

BROCHURE

Modernizing Virtualization at Scale with Red Hat

Seamlessly migrate large-scale VM estates to Kubernetes-native OpenShift to unify VMs and containers on a single control plane without downtime





Overview

Telcos and enterprises operate legacy environments comprising massive VM estates on legacy virtualization platforms. These environments have evolved into costly silos with duplicated tooling, high operational overhead, and tight coupling to underlying networks—which, in turn, have stalled the adoption of hybrid cloud and cloud-native architectures that resulted in efficiency, scalability, and modernization benefits to these organizations.

As Telcos and enterprises seek to integrate Kubernetes-based platforms to benefit from shared infrastructure and cloud-native operations, they face a critical constraint: existing VM workloads cannot be containerized overnight. A transitional framework is essential.

Tech Mahindra's Modernizing Virtualization applications Orion, powered by Red Hat OpenShift Virtualization, provides a safe, automated, Kubernetes-native migration path from VMware and other platforms, while addressing the primary challenge of enabling unified VM and container operations without refactoring applications, or rearchitecting systems and avoiding business disruption.



Description

Tech Mahindra's Migration Toolkit, combined with the Red Hat Ansible Automation Platform and the Migration Toolkit for Virtualization (MTV), delivers a controlled, large-scale migration to Red Hat OpenShift Virtualization. Post the migration, Red Hat OpenShift Virtualization acts as the platform to run VMs and containers on the same Kubernetes control plane with full automation of the end-to-end lifecycle.

Key capabilities include:



Maintain network continuity and minimize application refactoring impact enabled by overlay continuity delivering Like-for-like VLAN/VXLAN mapping from VMware to OpenShift, alongside IP preservation and tenant network consistency matching mapped to existing VMware VLANs.



Controlled migration through a dedicated migration network, pilot validation before batch migration, rollback readiness, and phased cutover execution.



Holistic configuration updates include automated updates to DNS, routing, security groups, and monitoring systems natively as part of the transition.

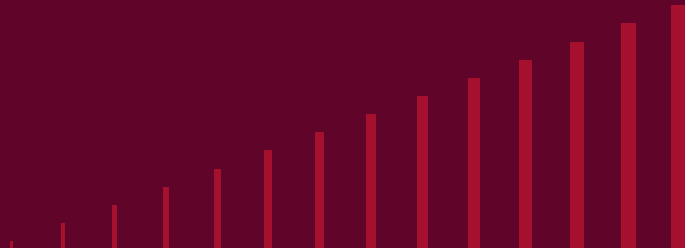


Establish a foundation for future VM coexistence with cloud-native network functions (CNFs) and full cloud-native workloads.

The offering enables an approach to solve the network - application dependencies that typically make large-scale cloud native modernization difficult. By preserving existing dependencies (such as VLANs, IPs, and security groups) in the target system, the solution outperforms traditional lift-and-shift or rip-and-replace methods to accelerate adoption of cloud native architectures.



In addition, the offering enables immediate gains in resource utilization and standardized operations across the data center, edge, and cloud by adopting a Kubernetes-native virtualization approach, that allows organizations reduce parallel infrastructure stacks and simplify and modernize their architecture.



Benefits



Enable consistent operations, tooling, and lifecycle management with virtual machines and containers running on a single Kubernetes control plane.



Improve resource utilization, elimination of parallel infrastructure, consolidation of virtualization and container platforms, and simplification and standardization of operational stacks lead to reduced infrastructure cost and operational complexity.



Ensure a non-disruptive transition enabled by the safe migration of legacy VMs without downtime, application refactoring, re-architecture, or SLA impact through like-for-like networking and phased cutovers.



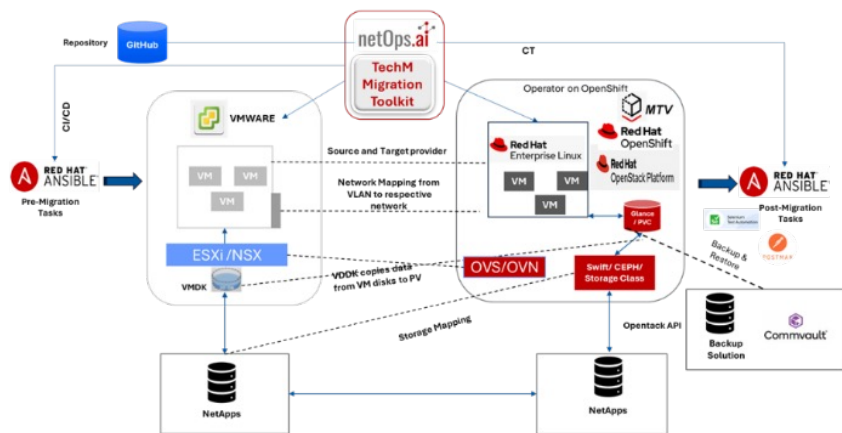
Create a future-ready foundation for application modernization post migration to OpenShift enabling future CNF adoption and application modernization.



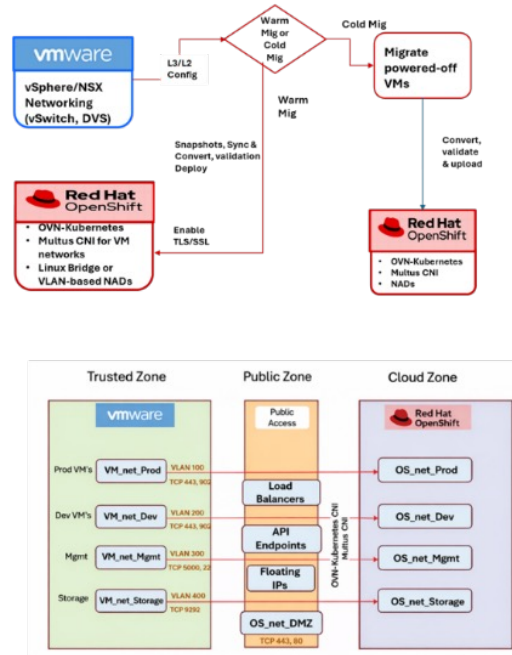
Accelerate cloud transformation programs for telecom operators with VNF-heavy environments and enterprises pursuing large-scale VMware replacement strategies.



Migration Architecture



Overlay Networking

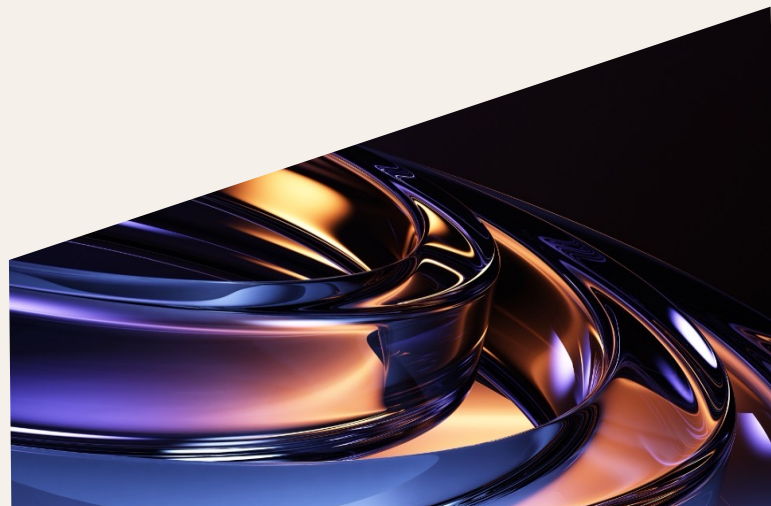
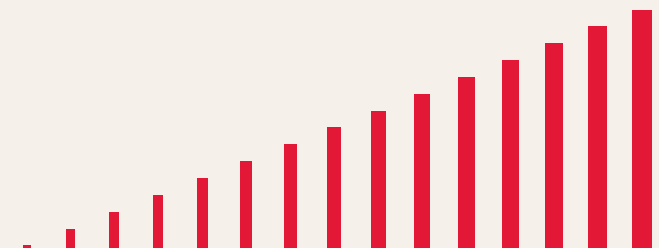


- Like-for-like VLAN/VXLAN mapping from VMware to OpenShift
- Same IP, same subnet to minimize application impact
- Dedicated migration network for controlled cutover
- Pilot validation before batch migration.
- Tenant networks matching mapped VLANs from VMware
- Routers and security groups update
- Update DNS and monitoring systems

Cloud Modernization and Migration: VMware to Red Hat with TechM automation accelerators.

Legacy virtualization platforms with inherent silos, tools and system sprawl, and heightened downtime risk— continue to impede progress toward cloud-native architectures. Tech Mahindra’s Modernizing Virtualization with Red Hat solution directly addresses these challenges by resolving complex network dependencies, reducing operational overhead, and simplifying large-scale migrations.

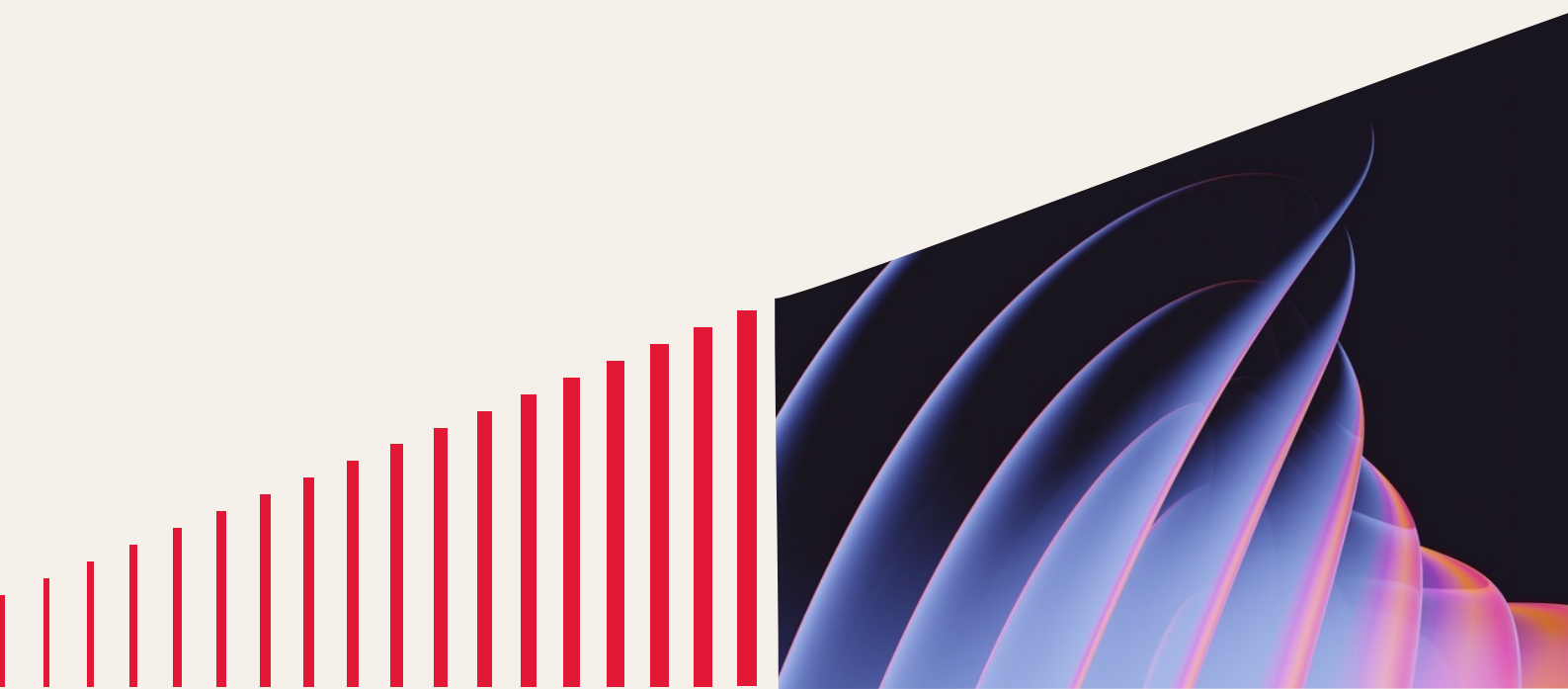
The result is a seamless, low-risk path to Kubernetes-native efficiency and a future-ready foundation for cloud-native workloads and sustained modernization.





TechM Advantage:

Tech Mahindra is a Red Hat Premier Partner with extensive experience in large-scale VM migrations and OpenShift Virtualization deployments. We bring proven telco-grade VNF experience, supported by proprietary toolkits purpose-built for complex deployments. Our telco domain expertise has powered successful VMware displacements for CSPs and enterprises, backed by 5,000+ Red Hat-certified professionals and more than 15 joint go-to-market solutions developed in collaboration with Red Hat.



Visit www.techmahindra.com/alliance/red-hat/ to schedule an assessment and identify tailored ROI opportunities for cloud-native network operations..

About Tech Mahindra

Tech Mahindra (NSE: TECHM) offers technology consulting and digital solutions to global enterprises across industries, enabling transformative scale at unparalleled speed. With 147,000+ professionals across 90+ countries helping 1100+ clients, Tech Mahindra provides a full spectrum of services including consult-ing, information technology, enterprise applications, business process services, engineering services, network services, customer experience & design, AI & analytics, and cloud & infrastructure services. It is the first Indian company in the world to have been awarded the Sustainable Markets Initiative's Terra Carta Seal, which recognises global companies that are actively leading the charge to create a climate and nature-positive future. Tech Mahindra is part of the Mahindra Group, founded in 1945, one of the largest and most admired multinational federation of companies. For more information on how TechM can partner with you to meet your Scale at Speed™ imperatives, please visit <https://www.techmahindra.com/>



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