

Validation of Open RAN Technology for an African Telco Operator for Mass Scale Deployment



Overview

The leading African telco operator had a vision of providing the benefits of connected digital life to their customers. They wanted to deploy Open RAN technology that enables a quicker, cost effective, and seamless support to their digital solutions. TechM developed and deployed Open RAN in lab and field environment partnered with an Asian telco. The solution enables cost reduction and faster scaling. The technology involves in reduction of power consumption and associated carbon emissions.

Client Background and Challenge

A leading telecom operator in Africa was seeking the flexibility and cost savings that an open and virtual RAN architecture could lend their networks. Their goal was to explore their options and decide if the open system would help modernize and evolve their network towards a software-centric approach. They partnered with Tech Mahindra, drawn by their successful launch of a similar network in Asia and their experience managing RAN vendor ecosystems. With a year in this program, we have successfully completed the lab and field validation. The performance benchmark of the Open RAN was found to be at par with traditional RAN, however it was evident that Open RAN had more benefits.

Our Approach and Solution

TechM partnered with a leading telecom company in Asia, pioneer in network on cloud to develop and deploy virtual RAN. TechM with this association has been their preferred partner to commercially deploy and integrate this technology for telcos across the globe. This gave us an edge to provide guidance to the client on deployment of Open RAN in terms of right architecture, vendor readiness and offering a proof of concept (POC) in lab and field trial to validate the benefits of the technology and spot the readiness for mass scale deployment.

TechM was selected as a vendor neutral system integrator as they want to test three to four technology platforms. We demonstrated our capabilities to execute multi-vendor ecosystem which is backed by partner alliances.

The client entrusted TechM to render lab and field POC in their various operating companies. We successfully tested the Open RAN in lab and field deployment for one Open RAN vendor. Since the results were encouraging with support from the client and the platform vendors, we addressed the challenges in commercial deployments. We are rightly poised to work with operators in Africa to bring most advance technology and help Africa move into digital framework including 5G offerings for digital enterprise.

The scope of POC included the testing of various call and data scenario's in 2G, 3G, 4G wireless domain. We completed acceptance testing of the scenarios provided by client in lab and field scenario and achieved success criteria in terms of KPI's provided by the client

The client wanted validation that the Open RAN technology is mature enough to commercially replace or augment their current expansion in their network. With a year in this program, we have successfully completed the lab and field trials.



Business and Community Impact

The technology brings more synergies across their RAN deployment, faster roll-out and capacity balancing as traffic keeps on shifting from one zone to other as seen during the pandemic. The solution offers wider options on the supply side for the client them to choose from multiple vendors.



Accelerates deployment time by 20% compared to traditional RAN and enables faster deployment timelines (from months to weeks) for the scaled program



The solution reduces hardware footprint due to virtualization and is also energy efficient contributing to reduction in carbon footprint



New feature rollouts and Technology refresh is faster as the new architecture is cloud based and software centric



Flexible deployment architecture enables substantial cost savings and faster scaling of the network

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