RELIABLE WIRELESS INTERNET CONNECTIVITY FOR FERRY PASSENGERS

SUMMARY

Despite numerous bridges and subways in Istanbul, the ferry remains the most popular form of transport. The largest city in Turkey lies on two continents — Europe and Asia. This unique geographical position makes it possible to live on one continent while working on another and commute between them each day for 300.000 people.

Istanbul has great ambitions to become a city connected by the IoT, improving connectivity. The challenges and solutions it choses are essential for any city that needs to make the move towards smart infrastructure.

CHALLENGE

Many passengers on the ferry want to share their scenic route on social media, read up on the news while commuting, or facetime their friends and family. For every one of those activities, an internet connection is a must, however the challenge lies in securing that connectivity on the water and between two continents separated by the Bosporus strait.

As the ferry sails across the water, the router might connect to different internet providers due to changing geographical location. Also, using the roaming function might cost quite a lot. Not to mention, many users are going to be connecting to one network at the same time.

PARTNERS

Stratus Bilisim is a software engineering and distribution company founded back in 2000. This company, located in Istanbul, Turkey, is highly experienced in unique security and network software solutions. Their primary expertise lies in the cyber security niche.

ISTELKOM Inc. came about from the need to provide innovative and reliable digital solutions for Istanbul. The company is working on establishing a better infrastructure for communications, which is the backbone of smart cities. One of their goals is to leave more sustainable and smart cities for future generations.
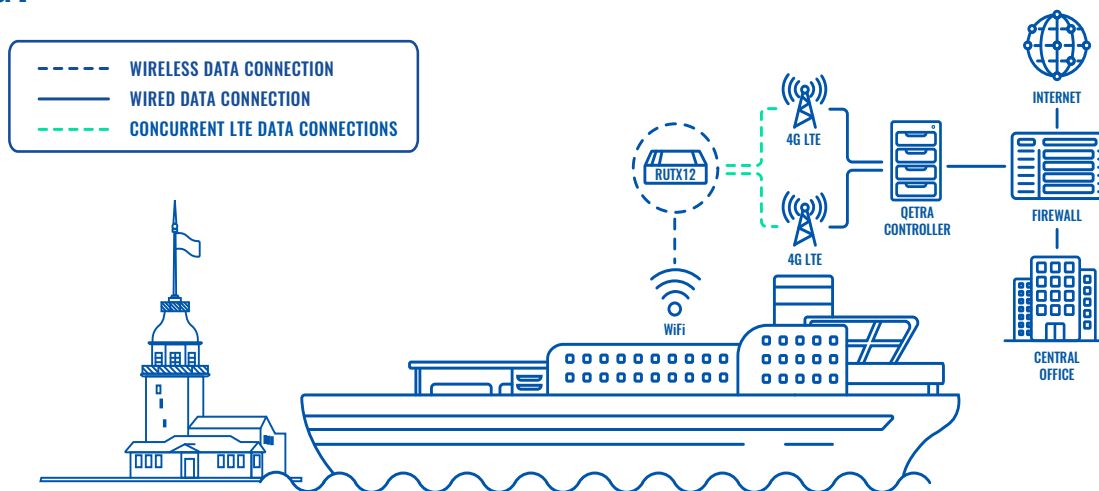
SOLUTION

ISTTELKOM and Stratus Bilisim have teamed up with Teltonika Networks to find an IoT solution that would help to provide a stable wireless internet connection to passengers on board the ferries. For this, our partners used the RUTX12 industrial cellular router due to its efficient load balancing and customizable RutOS firmware. In such a scenario features like load balancing, band-locking and the durability of the router are a must.

Using our SDK in combination with their own software Qetra SDWAN Suite, Stratus Bilisim added SD-WAN capabilities with Layer 2 communication to the RUTX12 router. With RUTX12 the load balancing feature can provide Wi-Fi users with a fast and stable internet connection. This IoT solution can automatically detect when one of the cellular internet provider connections weakens or fails and then switch to the other, more stable one. This functionality is essential as the cellular coverage on a ship is spotty at best.

RUTX12 router in this setup can offer Wi-Fi hotspot functionality. This function increases the security of the network with custom accessibility settings where certain permissions can be set. Moreover, it can be used for marketing and research purposes as it can collect data from connected devices or display targeted ads as they access the web.

TOPOLOGY

- - - - WIRELESS DATA CONNECTION
———— WIRED DATA CONNECTION
- - - - CONCURRENT LTE DATA CONNECTIONS

RUTX12 · 4G LTE · 4G LTE · WiFi · QETRA CONTROLLER · INTERNET · FIREWALL · CENTRAL OFFICE

BENEFITS

- Internet connection can be more stable and reach much higher speed because RUTX12 has two LTE Cat6 modems that can operate simultaneously.
- A wide range of operating humidity and temperature allows RUTX12 to be installed in harsh environments, such as a ferry.
- This router has a collection of advanced security features like VPN and Firewall which ensures that overall connection is safe.
- RUTX12 offers load balancing and band locking, both of these features provide greater control over data usage.

WHY TELTONIKA NETWORKS?

According to ISTTELKOM and Stratus Bilisim, they chose Teltonika Networks as their partner due to the high customizability and quality of our products. They were also looking for highly durable devices, that could withstand the harsh conditions when operating in Bosphorus. Our industrial-grade products were able to provide the complex and varied functionalities needed for this IoT solution.