



Rapidly Evolve to a 5G Core with Mavenir and VMware

Take a Flexible Path to 5G with Mavenir's Converged Packet Core on VMware Telco Cloud Platform

Running Mavenir's Converged Packet Core on VMware Telco Cloud Platform lets you deploy virtual network functions (VNFs) and cloud-native network functions (CNFs) throughout your existing packet core network without disruption while your core network evolves to 5G.

Mavenir's Converged Packet Core solution delivers an end-to-end, fully containerized 5G core with combination nodes for 2G, 3G, and 4G support, giving you the flexibility to retain existing services and subscribers while putting your network on a cost-effective path to 5G. Mavenir's Converged Packet Core can support non-3GPP access, and you can tailor the solution to fit your business needs.

VMware Telco Cloud Platform is powered by field-proven compute and networking coupled with VMware Telco Cloud Automation, which unites and optimizes multi-cloud resources to reduce operational complexity. The cloud-smart automation of VMware Telco Cloud Automation empowers you to rapidly launch services at scale.

The combined solution ensures telco-grade resiliency and service availability, delivers web-scale speed and agility, and accelerates your ability to bring innovative services to market.

Infrastructure and Automation for Seamless Evolution

VMware Telco Cloud Platform gives you the infrastructure, automation, and ecosystem to support a rapid evolution to 5G:

- High-performance CaaS and IaaS infrastructure: Deploy both CNFs and VNFs with consistent horizontal infrastructure and deploy them throughout the packet core network
- Telco-grade Kubernetes: Simplify the operations of Kubernetes for multi-cloud deployments with centralized management and governance tailored for telco use-cases
- Carrier-grade networking and performance: Achieve service continuity with integrated security and increased data plane performance through enhanced networking with VMware NSX
- Streamlined cloud-smart automation: Simplify operations and accelerate deployment speed with multi-layer, multi-cloud automation
- Multi-vendor ecosystem: Ensure interoperability and operational readiness of VNFs and CNFs so you can rapidly onboard and deploy functions in your 5G core

Mavenir's Converged Packet Core is supported by the following components on VMware Telco Cloud Platform:

- VMware ESXi™
- VMware vCenter® Server Appliance™
- VMware NSX-T™

VMWARE TELCO CLOUD PLATFORM AT A GLANCE

VMware Telco Cloud Platform™ is powered by field-proven compute and networking coupled with VMware Telco Cloud Automation™ and a telco-grade Kubernetes distribution. VMware Telco Cloud Platform empowers you to modernize your 5G network so you can rapidly deploy and efficiently operate multi-vendor CNFs and VNFs.

KEY BENEFITS

- Gain web-scale speed and agility to accelerate the rollout of 5G core services
- Deploy virtual network functions (VNFs) and containerized network functions (CNFs) on consistent horizontal infrastructure
- Dynamically adjust the configuration of underlying resources
- Automate lifecycle management of infrastructure, Kubernetes clusters, network functions, and services
- Accelerate the deployment of network functions through the VMware Ready for Telco Cloud program and its vast multi-vendor ecosystem

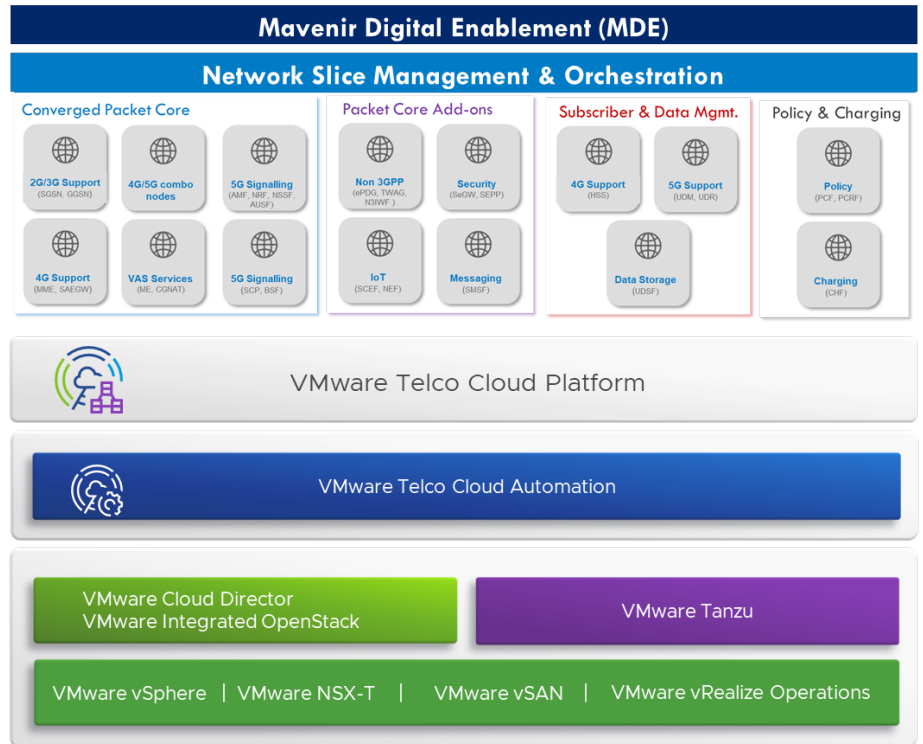


FIGURE 1: Mavenir's Converged Packet Core on VMware Telco Cloud Platform.

- VMware vSAN™
- VMware Telco Cloud Automation
- VMware vRealize® Orchestrator Appliance™
- VMware Tanzu® Kubernetes Grid

Mavenir's Architecture

Mavenir's packet core network architecture simplifies network transformation. The following core principles behind Mavenir's architecture consistently result in customer success:

The Mavenir Converged Packet Core uses a cloud-native architecture with granular micro-services, following web-scale principles that provide the scalability, agility, and reliability to meet a wide range of 5G use cases and stringent 5G performance requirements for end-to-end latency, high throughput demand, and overall network availability. Mavenir's architecture can support existing subscribers and services on all Gs on one common platform.

Converged Packet Core Features

To help you realize the full potential of 5G, Mavenir's solution implements cloud-based technologies and adheres to strong design principles:

- A cloud-native design: Applications and services deliver easy scaling, hardware de-coupling, agility, portability, reduced CapEx, and resilience across multiple cloud environments. A light hardware footprint reduces costs while fine-grained microservices lend control and simplicity to the environment. A cloud-native environment helps create and sustain a culture where building, testing, releasing, and deploying happens swiftly and consistently. An automated path for continuous delivery lets developers rapidly deploy to production environments.

ABOUT THE VMWARE TELCO CLOUD

VMware helps communications service providers build, operate, monetize, and protect their telco cloud. Our technology empowers CSPs to transform their networks into a 5G force, accelerate the delivery of innovative services, and compete in a multi-cloud world.

The VMware telco cloud creates a consistent foundation for operating all generations of cellular and fixed-line technology while leading the way to 5G adoption. Solutions for infrastructure, orchestration, automation, assurance, optimization, and security modernize telecommunications networks from the core to the edge and RAN.

ABOUT MAVENIR

Mavenir is building the future of networks and pioneering advanced technology, focusing on the vision of a single, software-based automated network that runs on any cloud. As the industry's only end-to-end, cloud-native network software provider, Mavenir is transforming the way the world connects, accelerating software network transformation for more than 250 communications service providers in over 120 countries.

LEARN MORE

For more information about VMware Telco Cloud RAN, call 1-877-VMWARE (outside North America, dial +1-650-427-5000) or visit <https://telco.vmware.com/>



- Service-based architecture: Application services are decoupled from the network and platform infrastructure. Open service-based APIs provide flexibility and extensibility for service agility. Network functions are microservices-based, containerized, reliable, agile, and stateless.
- Service velocity and automation: CSPs can rapidly launch new services with agility and use AI/ML for network scaling. This combination reduces OpEx.
- Network slicing: Traffic isolation, security, and differentiated performance give CSPs the ability to customize the network to suit the specific requirements of their customers.
- Optimized footprint: A complete 5G core as an enterprise service, dedicated network slice, or non-public network (NPN) can be deployed in an efficient, small-footprint server configuration.
- Access-agnostic core or access independence: A common core caters to all types of access (3GPP, non-3GPP) for seamless interworking and operational efficiencies.
- Multi-access Edge Computing (MEC): CSPs can achieve the low-latency requirement of use cases enabled by 5G. Low latency and high throughput requirements demand placing network functions closer to the application servers.
- High-performance User Plane Function (UPF): Mavenir's cloud-native, highly optimized packet processing design for UPF uses DPDK and VPP technology to reduce the hardware footprint and reduce costs (with SmartNIC offload), including support for 2G, 3G, and 4G.

Conclusion

Mavenir's cloud-native Converged Packet Core running on VMware Telco Cloud Platform delivers a cost-effective solution to deploy cloud-native network functions and virtual network functions throughout your existing packet core network without disruption while your core network evolves to 5G. The architecture and multi-cloud environment of the combined solution lets you optimize the use of resources and meet your business objectives.

Mavenir and VMware continue to collaborate to validate the latest version of Mavenir's Converged Packet Core on the latest version of VMware Telco Cloud Platform.