



H-Series Hardware

Replacing a H410S node in a SolidFire cluster

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Replacing a storage node in a SolidFire Cluster

You must replace a storage node in the event of CPU failure, Radian card problems, other motherboard issues, or if it does not power on. The instructions apply to H410S storage nodes.

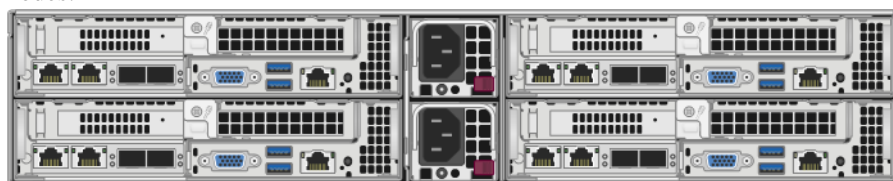
Before you begin

- You have verified that your storage node has failed.
- You have a replacement storage node.
- You have an electrostatic discharge (ESD) wristband, or you have taken other antistatic protection.
- You have labeled each cable that is connected to the storage node.

About this task

Alarms in the NetApp Element Software UI alert you when a storage node fails. You must use the NetApp Element software UI to get the serial number (service tag) of the failed node. You need this information to locate the failed node in the cluster.

The following figure shows the back of a two rack unit (2U), four-node chassis with four storage nodes:



Preparing to replace the storage node in the cluster

You must remove the failed storage node correctly from the cluster in the NetApp Element software UI before you install the replacement node. You can do this without causing any service interruption. You must obtain the serial number of the failed storage node from the Element UI and match it with the serial number on the sticker at the back of the node.

About this task

Steps

1. In the Element UI, select **Cluster > Drives**.
2. Remove the drives from the node using one of the following methods:

Option	Steps
To remove individual drives	<ol style="list-style-type: none">a. Click Actions for the drive you want to remove.b. Click Remove.
To remove multiple drives	<ol style="list-style-type: none">a. Select all the drives you want to remove, and click Bulk Actions.b. Click Remove.

3. Click **Cluster > Nodes**.
4. Note the serial number (service tag) of the failed node. You will take the serial number you noted to your chassis and match it with the serial number on the sticker at the back of the node.
5. After you note the serial number, remove the node from the cluster as follows:
 - a. Click the **Actions** button for the node you want to remove.

- b. Click **Remove**.

Replacing the storage node in the chassis

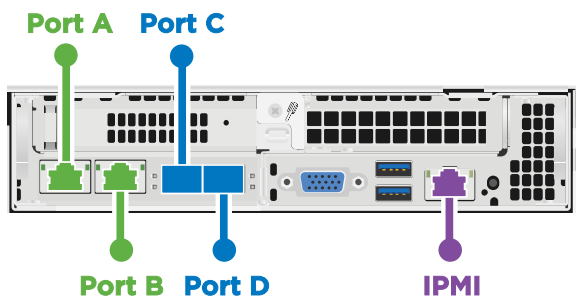
After you remove the failed node from the cluster using the NetApp Element software UI you are ready to physically remove the node from the chassis. You must install the replacement node in the same slot in the chassis from which you removed the failed node.

Before you begin

- You have an electrostatic discharge (ESD) wristband, or you have taken other antistatic protection.
- You have the replacement storage node.
- You have identified the failed node in the chassis by matching the serial number at the back of the node with the serial number you noted down from the Element UI.

Steps

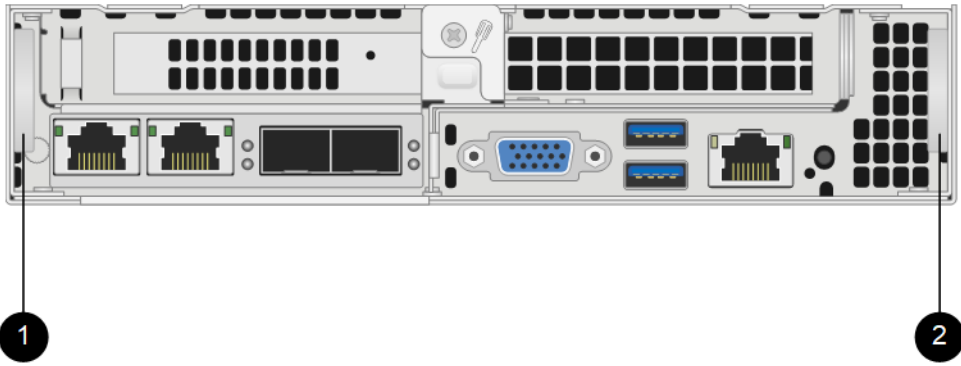
1. Wear antistatic protection before proceeding.
2. Unpack the new storage node, and set it on a level surface near the chassis. Keep the packaging material for when you return the failed node to NetApp.
3. Label each cable that is inserted at the back of the storage node that you want to remove. After you install the new storage node, you must insert the cables into the original ports. The following figure shows the back of a storage node:



Port	Details
Port A	1/10GbE RJ45 port
Port B	1/10GbE RJ45 port
Port C	10/25GbE SFP+ or SFP28 port
Port D	10/25GbE SFP+ or SFP28 port
IPMI	1/10GbE RJ45 port

4. Disconnect all the cables from the storage node.
5. Pull down the cam handle on the right side of the node, and pull the node out using both the cam handles.

The cam handle that you pull down has an arrow on it to indicate the direction in which it moves. The other cam handle does not move and is there to help you pull the node out.



1	Cam handle to help you pull the node out
2	Cam handle that you pull down before pulling the node out

Note: Support the node with both your hands when you pull it out of the chassis.

6. Place the node on a level surface.
You must package the node and return it to NetApp.
7. Align the replacement node with the slot in the chassis into which you are installing the node.
8. Push the node in until you hear a click.



Attention: Ensure that you do not use excessive force when sliding the node into the chassis.

9. Reconnect the cables to the ports from which you originally disconnected them.
The labels you had on the cables when you disconnected them will help guide you.



Attention:

- If the airflow vents at the rear of the chassis are blocked by cables or labels, it can lead to premature component failures due to overheating.
- Do not force the cables into the ports; you might damage the cables, ports, or both.

Tip: Ensure that the replacement node is cabled in the same way as the other nodes in the chassis.

10. Press the button at the front of the node to power it on.

Adding the storage node to the cluster

When you add a node to the cluster or install new drives in an existing node, the drives automatically register as available. You must add the drives to the cluster by using either the Element UI or API before they can participate in the cluster.

About this task

The software version on each node in a cluster must be compatible. When you add a node to a cluster, the cluster installs the cluster version of Element software on the new node as needed.

Steps

1. Select **Cluster > Nodes**.
2. Click **Pending** to view the list of pending nodes.
3. Do one of the following:
 - To add individual nodes, click the **Actions** icon for the node you want to add.
 - To add multiple nodes, select the check box of the nodes to add, and then **Bulk Actions**.

Note: If the node you are adding has a different version of Element software than the version running on the cluster, the cluster asynchronously updates the node to the version of Element software running on the cluster master. After the node is updated, it automatically adds itself to the cluster. During this asynchronous process, the node will be in a pendingActive state.
4. Click **Add**.

The node appears in the list of active nodes.
5. From the Element UI, select **Cluster > Drives**.
6. Click **Available** to view the list of available drives.
7. Do one of the following:
 - To add individual drives, click the **Actions** icon for the drive you want to add and click **Add**.
 - To add multiple drives, select the check boxes of the drives to add, click **Bulk Actions**, and click **Add**.

Where to find product documentation and other information

You can learn more about using and managing NetApp HCI and SolidFire all-flash storage from the resources available in the Documentation Centers and Resources pages for both products.

In the Documentation Centers, you can also find information about hardware installation and maintenance, additional content resources available, links to known issues and resolved issues, and the latest release notes. On the Resources pages, you can find links to data sheets, technical reports, white papers, and videos.

- [*NetApp HCI Documentation*](#)
- [*NetApp HCI Documentation Center*](#)
- [*NetApp HCI Resources page*](#)
- [*SolidFire and Element 12.0 Documentation Center*](#)
- [*SolidFire and Element 11.8 Documentation Center*](#)
- [*SolidFire and Element 11.7 Documentation Center*](#)
- [*SolidFire and Element 11.5 Documentation Center*](#)
- [*SolidFire and Element 11.3 Documentation Center*](#)
- [*SolidFire Resources page*](#)

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