



# **Manage volumes**

ONTAP 9

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# Manage volumes

## Manage volumes overview

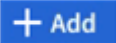




After you display a list of volumes in System Manager, you can perform various actions to manage the volumes.

### Steps

1. In System Manager, click **Storage > Volumes**.


The list of volumes is displayed.

2. You can perform the following:

To perform this task...	Take these actions...
Add a volume	Click  <b>Add</b> . See <a href="#">Add a volume</a> .
Manage multiple volumes	<p>Check the boxes next to the volumes.</p> <ul style="list-style-type: none"><li>• Click  <b>Delete</b> to delete the selected volumes.</li><li>• Click  <b>Protect</b> to assign a protection policy to the selected volumes.</li><li>• Click  <b>More</b> to select one of the following actions to perform for all selected volumes:<ul style="list-style-type: none"><li>◦ Enable quota</li><li>◦ Take offline</li><li>◦ Move</li><li>◦ Show Deleted Volumes</li></ul></li></ul>
Manage a single volume	<p>Next to the volume, click , then select one of the following actions to perform:</p> <ul style="list-style-type: none"><li>• Edit</li><li>• Resize (Beginning with ONTAP 9.10.1, and only for online volumes and DP FlexVol volumes)</li><li>• Delete</li><li>• Clone</li><li>• Take Offline (or Bring Online)</li><li>• Enable Quota (or Disable Quota)</li><li>• Edit Export Policy</li><li>• Edit Mount Path</li><li>• Move</li><li>• Edit Cloud Tier Settings</li><li>• Protect</li></ul>

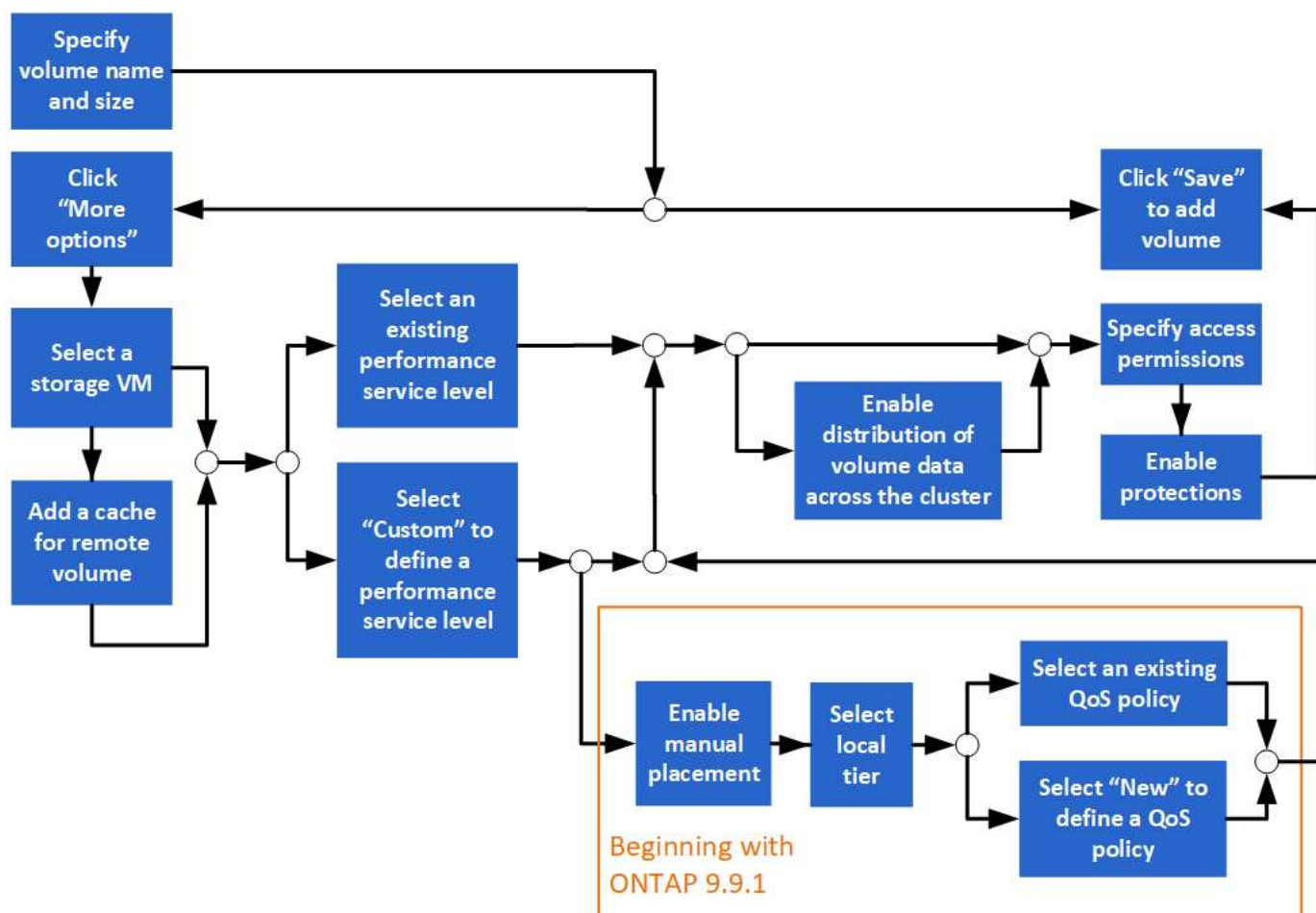
Rename a volume

You can rename a volume from the overview page.

Click  next to the volume name, and then modify the name of the volume.

## Add a volume

You can create a volume and add it to an existing storage VM that is configured for NFS or SMB service.



### Before you begin

- A storage VM that is configured for NFS or SMB service should exist in the cluster.
- Beginning in ONTAP 9.13.1, you can enable capacity analytics and Activity Tracking by default on new volumes. In System Manager, you can manage default settings at the cluster or storage VM level. For more information see [Enable File System Analytics](#).

### Steps

1. Go to **Storage > Volumes**.
2. Select **+ Add**.
3. Specify a name and size for the volume.
4. Perform one of the following steps:

Select this button...	To perform this action...
<b>Save</b>	The volume is created and added using the system defaults. No additional steps are required.
<b>More Options</b>	Proceed to <a href="#">Step 5</a> to define the specifications for the volume.

5. The volume name and size are shown if you previously specified them. Otherwise, enter the name and size.
6. Select a storage VM from the pull-down list.

Only storage VMs configured with the NFS protocol are listed. If only one storage VM configured with the NFS protocol is available, the **Storage VM** field is not shown.

7. To add a cache for the remote volume, select **Add a cache for remote volume** and specify the following values:
  - Select a cluster.
  - Select a storage VM.
  - Select the volume that you want to be a cache volume.
8. In the **Storage and Optimization** section, specify the following values:
  - a. The capacity of the volume is already shown, but you can modify it.
  - b. In the **Performance Service Level** field, select a service level:

When you select this service level...	This occurs...
An existing service level, such as "Extreme", "Performance", or "Value".  Only the service levels that are valid for the system platform (AFF, FAS, or others) are displayed.	A local tier or tiers are automatically chosen. Proceed to <a href="#">Step 9</a> .
Custom	Proceed to <a href="#">Step 8c</a> to define a new service level.

- c. Beginning with ONTAP 9.9.1, you can use System Manager to manually select the local tier on which you want to place the volume you are creating (if you have selected the "Custom" service level).



This option is not available if you select **Add as a cache for a remote volume** or **Distribute volume data across the cluster** (see below).

When you make this choice...	You perform these steps...
<b>Manual placement</b>	Manual placement is enabled. The <b>Distribute volume data across the cluster</b> selection is disabled (see below). Proceed to <a href="#">Step 8d</a> to complete the process.
No selection	Manual placement is not enabled. The local tier is automatically selected. Proceed to <a href="#">Step 9</a> .

- d. Select a local tier from the pull-down menu.

e. Select a QoS policy.

Select "Existing" to choose from a list of existing policies, or select "New" to enter the specifications of a new policy.

9. In the **Optimization options** section, determine if you want to distribute the volume data across the cluster:

When you make this choice...	This occurs...
<b>Distribute volume data across the cluster</b>	The volume you are adding becomes a FlexGroup volume. This option is not available if you previously selected <b>Manual placement</b> .
No selection	The volume you are adding becomes a FlexVol volume by default.

10. In the **Access Permissions** section, specify the access permissions for the protocols for which the volume is configured.

Beginning with ONTAP 9.11.1, the new volume will not be shareable by default. You can specify the default access permissions by ensuring the following check boxes are checked:

- **Export via NGS:** Creates the volume with the “default” export policy that grants users full access to the data.
- **Share via SMB/CIFS:** Creates a share with an auto-generated name, which you can edit. Access is granted to “Everyone”. Also, you can specify the permission level.

11. In the **Protection** section, specify the protections for the volume.

- Beginning with ONTAP 9.12.1, you can select **Enable Snapshot Copies (Local)** and choose a Snapshot copy policy rather than using the default.
- If you select **Enable SnapMirror (Local or Remote)**, then specify the protection policy and settings for the destination cluster from the pull-down lists.

12. Select **Save**.

The volume is created and added to the cluster and storage VM.



You can also save the specifications of this volume to an Ansible Playbook. For more details, go to [Use Ansible Playbooks to add or edit volumes or LUNs](#).

## Assign tags to volumes

Beginning with ONTAP 9.14.1, you can use System Manager to assign tags to volumes to identify objects as belonging to a category, such as projects or cost centers.

### About this task

You can assign a tag to a volume. First, you need to define and add the tag. Then, you can also edit or delete the tag.

Tags can be added when you create a volume, or they can be added later.

You define a tag by specifying a key and associating a value to it using the format “key:value”. For example:

“dept:engineering” or “location:san-jose”.

The following should be considered when you create tags:

- Keys have a minimum length of one character and cannot be null. Values can be null.
- A key can be paired with multiple values by separating the values with a comma, for example, “location:san-jose,toronto”
- Tags can be used for multiple resources.
- Keys must start with a lowercase letter.
- Tags assigned to volumes will be deleted when the volume is deleted.
- Tags are not recovered if a volume is recovered from the recovery queue.
- Tags are retained if the volume is moved or cloned.
- Tags assigned to storage VMs in a disaster recovery relationship are replicated on the volume on the partner site.

## Steps


To manage tags, perform the following steps:

1. In System Manager, click **Volumes**, and then select the volume to which you want to add a tag.

The tags are listed in the **Tags** section.

2. Click **Manage Tags** to modify existing tags or add new ones.

You can add, edit, or delete the tags.

To perform this action...	Perform these steps...
Add a tag	<ol style="list-style-type: none"><li>a. Click <b>Add Tag</b>.</li><li>b. Specify a key and its value or values (separate multiple values with commas).</li><li>c. Click <b>Save</b>.</li></ol>
Edit a tag	<ol style="list-style-type: none"><li>a. Modify the content in the <b>Key</b> and <b>Values (optional)</b> fields.</li><li>b. Click <b>Save</b>.</li></ol>
Delete a tag	<ol style="list-style-type: none"><li>a. Click  next to the tag you want to delete.</li></ol>

## Recover deleted volumes

If you have accidentally deleted one or more FlexVol volumes, you can use System Manager to recover these volumes. Beginning with ONTAP 9.8, you can also use System Manager to recover FlexGroup volumes. You can also delete the volumes permanently by purging the volumes.

The volume retention time can be set on a storage VM level. By default, the volume retention time is set to 12 hours.

## Selecting deleted volumes

### Steps

1. Click **Storage > Volumes**.
2. Click **More > Show Deleted Volumes**.
3. Select the volumes and click the desired action to recover or permanently delete the volumes.

## Resetting the volume configurations

Deleting a volume deletes the associated configurations of the volume. Recovering a volume does not reset all the configurations. Perform the following tasks manually after recovering a volume to bring the volume back to its original state:

### Steps

1. Rename the volume.
2. Set up a junction path (NAS).
3. Create mappings for LUNs in the volume (SAN).
4. Associate a Snapshot policy and export policy with the volume.
5. Add new quota policy rules for the volume.
6. Add a QOS policy for the volume.



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