



# **Upgrade software**

## **StorageGRID 11.7**

NetApp

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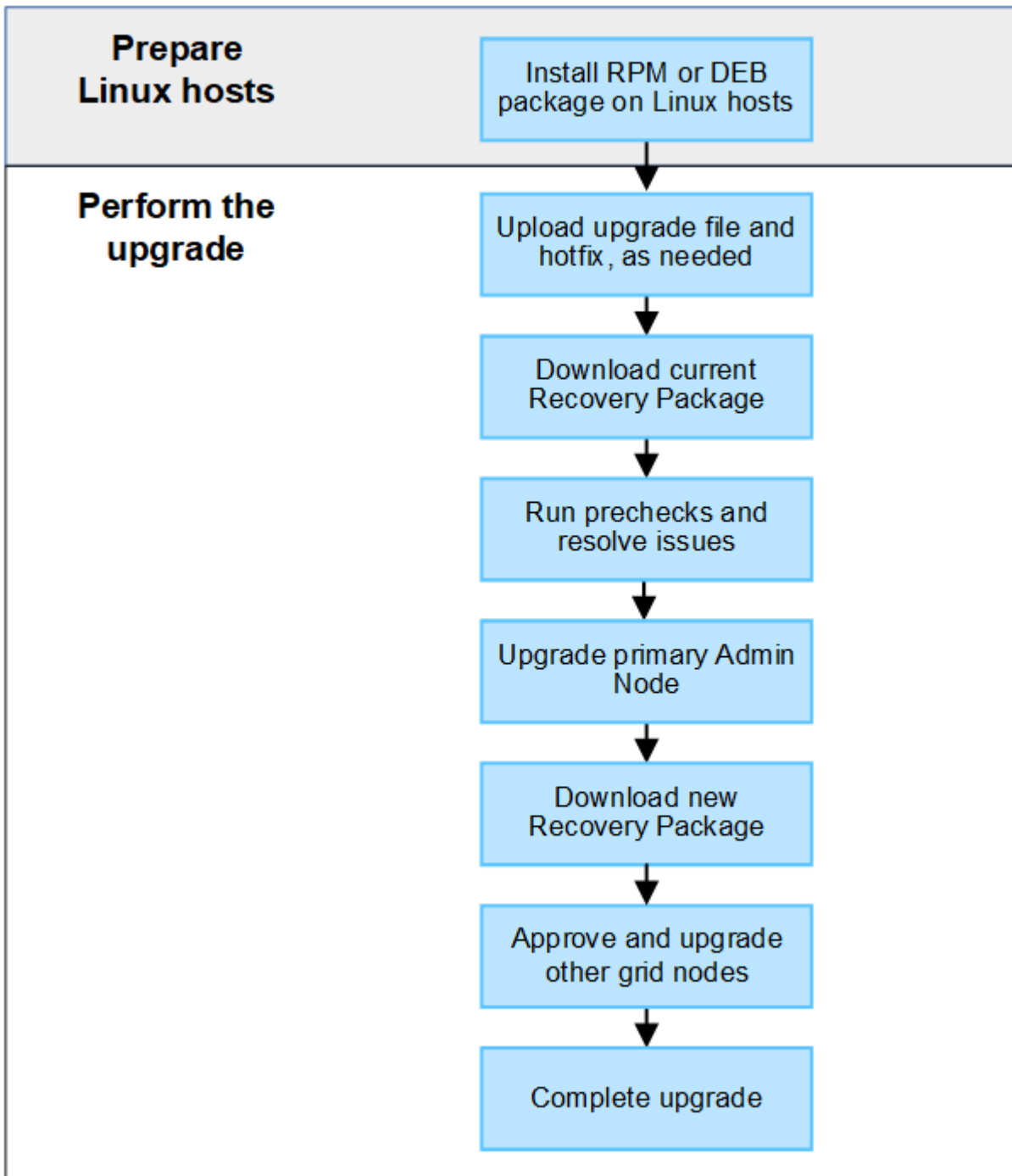
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# Upgrade software

## Upgrade workflow

Before starting the upgrade, review the general workflow. The StorageGRID Upgrade page guides you through each upgrade step.



1. If any StorageGRID nodes are deployed on Linux hosts, [install the RPM or DEB package on each host](#) before you start the upgrade.
2. From the primary Admin Node, access the StorageGRID Upgrade page and upload the upgrade file and the hotfix file, if required.

3. Download the current Recovery Package.
4. Run upgrade prechecks to detect and resolve any issues before you start the actual upgrade.
5. Start the upgrade, which runs prechecks and upgrades the primary Admin Node automatically. You can't access the Grid Manager while the primary Admin Node is being upgraded. Audit logs will also be unavailable. This upgrade can take up to 30 minutes.
6. After the primary Admin Node has been upgraded, download a new Recovery Package.
7. Approve the grid nodes. You can approve individual grid nodes, groups of grid nodes, or all grid nodes.



Don't approve the upgrade for a grid node unless you are sure that node is ready to be stopped and rebooted.

8. Resume operations. When all grid nodes have been upgraded, new features are enabled and you can resume operations. You must wait to perform a decommission or expansion procedure until the background **Upgrade database** task and the **Final upgrade steps** task have completed.

#### Related information

[Estimate the time to complete an upgrade](#)

## Linux: Download and install the RPM or DEB package on all hosts

If any StorageGRID nodes are deployed on Linux hosts, you must download and install an additional RPM or DEB package on each of these hosts before you start the upgrade.

### Download upgrade, Linux, and hotfix files

When you perform a StorageGRID upgrade from the Grid Manager, you are prompted to download the upgrade archive and any required hotfix as the first step. However, if you need to download files to upgrade Linux hosts, you can save time by downloading all required files in advance.

#### Steps

1. Go to [NetApp Downloads: StorageGRID](#).
2. Select the button for downloading the latest release, or select another version from the drop-down menu and select **Go**.

StorageGRID software versions have this format: 11.x.y. StorageGRID hotfixes have this format: 11.x.y.z.

3. Sign in with the username and password for your NetApp account.
4. If a Caution/MustRead notice appears, make note of the hotfix number, and select the checkbox.
5. Read the End User License Agreement, select the checkbox, and then select **Accept & Continue**.

The downloads page for the version you selected appears. The page contains three columns.

6. From the second column (**Upgrade StorageGRID**), download two files:
  - The upgrade archive for the latest release (this is the file in the section labeled **VMware, SG1000, or SG100 Primary Admin Node**). While this file is not needed until you perform the upgrade, downloading it now will save time.

- An RPM or DEB archive in either .tgz or .zip format. Select the .zip file if you are running Windows on the service laptop.

- Red Hat Enterprise Linux or CentOS

StorageGRID-Webscale-version-RPM-uniqueID.zip

StorageGRID-Webscale-version-RPM-uniqueID.tgz

- Ubuntu or Debian

StorageGRID-Webscale-version-DEB-uniqueID.zip

StorageGRID-Webscale-version-DEB-uniqueID.tgz

7. If you needed to agree to a Caution/MustRead notice because of a required hotfix, download the hotfix:

- Go back to [NetApp Downloads: StorageGRID](#).
- Select the hotfix number from the drop-down.
- Agree to the Caution notice and EULA again.
- Download and save the hotfix and its README.

You will be prompted to upload the hotfix file on the StorageGRID Upgrade page when you start the upgrade.

## Install archive on all Linux hosts

Perform these steps before upgrading StorageGRID software.

### Steps

- Extract the RPM or DEB packages from the installation file.
- Install the RPM or DEB packages on all Linux hosts.

See the steps for installing StorageGRID host services in the installation instructions:

- [Red Hat Enterprise Linux or CentOS: Install StorageGRID host services](#)
- [Ubuntu or Debian: Install StorageGRID host services](#)

The new packages are installed as additional packages. Don't remove the existing packages.

## Perform the upgrade

You can upgrade to StorageGRID 11.7 and apply the latest hotfix for that release at the same time. The StorageGRID upgrade page provides the recommended upgrade path and links directly to the correct download pages.

### Before you begin

You have reviewed all of the considerations and completed all of the planning and preparation steps.

## Access StorageGRID Upgrade page

As a first step, access the StorageGRID Upgrade page in the Grid Manager.

### Steps

- Sign in to the Grid Manager using a [supported web browser](#).

2. Select **MAINTENANCE > System > Software update**.
3. From the StorageGRID upgrade tile, select **Upgrade**.

## Select files

The update path on the StorageGRID Upgrade page indicates which major versions (for example, 11.7.0) and hotfixes (for example, 11.7.0.1) you must install to get to the latest StorageGRID release. You should install the recommended versions and hotfixes in the order shown.



If no update path is shown, your browser might not be able to access the NetApp Support Site, or the **Check for software updates** checkbox on the AutoSupport page (**SUPPORT > Tools > AutoSupport**) might be disabled.

### Steps

1. For the **Select files** step, review the update path.
2. From the Download files section, select each **Download** link to download the required files from the NetApp Support Site.

If no update path is shown, go to the [NetApp Downloads: StorageGRID](#) to determine if a new version or hotfix is available and to download the files you need.



If you needed to download and install an RPM or DEB package on all Linux hosts, you might already have the StorageGRID upgrade and hotfix files listed in the update path.

3. Select **Browse** to upload the version upgrade file to StorageGRID:  
`NetApp_StorageGRID_11.7.0_Software_uniqueID.upgrade`

When the upload and validation process is done, a green check mark appears next to the file name.

4. If you downloaded a hotfix file, select **Browse** to upload that file. The hotfix will be automatically applied as part of the version upgrade.
5. Select **Continue**.

## Run prechecks

Running prechecks allows you to detect and resolve any upgrade issues before you start upgrading your grid.

### Steps

1. For the **Run prechecks** step, start by entering the provisioning passphrase for your grid.
2. Select **Download recovery package**.

You should download the current copy of the Recovery Package file before you upgrade the primary Admin Node. The Recovery Package file allows you to restore the system if a failure occurs.

3. When the file is downloaded, confirm that you can access the contents, including the `Passwords.txt` file.
4. Copy the downloaded file (`.zip`) to two safe, secure, and separate locations.



The Recovery Package file must be secured because it contains encryption keys and passwords that can be used to obtain data from the StorageGRID system.

5. Select **Run prechecks**, and wait for the prechecks to complete.
6. Review the details for each reported precheck and resolve any reported errors. See the [StorageGRID software upgrade resolution guide](#) for the StorageGRID 11.7 release.

You must resolve all precheck *errors* before you can upgrade your system. However, you don't need to address precheck *warnings* before upgrading.



If you have opened any custom firewall ports, you are notified during the precheck validation. You must contact technical support before proceeding with the upgrade.

7. If you made any configuration changes to resolve the reported issues, select **Run prechecks** again to get updated results.

If all errors have been resolved, you are prompted to start the upgrade.

## Start upgrade and upgrade primary Admin Node

When you start the upgrade, the upgrade prechecks are run again, and the primary Admin Node is automatically upgraded. This part of the upgrade can take up to 30 minutes.



You will not be able to access any other Grid Manager pages while the primary Admin Node is being upgraded. Audit logs will also be unavailable.

### Steps

1. Select **Start upgrade**.

A warning appears to remind you will temporarily lose access to the Grid Manager.

2. Select **OK** to acknowledge the warning and start the upgrade.
3. Wait for the upgrade prechecks to be performed and for the primary Admin Node to be upgraded.



If any precheck errors are reported, resolve them and select **Start upgrade** again.

If the grid has another Admin Node that is online and ready, you can use it to monitor the status of the primary Admin Node. As soon as the primary Admin Node is upgraded, you can approve the other grid nodes.

4. As required, select **Continue** to access the **Upgrade other nodes** step.

## Upgrade other nodes

You must upgrade all grid nodes, but you can perform multiple upgrade sessions and customize the upgrade sequence. For example, you might prefer to upgrade the nodes at site A in one session and then upgrade the nodes at site B in a later session. If you choose to perform the upgrade in more than one session, be aware that you can't start using the new features until all nodes have been upgraded.

If the order in which nodes are upgraded is important, approve nodes or groups of nodes one at a time and wait until the upgrade is complete on each node before approving the next node or group of nodes.



When the upgrade starts on a grid node, the services on that node are stopped. Later, the grid node is rebooted. To avoid service interruptions for client applications that are communicating with the node, don't approve the upgrade for a node unless you are sure that node is ready to be stopped and rebooted. As required, schedule a maintenance window or notify customers.

## Steps

1. For the **Upgrade other nodes** step, review the Summary, which provides the start time for the upgrade as a whole and the status for each major upgrade task.
  - **Start upgrade service** is the first upgrade task. During this task, the software file is distributed to the grid nodes, and the upgrade service is started on each node.
  - When the **Start upgrade service** task is complete, the **Upgrade other grid nodes** task starts, and you are prompted to download a new copy of the Recovery Package.
2. When prompted, enter your provisioning passphrase and download a new copy of the Recovery Package.



You should download a new copy of the Recovery Package file after the primary Admin Node is upgraded. The Recovery Package file allows you to restore the system if a failure occurs.

3. Review the status tables for each type of node. There are tables for non-primary Admin Nodes, Gateway Nodes, Storage Nodes, and Archive Nodes.

A grid node can be in one of these stages when the tables first appear:

- Unpacking the upgrade
  - Downloading
  - Waiting to be approved
4. When you are ready to select grid nodes for upgrade (or if you need to unapprove selected nodes), use these instructions:

Task	Instruction
Search for specific nodes to approve, such as all nodes at a particular site	Enter the search string in the <b>Search</b> field
Select all nodes for upgrade	Select <b>Approve all nodes</b>
Select all nodes of the same type for upgrade (for example, all Storage Nodes)	Select the <b>Approve all</b> button for the node type  If you approve more than one node of the same type, the nodes will be upgraded one at a time.
Select an individual node for upgrade	Select the <b>Approve</b> button for the node
Postpone the upgrade on all selected nodes	Select <b>Unapprove all nodes</b>
Postpone the upgrade on all selected nodes of the same type	Select the <b>Unapprove all</b> button for the node type



Task	Instruction
Postpone the upgrade on an individual node	Select the <b>Unapprove</b> button for the node

5. Wait for the approved nodes to proceed through these upgrade stages:

- Approved and waiting to be upgraded
- Stopping services



You can't remove a node when its Stage reaches **Stopping services**. The **Unapprove** button is disabled.

- Stopping container
- Cleaning up Docker images
- Upgrading base OS packages



When an appliance node reaches this stage, the StorageGRID Appliance Installer software on the appliance is updated. This automated process ensures that the StorageGRID Appliance Installer version remains in sync with the StorageGRID software version.

- Rebooting



Some appliance models might reboot multiple times to upgrade the firmware and BIOS.

- Performing steps after reboot
- Starting services
- Done

6. Repeat the [approval step](#) as many times as needed until all grid nodes have been upgraded.

## Complete upgrade

When all grid nodes have completed the upgrade stages, the **Upgrade other grid nodes** task is shown as Completed. The remaining upgrade tasks are performed automatically in the background.

### Steps

1. As soon as the **Enable features** task is complete (which occurs quickly), you can start using the [new features](#) in the upgraded StorageGRID version.
2. During the **Upgrade database** task, the upgrade process checks each node to verify that the Cassandra database does not need to be updated.



The upgrade from StorageGRID 11.6 to 11.7 does not require a Cassandra database upgrade; however, the Cassandra service will be stopped and restarted on each Storage Node. For future StorageGRID feature releases, the Cassandra database update step might take several days to complete.

3. When the **Upgrade database** task has completed, wait a few minutes for the **Final upgrade steps** to complete.

4. When the **Final upgrade steps** have completed, the upgrade is done. The first step, **Select files**, is redisplayed with a green success banner.
5. Verify that grid operations have returned to normal:
  - a. Check that the services are operating normally and that there are no unexpected alerts.
  - b. Confirm that client connections to the StorageGRID system are operating as expected.

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