



OnCommand® Cloud Manager 3.2

# Provisioning NFS Volumes Using the Volume View

April 2017 | 215-12036\_B0  
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## Logging in to Cloud Manager

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You can log in to Cloud Manager from any web browser that has a connection to the Cloud Manager host.

### Steps

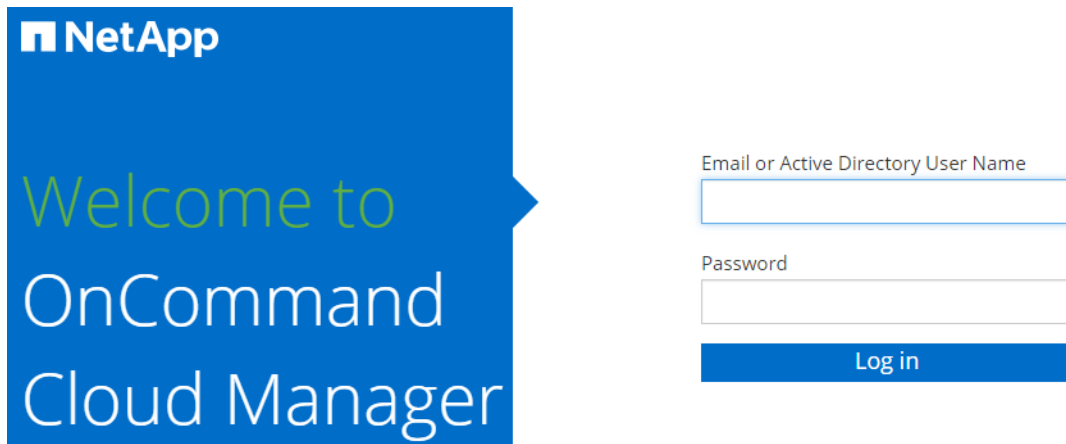
1. Open a web browser and enter the following URL:

**`https://ipaddress:port`**

*ipaddress* can be `localhost`, a private IP address, or a public IP address, depending on the configuration of the Cloud Manager host. For example, if Cloud Manager is in the public cloud without a public IP address, you must enter a private IP address from a host that has a connection to the Cloud Manager host.

*port* is required if you changed the default HTTP (80) or HTTPS (443) ports. For example, if the HTTPS port was changed to 8443, you would enter **`https://ipaddress:8443`**

After you enter the URL, the Cloud Manager log in screen appears:



NetApp

Welcome to  
OnCommand  
Cloud Manager

Email or Active Directory User Name

Password

Log in

2. Enter your credentials, and then click **Log in**.

## Creating NFS volumes

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You can use Cloud Manager to create NFS volumes that provide enterprise-class features on top of AWS storage.

### About this task

*NetApp video: [Creating an ONTAP Cloud HA volume from the Cloud Manager Volume View](#)*

### Steps

1. In the **Volumes** tab, click **Create New Volume**.
2. On the **Create New Volume** page, select a volume type:

Option	Description
<b>Create Volume</b>	Creates a volume attached to a single AWS instance.
<b>Create HA volume</b>	Creates a volume attached to a single AWS instance and mirrored to another instance to provide high availability in case of failures. Click the <b>Info</b> icon to see additional details about the instances required for an HA volume.

3. If you chose **Create Volume**, specify details for your first volume, and then click **Create**.

The following table describes fields for which you might need guidance:

Field	Description
Size	<p>The maximum size for the volume depends on the capacity available in existing storage systems.</p> <p>Thin provisioning is automatically enabled on the volume, which enables you to create a volume that is bigger than the physical storage currently available to it. Instead of preallocating storage space, space is allocated to each volume as data is written.</p>
AWS Disk Type	<p>You should choose the disk that meets your requirements for both performance and cost.</p> <ul style="list-style-type: none"> <li>• General Purpose SSD disks balance cost and performance for a broad range of workloads. Performance is defined in terms of IOPS.</li> <li>• Throughput Optimized HDD disks are for frequently accessed workloads that require fast and consistent throughput at a lower price.</li> <li>• Cold HDD disks are meant for backups, or infrequently accessed data, because the performance is very low. Like Throughput Optimized HDD disks, performance is defined in terms of throughput.</li> </ul> <p><i><a href="#">AWS Documentation: EBS Volume Types</a></i></p>

The following image shows the Create Volume page filled out:

## 6 | Provisioning NFS volumes using the Volume View

Details		Location	Edit
Volume Name	Size (GB)	AWS Region	
vol1	500	US East   N. Virginia	
AWS Disk Type		VPC	
General Purpose (SSD)		vpc-a6c1eac2   172.32.0.0/16	
		Subnet	
		172.32.0.0/24	

4. If you chose **Create HA volume**, specify details for the volume, and then click **Create**.

The following table describes fields for which you might need guidance:

Field	Description
Size	<p>The maximum size for the volume depends on the capacity available in existing storage systems.</p> <p>Thin provisioning is automatically enabled on the volume, which enables you to create a volume that is bigger than the physical storage currently available to it. Instead of preallocating storage space, space is allocated to each volume as data is written.</p>
AWS Disk Type	<p>You should choose the disk that meets your requirements for both performance and cost.</p> <ul style="list-style-type: none"> <li>General Purpose SSD disks balance cost and performance for a broad range of workloads. Performance is defined in terms of IOPS.</li> <li>Throughput Optimized HDD disks are for frequently accessed workloads that require fast and consistent throughput.</li> </ul> <p><i><a href="#">AWS Documentation: EBS Volume Types</a></i></p>
Location	<p>You should choose a VPC that includes three subnets in three separate Availability Zones.</p>
Nodes and Mediator	<p>If possible, Cloud Manager chooses separate Availability Zones for each instance because it is the supported and optimal configuration.</p>
Floating IP	<p>The IP addresses must be outside of the CIDR block for all VPCs in the region.</p>
Route Table	<p>If you have more than one route table, it is very important to select the correct route tables. Otherwise, some clients might not have access to the ONTAP Cloud HA pair.</p> <p><i><a href="#">Amazon Web Services (AWS) Documentation: Route Tables</a></i></p>

The following image shows the Nodes and Mediator page. Each instance is in a separate Availability Zone.

## Nodes &amp; Mediator

[Edit](#)

<b>Node 1</b>	Availability Zone us-east-1d	Subnet 172.31.0.0/20	
<b>Node 2</b>	Availability Zone us-east-1c	Subnet 172.31.16.0/20	
<b>Mediator</b>	Availability Zone us-east-1b	Subnet 172.31.32.0/20	Key Pair EranVirginia

**Result**

Cloud Manager creates the volume on an existing system or on a new system. If a new system is required, creating the volume can take approximately 25 minutes.

**After you finish**

Mount the volume to hosts.

**Related information**

*[Learning about Cloud Manager and ONTAP Cloud: How the Volume View works](#)*

## Mounting volumes to Linux hosts

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After you create a volume, you should mount it to your hosts so that they can access the volume.

### Steps

1. In the **Volumes** tab, place your mouse cursor over the volume, select the menu icon, and then click **Mount**.
2. Click **Copy**.
3. On your Linux hosts, modify the copied text by changing the destination directory, and then enter the command to mount the volume.



## Cloning volumes

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If you need an instantaneous copy of your data without using a lot of disk space, you can create a clone of an existing volume. The cloned volume is a writable, point-in-time copy that is space-efficient because it uses a small amount of space for metadata, and then only consumes additional space as data is changed or added.

### Steps

1. In the **Volumes** tab, place your mouse cursor over the volume, select the menu icon, and then click **Clone**.
2. Modify the name of the cloned volume, if needed, and then click **Clone**.

### Result

Cloud Manager creates a new volume that is a clone of an existing volume.

## Managing data access to volumes

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When you create a volume, Cloud Manager makes the volume available to all EC2 instances in the VPC in which the volume was created. You can modify this default value if you need to restrict data access to the volume.

### Steps

1. In the **Volumes** tab, place your mouse cursor over the volume, select the menu icon, and then click **Manage Access**.
2. Modify the volume access list, and then click **Save**.

## **Changing the underlying AWS disk for a volume**

You can change the underlying AWS disk that a volume uses to provide storage. For example, if higher performance is needed, you can change from a Throughput Optimized HDD to a General Purpose SSD.

### **Steps**

1. In the **Volumes** tab, place your mouse cursor over the volume, select the menu icon, and then click **Change Disk**.
2. Select the AWS disk type and click **Change**.

### **Result**

Cloud Manager moves the volume to an existing aggregate that uses the selected disk type or it creates a new aggregate for the volume.

## Deleting volumes

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You can delete volumes that you no longer need.

### Steps

1. In the **Volumes** tab, place your mouse cursor over the volume, select the menu icon, and then click **Delete**.
2. Click **Delete** to confirm that you want to delete the volume.

## Viewing and modifying AWS resources

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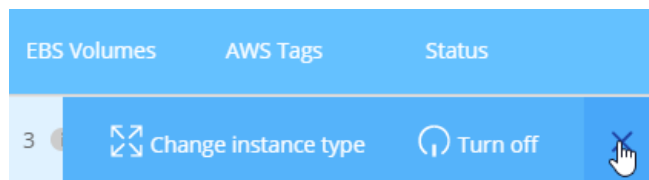
When you create a new volume, Cloud Manager allocates the AWS instances and EBS storage required for that volume. If required, you can view details about AWS instances and EBS storage, change instance types, and turn instances off and on.

### Steps

1. Click **AWS Resources**.

The list of AWS instances displays. You can view details such as instance type, AWS location, and the volumes attached to the instance.

2. If required, select the menu icon next to the **Status** column, and then choose one of the available actions:



## Changing to the Storage System View

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Cloud Manager provides two management views for its graphical interface: the Storage System View for managing storage systems across a hybrid cloud and the Volume View for creating volumes in AWS without having to manage storage systems. You can switch between these views, but those instances should be rare because a single view should meet your needs.

### Steps

1. In the upper right of the Cloud Manager console, click the menu, and then select **View Selection**.
2. On the **View Selection** page, select **Storage System View**, and then click **Switch**.

### Result

Cloud Manager switches to the Storage System View.

Here are a few tips when using the Storage System View:

- The volumes that you created are hosted by one or more ONTAP Cloud instances. The default name for each instance includes the date and time that Cloud Manager created the instance (for example, “COT\_17\_44\_40\_Mar\_17\_16”).
- It is possible to create additional user accounts in the Storage System View. However, only a user account with the Cloud Manager Admin role can access the Volume View.

### Related information

*[Learning about Cloud Manager and ONTAP Cloud: How the Storage System View works](#)*

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