

Mavenir's innovative Virtualized RAN solution is designed to address the requirements of pre-5G networks and inexpensive upgrades to 5G (NR)

Virtualized RAN (Cloud RAN)

A flexible Radio Access Network (RAN) is the cornerstone of next generation mobile network infrastructure. The evolved RAN architecture, designed with cloud native virtualization techniques, enables the RAN to flex and adapt based on usage and coverage. This flexibility provides expanded and more convenient network location choices for the baseband processing. In addition, it offers a strategic differentiation by enabling the RRUs to interwork with the virtualized Cloud BBU over a non-ideal fronthaul (i.e. ethernet), overcoming the traditional constraints of CPRI over fiber.

Conventional RAN platforms have been based on proprietary hardware and rely on long life-cycles in development, deployment, and operation. With each generation of radio interface change, these radios are typically replaced with the newer versions at a significant investment and inconvenience to the CSPs. Furthermore, radio infrastructures based on this approach are designed based on the peak capacity without granular power and interference management capabilities. This creates the vendor lock-in and the inability to keep pace with technology and demographic transitions.

Mavenir's approach is radically different from the legacy vendors. With a comprehensive portfolio of fully virtualized VNFs, cloud native virtualization of the baseband processing is extended to the edge of the network. **vRAN (previously Cloud RAN)** brings increased business agility with network elasticity, flexibility, and dynamic RAN optimization. The baseband processing centralization enables dynamic RAN adaptation through hierarchical mobility, SON, CoMP, centralized scheduling, policy enforcement, and interference control. In addition, Mavenir's vBBU is designed to support multiple Fronthaul splits simultaneously – making the vRAN solution an ideal choice for vendor agnostic and future-proof strategy for the CSPs.

Mavenir's innovative vRAN solution (RRU and vBBU) is designed to address the requirements of pre-5G networks with design and programming capabilities that enable simple and inexpensive upgrades to [5G \(NR\)](#) – providing investment protection and deployment flexibility. This approach is an attractive and clear pathway for CSPs that circumvents sequential investment in expensive, legacy traditional radio infrastructure expansion that will require expensive physical replacement in 5G evolution.

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