



CVFS Product Release Notes

Release 11.46.30

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CVFS 11.46.30 version support matrix

CVFS general release	Additional CVFS products
CVFS 11.46.30	CVFS CSI Driver version 2.0
CVFS 11.46.30	CVFS VAAI NAS Plugin version 4.2
CVFS 11.46.30	CVFS vCenter Plugin version 4.3.1

CVFS 11.46.30 Release Documentation

Title	contents
<i>Hedvig Cluster Deployment Guide</i>	how to set up, install, and upgrade Hedvig Storage Cluster Nodes, Storage Proxies, and Deployment Servers. Also, how to set up for HCI, AWS, KVM, Hyper-V, Multipath I/O, and HTTPS support.
<i>Hedvig Command Reference</i>	how to use all commands in the Hedvig CLI to create and manage Virtual Disks, snapshots, and clones, as well as manage Hedvig Storage Proxies, Storage Pools, rereplication, SNMP, MIBs, and OST AIR.
<i>Hedvig CSI User Guide</i>	how to install, configure, and provision storage for the Hedvig CSI Driver, as well as how to create snapshots and clones and perform data migration.
<i>Hedvig Deduplication Design User Guide</i>	how Hedvig deduplication design, including with respect to GC (garbage collection), is implemented.
<i>Hedvig Encrypt360 User Guide</i>	how to use the Hedvig Encrypt360 feature, which provides software-based encryption that is AES-256, FIPS compliant encryption of data in flight and at rest.
<i>Hedvig MIB User Guide</i>	how to set up the Hedvig MIB and configure SNMP, including sending a test trap and all hedvigTrapsEntry traps and descriptions.
<i>Hedvig Operator User Guide</i>	how to use the Hedvig Operator, the official operator to deploy and manage Hedvig components in container orchestrators such as Kubernetes – including how to install, create a configuration for, and upgrade Hedvig components with.

Title	contents
<i>Hedvig Pensieve User Guide</i>	how to use Hedvig's Pensieve Service, which monitors the metrics for a system – providing a system snapshot to help troubleshoot Hedvig Cluster issues.
<i>CVFS Product Release Notes</i>	[this document] special notes on upgrading and installing the current release, as well as highlights of the current release and a few previous releases.
<i>Hedvig RBAC User Guide</i>	how to set up and manage Hedvig RBAC, including user, role, and tenant management.
<i>Hedvig: Resetting VMware ESXi NFS 4.1 Transfer Size</i>	how to use two hidden parameters, ForeMaxRqstSize and ForeMaxRespSize, in the ESXi advanced settings, to increase the maximum NFS 4.1 transfer size up to 1024 KB.
<i>Hedvig REST API User Guide</i>	how to use the Hedvig REST API to create and manage Virtual Disks, snapshots, and clones, as well as manage Hedvig Storage Clusters.
<i>Hedvig S3 Protocol-Compatible Object Storage User Guide</i>	how to use Hedvig's S3 Protocol-Compatible Object Storage, including how to set up configuration files, SSE, HTTPS, AWS CLI, and S3 API calls supported by Hedvig.
<i>Hedvig S3 Protocol-Compatible Object Storage User Interface Guide</i>	how to use Hedvig's S3 Protocol-Compatible Object Storage User Interface, which supports S3 Bucket operations. This UI enables basic S3 operations, such as bucket/object creation; bucket/object basic metadata management; listing objects; managing folders; uploading, downloading, and deleting objects; etc.

Title	contents
<i>Hedvig Troubleshooting Guide</i>	how to troubleshoot Hedvig Storage Proxy and Cluster Node service status, health status, and metrics, as well as changing log file settings, performing data collection, and recommended SSD specifications.
<i>Hedvig UI Installer User Guide</i>	how to install Hedvig products with a user interface-based installation process.
<i>Hedvig VAAI NAS Plugin User Guide</i>	how to use the Hedvig VAAI NAS Plugin, which enables the use of VMware vSphere Storage APIs – Array Integration (VAAI) in the Hedvig environment.
<i>Hedvig Virtualized Storage for Microsoft Hyper-V Clusters User Guide</i>	how to set up Hyper-V Failover Clusters with Hedvig, including how to configure Scale-out File Server (SOFS).
<i>CVFS vCenter Plugin User Guide</i>	how to use the CVFS vCenter Plugin, which integrates CVFS functionality into the VMware vSphere Client, a Web browser-based application that connects to the vCenter Server in order to manage vSphere infrastructure.
<i>Hedvig WebUI User Guide</i>	how to use the Hedvig WebUI to create and manage Virtual Disks, snapshots, and clones, as well as manage Hedvig Storage Clusters, Storage Proxies, Storage Pool Migration, rebalancing, and SNMP configurations.

Highlights of the CVFS 11.46.30 release

Platform security enhancements

- Strengthens validation of privileged system command execution for NFS controller and related service operations.
- Improves platform hardening by disabling unused diagnostic and debugging operations within storage and metadata services.

Pages subsystem memory improvements

- Resolves a memory leak in the Pages subsystem that can occur under sustained read workload pressure, improving memory utilization and service stability.
- Introduces enhanced workload admission control to prevent resource exhaustion during high-load conditions.

Storage service startup resilience

Improves service startup reliability by allowing initialization to continue when key-management metadata is temporarily unavailable.

Cluster deployment corrections

Improves all-in-one cluster role detection during deployment, providing more reliable startup and operation of storage services.

Disk throttle service handling

Improves startup and lifecycle management of disk throttle services, including network readiness validation before service activation.

Platform dependency updates

Adds Java timezone data package support required for Enterprise Linux 9 environments.

Highlights of the CVFS 11.46.10 release

Node recovery improvements

Improves node rebuild and recovery workflows by enhancing reconstruction handling during node replacement and recovery operations.

Pages subsystem memory improvements

- Resolves a memory leak during Pages recovery by properly releasing and managing recovery buffers throughout the recovery lifecycle.
- Improves native read-path buffer cleanup, reducing memory growth and improving runtime stability under load.

Reconstruction and storage pool migration reporting

- Improves the accuracy of reconstruction and storage pool migration status reporting

for offline disks and recovery activities.

- Corrects migration progress reporting when containers are manually removed during storage pool migration.
- Improves the reliability of migration status queries in large-scale recovery scenarios.

Cluster communication memory improvements

Resolves a message-handling memory leak that can occur when cluster communication targets are unavailable, improving long-term service stability.

Security enhancements

Strengthens platform security with additional protections against XML External Entity (XXE) attacks.

Platform and cluster service updates

Updates cluster coordination and logging components to supported versions, improving platform compatibility and maintainability.

Enhanced drive replacement support for Fujitsu platforms

Improves drive replacement and disk rescan operations on Fujitsu PRIMERGY systems that use Adaptec RAID controllers, providing more reliable maintenance and recovery operations.

Highlights of the CVFS 11.44.23 release

Security enhancements

- Strengthens platform security with additional protection against XML External Entity (XXE) attacks.
- Strengthens validation of privileged system command execution for NFS controller and related service operations.
- Improves platform hardening by disabling unused diagnostic and debugging operations within storage and metadata services.

Cluster deployment improvements

- Expands bind-address configuration support for deployment, restore, and cluster management workflows.
- Reduces deployment and upgrade warnings, improving the overall operational experience.

Highlights of the CVFS 11.44.19 release

Platform dependency updates

Updates Java timezone data packaging to improve platform compatibility on supported Enterprise Linux environments.

Highlights of the CVFS 11.44.14 release

Health check improvements

Improves cluster health monitoring and alerting for storage pool and related health-check workflows.

Pages subsystem memory improvements

Improves native read-path buffer cleanup, reducing memory growth and improving runtime stability under load.

Reconstruction and storage pool migration reporting

Improves the accuracy of reconstruction and storage pool migration status reporting for offline disks and recovery activities.

Enhanced drive replacement support for Fujitsu platforms

Improves drive replacement and disk rescan operations on Fujitsu PRIMERGY systems that use Adaptec RAID controllers, providing more reliable maintenance and recovery operations.

Disk throttle service handling

Updates disk throttle operational components to supported revisions.

Platform and cluster service updates

Updates cluster coordination components to improve platform compatibility and supportability.

Highlights of the CVFS 6.0.5.12 release

Platform compatibility update for Rocky Linux 9

Includes a minor library-level update to ensure stable operation in Rocky Linux 9 environments.

Highlights of the CVFS 6.0.5.10 release

Memory leak fixes and stability improvements

Addresses memory-related issues to improve runtime stability and prevent service degradation over time.

Platform support for Rocky Linux 9

Adds compatibility with Rocky Linux 9, enabling deployment on newer operating system environments.

Highlights of the CVFS 6.0.5.6 release

Version 6.0.5.6 is a consolidation and stabilization release in the 6.0.x Innovation line, addressing correctness, efficiency, and reliability issues observed in earlier 6.0.5.x versions.

Key Enhancements and Fixes

- Improved EC Healing Behavior for RF3 Under Full Storage Pool Conditions

- Fixes inefficiencies during EC healing from RF3 data when storage pools are consistently full.
- Memory Usage Improvements During Storage Pool Full Scenarios
- Addresses a minor memory leak observed when operating near high watermark storage capacity on one or more disks
- RBL / SPM Interaction Fixes
- Improves coordination between concurrent RBL and SPM workflows
- Improved Efficiency of SPM Metadata Persistence
- Optimizes how SPM tracks and persists on disk metadata, minimizing unnecessary information retention and reducing memory and storage overhead.
- SPM Bug Fixes and Stability Improvements
- Includes miscellaneous fixes to improve robustness and correctness of SPM workflows across a range of operational scenarios.
- Operational and Security Fixes
- Addresses a set of known issues impacting deployment workflows, system logging under full disk conditions, hardware metadata accuracy, role configuration, and security vulnerabilities, including CVE fixes and access control hardening.

Highlights of the CVFS 6.0.5.5 release

Version 6.0.5.5 continues the 6.0.x Innovation line with a focus on stability and runtime efficiency.

Key Enhancements and Fixes

- Memory Optimizations
Improves memory utilization across core services to enhance runtime efficiency.

Highlights of the CVFS 6.0.5.4 release

Version 6.0.5.4 builds on the 6.0.x Innovation line with a focus on read performance and startup efficiency.

Key Enhancements and Fixes

- Read Performance Architecture Enhancement
Introduces substantial read performance improvements through a key architectural change. Index data is now maintained in a persistent, high performance NVMe storage

layer, rather than relying on transient in memory caches populated from HDD.

- **Faster and More Consistent Read Operations**

Persisting index data on NVMe improves read latency and consistency, particularly across steady state operation and restart scenarios.

- **Significantly Faster Service Startup and Upgrades**

Because index information is immediately available after restart, services no longer need to scan the entire node dataset during startup, resulting in dramatically faster service start times and reduced upgrade duration.

- **Operational Efficiency Improvements**

Reduces cache warm up overhead and variability, improving predictability of node restarts and lifecycle operations.

Early Access Notes

- Read performance enhancements are not enabled by default.
- Intended for early adopters and controlled environments.
- Feedback from this phase informs subsequent stabilization and broader enablement.

Highlights of the CVFS 6.0.4 release

Version 6.0.4 marks the first CVFS Innovation release in the 6.0.x series.

The 6.0.x Innovation line follows a faster feature cadence, delivering platform updates, performance work, and architectural changes earlier than the Long Term Support (LTS) stream.

Relationship to LTS

- 6.0.x includes all fixes mentioned in the 5.0.x LTS stream.
- On top of LTS fixes, 6.0.4 introduces Innovation only enhancements, including performance improvements, early access features, and internal service optimization.

Key Enhancements and Fixes

- **JDK 21 Support**
Upgrades runtime components to JDK 21 for improved performance, stability, and long term maintainability.
- **RBL / SPM Progress Bar Fixes**
Enhances accuracy of reporting for lifecycle operation progress indicators in RBL/SPM workflows.
- **IRBL Parallelism Configuration**
Increases parallelism for IRBLs targeting the same pool to reduce rebuild time and improve operational throughput. Also provides a configuration option for further optimization via developer tools.
- **Space Reservation Feature Bug Fixes**
- **Developer Workflow Enhancements for SPM**
Simplifies SPM triggering flows through improvements in developer tooling.
- **Fix for Empty RF3 Containers Causing SPM Stall**
Addresses a condition where empty RF3 containers could cause SPM operations to hang.
- **Developer CLI Validation Improvements**
Adds validation checks to prevent invalid command inputs and reduce operational errors.
- **Improved Fix Disk Reliability**
Prevents long running or stalled fix disk operations after NVMe failures.

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Software-defined AES-256, FIPS compliant encryption of data in flight and at rest.