

Lenovo ThinkEdge SE455 V3 Server and VMware Telco Cloud Platform RAN Solution for 5G Radio Access Networks

Integrated Lenovo and VMware Solution

Lenovo and VMware have successfully integrated and tested VMware Telco Cloud Platform RAN on the AMD-powered Lenovo ThinkEdge SE455 V3 server. The combination of the Lenovo ThinkEdge SE455 V3 Server and VMware Telco Cloud Platform RAN is a compelling solution for Communication Service Providers looking for a highly scalable horizontal platform to host their RAN functions as they embark on their evolutionary journey from Legacy RAN to vRAN to O-RAN. As we stand on the cusp of the virtualized 5G RAN, the solution provided by the 2 companies is ideal for the mass deployment of virtualized Distributed Units (DU) in a 5G network rollout.

The horizontal design coupled with operational consistency remove business uncertainties derived from introducing new virtualization technologies to a traditional proprietary-hardware-centric RAN environment, enabling Communication Service Providers to accelerate innovation speed, deploy 5G services fast, and scale the services as customers' demands grow.

In addition to RAN network elements, the combination of the new Lenovo Server and VMware Telco Cloud Platform RAN is also well suited to hosting Edge-native applications for residential and corporate customers.

In the ever-evolving landscape of cellular communication, the solution offered by Lenovo and VMware stands as a beacon of innovation, promising to reshape how we connect and communicate in a world that's constantly on the move. As rich content providers continue to push boundaries, this solution emerges as the bridge that links aspiration to realization, empowering networks to rise to the occasion and deliver connectivity that's not just fast, but also robust, secure, and sustainable.

Benefits for Mobile Operators

Power Efficiency, Sustainability and Performance

The Lenovo ThinkEdge S3455 V3 hosts a single socket AMD Siena Server, designed for the performance-per-Watt needs of Telco Edge applications, with up to 64 power-efficient cores. Combined with the virtualization and container management layer provided by VMware Telco Cloud Platform RAN, mobile operators will be able to build out a highly efficient private cloud optimized for power efficiency, sustainability and performance.

Security and Reliability

To enhance overall security posture, VMware Telco Cloud Platform RAN provides intrinsic security, where security is programmable, automated, and context-aware, with consistent security policies applied across distributed RAN sites, minimizing the risk of configuration errors or other changes that expose vulnerabilities.

With VMware's intrinsic security, each vRAN function is isolated within the virtualization layer, separating the management of the virtualization plane from other systems. The horizontal design of the platform combined with intrinsic security makes the platform flexible to run various vRAN functions across distributed RAN sites yet more secure than the conventional parameter-based and reactive security measures.

The Lenovo ThinkEdge SE455 V3 server is designed to meet the security and requirements for the Telco edge. It is ruggedized and NEB3 compliant, shock and vibration resistant, and it has extended temperature support up to 55 Degrees C. With lockable security bezel, tamper detection and encrypted storage your data is safe, on unauthorized access the encryption key is deleted rendering all information on the system immediately inaccessible.

Designed for Profitable, Large-Scale Deployments

The combined solution supports rapid, automated deployment for thousands of Telco edge locations. With VMware's [Telco Cloud Automation](#) operators can accelerate network service time-to-market with a simplified vendor-neutral and standard-compliant approach for designing and onboarding network functions and services.

[Lenovo XClarity](#) integrates into leading platforms, orchestration and IT services to provide full equipment insights and system management capabilities.

Edge Services

VMware Telco Cloud Platform RAN is designed to allow Communication Service Providers and their customers to develop custom 5G services at RAN sites, providing a tool for Communication Service Providers to offer superior edge computing services compared to hyperscalers. This is achieved by allowing 5G services, developed on and delivered from VMware Telco Cloud Platform RAN, to directly access ultra-high speed 5G networks end-to-end, from the consumer of the services all way up to the core of the network, making RAN to be truly modernized and transformed into a 5G multi-services hub.

Learn More

Lenovo: [Lenovo AMD EPYC servers | Lenovo US](#)

VMware: <https://telco.vmware.com/products/telco-cloud-platform-ran.html>

*Based on 3rd party testing

