Lenovo and Orange Successfully Enable Open RAN in End-to-End Workload Deployment and Orchestration
Article

Open RAN is a new Radio Access Network approach to reduce costs and improve innovation in the Telecommunication industry. Telco operators are investing in this technology in the early phases to get positioned to further stimulate the ecosystem and develop standards as the technology matures. Orange is one of the leading operators in Open RAN and joins with Lenovo to provide modern, reliable telco infrastructure.

The Open RAN Market

According to Grandview Research, the global open RAN market size was estimated at USD 1,647.5 million in 2022 and is expected to grow at a compound annual growth rate (CAGR) of 33.0% from 2023 to 2030. Open RAN is expected to accelerate modern telco networks, provide a competitive advantage, and enable new revenue streams for Communication Services Providers (CSP).

Accelerates Orchestration and Deployment of Open RAN Workloads

Lenovo, Orange, and Software Radio Systems (SRS) joined forces to validate the implementation of a fully disaggregated 5G System (5GS) at the Orange Open Testing and Integration Center (OTIC) Lab in Rennes, France. As part of this collaboration, the project encompassed the orchestration of deployment for Open RAN workloads on Lenovo's Commercial off-the-shelf (COTS) server hardware.

This undertaking represents a significant milestone in advancing continuous integration, deployment, and testing processes for telecommunications workloads throughout their lifecycle. The initiative not only accelerates the enablement of capabilities but also contributes to a reduction in Time-to-Market (TTM) for introducing new features in Telco networks.

Fully Automated Sylva NFVI Runtime Software and Orchestration

Sylva is used as NFVI Runtime Software and Orchestration which is an important milestone, as it is integrated for the first time into RAN CNF deployment orchestration and management. Both Orange and Lenovo are active contributors to Sylva Project to unify the cloud and orchestration layer that will support reducing operational costs for Telco operators.

Lenovo's Motorola Edge, ThinkEdge and ThinkSystem solutions powered User Equipment (UE), Open RAN DU & CU, 3GPP 5G Core (5GC) Network services demonstrating End-to-End (E2E) deployment orchestration in a disaggregated multi-vendor 5G Stand Alone (SA) environment.
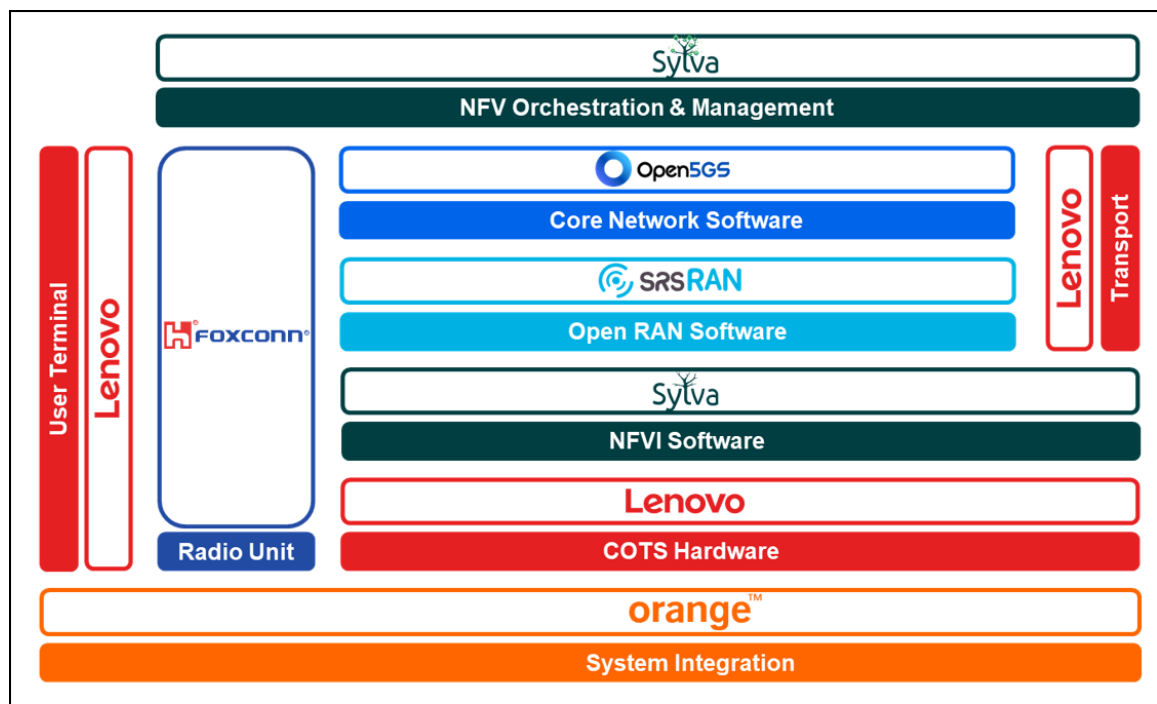

Figure 1. Layered Deployment Blueprint

Conclusion

Lenovo and Orange are committed to helping Open RAN technology evolve towards commercially deployable solutions; being either for greenfield or brownfield, and whatever the deployment scenario is (macro, micro-private networks, etc.).

This study proved the interoperation of truly disaggregated 5GS network fully automated using a MANO compliant open-source orchestrator to exploit the real potential. Both parties are further committed to support disaggregation in Telco for any generation, beyond 5G and ready to participate in the upcoming PlugFest events.

For more information, see the paper "Enabling an E2E Deployment Orchestration Scenario for Open RAN", available at https://lenovopress.lenovo.com/lp1883.

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