

Replace failed node with services appliance

StorageGRID 11.8

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Replace failed node with services appliance

Replace failed node with services appliance: Overview

You can use a 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.

Before you begin

- You have determined that one of the following situations is true:
 - The virtual machine hosting the node can't 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 have confirmed that the StorageGRID Appliance Installer version on the services appliance matches the software version of your StorageGRID system. See Verify and upgrade StorageGRID Appliance Installer version.



Don't deploy both an SG110 and an SG1100 services appliance or an SG100 and an SG1000 services appliance in the same site. Unpredictable performance might result.

About this task

You can use a 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 a services appliance for the replacement node, you must first install the new appliance hardware using the same node name (system name) as the failed node.

Before you begin

You 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. The node name is the hostname (system name).
- **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.

About this task

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.

Steps

- 1. Follow the instructions for installing a new services appliance. See Quick start for hardware installation.
- 2. When prompted for a node name, use the node name of the failed node.

Prepare appliance 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. Don't follow these steps if the failed node was originally hosted on VMware or a Linux host.

Steps

- 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 ${\tt Passwords.txt}$ 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 a services appliance, you use the StorageGRID Appliance Installer, which is included on the appliance.

Before you begin

- The appliance is installed in a rack, connected to your networks, and powered on.
- Network links and IP addresses are 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 are

defined in the Grid Network Subnet List on the primary Admin Node.

See Quick start for hardware installation.

- You are using a supported web browser.
- You have 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 don't need the installation files.

About this task

To install StorageGRID software on a 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 services appliance.

https://Controller_IP:8443

The StorageGRID Appliance Installer Home page appears.

etApp [®] Storage	GRID [®] Appliant	ce Installer			
Home Config	ure Networking 👻	Configure Hardware 🕶	Monitor Installation	Advanced 👻	
Home This Node					
Node type	Gateway	•			
Node name	NetApp-SGA				
	Cancel				
Primary Admin N	ode connection				
Enable Admin	2				
Node discovery	Uncheck to manua the Primary Admir	ally enter n Node IP			
Connection state	Admin Node disco progress	overy is in			
	Cancel				
	Save				
Installation					
Current state	Unable to start ins The Admin Node of	tallation.			
	is not ready.	ner en			
	Start installation				

- 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.

verapp S	storageG	Applian	cennstaller			
Home	Configure	e Networking 👻	Configure Hardware -	Monitor Installation	Advanced -	
	-					
Upload \$	StorageG	RID Software				
If this nod	e is the prin	mary Admin Node o	of a new deployment, you mu	st use this page to upload	the StorageGRID	software installation package, unless the
version of	the softwar	re you want to insta	all has already been uploaded	d. If you are adding this no	de to an existing of	deployment, you can avoid network traffic
uploading	the installa	ition package that i	matches the software version	running on the existing g	rid. If you do not u	pload the correct package, the node obtair
the softwa	are from the	e grid s primary Adr	nin ivode during installation.			
Current	Store vo O F	ND Installation C				
Current	storageGR	CD Installation S	ontware			
	., .					
	Version	None				
Package	e Name	None				
Upload S	StorageGR	ID Installation So	oftware			
S	oftware	Browse				
P	ackage					
	-					
Checks	um File	Browse				

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.

Option	Description
Manual IP entry	a. Clear the Enable Admin Node discovery checkbox.
	c. Click Save .
	d. Wait while the connection state for the new IP address becomes "ready."

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

Option	Description
Automatic discovery of all	a. Select the Enable Admin Node discovery checkbox.
connected primary Admin Nodes	 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 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.

Monitor services appliance installation

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

Steps

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

The Monitor Installation page shows the installation progress.

Monitor Installation

Install OS		Runnir
Step	Progress	Status
Obtain installer binaries		Complete
Configure installer		Complete
nstall OS		Installer VM running

4. Finalize installation Pending

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 aren't re-run. If you are rerunning an installation, any tasks that don't 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.

NetApp [®] StorageGRID [®] Appliance Installer					Help 🚽	
	Home	Configure Networking -	Configure Hardware 👻	Monitor Installation	Advanced -	

Monitor Installation

1. Configure storage	Complete
2. Install OS	Complete
3. Install StorageGRID	Running
4. Finalize installation	Pending

Connected	(unencrypted)) to: QEMU
-----------	---------------	------------

∕platform.type∎: Device or resou	irce busy	
[2017-07-31722:09:12.362566]	INFO [INSG]	NOTICE: seeding /var/local with c
ontainer data		
[2017-07-31T22:09:12.366205]	INFO [INSG]	Fixing permissions
[2017-07-31T22:09:12.369633]	INFO [INSG]	Enabling syslog
[2017-07-31T22:09:12.511533]	INFO [INSG]	Stopping system logging: syslog-n
g.		
[2017-07-31T22:09:12.570096]	INFO [INSG]	Starting system logging: syslog-n
g.		
[2017-07-31T22:09:12.576360]	INFO [INSG]	Beginning negotiation for downloa
d of node configuration		
[2017-07-31T22:09:12.581363]	INFO [INSG]	
[2017-07-31T22:09:12.585066]	INFO [INSG]	
[2017-07-31T22:09:12.588314]	INFO [INSG]	
[2017-07-31T22:09:12.591851]	INFO [INSG]	
[2017-07-31T22:09:12.594886]	INFO [INSG]	
[2017-07-31T22:09:12.598360]	INFO [INSG]	
[2017-07-31T22:09:12.601324]	INFO [INSG]	
[2017-07-31T22:09:12.604759]	INFO [INSG]	
[2017-07-31T22:09:12.607800]	INFO [INSG]	
[2017-07-31T22:09:12.610985]	INFO [INSG]	
[2017-07-31T22:09:12.614597]	INFO [INSG]	
[2017-07-31T22:09:12.618282]	INFO [INSG]	Please approve this node on the A
dmin Node GMI to proceed		
*		

• 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.

NetApp	[®] StorageGRID [®] Applian	ce Installer				Help 🚽
Home	Configure Networking -	Configure Hardware -	Monitor Installation	Advanced -		
Moni	or Installation					
1. 0	Configure storage					Complete
2.1	nstall OS					Complete
3. I	nstall StorageGRID					Complete
4. F	inalize installation					Complete
5. L	oad StorageGRID Installer					Running
St	əp	Progress	Status			
Sta	arting StorageGRID Installer		Do not	refresh. You will be	redirected when the installer is ready	

4. Go 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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