



RIFT AND WIND RIVER

Carrier Grade NFV Orchestration Accelerates NFV Deployments and Cloud-Ready Solutions

As a part of the Wind River® Titanium Cloud™ Ecosystem, RIFT and Wind River have partnered to bring carrier grade orchestration with scale to Wind River Titanium Cloud™ customers. The RIFT.ware™ Orchestration and Automation solution is a model-driven, ETSI-compliant Network Functions Virtualization (NFV) Management and Orchestration (MANO) solution that simplifies deployment of virtual network functions (VNF) and the composition and management of complex network services.

Communication service providers (CSPs) can use RIFT.ware to validate and deploy VNFs and network service chains on Titanium Cloud and automatically leverage the unique capabilities of their NFV and cloud infrastructure within a hybrid cloud environment.

Key benefits include:

- **Orchestration with scale:** RIFT.ware dynamically builds complex network services consisting of multiple VNFs, PNFs, and service chains and optimally deploys VNFs across distributed environments. Deployed services are monitored and scaled as required.
- **Orchestration with high availability:** Multi-level closed loop monitoring enables real-time, automated response to surges in network demand or VM, VNF, or network failures. This complements Titanium Cloud’s 99.9999% uptime guarantee and protect from failures at massive scale.
- **Faster service creation, deployment, and time-to-value:** RIFT.ware’s model-driven framework and user interface simplifies the composition of complex network services, VNF Forwarding Graphs (VNFFGs), and scalable compound multi-VM VNFs.
- **Optimized cloud infrastructure utilization:** RIFT.ware performs automated, intelligent VNF workload placement using VNF descriptors incorporating Intel® Enhanced Platform Awareness (EPA) attributes that makes it simple to take advantage of unique Titanium Cloud features.

ACCELERATING NETWORK TRANSFORMATION

A network transformation is underway that uses software-defined services to change the economics and service velocity of innovative network services. CSPs are seeking best-of-breed solutions that can help accelerate this transformation. They are also demanding solutions that provide seamless automation without compromising the “always on” reliability expected from carrier grade systems.



Ecosystem Component

- NFV MANO

Solutions

- RIFT.ware Network Service Virtualization Platform

Value

- Orchestration with high availability and scale
- Optimized VNF deployment across distributed environments incorporating Intel EPA
- Faster service creation, deployment, and time-to-value

By working together, RIFT and Wind River deliver an integrated carrier grade NFV solution that supports multi-VNF, multi-vendor, virtualized network services. The partnership delivers automation and orchestration with scale that optimizes existing network services and accelerates a CSP's ability to deploy new services while minimizing risk.

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. Utilizing solutions from the Titanium Cloud ecosystem accelerates time-to-market, reduces risk, and significantly improves the deployment of an end-to-end NFV infrastructure.

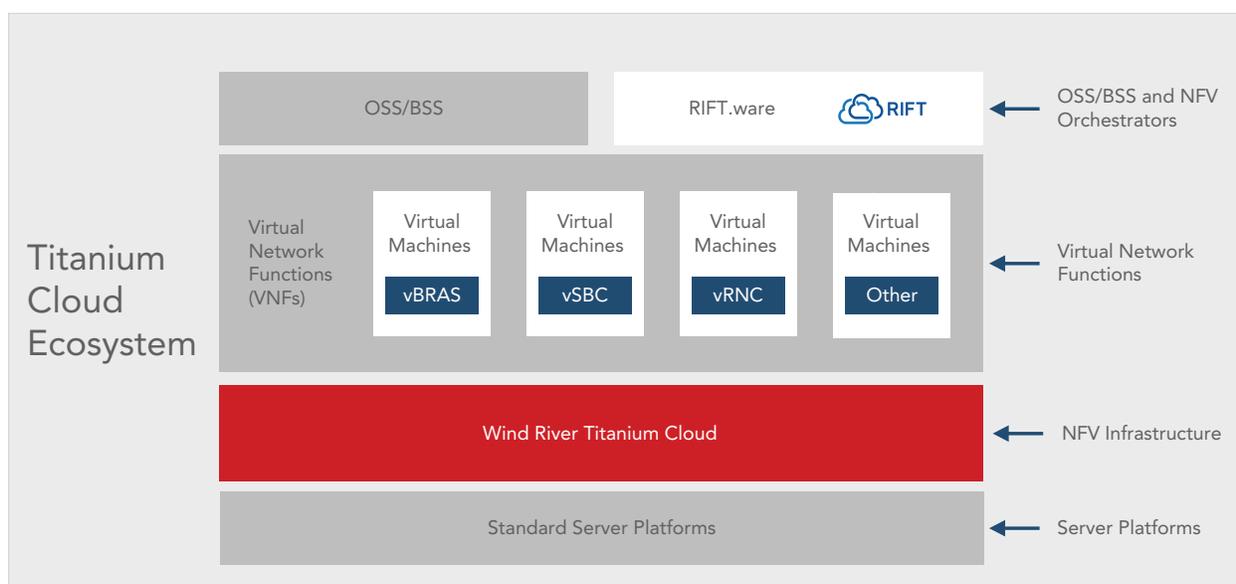


Figure 1. Titanium Cloud components with RIFT orchestration

ORCHESTRATION WITH SCALE AND CARRIER GRADE INFRASTRUCTURE

Titanium Cloud is a carrier grade NFV infrastructure that brings cloud economics and carrier grade capabilities to network services. RIFT.ware provides the capabilities needed for highly automated, end-to-end service delivery and lifecycle management. It features intelligent workload placement and integrated platform awareness, such as Intel EPA, to optimally use available network and cloud infrastructure capabilities, such as those provided by Titanium Cloud.

RIFT.ware incorporates key Intel networking technologies, such as Data Plane Development Kit (DPDK), Hardware Offload Acceleration (HWOA), Cache Allocation Technology (CAT), and Quick Assist Technology (QAT). These attributes help VNF suppliers exploit their capabilities and hardware efficiency gains and meet SLAs that depend on high performance and guaranteed latency.

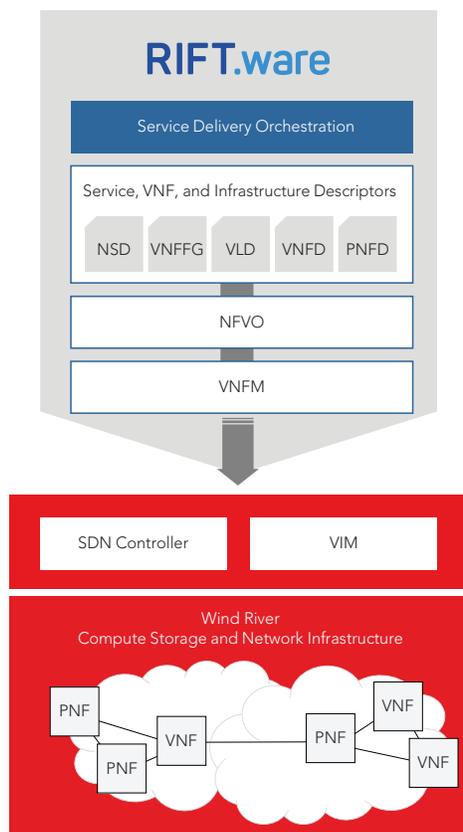


Figure 2. RIFT.ware service delivery orchestration

RIFT has created a series of open information models based on the ETSI MANO specification. These information models fully support Intel EPA attributes. VNF builders are able to specify the EPA attribute required by the VNF, such as DPDK for high throughput packet forwarding or encryption assist to support sensitive payloads. Using Intelligent Workload Placement, VNF suppliers specify the EPA attributes a VNF should have. Using this information, the RIFT.ware MANO functions request the corresponding resource from the Virtual Interface Manager (VIM) and place the workload on the resource with the required attributes—for example, Titanium Cloud.

RIFT participates in multiple standards and open source bodies such as ETSI NFV ISG, TM Forum, Linux Foundation ONAP, and ETSI Open Source MANO (OSM) Group to eliminate proprietary lock-in. Both companies feature open APIs, and RIFT.ware includes a multi-language plugin architecture to offer integration with any orchestration platform, analytics tool, cloud management system, Software Defined Networking (SDN) platform, and network function.

RIFT.ware delivers a common management and orchestration platform, with dramatically lower deployment cost, that supports multi-VNF, multi-vendor, virtualized network services across multiple virtualized or cloud platforms, including Titanium Cloud.

MORE INFORMATION

Detailed technical information about RIFT can be found at www.riftio.com, or contact info@riftio.com.

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

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

RIFT: RIFT.WARE ORCHESTRATION AND AUTOMATION SOLUTION

RIFT.ware is the next-generation orchestration solution that delivers open standards-based management, orchestration, and automation of virtual network services, applications, and functions with scale. It is a model-driven, ETSI-compliant NFV MANO solution that simplifies deployment of VNFs and the composition and management of complex network services—everything needed for highly automated, end-to-end service delivery and lifecycle management. It includes intelligent workload placement and integrated platform awareness, such as Intel EPA, to optimally use available network and cloud infrastructure capabilities.

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 compared to the three nines (99.9%) 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

RIFT.ware delivers a common management and orchestration platform, with dramatically lower deployment cost, that supports multi-VNF, multi-vendor, virtualized network services across multiple virtualized or cloud platforms, including Titanium Cloud.

