

# Ease your VM journey with the migration toolkit for virtualization

## Migration toolkit for virtualization:

- Provides a unique set of tools for guided VM migrations from alternative hypervisors to OpenShift Virtualization.
- Includes a single-click download in all Red Hat OpenShift editions.
- Integrates with Ansible Automation Platform for accelerated, automated VM migrations.
- Offers tailored VM migration options available with Red Hat Consulting Services.

## Virtualization migrations can be intimidating

The journey to application modernization often presents a significant hurdle for enterprises, such as lengthy, time-consuming virtual machine (VM) migrations. The desire to move towards a cloud-native future sounds appealing, but is it worth disrupting the status-quo and risking business operations? With a growing reliance on cloud-native architectures and increasing concern over virtualization vendor lock-in, business leaders and technical practitioners must make critical decisions about their application portfolio and migration plans.

The [migration toolkit for virtualization](#) is a suite of tools included in Red Hat® OpenShift® that simplifies VM migrations to a modern, hybrid application platform. By minimizing downtime, the toolkit helps ensure business continuity and reduce risk so you can access consistent tooling across your application portfolio in less time. Using Konveyor Forklist, the migration toolkit for virtualization offers steps to simplify the migration process as organizations transition from traditional VM management to a modern, container-native architecture.

## A reliable path to a cloud-native future

## Move your critical workloads with confidence

Included in all Red Hat OpenShift editions, the migration toolkit for virtualization eases your VM migration journey to a modern platform while minimizing risk and workload downtime. The toolkit connects directly to the existing hypervisor and traditional VM configurations before beginning the migration process. Through a structured plan, users can create, validate, and execute detailed migration plans through an intuitive interface, giving them full control over the process from start to finish.

*Top features and capabilities of the migration toolkit for virtualization include:*

- ▶ **Premigration validation.** The migration toolkit for virtualization validation service applies a set of Open Policy Agent rules against each VM to flag configurations for potential configuration or compatibility issues that might slow the migration down. These checks prevent common migration failures before they can happen to reduce risk and delays.
- ▶ **Guided migration planning.** Users can smoothly navigate the migration process using step-by-step workflows that guide them through how to connect their source providers, map infrastructure, create plans, and execute the migration. This structured process reduces complexity and provides a simple path forward.
- ▶ **Mass migrations with parallel VM conversions.** Mass migrations can be used with supported migration sources: Red Hat Virtualization, VMware, Red Hat OpenStack® Platform, vSphere-compatible open virtualization appliance (OVA), and Red Hat OpenShift. [Complete migrations faster](#) when migrating multiple VMs concurrently.

▶ **Predictable migrations with minimal downtime.** The migration toolkit for virtualization supports both cold and warm migrations depending on your VM needs. For users looking for minimal, planned cutovers, warm migrations involve the VM staying up and running for the majority of the data transfer, with a short downtime period at the end. These migrations are usually dedicated to critical applications so you can maintain operations without slowing down.

▶ **Accelerated migrations with storage offloading.** Accelerate VM migration and reduce disruption of business-critical workloads by migrating VMs over the storage array rather than the IP network. [This function is available](#) with compatible, certified storage partners such as HP, NetApp, and Hitachi.

For more details on the latest features and capabilities of the migration toolkit for virtualization, review the [product documentation](#).

By migrating VMs to OpenShift Virtualization, users can take advantage of cloud-native tooling and modern principles that come as standard with Red Hat OpenShift. Manage VMs, containers, and serverless technologies with a consistent set of tools for deployment, scaling, and monitoring. Through flexibility and choice, users can explore modernization of their traditional VM workloads, including expanding to a cloud environment and adding AI capabilities. OpenShift Virtualization is currently available on Red Hat OpenShift Service on AWS, Microsoft Azure Red Hat OpenShift, Red Hat OpenShift on IBM Cloud, Red Hat OpenShift Dedicated on Google Cloud, and Oracle Cloud Infrastructure. For a standalone virtualization solution, Red Hat OpenShift Virtualization Engine offers the proven virtualization functionality of Red Hat OpenShift Container Platform and the migration toolkit for virtualization to deploy, manage, and scale VMs exclusively.

### **Automate at-scale migrations and VM management**

For large migrations with customizable configurations, users can explore automated and scalable VM migrations with [Red Hat Ansible® Automation Platform](#). This solution provides the automation capabilities to orchestrate the entire migration process, cutting out manual configurations. Ansible seamlessly integrates with the migration toolkit for virtualization to automate the initiation and monitoring of these migrations, cutting out repetitive tasks. Through automated migration, users can expect more timely and more accurate migrations at scale. Use [Ansible Playbooks](#) to consistently deploy reusable configurations for your migrations and scale efforts.

Once migrated to OpenShift Virtualization, users must maintain continuous monitoring, maintenance, and adaption of their VMs. With Ansible Automation Platform, you can automate Day 2 tasks across the VM lifecycle such as health checks, patching, backups, security risk management, and sunsetting unused VMs. Post-VM migration teams can automate, manage, and optimize the lifecycle of their VMs running on Red Hat OpenShift.

### **Trust Red Hat expertise throughout the migration journey**

Red Hat Services, spanning Red Hat Consulting, Red Hat Training, and Red Hat Technical Account Management, helps streamline the migration journey and transform your processes for success long-term. Through tailored and phased approaches, Red Hat Consulting experts collaborate with you and your team to make sure your virtualization goals are met.

**Red Hat Virtualization Migration Assessment** is the first step to strategizing your migration. Red Hat Consulting analyzes your existing VM infrastructure, discovers and maps your VM workloads, and gains key insights about your VM needs beyond migration. The assessment concludes with a high-level custom solution designed for your target virtualization environment and a defined path to OpenShift Virtualization.

From there, Red Hat Consulting can assist your team in carrying out successful migrations. The Virtualization Migration Factory engagement helps you migrate initial VM workloads with the migration toolkit for virtualization to make sure your VMs are up and running on a modern platform.

To help smooth migration and achieve post-VM migration success, it is important to equip teams with the right skills to operate on their new platform and provide support for ongoing technical guidance even after the initial migration. Red Hat Services such as, Red Hat Training and Certification and Technical Account Management [can provide this support](#) and ultimately help your organization reduce complexity, mitigate risk, and lower operational cost.

## Get started

### ► **Explore VM migration in action with the migration toolkit for virtualization:**

- Explore the [interactive demonstration](#) on how to migrate traditional VMs to a modern, hybrid application platform. Check out the [full library](#) of interactive demonstrations.
- **Learn about how to build a modern virtualization migration strategy**
- Continue learning about how the migration toolkit for virtualization can help streamline your VM migrations. Read the [e-book](#) and [documentation](#).



## 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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