



VMware HCX 4.0 Release Notes

Updated on: 23 FEB 2021

VMware HCX 4.0.0 | 23 FEB 2021 | Build 17667890 (Connector), Build 17667891 (Cloud)

Check for additions and updates to these release notes.

What's in the Release Notes

The release notes cover the following topics:

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About VMware HCX

VMware HCX delivers secure and seamless app mobility and infrastructure hybridity across vSphere 6.0 and later versions, both on-premises and in the cloud. HCX abstracts the distinct private or public vSphere resources and presents a Service Mesh as an end-to-end entity. The HCX Interconnect can then provide high-performance, secure, and optimized multi-site connectivity to achieve infrastructure hybridity and present multiple options for bi-directional virtual machine mobility with technologies that facilitate the modernization of legacy data centers.

For more information, see the [VMware HCX User Guide](#) in the VMware Documentation Center.

Before You Begin

Starting with the HCX 4.0 release, software versioning adheres to **X.Y.Z** Semantic Versioning, where X is the major version, Y is the minor version, and Z is the maintenance version. For more information about HCX software support, lifecycles, and version skew policies, see [VMware HCX Software Support and Version Skew Policy](#). This document includes the section HCX Support Policy for Vacating Legacy vSphere Environments, with more information available in VMware [KB 82702](#).

For information regarding HCX interoperability, see [VMware Product Interoperability Matrix](#).

Upgrading to 4.0 from HCX 3.5.3 R-Releases

Prior to Semantic Versioning, HCX 3.5.3 releases were identified as "R" releases, such as R147. Review the following information prior to upgrading from R-based releases to HCX 4.0:

- Upgrading to HCX 4.0 is supported only from the following HCX Service Updates: R147.
- Customers are required to move to R147 to support upgrading to HCX 4.0.
- Assistance with upgrading from out-of-support releases will be on a best-effort basis.
- VMware sends administrative messages to HCX systems that are running out of support and require upgrade.

Note: 3.5.3/R147 HCX Manager systems will display release code R148 as a prefix to the 4.0.0 version. This is a known condition during the transition. 4.0.x HCX Managers will not display the R release codes.

Early Adoption Features

Early Adoption (EA) denotes an initial release phase of a critical service feature with limited field exposure. While the feature has completed its entire development cycle and it is fully supported in production, due to strong dependencies on the deployment environment, thorough validation and qualification is recommended before activating it.

What's New in this Release

VMware HCX 4.0 is a major release that introduces new functionality and enhancements.

Migration Enhancements

- **Mobility Migration Events** – The HCX Migration interface displays detailed event information with time lapse of events from the start of the migration operation. This information can help with understanding the migration process and diagnosing migration issues. See [Viewing HCX Migration Event Details](#).
- **NSX Security Tag Migration** – Transfers any NSX Security tags associated with the source virtual machine when selected as an Extended Option for vSphere to vSphere migrations. See [Additional Migration Settings](#).
- **Real-time Estimation of Bulk Migration** – HCX analyzes migration metrics and provides an estimation of the time required to complete the transfer phase for every configured Bulk migration. The estimate is shown in the progress bar displayed on the Migration Tracking and Migration Management pages for each virtual machine migration while the transfer is in underway. For more information, see [Monitoring Migration Progress for Mobility Groups](#).
- **OS Assisted Migration Scaling** – HCX now supports 200 concurrent VM disk migrations across a four Service Mesh scale out deployment. A single Service Mesh deploys one Sentinel Gateway (SGW) and its peer Sentinel Data Receiver (SDR), and continues to support up to 50 active replica disks each. In this Service Mesh scale out model for OSAM, the HCX Sentinel download operation is presented per Service Mesh. See [OS Assisted Migration in Linux and Windows Environments](#).
- **Migrate Custom Attributes for vMotion** – The option Migrate Custom Attributes is added to the Extended Options selections for vMotion migrations.

Note: Migrated custom attributes for HCX vMotion migration do not include the values.

- **Additional Disk Formats for Virtual Machines** – For Bulk, vMotion, and RAV migration types, HCX now supports these additional disk formats: Thick Provisioned Eager Zeroed, Thick Provisioned Lazy Zeroed.
- **Force Power-off for In-Progress Bulk Migrations** – HCX now includes the option to Force Power-off in-progress Bulk migrations, including the later stages of migration.

Network Extension Enhancements

- **In-Service Upgrade** – The Network Extension appliance is a critical component of many HCX deployments, not only during migration but also after migration in a hybrid environment. In-Service upgrade is available for Network Extension upgrade or redeploy operations, and helps to minimize service downtime and disruptions to on-going L2 traffic. See [In-Service Upgrade for Network Extension Appliances](#).

Note: This feature is currently available for Early Adoption (EA). The In-Service mode works to minimize traffic disruptions from the Network Extension upgrade or redeploy operation to only a few seconds or less. The actual time it takes to return to forwarding traffic depends on the overall deployment environment.

- **Network Extension Details** – HCX provides connection statistics for each extended network associated with a specific Network Extension appliance. Statistics include bytes and packets received and transferred, bit rate and packet rate, and attached virtual machine MAC addresses for each extended network. See [Viewing Network Extension Details](#).

Service Mesh Configuration Enhancements

- **HCX Traffic Type Selection in Network Profile** – When setting up HCX Network Profiles, administrators can tag networks for a suggested HCX traffic type: Management, HCX Uplink, vSphere Replication, vMotion, or Sentinel Guest Network. These selections then appear in the Compute Profile wizard as suggestions of which networks to use in the configuration. See [Creating a Network Profile](#).

Usability Enhancements

- HCX now supports scheduling of migrations in DRAFT state directly from the Migration Management interface. (PR/2459044)
- All widgets in the HCX Dashboard can be maximized to fit the browser window. (PR/2609007)
- The topology diagram shown in the Compute Profile now reflects when a folder is selected as the HCX Deployment Resource. (PR/2518674)
- In the Create/Edit Network Profile wizard, the IP Pool/Range entries are visually grouped for readability. (PR/2456501)

Resolved Issues

Resolved Interconnect Issues

- PR/2350287 - Generic error messages are generated when a DVS cannot span all the hosts in at least one of the compute clusters. Error messages now provide specific information about the issue.
- PR/2702515 - Cannot create a Service Mesh in NSX-T environments with CVDS because the switch does not span all the hosts in at least one of the compute clusters. Error messages now provide specific information about the issue.
- PR/2609943 - Entering an invalid IP address range or gateway address when creating or editing the Network Profile resulted in a generic error message. Network Profile error messages now display details that point to a root cause.
- PR/2672106 - Compute Profile logic can override the current service resources selection from Datacenter to clusters. This can happen when additional clusters are added to an SDDC that previously had only one cluster. The logic is now fixed to retain the existing service resource selection when a new cluster is added to the SDDC.
- PR/2709378 - Network Extension Container fails to load DVS when there are multiple datacenters with one of them, not having any ESX host configured. When creating or editing a Compute Profile, the UI now loads eligible Network containers correctly if previously selected service resources have some host folder also in inventory. In case an empty Datacenter is selected in the “Select service resources” step, the UI prevents you from moving to the next step in the configuration.
- PR/2724019 - Resolved an issue with Service Mesh deployment in environments running NSX 2.5.x.

Resolved Migration/Mobility Group Issues

- **PR/2534823 - No indication in the UI that the Force Clean-up task for a migration has completed. This is now displayed as part of the migration events.**
- PR/2649583 - The Status column in the Migration Management page is not identified with a header. All columns on the page are now properly labeled.
- PR/2661413 - The Migration Management page does not clearly identify how to enable the available action buttons: Go, Schedule, Cancel, Archive, Force Cleanup, Force Power-off . A tool tip is added in the UI explaining how to activate these actions.
- PR/2691038 - If a guest virtual machine is rebooted, or the Sentinel agent is restarted during the final transfer phase of an OS Assisted Migration, the connection info could be lost from the database which can cause the migration to hang. The connection info now persists in the database till the final sync is complete.
- PR/2692707 - Launching a Mobility Group migrations through PowerCLI results in

Destination Datacenter and Destination Cluster being shown as "Not Available" and Datastore ID shown instead of Datastore name on the UI. The system now properly passes the correct migration parameters.

- PR/2719322 - For OS Assisted Migration, the migration of Linux virtual machines with odd sized memory (memory that is not a multiple of 4MB) fails even after resizing it.

Resolved Activation Issues

- PR/2648535 - Datacenter locations have incomplete names. When entering the datacenter location during HCX activation, the autocomplete suggestion for city names no longer displays non-ASCII characters as "?".

Resolved HCX Inventory Issues

- PR/2701866 - HCX fails to sync NSX Inventory objects, generating numerous repetitive errors in log files and other task-related details in HCX database. The HCX functionality has been updated to minimize both repetitive errors in log files and task-related details for the failed NSX Inventory sync operations.

Security Issues

- PR/2697957 - Starting with HCX version 4.0.0, TLS1.2 is the only protocol enabled per FIPS compliance requirements. For more information, see VMware [KB 82147](#).