

Virtual Storage Platform One Object

Release Notes

This document contains the release notes for Virtual Storage Platform (VSP) One Object. It provides useful information about the release, including updates on new features, supported limits, product guidance, and both known and newly resolved issues.

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Virtual Storage Platform One Object v3.2 Release Notes

About this document

This document contains the release notes for Virtual Storage Platform (VSP) One Object. It provides useful information about the release, including updates on new features, supported limits, product guidance, and both known and newly resolved issues.

Intended audience

This document is intended for customers and Hitachi Vantara partners who license and use VSP One Object.

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About this release

The information contained in this document references build 3.2.0.109 of the VSP One Object software, which features a variety of bug fixes, product improvements, and new features.

For this release

Software

S3 Tables

The Amazon S3 Tables feature is now fully implemented, integrating Apache Iceberg table support with S3 buckets. This feature introduces new S3 Table APIs, a dedicated bucket type, and policies for managing analytical data storage. It provides AWS API compatibility while exposing Apache Iceberg catalog capabilities, delivering both AWS-compatible functionality and an open lakehouse interface for advanced data lake and table management.

S3 Tables bucket services previously relied on user-provided S3 credentials for maintenance and internal bucket operations. These services now use S3 service accounts provided by VSP One Object, improving security and automating credential management.

Additionally, S3 Tables metrics have also been introduced and are now visible in Prometheus. These metrics include key indicators such as the number of warehouses, number of tables, and total table size.

To learn more about the S3 Tables functionality, see the *VSP One Object Administration Guide*.

PII Service enhancements

The PII Service has been enhanced to improve scalability, resilience, and integration with the S3 Tables framework introduced in this release. These changes enable more efficient storage, querying, and management of PII data, while reducing pressure on local databases and improving recoverability.

1. Storing PII Entity Data in Object Buckets

PII Entity data is now stored in S3 object buckets instead of local PostgreSQL databases. This allows the PII Service to scale beyond local disk limits while supporting flexible storage backends, including Rhino and Block 20. The S3 Tables feature is used to manage this data.

2. Storing PII Audit Logs in Object Buckets

PII audit logs, previously stored locally in GreptimeDB, are now written to S3 buckets. This change prevents logs from outgrowing local storage, reduces disk pressure, and ensures persistence and recovery if a GreptimeDB node is replaced.

3. Policy Management Improvements

The PII policy interface now requires users to select at least one filter when defining a policy. Assigned policy filters are also displayed when editing an existing policy, improving visibility and accuracy of policy configurations.

Downloadable diagnostics and logs via CLI

This release introduces a new capability which allows customers to securely collect and download diagnostic data and logs directly through the CLI. A dedicated `monitor` user account is now created automatically during installation, providing restricted, password-based access for diagnostic tasks. The account operates under a limited shell to prevent unauthorized changes while allowing access to key troubleshooting tools.

Two CLI utilities support this functionality:

- **Diagnostics Collector:** Gathers essential diagnostic data and selected logs from all nodes in a region to support initial triage and escalation.
- **VLC:** Collects comprehensive log data from every node in a region and stores it as a compressed archive for download.

Both tools can be run from the jump node or any control plane node, and must be executed separately for each region in multi-region deployments.

For more information about logging, see the *VSP One Object Administration Guide*.

Known issues


| Issue | Area affected | Description |
|-----------|---------------|--|
| ASP-20001 | Oracle | Oracle RMAN backups are failing with a 400 Bad Request error message. This result is due to the invalid behavior of RMAN <i>and not</i> the VSP One Object software. |
| ASP-20276 | Grafana | The <i>Total Buckets</i> panel may sometimes display inaccurate values due to the non-persistent metric <code>voo_s3_requests_per_bucket_total</code> . |
| ASP-20443 | Keycloak | When using an outdated version of the Mozilla Firefox web browser, the Keycloak UI is unable to load. This is the result of a bug within Keycloak. To learn more about this issue, visit the official Keycloak GitHub page . Workaround: Updating to the latest version of Firefox resolves the issue. |
| ASP-20930 | S3 | On VSP One Object, <code>PutObjectLockConfiguration</code> on an existing bucket fails with <code>InvalidBucketState</code> . Workaround: Object Lock must be enabled at bucket creation; it cannot be enabled later. |
| ASP-21230 | S3 | When setting up a CloudBerry Explorer login, a region can't be specified, making it unusable with VSP One Object. |

| Issue | Area affected | Description |
|-------|---------------|---|
| | | <p>Workaround:</p> <ol style="list-style-type: none"> 1. Download and install the CloudBerry Drive tool: https://www.msp360.com/drive/ 2. Select Add to create a new account. The Mapped Drive Options window appears. 3. From the Storage Account dropdown, select Create a new account. 4. Select S3 Compatible from the Storage Provider dropdown. 5. Provide the following account information: <ul style="list-style-type: none"> ▪ Display name: Enter a name for the service point ▪ Service point: Enter the endpoint URL for the backup destination ▪ Access key: Enter an API access key ▪ Secret key: Enter an API secret key ▪ Use SSL: Enabled ▪ Use native multipart upload: Enabled ▪ Signature version: 4 6. Click OK. 7. From the Storage Account dropdown, select the newly created S3Compatible account. 8. Configure the drive settings 9. Click OK. 10. Select the new storage account and click Explore. 11. Export the settings: File > Export Settings 12. Open the exported file in a text editor and change the <code>DefaultRegionEndpoint</code> to match your region. For example, <code><DefaultRegionEndpoint>us-west-2</DefaultRegionEndpoint></code>. 13. Import the modified settings file: File > Import Settings and select Replace. |

| Issue | Area affected | Description |
|-----------|--------------------|---|
| ASP-21307 | S3 | <p>Attempting to connect to a VSP One Object bucket using S3Browser (v12.1.5) results in an "Unable to connect to remote server" error.</p> <p>Workaround:</p> <p>Downgrading to an older version of S3Browser (v10.8.1) resolves the issue.</p> |
| ASP-21424 | UI | <p>When a user enters a specific page URL (e.g., the Storage Classes page in Storage Manager) and is redirected to the login page, they are successfully authenticated but are routed to the Home page instead of the specific page they originally entered.</p> |
| ASP-21510 | HTTP | <p>Apps using the incorrect values for the <code>Expect</code> header may encounter issues.</p> <p>Workaround:</p> <p>If your application uses the <code>Expect</code> header, ensure that value provided for this header is valid. Per AWS Common Request Headers, the only valid value is <code>100-continue</code>.</p> |
| ASP-21648 | UI | <p>When setting or changing expiration lifecycle policies or rules on a bucket, the UI may take a few seconds to update.</p> <p>Workaround</p> <p>Refresh the page after a short delay to see the changes appear.</p> |
| ASP-21681 | Storage components | <p>Incorrect Management API (MAPI) credentials for HCP-S can cause repeated connection failures that may lock the account. If the same user account is used for both MAPI and Authentication accounts, this can result in loss of data access and interruption of storage metric collection.</p> <p>Workaround:</p> <p>Create separate MAPI and Authentication accounts to avoid potential data-access loss.</p> |
| ASP-21828 | S3 | <p>In multi-region configurations, it is possible to enable external encryption on a bucket located in a region where external encryption is not configured, if accessed from another region where it is enabled. This misconfiguration can cause replication failures between regions.</p> |
| ASP-21932 | AWS | <p>When ingesting objects with certain versions of the AWS CLI, a <code>MissingContentLength</code> error may occur during the <code>PutObject</code> operation, even if the <code>Content-Length</code> parameter is explicitly provided. This issue does not occur with AWS CLI v2.22.35 but is reproducible with versions v2.23.0 and later.</p> |

| Issue | Area affected | Description |
|-----------|-----------------|---|
| ASP-22096 | S3 | Replication between two ObjectLock-enabled buckets with mismatched default retention settings may result in unexpected behavior. For example, if the source bucket has no default retention configured and the target bucket has a default retention period of 30 days, replication may succeed but the replicated objects in the target bucket will inherit the target's retention policy, potentially altering expected object lifecycle and retention enforcement. |
| ASP-22841 | Performance | Running ingest with the repeatable read setting enabled can cause periodic dips in IOPS. |
| ASP-23340 | Deployment | <p>If the combined gateway name generated from the region and domain names exceeds Kubernetes' 63-character limit, GMS deployment fails.</p> <p>Workaround:</p> <p>Use shorter region or domain names so that the combined gateway name remains within the 63-character limit.</p> |
| ASP-23649 | MAPI, UI | MAPI allows the same KMIP server to be added multiple times to a cluster when each instance uses a different name. This results in duplicate entries for the same KMIP server instead of rejecting the second request as expected. |
| ASP-23702 | Storage Manager | <p>Logging out of the Storage Manager does not properly end the session and instead results in an error state caused by CORS configuration issues during the logout process.</p> <p>Workaround:</p> <p>This issue occurs only in Firefox. Chrome and Edge work as expected. Refreshing the page directly from the browser resolves the problem</p> |
| ASP-24535 | Grafana, S3 | The <code>s3_errors</code> metric in Grafana can show negative values, such as negative <code>NoSuchKey</code> errors, when S3-gateway pods go offline and restart. This occurs because Grafana calculates metric values over time using <code>finalValue - initialValue</code> , which can produce negative results when counters reset after pod restarts. The issue resolves automatically once the pods return online. |

Resolved issues

| Issue | Area affected | Description |
|-----------|----------------|--|
| ASP-21462 | Replication | During cross-region replication from one source bucket to two target buckets, the first object uploaded to the source bucket is only replicated to one target bucket. All subsequent objects are successfully replicated to both target buckets. |
| ASP-21484 | Grafana | The issue preventing access to the <i>Dashboard 07: GMS System Events</i> dashboard from regions other than where the GMS was deployed has been resolved, and the dashboard is now accessible from all regions. |
| ASP-21645 | S Series nodes | S Series nodes now support all hostname formats, resolving previous configuration and service issues that occurred when hostnames did not begin with <code>hs3</code> or <code>admin</code> . |
| ASP-22278 | UI | <p>When a user's session expired while the Storage Manager page remained open, previously viewed content, including sensitive information, continued to be visible instead of redirecting to a timeout or login page. This has been resolved so that expired sessions now properly clear the display and prompt for reauthentication.</p> <div data-bbox="662 1052 1393 1171" style="background-color: #e0f2f1; padding: 5px;"> <p> Note: The SSO session timeout must be set to greater than seven minutes for this feature to function as expected.</p> </div> |
| ASP-23537 | Keycloak | Keycloak previously failed the LDAP SSL handshake because it did not properly trust LDAP certificates, and both Keycloak and Grafana lacked complete HTTPS configuration. This has been resolved by enabling LDAP over SSL connections with valid certificate handling and by ensuring HTTPS is correctly configured for both services. |
| ASP-23640 | RabbitMQ | The <code>rmq_check.py</code> script could fail its <code>cluster_status</code> check when RabbitMQ raised <code>resource_limit: memory</code> alarms on one or more nodes. This occurred when backend services responsible for draining queues were disabled while producers continued sending messages, causing unbounded queue growth and triggering memory alarms. The issue has been resolved so that the script now handles this condition correctly. |

| Issue | Area affected | Description |
|-------------------------|-----------------|---|
| ASP-23675, ASP-24466 | RabbitMQ | Cluster deployment could fail during the S3-region stage if the <code>rabbitmq-check</code> pod entered a <code>NotReady</code> state. This issue has been resolved so that deployment now proceeds successfully once RabbitMQ components are verified and healthy. |
| ASP-24050 | Deployment | Deployment of an S3 region in a secondary region failed when both regions used the same Kubernetes CIDR range. This occurred because CIDR overlap was not properly validated during setup. The issue has been resolved, and deployment now fails early with an appropriate error message when overlapping CIDRs are detected. |
| ASP-24067 | Storage Manager | The Storage Manager <i>Home</i> page previously displayed “Total Shards,” which was confusing for end users. With bucket object metrics now supported in version 3.1 of VSP One Object, this label has been replaced with “Total Objects” to more accurately represent the data shown. |

Best practices

Managing VSP One S Series nodes

For a system that includes VSP One Object S Series node storage components, the best practice is to define a separate user account on them for exclusive use by VSP One Object. To prevent losing access to VSP One Object S Series nodes, ensure that password expiration is disabled for the accounts used to access them.

If you have already configured VSP One Object to use an account from an VSP One Object S Series node that is typically used for its management (that is, an administrative account), and then change the account’s credentials for security purposes, VSP One Object cannot communicate with the VSP One Object S Series node, which leads to a disruption of service.

If you have already defined storage components with single accounts, the best practice is to add another exclusive account on each VSP One Object S Series node and change the VSP One Object configuration to use that account.

Certificates and VSP One S Series nodes

When adding a VSP One Object S Series node storage device to your system, the associated certificate is required to enable capacity monitoring in Storage Manager. To learn more about certificates, see the *VSP One Object Management API Reference Guide* or reference the Swagger API.

Region naming conventions

Region names must comply with the following naming requirements:

1. They can be 1–30 characters long.
2. They can include uppercase and lowercase letters (A–Z, a–z).
3. They can include digits (0–9).
4. They can include hyphens (-).
5. They cannot start with a hyphen.
6. They cannot end with a hyphen.

Regex example:

```
^(?!-)[A-Za-z0-9-]{1,30}(?!-)$
```

System requirements

Supported browsers

The following browsers are qualified for use with VSP One Object software:

- Google Chrome (latest version as of the date of this publication)
- Mozilla Firefox (latest version as of the date of this publication)

Supported resolutions

For the best experience, the following screen resolutions are recommended:

- 1920 x 1080
- 1600 x 900
- 1536 x 864
- 1440 x 900
- 1366 x 768
- 1280 x 720

System limits

The following table provides the minimum and maximum supported values for key features and capacities for VSP One Object. All maximum values have been validated through testing and represent supported configuration limits. Use these guidelines to plan and configure your environment within its supported limits.

| Parameter | Minimum | Maximum |
|----------------------------|--------------|------------------|
| Block 20 array block size | 4096 bytes | 4096 bytes |
| Block 20 array name length | 1 character | 40 characters |
| Bucket description length | 0 characters | 1,024 characters |

| Parameter | Minimum | Maximum |
|--|--------------------|---|
| Bucket name length | 3 characters | 63 characters |
| Buckets | None | 10,000 |
| Buckets per owner | None | 1,000 |
| Bulk delete request count | 0 | 1,000 |
| Bulk delete request size | 0 | 3 MB |
| File size per PUT request | 0 | 5 GB |
| Groups (external) | None | 100 |
| HTTP connections per worker node | None | 255 |
| Lifecycle policy rules per bucket | None | 1,000 |
| Max number of nodes | 8 nodes | 32 nodes |
| Number of KMIP servers | None | 4 |
| Number of local user groups | None | 100 |
| Number of local users | None | 10,000 |
| Number of S Series nodes | None | 40 |
| Number of VSP One Block 20 nodes | None | 20 |
| Object size (multipart) | 0 | 5 TB |
| Object size (without multipart) | 0 | 5 GB |
| Objects per node | 0 | 1.25 billion (7.68 TB drive), 2.5 billion (15 TB drive) |
| Parts per multipart upload | 0 | 10,000 |
| Parts per multipart write | 1 | 10,000 |
| Regions in a galaxy | 1 | 2 |
| Replication rules per bucket (sync-to and sync-from) | None | 1,000 |
| Roles | None | 10,000 |
| S3 Select API input serialization | Parquet, CSV, JSON | N/A |
| S3 Select API max input record length | None | 1 MB |

| Parameter | Minimum | Maximum |
|---|-----------|---------|
| S3 Select API max SQL expression length | None | 256 KB |
| S3 Select API max uncompressed row group size | None | 256 MB |
| S3 Select API output serialization | CSV, JSON | N/A |
| Total number of buckets | 0 | 10,000 |
| Users (external) | None | 1,000 |

Related documents

The following is a list of supporting documentation for VSP One Object:

- *VSP One Object Release Notes*: This document is for customers and describes new features, product documentation, resolved and known issues, and provides other useful information about this release of the product.
- *VSP One Object Administration Guide*: This document contains instructions for configuring, managing, monitoring, and troubleshooting the VSP One Object software, storage components, and users.
- *VSP One Object Management API Reference*: This document is for customers and describes the management application programming interface (API) methods available for customer use.
- *VSP One Object Assembly and Configuration Guide*: This guide contains instructions for preparing a VSP One Object server, taking you from unpacking the components at the distribution center to repackaging them for shipment to the customer site.
- *VSP One Object Onsite Setup Guide*: This document is intended for engineers at customer sites who are responsible for the onsite setup of the VSP One Object server.
- *VSP One Object Maintenance and Support Guide*: This document is intended for engineers at customer sites who are responsible for the maintenance and support of the VSP One Object appliance

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