

# VMware HCX+

## Workload migration and mobility service

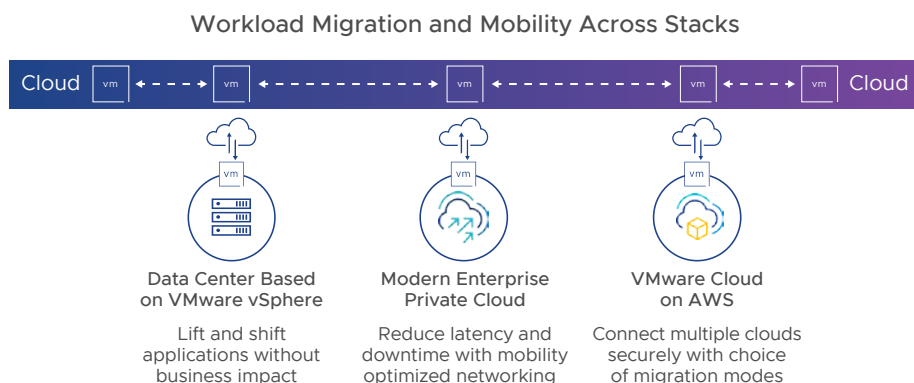
### At a glance

- Managed workload migration and mobility service
- Centralized workload mobility for multi-cloud environments
- Enhanced reporting and visibility across sites and migration
- Unified console for VMware HCX+ site lifecycle and management
- Live, large-scale movement of workloads across any VMware platform
- VMware vSphere 6.5 and up to any current vSphere version on public cloud or on-premises data center
- Workload migration without the need for re-IP addressing
- Compelling operational and economic advantages for on-premises and cloud migrations

### Overview

VMware HCX+™ is a managed workload migration and mobility service offering that provides centralized management, orchestration and observability for migration and rebalancing initiatives across multi-cloud environments. With single pane of glass visibility into multisite connectivity and migration activities, HCX+ helps accelerate your large-scale workload migration projects seamlessly, securely and with minimal to no downtime.

VMware HCX+ automates the creation of an optimized network interconnect and extension, and facilitates interoperability across different VMware vSphere® versions. This delivers live and bulk migration capabilities without redesigning the application or re-architecting networks.



**Figure 1:** Accelerate the multi-cloud journey and SDDC modernization with VMware HCX+.

“VMware HCX+ will give us the ability to accelerate and execute large, multi-cloud migration projects with ease. With HCX+, we can centrally manage workload mobility across our multiple sites with a high degree of operational efficiency. We are excited about the success of HCX+ and are eager to see what more it can enable for us.”

Brian Gay  
IT Systems Engineer  
Health New England

## Use cases

VMware HCX+ streamlines workload migration and workload rebalancing across data centers and clouds, moving applications seamlessly between environments at scale, and avoiding the cost and complexity of refactoring apps. HCX+ plays a pivotal role in several scenarios, such as hardware refresh/data center modernization, data center evacuation, cloud migration, data center consolidation (mergers and acquisitions [M&A]), capacity expansion or seasonal bursting, and workload rebalancing across clouds/data centers. The following are key use cases for HCX+.

### Workload migration

VMware HCX+ can migrate large amounts of applications and workloads across any VMware platform, such as from vSphere 6.5 and up to newer versions of vSphere. This applies to both modern data centers and to the cloud. HCX+ offers several migration types, such as VMware HCX® vMotion®, bulk migration, and replication-assisted vMotion.

HCX+ seamlessly creates a hybrid interconnect to easily migrate thousands of vSphere VMs within and across data centers and clouds without requiring a reboot and with zero downtime. Once migrated, swing networks without any retrofit/redesign. HCX+ supports bidirectional VM movement, making cloud-to-on-premises repatriation an easy and cost-effective choice for customers.

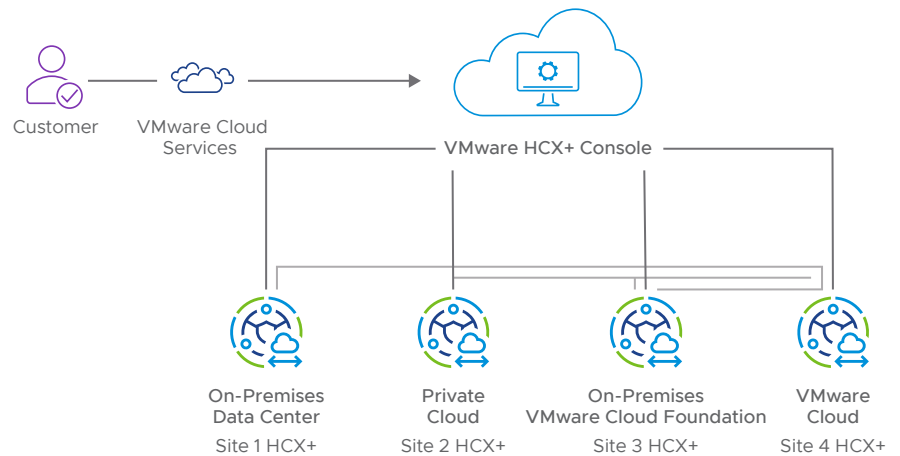
### Workload mobility

VMware HCX+ automates the creation of an optimized network interconnect and extension, and facilitates interoperability across vSphere versions. The Layer 2 extension enables you to use the same workload IP addresses on both the source and destination sites, making live migrations a lot smoother and easier. This delivers live and bulk migration capabilities without redesigning the application or re-architecting networks. Mobility optimized networking eliminates round-trip latency for routed communications in the cloud.

With HCX+, you can move workloads at any time to meet scale, cost management, compliance, and vendor neutrality goals. Your organization can actively rebalance cloud and on-premises application footprint with HCX+ as an always-on, secure, high-throughput, WAN-optimized, hybrid interconnect that tethers cloud to on-premises estates. Moreover, this can all be accomplished without end users noticing a difference in where their workload is running.

## Key capabilities

VMware HCX+ addresses the end-to-end lifespan of workload migration and mobility. Figure 2 depicts the high-level framework of the cloud-connected service.



**Figure 2:** VMware HCX+ functional diagram.

### Day 0 operations

Onboarding your team to VMware HCX+ is made easy with simplified deployment and centralized management. Administrators can also assign appropriate role types to members of their team or third parties, depending on who needs day-to-day access to HCX+. Very quickly, you can deploy necessary infrastructure from a single point of view and keep track of your entitlement without traditional license keys.

### Day 1 operations

Create plans for your VMs with two considerations: workload mobility and network connectivity. The SaaS product can orchestrate operations for the many different sites in your topology. You can migrate large-scale waves of VMs without application owners knowing a difference in which cloud their workload resides in. Network connectivity assists in ensuring there is the same IP space in your desired target environment, reducing the need for additional planning.

### Day 2 operations

Regular maintenance of your VMware HCX+ deployment is necessary to take advantage of the most up-to-date functionality and security patches. The SaaS product also allows for global visibility into your environment to perform quick troubleshooting. Administrators can dedicate more time to important Day 0 and 1 operations as their footprint scales across multiple clouds.

Note: VMware HCX+ Advanced is currently the only edition available. All features in Table 1 are available in this edition.

Table 1: Key features	
Day 0 operations – Simplified deployment	
Turnkey infrastructure creation	Utilize this one-stop shop to create hybridity between multi-cloud topologies with minimal steps.
Launch pad	Quickly onboard to VMware HCX+ with a guided journey. Step-by-step steering to a successful deployment will allow for quick and seamless onboarding of HCX+ services.
Keyless activation	Leverage a one-time use manifest to activate HCX+ site managers with a secure connection. Subscription entitlement will be managed for all sites from the console without the need for license keys.
Inventory discovery	Quickly onboard sites via the HCX+ console for organizations with VMware Cloud™ software-defined data center (SDDC) deployments. Onboarded sites will undergo a discovery process to identify available VMware services and managed objects.
Day 0 operations – Centralized management	
Unified cloud console	Enable many-to-many site connectivity by leveraging federation among independent entities to orchestrate functions.
Multisite cloud-based identity and access management	Enable cloud platform-powered authentication policies by offering federated, multifactor authentication.
Day 1 operations – Workload mobility	
Smart defaults	Accelerate time to configure and operate HCX+ with intelligent suggestions. Reduce the chance of human error with repeatable tasks.
Multisite mobility groups	Create meaningful waves of workloads to track mobility operations for multi-cloud infrastructures from a single point of view.
Large-scale, cloud-to-cloud migrations	Non-disruptively schedule hundreds of VMs to migrate in parallel with the flexibility of customizing the guest OS when VMs land at their destination.
WAN optimization	Efficiently migrate workloads with in-line data reduction and line conditioning for deployments over the internet.

## How to buy

VMware HCX+ Advanced is available as an add-on to VMware Cloud on AWS, VMware NSX®, and VMware Cloud Foundation™. Consult your VMware sales professional for details.

## For more information or to purchase VMware products

Call 877-4-VMWARE (outside North America, +1-650-427-5000) or visit [vmware.com/products/hcx](https://vmware.com/products/hcx). For detailed product specifications and system requirements, refer to the [VMware HCX documentation](#).

## Resources

[Take the VMware HCX Hands-on Lab](#)

[Visit the VMware HCX product page](#)

[Visit the VMware HCX Tech Zone](#)

[Read the VMware HCX documentation](#)

Day 1 operations – Network connectivity	
Multisite network extension	Seamlessly extend network and IP space across multiple clouds, reducing complex planning. Ensure that IP addressing policies, security policies, and administrative boundaries are not compromised across environments.
Network extension high availability	Ensure that multi-cloud connectivity is reliable and redundant with active/passive appliances.
Mobility optimized networking	Reduce unnecessary latency created by hair-pinning for workloads on stretched networks.
Traffic engineering	Utilize multiple traffic engineering technologies within the HCX+ data transport. These are enabled silently (abstracted complexity): <ul style="list-style-type: none"> <li>• Transport auto-configuration</li> <li>• Intelligent flow placement</li> <li>• Packet reassembly</li> <li>• Auto-negotiation</li> <li>• Intelligent flow placement on encrypted multitunnels</li> <li>• Equal-cost multipath (ECMP) resiliency</li> </ul>
Day 2 operations – Lifecycle management	
Pre-check validations	Verify that the underlying infrastructure is compatible with the latest features.
Instant access to new SaaS functionality	Begin consuming new features without impact to HCX+ managed sites with real-time updates to the HCX+ console.
Day 2 operations – Reporting and visibility	
Topology view	Visualize your HCX+ infrastructure across multiple sites. Quickly visualize if connectivity is healthy and be directed to relevant troubleshooting pages.
Operation dashboards	Get a single view for mobility and network extension summaries across all sites being managed by the HCX+ console.
Alerting and troubleshooting	Get real-time feedback on critical tasks and how to address them without major delays.