The OCP-V Opportunity

Using OCP-V to expand OpenShift

Alfred Bach
PSA
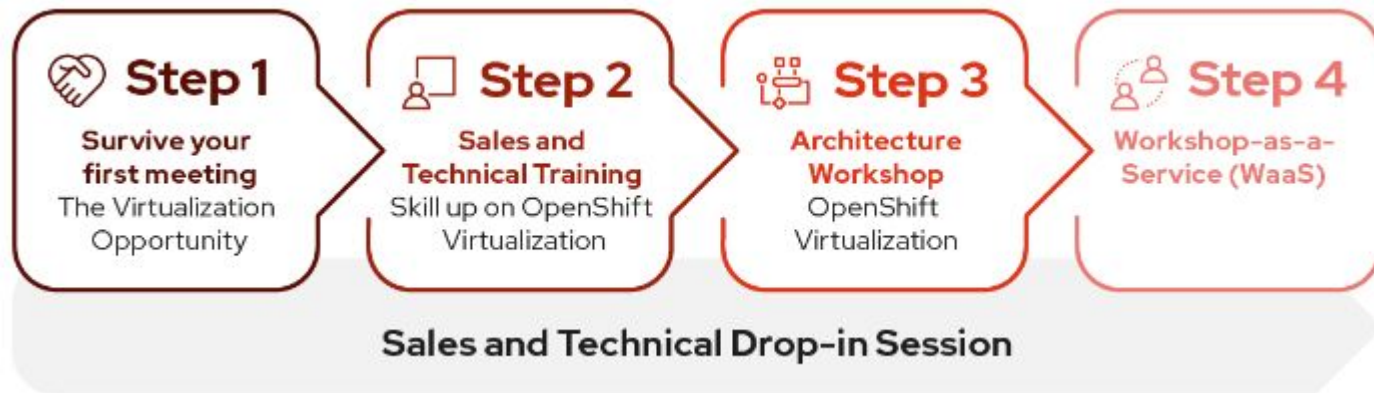Field Partner and Learning Team

Why are you here today?
Server Virtualization industry is changing dramatically

Consider your options.

OpenShift Virtualization
Journey

Red Hat

Step 1
Survive your first meeting
The Virtualization Opportunity

Step 2
Sales and Technical Training
Skill up on OpenShift Virtualization

Step 3
Architecture Workshop
OpenShift Virtualization

Step 4
Workshop-as-a-Service (WaaS)

Sales and Technical Drop-in Session

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What to Know

FEATURE

Broadcom's VMware acquisition explained: The impact on your IT strategy

In this guide, we look at Broadcom's acquisition of VMware and how it influences your IT desktop, server, cloud and supplier management strategies

By **Cliff Saran**, Managing Editor   Published: **22 Jan 2024**

In November 2023, Broadcom completed its $69bn acquisition of VMware, in a move to build out what the company sees as a multicloud strategy.

VMware has had a number of owners. It was previously owned by Dell, which took over the virtualisation company following its $67bn purchase of EMC in 2016. EMC had purchased VMware in 2004. In 2021, Dell spun out its share of VMware, paving the way to the Broadcom acquisition.

When it began trading in 1998, VMware launched into a world where datacentres were being refreshed with x86 servers. Proprietary Unix hardware was being replaced by x86-powered Linux servers from Red Hat and SUSE and Microsoft was pushing hard in the datacentre space with Windows NT Server, designed to run server software like its Exchange email server and SQL Server database.

VMware enabled x86 servers to run multiple virtual machines (VMs) on each physical server and

Latest News

Microsoft: Nation-state hackers are exploiting ChatGPT

Dutch Supreme Court approves use of EncroChat evidence

Nokia, A1, Microsoft claim first for enterprise 5G edge cloud network slicing

4

VMware/Broadcom Announcement

$69 Billion	Broadcom paying for VMware
500,000+	VMware customers
$13.5 Billion	VMware Revenue
38k	VMware Employees
$350k	VMware Revenue per employee

Red Hat

How are we positioning OpenShift Virtualization?

- Included feature of OpenShift, brings modern virtualization infrastructure to OpenShift to support existing virtual machines.

- Organizations can utilize a single unified application platform for both virtual workloads and containerized workloads as they begin their modernization journey

- OpenShift Virtualization is a highly reliable, stable, and performant KVM hypervisor with API and automation capabilities
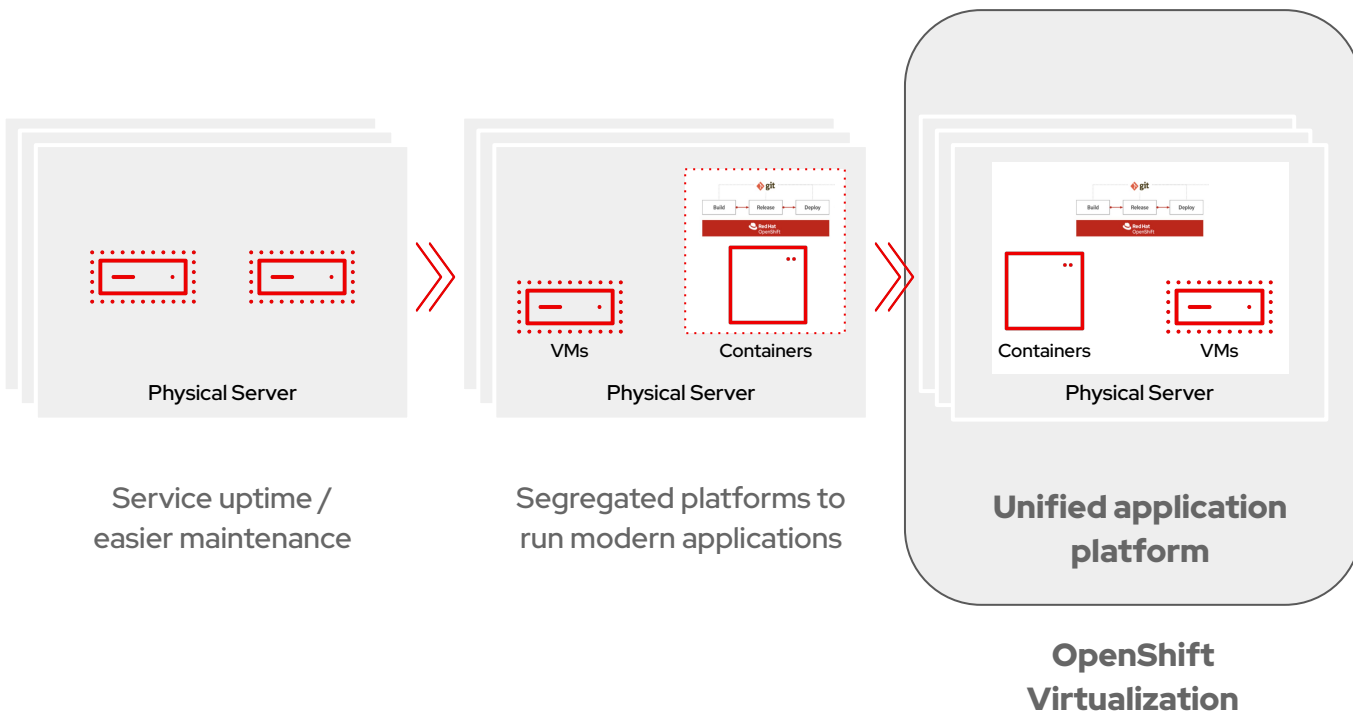
Virtualization Modernization

Virtualization Modernization

1 **Sales Play Overview**

2 Use Cases

3 Business Value

4 Call to Action

Red Hat

Bring cloud-native functionality
to virtual machines with Red Hat innovation

Physical Server

VMs   Containers

Physical Server

Containers   VMs

Physical Server

Service uptime /
easier maintenance

Segregated platforms to
run modern applications

**Unified application
platform**

**OpenShift
Virtualization**

What is OpenShift Virtualization?

- Unified platform for running VMs and Containers
  - Included feature of the OpenShift application platform
- Performance, stability, scalability, and reliability of KVM
  - mature Linux virtualization
  - RHEL guest entitlements included
  - Supports Microsoft Windows guests
    - Microsoft Server Virtualization Validation Program (SVVP)
- Leverage existing VM roles and responsibilities, while modernizing skill sets over time
  - Traditional administration, familiar ecosystem partners
- Migration Tooling
  - Migration Toolkit for Virtualization (MTV)
  - Warm migration of VMs at scale
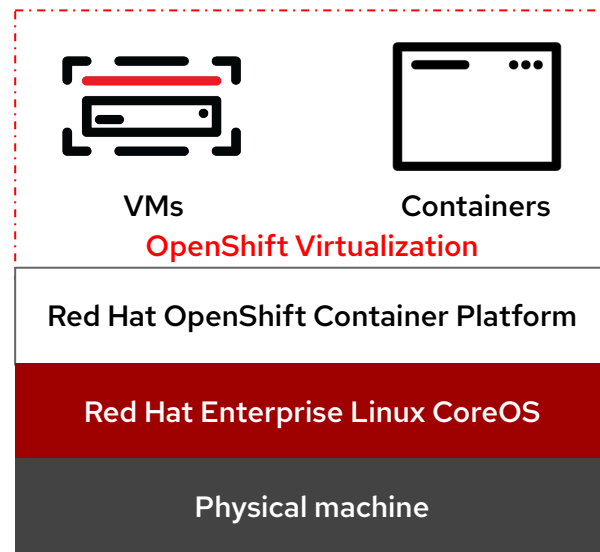
VMs   **Containers**

OpenShift Virtualization

Red Hat OpenShift Container Platform

Red Hat Enterprise Linux CoreOS

Physical machine

LIVE DEMO

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Use Case and Product Journey

Financial Services

Adopt internal private cloud

Host multiple OpenShift Clusters

Persistent desktops

E-commerce

Modernize 3-tier applications

Adopt Kubernetes to adopt rapid lifecycle for .Net, Java, Linux applications

Telco

Rollout new back office applications

VNF & CNF consolidation at the edge

Manufacturing / Energy

Manufacturing floor automation

Data visualization

Government / Military

Adopt internal private cloud

Host multiple OpenShift Clusters

Tactical Edge with mix of Container / VM applications

Media / Technology

Technical Workstations

Adopt internal private cloud

Red Hat

Success with OpenShift Virtualization

Workload	Details	Target Customer
Technical workstations	Have an easy and consistent way to deploy and manage Professional Desktops at scale.	Technical workstations, 3D rendering and remote visualization
Java Modernization, Windows and Linux apps	Customer is modernizing 3-tier legacy applications External Collateral:	Initiative to modernize 3-tier applications e.g. .Net or Java Application
AI/ML data science platform with CI/CD pipelines	Leveraging GPU compute acceleration, Adopt automated pipelines with GitOps External Collateral: Lockheed Summit Session 2021	Adopting GitOps and DevOps
Multi-tenant OpenShift Clusters	Running multiple fully isolated OpenShift clusters at different OCP versions. Fault zone reduction of a very large environment.	Looking for multi-tenancy
Cloud native architecture, but some services still run in VMs	Wanted to deploy a new app, but specific functionality (database, load balancer, management app) is not yet containerized. Running the specific services as VMs allowed for faster time to market.	Greenfield applications with mixed VMs and Container components
Iaas/PaaS Implementation	Moving to OpenShift to create a private cloud hosting thousands of VMs and Containers	Need for a private cloud with a mix of containers and VMs

OpenShift Virtualization Coming to
Red Hat OpenShift Service on AWS (ROSA) and AWS
Bare Metal Offering in 4.14

New!

- Faster adoption of OpenShift and public clouds
  - Rehost and then refactor
  - Data Center Exit
  - Windows modernization
- Consistent VM deployment and management, on-prem and in the cloud
  - Consistent management
  - VM portability between cloud providers & on-prem
  - Disaster Recovery and bursting

New Exciting Partnership with Dell!

OpenShift Virtualization

Near Term (Q2 2024)	**Mid Term** (Mid 2024)	**Long Term** H2CY2024+

Core Platform
● Backup and Restore with OADP
    ● Datamover, DM for block volumes, non-admin backup (Block Mode)
● OVN Kubernetes secondary networks (GA)
    ● Microsegmentation (IP block policies)
● Cloud-like VM provisioning through Instance Types (GA)
	Core Platform
	● OVN Kubernetes secondary networks - IPAM
	● DPDK support (GA)
	● Host IP pooling
	● Windows VM's RDP to external clients
	● Configuration and usage of secondary (Multus) networks
		Core Platform
		● Realtime Support (GA)
		● OVN Kubernetes: Port mirroring, QinQ, Services and ingress
		● VM Disaster recovery with Regional-DR with additional storage partners

Scale/HA ● Tech Preview: Memory Overcommit ● Tech Preview: CPU and Memory Hotplug ● Hotplug Bridge and SR-IOV network interfaces (GA)	**Scale/HA** ● CPU and Memory Hotplug	**Scale/HA** ● Memory Overcommit (GA) ● Workload aware-scheduler ● Sustainability with Project Kepler
Ecosystem ● Data protection from additional storage vendors	**Ecosystem** ● Oracle Cloud Infrastructure ● Additional Legacy Backup Vendors	**Ecosystemm** ● Arm support ● ROSA/AWS Secondary Networks, ODF support ● Azure Bare Metal

A Growing Infrastructure Ecosystem

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Red Hat

Modernize at your own pace

Legacy Virtualization
Apps in VMs

Infrastructure Modernization
Apps in VMs

Slow evolution

Increasing costs

Developer productivity

MTV

Cloud Elasticity + Scalability

Reduce Operating Cost

Increase IT efficiency + reliability

Speed of Infrastructure Deployment
Speed of Application Development

Modernize at your own pace

Legacy Virtualization
Apps in VMs

- Slow evolution
- Increasing costs
- Developer productivity

MTV
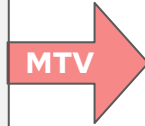
Infrastructure Modernization
Apps in VMs

- Cloud Elasticity + Scalability
- Reduce Operating Cost
- Increase IT efficiency + reliability

Cloud native

DevOps and Infrastructure Modernization
Apps in VMs or Containers

- Innovate at speed
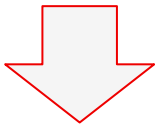- Higher Annual Revenue
- Increased Developer Output

Direct path to cloud native

Speed of Infrastructure Deployment
Speed of Application Development

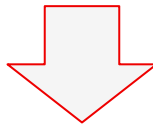# NextGen Virtualization Leveraging OpenShift

COST EFFECTIVENESS

ITERATIVE MODERNIZATION

RISK MANAGEMENT

Lower TCO

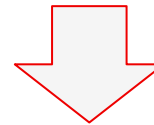Cloud-native approach to VM manageability minus the cost of proprietary SW

Flexibility of approach

Traditional VM behavior while VMs participate in modern DevSecOps and GitOps pipelines via Infrastructure as Code

Highly resilient and scalable

Manage VM fleet with single-pane of glass with modern dashboard technology

Up to 21% Higher Operational Infrastructure Efficiency

Consistency of management

Up to 42% reduction of Unplanned Outages

Next Gen Virtualization with Red Hat OpenShift

Red Hat Business Value Practice

BUSINESS OBJECTIVES	RED HAT SOLUTION ENABLERS	BUSINESS IMPACT
Cost Efficiency	• VMware cost avoidance • Consistent experience for VM Admins and developers (across VMs, containers, serverless) • Unified tools, process and pipelines for all apps • Consistency of management for system admins: one simpler architecture to manage • Openshift app platform efficiencies	⬇ CapEx and OpEx (VMware) ⬇ Effort spent on managing IT infrastructure
Iterative Modernization	• Refactor VMs on your schedule • Migration toolkit for virtualization (MTV): analytics enable s migrations at scale • VMs as code - CI/CD use case • Windows VMs can be brought into containers during OS changeover/migration • Leverage OpenShift functionality and modalities: Advanced Cluster Management for hybrid and multicloud, IT Operators, APIs	⬆ Development velocity ⬆ Developer satisfaction ⬆ Modernized revenue generating applications
Risk Mitigation	• Maintaining traditional VM behavior to mitigate developer disruption • Manage VM fleet with single-pane of glass with modern dashboard technology • Security is intrinsic and inherited from KVM • Portability of containerized workloads	⬆ Observability and control ⬆ Flexibility ⬇ Unplanned downtime

22

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Red Hat

Our target customers are:

Looking for an alternative Virtualization Solution

Uses RHV as their Virtualization solution

Customers ready for a modernization message

Red Hat
Business
Value Practice

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Thank you

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