



## MAVENIR'S CONVERGED PACKET CORE ON VMWARE TELCO CLOUD PLATFORM

**Mavenir's Converged Packet Core** enables CSPs to leverage their existing mobile network while evolving to a 5G core network. The Converged Packet Core solution provides an end-to-end fully containerized 5G Core portfolio with combo nodes for 2G, 3G, and 4G support. Mavenir provides customers with a flexible and cost-effective journey to 5G that allows them to retain existing services and subscribers. In addition to multi-generation support, Converged Packet Core can support non-3GPP access and be tailored to fit a customer's infrastructure and business needs.

Mavenir's cloud-first approach is augmented by **VMware's Telco Cloud Platform** that is powered by field-proven compute and networking coupled with VMware Telco Cloud Automation which unifies and optimizes multi-cloud resources to reduce operational complexity with cloud-smart automation to rapidly launch services at scale.

**Mavenir's Converged Packet Core** running on **VMware's Telco Cloud Platform** is a solution that deploys cloud-native and virtual network functions throughout the packet core network without disruption, ensuring telco-grade resiliency, service availability, web-scale speed, agility, and cloud economics to accelerate innovation and go to market quicker.

### **VMware Telco Cloud Platform (Figure 1) enables:**

- > **High Performance CaaS & 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 & 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
- > **Best of Breed Multi-Vendor Ecosystem:** Ensure interoperability and operational readiness of VNFs and CNFs enabling CSPs to rapidly onboard and deploy functions in their 5G core

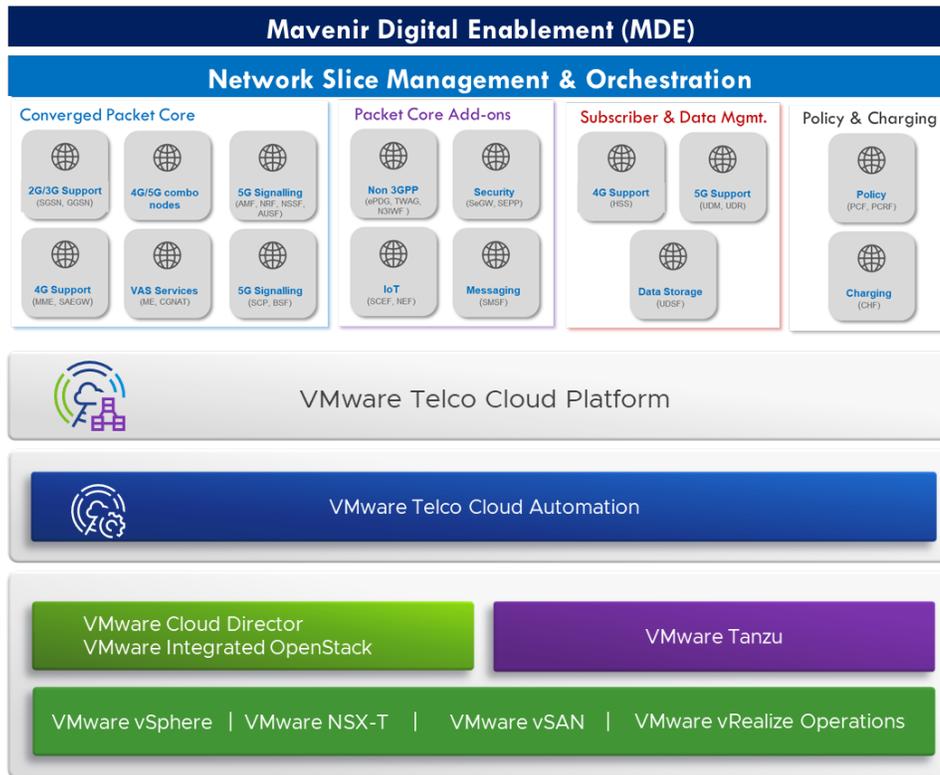


Figure 1: Converged Packet Core on VMWare Telco Cloud Platform

## Mavenir’s Converged Packet Core is supported by the following components from VMware Telco Cloud Platform

- > VMware ESXi
- > VMware vCenter Server Appliance
- > VMware NSX-T
- > VMware vSAN
- > VMware Telco Cloud Automation
- > VMware vRealize Orchestrator Appliance
- > VMware Tanzu Kubernetes Grid

Mavenir is committed to changing network economics and driving positive business outcomes for customers. Mavenir’s packet core network architecture simplifies network transformation and focuses on the following core principles that consistently result in customer success (Figure 2).

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

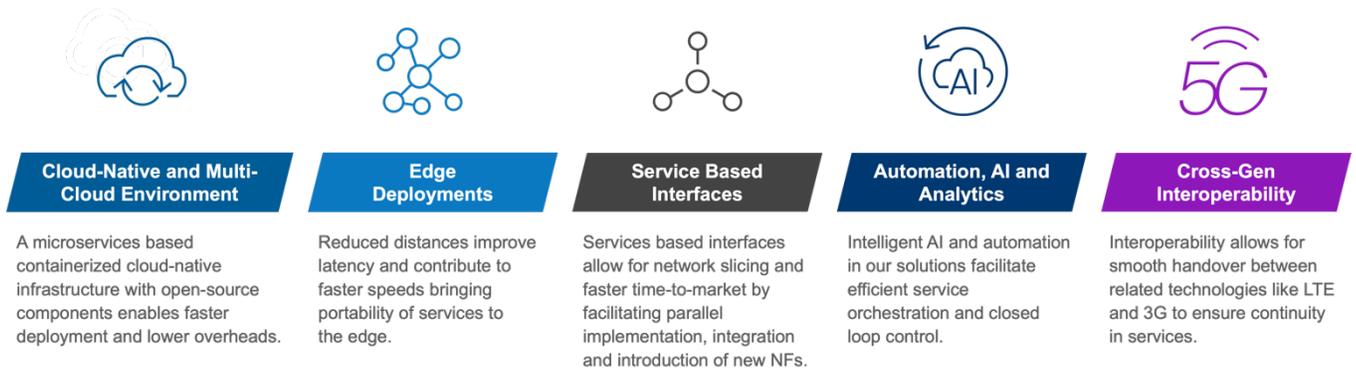


Figure 2: Key Tenets for Converged Packet Core

## Converged Packet Core Features

To help CSPs realize the full potential of 5G, Mavenir’s solution implements cloud-based technologies and adheres to strong design principles and architecture. The solution delivers:

- > **A 100% cloud-native design:** Applications and services are purpose-built for the cloud model that offers 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.
- > **Service-based architecture:** Application services are de-coupled from the network and platform infrastructure. Open service-based APIs provide flexibility and extensibility for service agility. All Network Functions are microservices-based, containerized, reliable, agile, and stateless.
- > **Service velocity and automation:** CSPs can rapidly launch new services with service deployment agility and AI/ML for network scaling resulting in reduced 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.
- > **Continuous Development and Continuous Integration (CI/CD):** DevOps-based software release and upgrade cycles reduce time to market, cost, and lengthy integration processes.
- > **Access agnostic core or access independence:** A common core caters to all types of access (3GPP, non-3GPP), allowing seamless interworking between them and enabling 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.

**Mavenir collaborates and partners with global industry leaders** and key ecosystem players to pioneer and build network capabilities that boost performance, capacity, and make the promise of 5G and edge deployment a reality.

**Mavenir is an award-winning<sup>1</sup> 5G core network technology provider.** A master innovator of the 5G core network technology, Mavenir's cloud-native Converged Packet Core solution provides customers with innovative and cost-effective solutions. Mavenir enables new revenue-generating opportunities while staying focused on mobile network economics. Mavenir's solution offers flexibility to CSPs and enterprises with a multi-cloud environment, allowing the optimal use of resources based on the organization's business objectives.



## 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 250+ Communications Service Providers in over 120 countries, which serve more than 50% of the world's subscribers.

## About VMware

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.

For more on Mavenir solutions please visit our website at [www.mavenir.com](http://www.mavenir.com)

<sup>1</sup> [mavenir.com/press-releases/mavenir-wins-best-5g-core-and-best-openran-at-5g-world-2020/](http://mavenir.com/press-releases/mavenir-wins-best-5g-core-and-best-openran-at-5g-world-2020/)