Replace failed node with services appliance

StorageGRID

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Table of Contents

Replace failed node with services appliance . . . 1
Install services appliance (platform change only) . . . 1
Prepare appliance for reinstallation for reinstallation (platform replacement only) . . . 2
Start software installation on services appliance . . . 2
Monitor services appliance installation . . . 6

Replace failed node with services appliance

You can use an SG100 or SG1000 services appliance to recover a failed Gateway Node, a failed non-primary Admin Node, or a failed primary Admin Node that was hosted on VMware, a Linux host, or a services appliance. This procedure is one step of the grid node recovery procedure.

What you'll need

- You must have determined that one of the following situations is true:
  - The virtual machine hosting the node cannot be restored.
  - The physical or virtual Linux host for the grid node has failed, and must be replaced.
  - The services appliance hosting the grid node must be replaced.
- You must make sure that the StorageGRID Appliance Installer version on the services appliance matches the software version of your StorageGRID system, as described in hardware installation and maintenance for verifying and upgrading the StorageGRID Appliance Installer version.

  SG100 and SG1000 services appliances

> Do not deploy both an SG100 and an SG1000 service appliance in the same site. Unpredictable performance might result.

About this task

You can use an SG100 or SG1000 services appliance to recover a failed grid node in the following cases:

- The failed node was hosted on VMware or Linux (platform change)
- The failed node was hosted on a services appliance (platform replacement)

Install services appliance (platform change only)

When you are recovering a failed grid node that was hosted on VMware or a Linux host and you are using an SG100 or SG1000 services appliance for the replacement node, you must first install the new appliance hardware using the same node name as the failed node.

You must have the following information about the failed node:

- **Node name**: You must install the services appliance using the same node name as the failed node.
- **IP addresses**: You can assign the services appliance the same IP addresses as the failed node, which is the preferred option, or you can select a new unused IP address on each network.

Perform this procedure only if you are recovering a failed node that was hosted on VMware or Linux and are replacing it with a node hosted on a services appliance.

1. Follow the instructions for installing a new SG100 or SG1000 services appliance.
2. When prompted for a node name, use the node name of the failed node.

Related information

Prepare appliance for reinstallation for reinstallation (platform replacement only)

When recovering a grid node that was hosted on a services appliance, you must first prepare the appliance for reinstallation of StorageGRID software.

Perform this procedure only if you are replacing a failed node that was hosted on a services appliance. Do not follow these steps if the failed node was originally hosted on VMware or a Linux host.

1. Log in to the failed grid node:
   a. Enter the following command: `ssh admin@grid_node_IP`
   b. Enter the password listed in the `Passwords.txt` file.
   c. Enter the following command to switch to root: `su -`
   d. Enter the password listed in the `Passwords.txt` file.

   When you are logged in as root, the prompt changes from `$` to `#`.
2. Prepare the appliance for the installation of StorageGRID software. Enter: `sgareinstall`
3. When prompted to continue, enter: `y`

   The appliance reboots, and your SSH session ends. It usually takes about 5 minutes for the StorageGRID Appliance Installer to become available, although in some cases you might need to wait up to 30 minutes.

   The services appliance is reset, and data on the grid node is no longer accessible. IP addresses configured during the original installation process should remain intact; however, it is recommended that you confirm this when the procedure completes.

   After executing the `sgareinstall` command, all StorageGRID-provisioned accounts, passwords, and SSH keys are removed, and new host keys are generated.

Start software installation on services appliance

To install a Gateway Node or Admin Node on an SG100 or SG1000 services appliance, you use the StorageGRID Appliance Installer, which is included on the appliance.

What you'll need

- The appliance must be installed in a rack, connected to your networks, and powered on.
- Network links and IP addresses must be configured for the appliance using the StorageGRID Appliance Installer.
- If you are installing a Gateway Node or non-primary Admin Node, you know the IP address of the primary Admin Node for the StorageGRID grid.
- All Grid Network subnets listed on the IP Configuration page of the StorageGRID Appliance Installer must be defined in the Grid Network Subnet List on the primary Admin Node.

For instructions for completing these prerequisite tasks, see the installation and maintenance instructions for

an SG100 or SG1000 services appliance.

- You must be using a supported web browser.
- You must know one of the IP addresses assigned to the appliance. You can use the IP address for the Admin Network, the Grid Network, or the Client Network.
- If you are installing a primary Admin Node, you have the Ubuntu or Debian install files for this version of StorageGRID available.

> A recent version of StorageGRID software is preloaded onto the services appliance during manufacturing. If the preloaded version of software matches the version being used in your StorageGRID deployment, you do not need the installation files.

About this task

To install StorageGRID software on an SG100 or SG1000 services appliance:

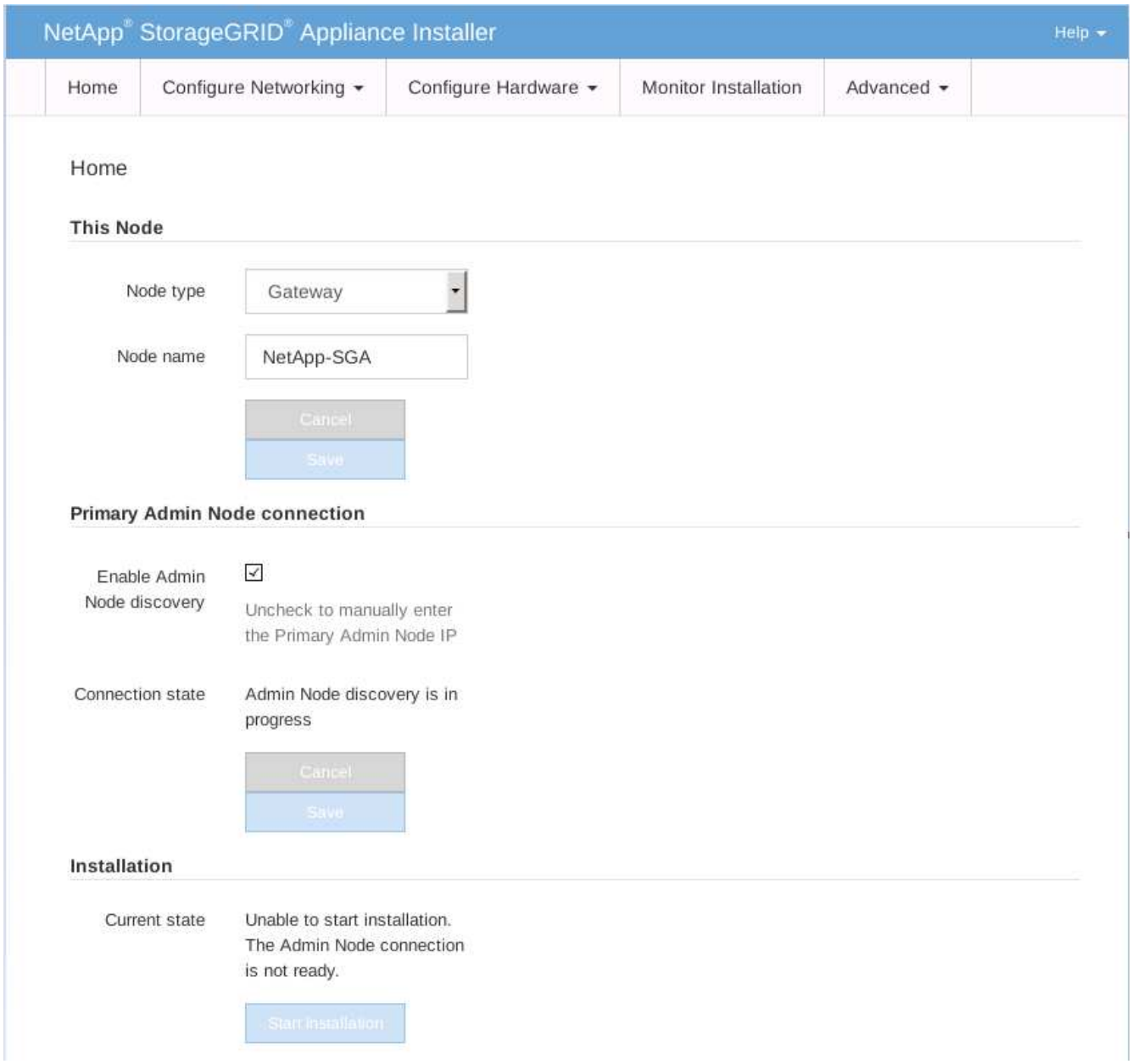
- For a primary Admin Node, you specify the name of the node and then upload the appropriate software packages (if required).
- For a non-primary Admin Node or a Gateway Node, you specify or confirm the IP address of the primary Admin Node and the name of the node.
- You start the installation and wait as volumes are configured and the software is installed.
- Partway through the process, the installation pauses. To resume the installation, you must sign into the Grid Manager and configure the pending node as a replacement for the failed node.
- After you have configured the node, the appliance installation process completes, and the appliance is rebooted.

Steps

1. Open a browser and enter one of the IP addresses for the SG100 or SG1000 services appliance.

   ```
   https://Controller_IP:8443
   ```

   The StorageGRID Appliance Installer Home page appears.

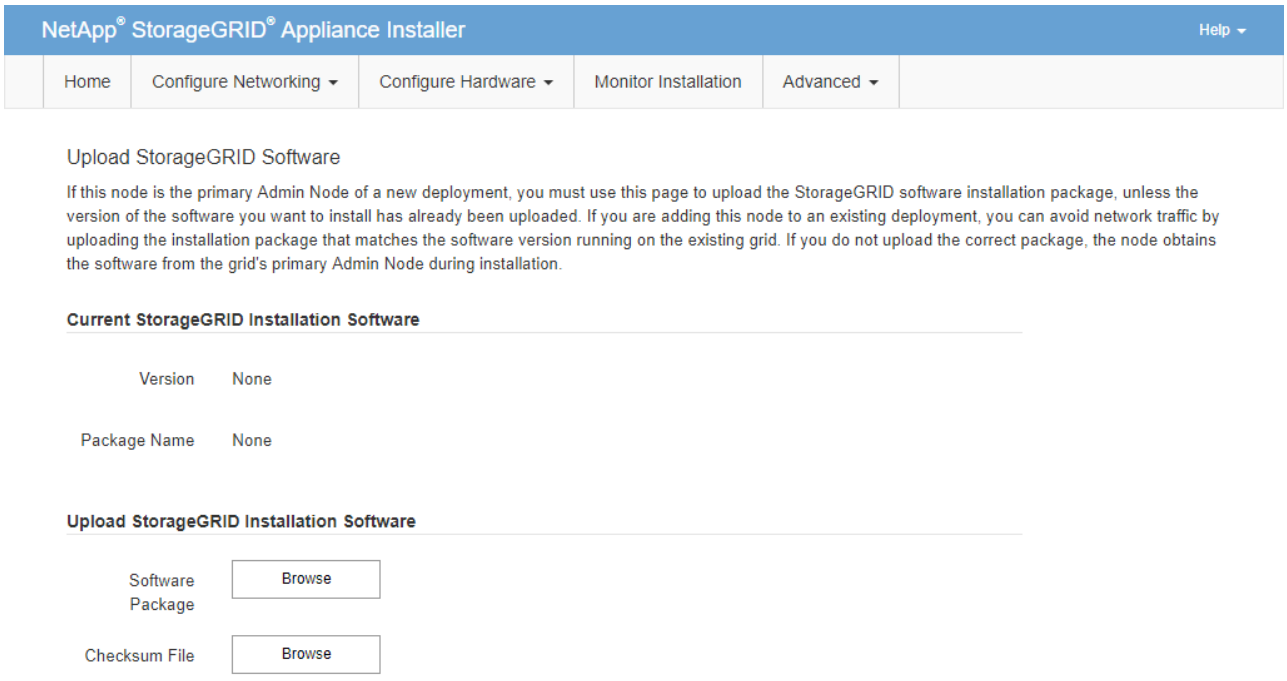


2. To install a Primary Admin Node:
   a. In the This Node section, for **Node Type**, select **Primary Admin**.
   b. In the **Node Name** field, enter the same name that was used for the node you are recovering, and click **Save**.
   c. In the Installation section, check the software version listed under Current state

      If the version of software that is ready to install is correct, skip ahead to the Installation step.

   d. If you need to upload a different version of software, under the **Advanced** menu, select **Upload StorageGRID Software**.

      TheUpload StorageGRID Software page appears.



e. Click **Browse** to upload the **Software Package** and **Checksum File** for StorageGRID software.

   The files are automatically uploaded after you select them.

f. Click **Home** to return to the StorageGRID Appliance Installer Home page.

3. To install a Gateway Node or non-Primary Admin Node:

   a. In the This Node section, for **Node Type**, select **Gateway** or **Non-Primary Admin**, depending on the type of node you are restoring.

   b. In the **Node Name** field, enter the same name that was used for the node you are recovering, and click **Save**.

   c. In the Primary Admin Node connection section, determine whether you need to specify the IP address for the primary Admin Node.

      The StorageGRID Appliance Installer can discover this IP address automatically, assuming the primary Admin Node, or at least one other grid node with ADMIN_IP configured, is present on the same subnet.

   d. If this IP address is not shown or you need to change it, specify the address:

Option	Description
Manual IP entry	a. Unselect the **Enable Admin Node discovery** check box. b. Enter the IP address manually. c. Click **Save**. d. Wait while the connection state for the new IP address becomes “ready.”

Option	Description
Automatic discovery of all connected primary Admin Nodes	a. Select the **Enable Admin Node discovery** check box. b. From the list of discovered IP addresses, select the primary Admin Node for the grid where this services appliance will be deployed. c. Click **Save**. d. Wait while the connection state for the new IP address becomes “ready.”

4. In the Installation section, confirm that the current state is Ready to start installation of node name and that the **Start Installation** button is enabled.

   If the **Start Installation** button is not enabled, you might need to change the network configuration or port settings. For instructions, see the installation and maintenance instructions for your appliance.

5. From the StorageGRID Appliance Installer home page, click **Start Installation**.

   The Current state changes to “Installation is in progress,” and the Monitor Installation page is displayed.

   If you need to access the Monitor Installation page manually, click **Monitor Installation** from the menu bar.

Related information

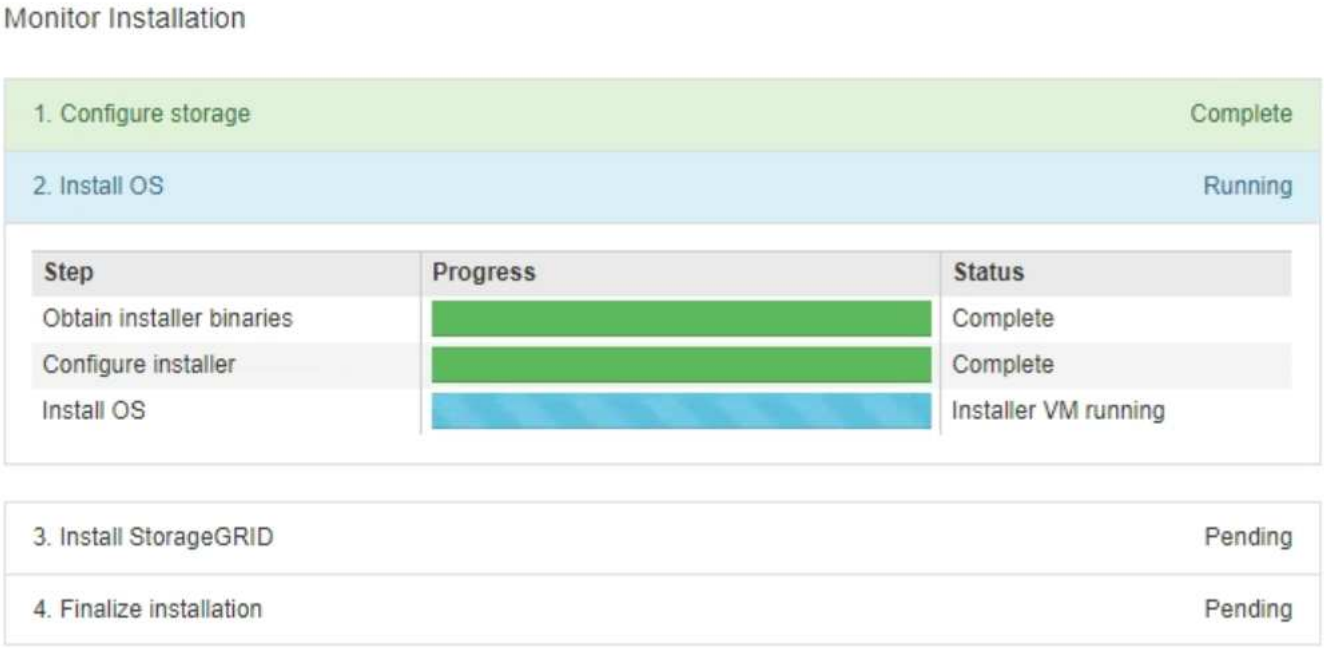
SG100 and SG1000 services appliances

Monitor services appliance installation

The StorageGRID Appliance Installer provides status until installation is complete. When the software installation is complete, the appliance is rebooted.

1. To monitor the installation progress, click **Monitor Installation** from the menu bar.

   The Monitor Installation page shows the installation progress.



The blue status bar indicates which task is currently in progress. Green status bars indicate tasks that have completed successfully.

> ⓘ The installer ensures that tasks completed in a previous install are not re-run. If you are re-running an installation, any tasks that do not need to be re-run are shown with a green status bar and a status of “Skipped.”

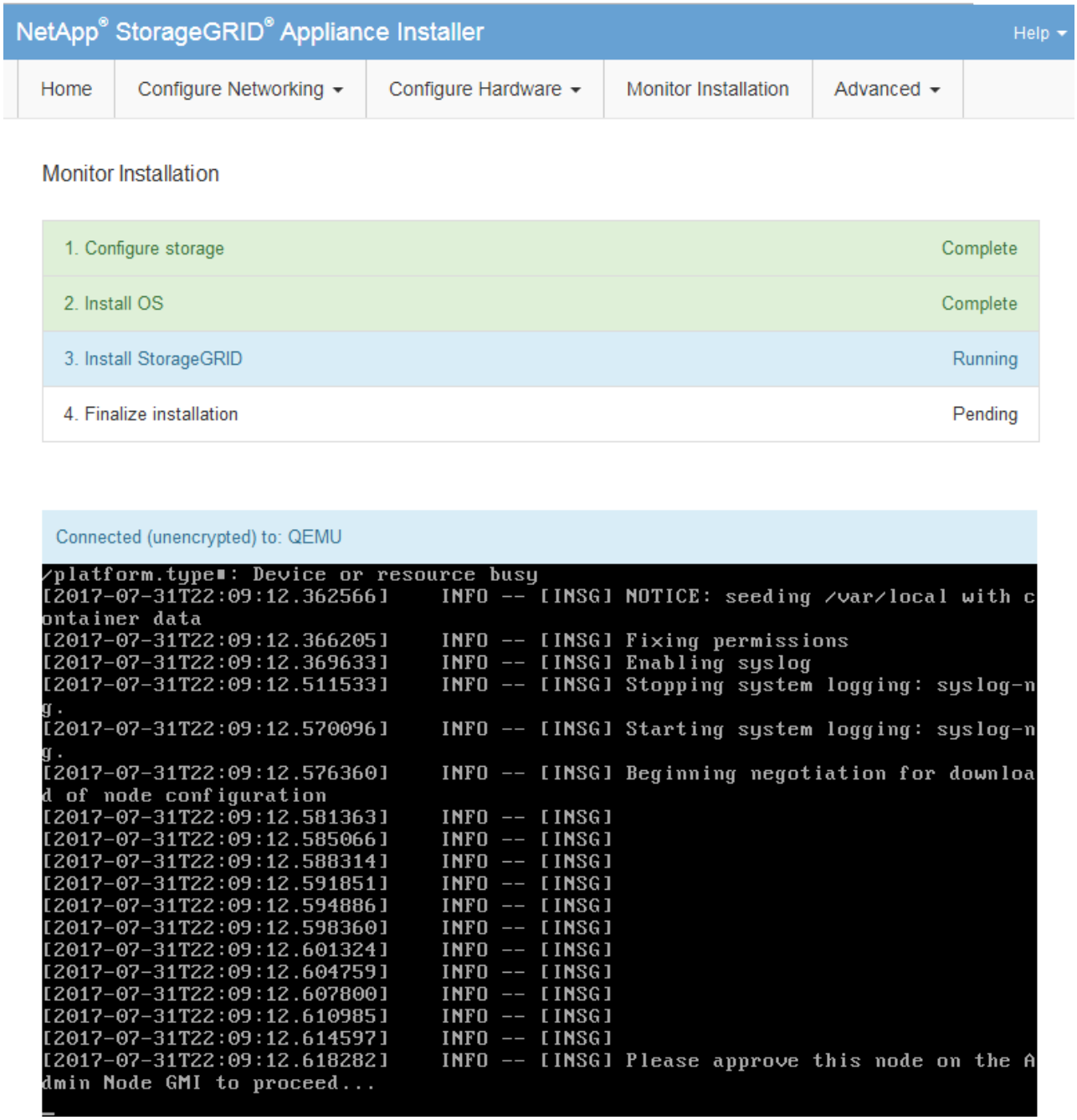
2. Review the progress of first two installation stages.
   - **1. Configure storage**

     During this stage, the installer clears any existing configuration from the drives, and configures host settings.

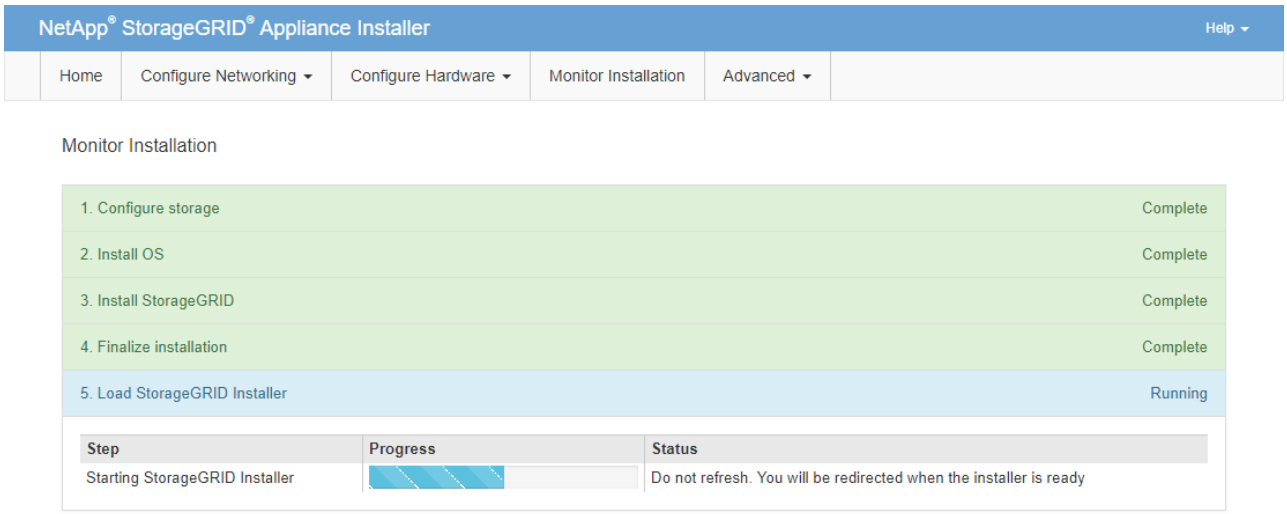
   - **2. Install OS**

     During this stage, the installer copies the base operating system image for StorageGRID from the primary Admin Node to the appliance or installs the base operating system from the installation package for the primary Admin Node.

3. Continue monitoring the installation progress until one of the following occurs:
   - For appliance Gateway Nodes or non-primary appliance Admin Nodes, the **Install StorageGRID** stage pauses and a message appears on the embedded console, prompting you to approve this node on the Admin Node using the Grid Manager.



- For appliance primary Admin Nodes, a fifth phase (Load StorageGRID Installer) appears. If the fifth phase is in progress for more than 10 minutes, refresh the page manually.



4. Go on to the next step of the recovery process for the type of appliance grid node that you are recovering.

Type of recovery	Reference
Gateway Node	Select Start Recovery to configure Gateway Node
Non-primary Admin Node	Select Start Recovery to configure non-primary Admin Node
Primary Admin Node	Configure replacement primary Admin Node

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