

Connect

From zero to hero

OpenShift Virtualization

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The **WORLD** is changing





Red Hat open hybrid cloud platform



Red Hat

V000000

Red Hat OpenShift® includes supported runtimes for popular languages/frameworks/databases. Additional capabilities listed are from the Red Hat Application Services and Red Hat Data Services portfolios.

** Disaster recovery, volume and multicloud encryption, key management service, and support for multiple clusters and off-cluster workloads requires OpenShift Data Foundation Advanced

*** Optional add-on

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OpenShift as an Application Platform should bring **developers** and **operations** teams together for both Containers and Virtualization.





Red Hat has a long history with Virtualization



Red Hat OpenShift Virtualization

The modern option for general purpose virtualization



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- Unified platform for virtual machines and containers
- Consistent management tools, interfaces, and APIs incl. ACM and AAP integrations
- Performance and stability of Linux, KVM, and gemu

Healthy open source community

the KubeVirt project is a top 10 CNCF active project, with 200+ contributing companies

Diverse ecosystem
of Red Hat & partner operators

 Includes Red Hat Enterprise Linux

guest entitlements

- Supports Microsoft Windows guests through Microsoft SVVP
- Inbound guest migration using Ansible Automation Platform + Migration Toolkit for Virtualization, Training and Consulting



Using VMs and containers together

- Virtual Machines connected to pod networks are accessible using standard Kubernetes methods:
 - \circ Service
 - Route
 - Ingress
- Network policies apply to VM pods the same as application pods
- VM-to-pod, and vice-versa, communication happens over SDN or ingress depending on network
- , connectivity



Demo of mixed workloads



Self-service VM by Project





Fragmented 'approach' to VM provisioning

A process that can take weeks trapped in queues and iterations



Next Gen approach to VM provisioning

Automated VM provisioning in minutes



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Steps for using image builder



OpenShift Pipelines / OpenShift GitOps

OpenShift CI/CD

CI will be done with OpenShift Pipelines based on OSS Tekton, and CD will be done with OpenShift GitOps based on Argo CD. Each is installed and managed by Operators.





Demo



OpenShift Pipeline



Automating the virtualized application lifecycle

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vm tools

machine

Optimize

Perform VM quest

modifications such as installing

Automation for virtual

<u>ट</u> Install application

Use native Linux or Windows modules to install applications, modify configuration settings and deploy services

Automation for Linux/Windows

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Orchestration

Physical network DNS, load balancers, and firewalls

Public/private cloud services Hosted database services, hypervisors, and serverless functions

Software as a Service (SaaS) ServiceNow ITSM, service catalogs, and other hosted apps

Security Audits, incident response, and remediation

Automation for Infra & ITSM/CMDB

(×) Deprovision

Remove or stop virtual machine when application is no longer required

Automation for OpenShift Virtualization





Automation for OpenShift Virtualization

Deploy VM

Migrating VM-based applications with minimal disruption

Migration toolkit for virtualization (MTV) included with OpenShift



Mass migration of virtual machines

- Migrate virtual machines at scale to OpenShift Virtualization in a few simple steps
- Provide source and destination credentials, map infrastructure and create migration plans



Virtualization Migration Assessment

Two-week onsite interactive workshop and follow-on report

Want to migrate VMs quickly and safely to a mature platform? Kick off with a Virtualization Migration Assessment for your quickest path to migration

Next Steps _____



Gather representatives from your infrastructure, networking and security teams

Experienced Red Hat Architects run a short series of onsite workshops to develop your migration journey



Know where you are going and how your going to get there

We provide a completed architecture design and prioritized roadmap for integrated migration factory solution



We will follow up with a tailored proposal for your complete migration off your current virtualization solution





Connect

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