



Supported configurations

Cloud Volumes ONTAP release notes

NetApp
July 14, 2026

This PDF was generated from <https://docs.netapp.com/us-en/cloud-volumes-ontap-9181-relnotes/reference-configs-aws.html> on July 14, 2026. Always check docs.netapp.com for the latest.

Table of Contents

- Supported configurations 1
 - Supported configurations for Cloud Volumes ONTAP in AWS 1
 - Supported number of nodes 1
 - Supported storage 1
 - Supported regions 9
 - Related information 9
 - Supported configurations for Cloud Volumes ONTAP in Azure 9
 - Supported configurations by license 9
 - Supported disk sizes 24
 - Supported regions 24
 - Supported configurations for Cloud Volumes ONTAP in Google Cloud 25
 - Supported configurations by license 25
 - Flash Cache support 32
 - Maximum system capacity based on VM type 32
 - Supported disk sizes 33
 - Supported regions 33

Supported configurations

Supported configurations for Cloud Volumes ONTAP in AWS

Several Cloud Volumes ONTAP configurations are supported in AWS.

Supported number of nodes

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.

Supported storage

Cloud Volumes ONTAP supports several types of EBS disks, and S3 object storage for data tiering. The maximum storage capacity is determined by the license that you choose.

Storage support by license

Each license supports a different maximum system capacity. The maximum system capacity includes disk-based storage plus object storage used for data tiering. NetApp doesn't support exceeding this limit.

The following tables list the supported storage and EC2 machine type combinations for each license. For the latest EC2 instance specifications, including vCPU, memory, network bandwidth, and Amazon EBS bandwidth, refer to [Amazon EC2 instance types](#).

Cloud Volumes ONTAP can run on either a Reserved or On-demand EC2 instance. Solutions that use other instance types aren't supported.

Capacity-based licenses

	Freemium	Capacity-based license (Essentials and Professional)
Maximum system capacity ¹ (disks + object storage)	500 GiB	Flexible ²

	Freemium	Capacity-based license (Essentials and Professional)
Supported machine types	C5 series	
	- c5.9xlarge - c5.18xlarge ⁷	
	C5a series	
	c5a.12xlarge	
	C5d series	
	- c5d.4xlarge ⁸ - c5d.9xlarge - c5d.18xlarge ⁷	
	C5n series	
	- c5n.9xlarge - c5n.18xlarge ⁷	
	M5 series	
	- m5.xlarge ⁸ - m5.2xlarge ⁸ - m5.4xlarge ⁸ - m5.16xlarge	
	M5a series	
	- m5a.2xlarge - m5a.16xlarge	
	M5d series	
	- m5d.8xlarge - m5d.12xlarge	
	M5dn series	
	- m5dn.4xlarge - m5dn.12xlarge - m5dn.24xlarge ⁷	

	Freemium	Capacity-based license (Essentials and Professional)		
Supported disk types	- General Purpose SSD (gp3 and gp2) ^{3,5} - Provisioned IOPS SSD (io1) ³ - Throughput Optimized HDD (st1) ⁴			
Cold data tiering to S3	Supported			
	- m6id.xlarge ⁹ - m6id.2xlarge ⁹ - m6id.4xlarge ⁹ - m6id.8xlarge ⁹ - m6id.16xlarge ^{7,9} - m6id.32xlarge ^{7,9} 1. For an HA pair, the capacity limit is for the entire HA pair. It's not per node. For example, if you use the PAYGO Premium license, you can have up to 368 TiB of capacity between both nodes. 2. For some configurations, disk limits prevent you from reaching the capacity limit by using disks alone. In those cases, you can reach the capacity limit by tiering inactive data to object storage. For information about disk limits, refer to storage limits. With capacity-based licensing, each Cloud Volumes ONTAP system supports tiering to object storage. The total tiered capacity can scale up to the cloud provider's bucket limit. While the license does not impose capacity restrictions, you should follow the FabricPool Best Practices to ensure optimal performance, reliability, and cost efficiency when configuring and managing tiering. 3. Enhanced write performance is enabled when using SSDs with all Cloud Volumes ONTAP configurations, except for PAYGO Explore. 4. Tiering data to object storage isn't recommended when using Throughput Optimized HDDs (st1). 5. Cloud Volumes ONTAP configurations in AWS Local Zones support only the General Purpose SSD (gp2) disk type. No other disk types are supported in AWS Local Zones. 6. The r5.12xlarge instance type has a known limitation with supportability. If a node unexpectedly reboots due to a panic, the system might not collect core files used to troubleshoot and root cause the problem. The customer accepts the risks and limited support terms and bears all support responsibility if this condition occurs. This limitation affects newly deployed HA pairs and HA pairs upgraded from 9.8. The limitation does not affect newly deployed single-node systems. 7. While these EC2 instance types support more than 64 vCPUs, Cloud Volumes ONTAP supports up to 64 vCPUs. 8. AWS Local Zones are supported in the following EC2 instance type families with sizes xlarge to 4xlarge: M5, C5, C5d, R5, and R5d. You should refer to AWS for the latest and complete details about supported EC2 instance types in Local Zones. High write speed isn't supported with these instance types in AWS Local Zones. 9. These instance types require ONTAP 9.16.1 GA or later. - r5d.2xlarge			
Other licenses				
	PAYGO Explore	PAYGO Standard	PAYGO Premium	Node-based BYOL
Maximum system capacity (disks + object storage)	2 TiB	10 TiB	368 TiB ²	368 TiB per license ²

	PAYGO Explore	PAYGO Standard	PAYGO Premium	Node-based BYOL
Supported machine types	M5 series	M5 series	C5 series	C5 series
	m5.xlarge⁸	m5.2xlarge⁸	- c5.9xlarge - c5.18xlarge⁷	- c5.9xlarge - c5.18xlarge⁷
	M6id series	M5a series	C5a series	C5a series
	m6id.xlarge⁹	m5a.2xlarge	c5a.12xlarge	c5a.12xlarge
	M6idn series	M6id series	C5d series	C5d series
	m6idn.xlarge⁹	m6id.2xlarge⁹	- c5d.4xlarge⁸ - c5d.9xlarge - c5d.18xlarge⁷	- c5d.4xlarge⁸ - c5d.9xlarge - c5d.18xlarge⁷
		M6idn series	C5n series	C5n series
		m6idn.2xlarge⁹	- c5n.9xlarge - c5n.18xlarge⁷	- c5n.9xlarge - c5n.18xlarge⁷
		R5 series	M5 series	M5 series
		r5.xlarge⁸	- m5.4xlarge⁸ - m5.16xlarge	- m5.xlarge⁸ - m5.2xlarge⁸ - m5.4xlarge⁸ - m5.16xlarge
			M5a series	
			m5a.16xlarge	

	PAYGO Explore	PAYGO Standard	PAYGO Premium	Node-based BYOL
Supported disk types	- General Purpose SSD (gp3 and gp2) ^{3,5} - Provisioned IOPS SSD (io1) ³ - Throughput Optimized HDD (st1) ⁴			
Cold data tiering to S3	Not supported	Supported		
1. For an HA pair, the capacity limit is for the entire HA pair. It's not per node. For example, if you use the PAYGO Premium license, you can have up to 368 TiB of capacity between both nodes. 2. For some configurations, disk limits prevent you from reaching the capacity limit by using disks alone. In those cases, you can reach the capacity limit by tiering inactive data to object storage. For information about disk limits, refer to storage limits. With capacity-based licensing, each Cloud Volumes ONTAP system supports tiering to object storage. The total tiered capacity can scale up to the cloud provider's bucket limit. While the license does not impose capacity restrictions, you should follow the FabricPool Best Practices to ensure optimal performance, reliability, and cost efficiency when configuring and managing tiering. 3. Enhanced write performance is enabled when using SSDs with all Cloud Volumes ONTAP configurations, except for PAYGO Explore. 4. Tiering data to object storage isn't recommended when using Throughput Optimized HDDs (st1). 5. Cloud Volumes ONTAP configurations in AWS Local Zones support only the General Purpose SSD (gp2) disk type. No other disk types are supported in AWS Local Zones. 6. The r5.12xlarge instance type has a known limitation with supportability. If a node unexpectedly reboots due to a panic, the system might not collect core files used to troubleshoot and root cause the problem. The customer accepts the risks and limited support terms and bears all support responsibility if this condition occurs. This limitation affects newly deployed HA pairs and HA pairs upgraded from 9.8. The limitation does not affect newly deployed single-node systems. 7. While these EC2 instance types support more than 64 vCPUs, Cloud Volumes ONTAP supports up to 64 vCPUs. 8. AWS Local Zones are supported in the following EC2 instance type families with sizes xlarge to 4xlarge: M5, C5, C5d, R5, and R5d. You should refer to AWS for the latest and complete details about supported EC2 instance types in Local Zones. High write speed isn't supported with these instance types in AWS Local Zones. 9. These instance types require ONTAP 9.16.1 GA or later. rge M5dn series m5dn.4xlarge rge m5dn.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m5n.24xlarge M5n series m5n.4xlarge M5n series m5n.12xlarge M5n series m				

Supported instance	Flash Cache	High write speed
c5a.12xlarge	Not supported	Supported
c5d.4xlarge	Supported	Supported
c5d.9xlarge	Supported	Supported
c5d.18xlarge	Supported	Supported
c5n.9xlarge	Not supported	Supported
c5n.18xlarge	Not supported	Supported
m5.xlarge	Not supported	Supported (single node only)
m5.2xlarge	Not supported	Supported
m5.4xlarge	Not supported	Supported
m5.16xlarge	Not supported	Supported
m5a.2xlarge	Not supported	Supported
m5a.16xlarge	Not supported	Supported
m5d.8xlarge	Supported	Supported
m5d.12xlarge	Supported	Supported
m5dn.4xlarge	Supported	Supported
m5dn.12xlarge	Supported	Supported
m5dn.24xlarge	Supported	Supported
m5n.2xlarge	Not supported	Supported
m6id.xlarge	Supported *	Supported (single node only)
m6id.2xlarge	Supported *	Supported
m6id.4xlarge	Supported	Supported
m6id.8xlarge	Supported	Supported
m6id.16xlarge	Supported	Supported
m6id.32xlarge	Supported	Supported
m6idn.xlarge	Supported *	Supported (single node only)
m6idn.2xlarge	Supported *	Supported
m6idn.4xlarge	Supported	Supported
m6idn.8xlarge	Supported	Supported
m6idn.16xlarge	Supported	Supported
m6idn.32xlarge	Supported	Supported
r5.xlarge	Not supported	Supported (single node only)
r5.2xlarge	Not supported	Supported
r5.8xlarge	Not supported	Supported

Supported instance	Flash Cache	High write speed
r5.12xlarge	Not supported	Supported
r5d.2xlarge	Supported	Supported

* Flash Cache is supported on m6id.xlarge, m6id.2xlarge, m6idn.xlarge, and m6idn.2xlarge. However, these instance types have fewer than 16 core processors and are not recommended for high-performance or memory-intensive workloads. Under heavy load, they may restart due to memory constraints. To avoid this, use an instance type with a higher core count and larger memory.

The following notes provide general guidance about supported instance behavior and deployment options.

- Some 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's 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 about Flash Cache.](#)
- Cloud Volumes ONTAP supports high write speed with all supported instance types when using a single-node system. When using an HA pair, high write speed is supported only with supported instance types. [Learn more about choosing a write speed.](#)
- When you choose an EC2 instance type, you can specify whether it is a shared instance or a dedicated instance.

Supported disk sizes

In AWS, an aggregate can contain up to 6 disks that are all the same size. But if you have a configuration that supports the Amazon EBS Elastic Volumes feature, then an aggregate can contain up to 8 disks. [Learn more about support for Elastic Volumes](#)

General Purpose SSDs (gp3 and gp2)	Provisioned IOPS SSDs (io1)	Throughput Optimized HDDs (st1)
100 GiB 500 GiB 1 TiB 2 TiB 4 TiB 6 TiB 8 TiB 16 TiB	100 GiB 500 GiB 1 TiB 2 TiB 4 TiB 6 TiB 8 TiB 16 TiB	500 GiB 1 TiB 2 TiB 4 TiB 6 TiB 8 TiB 16 TiB

c4, m4, and r4 instances no longer supported

Cloud Volumes ONTAP no longer supports the c4, m4, and r4 EC2 instance types in AWS.

If your system runs on a c4, m4, or r4 instance, change it to a c5, m5, or r5 instance before you upgrade to this release.

[Learn how to change the EC2 instance type for Cloud Volumes ONTAP.](#)

For more information, refer to the following resources:

- [Knowledge base \(KB\) article: Converting an AWS Xen CVO instance to Nitro KVM](#)
- [KB article: Unable to change the instance type from r4 to r5 with disk count error](#)
- [Learn more about the end of availability and support for these instance types](#)

Supported regions

For AWS region support, see [Cloud Volumes Global Regions](#).

Related information

- [Amazon EC2 instance types](#)
- [Amazon EC2 M5 instances](#)
- [Amazon EC2 M6i instances](#)
- [Amazon EC2 C5 instances](#)
- [Amazon EC2 R5 instances](#)

Supported configurations for Cloud Volumes ONTAP in Azure

Several Cloud Volumes ONTAP configurations are supported in Azure.

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.

Cloud Volumes ONTAP can run on either a Reserved or On-demand VM instance from your cloud provider. Solutions that use other VM instance types aren't supported.

For supported instances specifications, refer to the [Microsoft Azure documentation](#).

Single-node systems

You can choose from the following capacity-based or node-based licensing configurations when deploying Cloud Volumes ONTAP as a single-node system in Azure.

Cloud Volumes ONTAP can run on either a Reserved or On-demand VM instance from your cloud provider. Solutions that use other VM instance types aren't supported.

Capacity-based licenses

	Freemium	Optimized ⁵	Capacity-based license (Essentials and Professional)
Maximum system capacity (disks + object storage)	500 GiB	With capacity-based licensing, each Cloud Volumes ONTAP system supports tiering to object storage. The total tiered capacity can scale up to the cloud provider's bucket limit. While the license does not impose capacity restrictions, you should follow the FabricPool Best Practices to ensure optimal performance, reliability, and cost efficiency when configuring and managing tiering.	

	Freemium	Optimized ⁵	Capacity-based license (Essentials and Professional)
Supported virtual machine types	DSv2 series • DS4_v2 ¹ • DS5_v2 ¹ • DS13_v2 ¹ • DS14_v2 ¹ • DS15_v2 ¹	DSv2 series • DS4_v2 ¹ • DS13_v2 ¹	DSv2 series • DS4_v2 ¹ • DS5_v2 ¹ • DS13_v2 ¹ • DS14_v2 ¹ • DS15_v2 ¹
	Ebdsv5 series • E4bds_v5 ⁷ • E8bds_v5 ⁷ • E16bds_v5 ⁷ • E32bds_v5 ⁷ • E48bds_v5 ⁷ • E64bds_v5 ⁷	Esv3 series • E4s_v3 ¹ • E8s_v3 ¹	Ebdsv5 series • E4bds_v5 ⁷ • E8bds_v5 ⁷ • E16bds_v5 ⁷ • E32bds_v5 ⁷ • E48bds_v5 ⁷ • E64bds_v5 ⁷
	Edsv4 series • E4ds_v4 • E8ds_v4 • E32ds_v4 ³ • E48ds_v4 ³ • E80ids_v4 ³	Edsv4 series • E4ds_v4 ³ • E8ds_v4 ³ • E4ds_v5 • E8ds_v5	Edsv4 series • E4ds_v4 ³ • E8ds_v4 ³ • E32ds_v4 ³ • E48ds_v4 ³ • E80ids_v4 ³
	Edsv5 series • E4ds_v5 • E8ds_v5 • E20ds_v5 ³ • E32ds_v5 ³ • E48ds_v5 ³ • E64ds_v5 ³ • E104ids_v5 ⁷		Edsv5 Series • E4ds_v5 • E8ds_v5 • E20ds_v5 ³ • E32ds_v5 ³ • E48ds_v5 ³ • E64ds_v5 ³ • E104ids_v5 ⁷

	Freemium	Optimized ⁵	Capacity-based license (Essentials and Professional)
Supported disk types ⁴	Standard HDD Managed Disks, Standard SSD Managed Disks, Premium SSD Managed Disks, and Premium SSD v2 Managed Disks.		

Notes:

- ¹ The DSv2 and Esv3 machine families are no longer available for selection on the NetApp Console when deploying new instances of Cloud Volumes ONTAP in Azure. These families will be retained and supported only in older, existing systems. New deployments of Cloud Volumes ONTAP are supported in Azure only from the 9.12.1 release. We recommend that you switch to either ES_v4 or any other series compatible with Cloud Volumes ONTAP 9.12.1 and later. The DS_v2 and Es_v3 series machines, however, will be available for new deployments made through the API.
Esv3 series
- ² This VM type includes 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. [Learn more](#).
The minimum ONTAP version required for configuring Flash Cache on Azure is 9.13.1 GA.
³ These VM types use an [Ultra SSD](#) for VNVRAM, which provides better write performance.
If you choose any of these VM types when you deploy a new Cloud Volumes ONTAP system, you can't change to another VM type that *doesn't* use an Ultra SSD for VNVRAM. For example, you can't change from E8ds_v4 to E8s_v3, but you can change from E8ds_v4 to E32ds_v4 because both of those VM types use Ultra SSDs. Conversely, if you deployed Cloud Volumes ONTAP using any other VM type, you won't be able to change to another that uses an Ultra SSD for VNVRAM. For example, you can't change E8s_v3, which *doesn't* use Ultra SSD for VNVRAM, to E8ds_v4, which *does*.
Similarly, if you choose Premium SSD Managed Disks for an environment that fulfills the criteria for Premium SSD v2 Managed Disks, the Console automatically deploys Premium SSD v2 Managed Disks. You cannot switch to Premium SSD v1 Managed Disks.
⁴ For information about the supported disk types in single node deployments, refer to [Azure \(single node\)](#). High write speed is supported with all instance types when using a single-node system. You can enable high write speed from the Console during deployment or any time after. [Learn more about choosing a write speed](#). Enhanced write performance is enabled when using SSDs.
⁵ Beginning on August 11, 2025, the Cloud Volumes ONTAP Optimized license is deprecated and will no longer be available for purchase or renewal in the Azure marketplace for pay-as-you-go (PAYGO) subscriptions. For more information, refer to [End of availability of Optimized licenses](#).
⁶ Edsv6 VM types are supported for new deployments of Cloud Volumes ONTAP 9.17.1 and later. You cannot switch an existing deployment with any other VM type, for example, from Edsv5 to Edsv6; only size changes among Edsv6 variants (for example E20ds_v6 → E32ds_v6) are supported. For information about this VM type, refer to the [Azure documentation: Edsv6 sizes series](#).
⁷ The Ebds_v5 and E104ids_v5 VMs are available for new deployments and upgrade of Cloud Volumes ONTAP 9.18.1 and later. You can change or upgrade your existing Edsv4, Edsv5, or other Ebds_v5 VMs types to Ebds_v5. You can upgrade Ebds_v5 or Eids_v5 VMs to E104ids_v5.

Other licenses

	PAYGO Explore	PAYGO Standard	PAYGO Premium	Node-based BYOL
Maximum system capacity (disks + object storage)	2 TiB ⁵	10 TiB	368 TiB	368 TiB per license

	PAYGO Explore	PAYGO Standard	PAYGO Premium	Node-based BYOL
Supported virtual machine types	Ebdsv5 series • F4bds_v5	Dsv2 series • DS4_v2 ¹ • DS13_v2 ¹	DSv2 series • DS5_v2 ¹ • DS14_v2 ¹ • DS15_v2 ¹	DSv2 series • DS4_v2 ¹ • DS5_v2 ¹ • DS13_v2 ¹ • DS14_v2 ¹ • DS15_v2 ¹
	Esv3 series • E4s_v3 ¹	Ebdsv5 series • F8bds_v5	Ebdsv5 series • E16bds_v5 ⁷ • E32bds_v5 ⁷ • E48bds_v5 ⁷ • E64bds_v5 ⁷	Ebdsv5 series • F4bds_v5 • F8bds_v5 • E16bds_v5 ⁷ • E32bds_v5 ⁷ • E48bds_v5 ⁷ • E64bds_v5 ⁷
	Edsv4 series • E4ds_v4 ³	Esv3 series • E8s_v3 ¹		
	Edsv5 series • E4ds_v5	Edsv4 series • E8ds_v4 ³	Esv3 series • F32s_v3_{1,3} • F48s_v3_{1,3} • F64is_v3_{1,3}	
	Edsv6 series • E4ds_v6 ⁶	Edsv5 series • E8ds_v5	Edsv4 series • F32ds_v4₃ • F48ds_v4₃ • E80ids_v4₃	Esv3 series • E4s_v3 ¹ • E8s_v3 ¹ • F32s_v3_{1,3} • F48s_v3_{1,3} • F64is_v3_{1,3}
		Lsv3 series • L8s_v3 ²		

	PAYGO Explore	PAYGO Standard	PAYGO Premium	Node-based BYOL
Supported disk types ⁴	Standard HDD Managed Disks, Standard SSD Managed Disks, and Premium SSD Managed Disks			
Notes:			- E20ds_v5 - E32ds_v5	- E4ds_v4 ³ - E8ds_v4 ³
1. ¹ The DS_v2 and Es_v3 machine families are no longer available for selection on the Console when deploying new instances of Cloud Volumes ONTAP in Azure. These families will be retained and supported only in older, existing systems. New deployments of Cloud Volumes ONTAP are supported in Azure only from the 9.12.1 release. We recommend that you switch to either Es_v4 or any other series compatible with Cloud Volumes ONTAP 9.12.1 and later. The DS_v2 and Es_v3 series machines, however, will be available for new deployments made through the API.		E104ids_v5	- E32ds_v4 - E48ds_v4 - E80ds_v4	
2. ² This VM type includes local NVMe storage, which Cloud Volumes ONTAP uses as <i>Flash Cache</i> . 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. Learn more .			Edsv5 series	
3. ³ These VM types use an Ultra SSD for VNVRAM, which provides better write performance.		Edsv6 series	- E4ds_v5 - E8ds_v5	
If you choose any of these VM types when you deploy a new Cloud Volumes ONTAP system, you can't change to another VM type that <i>doesn't</i> use an Ultra SSD for VNVRAM. For example, you can't change from E8ds_v4 to E8s_v3, but you can change from E8ds_v4 to E32ds_v4 because both of those VM types use Ultra SSDs. Conversely, if you deployed Cloud Volumes ONTAP using any other VM type, you won't be able to change to another that uses an Ultra SSD for VNVRAM. For example, you can't change E8s_v3, which doesn't use Ultra SSD for VNVRAM, to E8ds_v4 that does.		- E20ds_v6 - E32ds_v6 - E48ds_v6 - E64ds_v6	E104ids_v5	
Similarly, if you choose Premium SSD Managed Disks for an environment that fulfils the criteria for Premium SSD v2 Managed Disks, the Console automatically deploys Premium SSD v2 Managed Disks. You cannot switch to Premium SSD v1 Managed Disks.			E64ds_v5	
4. ⁴ High write speed is supported with all instance types when using a single-node system. You can enable high write speed from the Console during deployment or any time after. Learn more about choosing a write speed . Enhanced write performance is enabled when using SSD.			E104ids_v5 ⁷	Edsv6 series
5. ⁵ Data tiering to Azure Blob storage isn't supported with PAYGO Explore.				
6. ⁶ Edsv6 VM types are supported for new deployments of Cloud Volumes ONTAP 9.17.1 and later. You cannot switch an existing deployment with any other VM type, for example, from Edsv5 to Edsv6. Only size changes among Edsv6 variants (for example E20ds_v6 → E32ds_v6) are supported. For information about this VM type, refer to the Azure documentation: Edsv6 sizes series .			- E4ds_v6 ⁶ - E20ds_v6 - E32ds_v6	
7. ⁷ The Ebds_v5 and E104ids_v5 VMs are available for new deployments and upgrade of Cloud Volumes ONTAP 9.18.1 and later. You can change or upgrade your existing Edsv4, Edsv5, or other Ebds_v5 VMs types to Ebds_v5. You can upgrade Ebds_v5 or Eids_v5 VMs to E104ids_v5.			- E48ds_v6 - E64ds_v6	

HA pairs

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

HA pairs with shared managed disks

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

Lsv3 series

- L8s_v3 ²
- L16s_v3 ²
- L32s_v3 ²
- L48s_v3 ²
- L64s_v3 ²

Capacity-based licenses

	Freemium	Optimized ⁷	Capacity-based license (Essentials and Professional)
Maximum system capacity (disks + object storage)	500 GiB	With capacity-based licensing, each Cloud Volumes ONTAP system supports tiering to object storage. The total tiered capacity can scale up to the cloud provider's bucket limit. While the license does not impose capacity restrictions, you should follow the FabricPool Best Practices to ensure optimal performance, reliability, and cost efficiency when configuring and managing tiering.	

	Freemium	Optimized ⁷	Capacity-based license (Essentials and Professional)
Supported virtual machine types	Ebdsv5 series - E8bds_v5 ⁹ - E16bds_v5 ⁹ - E32bds_v5 ⁹ - E48bds_v5 ⁹ - E64bds_v5 ⁹	Edsv4 series E8ds_v4	Ebdsv5 series - E8bds_v5 ⁹ - E16bds_v5 ⁹ - E32bds_v5 ⁹ - E48bds_v5 ⁹ - E64bds_v5 ⁹
	Edsv4 series - E8ds_v4 - E32ds_v4 ¹ - E48ds_v4 ¹ - E80ids_v4 ^{1,2}	Edsv5 series E8ds_v5 ⁴	Edsv4 series - E8ds_v4 - E32ds_v4 ¹ - E48ds_v4 ¹ - E80ids_v4 ^{1,2}
	Edsv5 series - E8ds_v5 ⁴ - E20ds_v5 ^{1,4} - E32ds_v5 ^{1,4} - E48ds_v5 ^{1,4} - E64ds_v5 ^{1,4} - E104ids_v5 ⁹		Edsv5 series - E8ds_v5 ⁴ - E20ds_v5 ^{1,4} - E32ds_v5 ^{1,4} - E48ds_v5 ^{1,4} - E64ds_v5 ^{1,4} - E104ids_v5 ⁹
	Edsv6 series - E20ds_v6 ⁸ - E32ds_v6 ⁸ - E48ds_v6 ⁸ - E64ds_v6 ⁸		Edsv6 series - E20ds_v6 ⁸ - E32ds_v6 ⁸ - E48ds_v6 ⁸ - E64ds_v6 ⁸
	Lsv3 series - L8s_v3 ^{1,3,5} - L16s_v3 ^{1,3,5} - L32s_v3 ^{1,3,5} - L48s_v3 ^{1,3,5} - L64s_v3 ^{1,3,5}		Lsv3 series - L8s_v3 ^{1,3,5} - L16s_v3 ^{1,3,5} - L32s_v3 ^{1,3,5} - L48s_v3 ^{1,3,5} - L64s_v3 ^{1,3,5}

	Freemium	Optimized ⁷	Capacity-based license (Essentials and Professional)
Supported disk types ⁶	Premium SSD Managed Disks or Premium SSD v2 Managed Disks.		

Notes:

- ¹ Cloud Volumes ONTAP supports high write speed with these VM types when using an HA pair. You can enable high write speed from the Console during deployment or any time after. [Learn more about choosing a write speed.](#)
- ² Use this VM only when Azure maintenance control is required. It is not recommended for other use cases due to higher pricing. When using Isolated instance types for Azure maintenance control, ensure that each VM in an HA pair has its own Maintenance Configuration in Azure with staggered schedules so that both VMs are not offline simultaneously.
- ³ Multiple availability zone support starts from ONTAP version 9.13.1.
- ⁴ Multiple availability zone support starts from ONTAP version 9.14.1 RC1.
- ⁵ This VM type includes 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. [Learn more.](#)
- ⁶ If you choose Premium SSD Managed Disks for an environment that fulfils the [criteria](#) for Premium SSD v2 Managed Disks, the Console automatically deploys Premium SSD v2 Managed Disks. You cannot switch to Premium SSD v1 Managed Disks. For information about the internal disks for system data for HA deployments single and multiple availability zones, refer to [Azure \(HA pair\)](#).
- ⁷ Beginning on August 11, 2025, the Cloud Volumes ONTAP Optimized license is deprecated and will no longer be available for purchase or renewal in the Azure marketplace for pay-as-you-go (PAYGO) subscriptions. [End of availability of Optimized licenses.](#)
- ⁸ Edsv6 VM types are supported for new deployments of Cloud Volumes ONTAP 9.17.1 and later. You cannot switch an existing deployment with any other VM type, for example, from Edsv5 to Edsv6; only size changes among Edsv6 variants (for example E20ds_v6 → E32ds_v6) are supported. For information about this VM type, refer to the [Azure documentation: Edsv6 sizes series](#).
- ⁹ The Ebds5 and E104ids_v5 VMs are available for new deployments and upgrade of Cloud Volumes ONTAP 9.18.1 and later. You can change or upgrade your existing Edsv4, Edsv5, or other Ebds5 VMs types to Ebds5. You can upgrade Ebds5 or Eids5 VMs to E104ids_v5.

Other licenses

	PAYGO Standard	PAYGO Premium	Node-based BYOL
Maximum system capacity (disks + object storage)	10 TiB	368 TiB	368 TiB per license

	PAYGO Standard	PAYGO Premium	Node-based BYOL
Supported virtual machine types	Ebdsv5 series	Ebdsv5 series	Ebdsv5 series
	E8bds_v5 ⁷	- E16bds_v5 ⁷ - E32bds_v5 ⁷ - E48bds_v5 ⁷ - E64bds_v5 ⁷	- E4bds_v5 ⁷ - E8bds_v5 ⁷ - E16bds_v5 ⁷ - E32bds_v5 ⁷ - E48bds_v5 ⁷ - E64bds_v5 ⁷
	Edsv4 series	Edsv4 series	Edsv4 series
	E8ds_v4 ⁴	- E32ds_v4 ^{1,4} - E48ds_v4 ^{1,4} - E80ids_v4 ^{1,2,4}	- E8ds_v4 ⁴ - E32ds_v4 ^{1,4} - E48ds_v4 ^{1,4} - E80ids_v4 ^{1,2,4}
	Lsv3 series	Edsv5 series	Edsv5 series
	L8s_v3 ^{4,5}	- E20ds_v5 ¹ - E32ds_v5 ¹ - E48ds_v5 ¹ - E64ds_v5 ¹ - E104ids_v5 ⁷	- E4ds_v5 - E8ds_v5 - E20ds_v5 ¹ - E32ds_v5 ¹ - E48ds_v5 ¹ - E64ds_v5 ¹ - E104ids_v5 ⁷
		Edsv6 series	Edsv6 series
		- E20ds_v6 ⁶ - E32ds_v6 ⁶ - E48ds_v6 ⁶ - E64ds_v6 ⁶	- E20ds_v6 ⁶ - E32ds_v6 ⁶ - E48ds_v6 ⁶ - E64ds_v6 ⁶
		Lsv3 series	Lsv3 series
		- L16s_v3 ^{1,4,5} - L32s_v3 ^{1,4,5} - L48s_v3 ^{1,4,5} - L64s_v3 ^{1,4,5}	- L16s_v3 ^{1,4,5} - L32s_v3 ^{1,4,5} - L48s_v3 ^{1,4,5} - L64s_v3 ^{1,4,5}

	PAYGO Standard	PAYGO Premium	Node-based BYOL
Supported disk types	Premium SSD Managed Disks or Premium SSD v2 Managed Disks.		

Notes:

- ¹ Cloud Volumes ONTAP supports high write speed with these VM types when using an HA pair. You can enable high write speed from the Console during deployment or any time after. [Learn more about choosing a write speed.](#)
- ² Use this VM only when Azure maintenance control is required. It is not recommended for other use cases due to higher pricing. When using Isolated instance types for Azure maintenance control, ensure that each VM in an HA pair has its own Maintenance Configuration in Azure with staggered schedules so that both VMs are not offline simultaneously.
- ³ These VM types are only supported for HA pairs in a single availability zone configuration running on shared managed disks.
- ⁴ These VM types are supported for HA pairs in single availability zone and multiple availability zone configurations running on shared managed disks. For Ls_v3 VM types, multiple availability zone support starts from ONTAP version 9.13.1. For Eds_v5 VM types, multiple availability zone support starts from ONTAP version 9.14.1 RC1.
- ⁵ This VM type includes 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. [Learn more.](#)
- ⁶ Edsv6 VM types are supported for new deployments of Cloud Volumes ONTAP 9.17.1 and later. You cannot switch an existing deployment with any other VM type, for example, from Edsv5 to Edsv6; only size changes among Edsv6 variants (for example E20ds_v6 → E32ds_v6) are supported. For information about this VM type, refer to the [Azure documentation: Edsv6 sizes series](#).
- ⁷ The Ebds_v5 and E104ids_v5 VMs are available for new deployments and upgrade of Cloud Volumes ONTAP 9.18.1 and later. You can change or upgrade your existing Edsv4, Edsv5, or other Ebds_v5 VMs types to Ebds_v5. You can upgrade Ebds_v5 or Eids_v5 VMs to E104ids_v5.

HA pairs with page blob

You can use the following configurations with the existing Cloud Volumes ONTAP HA page blob deployments in Azure.



Azure page blobs are not supported for any new deployment.

Capacity-based licenses

	Freemium	Optimized ⁴	Capacity-based license (Essentials and Professional)
Maximum system capacity (disks + object storage)	500 GiB	With capacity-based licensing, each Cloud Volumes ONTAP system supports tiering to object storage. The total tiered capacity can scale up to the cloud provider's bucket limit. While the license does not impose capacity restrictions, you should follow the FabricPool Best Practices to ensure optimal performance, reliability, and cost efficiency when configuring and managing tiering.	
Supported virtual machine types	DSv2 series - DS4_v2 - DS5_v2 ¹ - DS13_v2 - DS14_v2 ¹ - DS15_v2 ¹ Esv3 series - E8s_v3 - E48s_v3 ¹ Edsv4 series - E8ds_v4 ³ - E32ds_v4 ^{1,3} - E48ds_v4 ^{1,3} - E80ids_v4 ^{1,2,3} Edsv5 series - E8ds_v5 - E20ds_v5 ¹ - E32ds_v5 ¹ - E48ds_v5 ¹ - E64ds_v5 ¹	DSv2 series - DS4_v2 - DS13_v2 Esv3 series - E8s_v3 Edsv4 series - E8ds_v4 ³ Edsv5 series - E8ds_v5	DSv2 series - DS4_v2 - DS5_v2 ¹ - DS13_v2 - DS14_v2 ¹ - DS15_v2 ¹ Esv3 series - E8s_v3 - E48s_v3 ¹ Edsv4 series - E8ds_v4 ³ - E32ds_v4 ^{1,3} - E48ds_v4 ^{1,3} - E80ids_v4 ^{1,2,3} Edsv5 series - E8ds_v5 - E20ds_v5 ¹ - E32ds_v5 ¹ - E48ds_v5 ¹ - E64ds_v5 ¹

	Freemium	Optimized ⁴	Capacity-based license (Essentials and Professional)
Supported disk types	Page blobs		

Notes:

- ¹ Cloud Volumes ONTAP supports high write speed with these VM types when using an HA pair. You can enable high write speed from the Console during deployment or any time after. [Learn more about choosing a write speed.](#)
- ² This VM is recommended only when Azure maintenance control is needed. It's not recommended for any other use case due to the higher pricing.
- ³ These VMs are only supported in deployments of Cloud Volumes ONTAP 9.11.1 or earlier. With these VM types you can upgrade an existing page blob deployment from Cloud Volumes ONTAP 9.11.1 to 9.12.1. You cannot perform new page blob deployments with Cloud Volumes ONTAP 9.12.1 or above.
- ⁴ Beginning on August 11, 2025, the Cloud Volumes ONTAP Optimized license is deprecated and will no longer be available for purchase or renewal in the Azure marketplace for pay-as-you-go (PAYGO) subscriptions. For more information, refer to [End of availability of Optimized licenses.](#)

Other licenses

	PAYGO Standard	PAYGO Premium	Node-based BYOL
Maximum system capacity (disks + object storage)	10 TiB	368 TiB	368 TiB per license

	PAYGO Standard	PAYGO Premium	Node-based BYOL
Supported virtual machine types	DSv2 series • DS4_v2 • DS13_v2	DSv2 series • DS5_v2 ¹ • DS14_v2 ¹ • DS15_v2 ¹	DSv2 series • DS4_v2 • DS5_v2 ¹ • DS13_v2 • DS14_v2 ¹ • DS15_v2 ¹
	Esv3 series • E8s_v3	Esv3 series • E48s_v3 ¹	Esv3 series • E8s_v3 • E48s_v3 ¹
	Edsv4 series • E8ds_v4 ³	Edsv4 series • E32ds_v4 ^{1,3} • E48ds_v4 ^{1,3} • E80ids_v4 ^{1,2,3}	Edsv4 series • E8ds_v4 ³ • E32ds_v4 ^{1,3} • E48ds_v4 ^{1,3} • E80ids_v4 ^{1,2,3}
	Edsv5 series • E8ds_v5	Edsv5 series • E20ds_v5 ¹ • E32ds_v5 ¹ • E48ds_v5 ¹ • E64ds_v5 ¹	Edsv5 series • E4ds_v5 • E8ds_v5 • E20ds_v5 ¹ • E32ds_v5 ¹ • E48ds_v5 ¹ • E64ds_v5 ¹
Supported data disk types	Page blobs		

Notes:

- ¹ Cloud Volumes ONTAP supports high write speed with these VM types when using an HA pair. You can enable high write speed from the Console during deployment or any time after. [Learn more about choosing a write speed.](#)
- ² This VM is recommended only when Azure maintenance control is needed. It's not recommended for any other use case due to the higher pricing.
- ³ These VMs are only supported in deployments of Cloud Volumes ONTAP 9.11.1 or earlier. With these VM types you can upgrade an existing page blob deployment from Cloud Volumes ONTAP

9.11.1 to 9.12.1. You cannot perform new page blob deployments with Cloud Volumes ONTAP 9.12.1 or above.

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 GiB • 1 TiB • 2 TiB • 4 TiB • 8 TiB • 16 TiB • 32 TiB	• 100 GiB • 500 GiB • 1 TiB • 2 TiB • 4 TiB • 8 TiB • 16 TiB • 32 TiB	• 100 GiB • 500 GiB • 1 TiB • 2 TiB • 4 TiB • 8 TiB • 16 TiB • 32 TiB

HA pairs

HA pairs use Azure Managed Disks. The following disk type and sizes are supported.

(Page blobs are supported with HA pairs deployed before the 9.12.1 release.)

Premium SSD

- 500 GiB
- 1 TiB
- 2 TiB
- 4 TiB
- 8 TiB
- 16 TiB (managed disks only)
- 32 TiB (managed disks only)

Supported regions

For Azure region support, see [Cloud Volumes Global Regions](#).

Supported configurations for Cloud Volumes ONTAP in Google Cloud

Several Cloud Volumes ONTAP configurations are supported in Google Cloud.

Supported configurations by license

Cloud Volumes ONTAP is available in Google Cloud 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 isn't 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.

Cloud Volumes ONTAP can run on either a Reserved or On-demand VM instance from your cloud provider. Solutions that use other VM instance types aren't supported.

Single node systems

Capacity-based licenses

	Freemium	Optimized ⁴	Capacity-based license (Essentials and Professional)
Maximum system capacity (disks + object storage)	500 GiB	With capacity-based licensing, each Cloud Volumes ONTAP system supports tiering to object storage. The total tiered capacity can scale up to the cloud provider's bucket limit. While the license does not impose capacity restrictions, you should follow the FabricPool Best Practices to ensure optimal performance, reliability, and cost efficiency when configuring and managing tiering.	
Supported machine types ¹	- c3-standard-4, c3-standard-4-1ssd ⁵ - c3-standard-8, c3-standard-8-1ssd ⁵ - c3-standard-22, c3-standard-22-1ssd ⁵ - c3-standard-44, c3-standard-44-1ssd ⁵ - c3-standard-88, c3-standard-88-1ssd ⁵ - n1-standard-8 ¹ - n1-standard-32 ¹ - n2-standard-4 - n2-standard-8 - n2-standard-16 - n2-standard-32 - n2-standard-48 - n2-standard-64	- n2-standard-4 - n2-standard-8	- c3-standard-4, c3-standard-4-1ssd ⁵ - c3-standard-8, c3-standard-8-1ssd ⁵ - c3-standard-22, c3-standard-22-1ssd ⁵ - c3-standard-44, c3-standard-44-1ssd ⁵ - c3-standard-88, c3-standard-88-1ssd ⁵ - n1-standard-8 ¹ - n1-standard-32 ¹ - n2-standard-4 - n2-standard-8 - n2-standard-16 - n2-standard-32 - n2-standard-48 - n2-standard-64
Supported disk types ²	Balanced persistent disks ³ , Performance (SSD) persistent disks ³ , and Standard (HDD) persistent disks. C3 VMs support only Hyperdisk Balanced disks.		

Notes:

- ¹ The n1 series machines are no longer available for selection on the NetApp Console when deploying new instances of Cloud Volumes ONTAP in Google Cloud. The n1 series machines will be retained and supported only in older, existing systems. New deployments of Cloud Volumes ONTAP are supported in Google Cloud only from the 9.8 release. We recommend that you switch to the n2 series machines that are compatible with Cloud Volumes ONTAP 9.8 and later. The n1 series machines, however, will be available for new deployments made through the API.

The custom-4-16384 machine type is no longer supported with new Cloud Volumes ONTAP systems.

If you have an existing system running on this machine type, you can keep using it, but we recommend switching to the n2-standard-4 machine type.

2. ² Disk limits can prevent you from reaching the maximum system capacity limit by using disks alone. You can reach the capacity limit by [tiering inactive data to object storage](#).

[Learn more about disk limits in Google Cloud](#).

3. ³ Enhanced write performance is enabled when using Balanced persistent disks and Performance (SSD) persistent disks.
4. ⁴ Beginning on August 11, 2025, the Cloud Volumes ONTAP Optimized license is deprecated and will no longer be available for purchase or renewal in the Google Cloud marketplace for pay-as-you-go (PAYGO) subscriptions. For information, refer to [What's new in Cloud Volumes ONTAP](#).
5. ⁵ You can deploy the next-generation C3 family VMs on Cloud Volumes ONTAP 9.18.1 and later. The c3-standard-44 and c3-standard-88 machines and their LSSD variants support Tier-1 bandwidth in Google Cloud Console by default. Refer to [Flash Cache support](#) for more information on the LSSD variants.

Other licenses

	PAYGO Explore	PAYGO Standard	PAYGO Premium	Node-based BYOL
Maximum system capacity (disks + object storage)	2 TB ²	10 TiB	368 TiB	368 TiB per license

	PAYGO Explore	PAYGO Standard	PAYGO Premium	Node-based BYOL
Supported machine types ³	- c3-standard-4, c3-standard-4-lssd ⁵ - n2-standard-4	- c3-standard-8, c3-standard-8-lssd ⁵ - n1-standard-8 ³ - n2-standard-8	- c3-standard-22, c3-standard-22-lssd ⁵ - c3-standard-44, c3-standard-44-lssd ⁵ - c3-standard-88, c3-standard-88-lssd ⁵ - n1-standard-32 ³ - n2-standard-16 - n2-standard-32 - n2-standard-48 - n2-standard-64	- c3-standard-4, c3-standard-4-lssd ⁵ - c3-standard-8, c3-standard-8-lssd ⁵ - c3-standard-22, c3-standard-22-lssd ⁵ - c3-standard-44, c3-standard-44-lssd ⁵ - c3-standard-88, c3-standard-88-lssd ⁵ - n1-standard-8 ³ - n1-standard-32 ³ - n2-standard-4 - n2-standard-8 - n2-standard-16 - n2-standard-32 - n2-standard-48 - n2-standard-64
Supported disk types	Balanced persistent disks ⁴ , Performance (SSD) persistent disks ⁴ , and Standard (HDD) persistent disks. C3 VMs support only Hyperdisk Balanced disks.			

Notes:

- ¹ Disk limits can prevent you from reaching the maximum system capacity limit by using disks alone. You can reach the capacity limit by [tiering inactive data to object storage](#).

[Learn more about disk limits in Google Cloud.](#)

- ² Data tiering to Google Cloud Storage isn't supported with PAYGO Explore.
- ³ The n1 series machines are no longer available for selection on the Console when deploying new instances of Cloud Volumes ONTAP in Google Cloud. The n1 series machines will be retained and supported only in older, existing systems. New deployments of Cloud Volumes ONTAP are supported in Google Cloud only from the 9.8 release. We recommend that you switch to the n2 series machines that are compatible with Cloud Volumes ONTAP 9.8 and later. The n1 series machines, however, will be available for new deployments performed through the API.

The custom-4-16384 machine type is no longer supported with new Cloud Volumes ONTAP systems. If you have an existing system running on this machine type, you can keep using it, but we recommend switching to the n2-standard-4 machine type.

4. ⁴ Enhanced write performance is enabled when using Balanced persistent disks and Performance (SSD) persistent disks.
5. ⁵ You can deploy the next-generation C3 family VMs on Cloud Volumes ONTAP 9.18.1 and later. The c3-standard-44 and c3-standard-88 machines and their LSSD variants support Tier-1 bandwidth in Google Cloud Console by default. Refer to [Flash Cache support](#) for more information on the LSSD variants.

The Console shows an additional supported machine type for Standard and BYOL: n1-highmem-4. However, this machine type isn't meant for production environments. We've made it available for a specific lab environment only.

For more information about specific machine types, refer to the Google Cloud documentation:

- [n1 series general-purpose machine types](#)
- [N2 series general-purpose machine types](#)

High-availability (HA) pairs

Capacity-based licenses

	Freemium	Optimized ⁴	Capacity-based license (Essentials and Professional)
Maximum system capacity based on license (disks + object storage)	500 GiB	With capacity-based licensing, each Cloud Volumes ONTAP system supports tiering to object storage. The total tiered capacity can scale up to the cloud provider's bucket limit. While the license does not impose capacity restrictions, you should follow the FabricPool Best Practices to ensure optimal performance, reliability, and cost efficiency when configuring and managing tiering.	
Supported machine types ¹	• n1-standard-8 ¹ • n1-standard-32 ¹ • n2-standard-4 • n2-standard-8 • n2-standard-16 • n2-standard-32 • n2-standard-48 • n2-standard-64	• n2-standard-4 • n2-standard-8	• n1-standard-8 ¹ • n1-standard-32 ¹ • n2-standard-4 • n2-standard-8 • n2-standard-16 • n2-standard-32 • n2-standard-48 • n2-standard-64
Supported disk types ²	Balanced persistent disks ³ , Performance (SSD) persistent disks ³ , and Standard (HDD) persistent disks.		

Notes:

- ¹ The n1 series machines are no longer available for selection on the NetApp Console when deploying new instances of Cloud Volumes ONTAP in Google Cloud. The n1 series machines will be retained and supported only in older, existing systems. New deployments of Cloud Volumes ONTAP are supported in Google Cloud only from the 9.8 release. We recommend that you switch to the n2 series machines that are compatible with Cloud Volumes ONTAP 9.8 and later. The n1 series machines, however, will be available for new deployments made through the API.

The custom-4-16384 machine type is no longer supported with new Cloud Volumes ONTAP systems. If you have an existing system running on this machine type, you can keep using it, but we recommend switching to the n2-standard-4 machine type.

- ² Disk limits can prevent you from reaching the maximum system capacity limit by using disks alone. You can reach the capacity limit by [tiering inactive data to object storage](#).

[Learn more about disk limits in Google Cloud.](#)

- ³ Enhanced write performance is enabled when using Balanced persistent disks and Performance (SSD) persistent disks.
- ⁴ Beginning on August 11, 2025, the Cloud Volumes ONTAP Optimized license is deprecated and will no longer be available for purchase or renewal in the Google Cloud marketplace for pay-as-you-go (PAYGO) subscriptions. For information, refer to [What's new in Cloud Volumes ONTAP](#).

Other licenses

	PAYGO Explore	PAYGO Standard	PAYGO Premium	Node-based BYOL
Maximum system capacity based on license (disks + object storage)	2 TB ²	10 TiB	368 TiB	368 TiB per license
Supported machine types ³	• n2-standard-4	• n1-standard-8 ³ • n2-standard-8	• n1-standard-32 • n2-standard-16 • n2-standard-32 • n2-standard-48 • n2-standard-64	• n1-standard-8 ³ • n1-standard-32 • n2-standard-4 • n2-standard-8 • n2-standard-16 • n2-standard-32 • n2-standard-48 • n2-standard-64
Supported disk types	Balanced persistent disks ⁴ , Performance (SSD) persistent disks ⁴ , and Standard (HDD) persistent disks.			

Notes:

- ¹ Disk limits can prevent you from reaching the maximum system capacity limit by using disks alone. You can reach the capacity limit by [tiering inactive data to object storage](#).

[Learn more about disk limits in Google Cloud.](#)

- ² Data tiering to Google Cloud Storage isn't supported with PAYGO Explore.
- ³ The n1 series machines are no longer available for selection on the Console when deploying new instances of Cloud Volumes ONTAP in Google Cloud. The n1 series machines will be retained and supported only in older, existing systems. New deployments of Cloud Volumes ONTAP are supported in Google Cloud only from the 9.8 release. We recommend that you switch to the n2 series machines that are compatible with Cloud Volumes ONTAP 9.8 and later. The n1 series machines, however, will be available for new deployments performed through the API.

The custom-4-16384 machine type is no longer supported with new Cloud Volumes ONTAP systems. If you have an existing system running on this machine type, you can keep using it, but we recommend switching to the n2-standard-4 machine type.

- ⁴ Enhanced write performance is enabled when using Balanced persistent disks and Performance (SSD) persistent disks.

The Console shows an additional supported machine type for Standard and BYOL: n1-highmem-4. However, this machine type isn't meant for production environments. We've made it available for a specific lab environment only.

For more information about specific machine types, refer to the Google Cloud documentation:

- [n1 series general-purpose machine types](#)
- [N2 series general-purpose machine types](#)

Flash Cache support

Beginning with Cloud Volumes ONTAP 9.13.0, *Flash Cache*, high write speed, and a higher maximum transmission unit (MTU) of 8,896 bytes, are available for the following HA pair deployment instances:

- n2-standard-16
- n2-standard-32
- n2-standard-48
- n2-standard-64

You can enable *Flash Cache*, and high write speed when deploying an eligible instance type. To enable the higher maximum transmission unit of 8,896 bytes, you must chose VPC-1, VPC-2, or VPC-3 for the deployment. The higher MTU enables higher network throughput. For more information on launching one of these deployments, see [Launching Cloud Volumes ONTAP in Google Cloud](#).



Flash Cache, high write mode, and an MTU of 8,896 are feature-dependent and cannot be disabled individually within a configured instance.

In single node deployments, beginning with Cloud Volumes ONTAP 9.18.1, if you select the local SSD (LSSD) variants of the C3 VMs, Flash Cache gets enabled by default. You can't switch between C3 LSSD VM variants in your Cloud Volumes ONTAP deployment, even if the target variant supports Flash Cache.

Check this table to understand the VM variant and the number of LSSDs supported by them:

VM type	Number of LSSD disks attached
c3-standard-4-lssd	1
c3-standard-8-lssd	2
c3-standard-22-lssd	4
c3-standard-44-lssd	8
c3-standard-88-lssd	16

Maximum system capacity based on VM type

VM type	Maximum supported data disks	Maximum capacity (in TiB)
n2 (all variants)	124	257
c3-standard-4	12	256
c3-standard-8	12	256
c3-standard-22	28	256
c3-standard-44	28	512
c3-standard-88	28	512
c3-standard-4-lssd	12	256

VM type	Maximum supported data disks	Maximum capacity (in TiB)
c3-standard-8-ssd	12	256
c3-standard-22-ssd	28	256
c3-standard-44-ssd	28	512
c3-standard-88-ssd	28	512

Supported disk sizes

In Google Cloud, 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
- 64 TB

Supported regions

For Google Cloud region support, see [Cloud Volumes Global Regions](#).

Copyright information

Copyright © 2026 NetApp, Inc. All Rights Reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system—without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP “AS IS” AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

LIMITED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (b)(3) of the Rights in Technical Data -Noncommercial Items at DFARS 252.227-7013 (FEB 2014) and FAR 52.227-19 (DEC 2007).

Data contained herein pertains to a commercial product and/or commercial service (as defined in FAR 2.101) and is proprietary to NetApp, Inc. All NetApp technical data and computer software provided under this Agreement is commercial in nature and developed solely at private expense. The U.S. Government has a non-exclusive, non-transferrable, nonsublicensable, worldwide, limited irrevocable license to use the Data only in connection with and in support of the U.S. Government contract under which the Data was delivered. Except as provided herein, the Data may not be used, disclosed, reproduced, modified, performed, or displayed without the prior written approval of NetApp, Inc. United States Government license rights for the Department of Defense are limited to those rights identified in DFARS clause 252.227-7015(b) (FEB 2014).

Trademark information

NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.