the Bolivar and Sucre departments.

Hernán Dager Peña, IT coordinator of La Empresa Social del Estado Hospital Local Cartagena de Indias, said: *“Our main requirement was a service that offered reliability, quality and stable connectivity in the 43 hospital branches, including the administrative headquarters, three hospitals, ten emergency health centres and ten external consultation centres.”*

Peña added: *“Fibraxo SAS offered us a robust platform based on both fibre optics and radio link, with the latter provided by Infinet Wireless and working perfectly to meet the needs and requirements of our hospitals network. The health centres are spread around the state with long distances between them, yet the Fibraxo network has managed to cover seamlessly the entire area, as well the surrounding towns and islands.”*

Requirements

- The need to generate connectivity and create information unification
- Achieve quality throughout the territory, especially in areas with extreme poverty

Solutions

- Two InfiMAN 2x2 R5000-Qmxb devices
- 19 dBi InfiLINK 2x2 R5000-Lmn
- 23 dBi InfiLINK 2x2 R5000-Smn

Customer benefits

- Provide quality in health services to the entire community thanks to the connectivity network.
- Centralized management of information from all ESE HLCl.
- Digital inclusion of rural communities and island areas of Cartagena.
- The connectivity and coverage of those places that previously weren't serviced.
- Capacity (bandwidth).
- Economic savings due to reduced technical support.
- 24/7 Call center monitoring and assistance service was improved.