MAVENIR AND WIND RIVER

Mavenir Collaborates with Wind River to Accelerate Deployment of NFV Solutions

Mavenir and Wind River® have partnered to perform testing and validation processes as part of the Wind River Titanium Cloud™ Ecosystem program, dedicated to accelerating the deployment of solutions for Network Functions Virtualization (NFV). This partnership allows communications service providers (CSPs) to take advantage of a pre-integrated and validated solution with the following benefits:

- **Optimized for NFV:** Virtualization expertise to create standardized NFV solutions

- **Accelerated time-to-market:** Pre-validated solutions with Wind River Titanium Cloud

- **Interoperability:** Standardized carrier grade platform for end-to-end NFV solutions

DELIVERING OPTIMIZED NFV SOLUTIONS

A network transformation is underway to enable better utilization through software-defined services. CSPs are seeking best-of-breed solutions that can accelerate this transformation. They are also demanding solutions that provide seamless automation without compromising the "always on" reliability expected from carrier grade systems.

Mavenir and Wind River have joined forces to offer an integrated carrier grade NFV solution. By validating and pre-integrating their hardware and software offerings with Titanium Cloud, companies can deliver optimized solutions for service providers and telecom equipment manufacturers (TEMs) deploying infrastructure based on NFV.

AN ECOSYSTEM ENABLES THE PROMISE OF NFV FOR SERVICE PROVIDERS

Through the Titanium Cloud Ecosystem, Wind River has collaborated with industry-leading hardware and software companies to ensure the availability of interoperable standard NFV products optimized for deployment with Titanium Cloud. Using solutions from the Titanium Cloud Ecosystem will accelerate time-to-market, reduce risk, and significantly improve the deployment of an end-to-end NFV infrastructure.

Ecosystem Component

- Mavenir

Solutions

- TAS
- ePDG
- SBC

Value

- World's first commercially deployed VoLTE product suite

- High-performance and scalable solutions for NFV MANO

- Complete NFV offerings with supporting elements and aggregators for ease of integration and operation
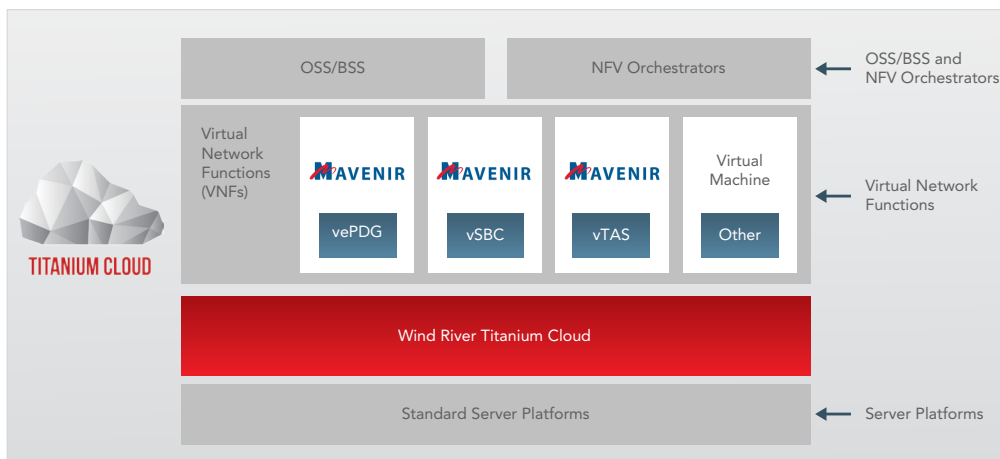
WHEN IT MATTERS, IT RUNS ON WIND RIVER

Figure 1. Titanium Cloud components with Mavenir

MAVENIR'S NFV SOLUTIONS

Mavenir is leading the industry in the deployment of virtualized solutions for mobile network operators worldwide. Mavenir has now introduced its disruptive solutions into the NFV ecosystem. The Mavenir NFV suite offers an all-inclusive package of solutions that are easy to deploy and manage, laying the foundation for network slicing and future 5G networks. With its stable and proven platform, the Titanium Cloud Ecosystem brings strength to the packaged end-to-end offerings, and the Wind River Accelerated vSwitch caters to the high-performance data plane requirements of Mavenir's NFV solutions.

Mavenir's Evolved Packet Data Gateway

The Mavenir evolved packet data gateway (ePDG) provides mobile service providers with the ability to securely connect users on both trusted and untrusted Wi-Fi networks with the IP multimedia subsystem (IMS) services in the mobile packet core. The highly scalable architecture of the ePDG is ideally suited for NFV. Dynamic elasticity allows for the virtual function to adjust with live traffic demand, conserving resources. With multiple successful deployments extending next-generation IP services over Wi-Fi without compromising user experience, Mavenir's ePDG provides key features and benefits for CSPs.
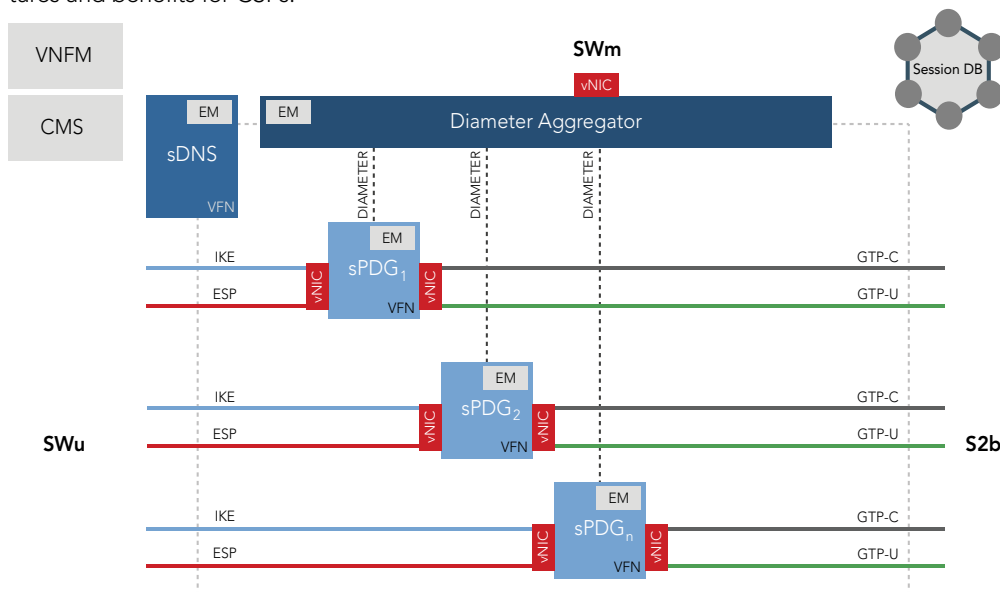

Figure 2. Mavenir's evolved packet data gateway

Mavenir's Session Border Controller

Mavenir's session border controller (SBC) enables a next-generation approach to this network element—one that is software-based and virtualized. Mavenir's commercially proven SBC is optimized to provide contemporary wireless functionality (e.g., VoLTE); next-generation high-definition voice; and rich services such as chat, instant messaging, and presence. Mavenir's innovative design includes ETSI-compliant NFV/SDN architecture with independent scaling of the media plane, control plane, and transcoding pool.

The SBC is based on a singular data plane–enabled platform called the Unified Access Gateway (UAG). The UAG platform is used to deliver products such as Mavenir's SBC, IMS core, and WebRTC Gateway.
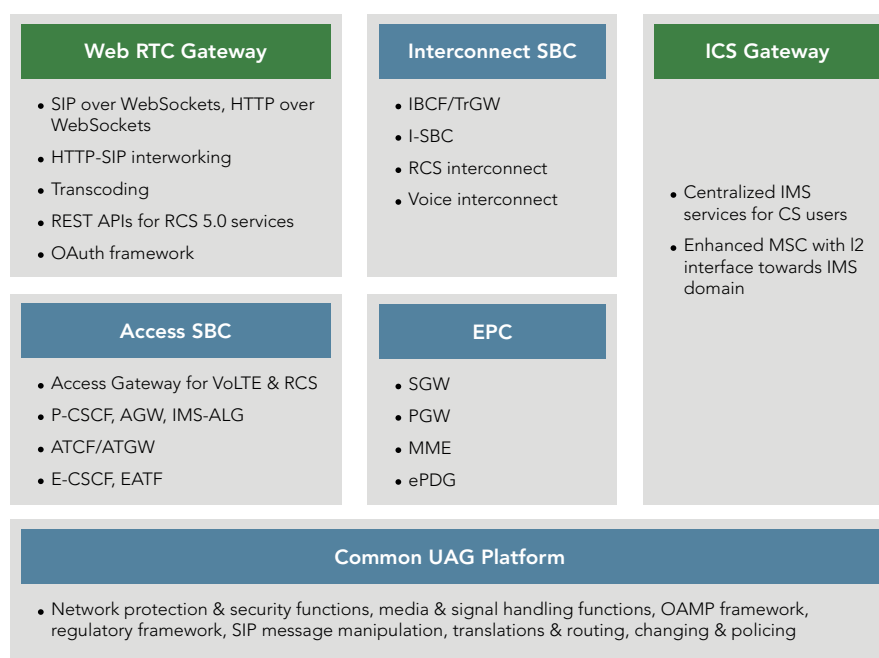
Web RTC Gateway	Interconnect SBC	ICS Gateway
• SIP over WebSockets, HTTP over WebSockets • HTTP-SIP interworking • Transcoding • REST APIs for RCS 5.0 services • OAuth framework	• IBCF/TrGW • I-SBC • RCS interconnect • Voice interconnect	• Centralized IMS services for CS users • Enhanced MSC with I2 interface towards IMS domain

Access SBC	EPC
• Access Gateway for VoLTE & RCS • P-CSCF, AGW, IMS-ALG • ATCF/ATGW • E-CSCF, EATF	• SGW • PGW • MME • ePDG

Common UAG Platform

• Network protection & security functions, media & signal handling functions, OAMP framework, regulatory framework, SIP message manipulation, translations & routing, changing & policing

Figure 3. Mavenir's session border controller

Mavenir's Telephony Application Server

Mavenir's telephony application server (TAS) reduces the total cost of ownership and improves time-to-market by seamlessly integrating into the operator's existing infrastructure—including subscriber databases, intelligent networking systems, and billing systems—using standard legacy interfaces. Mavenir's approach ensures mobile subscribers have a consistent user experience using next-generation voice services over long-term evolution (LTE) or Wi-Fi since the TAS provides service parity with the legacy circuit-switched mobile network.

Mavenir's TAS is access agnostic and supports the range of features needed to deliver rich multimedia services such as HD voice and video calling to subscribers on LTE, Wi-Fi, fixed, or business networks, as well as integrated mobility features to enable service continuity to move from one access network to another.

WIND

Based on Mavenir's flagship mOne® Convergence Platform, Mavenir's TAS is a fully virtualized, highly scalable, carrier grade solution that can be deployed on cloud-based infrastructure.

Mavenir offers a broad portfolio of IMS nodes for VoLTE, covering elements from evolved packet core (EPC) all the way through application servers.
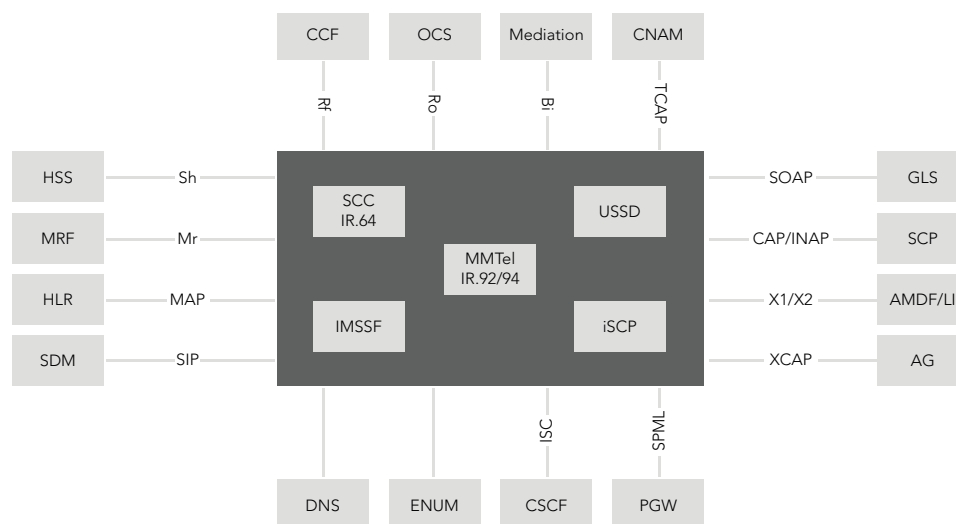

Figure 4. Mavenir's telephony application server

Highlights

- World's first commercially deployed VoLTE (MetroPCS)
- World's first commercially deployed IMS-based VoWi-Fi (T-Mobile U.S.)
- Service parity with legacy MSCs, including IN services
- Converged IMS-based voice solution (LTE, Wi-Fi, fixed)
- Interworking function enables SR-VCC without upgrading legacy MSC
- Enhanced for voice/video mail call completion
- Service broker architecture: MMTEL, SCC, IM-SSF
- Fully virtualized solution

Benefits

- Software-only architecture
- ETSI NFV support on multiple platforms including Titanium Cloud
- Industry-leading feature set
- Deployment options of ATCA and virtualized
- Centralized provisioning with configuration management system
- Extensive interoperability experience with multiple vendors
- Wide set of interface support including legacy GSM interfaces
- Feature parity with legacy 2G/3G networks
- Service broker for service chaining (SCC, MMTel, IM-SSF), reduced ISC signaling, simplified iFC

MORE INFORMATION

Detailed technical information about Mavenir can be found at www.mavenir.com, or contact marketing@mavenir.com.

Detailed technical information about Wind River Titanium Cloud can be found at www.windriver.com/products/titanium-cloud, or contact salesinquiry@windriver.com.

Additional information about the Titanium Cloud Ecosystem can be found at www.windriver.com/announces/titanium_cloud_partner_program.

WIND RIVER TITANIUM CLOUD

As the industry's first fully integrated and feature-complete NFV software platform, Titanium Cloud enables an NFV infrastructure to achieve the ultra-reliability and high performance mandated for telecom networks. It delivers six nines (99.9999%) reliability, in contrast to the three nines of virtualized platforms based on common enterprise software.

Combining open source and open industry standards, with required carrier grade extensions, Titanium Cloud is the only commercial server solution enabling service providers to maintain the rigorous uptime required as networks transition to a virtualized infrastructure. With Titanium Cloud, service providers can now meet the "always on" expectations of consumers.

SUMMARY

The Mavenir and Wind River partnership enables service providers to leverage NFV without sacrificing the reliability and performance of hardware networking solutions. By collaborating with Wind River through the Titanium Cloud Ecosystem to provide interoperable networking services, Mavenir can accelerate time-to-market for service providers and telecom equipment manufacturers (TEMs), allowing customers to reach their NFV objectives quickly and reliably.