



Supported configurations

Cloud Volumes ONTAP

NetApp
July 30, 2021

This PDF was generated from https://docs.netapp.com/us-en/cloud-volumes-ontap/reference_configs_aws_96.html on July 30, 2021. Always check docs.netapp.com for the latest.

Table of Contents

- Supported configurations 1
 - Supported configurations for Cloud Volumes ONTAP 9.6 in AWS 1
 - Supported configurations for Cloud Volumes ONTAP 9.6 in Azure 3
 - Supported configurations for Cloud Volumes ONTAP 9.6 in GCP 5

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	<ul style="list-style-type: none">• m4.xlarge• m5.xlarge	<ul style="list-style-type: none">• m4.2xlarge• m5.2xlarge• r4.xlarge• r5.xlarge	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• 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 SSDs (gp2) ⁵ , Provisioned IOPS SSDs (io1), and Throughput Optimized HDDs (st1)			

	Explore	Standard	Premium	BYOL
Cold data tiering to S3	Not supported	Supported		
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 SSDs (gp2)	Provisioned IOPS SSDs (io1)	Throughput Optimized HDDs (st1)
<ul style="list-style-type: none"> • 100 GB • 500 GB • 1 TB • 2 TB • 4 TB • 6 TB • 8 TB • 16 TB 	<ul style="list-style-type: none"> • 100 GB • 500 GB • 1 TB • 2 TB • 4 TB • 6 TB • 8 TB • 16 TB 	<ul style="list-style-type: none"> • 500 GB • 1 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	<ul style="list-style-type: none">DS4_v2DS13_v2	<ul style="list-style-type: none">DS5_v2DS14_v2DS15_v2	<ul style="list-style-type: none">DS3_v2DS4_v2DS5_v2DS13_v2DS14_v2DS15_v2
Supported disk types ¹	Standard HDD Managed Disks, Standard SSD Managed Disks, and Premium SSD Managed Disks			
Cold data tiering to Blob storage	Not supported	Supported		
Maximum system capacity (disks + object storage)	2 TB	10 TB	368 TB	368 TB per license

Notes:

- Enhanced write performance is enabled when using SSDs, but not when using the DS3_v2 virtual machine type.
- 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	<ul style="list-style-type: none">• DS4_v2• DS13_v2	<ul style="list-style-type: none">• DS5_v2• DS14_v2• DS15_v2	<ul style="list-style-type: none">• 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
<ul style="list-style-type: none">• 500 GB• 1 TB• 2 TB• 4 TB• 8 TB• 16 TB• 32 TB	<ul style="list-style-type: none">• 100 GB• 500 GB• 1 TB• 2 TB• 4 TB• 8 TB• 16 TB• 32 TB	<ul style="list-style-type: none">• 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 licensing options: 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	<ul style="list-style-type: none"> • custom-4-16384 • n1-standard-8 • n1-standard-32

	Explore	Standard	Premium	BYOL
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

Copyright Information

Copyright © 2021 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.

RESTRICTED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.277-7103 (October 1988) and FAR 52-227-19 (June 1987).

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.