Maintain appliance

StorageGRID

NetApp
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Maintain appliance

You might need to perform maintenance procedures on the appliance. The procedures in this section assume that the appliance has already been deployed as a Gateway Node or an Admin Node in a StorageGRID system.

Place appliance into maintenance mode

You must place the appliance into maintenance mode before performing specific maintenance procedures.

What you'll need

- You are signed in to the Grid Manager using a supported web browser.
- You have the Maintenance or Root access permission. For details, see the instructions for administering StorageGRID.

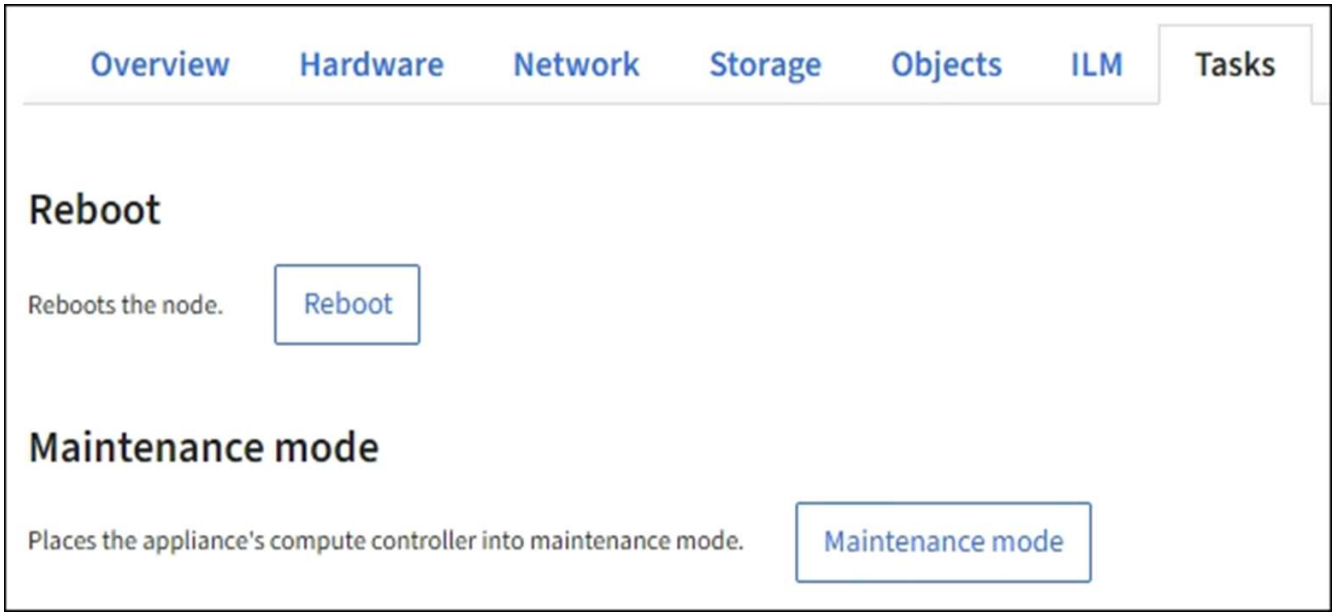
About this task

In rare instances, placing a StorageGRID appliance into maintenance mode might make the appliance unavailable for remote access.

> The admin account password and SSH host keys for a StorageGRID appliance in maintenance mode remain the same as they were when the appliance was in service.

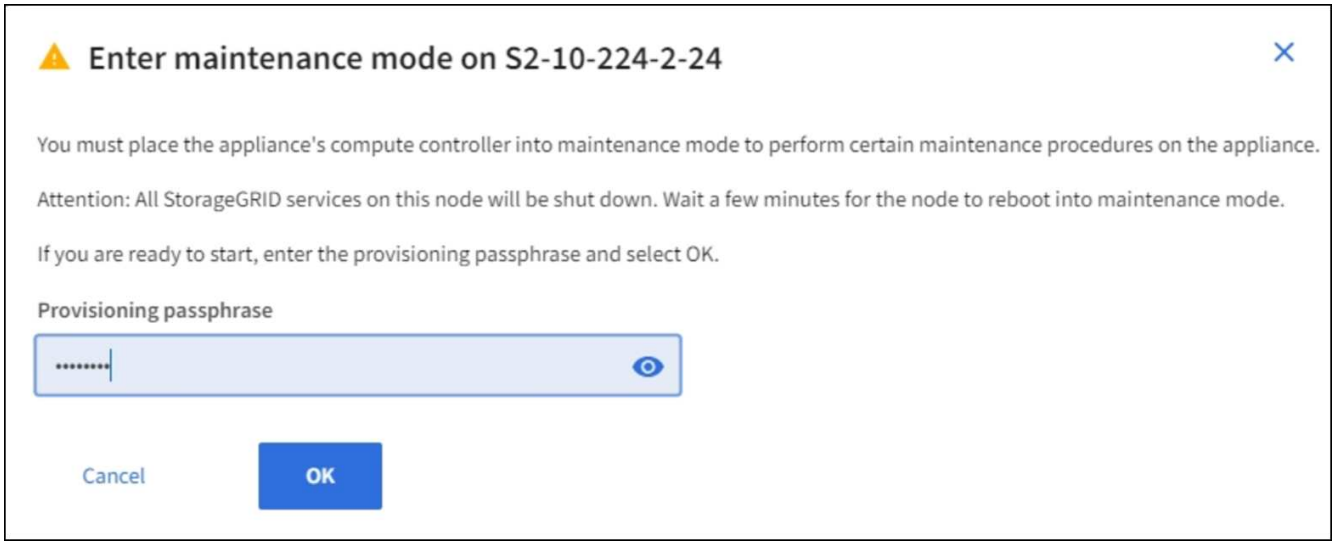
Steps

1. From the Grid Manager, select **NODES**.
2. From the tree view of the Nodes page, select the appliance Storage Node.
3. Select the **Tasks** tab.



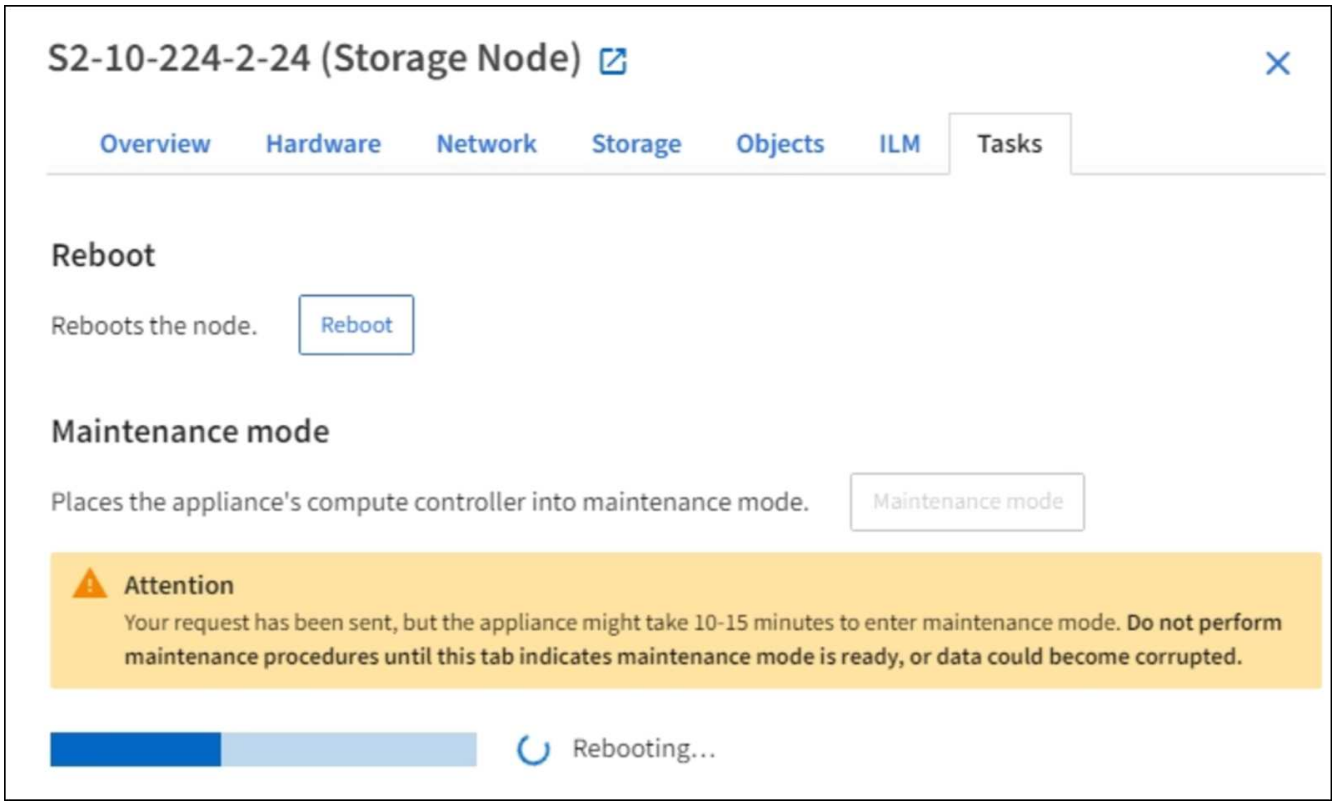
4. Select **Maintenance mode**.

   A confirmation dialog box appears.

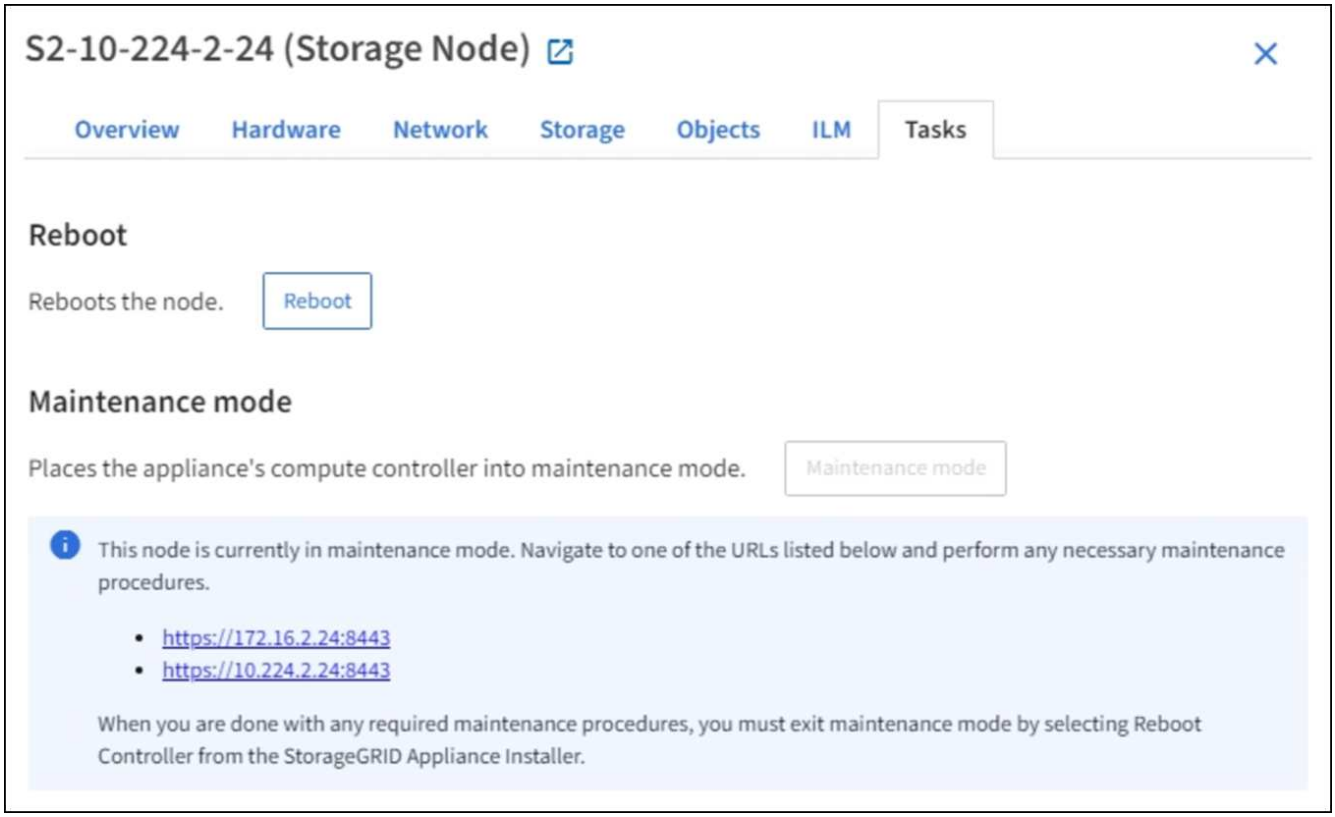


5. Enter the provisioning passphrase, and select **OK**.

   A progress bar and a series of messages, including "Request Sent," "Stopping StorageGRID," and "Rebooting," indicate that the appliance is completing the steps for entering maintenance mode.



   When the appliance is in maintenance mode, a confirmation message lists the URLs you can use to access the StorageGRID Appliance Installer.



6. To access the StorageGRID Appliance Installer, browse to any of the URLs displayed.

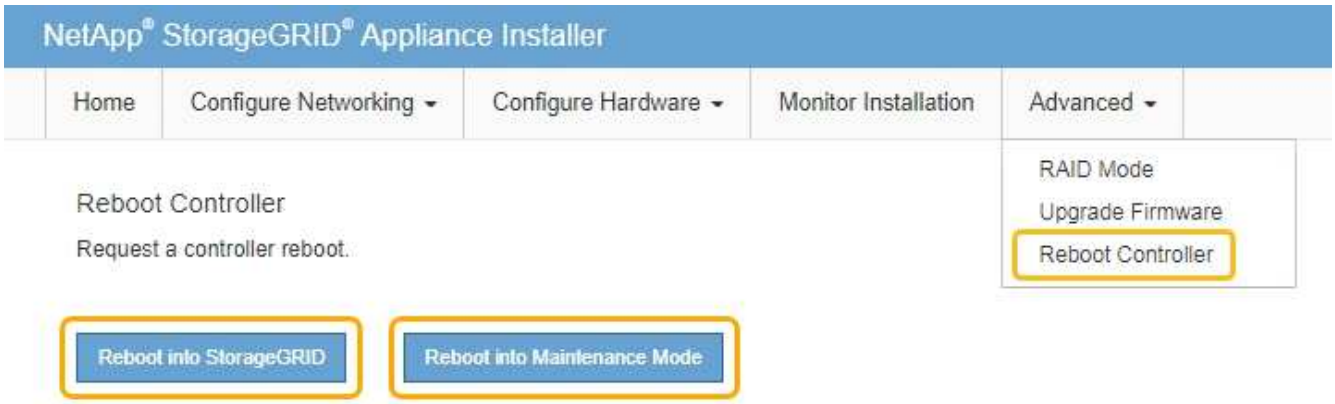
   If possible, use the URL containing the IP address of the appliance's Admin Network port.

   > If you have a direct connection to the appliance's management port, use `https://169.254.0.1:8443` to access the StorageGRID Appliance Installer page.

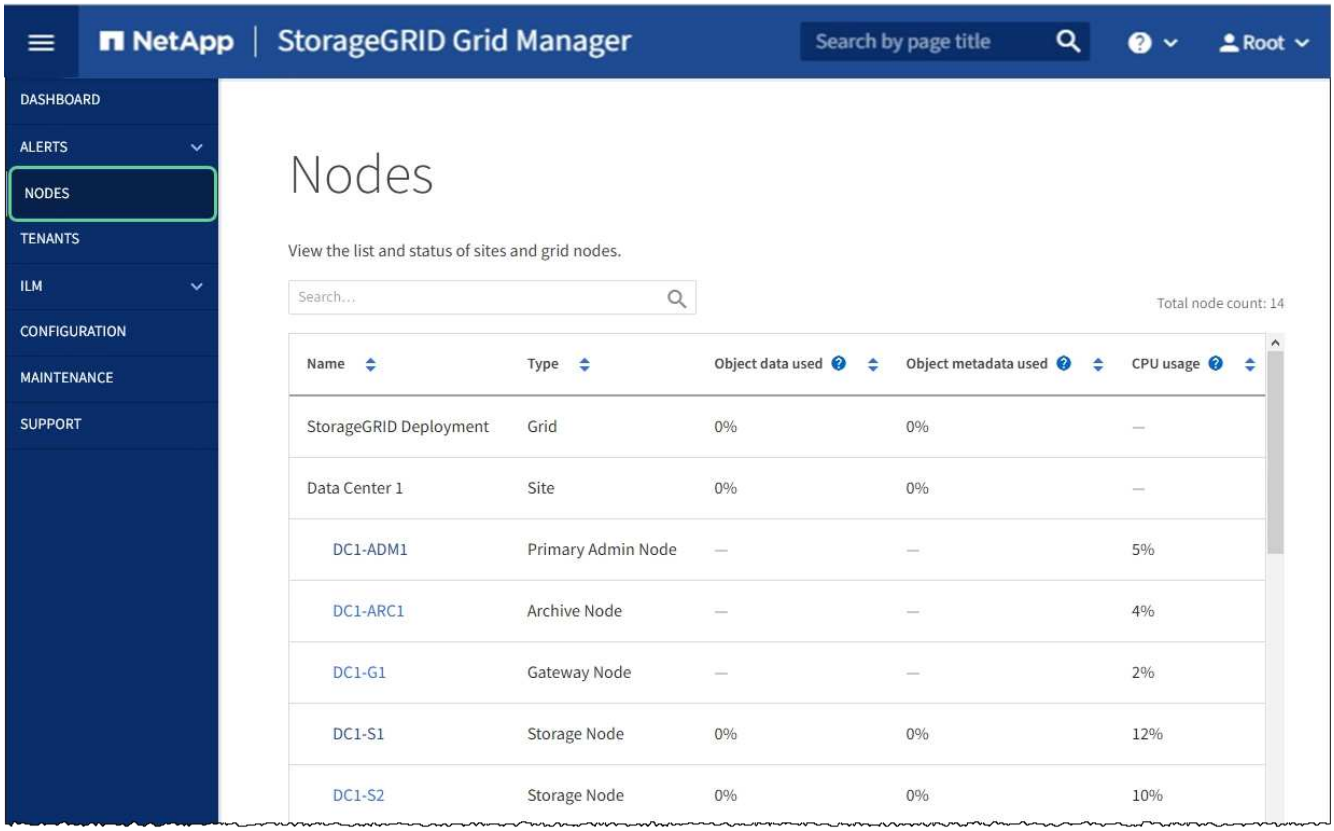
7. From the StorageGRID Appliance Installer, confirm that the appliance is in maintenance mode.

8. Perform any required maintenance tasks.
9. After completing maintenance tasks, exit maintenance mode and resume normal node operation. From the StorageGRID Appliance Installer, select **Advanced** > **Reboot Controller**, and then select **Reboot into StorageGRID**.



It can take up to 20 minutes for the appliance to reboot and rejoin the grid. To confirm that the reboot is complete and that the node has rejoined the grid, go back to the Grid Manager. The **NODES** page should display a normal status (no icon) for the appliance node, indicating that no alerts are active and the node is connected to the grid.



Turn controller identify LED on and off

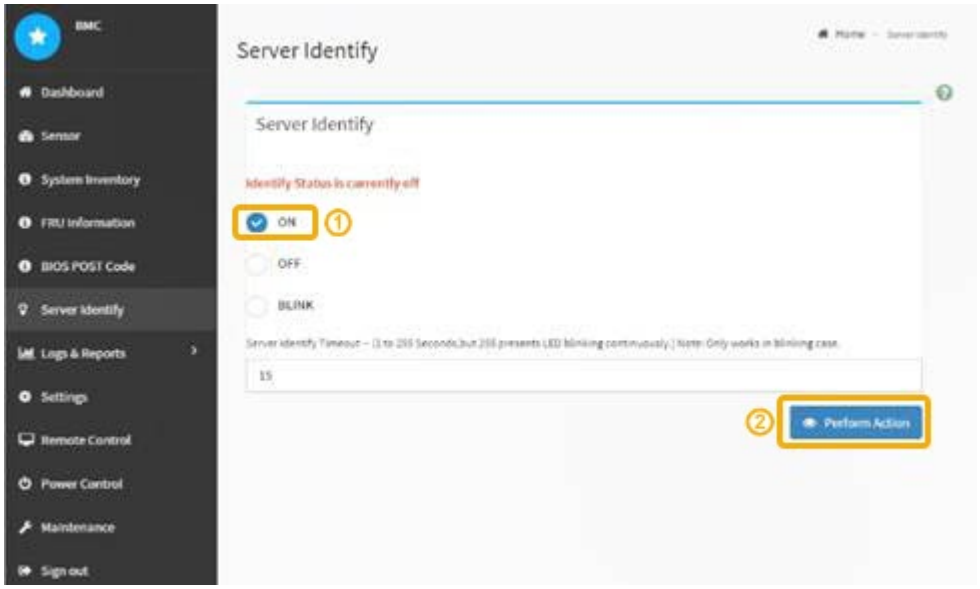
The blue identify LED on the front and back of the controller can be turned on to help locate the appliance in a data center.

What you'll need

You must have the BMC IP address of the controller you want to identify.

Steps

1. Access the controller BMC interface.
2. Select **Server Identify**.
3. Select **ON** and then select **Perform Action**.



Result

The blue identify LEDs light on the front (shown) and rear of the controller.

If a bezel is installed on the controller, it might be difficult to see the front identify LED.

After you finish

To turn off the controller identify LED:

- Press the identify LED switch on the controller front panel.
- From the controller BMC interface, select **Server Identify**, select **OFF** and then select **Perform Action**.

The blue identify LEDs on the front and rear of the controller go off.

Related information

Locate controller in data center

Access BMC interface

Locate controller in data center

Locate the controller so that you can perform hardware maintenance or upgrades.

What you'll need

- You have determined which controller requires maintenance.
- (Optional) To help locate the controller in your data center, turn on the blue identify LED.

Steps

1. Find the controller requiring maintenance in the data center.
   - Look for a lit blue identify LED on the front or rear of the controller.

     The front identify LED is behind the controller front bezel and might be difficult to see if the bezel is installed.

   - Check the tags attached to the front of each controller for a matching part number.
2. Remove the controller front bezel, if one is installed, to access the front panel controls and indicators.
3. Optional: Turn off the blue identify LED if you used it to locate the controller.
   - Press the identify LED switch on the controller front panel.

- Use the controller BMC interface.

Shut down the services appliance

Shut down the services appliance to perform hardware maintenance.

What you'll need

- You have physically located the services appliance requiring maintenance in the data center.

  Locating the controller in a data center

- The appliance has been placed into maintenance mode.

About this task

To prevent service interruptions, shut down the services appliance during a scheduled maintenance window when periods of service disruption are normally expected.

Steps

1. When the appliance has been placed in maintenance mode, shut down the appliance:

   > You must perform a controlled shut down of the appliance by entering the commands specified below. Shutting down the appliance using the power switch will result in data loss.

   a. Log in to the grid node using PuTTY or another ssh client:

      i. Enter the following command: `ssh admin@grid_node_IP`

      ii. Enter the password listed in the `Passwords.txt` file.

      iii. Enter the following command to switch to root: `su -`

      iv. Enter the password listed in the `Passwords.txt` file.

      When you are logged in as root, the prompt changes from `$` to `#`.

   b. Shut down the services appliance:
   `shutdown -h now`

      This command might take up to 10 minutes to complete.

2. Use one of the following methods to verify that the appliance is powered off:
   - Look at the power LED on the front of the appliance and confirm that it is off.
   - Check the Power Control page of the BMC interface to confirm the appliance is off.

Replace services appliance

You might need to replace the appliance if it is not functioning optimally or if it has failed.

What you'll need

- You have a replacement appliance with the same part number as the appliance you are replacing.
- You have labels to identify each cable that is connected to the appliance.

- You have physically located the appliance.
- The appliance has been placed maintenance mode.

About this task

The StorageGRID node will not be accessible while you replace the appliance. If the appliance is functioning sufficiently, you can perform a controlled shutdown at the start of this procedure.

> If you are replacing the appliance before installing StorageGRID software, you might not be able to access the StorageGRID Appliance Installer immediately after completing this procedure. While you can access the StorageGRID Appliance Installer from other hosts on the same subnet as the appliance, you cannot access it from hosts on other subnets. This condition should resolve itself within 15 minutes (when any ARP cache entries for the original appliance time out), or you can clear the condition immediately by purging any old ARP cache entries manually from the local router or gateway.

Steps

1. When the appliance has been placed maintenance mode, shut down the appliance.
   a. Log in to the grid node:
      i. Enter the following command: `ssh admin@grid_node_IP`
      ii. Enter the password listed in the `Passwords.txt` file.
      iii. Enter the following command to switch to root: `su -`
      iv. Enter the password listed in the `Passwords.txt` file.

      When you are logged in as root, the prompt changes from `$` to `#`.

   b. Shut down the appliance:
      `shutdown -h now`
2. Use one of two methods to verify that the power for the appliance is off:
   - The power indicator LED on the front of the appliance is off.
   - The Power Control page of the BMC interface indicates that the appliance is off.
3. If the StorageGRID networks attached to the appliance use DHCP servers, update DNS/network and IP address settings.
   a. Locate the MAC address label on the front of the appliance, and determine the MAC address for the Admin Network port.

      > The MAC address label lists the MAC address for the BMC management port.

      To determine the MAC address for the Admin Network port, you must add **2** to the hexadecimal number on the label. For example, if the MAC address on the label ends in **09**, the MAC address for the Admin Port would end in **0B**. If the MAC address on the label ends in **(*y*)FF**, the MAC address for the Admin Port would end in **(*y*+1)01**. You can easily make this calculation by opening Calculator in Windows, setting it to Programmer mode, selecting Hex, typing the MAC address, then typing **+ 2 =**.

   b. Ask your network administrator to associate the DNS/network and IP address for the appliance you removed with the MAC address for the replacement appliance.

> You must ensure that all IP addresses for the original appliance have been updated before you apply power to the replacement appliance. Otherwise, the appliance will obtain new DHCP IP addresses when it boots up and might not be able to reconnect to StorageGRID. This step applies to all StorageGRID networks that are attached to the appliance.

> If the original appliance used static IP address, the new appliance will automatically adopt the IP addresses of the appliance you removed.

4. Remove and replace the appliance:
   a. Label the cables and then disconnect the cables and any network transceivers.

      > To prevent degraded performance, do not twist, fold, pinch, or step on the cables.

   b. Remove the failed appliance from the cabinet or rack.
   c. Transfer the two power supplies, eight cooling fans, and two SSDs from the failed appliance to the replacement appliance.

      Follow the instructions provided for replacing these components.

   d. Install the replacement appliance into the cabinet or rack.
   e. Replace the cables and any optical transceivers.
   f. Power on the appliance and monitor the appliance LEDs and boot-up codes.

      Use the BMC interface to monitor boot-up status.

5. Confirm that the appliance node appears in the Grid Manager and that no alerts appear.

Related information

Install appliance into a cabinet or rack (SG100 and SG1000)

View status indicators on the SG100 and SG1000 appliances

View boot-up codes for appliance

Replace one or both power supplies in the services appliance

The services appliance has two power supplies for redundancy. If one of the power supplies fails, you must replace it as soon as possible to ensure that the compute controller has redundant power. Both power supplies operating in the controller must be the same model and wattage.

What you'll need

- You have physically located the controller with the power supply to be replaced.
- If you are replacing only one power supply:
  - You have unpacked the replacement power supply unit and ensured that it is the same model and wattage as the power supply unit you are replacing.

- You have confirmed that the other power supply is installed and running.

- If you are replacing both power supplies at the same time:
  - You have unpacked the replacement power supply units and ensured they are the same model and wattage.

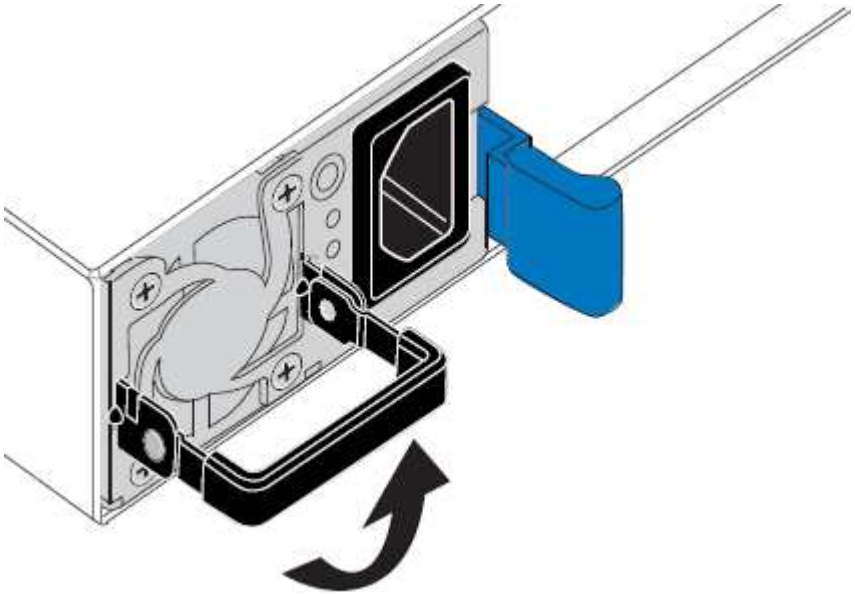
About this task

The figure shows the two power supply units for the SG100, which are accessible from the back of the appliance.

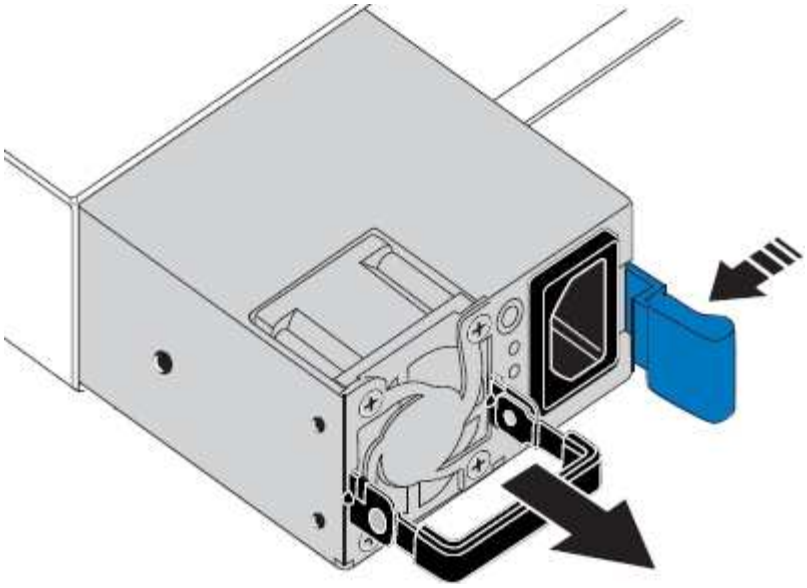
The power supplies for the SG1000 are identical.

Steps

1. If you are replacing only one power supply, you don't need to shut down the appliance. Go to the Unplug the power cord step. If you are replacing both power supplies at the same time, do the following before unplugging the power cords:
   a. Place the appliance into maintenance mode.
   b. Shut down the appliance.
2. Unplug the power cord from each power supply to be replaced.
3. Lift the cam handle on the first supply to be replaced.



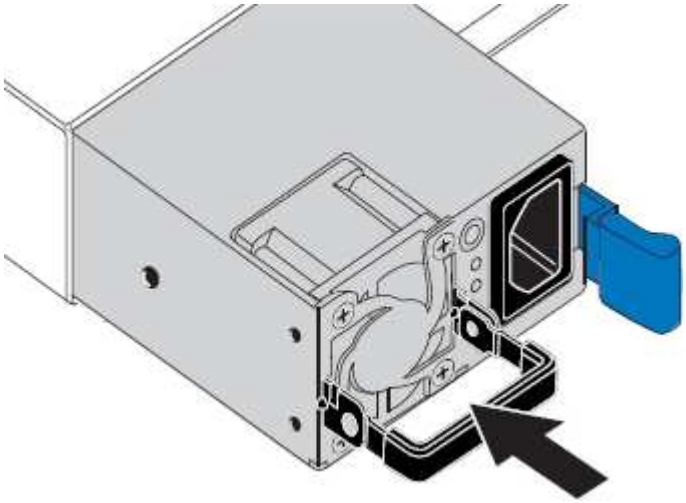
4. Press the blue latch and pull the power supply out.



5. With the blue latch on the right, slide the replacement power supply into the chassis.

   Both power supplies must be the same model and wattage.

   Ensure that the blue latch is on the right side when you slide the replacement unit in.



6. Push the cam handle down to secure the replacement power supply.
7. If you are replacing both power supplies, repeat steps 2 though 6 to replace the second power supply.
8. Connect the power cords to the replaced units and apply power.
9. If you placed the appliance in maintenance mode, exit maintenance mode. From the StorageGRID Appliance Installer, select **Advanced** > **Reboot Controller**, and then select **Reboot into StorageGRID**.

Replace fan in services appliance

The services appliance has eight cooling fans. If one of the fans fails, you must replace it as soon as possible to ensure that the appliance has proper cooling.

What you'll need

- You have unpacked the replacement fan.
- You have physically located the appliance.
- You have confirmed that the other fans are installed and running.
- You have placed the appliance into maintenance mode.

About this task

The appliance node will not be accessible while you replace the fan.

The photograph shows a fan for the services appliance. The cooling fans are accessible after you take the top cover off of the appliance.

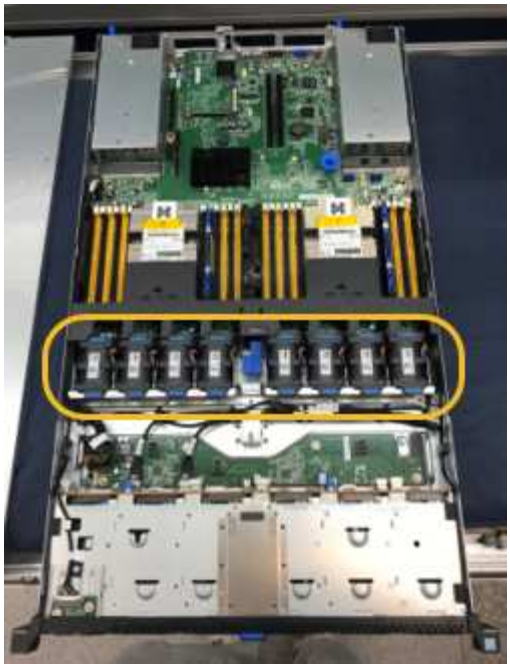
> Each of the two power supply units also contain a fan. Those fans are not included in this procedure.

Steps

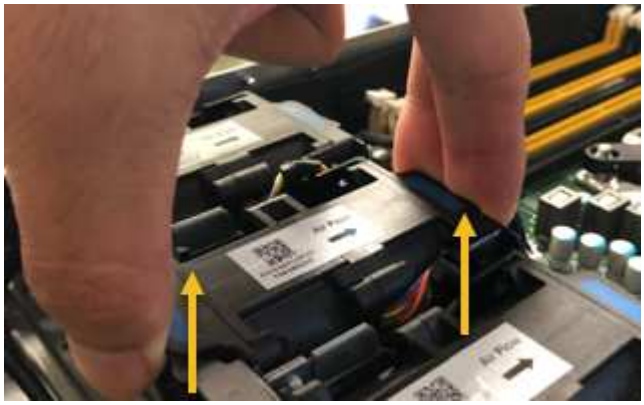
1. When the appliance has been placed maintenance mode, shut down the appliance.
   a. Log in to the grid node:
      i. Enter the following command: `ssh admin@grid_node_IP`
      ii. Enter the password listed in the `Passwords.txt` file.
      iii. Enter the following command to switch to root: `su -`
      iv. Enter the password listed in the `Passwords.txt` file.

      When you are logged in as root, the prompt changes from `$` to `#`.

   b. Shut down the services appliance:
      `shutdown -h now`
2. Use one of two methods to verify that the power for the services appliance is off:
   - The power indicator LED on the front of the appliance is off.
   - The Power Control page of the BMC interface indicates that the appliance is off.
3. Pull the appliance out of the rack.
4. Lift the latch on the top cover and remove the cover from the appliance.
5. Locate the fan that failed.

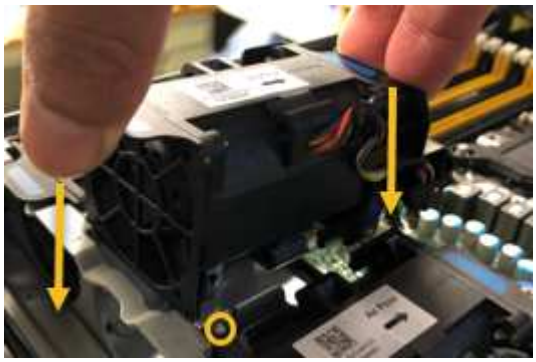


6. Lift the failed fan out of the chassis.

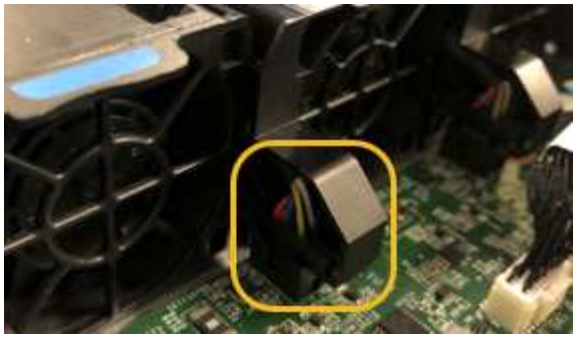


7. Slide the replacement fan into the open slot in the chassis.

   Line up the edge of the fan with the guide pin. The pin is circled in the photograph.



8. Press the fan’s connector firmly into the circuit board.



9. Put the top cover back on the appliance, and press the latch down to secure the cover in place.
10. Power on the appliance and monitor the controller LEDs and boot-up codes.

    Use the BMC interface to monitor boot-up status.

11. Confirm that the appliance node appears in the Grid Manager and that no alerts appear.

Replace drive in services appliance

The SSDs in the services appliance contain the StorageGRID operating system. Additionally, when the appliance is configured as an Admin Node, the SSDs also contain audit logs, metrics, and database tables. The drives are mirrored using RAID1 for redundancy. If one of the drives fails, you must replace it as soon as possible to ensure redundancy.

What you'll need

- You have physically located the appliance.
- You have verified which drive has failed by noting that its left LED is blinking amber.

> If you remove the working drive, you will bring down the appliance node. See the information about viewing status indicators to verify the failure.

- You have obtained the replacement drive.
- You have obtained proper ESD protection.

Steps

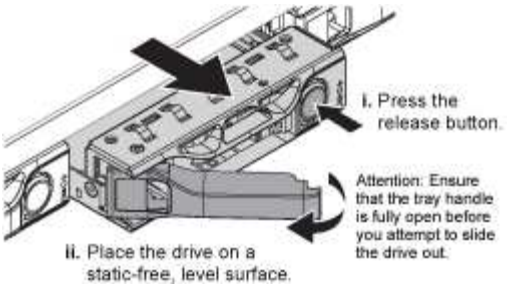
1. Verify that the drive's left LED is blinking amber.

   You can also use the Grid Manager to monitor the status of the SSDs. Select **NODES**. Then select **`Appliance Node`** > **Hardware**. If a drive has failed, the Storage RAID Mode field contains a message about which drive has failed.

2. Wrap the strap end of the ESD wristband around your wrist, and secure the clip end to a metal ground to prevent static discharge.
3. Unpack the replacement drive, and set it on a static-free, level surface near the appliance.

   Save all packing materials.

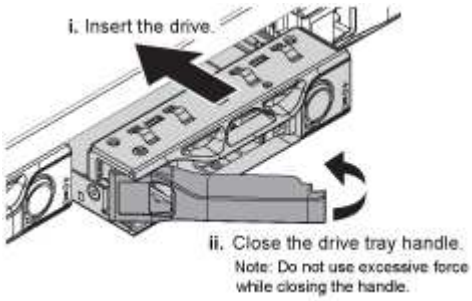
4. Press the release button on the failed drive.



The handle on the drive springs open partially, and the drive releases from the slot.

5. Open the handle, slide the drive out, and place it on a static-free, level surface.
6. Press the release button on the replacement drive before you insert it into the drive slot.

   The latch springs open.



7. Insert the replacement drive in the slot, and then close the drive handle.

   > Do not use excessive force while closing the handle.

   When the drive is fully inserted, you hear a click.

   The drive is automatically rebuilt with mirrored data from the working drive. You can check the status of the rebuild by using the Grid Manager. Select **NODES**. Then select **`Appliance Node`** > **Hardware**. The Storage RAID Mode field contains a “rebuilding” message until the drive is completely rebuilt.

8. Contact technical support about the drive replacement.

   Technical support will provide instructions for returning the failed drive.

Change link configuration of services appliance

You can change the Ethernet link configuration of the services appliance. You can change the port bond mode, the network bond mode, and the link speed.

What you’ll need

- You have placed the appliance into maintenance mode.

> In rare instances, placing a StorageGRID appliance into maintenance mode might make the appliance unavailable for remote access.

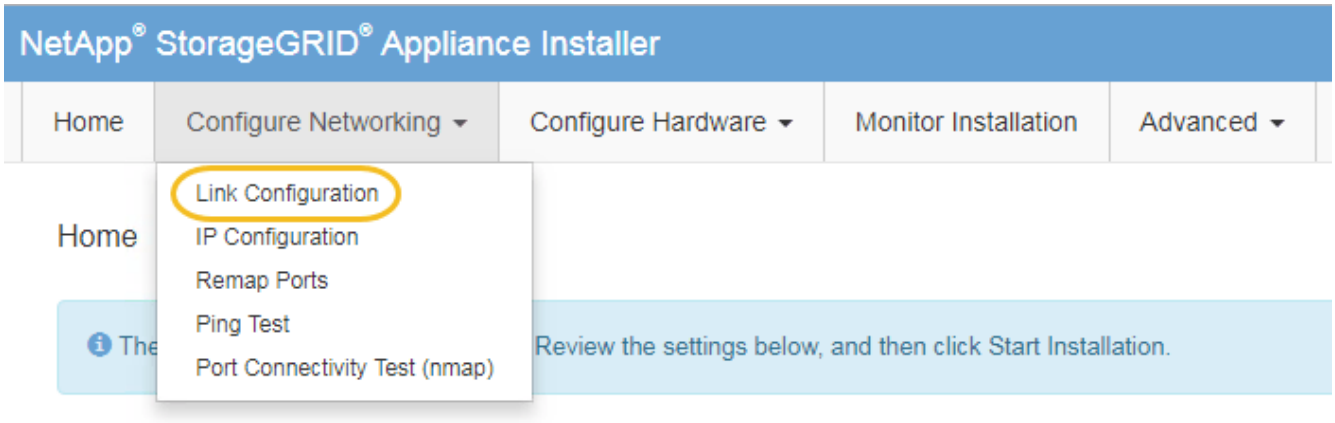
About this task

Options for changing the Ethernet link configuration of the services appliance include:

- Changing **Port bond mode** from Fixed to Aggregate, or from Aggregate to Fixed
- Changing **Network bond mode** from Active-Backup to LACP, or from LACP to Active-Backup
- Enabling or disabling VLAN tagging, or changing the value of a VLAN tag
- Changing the link speed

Steps

1. From the StorageGRID Appliance Installer, select **Configure Networking** > **Link Configuration**.



2. Make the desired changes to the link configuration.

   For more information on the options, see Configure network links.

3. When you are satisfied with your selections, click **Save**.

   You might lose your connection if you made changes to the network or link you are connected through. If you are not reconnected within 1 minute, re-enter the URL for the StorageGRID Appliance Installer using one of the other IP addresses assigned to the appliance:
   `https://services_appliance_IP:8443`

4. Make any necessary changes to the IP addresses for the appliance.

   If you made changes to the VLAN settings, the subnet for the appliance might have changed. If you need to change the IP addresses for the appliance, see Configure StorageGRID IP addresses.

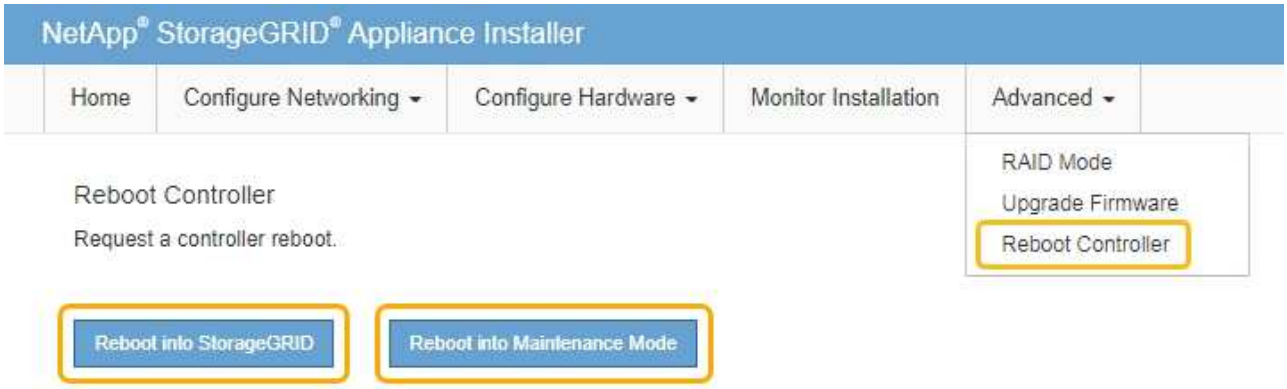
5. Select **Configure Networking** > **Ping Test** from the menu.
6. Use the Ping Test tool to check connectivity to IP addresses on any networks that might have been affected by the link configuration changes you made when configuring the appliance.

   In addition to any other tests you choose to perform, confirm that you can ping the Grid Network IP address of the primary Admin Node, and the Grid Network IP address of at least one other node. If necessary, return to the instructions for configuring network links, and correct any issues.

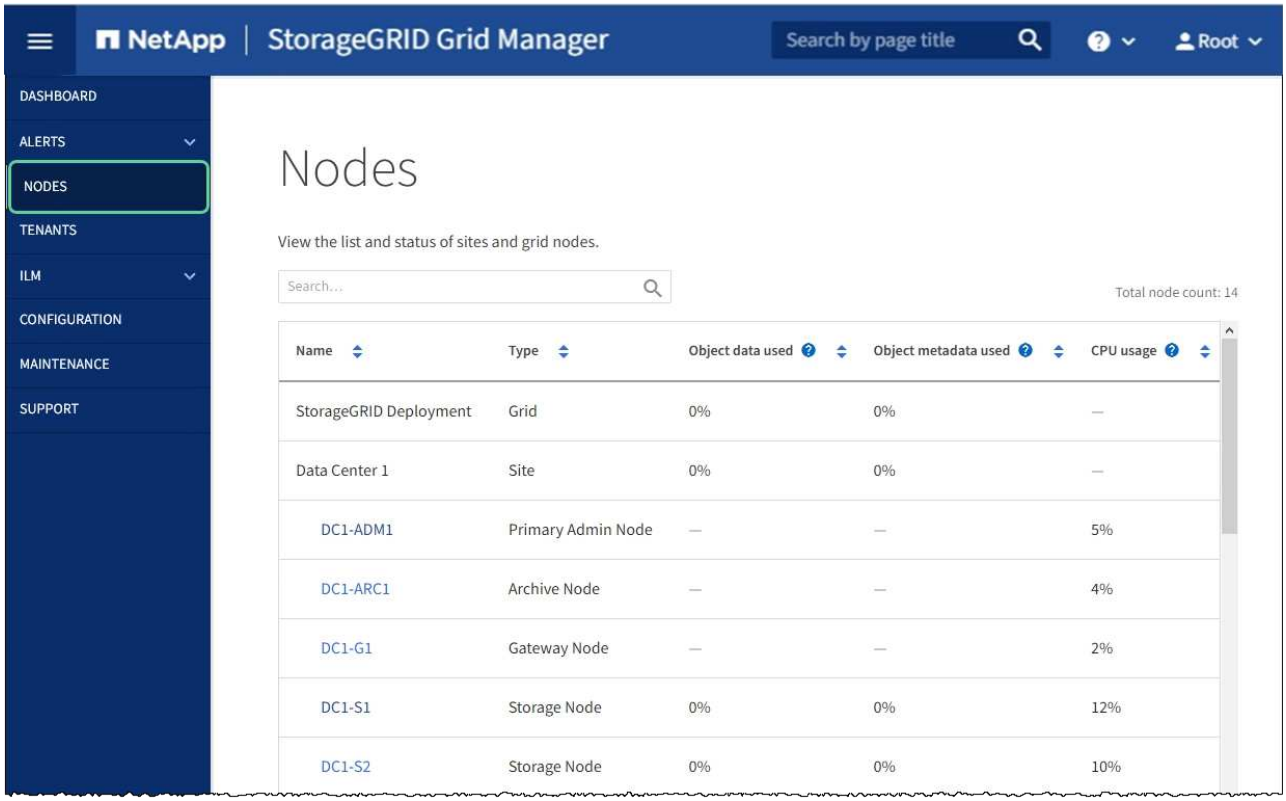
7. Once you are satisfied that your link configuration changes are working, reboot the node. From the StorageGRID Appliance Installer, select **Advanced** > **Reboot Controller**, and then select one of these options:
   - Select **Reboot into StorageGRID** to reboot the controller with the node rejoining the grid. Select this

option if you are done working in maintenance mode and are ready to return the node to normal operation.

- Select **Reboot into Maintenance Mode** to reboot the controller with the node remaining in maintenance mode. (This option is available only when the controller is in maintenance mode.) Select this option if there are additional maintenance operations you need to perform on the node before rejoining the grid.



It can take up to 20 minutes for the appliance to reboot and rejoin the grid. To confirm that the reboot is complete and that the node has rejoined the grid, go back to the Grid Manager. The **NODES** page should display a normal status (no icon) for the appliance node, indicating that no alerts are active and the node is connected to the grid.



Change MTU setting

You can change the MTU setting that you assigned when you configured IP addresses for the appliance node.

About this task

The MTU value of the network must match the value configured on the switch port the node is connected to. Otherwise, network performance issues or packet loss might occur.

For the best network performance, all nodes should be configured with similar MTU values on their Grid Network interfaces. The **Grid Network MTU mismatch** alert is triggered if there is a significant difference in MTU settings for the Grid Network on individual nodes. The MTU values do not have to be the same for all network types.

To change the MTU setting without rebooting the appliance node, use the Change IP tool.

If the Client or Admin Network was not configured in the StorageGRID Appliance Installer during the initial installation, change the MTU setting using maintenance mode.

Change the MTU setting using the Change IP tool

What you'll need

- You have the `Passwords.txt` file to use the Change IP tool.

Steps

Access the Change IP tool and update the MTU settings as described in Change node network configuration.

Change the MTU setting using maintenance mode

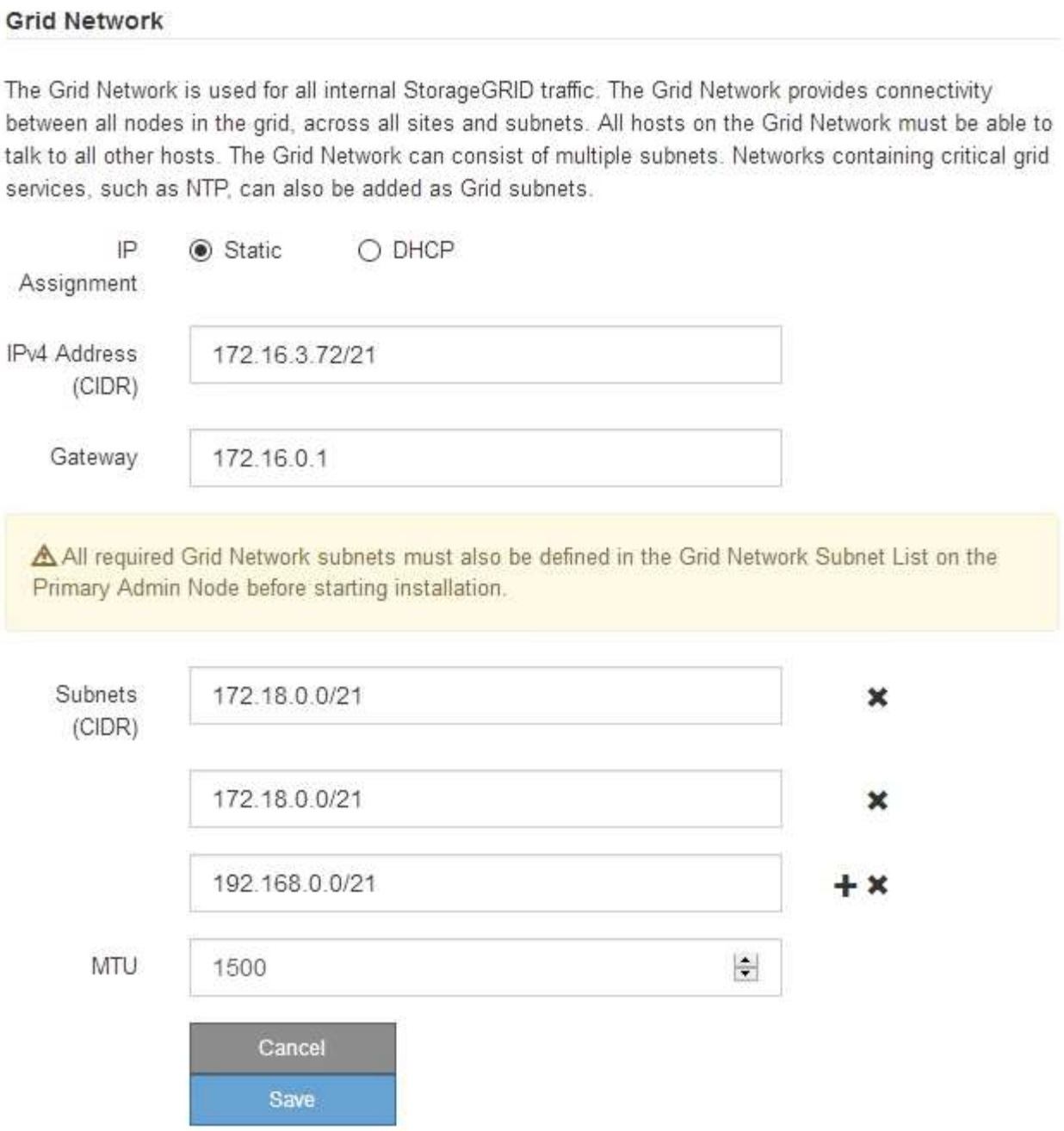
Change the MTU setting using maintenance mode if you are unable to access these settings using the Change IP tool.

What you'll need

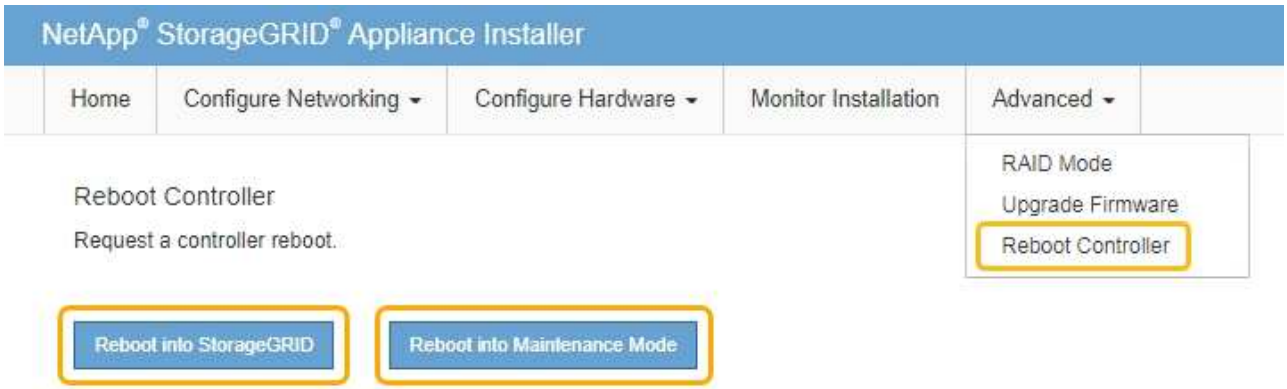
- You have placed the appliance into maintenance mode.

Steps

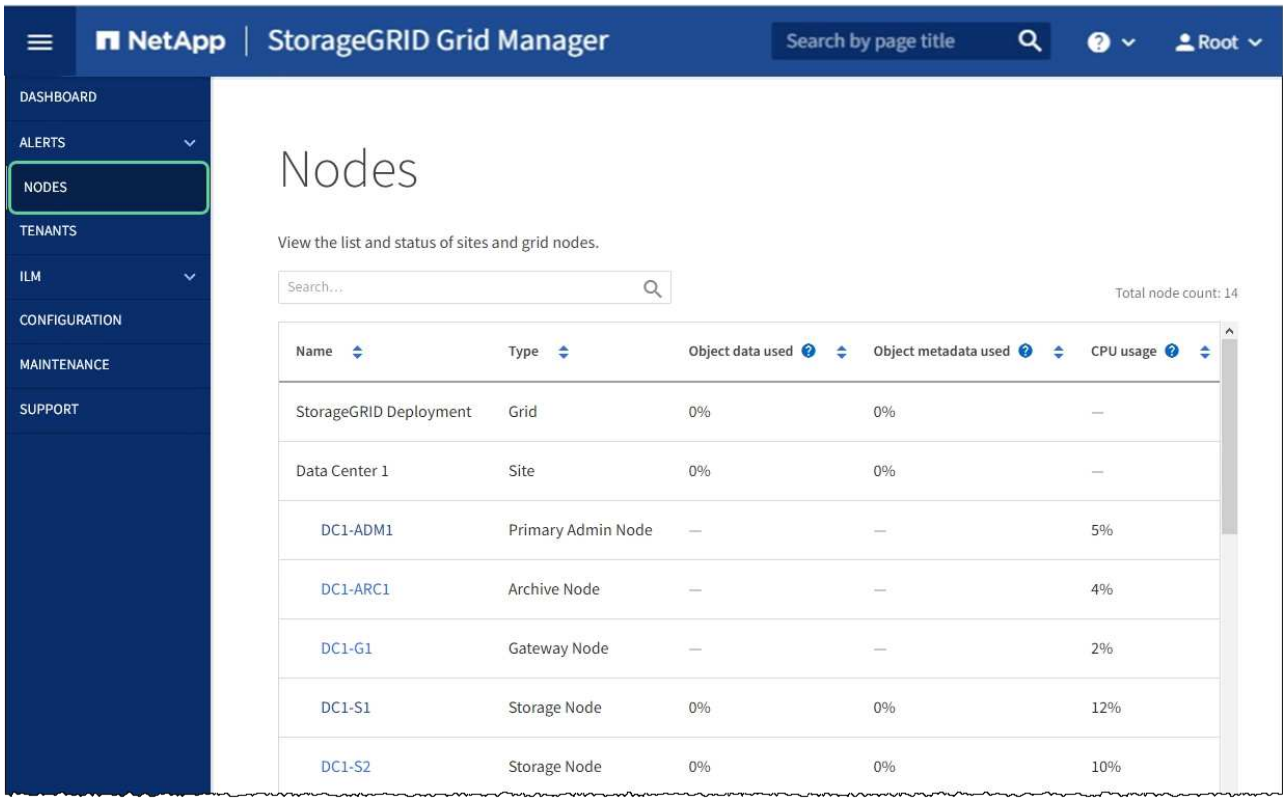
1. From the StorageGRID Appliance Installer, select **Configure Networking** > **IP Configuration**.
2. Make the desired changes to the MTU settings for the Grid Network, Admin Network, and Client Network.



3. When you are satisfied with the settings, select **Save**.
4. Reboot the node. From the StorageGRID Appliance Installer, select **Advanced** > **Reboot Controller**, and then select one of these options:
   - Select **Reboot into StorageGRID** to reboot the controller with the node rejoining the grid. Select this option if you are done working in maintenance mode and are ready to return the node to normal operation.
   - Select **Reboot into Maintenance Mode** to reboot the controller with the node remaining in maintenance mode. (This option is available only when the controller is in maintenance mode.) Select this option if there are additional maintenance operations you need to perform on the node before rejoining the grid.



It can take up to 20 minutes for the appliance to reboot and rejoin the grid. To confirm that the reboot is complete and that the node has rejoined the grid, go back to the Grid Manager. The **NODES** page should display a normal status (no icon) for the appliance node, indicating that no alerts are active and the node is connected to the grid.



Related information

Administer StorageGRID

Check DNS server configuration

You can check and temporarily change the domain name system (DNS) servers that are currently in use by this appliance node.

What you'll need

- You have placed the appliance into maintenance mode.

About this task

You might need to change the DNS server settings if an encrypted appliance cannot connect to the key management server (KMS) or KMS cluster because the hostname for the KMS was specified as a domain name instead of an IP address. Any changes that you make to the DNS settings for the appliance are temporary and are lost when you exit maintenance mode. To make these changes permanent, specify the DNS servers in Grid Manager (**MAINTENANCE** > **Network** > **DNS servers**).

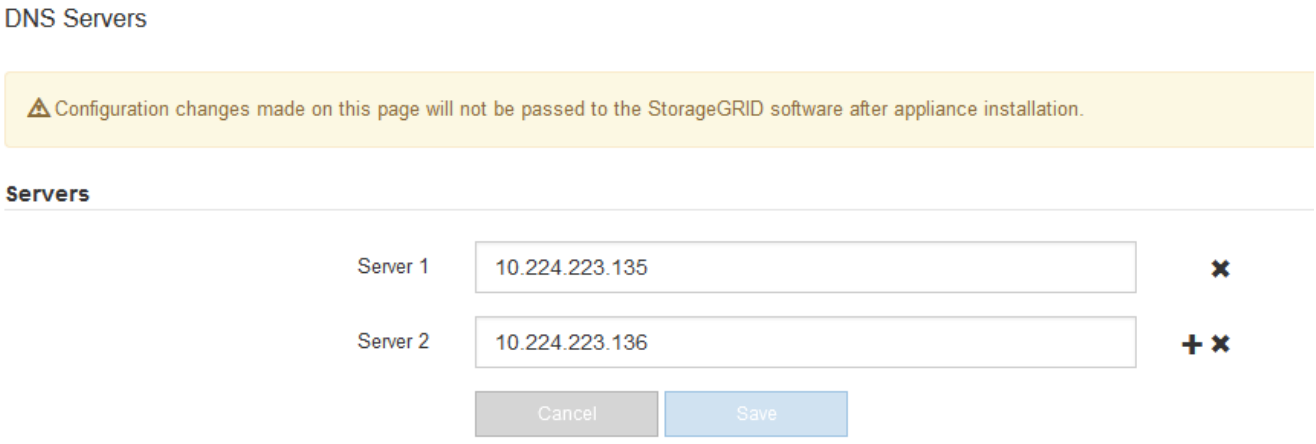
- Temporary changes to the DNS configuration are necessary only for node-encrypted appliances where the KMS server is defined using a fully qualified domain name, instead of an IP address, for the hostname.
- When a node-encrypted appliance connects to a KMS using a domain name, it must connect to one of the DNS servers defined for the grid. One of these DNS servers then translates the domain name into an IP address.
- If the node cannot reach a DNS server for the grid, or if you changed the grid-wide DNS settings when a node-encrypted appliance node was offline, the node is unable to connect to the KMS. Encrypted data on the appliance cannot be decrypted until the DNS issue is resolved.

To resolve a DNS issue preventing KMS connection, specify the IP address of one or more DNS servers in the StorageGRID Appliance Installer. These temporary DNS settings allow the appliance to connect to the KMS and decrypt data on the node.

For example, if the DNS server for the grid changes while an encrypted node was offline, the node will not be able to reach the KMS when it comes back online, since it is still using the previous DNS values. Entering the new DNS server IP address in the StorageGRID Appliance Installer allows a temporary KMS connection to decrypt the node data.

Steps

1. From the StorageGRID Appliance Installer, select **Configure Networking** > **DNS Configuration**.
2. Verify that the DNS servers specified are correct.



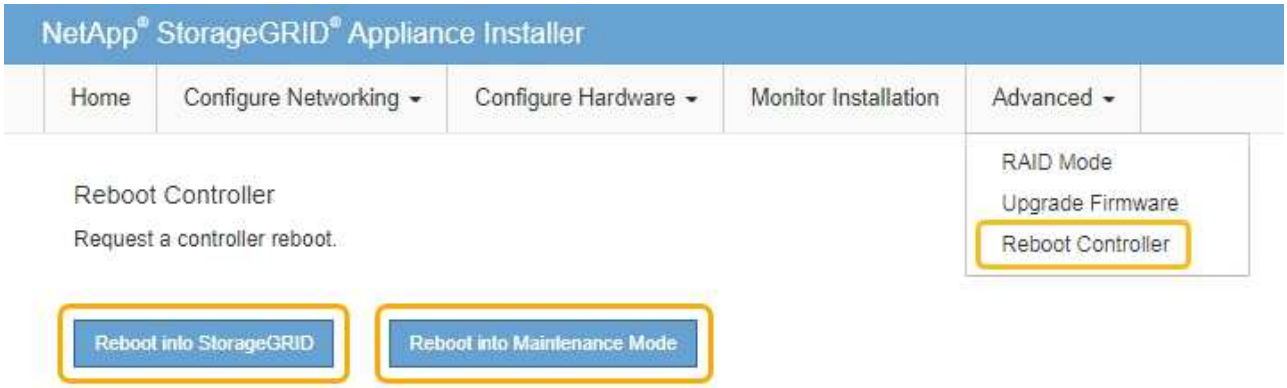
3. If required, change the DNS servers.

> Changes made to the DNS settings are temporary and are lost when you exit maintenance mode.

4. When you are satisfied with the temporary DNS settings, select **Save**.

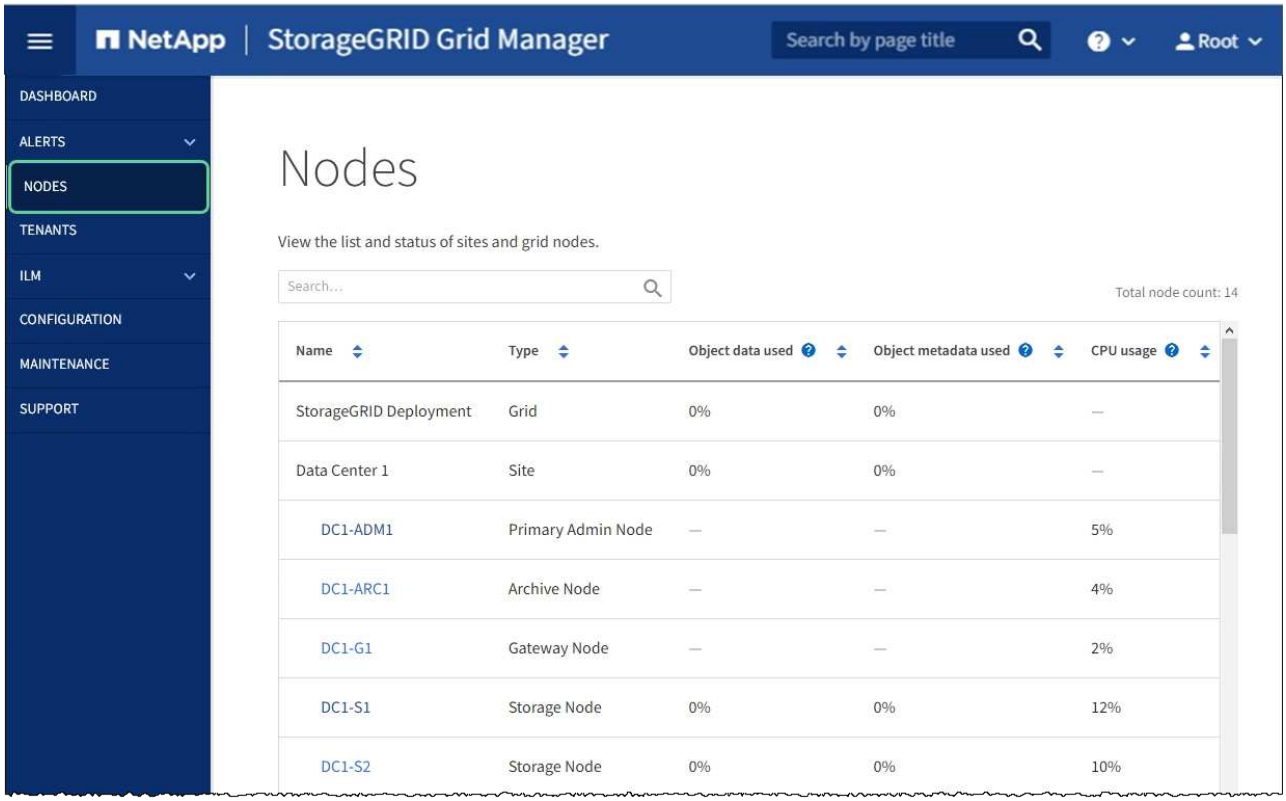
   The node uses the DNS server settings specified on this page to reconnect to the KMS, allowing data on the node to be decrypted.

5. After node data is decrypted, reboot the node. From the StorageGRID Appliance Installer, select **Advanced** > **Reboot Controller**, and then select one of these options:
   - Select **Reboot into StorageGRID** to reboot the controller with the node rejoining the grid. Select this option if you are done working in maintenance mode and are ready to return the node to normal operation.
   - Select **Reboot into Maintenance Mode** to reboot the controller with the node remaining in maintenance mode. (This option is available only when the controller is in maintenance mode.) Select this option if there are additional maintenance operations you need to perform on the node before rejoining the grid.



> When the node reboots and rejoins the grid, it uses the system-wide DNS servers listed in the Grid Manager. After rejoining the grid, the appliance will no longer use the temporary DNS servers specified in the StorageGRID Appliance Installer while the appliance was in maintenance mode.

It can take up to 20 minutes for the appliance to reboot and rejoin the grid. To confirm that the reboot is complete and that the node has rejoined the grid, go back to the Grid Manager. The **NODES** page should display a normal status (no icon) for the appliance node, indicating that no alerts are active and the node is connected to the grid.



Monitor node encryption in maintenance mode (SG100 and SG1000)

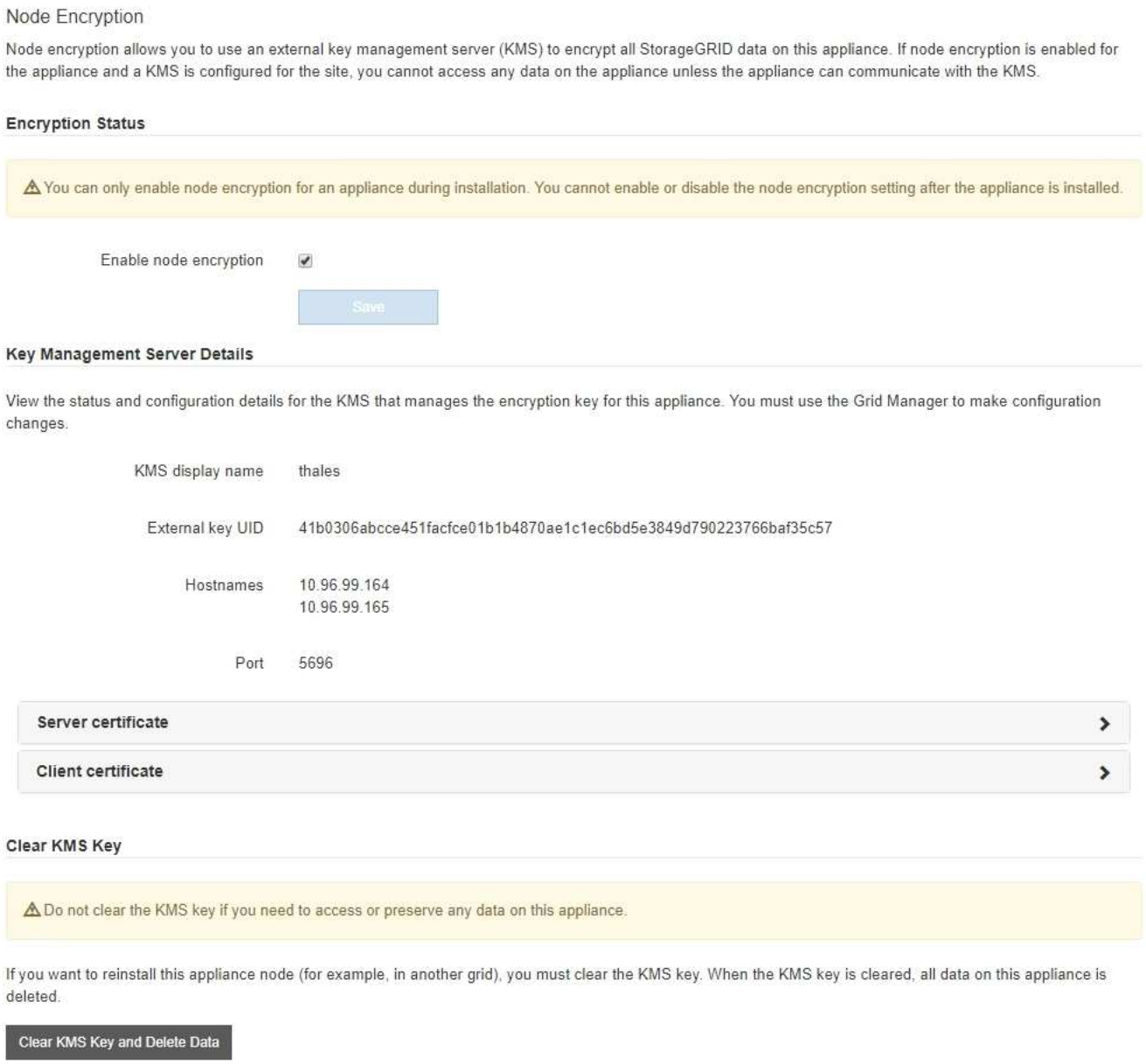
If you enabled node encryption for the appliance during installation, you can monitor the node-encryption status of each appliance node, including the node-encryption state and key management server (KMS) details.

What you'll need

- You enabled node encryption for the appliance during installation. You cannot enable node encryption after the appliance is installed.
- You have placed the appliance into maintenance mode.

Steps

1. From the StorageGRID Appliance Installer, select **Configure Hardware** > **Node Encryption**.

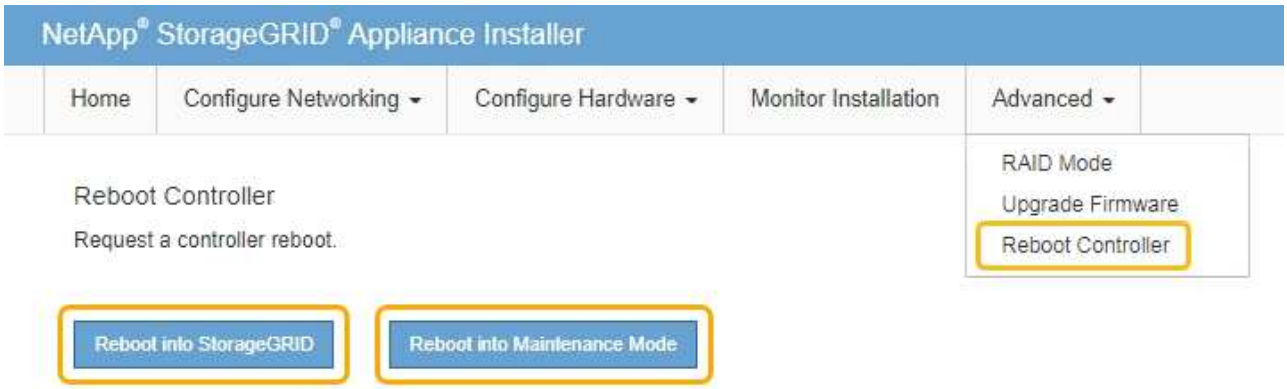


The Node Encryption page includes three sections:

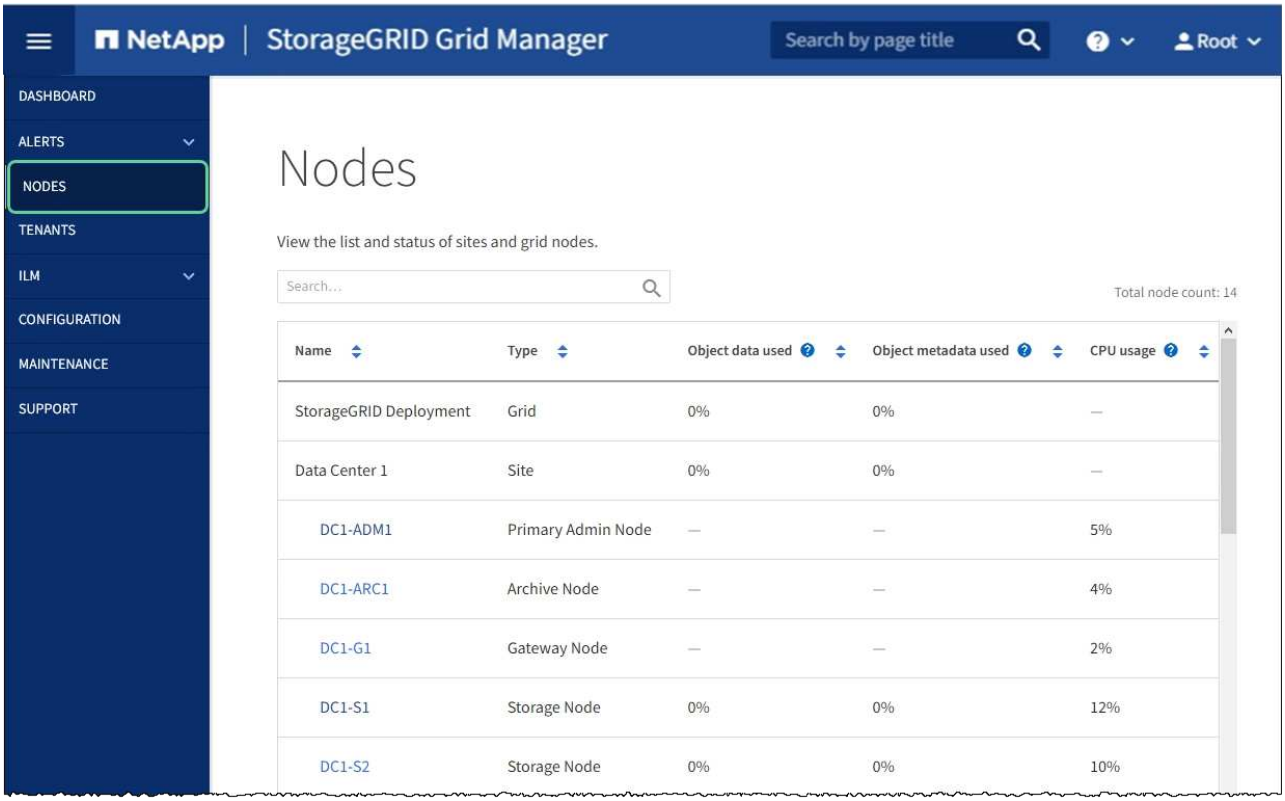
- Encryption Status shows whether node encryption is enabled or disabled for the appliance.
- Key Management Server Details shows information about the KMS being used to encrypt the appliance. You can expand the server and client certificate sections to view certificate details and status.
  - To address issues with the certificates themselves, such as renewing expired certificates, see the instructions for configuring KMS.
  - If there are unexpected problems connecting to KMS hosts, verify that the domain name system (DNS) servers are correct and that appliance networking is correctly configured.
  - If you are unable to resolve your certificate issues, contact technical support.
- Clear KMS Key disables node encryption for the appliance, removes the association between the appliance and the key management server that was configured for the StorageGRID site, and deletes all data from the appliance. You must clear the KMS key before you can install the appliance into another StorageGRID system.

Clearing the KMS configuration deletes data from the appliance, rendering it permanently inaccessible. This data is not recoverable.

2. When you are done checking node-encryption status, reboot the node. From the StorageGRID Appliance Installer, select **Advanced** > **Reboot Controller**, and then select one of these options:
   - Select **Reboot into StorageGRID** to reboot the controller with the node rejoining the grid. Select this option if you are done working in maintenance mode and are ready to return the node to normal operation.
   - Select **Reboot into Maintenance Mode** to reboot the controller with the node remaining in maintenance mode. (This option is available only when the controller is in maintenance mode.) Select this option if there are additional maintenance operations you need to perform on the node before it can rejoin the grid.



It can take up to 20 minutes for the appliance to reboot and rejoin the grid. To confirm that the reboot is complete and that the node has rejoined the grid, go back to the Grid Manager. The **NODES** page should display a normal status (no icon) for the appliance node, indicating that no alerts are active and the node is connected to the grid.



Related information

Administer StorageGRID

Clear key management server configuration

Clearing the key management server (KMS) configuration disables node encryption on your appliance. After clearing the KMS configuration, the data on your appliance is permanently deleted and is no longer accessible. This data is not recoverable.

What you'll need

If you need to preserve data on the appliance, you must either perform a node decommission procedure or clone the node before you clear the KMS configuration.

> When KMS is cleared, data on the appliance will be permanently deleted and no longer accessible. This data is not recoverable.

Decommission the node to move any data it contains to other nodes in the grid.

About this task

Clearing the appliance KMS configuration disables node encryption, removing the association between the appliance node and the KMS configuration for the StorageGRID site. Data on the appliance is then deleted and the appliance is left in a pre-install state. This process cannot be reversed.

You must clear the KMS configuration:

- Before you can install the appliance into another StorageGRID system, that does not use a KMS or that uses a different KMS.

Do not clear the KMS configuration if you plan to reinstall an appliance node in a StorageGRID system that uses the same KMS key.

- Before you can recover and reinstall a node where the KMS configuration was lost and the KMS key is not recoverable.
- Before returning any appliance that was previously in use at your site.
- After decommissioning a appliance that had node encryption enabled.

Decommission the appliance before clearing KMS to move its data to other nodes in your StorageGRID system. Clearing KMS before decommissioning the appliance will result in data loss and might render the appliance inoperable.

Steps

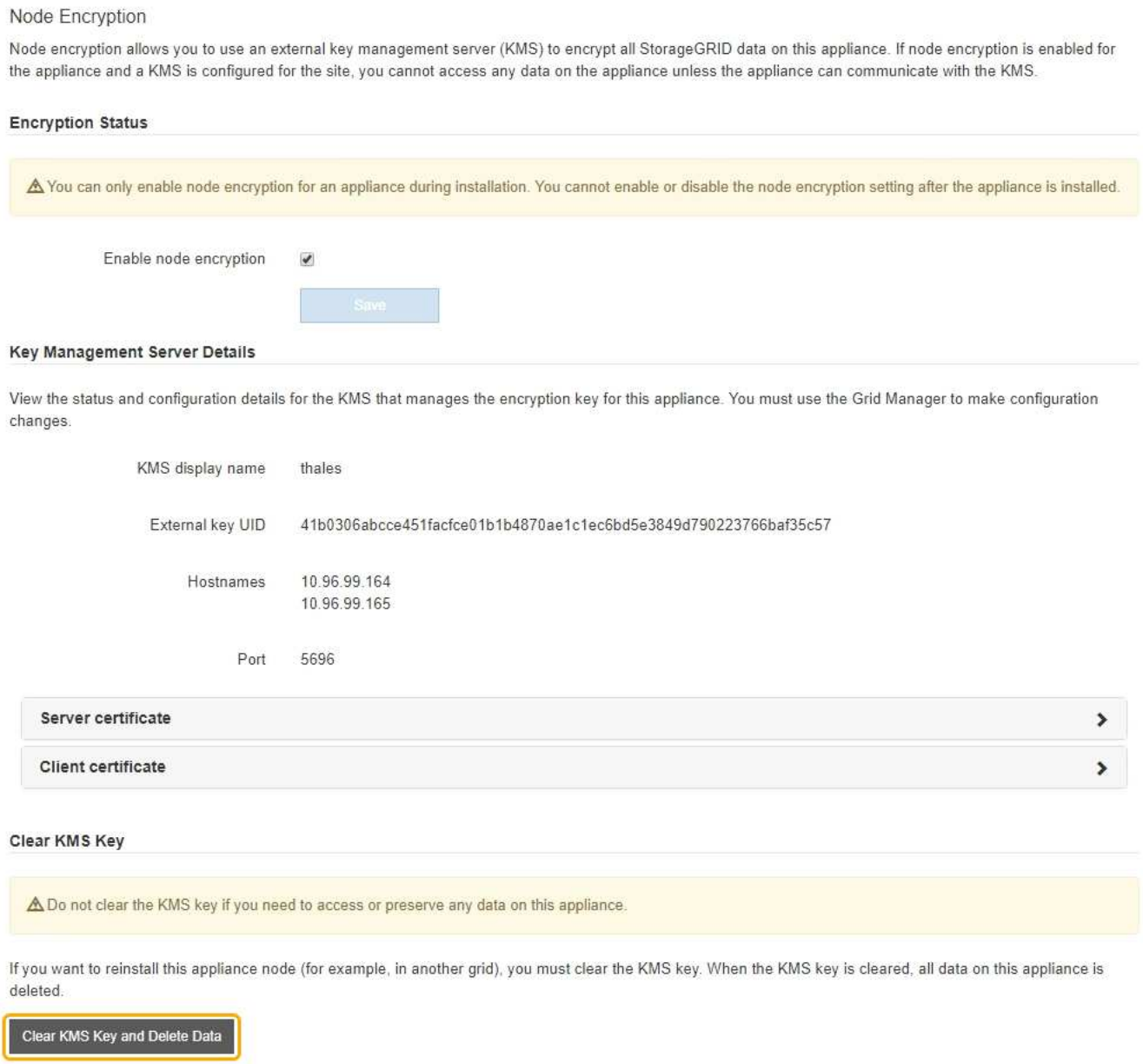
1. Open a browser, and enter one of the IP addresses for the appliance's compute controller.

   `https://Controller_IP:8443`

   `Controller_IP` is the IP address of the compute controller (not the storage controller) on any of the three StorageGRID networks.

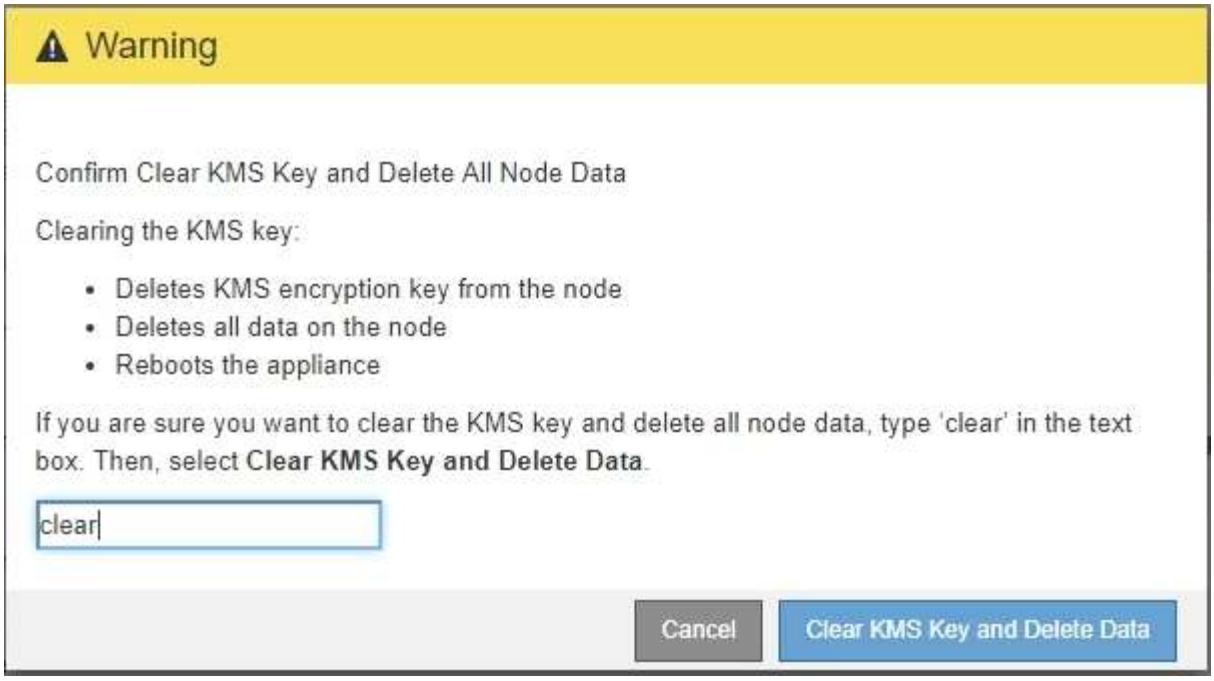
   The StorageGRID Appliance Installer Home page appears.

2. Select **Configure Hardware** > **Node Encryption**.



If the KMS configuration is cleared, data on the appliance will be permanently deleted. This data is not recoverable.

3. At the bottom of the window, select **Clear KMS Key and Delete Data**.
4. If you are sure that you want to clear the KMS configuration, type
   `clear`
   and select **Clear KMS Key and Delete Data**.



The KMS encryption key and all data are deleted from the node, and the appliance reboots. This can take up to 20 minutes.

5. Open a browser, and enter one of the IP addresses for the appliance's compute controller.
`https://Controller_IP:8443`

   `Controller_IP` is the IP address of the compute controller (not the storage controller) on any of the three StorageGRID networks.

   The StorageGRID Appliance Installer Home page appears.

6. Select **Configure Hardware** > **Node Encryption**.
7. Verify that node encryption is disabled and that the key and certificate information in **Key Management Server Details** and the **Clear KMS Key and Delete Data** control are removed from the window.

   Node encryption cannot be reenabled on the appliance until it is reinstalled in a grid.

After you finish

After the appliance reboots and you have verified that KMS has been cleared and that the appliance in a pre-install state, you can physically remove the appliance from your StorageGRID system. See the instructions for preparing the appliance for reinstallation.

Related information

Administer StorageGRID