



# Configure host access

SANtricity software

NetApp  
March 27, 2025

# Table of Contents

Configure host access . . . . .	1
Create host automatically . . . . .	1
Create host manually . . . . .	1
Create host cluster . . . . .	4
Assign volumes to hosts . . . . .	5

# Configure host access

## Create host automatically

You can allow the Host Context Agent (HCA) to automatically detect the hosts, and then verify that the information is correct. Creating a host is one of the steps required to let the storage array know which hosts are attached to it and to allow I/O access to the volumes.

### Before you begin

Make sure the Host Context Agent (HCA) is installed and running on every host connected to the storage array. Hosts with the HCA installed and connected to the storage array are created automatically. To install the HCA, install SANtricity Storage Manager on the host and select the Host option. The HCA is not available on all supported operating systems. If it is not available, you must create the host manually.

### Steps

1. Select **Storage > Hosts**.

The table lists the automatically-created hosts.

2. Verify that the information provided by the HCA is correct (name, host type, host port identifiers).

If you need to change any of the information, select the host, and then click **View/Edit Settings**.

3. **Optional:** If you want the automatically-created host to be in a cluster, create a host cluster and add the host or hosts.

### Results

After a host is created automatically, the system displays the following items in the Hosts tile table:

- The host name derived from the system name of the host.
- The host identifier ports that are associated with the host.
- The Host Operating System Type of the host.

## Create host manually

For hosts that cannot be automatically discovered, you can manually create a host. Creating a host is one of the steps required to let the storage array know which hosts are attached to it and to allow I/O access to the volumes.

### About this task

Keep these guidelines in mind when you create a host:

- You must define the host identifier ports that are associated with the host.
- Make sure that you provide the same name as the host's assigned system name.
- This operation does not succeed if the name you choose is already in use.
- The length of the name cannot exceed 30 characters.

### Steps

1. Select **Storage > Hosts**.
2. Click **Create > Host**.

The Create Host dialog box appears.

3. Select the settings for the host as appropriate.

## Field details

Setting	Description
Name	Type a name for the new host.
Host operating system type	Select the operating system that is running on the new host from the drop-down list.
Host interface type	(Optional) If you have more than one type of host interface supported on your storage array, select the host interface type that you want to use.
Host ports	<p>Do one of the following:</p> <ul style="list-style-type: none"> <li><b>Select I/O Interface</b></li> </ul> <p>Generally, the host ports should have logged in and be available from the drop-down list. You can select the host port identifiers from the list.</p> <ul style="list-style-type: none"> <li><b>Manual add</b></li> </ul> <p>If a host port identifier is not displayed in the list, it means that the host port has not logged in. An HBA utility or the iSCSI initiator utility may be used to find the host port identifiers and associate them with the host.</p> <p>You can manually enter the host port identifiers or copy/paste them from the utility (one at a time) into the <b>Host ports</b> field.</p> <p>You must select one host port identifier at a time to associate it with the host, but you can continue to select as many identifiers that are associated with the host. Each identifier is displayed in the <b>Host ports</b> field. If necessary, you also can remove an identifier by selecting the <b>X</b> next to it.</p>
CHAP initiator	<p>(Optional) If you selected or manually entered a host port with an iSCSI IQN, and if you want to require a host that tries to access the storage array to authenticate using Challenge Handshake Authentication Protocol (CHAP), select the <b>CHAP initiator</b> checkbox. For each iSCSI host port you selected or manually entered, do the following:</p> <ul style="list-style-type: none"> <li>Enter the same CHAP secret that was set on each iSCSI host initiator for CHAP authentication. If you are using mutual CHAP authentication (two-way authentication that enables a host to validate itself to the storage array and for a storage array to validate itself to the host), you also must set the CHAP secret for the storage array at initial setup or by changing settings.</li> <li>Leave the field blank if you do not require host authentication.</li> </ul> <p>Currently, the only iSCSI authentication method used by System Manager is CHAP.</p>

4. Click **Create**.

## Results

After the host is successfully created, the system creates a default name for each host port configured for the host (user label).

The default alias is <Hostname \_ Port Number>. For example, the default alias for the first port created for host IPT is IPT\_1.

## Create host cluster

You create a host cluster when two or more hosts require I/O access to the same volumes.

### About this task

Keep these guidelines in mind when you create a host cluster:

- This operation does not start unless there are two or more hosts available to create the cluster.
- Hosts in host clusters can have different operating systems (heterogeneous).
- NVMe hosts in host clusters cannot be mixed with non-NVMe hosts.
- To create a Data Assurance (DA)-enabled volume, the host connection you are planning to use must support DA.

If any of the host connections on the controllers in your storage array do not support DA, the associated hosts cannot access data on DA-enabled volumes.

- This operation does not succeed if the name you choose is already in use.
- The length of the name cannot exceed 30 characters.

### Steps

1. Select **Storage > Hosts**.
2. Select **Create > Host Cluster**.

The Create Host Cluster dialog box appears.

3. Select the settings for the host cluster as appropriate.

### Field details

Setting	Description
Name	Type the name for the new host cluster.
Select hosts to share volume access	Select two or more hosts from the drop-down list. Only those hosts that are not already part of a host cluster appear in the list.

4. Click **Create**.

If the selected hosts are attached to interface types that have different Data Assurance (DA) capabilities, a dialog appears with the message that DA will be unavailable on the host cluster. This unavailability prevents DA-enabled volumes from being added to the host cluster. Select **Yes** to continue or **No** to cancel.

DA increases data integrity across the entire storage system. DA enables the storage array to check for errors that might occur when data is moved between the hosts and the drives. Using DA for the new volume ensures that any errors are detected.

## Results

The new host cluster appears in the table with the assigned hosts in the rows beneath.

# Assign volumes to hosts

You must assign a volume to a host or a host cluster so it can be used for I/O operations. This assignment grants a host or host cluster access to one or more volumes in a storage array.

## About this task

Keep these guidelines in mind when you assign volumes to hosts:

- You can assign a volume to only one host or host cluster at a time.
- Assigned volumes are shared between controllers in the storage array.
- The same logical unit number (LUN) cannot be used twice by a host or a host cluster to access a volume. You must use a unique LUN.
- For new volume groups, if you wait until all volumes are created and initialized before you assign them to a host, the volume initialization time is reduced. Keep in mind that once a volume associated with the volume group is mapped, *all* volumes will revert to the slower initialization. You can check the initialization progress from **Home > Operations in Progress**.

Assigning a volume fails under these conditions:

- All volumes are assigned.
- The volume is already assigned to another host or host cluster.

The ability to assign a volume is unavailable under these conditions:

- No valid hosts or host clusters exist.
- No host port identifiers have been defined for the host.
- All volume assignments have been defined.

All unassigned volumes are displayed during this task, but functions for hosts with or without Data Assurance (DA) apply as follows:

- For a DA-capable host, you can select volumes that are either DA-enabled or not DA-enabled.
- For a host that is not DA-capable, if you select a volume that is DA-enabled, a warning states that the system must automatically turn off DA on the volume before assigning the volume to the host.

## Steps

1. Select **Storage > Hosts**.

2. Select the host or host cluster to which you want to assign volumes, and then click **Assign Volumes**.

A dialog box appears that lists all the volumes that can be assigned. You can sort any of the columns or type something in the **Filter** box to make it easier to find particular volumes.

3. Select the check box next to each volume that you want to assign or select the check box in the table header to select all volumes.

4. Click **Assign** to complete the operation.

## Results

After successfully assigning a volume or volumes to a host or a host cluster, the system performs the following actions:

- The assigned volume receives the next available LUN number. The host uses the LUN number to access the volume.
- The user-supplied volume name appears in volume listings associated to the host. If applicable, the factory-configured access volume also appears in volume listings associated to the host.

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