

Case Study



Introduction

Legacy LTE solutions have been based on proprietary hardware and take a long time to develop and deploy. Parallel Wireless Open RAN and cloud-native software-based 4G LTE solution makes it the best candidate for any end-to-end network deployment. The software approach reduces the complexity of network configuration during initial installations. Also, specific SON functionality including self-configuration eliminates the need for expert installers and can be done remotely. Parallel Wireless outdoor Open RAN hardware reduces the footprint on the rooftops or towers and will reduce the related OPEX dramatically.

The Challenge

According to the GSMA Mobile Economy: Middle East and North Africa 2018 report, Iraq has only a 52% wireless Internet penetration rate, presenting a great opportunity for telecom service providers in that market. Poor infrastructure and high operating costs are currently stunting development. Kalimat recognized the inflexibility of legacy cellular solutions to bring digital services to the Iraqi population that is hungry for digital services.

The Solution: Parallel Wireless End-to-End 4G Wireless Infrastructure

Kalimat deployed Parallel Wireless's fully virtualized Open RAN and core solutions for the overall network build-out. Kalimat deployed a distributed virtualized mobile broadband network delivering consumer and enterprise wireless services across Iraq cost-effectively and on an accelerated timeline including these components from Parallel Wireless:

- Open RAN hardware for outdoor and indoor: With the Parallel Wireless approach, we enable you to use any white box CPE, indoors or out, to enable fixed wireless access. This gave Kalimat the flexibility to choose whichever hardware they preferred with no vendor lock-in, the most economic or most capable approach. 4G Open RAN elements including the world's first 3GPP compliant Open RAN controller, enable smooth evolution, maximum asset reuse and high performance to the end users and businesses.
- IP-enabled mobile transport for converged, cost-efficient transport as well as high QoS and network slicing.
- Service-aware cloud-native wireless core solution with advanced QoS and scalability for dynamic IP, mobility and policy management. Parallel Wireless core network software concentrates all eNBs and provides a single S1-U connection to S-GW for data traffic and a single S1-MME connection to MME for all signaling and control related traffic. It acts as an aggregator of S1 signaling toward S-GW and MME. This reduces all handover and paging related signaling and control messages toward the core network (EPC). The Parallel Wireless EPC is a full LTE core solution consisting of MME, SGW, and PGW, or any combination of these, deployed as Virtual Network Functions (NFV) on a COTS hardware or virtualized infrastructure. Its scalable architecture allowed flexible deployments offering one of the best performance-to-price ratios in the industry. As a part of Policy and Charging Control (PCC) functionality, Parallel Wireless provides PCRF portion of it to integrate with our EPC through standard Gx interface. This provided a fast deployment path toward a complete and operational network for Kalimat.
- Intelligent network management across all network elements with most advanced real-time network orchestration and SON.
- Wireless intelligence and Analytics that allowed for end-to-end network visibility to harness knowledge and enable a differentiated user experience.



Benefits to Kalimat

Kalimat Telecom benefited with:

- Ease of deployment: The Parallel Wireless software-based architecture delivered ease of deployment and the flexibility required to meet the changing needs of this market. Parallel Wireless software eliminates manual upgrade steps and makes a new site installation a very simple process as software configures RANs toward the Kalimat's core network during the initial installation.
- Ease of on-going maintenance: After the initial install, any new CWS deployment is managed through the software and all related configurations will be pushed to CWS during the installation. The field technicians just install the CWS and connect it to the network with an IP address. Everything is configured and coordinated through the software and makes the installation of any new location fast and cost-effective through network automation.
- Future proof for 5G: The software has holistic visibility into the network as we enable the unique capability of having portability and mobility between the home network and the larger macro network, so subscribers are always connected. With fixed wireless being one of the first use cases for 5G, this solution further enables migration to 5G networks.
- Lowest TCO to build out a network: to help them cost-effectively enable connectivity by simplifying the installation and increasing flexibility and sustainability through our software for new wireless network build-outs. As a result, the costs associated with building or modernizing mobile networks are reduced and connectivity can be brought to every single person in the world."

About Kalimat Telecom

Kalimat Telecom Ltd. is known to be one of Iraq's leading telecommunications providers offering voice and data services to home, corporate and private sector customers across the country. Iraq is one of the world's most exciting high-growth telecom markets, and Kalimat Telecom is following through with the aim to employ and support the Iraqi people, we are helping to build an ever-improving international reputation for the new Iraq. Kalimat Telecom is a leading telecoms player that handles the voice traffic and data transfer needs of the Iraqi consumer between different regions of the country, ensuring improved call completion rates, prompt bill settlement and increased revenue for its operation.

Summary

The all-around value of working with an Open RAN and cloud-native solutions for an end-to-end 4G LTE solution goes beyond financial benefits. It helps accelerate deployment timelines and enables automation across all network elements. With our CWS Open RAN hardware and cloud-native architecture, Parallel Wireless provided a larger coverage area per base station, allowing to cost-effectively provide access to more homes and communities for much less investment, allowing Kalimat enter new markets. As a result, this will become one of the largest fully virtualized commercial mobile broadband networks in the region. With Parallel Wireless, the overall CAPEX, OPEX, and complexity associated with building out and managing the network are significantly reduced through network automation. As a result, the high-speed mobile broadband network will provide the region with a range of advanced new residential and business voice and data services, helping with the digital society realization.



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