

# VMware HCX for Disaster Protection, Recovery and Avoidance

## AT A GLANCE

VMware HCX®, an application mobility platform, simplifies application migration, rebalances workloads and optimizes disaster recovery across data centers and clouds. This software-as-a-service (SaaS) offering enables high-performance, large-scale app mobility across VMware vSphere® and non-vSphere cloud and on-premises environments to accelerate data center modernization and cloud transformation.

HCX automates the creation of an optimized network interconnect and extension, and facilitates interoperability across KVM, Hyper-V and vSphere 5.0+ to current vSphere versions. This delivers live and bulk migration capabilities without redesigning the application or re-architecting networks.

## Application migration and mobility for workload protection

Cloud adoption and multi-cloud strategies continue to be top of mind for many organizations, but building and managing a connected experience across private and public cloud environments can be complex. In a recent poll, 87 percent of VMware customers named operating across multiple clouds with minimal complexity as their top priority, and 56 percent named migrating applications across clouds.

Consistent infrastructure and management are baseline requirements for a good hybrid cloud strategy, but the ability to move applications freely is also critical. When it comes to migrating applications and workloads across clouds, populating new environments is often the first need. However, that same cloud infrastructure also provides new opportunities to simplify disaster protection and recovery.

Leveraging private and public clouds for disaster protection and recovery in hybrid and multi-cloud scenarios can be difficult to design. Many cloud disaster recovery solutions can replicate workload data but are limited in their ability to understand and augment the network that the workloads connect to. Customers that have required networks to be extended to a disaster recovery site have been excluded from using the cloud as a target and have had to build a traditional second data center, ordering and provisioning expensive physical networking equipment and connectivity services to extend layer 2 networks between sites. VMware HCX brings together data replication with simultaneous automation of the extension of on-premises layer 2 networks between sites.

## VM replication-based protection using VMware HCX mobility

VMware HCX Disaster Recovery protects virtual workloads managed by VMware vSphere deployed in a private or a public cloud, enabling on-demand and scheduled backup and recovery as well as large-scale workload migration for disaster avoidance. HCX introduces a new approach to disaster recovery by providing active-active protection for either partial or full recovery of both virtual machines (VMs) and infrastructure.

HCX Disaster Recovery makes it possible to protect VMs in primary or secondary sites, run test and planned failovers, reverse replication and execute fallback. It's simple to set up and manage, and costs less than traditional disaster recovery solutions. HCX Disaster Recovery can accommodate the most demanding business-critical applications and allows you to scale your protection capacity to meet variable demands.

HCX Disaster Recovery provides:

- Secure (enterprise to cloud and cloud to cloud) asynchronous replication and recovery of VMs via a simple, easy-to-use management platform
- Major efficiency gains over traditional business continuity and disaster recovery practices
- Improved recovery point objective (RPO) and recovery time objective (RTO) compliance while reducing TCO

**KEY CAPABILITIES**

- Eliminate upgrade requirements with app mobility across vSphere 5.0+ versions, on premises to cloud.
- Accelerate migration with seamless, secure, zero-downtime vSphere vMotion® and live, large-scale workload migration.
- Enable hybrid cloud designs with high-throughput, multisite, bidirectional, WAN-optimized, traffic-engineered interconnects.
- Migrate VMs from any switch at the source to the latest software-defined data center or cloud with VMware NSX®.
- Extend layer 2 networks, eliminating the need to re-IP or refactor existing workloads.

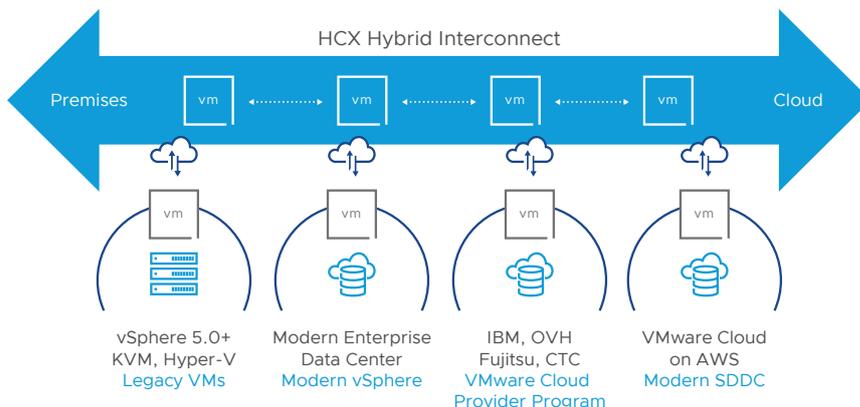


FIGURE 1: Move VMs to and from on-premises and cloud data centers enabled with VMware HCX.

**VMware HCX and VMware Site Recovery Manager**

VMware HCX Enterprise works with VMware Site Recovery Manager™ for advanced disaster recovery. This combination of automated network connectivity and optimized data replication simplifies the modernization of disaster recovery sites. The addition of HCX hybrid interconnect to Site Recovery Manager disaster recovery funnels replication traffic over a secure VPN and WAN optimized link, which allows networks to be extended across sites and keep the same IP address to accelerate deployment and ensure faster recovery.

HCX Enterprise and Site Recovery Manager together support more vSphere versions and provide the option of partial failover via data center extension where VMs can either connect to the source site and be reachable to dependencies (such as Active Directory, VMware vRealize® Operations™, security and compliance apps) or be routed to the destination site.

Site Recovery Manager provides full disaster recovery automation:

- Extensive disaster recovery runbooks minimize manual processes, ensuring VMs boot in the correct sequence, run in-VM scripts and re-IP where needed
- Non-disruptive full-site and app-level testing workflows ensure RTO requirements are met
- Detailed disaster recovery reports can be used for audit purposes

HCX provides replication and hybridity:

- WAN optimization and traffic shaping
- Secure tunneling of replication traffic
- Easy-to-setup L2 stretch networks to avoid re-IP of recovered VMs

**RESOURCES**

- [Read an overview on VMware HCX](#)
- [Take the HCX Hands-on Lab](#)
- [Visit the VMware HCX product page](#)
- [Watch informative demos, overview videos and more](#)
- [Read our latest HCX blogs](#)
- [Follow @VMwareHCX on Twitter and give us a shout with #VMwareHCX](#)
- [Read VMware HCX documentation](#)
- [Read our Enterprise Guide to Migrating to the Cloud](#)

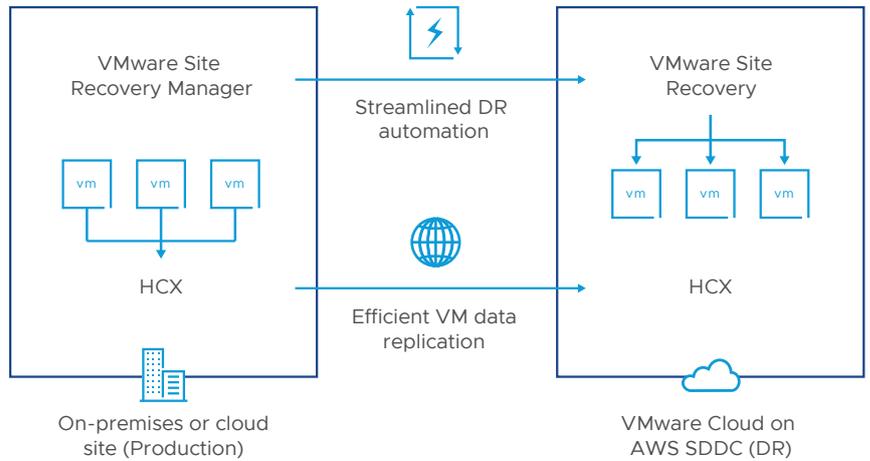


FIGURE 2: Disaster recovery with VMware HCX and VMware Site Recovery Manager.

HCX provides a simple, easy-to-manage solution that protects VMs deployed on premises or in a public cloud such as VMware Cloud™ on AWS. HCX Disaster Recovery provides:

Asynchronous replication and recovery of VMs

- Self-service RPO settings from 5 minutes to 24 hours per VM
- Reverse failover of workflows to the source site
- Multiple points-in-time recovery snapshots that allow recovery for up to 24 previous replication points in time
- Optimized replication throughput via WAN optimization
- The ability to route replication traffic across a direct connect network
- On-premises monitoring and management with the vSphere Web Client plug-in