Hitachi Content Platform Gateway Release Notes for Windows

v4.3.8

Windows only

This document contains the release notes for the Windows version of Hitachi Content Platform Gateway. It describes the new features, supported environments, known issues, issues resolved and other useful information about this version of the product.

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Release Highlights

Overview

The HCP Gateway provides legacy applications with the ability to lower storage costs and achieve higher levels of curability by storing content on the Hitachi Content Platform (HCP). The primary use cases for the HCP Gateway are:

- NAS Gateway to HCP - enable legacy applications to utilize HCP storage via S3 cloud storage protocol.
- Compliance – help meet compliance requirements including retention on files, apply legal hold, and audit user and administrative access to files.
- Edge to Core – enable bottomless storage at remote offices and make copy to a central HCP to remove backup requirements at the remote office.

New Features

What's new in 4.3.8

- Support byte-range read of offline file and keep the partial content in cache.
- Cache Migration page, allow users to execute Copy File to Cache for the files which are accessed/created/modified in a date range.
- Add "Verify SSL Certificate" option for S3 storage with HTTPS protocol.
- The query data for: capacity, Files total number and size will be displayed on the Summary page with a time and date stamp.
- Added File Path option to use UNC Storage for HCP and other storage
- Updated License check to be less sensitive using Fingerprint v3.
- New script to automatically upgrade from HCP Gateway version 4.2.0 to version 4.3.1.

What's new in 4.3.1

- The enforcement of Quotas on Windows Shares is now supported. Stubbed files are excluded from capacity.
- Windows Folder Move function is now supported.
- License capacity check will be run once per month versus on application start.
- The query data for: capacity, Files total number and size will be displayed on the Summary page with a time and date stamp.
- New script to automatically upgrade from HCP Gateway version 4.2.0 to version 4.3.1.

What's new in 4.2.0

- Qualified HCP for Cloud Scale v2.3, including option for file path as object id (no name mangling).

- Windows Event Logging – Admin events logged to Windows events to support Varonis and other Microsoft Windows tools.
- Cache Management includes last Modification date as watermark clear option.
- File Explorer – Pre-fetch data into local cache for faster READ performance.
- Copy Release Policy – immediate copy to HCP and scheduled policy-based removal of cache data – based on file modify time.
- USB bootable ISO image for physical server and VM installation (eliminated OVA image).
- New dedicated Reports database.
- Security fixes and improvements.

Supported Environments

System Configurations

- **Virtual Machine** – Supported VM hosts include:
  - VMWare ESXi 6.7 or 7.0 for Single Gateway Node.
  - VMware ESXi 7.0 is required for Clustered Gateway Nodes.
- **Appliance** – HCP Gateway software installed on a physical server from Hitachi Vantara.

Supported Operating Systems

Windows HCP Gateway – Windows Server 2019 Standard Edition (standalone and cluster).

User Authentication

HCP Gateway can use Windows Active Directory for user and administrator authentication. For the HCP Gateway to use Active Directory. The following Active Directory domain controllers are supported:

- Windows Server 2012 R2
- Windows Server 2016
- Windows Server 2019

Supported HCP Platforms

- HCP 8.x
- HCP 9.1 or later
- HCP for Cloud Scale 2.3 or later

Supported Browsers

The HCP Gateway UI supports the following browsers:

- Google Chrome – 80+
- Mozilla Firefox – 72+

Third-Party Copyrights and Licenses (including Open Source)

The Windows version of HCP Gateway incorporates third-party software and utilizes various operating systems.

Component List	Version	Name of Developer	Website	License
Wildfly	19.1.0	Red Hat/JBOSS	https://wildfly.org/	LGPL v2.1
MariaDB	10.6	MariaDB Corporation AB	https://mariadb.org/	LGPL v2.1
Eclipse Temurin JDK with Hotspot	11.0.13+8	Eclipse Foundation - Adoptium	https://adoptium.net/	GPL v2 with Classpath Exception and GPL v2 with Assembly Exception
Vaadin	7.7.30, 10.0 - 14.0	Vaadin Ltd	https://vaadin.com	Apache v2.0
Boost C++ Libraries	1.75	Beman Dawes	https://www.boost.org	Boost Software License, v1.0
AWS SDK C++	1.9.346	Amazon	https://github.com/aws/aws-sdk-cpp	Apache v2.0
OpenSSH	7.9	OpenBSD Project	https://www.openssh.com/portable.html	OpenBSD
Tail for Windows	7	Tail for Windows	https://sourceforge.net/projects/wintail/	Public Domain
OpenSSL	1.1.1h	Eric Young, Tim Hudson	https://www.openssl.org/source/	Double license - OpenSSL license and the original SSLeay license
FireFox	95	Mozilla Foundation	https://www.mozilla.org/en-US/firefox/new/	Mozilla Public License v2
7Zip	19	Igor Pavlov	https://www.7-zip.org/	LGPL v2.1
Microsoft Windows Server OS	2019	Microsoft	https://www.microsoft.com/en-us/cloud-platform/windows-server	Microsoft – Server OS and CAL

Note:

For existing HCP Gateway customers, it is required to update Java version to 11.0.13+8. The updated version is included in this release and will need to be manually installed. See Chapter 32 in the HCP Gateway Administration Guide for detailed instructions.

Fixes & Issues

Bugs/Issues Resolved

This version of the HCP Gateway fixes the following bugs:

Resolved	Description
2263062	The updated content sometimes disappeared when update an offline file wrote by other node
2263061	Four Cluster Nodes: Un-archived file cannot be migrated to storage on SiteB any more if it is deleted on SiteA
2262855	Email is disabled, but UI always searches events in database-not fixed
2262825	"Not Support type 50" warning generated when create quota
2262818	Exception "Unbalanced parenthesis" appears in log when AD user "LastName_ FirstName" login to UI
2262789	File cannot read from CloudScale File Path storage after rename case of folder and file together
2262784	File is disappeared in share after renaming only by changing the case of file name
2262777	Failed to restore share to a remote database address
2194382	Empty sparse file is copied from Share to Local by robocopy with parameter '/b'
GUI Resolved	**Description**
136	Restore: Slash \ in path is missing in Event
2262873	Remove "S3 Enable" option from Storage Setting
2262858	Limit the search result to 1000 for display or selecting in File Explorer page
2262832	Add hint message about share may be paused on Summary and Storage page when clicking refresh button
2262824	Remove Snaplock policy from HCPG UI setting

Outstanding Bugs

App Bug	Description
2262852	Delete on Storage: Fail to delete an object with Governance Retention from AWS storage
2262850	Content of file version is not correct if sam-recovery.exe recovers file from UUID storage to a UNC File Path storage. UNC storage doesn't support versioning
2262747	The share quota setting is lost after restore whole share from backup snapshot
2262845	Migrate deleted files to UNC File Path storage, folder permission is incorrect in storage
2262740	Versions not visible after move/rename of a file or its path
2262837	If the storage driver failed to rename or move object on CloudScale File Path storage, driver will not try to fix the failed objects which is still in the old path
2262833	Folder in CloudScale File Path storage is not renamed after renaming case of folder in share, however the files are readable
2262884	Java exception message is shown on page if uploading invalid AD certificate
2262871	Enable Email failed and UI.log with error message after enabling AD SSL
2262848	When AD SSL is enabled, AD certificate is only added to active cluster node, AD user cannot login to UI after cluster failover
2262843	Add error message when trying to run Report without selecting share
2262876	DOS scheduled run in cluster both node with remove record option block the database replication, need to move the PowerShell script to scheduler task from local system to cluster
2262872	Fail to generate Report when database.name is not set to "sam" or "SAM"
2262844	Report doesn't generate correctly by Scheduler if share name contains double byte characters like Chinese
2262842	Report doesn't generate correctly when share name contains special characters &^!
2262839	Restore Script: Failed to restore database on Cluster Passive Node
2262828	Report: Cannot connect to database if mysql password contains '!
2262822	sam-operations.cmd cannot backup databases correctly from remote server
2231267	Writing small files to HCPG share is much slower than Windows Share

2229465	If Acronis backs up the system and save the .tibx backup file to share directly, this file cannot be uploaded to storage
2208337	Deduplication of files in a Share with tens of millions of files has high CPU usage
2193935	Copy file with encryption attribute to Share, content is missing, file cannot be uploaded to storage
2193769	Cannot copy files from a hidden source to root of HCPG share by robocopy
2189358	Cannot create hardlink when the source file has legal hold or retention protection-na
GUI Bug	**Description**
510	Cannot search file by Name
508	Some Operations cannot be canceled during running, like privilege delete, search...
500	The UI will also display a "Versions" button even though there is no version to restore.
457	Deleted file shown incorrectly on File Explorer page
300	Admin can only run one file restore operation at a time
232	Set retention grace time is limited to 90 seconds or greater, even if set for less

Known Issues / Limitations

1. In cluster nodes, only the active node can run restore share, since the share cache disk is only available in the active node.
2. Do not support renaming or moving in share, do not support versioning, and do not support editing Microsoft Office files when UNC File Path storage is in use, others office application files will also not support since renaming is not allowed.
3. Only the latest version of a file will be moved to the new folder. Old versions will be kept in the old folder location in the database. So after a folder is moved, files in that folder cannot be restored to an older version.
4. Folders containing files under Legal Hold, Retention or Snaplock policies are not permitted to be moved.
5. Move Folder is not supported on a replicated target Gateway when the cache is not shared. The folder can only be moved on the Gateway that created the folder.
6. Move Folder is not supported in a folder with hundreds of subfolders and thousands of files. May result in and unexpected error keeping you from moving the folder.
7. The MariaDB database root and sam user passwords must not contain an "!" as this will prevent the HCP Gateway reports from running.
8. Running Reports locks the File System table and share may not be accessible until lock released. We recommend running/scheduling Reports to run in off hour times to minimize impact.

9. SFTP Target is limited to one share.
10. Backups are always full backups.
11. Symbolic links and Hard links are not supported.
12. Legal Hold and Retention Scheduler – There is a scheduler in place that handles legal hold and retention. The scheduler runs every 10 minutes, so it can take up to 20 minutes before a legal hold is placed or removed from a file or retention is set on a file on the HCP. This also impacts the Grace Period being used to set Retention on an object.
13. When performing a system restore a new cache will need to be created. If space is a concern the old cache can be manually deleted.
14. On Share Restore operation files are put into Read-Only status. When client requests a file immediately after a Restore the file is served to the client, but it may take up to 3 minutes before the Read-Only status is updated to Read/Write.
15. Microsoft Office files are not Read/Write when using a Server Mode policy with a share created using HCP Gateway v4.1.1 or older version.
16. LDAP SSL and Email SSL cannot be used together.
17. The LDAP could not connect before save domain and host setting into database.
18. Setting Legal Hold Policy on a file in HCPG Gateway Admin GUI will take a few minutes before the file is locked, it does not instantly occur.
19. During a migration to HCP Gateway if ACL is highly restrictive it is possible to lock the file out. This is not an issue with HDI Migrator but could be an issue with a different migration application.
20. Editing files with Windows Notepad that are no longer in the local cache fails to ”save” and the user must use “Save as”
    a. Notepad does not work well for editing stubbed/virtual files that are no longer in the local cache.
    b. Please use either Notepad++ or MS Office applications.
21. If Acronis software backs up the system and saves the .tibx backup file to the share directly, the file is not uploaded to storage
22. Share may not be removed from cluster after failover if database replication synchronization is broken.
23. When user renames a folder which has many files inside, or rename/move a big file, DO NOT read the files immediately after rename/move.
24. Before a customer restores their HCP Gateway database onto a different server, ensure that the ACL on the new server’s E:\SAM\Archive# is copied from the original server’s E:\SAM\Archive# folder. Ensure that the sam.account parameter in C:\SAM\etc\sam\sam.properties and the Windows Service SAM VFS Logon are the same on the old and new servers.
25. The Wildfly version 19 application only supports TLS version 1.3. Microsoft Internet Explorer does not support TLS version 1.3, so it cannot be used to access the HCP Gateway UI. Starting with HCP Gateway version 4.2.0, use a web browser such as Firefox to access the HCP Gateway UI.
26. Notepad++ 8.1.6 and newer versions are not supported with an archive mode policy, because this tool changes the method to open file to edit the file in place.
27. Using VMWare VMotion with HCP Gateway or any other application that will pause the Gateway will likely cause corruption in the MariaDB database on the Gateway.
28. Using applications that scan the database or filesystems or pause the database or filesystems on the Gateway, such as Eracent, Splunk, Puppet, Sophos, Nessus, Qualys Cloud Security Agent, Configuration Management Client, Snow Inventory Agent, Rubrik Backup Agent, NSClient++ Agent, Windows Defender are known to cause the shares to go offline on the Gateway. Please follow the instructions in Chapter 20 Anti-virus Scanning in the HCP Gateway Administration Guide for

instructions on how to configure these applications so they do not interfere with the operation of the Gateway.

Security and CVEs Fixes

- CVE-2021-45105, update to 2.17 Apache Log4j
- CVE-2021-45046, update to 2.17 Apache Log4j and update Restore script
- CVE-2021-44228, update to 2.17 Apache Log4j and update Restore script
- CVE-2019-16905, update Java to version 11.0.13+8

Upgrade Notes

Upgrade from 4.2.0 or newer to 4.3.8:

1. For a share with thousands of records - Run mysql query for each share before install: ALTER TABLE #_ntfs ADD COLUMN cmFlag INT NOT NULL DEFAULT 0;
2. The SAMVFS service logon user will be cleared when uninstall SAM driver, it should be written down before uninstalling and reset after installing 4.3.1
3. MariaDB my.ini file update required, set "default-storage-engine=Aria", and remove "skip-innodb" if it exists
4. For cluster nodes add "cluster.access.ip=$clusterIPAddress" to C:\SAM\etc\sam\sam.properties, the $clusterIPAddress is the cluster role address.
5. There is a database update required to create an index for cache management. In the instructions below only create one of these indexes, otherwise performance will be impacted.

   Go to the General page in the HCP Gateway UI and select Watermark clear option. Then pick one option:

- To use the default access date as the Cache Watermark clear option, please manually add iAccess index for each existing share with the following database query, do not add iCreate or iModify indexes:

  ALTER TABLE 1_fs ADD INDEX iAccess(fsid, type, visible, location, accessDate);

- To use the default access date as the Cache Watermark clear option, please manually add iAccess index for each existing share with the following database query, do not add iCreate or iModify indexes:

  ALTER TABLE 1_fs ADD INDEX iAccess(fsid, type, visible, location, accessDate);

- To use create date as the Cache Watermark clear option, do not add iAccess or iCreate indexes, add iModify index for each existing share:

  ALTER TABLE 1_fs ADD INDEX iModify(fsid, type, visible, location, modifyDate);

When a new share is created, the iAccess index will be automatically created. If you want to use create date or modify date instead of access date as the Cache Watermark clear option, then drop the index iAccess and then add the iCreate or iModify index.

Upgrade to 4.2

There are database table changes in the 4.2.0 release that will cause the shares to take longer to start after the upgrade. How long depends on how many files are stored on the HCP Gateway, the more files on the Gateway, the longer the database updates will take. For perspective, the QA team experienced about 12 minutes for the database updates to take place on a share with 25 million files. Contact Hitachi Support for assistance running the database update scripts after upgrading the MariaDB database application to reduce the time for the shares to start after the upgrade.

After upgrading to HCP Gateway version 4.2, a new digital FingerPrint will need to be generated in the HCP Gateway UI and sent to Hitachi Support because a new license key will need to be installed.

The detailed instructions for doing an upgrade are available in the HCP Gateway Administration Guide.

Upgrades from the following versions are supported:

- Upgrade from 4.1.4 to 4.2
- Upgrade from 4.1.5 to 4.2
- Upgrade from 4.1.6 to 4.2
- Upgrade from 4.1.7 to 4.2
- Upgrade from 4.1.8 to 4.2
- Upgrade from 4.1.9 to 4.2

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