

MODERNIZE WITH A VIRTUALIZED RADIO ACCESS NETWORK FROM RED HAT AND ALTIOSTAR

PARTNER SOLUTION BRIEF



Global mobile data traffic is expected to increase **445%** between 2017 and 2021.¹

RELENTLESS DEMAND FOR MOBILE BROADBAND

Demand for mobile bandwidth continues to grow as customers access new services and applications. However, revenue is not increasing in line with this demand. To retain customers and remain competitive, communications service providers (CSPs) must cost-effectively expand bandwidth while improving subscriber experience.

As a result, CSPs need to invest in and modernize their infrastructure. Radio access networks (RANs) are one of the most expensive mobile network elements and often require specialized hardware and software. Due to the technological complexities associated with wireless signaling, RANs are frequently the source of performance problems that affect customer experience. As an alternative to proprietary, hardware-based solutions, Red Hat and Altiostar offer a virtualized RAN (vRAN) solution that can help you deliver more customer value, reduce network costs, and prepare for future growth and uncertainty.

MODERNIZE AND VIRTUALIZE YOUR RADIO ACCESS NETWORK

The Red Hat® and Altiostar solution delivers full RAN functionality using open source infrastructure from Red Hat and virtualized baseband units (vBBU), virtualized signal processing units (vSPU), and intelligent Remote Radio Heads (iRRH) from Altiostar. The vBBU executes all upper-layer functions, while the vSPU performs real-time functions. The iRRH carries out physical-layer functions to provide wireless connectivity to mobile devices.

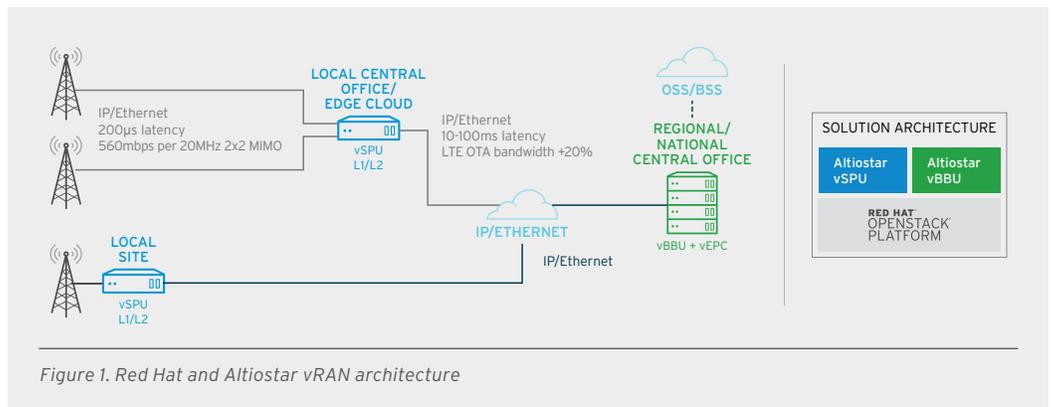


Figure 1. Red Hat and Altiostar vRAN architecture

As the only open source technology vendor that delivers the entire core software stack needed for network functions virtualization (NFV), Red Hat can ensure better interoperability, stability, and security across your NFV environment.² The vBBU and vSPU run as virtual network functions (VNFs) on network functions virtualization infrastructure (NFVi) from Red Hat, which is comprised

¹ "Global mobile data traffic from 2016 to 2021." Statista. 2018. [statista.com/statistics/271405/global-mobile-data-traffic-forecast](https://www.statista.com/statistics/271405/global-mobile-data-traffic-forecast).

² "Network functions virtualization with Red Hat." Red Hat. September 2015. [redhat.com/en/resources/network-functions-virtualization-red-hat](https://www.redhat.com/en/resources/network-functions-virtualization-red-hat).



ABOUT RED HAT

Red Hat is the world's leading provider of open source software solutions, using a community-powered approach to provide reliable and high-performing cloud, Linux, middleware, storage, and virtualization technologies. Red Hat also offers award-winning support, training, and consulting services. As a connective hub in a global network of enterprises, partners, and open source communities, Red Hat helps create relevant, innovative technologies that liberate resources for growth and prepare customers for the future of IT.

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of Red Hat OpenStack[®] Platform, Red Hat Enterprise Linux[®], Red Hat Ceph Storage, and commonly available hardware. Co-engineering and integration across Red Hat software further increases the reliability, performance, and scalability of the Red Hat NFVi solution.

The vRAN solution supports many network topologies, allowing you to choose the location and connectivity of all network components. Configure your network to pool resources across multiple cell sites, scale capacity based on conditions, and ease support and maintenance requirements. Connect solution components with a variety of Ethernet/IP transport links for fast, economical deployment that makes use of currently available infrastructure.

DELIVER AN ENHANCED CUSTOMER EXPERIENCE

Mobile broadband performance can be a source of dissatisfaction for smartphone users. The Red Hat and Altiostar solution can help you improve mobile broadband performance to increase customer satisfaction. The vRAN cluster provides greater than 99.9999% availability, so subscribers are always connected to the network.³ And, with highly scalable and elastic capacity, your network can quickly adapt to short-term, location-specific traffic spikes, providing high-quality, continuous service to your customers.

REDUCE COSTS THROUGH NETWORK FLEXIBILITY

Controlling costs continues to be an area of concern for CSPs, with 53% of operators viewing cost control and business efficiencies to be their most important strategic priority over the next three years.⁴ The Red Hat and Altiostar solution can help your business manage expenses and increase efficiency using a flexible network architecture. With an open source, industry-standard foundation, you can choose the hardware that best fits your needs and budget. Meanwhile, flexible component connectivity lets you use both existing and new Ethernet/IP transport links to maximize return on existing investments and reduce new capital expenditures.

PREPARE FOR FUTURE CHANGE AND UNCERTAINTY

By 2023, experts anticipate that there will be more than one billion 5G subscriptions worldwide.⁵ The Red Hat and Altiostar vRAN solution helps you prepare for future innovation and growth. The virtualized foundation lets you more easily upgrade and add new services and technologies like 5G and Internet of Things (IoT) using the same underlying infrastructure. You can also take advantage of long-term traffic growth with a network infrastructure that scales dynamically.

LEARN MORE

Mobile traffic continues to grow, providing revenue opportunities for CSPs. Red Hat and Altiostar can help you take advantage of this growth. With the Red Hat and Altiostar vRAN solution, you can reduce costs, deliver an enhanced customer experience, and prepare for future uncertainty. Contact your Red Hat or Altiostar sales representative to learn about modernizing your RAN to better support your business.

Learn more at redhat.com/telco and altiostar.com.

³ "vRAN Solution Technical Description." Altiostar. 2017.

⁴ "Digital transformation for 2020 and beyond." EY. 2017. ey.com/gl/en/industries/telecommunications/ey-digital-transformation-for-2020-and-beyond.

⁵ "Forecast number of mobile 5G subscriptions worldwide by region from 2019 to 2023." Statista. 2018. statista.com/statistics/521598/5g-mobile-subscriptions-worldwide.