Provision volumes for file services

Cloud Manager

NetApp
June 15, 2020

This PDF was generated from https://docs.netapp.com/us-en/occm/task_manage_anf.html on June 15, 2020. Always check docs.netapp.com for the latest.

Table of Contents

Provision volumes for file services . . . 1
Managing volumes for Azure NetApp Files . . . 1
Managing Cloud Volumes Service for AWS . . . 11

Provision volumes for file services

Managing volumes for Azure NetApp Files

Cloud Manager enables you to manage volumes for Azure NetApp Files directly from its interface. You can view volumes, create NFS volumes, migrate data to Azure NetApp Files from an NFS or SMB server, and scan Azure NetApp Files using Cloud Compliance.

Setting up your configuration

Your configuration needs to meet a few requirements before you can manage volumes for Azure NetApp Files from Cloud Manager.

1. Azure NetApp Files must be set up by completing the following from the Azure portal:
    - Register for Azure NetApp Files
    - Create a NetApp account
    - Set up a capacity pool
    - Delegate a subnet to Azure NetApp Files
2. Cloud Manager must be set up as follows:
    - Cloud Manager must be running in Azure, in the account where Azure NetApp Files was set up.
    - The Cloud Manager virtual machine must receive permissions through a managed identity.

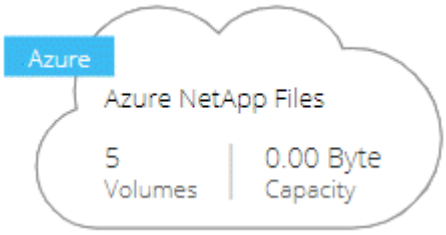
      If you deployed Cloud Manager from Cloud Central, then you're all set. Cloud Central automatically enables a system-assigned managed identity on the Cloud Manager virtual machine.

      If you deployed Cloud Manager from the Azure Marketplace, then you should have followed instructions to enable a managed identity.

    - The Azure role assigned to the Cloud Manager virtual machine must include the permissions listed in the latest Cloud Manager policy for Azure:

      ```
      "Microsoft.NetApp/netAppAccounts/read",
      "Microsoft.NetApp/netAppAccounts/capacityPools/read",
      "Microsoft.NetApp/netAppAccounts/capacityPools/volumes/write",
      "Microsoft.NetApp/netAppAccounts/capacityPools/volumes/read",
      "Microsoft.NetApp/netAppAccounts/capacityPools/volumes/delete,"
      "Microsoft.Insights/Metrics/Read"
      ```

When your configuration is set up, Cloud Manager automatically displays Azure NetApp Files on the Working Environments page:



Provisioning volumes

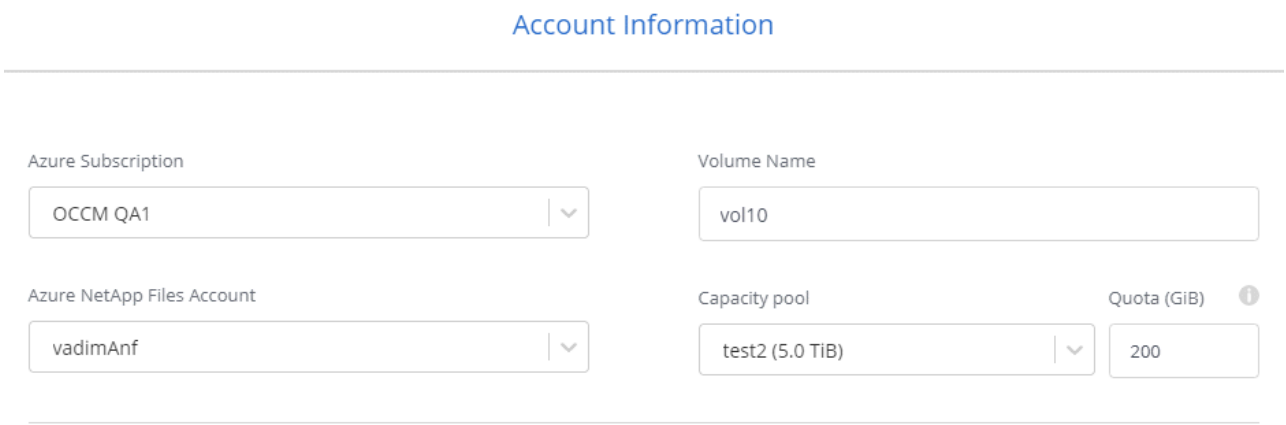
Manage volumes for Azure NetApp Files directly from Cloud Manager.

Creating NFS volumes

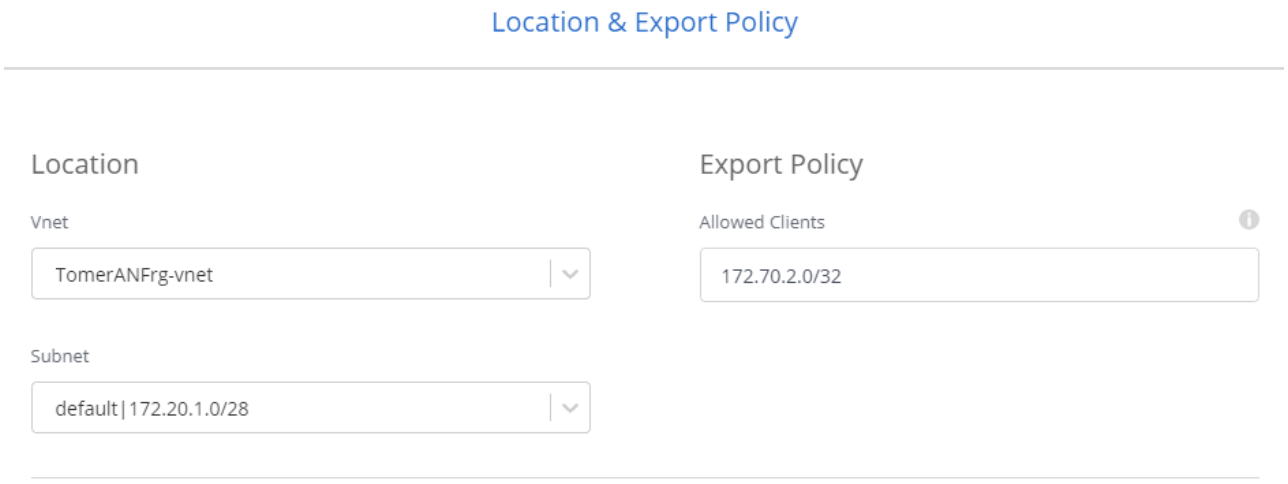
Cloud Manager enables you to create NFSv3 volumes for Azure NetApp Files.

Steps

1. Open the working environment.
2. Click **Add New Volume**.
3. Enter basic details about the volume in the **Account Information** page:
   a. Select an Azure subscription and Azure NetApp Files account.
   b. Enter a name for the volume.
   c. Select a capacity pool and specify a quota, which is the amount of logical storage that's allocated to the volume.



4. Fill out the **Location & Export Policy** page:
   a. Select a VNet and subnet.
   b. Configure an export policy to control access to the volume.



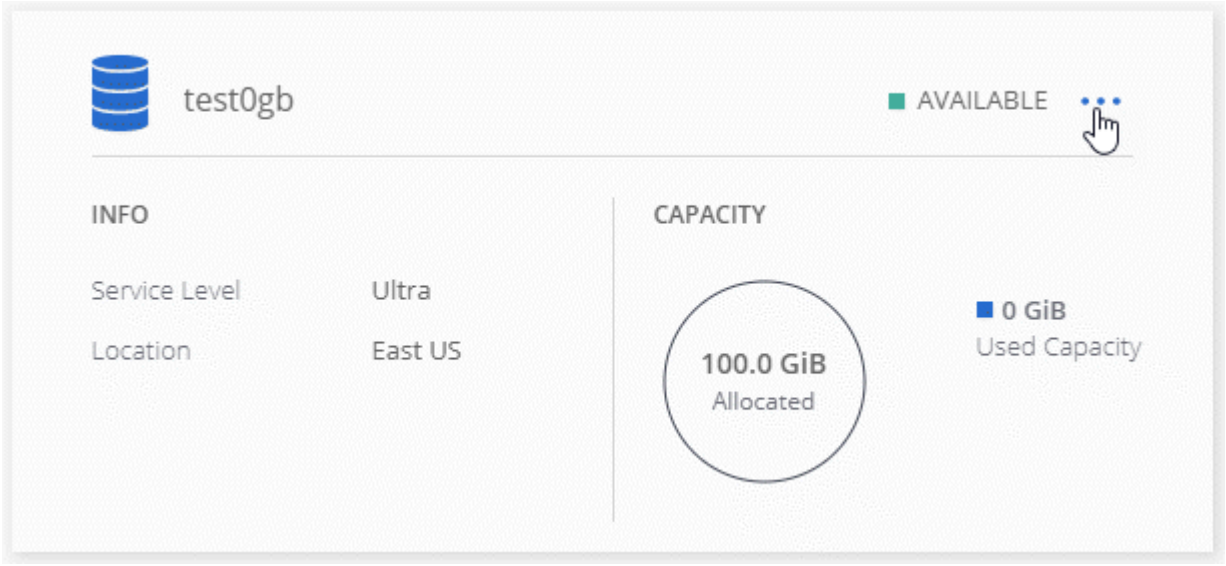
5. Click **Go**.

Getting a volume's mount path

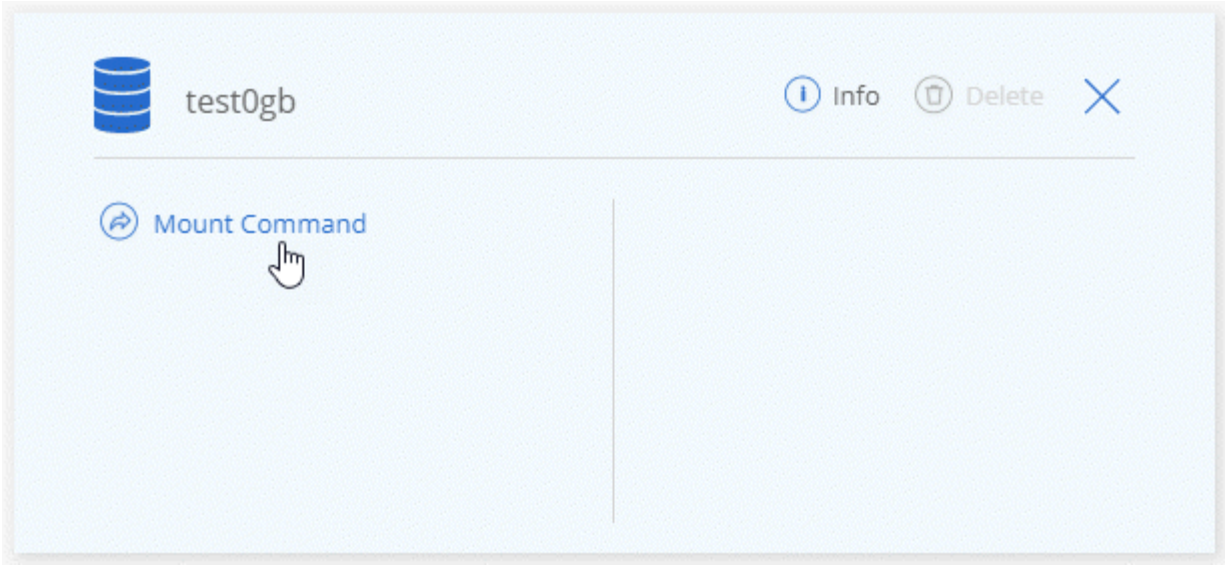
Copy the mount path for a volume so you can mount the volume to a Linux machine.

Steps

1. Open the working environment.
2. Hover over the volume and click the menu.



3. Click **Mount Command**.



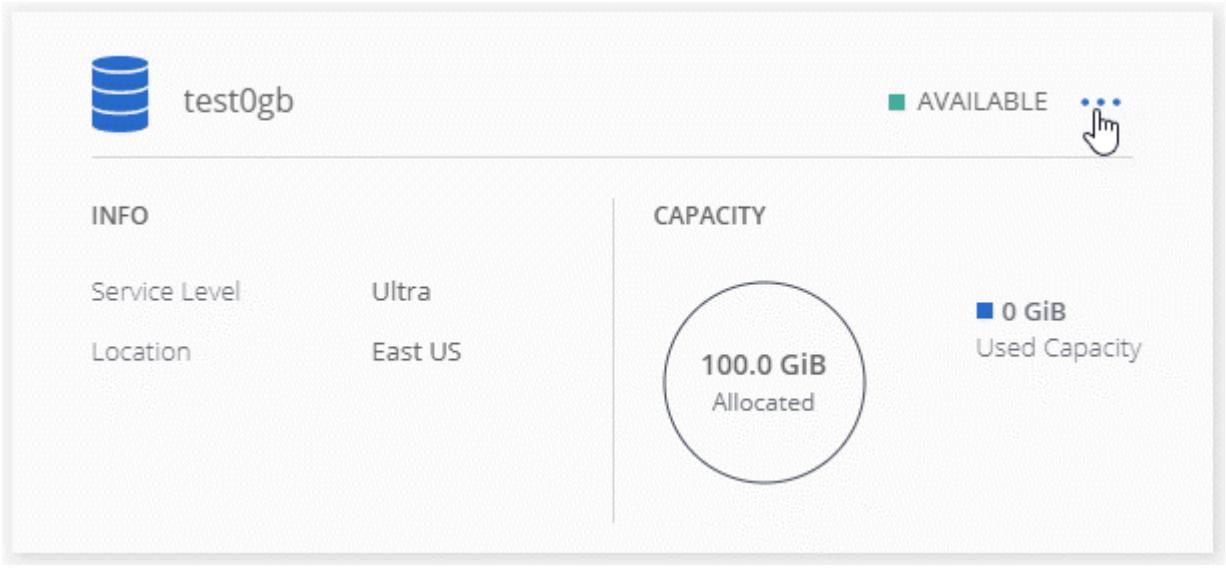
4. Copy the mount path and use the copied text to mount the volume to a Linux machine.

Deleting volumes

Delete the volumes that you no longer need.

Steps

1. Open the working environment.
2. Hover over the volume and click the menu.



3. Click **Delete**.
4. Confirm that you want to delete the volume.

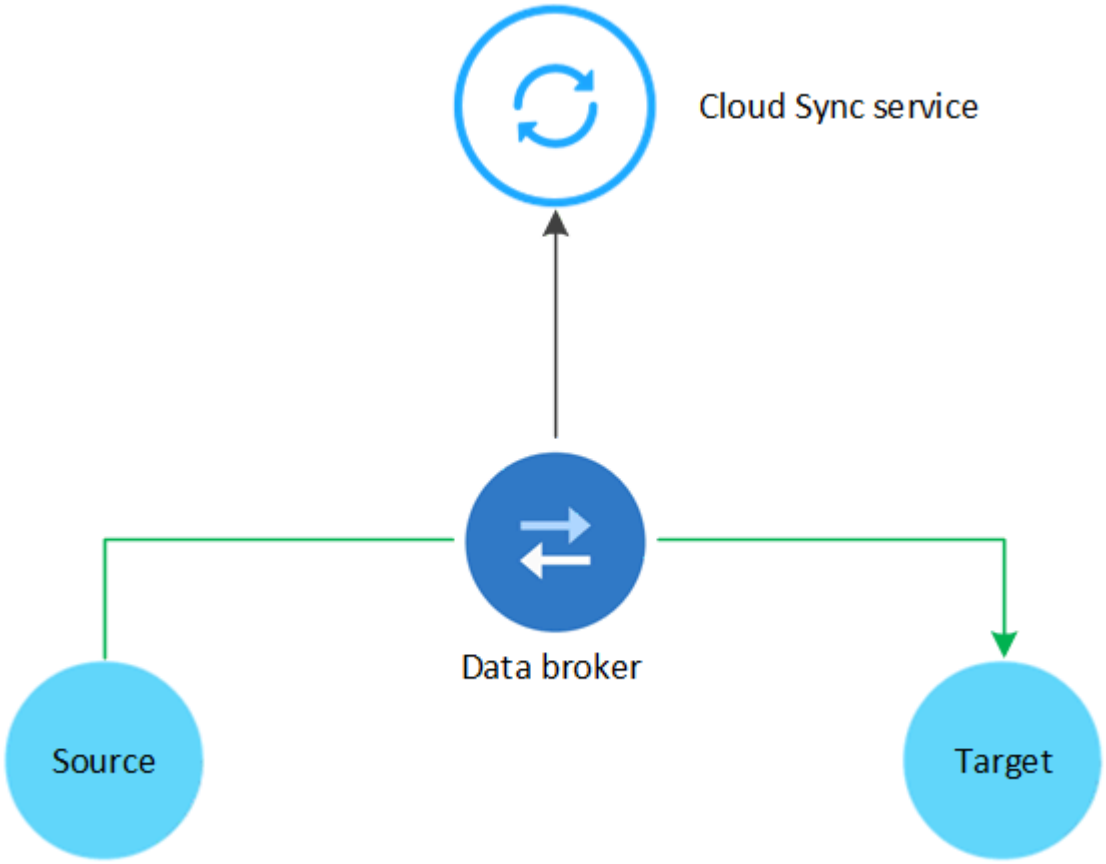
Migrating data to Azure NetApp Files

You can migrate NFS or SMB data to Azure NetApp Files directly from Cloud Manager. Just select the

working environment and click **Sync**. Data migrations are powered by NetApp's Cloud Sync service.

Overview

Cloud Sync is NetApp's service for rapid and secure data synchronization. Cloud Sync is a software-as-a-service (SaaS) platform that consists of a data broker, a cloud-based portal, and a source and target.



At this time, Cloud Sync's integration with Cloud Manager enables you to migrate data from a source NFS or SMB server to Azure NetApp Files through a one-time copy. Azure NetApp Files is supported as a target only. The target must be a volume that uses the Ultra service level. No other service levels are supported.

When you set up a data sync to Azure NetApp Files, you need to deploy a data broker in Azure. The NetApp data broker software syncs data from a source to a target (this is called a *sync relationship*). You can use a single data broker for multiple sync relationships.

Cost

NetApp doesn't charge you to sync data to Azure NetApp Files.

Requirements

Prepare to sync data by verifying that your source and target are supported and setup.

Networking requirements

Networking for Cloud Sync includes connectivity between the data broker and the source and target locations, and an outbound internet connection from the data broker over port 443.

- The source and target must have a network connection to the data broker, which you'll deploy in an Azure VNet.

  For example, if an NFS server is in your data center and the data broker is in Azure, then you need a network connection (VPN or ExpressRoute) from your network to the Azure VNet and from the Azure VNet to the Azure NetApp Files location.

- The data broker needs an outbound internet connection so it can poll the Cloud Sync service for tasks over port 443.

  When Cloud Sync deploys the data broker in Azure, it creates a security group that enables the required outbound communication.

  If you need to limit outbound connectivity, see the list of endpoints that the data broker contacts.

- NetApp recommends configuring the source, target, and data broker to use a Network Time Protocol (NTP) service. The time difference between the three components should not exceed 5 minutes.

NFS and SMB server requirements

- The server can be a NetApp system or a non-NetApp system.
- The file server must allow the data broker host to access the exports.
- NFS versions 3, 4.0, 4.1, and 4.2 are supported.
- SMB versions 1.0, 2.0, 2.1, and 3.0 are supported.

  The desired version must be enabled on the server.

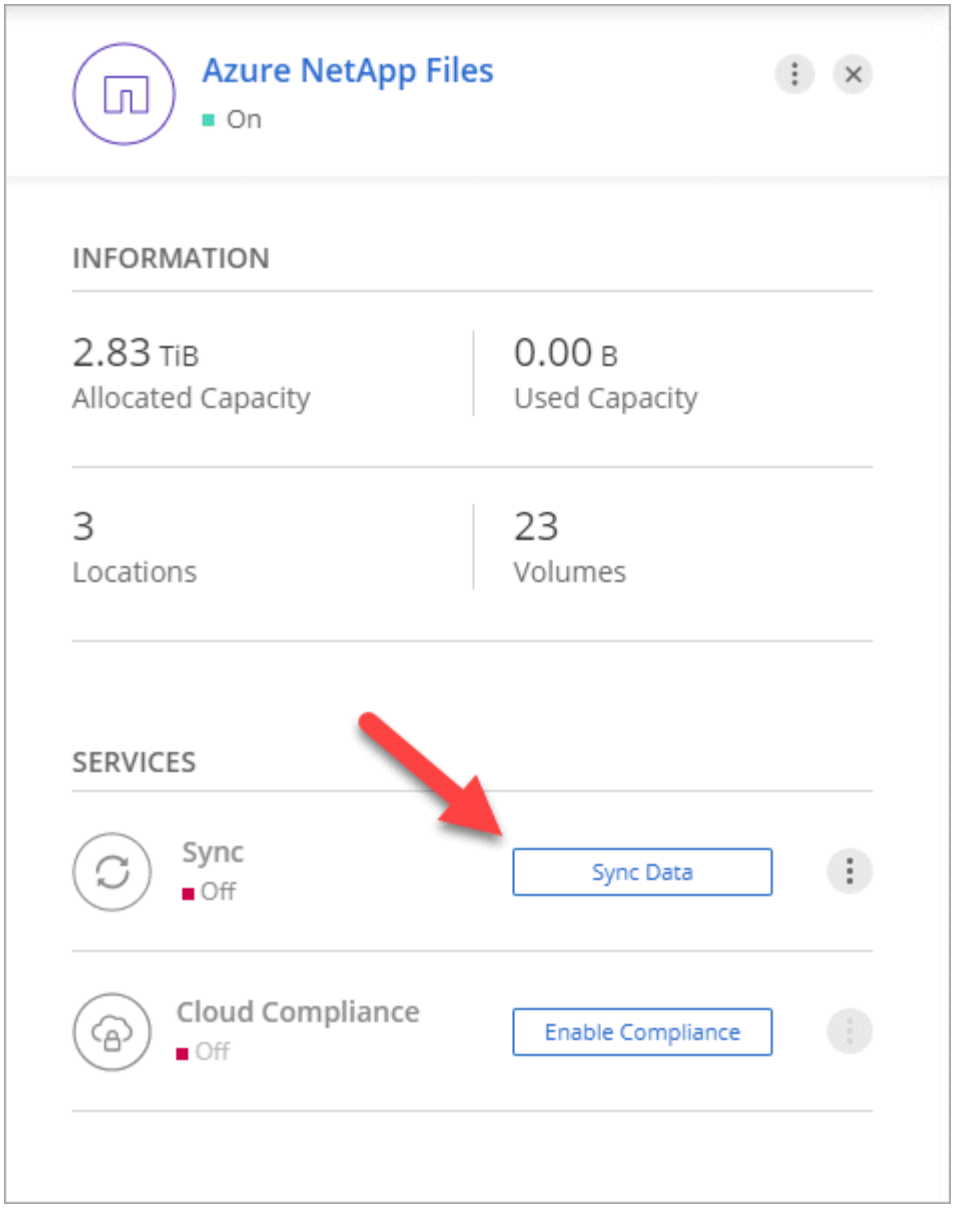
Migrating data

When you create a sync relationship, the Cloud Sync service copies files from the source to the target volume. The schedule for the sync relationship is a one-time copy—there are no additional syncs in the schedule. You can sync the data again by managing the relationship.

The target volume in Azure NetApp Files must be a volume that uses the Ultra service level. No other service levels are supported.

Steps

1. Select the Azure NetApp Files working environment.
2. Click **Sync Data**.



3. Click **Log in to Azure**.

   When prompted, sign in and accept the permissions request from Microsoft. The form is owned and hosted by Microsoft. Your credentials are not provided to NetApp.

4. Select an Azure subscription.

   This is the subscription that includes the volume to which you want to sync the data.

5. Select a volume and click **Continue**.

   This is the volume to which the data will be tiered.

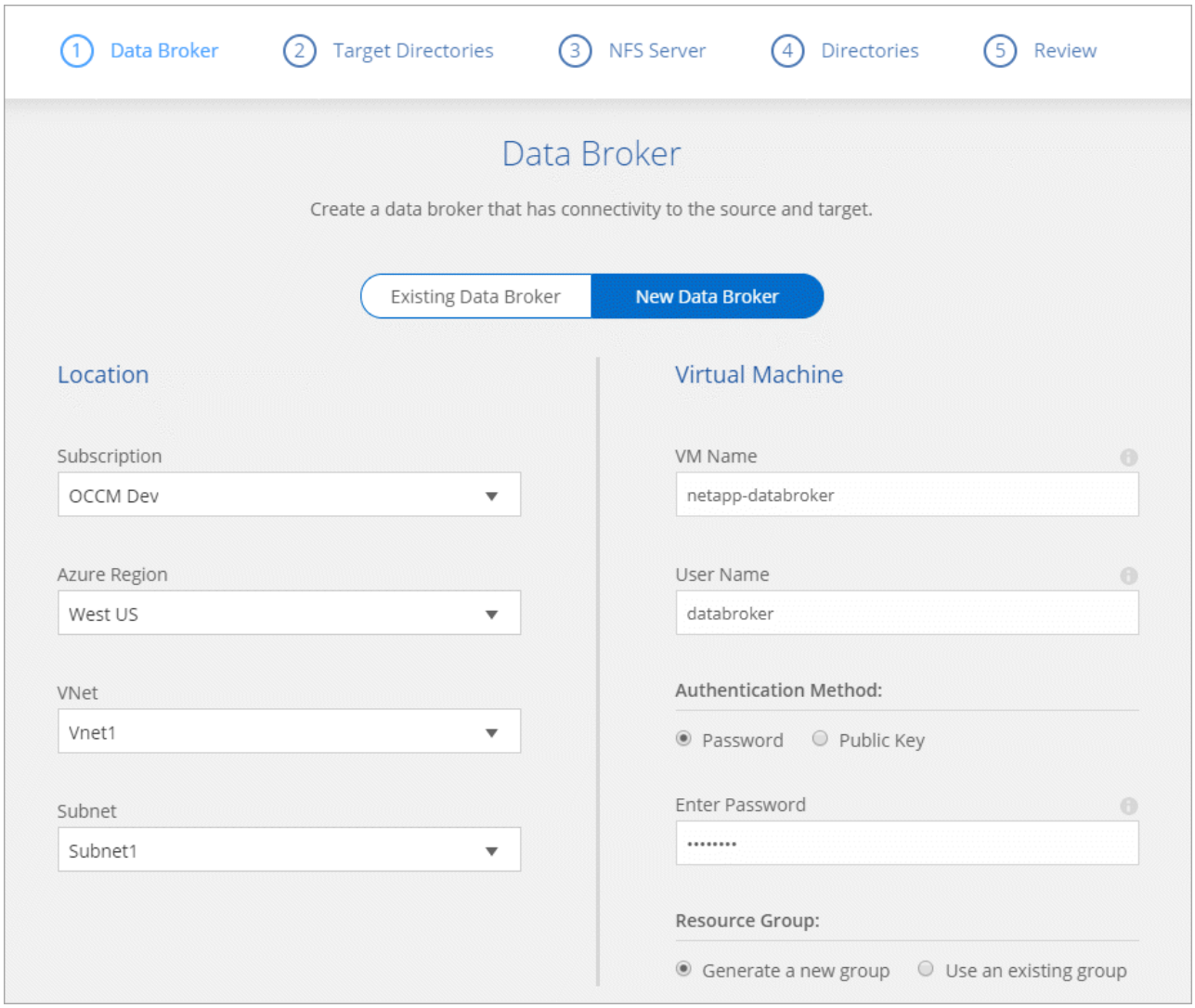
   The target volume must be a volume that uses the Ultra service level. No other service levels are supported.

6. If you selected an SMB volume, enter Active Directory credentials for the volume and click

Continue.

7. Follow the steps in the Sync Data Wizard.

   a. **Data Broker**: Select an existing data broker or provide information to deploy a new data broker and click **Continue**.



   Keep the page open until the deployment is complete. It can take up to 5 minutes to deploy a new data broker.

   b. **Target Shares/Directories**: Select the share or directory to which you want to sync the data and then click **Continue**.

   c. **SMB/NFS Server**: Now you need to provide details about the source server that contains the data that you want to migrate. Select an existing SMB or NFS server that you previously entered, or enter information about a new source server and click **Continue**.

   d. **Shares/Directories**: Select the source share or directory that you want to sync to Azure NetApp Files.

   e. **Review**: Review details about the sync relationship and then click **Sync**.

f. Click **View in Dashboard** to view details about the sync relationship.

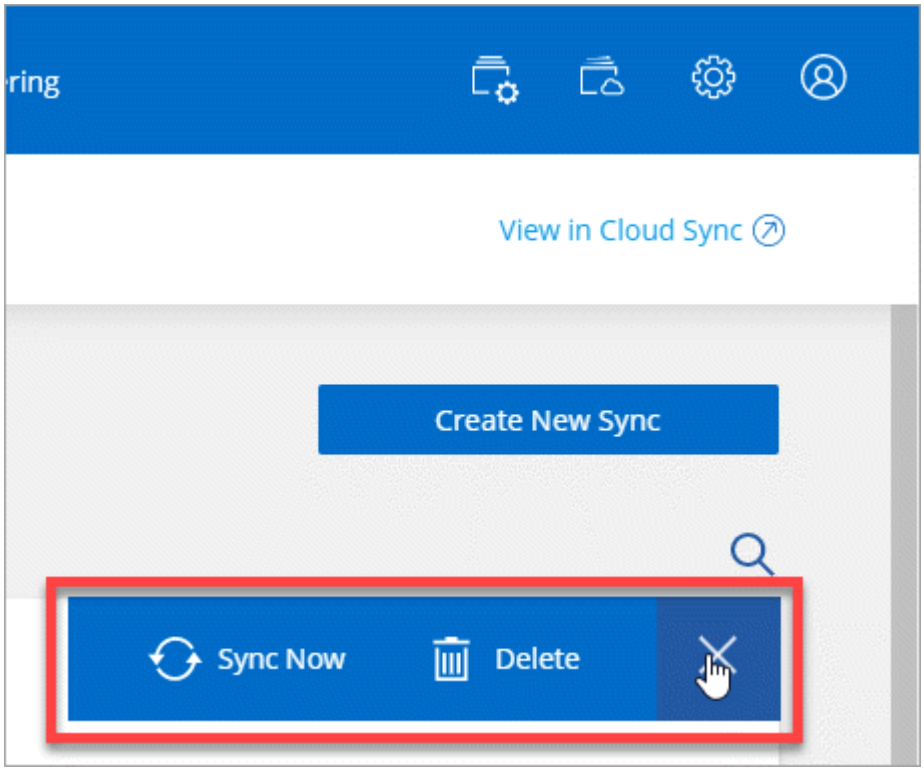
Managing sync relationships

A few actions are available from within Cloud Manager to manage your existing sync relationships. You can immediately sync the data again and you can delete relationships.

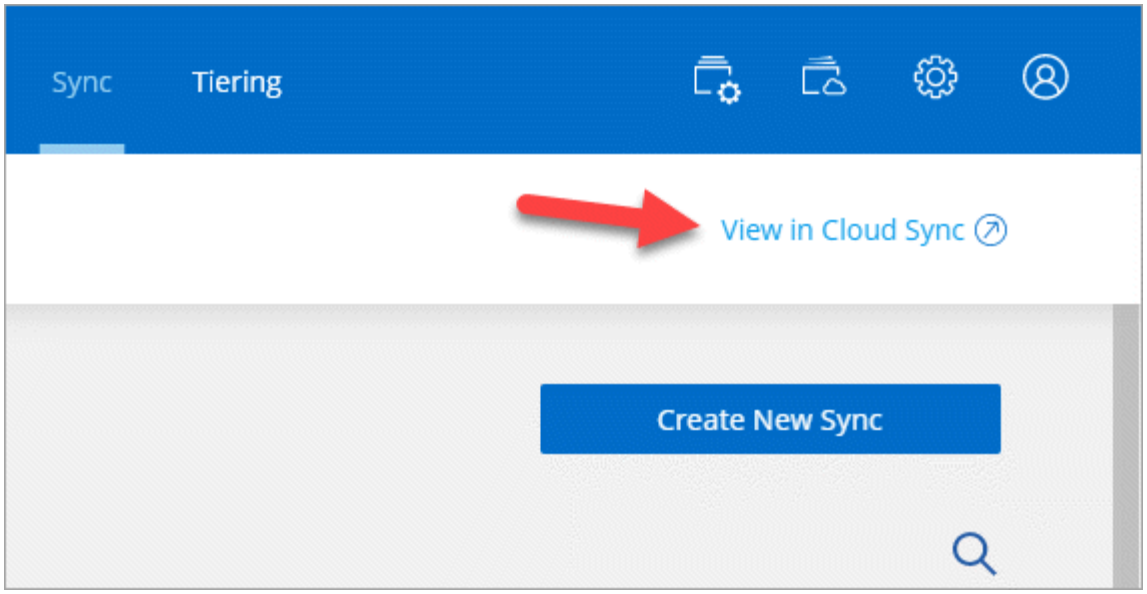
If needed, you can click a link to go directly to the Cloud Sync service where you can access additional actions, such as managing sync settings or accelerating performance.

Steps

1. At the top of Cloud Manager, click **Sync**.
2. Hover over the sync relationship and click the action menu.
3. Select one of the available options.



4. If you want to access additional options, click **View in Cloud Sync**.



The Cloud Sync service opens in another browser tab. If you can't see your sync relationships, then make sure that you're viewing the right Cloud Central account. Learn more about accounts.

Scanning volumes for data privacy compliance

Using Artificial Intelligence (AI) driven technology, Cloud Compliance can help you understand data context and identify sensitive data that resides in your Azure NetApp Files accounts. Learn more.

Getting help

For technical support issues associated with Azure NetApp Files, use the Azure portal to log a support request to Microsoft. Select your associated Microsoft subscription and select the **Azure NetApp Files** service name under **Storage**. Provide the remaining information required to create your Microsoft support request.

For issues related to Cloud Sync and Azure NetApp Files, you can start with NetApp using your Cloud Sync serial number directly from the Cloud Sync service. You will need to access the Cloud Sync service through the link in Cloud Manager. View the process to enable Cloud Sync support.

Limitations

- Cloud Manager can create NFSv3 volumes for Azure NetApp Files. It doesn't support creating SMB volumes.
- Cloud Manager doesn't enable you to manage capacity pools or volume snapshots.
- You can create volumes with an initial size and single export policy. Editing a volume must be done from the Azure NetApp Files interface in the Azure portal.
- Cloud Manager doesn't support data replication to or from Azure NetApp Files.

Related links

- NetApp Cloud Central: Azure NetApp Files
- Azure NetApp Files documentation
- Cloud Sync documentation

Managing Cloud Volumes Service for AWS

Cloud Manager enables you to discover the NFS cloud volumes in your Cloud Volumes Service for AWS subscription. After discovery, you can add additional NFS cloud volumes directly from Cloud Manager.

Cloud Manager does not support SMB or dual-protocol volumes with Cloud Volumes Service for AWS.

Before you get started

- Cloud Manager enables discovery of *existing* Cloud Volumes Service for AWS subscriptions. See the NetApp Cloud Volumes Service for AWS Account Setup Guide if you haven't set up your subscription yet.

  You must follow this setup process for each region and provision your first volume from Cloud Volumes Service before you can discover the region in Cloud Manager.

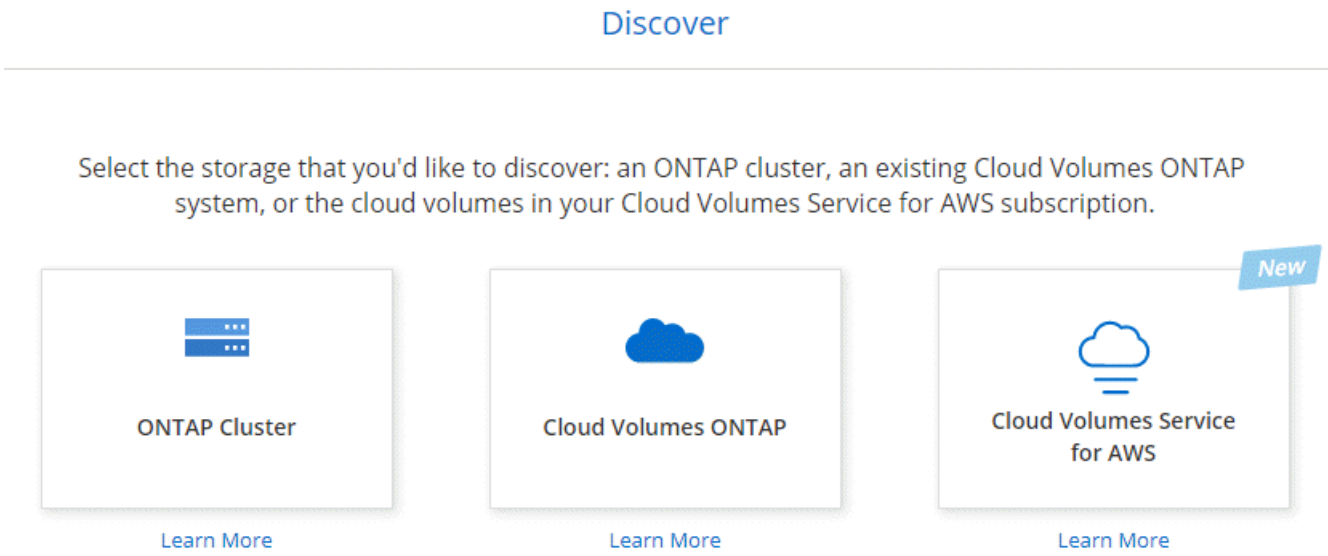
- You need to obtain the Cloud Volumes API key and secret key so you can provide them to Cloud Manager. For instructions, refer to Cloud Volumes Service for AWS documentation.

Discovering your Cloud Volumes Service for AWS subscription

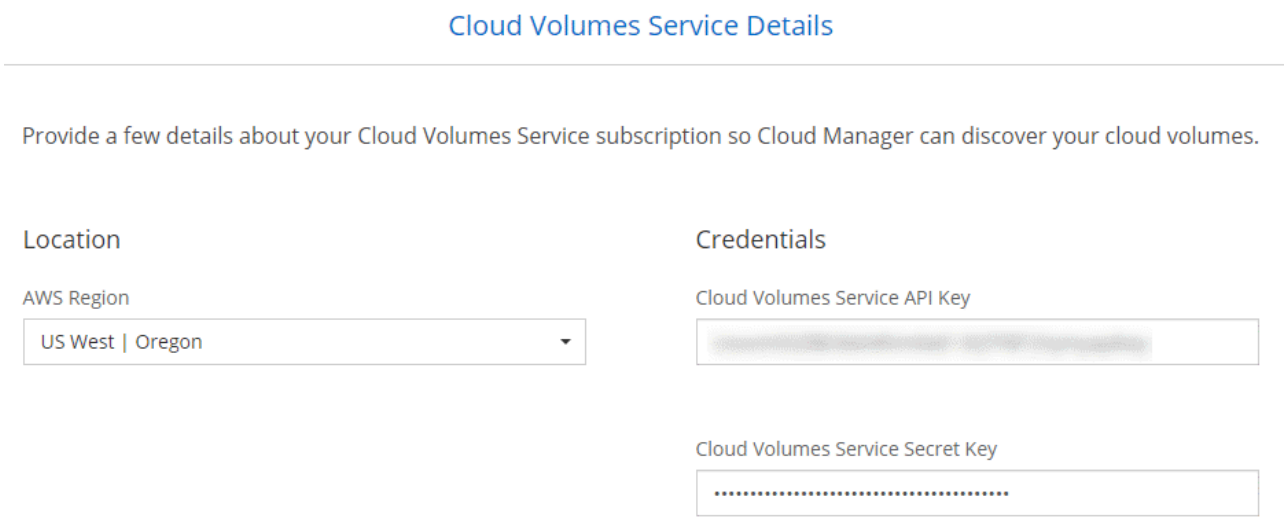
To get started, you need to discover the cloud volumes in an AWS region. You can discover additional regions later.

Steps

1. On the Working Environments page, click **Discover**.
2. Select **Cloud Volumes Service for AWS**.



3. Provide information about your Cloud Volumes Service subscription:
   a. Select the AWS region where your cloud volumes reside.
   b. Enter the Cloud Volumes API key and secret key. For instructions, refer to Cloud Volumes Service for AWS documentation.
   c. Click **Go**.



Result

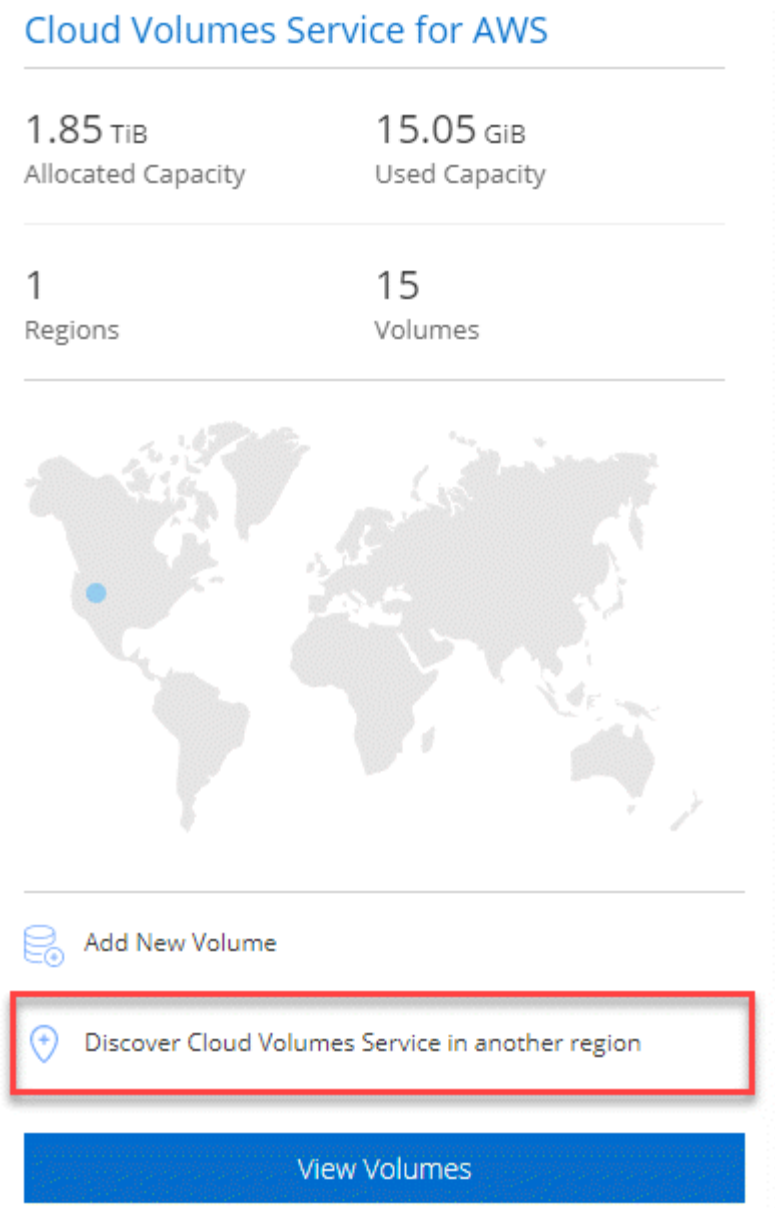
Cloud Manager should now display your Cloud Volumes Service for AWS configuration on the Working Environments page.

Discovering additional regions

If you have cloud volumes in additional regions, you need to discover each individual region.

Steps

1. On the Working Environments page, select the working environment (but don’t open it by double-clicking).
2. In the right pane, click **Discover Cloud Volumes Service in another region**.



3. Provide information about your Cloud Volumes Service subscription:
   a. Select the AWS region where your cloud volumes reside.
   b. Enter the Cloud Volumes API key and secret key. For instructions, refer to Cloud Volumes Service for AWS documentation.
   c. Click **Go**.

Result

Cloud Manager discovers information about the cloud volumes in the selected region.

Creating cloud volumes

Cloud Manager enables you to create NFSv3 cloud volumes. You can only create cloud volumes with an initial size and single export policy. Editing the volume must be done from the Cloud Volume Service

user interface.

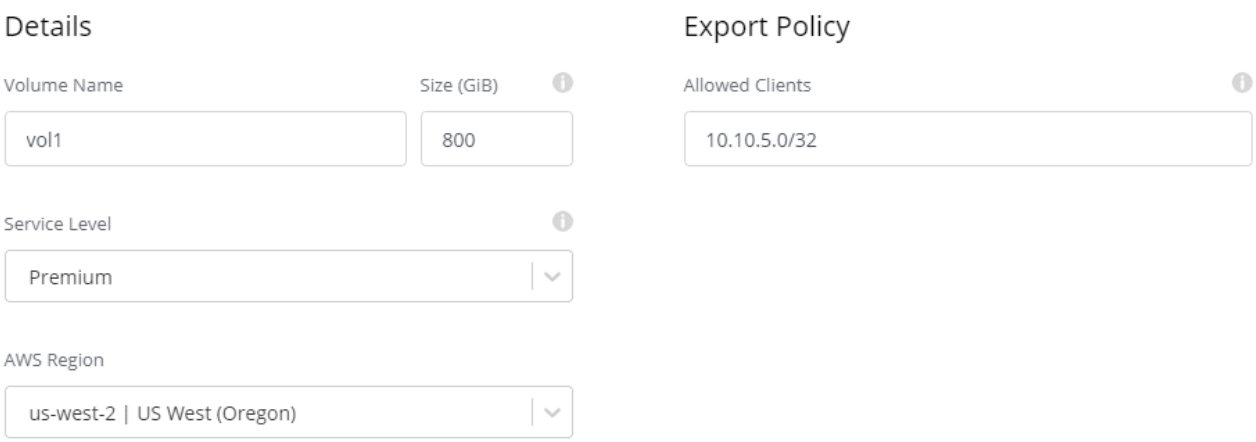
1. Open the working environment.
2. Click **Add New Volume**.
3. Enter details about the volume:
   a. Enter a name for the volume.
   b. Specify a size within the range of 100 GiB to 90,000 GiB (equivalent to 88 TiBs).

      Cloud Manager displays volumes in GiB, while the Cloud Volumes Service displays volumes in GB.

   c. Specify a service level: Standard, Premium, or Extreme.

      Learn more about these service levels.

   d. Choose a region. You can create the volume in a region that Cloud Manager has discovered.
   e. Restrict client access by specifying an IP address or Classless Inter-Domain Routing (CIDR).



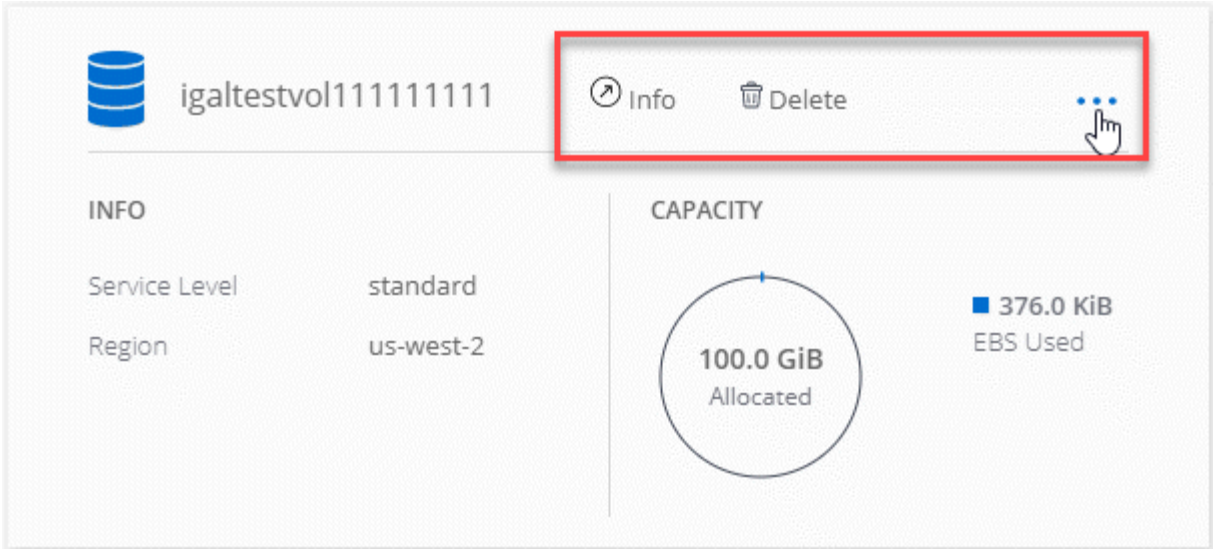
4. Click **Go**.

Deleting cloud volumes

Delete the cloud volumes that you no longer need.

Steps

1. Open the working environment.
2. Hover over the volume and click the menu. Click **Delete**.



3. Confirm that you want to delete the volume.

Getting help

Use the Cloud Manager chat for general service questions.

For technical support issues associated with your cloud volumes, use your 20 digit “930” serial number located in the "Support" tab of the Cloud Volumes Service user interface. Use this support ID when opening a web ticket or calling for support. Be sure to activate your Cloud Volumes Service serial number for support from the Cloud Volumes Service user interface. Those steps are explained here.

Limitations

- Cloud Manager does not support SMB or dual-protocol volumes.
- You can only create cloud volumes with an initial size and single export policy. Editing the volume must be done from the Cloud Volume Service user interface.
- Cloud Manager doesn’t support data replication to or from a Cloud Volumes Service for AWS subscription.
- Removing your Cloud Volumes Service for AWS subscription from Cloud Manager isn’t supported. There are no charges to discover a region from Cloud Manager.

Related links

- NetApp Cloud Central: Cloud Volumes Service for AWS
- NetApp Cloud Volumes Service for AWS documentation

Copyright Information

Copyright © 2020 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.