Supported configurations

Cloud Volumes ONTAP

NetApp
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Supported configurations

Supported configurations for Cloud Volumes ONTAP 9.6 in AWS

Cloud Volumes ONTAP is available in AWS in two pricing options: pay-as-you-go and Bring Your Own License (BYOL). For pay-as-you-go, you can choose from three configurations: Explore, Standard, or Premium.

Supported configurations by license

Cloud Volumes ONTAP is available in AWS as a single node system and as a high-availability (HA) pair of nodes for fault tolerance and nondisruptive operations.

Upgrading a single node system to an HA pair is not supported. If you want to switch between a single node system and an HA pair, then you need to deploy a new system and replicate data from the existing system to the new system.

	Explore	Standard	Premium	BYOL
Supported EC2 instance types [1]	• m4.xlarge • m5.xlarge	• m4.2xlarge • m5.2xlarge • r4.xlarge • r5.xlarge	• c4.4xlarge • c4.8xlarge • c5.9xlarge • c5.18xlarge • c5d.4xlarge [2] • c5d.9xlarge [2] • c5d.18xlarge [2,3] • m4.4xlarge • m5.4xlarge • m5d.8xlarge [2,3] • r4.2xlarge • r5.2xlarge • r5d.2xlarge [2]	• c4.4xlarge • c4.8xlarge • c5.9xlarge • c5.18xlarge • c5d.4xlarge [2] • c5d.9xlarge [2] • c5d.18xlarge [2,3] • m4.xlarge • m4.2xlarge • m4.4xlarge • m5.xlarge • m5.2xlarge • m5.4xlarge • m5d.8xlarge [2,3] • r4.xlarge • r4.2xlarge • r5.xlarge • r5.2xlarge • r5d.2xlarge [2]
Supported disk types [4]	General Purpose SSD (gp2) [5], Provisioned IOPS SSD (io1), Throughput Optimized HDD (st1), and Cold HDD (sc1 - single node only)			

	Explore	Standard	Premium	BYOL
Cold data tiering to S3	Not supported	Supported, but not with Cold HDD disks		
Maximum system capacity (disks + object storage)	2 TB	10 TB	368 TB [5]	368 TB per license [5]

Notes:

1. When you choose an EC2 instance type, you can specify whether it is a shared instance or a dedicated instance.
2. These instance types include local NVMe storage, which Cloud Volumes ONTAP uses as *Flash Cache*. Flash Cache speeds access to data through real-time intelligent caching of recently read user data and NetApp metadata. It is effective for random read-intensive workloads, including databases, email, and file services. Compression must be disabled on all volumes to take advantage of the Flash Cache performance improvements. Learn more.
3. c5d.18xlarge and m5d.8xlarge are supported starting with Cloud Volumes ONTAP 9.6 P3.
4. Enhanced write performance is enabled when using SSDs with Cloud Volumes ONTAP Standard, Premium, and BYOL.
5. gp3 SSDs are not supported.
6. For some HA configurations, disk limits prevent you from reaching the 368 TB capacity limit by using disks alone. In those cases, you can reach the 368 TB capacity limit by tiering inactive data to object storage. For information about disk limits, refer to storage limits.
7. For AWS region support, see Cloud Volumes Global Regions.

Supported disk sizes

In AWS, an aggregate can contain up to 6 disks that are all the same type and size.

General Purpose SSD (gp2)	Provisioned IOPS SSD (io1)	Throughput Optimized HDD (st1)	Cold HDD (sc1 - single node only)
• 100 GB • 500 GB • 1 TB • 2 TB • 4 TB • 6 TB • 8 TB • 16 TB	• 100 GB • 500 GB • 1 TB • 2 TB • 4 TB • 6 TB • 8 TB • 16 TB	• 500 GB • 1 TB • 2 TB • 4 TB • 6 TB • 8 TB • 16 TB	• 2 TB • 4 TB • 6 TB • 8 TB • 16 TB

Supported configurations for Cloud Volumes ONTAP 9.6 in Azure

Cloud Volumes ONTAP is available in Azure in two pricing options: pay-as-you-go and Bring Your Own License (BYOL). For pay-as-you-go, you can choose from three configurations: Explore, Standard, or Premium.

Supported configurations by license

Cloud Volumes ONTAP is available in Azure as a single node system and as a high-availability (HA) pair of nodes for fault tolerance and nondisruptive operations.

Upgrading a single node system to an HA pair is not supported. If you want to switch between a single node system and an HA pair, then you need to deploy a new system and replicate data from the existing system to the new system.

Single node systems

You can choose from the following configurations when deploying Cloud Volumes ONTAP as a single-node system in Azure:

	Explore	Standard	Premium	BYOL
Supported virtual machine types	DS3_v2	• DS4_v2 • DS13_v2	• DS5_v2 • DS14_v2 • DS15_v2	• DS3_v2 • DS4_v2 • DS5_v2 • DS13_v2 • DS14_v2 • DS15_v2
Supported disk types [1]	Standard HDD Managed Disks, Standard SSD Managed Disks, and Premium SSD Managed Disks			
Cold data tiering to Blob storage [2]	Not supported	Supported		
Maximum system capacity (disks + object storage)	2 TB	10 TB	368 TB	368 TB per license

Notes:

1. Enhanced write performance is enabled when using SSDs, but not when using the DS3_v2 virtual machine type.
2. Data tiering is not supported with the DS3_v2 virtual machine type.
3. For Azure region support, see Cloud Volumes Global Regions.

HA pairs

You can choose from the following configurations when deploying Cloud Volumes ONTAP as an HA pair in Azure:

	Explore	Standard	Premium	BYOL
Supported virtual machine types	Not supported	• DS4_v2 • DS13_v2	• DS5_v2 • DS14_v2 • DS15_v2	• DS4_v2 • DS5_v2 • DS13_v2 • DS14_v2 • DS15_v2
Supported disk types	Not supported	Premium page blobs		
Cold data tiering to Blob storage [2]	Not supported	Supported		
Maximum system capacity (disks + object storage)	Not supported	10 TB	368 TB	368 TB per license

Notes:

1. For Azure region support, see Cloud Volumes Global Regions.

Supported disk sizes

In Azure, an aggregate can contain up to 12 disks that are all the same type and size.

Single node systems

Single node systems use Azure Managed Disks. The following disk sizes are supported:

Premium SSD	Standard SSD	Standard HDD
• 500 GB • 1 TB • 2 TB • 4 TB • 8 TB • 16 TB • 32 TB	• 100 GB • 500 GB • 1 TB • 2 TB • 4 TB • 8 TB • 16 TB • 32 TB	• 100 GB • 500 GB • 1 TB • 2 TB • 4 TB • 8 TB • 16 TB • 32 TB

HA pairs

HA pairs use Premium page blobs. The following disk sizes are supported:

- 500 GB
- 1 TB
- 2 TB
- 4 TB
- 8 TB

Supported configurations for Cloud Volumes ONTAP 9.6 in GCP

Cloud Volumes ONTAP is available in Google Cloud Platform as a single node system. Two pricing options are available: pay as you go and Bring Your Own License (BYOL).

Pay-as-you-go overview

- Offers Cloud Volumes ONTAP in three different configurations: Explore, Standard, and Premium.
- A 30-day free trial is available for the first Cloud Volumes ONTAP system that you deploy in GCP.
  - There are no hourly software charges, but GCP infrastructure charges still apply (compute, storage, and networking).
  - When the free trial ends, you'll be charged hourly according to the selected license, as long as you subscribed. If you haven't subscribed, the system shuts down.
- Conversions from PAYGO to BYOL aren't currently supported.
- Basic technical support is offered, but you must register and activate the NetApp serial number associated with your system.

  Register pay-as-you-go systems in Cloud Manager

BYOL overview

- Single node license with term-based subscription options like 12 months, 24 months, and more.
- Support is included for the length of the subscription term.
- You can purchase multiple licenses for a Cloud Volumes ONTAP BYOL system to allocate more than 368 TB of capacity.

  For example, you might purchase two licenses to allocate up to 736 TB of capacity to Cloud Volumes ONTAP. Or you could purchase four licenses to get up to 1.4 PB.

Supported configurations by license

Cloud Volumes ONTAP is available in Google Cloud Platform as a single node system.

	Explore	Standard	Premium	BYOL
Supported machine types [1]	custom-4-16384	n1-standard-8	n1-standard-32	• custom-4-16384 • n1-standard-8 • n1-standard-32
Supported disk types [2]	Zonal persistent disks (SSD and standard)			
Cold data tiering to object storage	Not supported	Supported		
Maximum system capacity (disks + object storage)	2 TB	10 TB	368 TB [3]	368 TB per license [3]

Notes:

1. The custom machine type has 4 vCPUs and 16 GB of memory. For details about standard machine types, refer to Google Cloud Documentation: Machine Types.
2. Enhanced write performance is enabled when using SSDs.
3. Disk limits prevent you from reaching the 368 TB capacity limit by using disks alone. You can reach the 368 TB capacity limit by tiering inactive data to object storage.

   Learn more about disk limits in GCP.

4. For Google Cloud Platform region support, see Cloud Volumes Global Regions.

Supported disk sizes

In GCP, an aggregate can contain up to 6 disks that are all the same type and size. The following disk sizes are supported:

- 100 GB
- 500 GB
- 1 TB
- 2 TB
- 4 TB
- 8 TB
- 16 TB