



Release Notes for Cisco HX Data Platform, Release 5.5

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Introduction

Cisco HyperFlex™ Systems unlock the full potential of hyperconvergence. The systems are based on an end-to-end software-defined infrastructure, combining software-defined computing in the form of Cisco Unified Computing System (Cisco UCS) servers, software-defined storage with the powerful Cisco HX Data Platform, and software-defined networking with the Cisco UCS fabric that integrates smoothly with Cisco Application Centric Infrastructure (Cisco ACI). Together with a single point of connectivity and hardware management, these technologies deliver a pre-integrated and adaptable cluster that is ready to provide a unified pool of resources to power applications as your business needs dictate.

These release notes pertain to the Cisco HX Data Platform, Release 5.5, and describe the features, limitations and caveats for the Cisco HX Data Platform.

Recent Revisions

The following table links you to the sections of the HyperFlex Release notes that were introduced or updated for each release. Click on the link to view the details.

Release	Date	Description
5.5(1a)	August 22, 2023	First Release of Cisco HyperFlex Release 5.5(x). The following sections were introduced: <ul style="list-style-type: none">• New HyperFlex Features, on page 2• Supported Versions and System Requirements for Cisco HXDP Release 5.5(x), on page 3• Mixed Cluster Expansion Guidelines - Cisco HX Release 5.5(x), on page 5• Resolved Security Fixes, on page 5• Caveats in Release 5.5(x): Cisco Bug Search Tool, on page 6• Related Documentation, on page 6

New HyperFlex Features

Cisco HyperFlex Release 5.5(1a): New HyperFlex Features

The following features were introduced or updated in Cisco HyperFlex Release 5.5(1a):

- **Support for vSphere 8.0 U1**
- **Additional UCS Fabric Interconnect Support:** Support for UCS-FI-6536.
- **Stretch Cluster Enhancements:** The following features were introduced in HXDP Release 5.5(1a)
 - **Invisible Cloud Witness:** New Stretch Clusters installed using HXDP 5.5(1a) Stretch Clusters installed using HXDP 5.5(1a) will auto-configure an Invisible Cloud Witness for site arbitration, without the need for of an external witness service in a third site. Invisible Cloud Witness automatically runs the latest Invisible Cloud Witness version, user maintenance of this component is not required. (Stretch Cluster deployments from Intersight is not supported).
 - Support for Stretch Cluster preferred site



Note Established clusters using earlier zookeeper witness continue to work after cluster upgrade.

- **ESXi Hypervisor:** Reboot time reduction



Note The following support changes:

- Sentinel Snapshot Create workflow is not supported.
- Starting with 5.5(1a) ESXi versions 6.5, 6.7, and 7.0.U1 are not supported.
- Microsoft Hyper-V, HXCSI, and HyperFlex M4 server are not supported in HXDP Release 5.5(x). For configuration and administration information, see the Cisco HyperFlex Release 5.0(x) documents.
- VMware local plugin architecture support is limited to vSphere versions 6.5, 6.7, and 7.0. For more information, see the *vSphere Client Local plugins are deprecated (87880)* article on the VMware site.

New Supported Drives

For expansion of existing clusters or general information about interoperability of different drives, see HyperFlex Spec Sheets and the [HX Drive Compatibility Guide](#).

Table 1: Supported Drives

Drive Name	Drive Function	Drive PID	Applicable Platforms	Version
1.6TB ADP-RR 5620	Cache drive	HX-NVME4-1600	M5 C220 All NVMe M5 C220/C240 All Flash M6 C220/C240 All NVMe M6 C220/C240 All Flash	5.5(1a)

Supported Versions and System Requirements for Cisco HXDP Release 5.5(x)

Cisco HX Data Platform requires specific software and hardware versions, and networking settings for successful installation.

For a complete list of requirements, see the [Cisco HyperFlex Systems Installation Guide for VMware ESXi, Release 5.5](#)

Requirement	Link to Details
For a complete list of hardware and software inter-dependencies,	Hardware and Software Interoperability for Cisco HyperFlex HX-Series
Details on cluster limits and Cisco HX Data Platform Compatibility and Scalability Details	Cisco HX Data Platform Compatibility and Scalability Details - 5.5(x) Releases
Verify that each component, on each server used with and within an HX Storage Cluster is compatible.	FI/Server Firmware - 5.5(x) Releases
Confirm the component firmware on the server meets the minimum versions supported.	HyperFlex Edge and Firmware Compatibility Matrix for 5.5(x) Deployments
HX Data Platform Software Versions for HyperFlex Witness Node for Stretch Cluster	HX Data Platform Software Versions for HyperFlex Witness Node for Stretch Cluster - 5.5(x) Releases
Verify that you are using compatible versions of Cisco HyperFlex Systems (HX) components and VMware vSphere, VMware vCenter, and VMware ESXi.	Software Requirements for VMware ESXi - 5.5(x) Releases
List of recommended browsers.	Browser Recommendations - 5.5(x) Releases

Guidelines and Limitations

- HyperFlex vCenter Local Plugin is not supported after upgrade to ESXi 8.0 U1.

Prerequisites for Upgrading HyperFlex Software

The following tasks should be performed prior to beginning the upgrade process:



Important Using VMware Update Manager (VUM) or VMware Lifecycle Manager (vLCM) for upgrading the ESXi on HyperFlex node is not supported. Using these upgrade methods may delete Cisco custom drivers and cause cluster outages. We recommend using Cisco Intersight or HyperFlex Connect for ESXi upgrades including the security patches from VMware or manually installing patches using the offline zip bundle with ESXCLI commands.

- Ensure Storage I/O Control (SIOC) is completely disabled on each HyperFlex datastore and the local datastore on each ESXi host in the HyperFlex cluster. This can be confirmed through the vCenter Web Client:

Datastores -> <datastore name> -> Configure -> General -> Datastore Capabilities -> Storage I/O Control -> Verify > both Status and Statistics Collection is set to Disabled.



Note Please refer to the VMware documentation site for more details and steps to disable SIOC.

- Clusters running HXDP Release 4.0(2x) or later can upgrade directly to 5.5(1a).
- HXDP Release 5.5(x) supports ESXi version 7.0 U2, 7.0 U3 and 8.0 U1 and later only. If your current ESXi version is earlier than 7.0 U2, make sure to perform a combined upgrade of HXDP and ESXi to a target level 7.0 U2 or later.
- If the HXDP is already upgraded to 5.5(x) and an ESXi upgrade is attempted from 7.0 to 8.0, user needs to upload HXDP bundle and select HXDP along with the target ESXi 8.0 bundle.
- Migrate all M4 nodes to HyperFlex M5 or higher before attempting to upgrade to HXDP Release 5.5(x). Attempts to upgrade to HXDP Release 5.5(x) with HyperFlex M4 nodes in your cluster will fail.
- Review the Cisco HyperFlex Upgrade Guidelines in the [Recommended Cisco HyperFlex HX Data Platform Software Releases - for Cisco HyperFlex HX-Series Systems](#).
- Beginning with Cisco HXDP Release 5.0(2a), full feature functionality and configuration changes require a valid Cisco HyperFlex Software License. HX Connect users with expired or insufficient licenses at the end of the evaluation or the grace period after the license compliance date, view a prominent countdown banner that alerts the user to the license compliance need and provides a link to the license renewal page until the license expiration is remedied.

In the event a license passes both the license expiration date and the grace period countdown, the current configurations will operate as expected with limited information. Renewing the license allows a user to resume full feature functionality, and make configuration changes. For details and examples of the banners, see the [License Compliance and Feature Functionality](#) section of the Cisco HyperFlex Systems Ordering and Licensing Guide.

- vCenter version check: Verify that the vCenter meets the minimum requirement for the ESXi version being upgraded to. See, [VMware Product Interoperability Matrices](#) to ensure compatibility between vCenter and ESXi.
- Ensure all VM network port groups exist on all nodes in the cluster for vMotion compatibility.
- Ensure that the management and storage data VLANs are configured on the top-of-rack network switches to ensure uninterrupted connectivity during planned fabric failover.

- If using jumbo frames in your environment, ensure jumbo frames are enabled on the vMotion and data networks on the top of rack switch.
- Verify that the ESXi hosts are not in lockdown mode, and SSH is enabled for the duration of the upgrade. Lockdown mode can be re-enabled and SSH disabled after the upgrade is complete.
- Blade Package and Rack Package versions are not displayed in the Host Firmware Package: **HyperFlex-m5-con** and **HyperFlex-m6-con** for M6 nodes.
- Upgrading the VM compatibility version or hardware version of the Storage Controller Virtual Machine (SCVM) is not supported and should not be performed. This action is detrimental to the SCVM and will require a rebuild of the SCVM if performed.

Mixed Cluster Expansion Guidelines - Cisco HX Release 5.5(x)

General Guidelines:

- HX240c M6 is not able to use the additional slots if combined in a cluster with M5 nodes.
- All servers must match the form factor (220/240), type (Hybrid/AF/NVME), security capability (Non-SED only) and disk configuration (QTY, capacity, and non-SED) across the cluster.

Mixed Cluster Expansion Options: Supported

- Expanding existing M5 clusters with M6 converged nodes is supported.
- Expanding existing mixed M5/M6 cluster with M5 or M6 converged nodes is supported.
- Only expansion workflow is supported to create a mixed cluster (Initial cluster creation with mixed M5/M6 servers is not supported).
- Adding any supported compute-only nodes is permitted with all M5, M6 and mixed M5/M6 clusters using the HX Data Platform 5.0 or later Installer. Some example combinations are listed here, many other combinations are possible.

Mixed Cluster Expansion Options: Not Supported

- Expanding existing M6 cluster with M5 converged nodes is NOT supported.
- Mixing Intel and AMD M6 is not supported.
- HX Edge does not support mixed M5 and M6 clusters.
- Initial cluster creation with mixed M5/M6 servers is not supported.

Resolved Security Fixes

The following security issues are resolved in HXDP Release 5.5(x):

Affected Releases: The list of affected releases is equal to the First Known Release and all releases up to, but not including the HXDP 5.5(x) resolved release.

Defect ID	Common Vulnerability and Exposures (CVE) IDs:	Description	First Known Release ¹
CSCvp64519	None listed	Adobe Flash permissive crossdomain.xml policy	3.5(1a)

¹ Assume that all releases between the first known and resolved release are affected.

Caveats in Release 5.5(x): Cisco Bug Search Tool

The Bug Search Tool (BST) is designed to improve the effectiveness in network risk management and device troubleshooting. The BST allows partners and customers to search for software bugs based on product, release, and keyword, and aggregates key data such as bug details, product, and version. The tool has a provision to filter bugs based on credentials to provide external and internal bug views for the search input. Access the BST (use your Cisco user ID and password) at <https://tools.cisco.com/bugsearch/>.

The following table list all non-security HXDP caveats for the Cisco HyperFlex Release 5.5(x)

- To view the list of found and fixed caveats for a given release: Click on the link associated with the desired release.
- To view details about the symptom, conditions, and workarounds that apply to a bug, in the BST output, hover over the desired bug and view the details in the right panel or click on the bug entry to open the record in a new tab.
- To export the results to Excel: Click the **Export Results to Excel** button.

Table 2: Cisco Bug Search Tool:

HyperFlex Release	Affecting Releases	Fixed in Releases
5.5(1a)	5.5(1a) Open Caveat List	5.5(1a) Fixed Caveat List

Related Documentation

Information about installation, upgrading, maintaining, and troubleshooting your Cisco HyperFlex deployment are available in the following documents.

- [Preinstallation Checklist for VMware ESXi](#)
Provides an editable file for gathering **required** configuration information prior to starting an installation. This checklist must be filled out and returned to a Cisco account team.
- [Cisco HyperFlex Systems Installation Guide for VMware ESXi, Release 5.5](#)
Provides detailed information about Day 0 configuration of HyperFlex Systems and related post cluster configuration tasks. It also describes how to set up multiple HX clusters, expand an HX cluster, set up a mixed HX cluster, and attach external storage.
- [Cisco HyperFlex Systems Upgrade Guide for VMware ESXi, Release 5.5](#)
Provides information on how to upgrade an existing installation of Cisco HX Data Platform, upgrade guidelines, and information about various upgrade tasks.

- [Cisco HyperFlex Systems Upgrade Guide for Unsupported Cisco HX Releases](#)

Guides Cisco HyperFlex users who need to upgrade their environment from a Cisco HyperFlex HX Data Platform software release that is past the last date of support, to the latest suggested release on the Cisco Software Download site.
- [Cisco HyperFlex Data Platform Administration Guide, Release 5.5](#)

Provides information about how to manage and monitor the cluster, encryption, data protection (replication and recovery), ReadyClones, Native snapshots, and user management. Interfaces include HX Connect, HX Data Platform Plug-in, and the `stcli` commands.
- [Preinstallation Checklist for Cisco HyperFlex Edge](#)

Provides an editable file for gathering **required** configuration information prior to starting an installation. This checklist must be filled out and returned to a Cisco account team.
- [Cisco HyperFlex Edge Deployment Guide, Release 5.5](#)

Provides deployment procedures for HyperFlex Edge, designed to bring hyperconvergence to remote and branch office (ROBO) and edge environments.
- [Cisco HyperFlex Systems Network and External Storage Management Guide](#)

Provides information about HyperFlex Systems specific network and external storage management tasks.
- [Cisco HyperFlex Systems Stretch Cluster Guide, Release 5.5](#)

Provides installation and configuration procedures for HyperFlex Stretch cluster, enabling you to deploy an Active-Active disaster avoidance solution for mission critical workloads.
- [HyperFlex Intersight Installation Guide](#)

Provides installation, configuration, and deployment procedures for HyperFlex Intersight, designed to deliver secure infrastructure management anywhere from the cloud.
- [Cisco HyperFlex SD-WAN Deployment Guide](#)

Feature preview for deploying the SD-WAN solution on a HyperFlex cluster. Cisco recommends that you test this feature on a test network/system (Not for use in your production environment).
- [Cisco HX Data Platform Security Hardening Guide](#)

Provides recommended configuration settings and deployment architectures for HXDP-based solutions. Provides additional vCenter Security Hardening settings.
- [TechNotes](#)

Provides information on recommended FI/Server firmware.
- [Troubleshooting Guide](#)

Provides troubleshooting for installation, configuration, Cisco UCS Manager to Cisco HyperFlex configuration, and VMware vSphere to HyperFlex configuration. In addition, this guide provides information about understanding system events, errors, Smart Call Home, and Cisco support.
- [Command Line Interface \(CLI\) Guide](#)

Provides CLI reference information for HX Data Platform `hxcli` and `stcli` commands.
- [REST API Getting Started Guide](#)

Provides information related to REST APIs that enable external applications to interface directly with the Cisco HyperFlex management plane. [REST API Reference](#)

- [Cisco HyperFlex PowerShell Cmdlets for Disaster Recovery](#)

Provides information on how to use the Cisco PowerShell Cisco HXPowerCLI cmdlets for Data Protection.

- [Cisco HxBench Getting Started Guide](#)

This document describes how to use the Cisco HxBench storage performance testing tool to measure the storage infrastructure.

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Cisco Bug Search Tool

[Cisco Bug Search Tool](#) (BST) is a web-based tool that acts as a gateway to the Cisco bug tracking system that maintains a comprehensive list of defects and vulnerabilities in Cisco products and software. BST provides you with detailed defect information about your products and software.

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