Telcos unify virtual machine and container management with Red Hat

Telecommunications service providers (telcos) often work with Red Hat to reduce complexity and cost associated with simultaneously deploying and maintaining applications on containers and virtual machines (VMs). Working with Red Hat® Consulting to implement Red Hat OpenShift®, service providers use the built-in virtualization functionality to unify the management of both container-based applications and VMs on a single platform. To strengthen disaster recovery capabilities, they also deploy Red Hat Advanced Cluster Management for Kubernetes and Red Hat OpenShift Data Foundation. Here are 4 ways telcos can successfully manage containers and VMs on a unified, modern platform.

1 Consolidate application modernization and migration

Operations support systems (OSS), including network monitoring and performance management tools, are essential for telcos to run their network reliably. While many vendors and independent software vendors (ISVs) have already begun developing microservices-based OSS using an open-standard cloud computing platform, service providers often work with Red Hat for a more efficient and future-ready solution to support VM management alongside application modernization.

How Red Hat helps: Keen to strike a balance between innovation and traditional optimization, service providers collaborate with Red Hat to help design and implement new hybrid cloud platforms. Following a successful proof of concept exercise, 1 major global telecommunications service provider selected Red Hat OpenShift as a common telco cloud platform as it provides a comprehensive and consistent experience for application migration, modernization, and deployment.[*]

Using Red Hat OpenShift helps service providers reduce operational costs and improve efficiency and time to market—in the case of this major global telco, with 80% faster deployment for business-critical, container-based applications.[*] By taking advantage of existing servers and storage, service providers can work towards maximizing cost-efficiency while ensuring their common telco cloud platform meets long-term needs.

2 Unify management of virtual and container workloads

Service providers across the telecommunications industry face rising costs from virtualized applications and are looking to address inefficiencies in managing extensive VM footprints. One Red Hat customer—a leading global system for mobile communications (GSM) operator—with 200-plus nodes in its Service Network Operations Center (SNOC) and more than 1,000 VMs across wider business units previously used separate platforms for containers and VMs, which caused high management complexity and cost.[*]

How Red Hat helps: Many service providers work with Red Hat to create, run, and manage their VMs using Red Hat OpenShift across multiple datacenters. By taking full advantage of Red Hat OpenShift Virtualization—an included feature of Red Hat OpenShift—service providers have a modern platform to manage VMs without issue alongside containers. Using the included migration toolkit for virtualization simplifies the migration of VMs at scale. And for service providers interested exclusively in VMs, Red Hat OpenShift Virtualization Engine offers a streamlined solution to migrate, manage, and scale workloads.

Another major service provider benefited from Red Hat's cost-effective pricing. Its Red Hat solution included Red Hat Enterprise Linux®, which accounted for approximately 70% of its workloads. This resulted in a 20% reduction in over-provisioning, optimized resource usage, and allowed dynamic scaling based on demand. For this service provider, consolidating platforms on Red Hat is targeted to deliver a 30-40% reduction in total cost of ownership due to lower subscription costs and increased efficiencies.[*]

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* Red Hat client data.

Checklist Telcos unify virtual machine and container management with Red Hat

3 Take advantage of built-in robust disaster recovery

OSS applications play a critical role for service providers in preventing outages and safeguarding business continuity. That is why disaster recovery (DR) for these systems is a high priority for so many Red Hat customers, who are looking to keep robust DR capabilities within their new environments.

How Red Hat helps: As part of any project, Red Hat can help to design and deploy a DR solution based on technologies such as Red Hat Advanced Cluster Management for Kubernetes and Red Hat OpenShift Data Foundation.

This solution was used to help one Red Hat customer span 3 datacenters while fully using existing hardware and protecting SNOC applications, including fault and performance management systems. This strengthened DR environment now ensures that services can be maintained with minimal impact, even during incidents affecting key sites.*

Learn about our Virtualization Migration Assessment

4 Work with an experienced vendor

Many service providers recognize that once a project has been initiated, they require a trusted vendor to help meet business requirements, optimize existing technologies, and ensure smooth, consistent integration. As with so many companies, limited resources and a lack of relevant expertise is a common barrier to success.

How Red Hat helps: Red Hat Consulting helps service providers minimize risk, cost, and timescales of their transformation projects. After conducting a detailed evaluation of the existing service provider environment, including compute, storage, and operating systems, the Red Hat Consulting team can ensure that the service provider is able to fully use existing hardware, select the right solutions, and bring about a successful migration.

Following the success of a project within the SNOC of one Red Hat customer, business units across service providers are now following suit in also implementing Red Hat OpenShift, using the OpenShift Virtualization feature, as the default private cloud platform of choice.*

See how Red Hat can help reshape telcos

About Red Hat

Red Hat helps customers standardize across environments, develop cloud-native applications, and integrate, automate, secure, and manage complex environments with award-winning support, training, and consulting services.

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