



## Volumes

### SolidFire Active IQ

NetApp  
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# Volumes

## Volumes

On the **Volumes** page, available from the side panel for a selected cluster, you can view information about volumes that are provisioned on the cluster. Each category of volume information is presented in either a table format or a graphical format.

Learn about what is displayed from the **Volumes** page:

- [Active Volumes](#)
- [Snapshots and Snapshot Schedules](#)

### Find more information

[NetApp Product Documentation](#)

## Active Volumes

From the **Volumes** page, you can view details about active volumes, individual volumes and performance graphs:

- [View active volume details](#)
- [View individual volume details](#)
- [View individual volume performance graphs](#)

### View active volume details

On the **Volumes > Active Volumes** page for a selected cluster, you can view the following information in the list of active volumes.


Heading	Description
ID	ID given when the volume was created.
Account ID	ID of the account assigned to the volume.
Volume Size	Size of the volume from which the snapshot was created.
Used Capacity	Current used capacity of the volume: <ul style="list-style-type: none"><li>• Green = up to 80%</li><li>• Yellow = above 80%</li><li>• Red = above 95%</li></ul>
Primary Node ID	Primary node for this volume.
Secondary Node ID	List of secondary nodes for this volume. Can be multiple values during transitory states, like change of secondary nodes, but will usually have a single value.

Heading	Description
QoS Throttle	<p>Represents the current throttling for the volume.</p> <ul style="list-style-type: none"> <li>• Green = up to 20%</li> <li>• Yellow = above 20%</li> <li>• Red = above 80%</li> </ul> <p>The value does not include historical throttling on the volume.</p>
Min IOPS	The minimum number of IOPS guaranteed for the volume.
Max IOPS	The maximum number of IOPS allowed for the volume.
Burst IOPS	The maximum number of IOPS allowed over a short period of time.
Average IOPS Last 30 mins	<p>The average number of IOPS executed for all volumes that have this node as their primary.</p> <p>IOPS are collected over 500 millisecond intervals on the cluster side. SolidFire Active IQ collects these values at 60 second intervals. For each volume, the average IOPS is calculated from the SolidFire Active IQ values collected in the last 30 minutes.</p>
Average Throughput Last 30 mins	<p>The average throughput executed for all volumes that have this node as their primary.</p> <p>Throughput is collected over 500 millisecond intervals on the cluster side. SolidFire Active IQ collects these values at 60 second intervals. For each volume, the average throughput is calculated from the SolidFire Active IQ values collected in the last 30 minutes.</p>
Average Latency (µs) Last 30 min	<p>The average time in microseconds to complete read and write operations to all volumes that have this node as their primary.</p> <p>Latency is measured over 500 millisecond intervals on the cluster side. SolidFire Active IQ collects these values at 60 second intervals. For each volume, the average latency is calculated from the SolidFire Active IQ values collected in the last 30 minutes. For more information, see this <a href="#">KB article</a>.</p>
Snapshots	The number of snapshots created for the volume.
Actions	Select the vertical drop-down menu for more details on an individual volume.

## View individual volume details

From the **Volumes** page, you can view more information for an individual volume.

### Steps

1. Select **Volumes > Active Volumes**.
2. In the Actions column, select the  icon for the volume you want and select **View Details**.


After the page opens for the active volume, you can view recent volume data from the information bar.

Heading	Description
Account ID	System-generated ID for the volume.
Volume Size	Total size of the volume.
Used Capacity	Shows how full the volume is.
Average IOPS	Average number of IOPS executed against the volume in the last 30 minutes.
Average Throughput	Average throughput executed against the volume in the last 30 minutes.
Average Latency	The average time, in microseconds, to complete read and write operations to the volume in the last 30 minutes. For more information, see this <a href="#">KB article</a> .
<b>You can view additional details from the Show Volume Details drop-down menu.</b>	
Access	The read/write permissions assigned to the volume.
Access Groups	Associated volume access groups.
Non-Zero Blocks	Total number of 4KiB blocks with data after the last round of garbage collection operation has completed.
Zero Blocks	Total number of 4KiB blocks without data after the last round of garbage collection operation has completed.
Snapshot Count	The number of associated snapshots.
Min IOPS	The minimum number of IOPS guaranteed for the volume.
Max IOPS	The maximum number of IOPS allowed for the volume.
Burst IOPS	The maximum number of IOPS allowed over a short period of time.
512e Enabled	Identifies if 512e is enabled on a volume.
QoS Throttle	Represents the current throttling for the volume. The value does not include historical throttling on the volume.
Primary Node ID	Primary node for this volume.
Secondary Node ID	List of secondary nodes for this volume. Can be multiple values during transitory states, like change of secondary nodes, but will usually have a single value.
Volumes Paired	Indicates if a volume has been paired or not.
Create Time	The time the volume creation task was completed.
Block Size	Size of the blocks on the volume.
IQN	The iSCSI Qualified Name (IQN) of the volume.
scsiEUIDeviceID	Globally unique SCSI device identifier for the volume in EUI-64 based 16-byte format.
scsiNAADeviceID	Globally unique SCSI device identifier for the volume in NAA IEEE Registered Extended format.
Attributes	List of Name/Value pairs in JSON object format.


## View individual volume performance graphs

From the **Volumes** page, you can view performance activity for each volume in a graphical format. This information provides real-time statistics for throughput, IOPS, latency, queue depth, average IO size, and capacity for each volume.

### Steps

1. Select **Volumes > Active Volumes**.
2. In the **Actions** column, select the  icon for the volume you want and select **View Details**.

A separate page opens to display an adjustable timeline, which is synced with the performance graphs.

3. On the left, select a thumbnail graph to view performance graphs in detail. You can view the following graphs:
  - Throughput
  - IOPS
  - Latency
  - Queue Depth
  - Average IO Size
  - Capacity
4. (Optional) You can export each graph as a CSV file by selecting the  icon.

## Find more information

[NetApp Product Documentation](#)

## Snapshots and Snapshot Schedules



Learn about viewing information about snapshots and snapshot schedules:

- [Snapshots](#)
- [Snapshot Schedules](#)

## Snapshots

From the **Volumes** page that is available from the side panel for a selected cluster, you can view information about volume snapshots.

### Steps


1. Select **Volumes > Snapshots**.
2. Alternatively, select **Volumes > Active Volumes** and in the Actions column, select the  icon for the volume you want and select **View Snapshots**.
3. (Optional) You can export the snapshot list as a CSV file by selecting the  icon.

The following list describes the available details:

Heading	Description
ID	Displays the snapshot ID assigned to the snapshot.
Volume ID	ID given when the volume was created.
Account ID	ID of the account assigned to the volume.
UUID	Universally unique identifier.
Size	User-defined size of the snapshot.
Volume Size	Size of the volume from which the snapshot was created.
Create Time	The time at which the snapshot was created.
Retain Until	The day and time the snapshot will be deleted.
Group Snapshot ID	The group ID the snapshot belongs to if grouped together with other volume snapshots.
Replicated	Displays the status of the snapshot on the remote cluster: <ul style="list-style-type: none"> <li>• Present: The snapshot exists on a remote cluster.</li> <li>• Not Present: The snapshot does not exist on a remote cluster.</li> <li>• Syncing: The target cluster is currently replicating the snapshot.</li> <li>• Deleted: The target replicated the snapshot and then deleted it.</li> </ul>

## Snapshot Schedules

From the **Volumes > Snapshot Schedules** page that is available from the side panel for a selected cluster, you can view snapshot schedule details.

You can export the snapshot schedule list as a CSV file by selecting the  icon.

The following list describes the available details:

Heading	Description
ID	The schedule ID assigned to the schedule.
Name	User-assigned name of the schedule.
Frequency	The frequency at which the schedule is run. The frequency can be set in hours and minutes, weeks, or months.
Recurring	Indicates whether or not the schedule is recurring.
Volume IDs	The volume IDs included in the scheduled snapshot.
Last Run	The last time the schedule executed.
Last Run Status	The outcome of the last schedule execution. Possible values: Success or Error
Manually Paused	Identifies whether or not the schedule has been manually paused.

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