Known limitations

Cloud Volumes ONTAP 9.12.1 release notes

NetApp
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Known limitations

Limitations in all cloud providers

Known limitations identify platforms, devices, or functions that are not supported by this release of the product, or that do not interoperate correctly with it. Review these limitations carefully.

The following limitations apply to Cloud Volumes ONTAP in all cloud providers: AWS, Azure, and Google Cloud.

Maximum concurrent replication operations

The maximum number of concurrent SnapMirror or SnapVault transfers for Cloud Volumes ONTAP is 100 per node, regardless of the instance type or machine type.

Cloud provider snapshots must not be used for your backup and recovery plans

You shouldn't use your cloud provider's snapshots as part of your backup and recovery plan for Cloud Volumes ONTAP data. You should always use ONTAP Snapshot copies or third-party backup solutions to back up and restore data hosted on Cloud Volumes ONTAP.

Learn how to use the Cloud Backup service to back up and restore ONTAP data.

ONTAP consistency points in the WAFL file system determine data consistency. Only ONTAP can quiesce the WAFL file system to make a crash-consistent backup.

Support in China regions

Cloud Volumes ONTAP is supported in China regions as follows.

- Cloud Volumes ONTAP 9.6 is supported in AWS China regions.
- Single node systems are supported.
- Licenses purchased directly from NetApp are supported.

All other locations, versions, configurations, and licenses aren't supported.

Cloud Volumes ONTAP supports Reserved and On-demand VM instances

Cloud Volumes ONTAP can run on either a Reserved or On-demand VM instance from your cloud provider. Other types of VM instances aren't supported.

Automatic application resource management solutions shouldn't be used

Automatic application resource management solutions should not manage Cloud Volumes ONTAP systems. Doing so can result in a change to an unsupported configuration. For example, the solution might change Cloud Volumes ONTAP to an unsupported VM instance type.

Software updates must be completed by BlueXP

Upgrades of Cloud Volumes ONTAP must be completed from BlueXP. You should not upgrade Cloud Volumes ONTAP by using System Manager or the CLI. Doing so can impact system stability.

Cloud Volumes ONTAP deployment must not be modified from your cloud provider's console

Changes to a Cloud Volumes ONTAP configuration from your cloud provider's console results in an unsupported configuration. Any changes to the Cloud Volumes ONTAP resources that BlueXP creates and manages can impact system stability and BlueXP's ability to manage the system.

Disks and aggregates must be managed from BlueXP

All disks and aggregates must be created and deleted directly from BlueXP. You should not perform these actions from another management tool. Doing so can impact system stability, hamper the ability to add disks in the future, and potentially generate redundant cloud provider fees.

SnapManager licensing limitation

SnapManager per-server licenses are supported with Cloud Volumes ONTAP. Per-storage system (SnapManager suite) licenses are not supported.

Unsupported ONTAP features

The following features are not supported with Cloud Volumes ONTAP:

- Aggregate-level inline deduplication
- Aggregate-level background deduplication
- Anti-ransomware
- Disk maintenance center
- Disk sanitization
- FabricPool mirroring
- Fibre Channel (FC)
- Flash Pools
- Infinite Volumes
- Interface groups
- Intranode LIF failover
- MetroCluster
- Multi-admin verification

  Enabling multi-admin verification on Cloud Volumes ONTAP will result in an unsupported configuration.

- ONTAP S3 in Google Cloud (the S3 protocol is supported in Azure and AWS)
- RAID4, RAID-DP, RAID-TEC (RAID0 is supported)
- Service Processor

- SnapLock Compliance and Enterprise modes (only Cloud WORM is supported)
- SnapMirror Synchronous
- VLANs

Known limitations in AWS

The following known limitations are specific to Cloud Volumes ONTAP in Amazon Web Services. Be sure to also review Limitations for Cloud Volumes ONTAP in all cloud providers.

AWS Outpost limitations

If you have an AWS Outpost, you can deploy Cloud Volumes ONTAP in that Outpost by selecting the Outpost VPC in the Working Environment wizard. The experience is the same as any other VPC that resides in AWS. Note that you will need to first deploy a Connector in your AWS Outpost.

There are a few limitations to point out:

- Only single node Cloud Volumes ONTAP systems are supported at this time
- The EC2 instances that you can use with Cloud Volumes ONTAP are limited to what's available in your Outpost
- Only General Purpose SSDs (gp2) are supported at this time

Flash Cache limitations

C5D and R5D instance types include local NVMe storage, which Cloud Volumes ONTAP uses as *Flash Cache*. Note the following limitations:

- Compression must be disabled on all volumes to take advantage of the Flash Cache performance improvements up to Cloud Volumes ONTAP 9.12.0. When you deploy or upgrade to Cloud Volumes ONTAP 9.12.1, you don't need to disable compression.

  You can choose no storage efficiency when creating a volume from BlueXP, or you can create a volume and then disable data compression by using the CLI.

- Cache rewarming after a reboot is not supported with Cloud Volumes ONTAP.

False alarms reported by Amazon CloudWatch

Cloud Volumes ONTAP does not release CPUs when idle, so Amazon CloudWatch can report a high CPU warning for the EC2 instance because it sees 100% usage. You can ignore this alarm. The ONTAP statistics command displays the true usage of the CPUs.

Cloud Volumes ONTAP HA pairs do not support immediate storage giveback

After a node reboots, the partner must sync data before it can return the storage. The time that it takes to resync data depends on the amount of data written by clients while the node was down and the data write speed during the time of giveback.

Learn how storage works in a Cloud Volumes ONTAP HA pair running in AWS.

Known limitations in Azure

The following known limitations are specific to Cloud Volumes ONTAP in Microsoft Azure. Be sure to also review Limitations for Cloud Volumes ONTAP in all cloud providers.

Flash Cache limitations

Some VM types include local NVMe storage, which Cloud Volumes ONTAP uses as *Flash Cache*. Note the following limitations for Flash Cache:

- Compression must be disabled on all volumes to take advantage of the Flash Cache performance improvements up to Cloud Volumes ONTAP 9.12.0. When you deploy or upgrade to Cloud Volumes ONTAP 9.12.1, you don't need to disable compression.

  You can choose no storage efficiency when creating a volume from BlueXP, or you can create a volume and then disable data compression by using the CLI.

- Cache rewarming after a reboot is not supported with Cloud Volumes ONTAP.

HA limitations

HA pairs aren't supported in some regions.

View the list of supported Azure regions.

Known limitations in Google Cloud

The following known limitations are specific to Cloud Volumes ONTAP in Google Cloud Platform. Be sure to also review Limitations for Cloud Volumes ONTAP in all cloud providers.

Limitation with packet mirroring

Packet mirroring must be disabled in the Google Cloud VPC in which you deploy Cloud Volumes ONTAP.

Cloud Volumes ONTAP can't operate properly if packet mirroring is enabled.

Google Private Service Connect limitations

If you leverage Google Private Service Connect within the VPC that you are deploying Cloud Volumes ONTAP into, you will need to implement DNS records that forward traffic to the required BlueXP API Endpoints.

Tiering data from Cloud Volumes ONTAP into a Google Cloud Storage bucket is not currently supported with Private Service Connect.

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