Success Story

ETB Colombia **offloads LTE subscribers to WiFi** to provide consistent data coverage

With Alepo's Wi-Fi Offload Solution, ETB Colombia boosted its data coverage and enhanced the data experience for LTE subscribers.

Operator Requirements

As a longtime technology partner of ETB, Alepo was already familiar with ETB's network architecture and its limitations. Challenges and considerations included:

- Stringent deadlines that demanded quick deployment of an expansive Wi-Fi hotspot network
- A desire to leverage and extend the existing Alepo AAA infrastructure in order to maintain a low TCO
- Limited LTE coverage as ETB did not own the LTE RAN
- A complex process to coordinate multiple, third-party vendors in the LTE core and Wi-Fi access network

Project Background

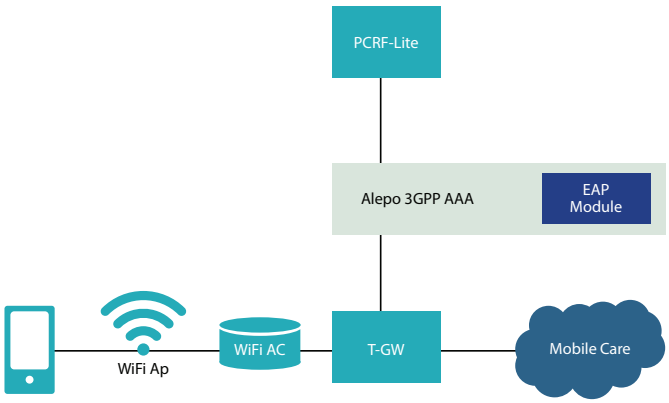
La Empresa de Telecomunicaciones de Bogota (ETB), Colombia's principal communications service provider, offers fixed voice services, Fiber-to-the-home (FTTH) broadband, LTE, and interactive digital television.In the effort to provide consistent data coverage to subscribers on its recently launched LTE broadband network, ETB turned to its longstanding technology partner, Alepo, for a carrier-grade Wi-Fi offload solution.

In Wi-Fi offload, ETB wanted to achieve a smooth data experience for its LTE subscribers in the absence of LTE data coverage. ETB's goal was to deliver consistent high-speed data services over a mix of LTE and Wi-Fi in order to enhance the customer data experience, prevent churn, and maintain brand leadership. Building its own expansive Wi-Fi hotspot network was also part of ETB's six strategic pillars in a major, multi-year network transformation program aimed to broaden its next-gen data capabilities.

Alepo's Solution

Alepo worked closely with ETB to deploy a reliable, high-speed Wi-Fi hotspot network in under two months. Alepo created a smooth, secure, and user-friendly Wi-Fi offload experience for subscribers. As part of the Alepo Wi-Fi Offload solution, Alepo delivered the following:

- Alepo's 3GPP Carrier-Grade AAA at multiple sites
- Alepo's EAP module for secure SIM-based authentication of Wi-Fi offloaded subscribers
- Alepo Enterprise Management System (EMS) Portal for AAA configuration and user management
- Integration of Alepo's 3GPP AAA with a third-party HSS for authentication via Diameter-based SWx interface
- Integration of Alepo's 3GPP AAA with third-party T-GW for authentication via RADIUS interface



Network Architecture

Solution Highlights

With Alepo's performance-driven AAA solution, ETB gained an industry-leading core network infrastructure and unprecedented performance. The solutions provided endless scalability and greater capacity to support ever-increasing subscriber base of ETB with no further network investment. Highlights of the solution included:

A Robust Carrier-Grade Wi-Fi Network Infrastructure

Improved ETB's total network capacity and data coverage that was previously restricted due to a lack of ETB-owned LTE base stations.

Consistent and Reliable Data Coverage

With multi-site, high-performance AAA infrastructure, Alepo was able to deliver a consistent and reliable data experience by smoothly and automatically offloading mobile subscribers to Wi-Fi where available.

Brand Differentiation

The launch of Wi-Fi hotspot services in the Bogota region gave ETB a competitive advantage over competitors in the market.

Low Total Cost of Ownership

With Alepo AAA infrastructure already installed at ETB and successful IOTs with the mobile core and Wi-Fi vendors, Alepo was able to extend the solution to support Wi-Fi offload in a highly cost-effective manner.

Project Outcomes

Enhanced Data Coverage

Successful Wi-Fi offload created a more connected network and consistent data experience. After the project, ETB data coverage increased thanks to a granular deployment of Wi-Fi hotspots across the capital.

Increased Data Revenue

Total data consumption on Wi-Fi increased from less than 1GB to 16GB in a month, which released high pressure on shared radio access network after project completion. Latest statistics by MINTIC shows that ETB had 162K subscribers at the end of Q2 2015 and expected to reach 400K by end 2015[1], forecasting a huge increase in data revenues for ETB.

Improved Customer Experience (CEX)

Automatic Wi-Fi offload in the absence of LTE data coverage improved CEX and prevented churn. Offloaded data sessions had consistently gone up from 0% to 5% of mobile subscribers in just one month after commercial launch, indicating that an increasing number of ETB mobile subscribers now regularly enjoy continuous data coverage, whether on LTE or Wi-Fi.

References:

1. http://colombiatic.mintic.gov.co/602/articles-14228_archivo_pdf.pdf

Credits:

Alepo would like to extend its appreciation to Renzo Alejandro Clavijo Romero, Telecommunications Engineering and Economic Analysis Consultant at ETB (renzo.clavijor@etb.com.co) for providing helpful insights on the post-launch project scenario.