StorageGRID hotfix procedure

StorageGRID

NetApp
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StorageGRID hotfix procedure

You might need to apply a hotfix to your StorageGRID system if issues with the software are detected and resolved between feature releases.

StorageGRID hotfixes contain software changes that are made available outside of a feature or patch release. The same changes are included in a future release. In addition, each hotfix release contains a roll-up of all previous hotfixes within the feature or patch release.

Considerations for applying a hotfix

When you apply a hotfix, a cumulative series of software updates is applied to the nodes in your StorageGRID system.

You cannot apply a StorageGRID hotfix when another maintenance procedure is running. For example, you cannot apply a hotfix while a decommission, expansion, or recovery procedure is running.

> If a node or site decommission procedure is paused, you can safely apply a hotfix. In addition, you might be able to apply a hotfix during the final stages of a StorageGRID upgrade procedure. See the instructions for upgrading StorageGRID software for details.

After you upload the hotfix in the Grid Manager, the hotfix is applied automatically to the primary Admin Node. Then, you can approve the application of the hotfix to the rest of the nodes in your StorageGRID system.

If a hotfix fails to be applied to one or more nodes, the reason for the failure appears in the Details column of the hotfix progress table. You must resolve whatever issues caused the failures and then retry the entire process. Nodes with a previously successful application of the hotfix will be skipped in subsequent applications. You can safely retry the hotfix process as many times as required until all nodes have been updated. The hotfix must be successfully installed on all grid nodes in order for the application to be complete.

While grid nodes are updated with the new hotfix version, the actual changes in a hotfix might only affect specific services on specific types of nodes. For example, a hotfix might only affect the LDR service on Storage Nodes.

How hotfixes are applied for recovery and expansion

After a hotfix has been applied to your grid, the primary Admin Node automatically installs the same hotfix version to any nodes restored by recovery operations or added in an expansion.

However, if you need to recover the primary Admin Node, you must manually install the correct StorageGRID release and then apply the hotfix. The final StorageGRID version of the primary Admin Node must match the version of the other nodes in the grid.

The following example illustrates how to apply a hotfix when recovering the primary Admin Node:

1. Assume the grid is running a StorageGRID 11.*A.B* version with the latest hotfix. The “grid version” is 11.*A.B.y*.
2. The primary Admin Node fails.
3. You redeploy the primary Admin Node using StorageGRID 11.*A.B*, and perform the recovery procedure.

> As required to match the grid version, you can use a minor release when deploying the node; you do not need to deploy the major release first.

4. You then apply hotfix 11.*A.B.y* to the primary Admin Node.

Related information

Configure replacement primary Admin Node

Plan and prepare for a hotfix

You must plan before applying a hotfix to ensure minimal disruption to your StorageGRID system.

Steps

- How your system is affected when you apply a hotfix
- Obtaining the required materials for a hotfix
- Downloading the hotfix file
- Checking the system's condition before applying a hotfix

How your system is affected when you apply a hotfix

You must understand how your StorageGRID system will be affected when you apply a hotfix.

Client applications might experience short-term disruptions

The StorageGRID system can ingest and retrieve data from client applications throughout the hotfix process; however, client connections to individual Gateway Nodes or Storage Nodes might be disrupted temporarily if the hotfix needs to restart services on those nodes. Connectivity will be restored after the hotfix process completes and services resume on the individual nodes.

You might need to schedule downtime to apply a hotfix if loss of connectivity for a short period is not acceptable. You can use selective approval to schedule when certain nodes are updated.

> You can use multiple gateways and high availability (HA) groups to provide automatic failover during the hotfix process. See the instructions for configuring high availability groups.

Alerts and SNMP notifications might be triggered

Alerts and SNMP notifications might be triggered when services are restarted and when the StorageGRID system is operating as a mixed-version environment (some grid nodes running an earlier version, while others have been upgraded to a later version). In general, these alerts and notifications will clear when the hotfix completes.

Configuration changes are restricted

When applying a hotfix to StorageGRID:

- Do not make any grid configuration changes (for example, specifying Grid Network subnets or approving pending grid nodes) until the hotfix has been applied to all nodes.
- Do not update the ILM configuration until the hotfix has been applied to all nodes.

Obtain required materials for hotfix

Before applying a hotfix, you must obtain all required materials.

Item	Notes
StorageGRID hotfix file	You must download the StorageGRID hotfix file.
• Network port • Supported web browser • SSH client (for example, PuTTY)	
Recovery Package (`.zip`) file	Before applying a hotfix, download the most recent Recovery Package file in case any problems occur during the hotfix.Then, after the hotfix has been applied, download a new copy of the Recovery Package file and save it in a safe location. The updated Recovery Package file allows you to restore the system if a failure occurs.
`Passwords.txt file`	Optional and used only if you are applying a hotfix manually using the SSH client. The `Passwords.txt` file is included in the SAID package, which is part of the Recovery Package `.zip` file.
Provisioning passphrase	The passphrase is created and documented when the StorageGRID system is first installed. The provisioning passphrase is not listed in the `Passwords.txt` file.
Related documentation	`readme.txt` file for the hotfix. This file is included on the hotfix download page. Be sure to review the `readme` file carefully before applying the hotfix.

Related information

Download hotfix file

Download hotfix file

You must download the hotfix file before you can apply the hotfix.

Steps

1. Go to the NetApp Downloads page for StorageGRID.

   NetApp Downloads: StorageGRID

2. Select the down arrow under **Available Software** to see a list of hotfixes that are available to download.

   Hotfix file versions have the form: 11.4.*x.y*.

3. Review the changes that are included in the update.

   If you have just recovered the primary Admin Node and you need to apply a hotfix, select the same hotfix version that is installed on the other grid nodes.

   a. Select the hotfix version you want to download, and select **Go**.
   b. Sign in using the username and password for your NetApp account.
   c. Read and accept the End User License Agreement.

      The download page for the version you selected appears.

   d. Download the hotfix `readme.txt` file to view a summary of the changes included in the hotfix.

4. Select the download button for the hotfix, and save the file.

   Do not change the name of this file.

   If you are using a macOS device, the hotfix file might be automatically saved as a `.txt` file. If it is, you must rename the file without the `.txt` extension.

5. Select a location for the download, and select **Save**.

Related information

Configure replacement primary Admin Node

Check system's condition before applying hotfix

You must verify the system is ready to accommodate the hotfix.

1. Sign in to the Grid Manager using a supported web browser.
2. If possible, ensure that the system is running normally and that all grid nodes are connected to the grid.

   Connected nodes have green check marks on the Nodes page.

3. Check for and resolve any current alerts, if possible.

   For information about specific alerts, see the instructions for monitoring and troubleshooting StorageGRID.

4. Ensure no other maintenance procedures are in progress, such as an upgrade, recovery, expansion, or decommission procedure.

   You should wait for any active maintenance procedures to complete before applying a hotfix.

   You cannot apply a StorageGRID hotfix when another maintenance procedure is running. For example, you cannot apply a hotfix while a decommission, expansion, or recovery procedure is running.

If a node or site decommission procedure is paused, you can safely apply a hotfix. In addition, you might be able to apply a hotfix during the final stages of a StorageGRID upgrade procedure. See the instructions for upgrading StorageGRID software for details.

Related information

Monitor and troubleshoot

Pause and resume decommission process for Storage Nodes

Apply hotfix

The hotfix is first applied automatically to the primary Admin Node. Then, you must approve the application of the hotfix to other grid nodes until all nodes are running the same software version. You can customize the approval sequence by selecting to approve individual grid nodes, groups of grid nodes, or all grid nodes.

What you'll need

- You have reviewed the considerations and completed the steps in Plan and prepare for a hotfix.
- You have the provisioning passphrase.
- You have Root Access or the Maintenance permission.

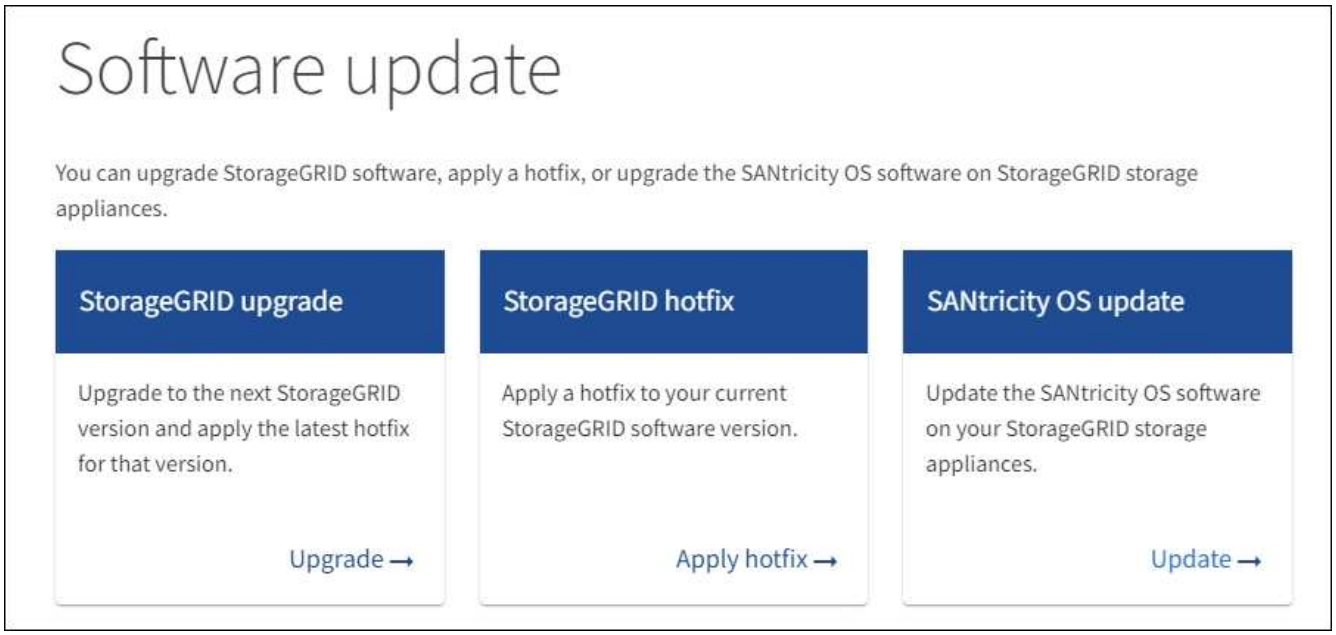
About this task

- You can delay applying a hotfix to a node, but the hotfix process is not complete until you apply the hotfix to all nodes.
- You cannot perform a StorageGRID software upgrade or a SANtricity OS upgrade until you have completed the hotfix process.

Steps

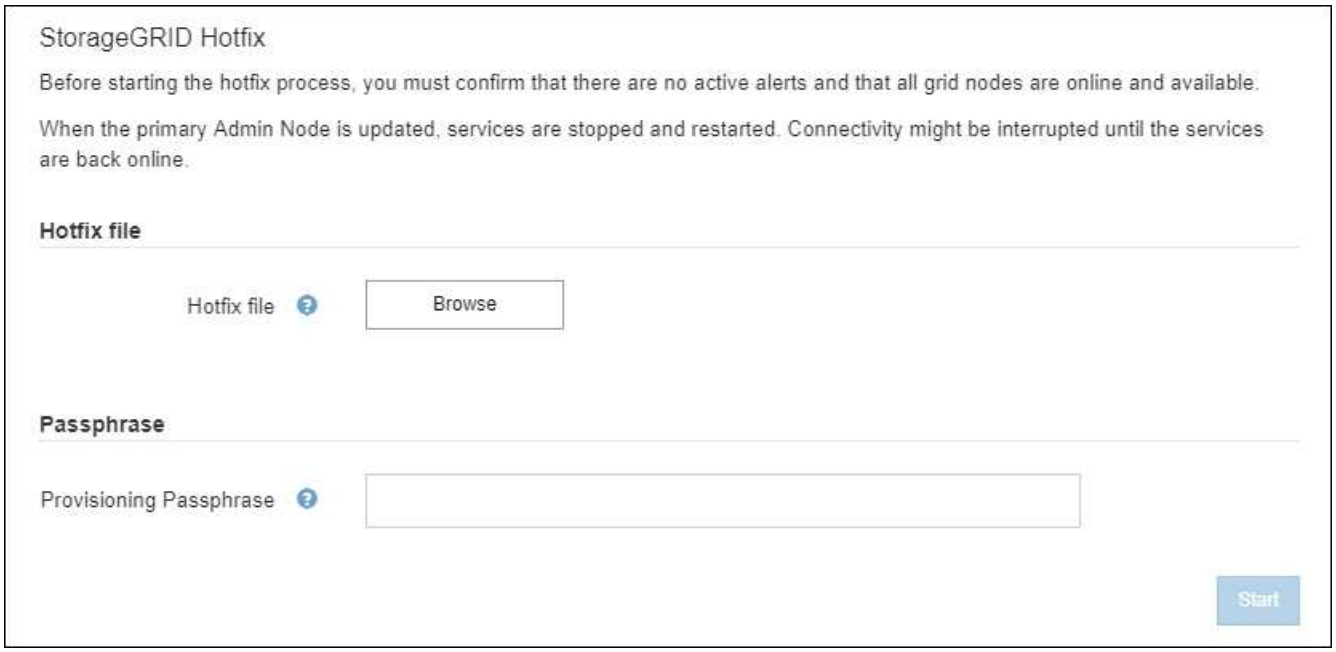
1. Sign in to the Grid Manager using a supported web browser.
2. Select **MAINTENANCE** > **System** > **Software update**.

   The Software Update page appears.



3. Select **Apply hotfix**.

   The StorageGRID Hotfix page appears.



4. Select the hotfix file you downloaded from the NetApp support site.
   a. Select **Browse**.
   b. Locate and select the file.

      `hotfix-install-`*`version`*

   c. Select **Open**.

      The file is uploaded. When the upload is finished, the file name is shown in the Details field.

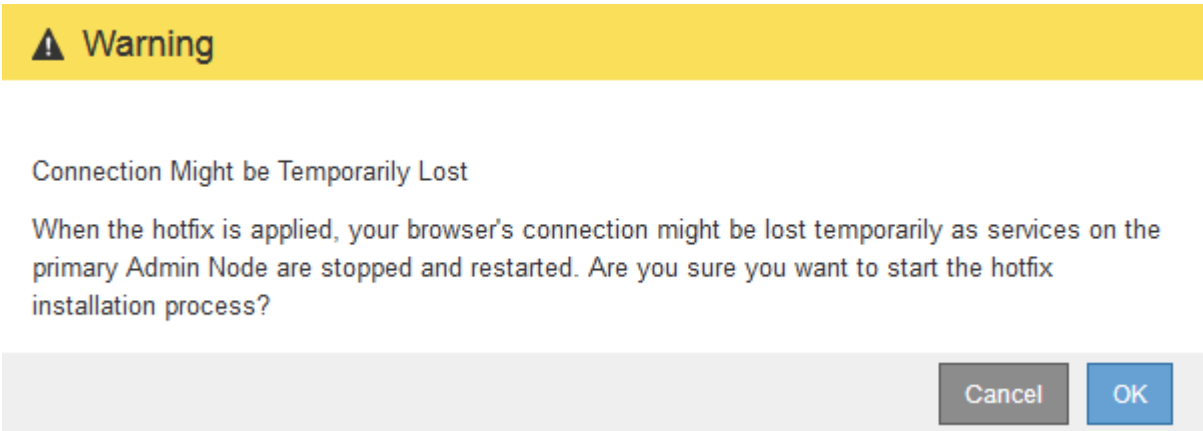
> Do not change the file name since it is part of the verification process.

5. Enter the provisioning passphrase in the text box.

   The **Start** button becomes enabled.

6. Select **Start**.

   A warning appears stating that your browser's connection might be lost temporarily as services on the primary Admin Node are restarted.



7. Select **OK** to start applying the hotfix to the primary Admin Node.

   When the hotfix starts:

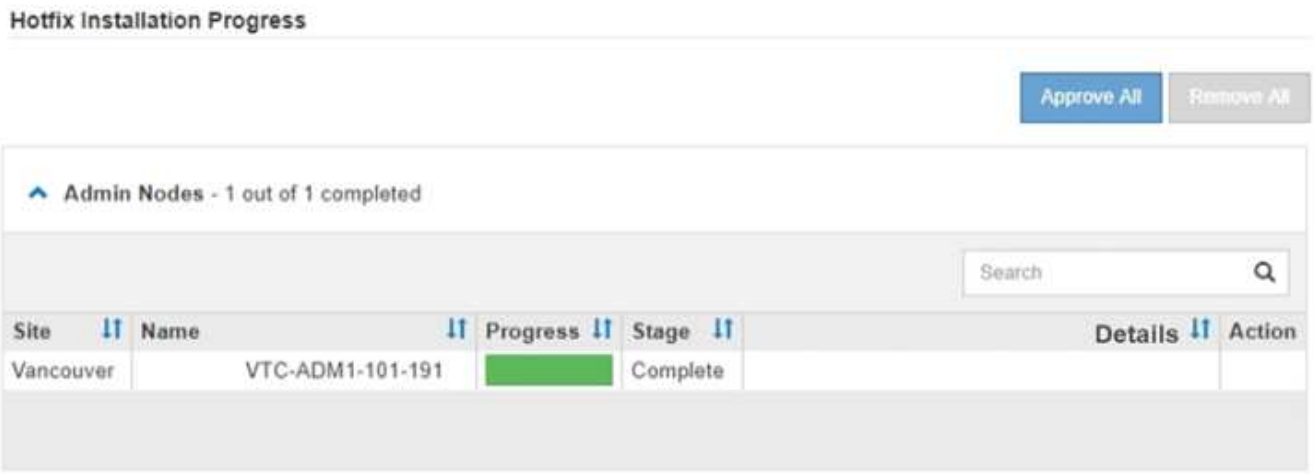
   a. The hotfix validations are run.

      > If any errors are reported, resolve them, re-upload the hotfix file, and select **Start** again.

   b. The hotfix installation progress table appears. This table shows all nodes in your grid and the current stage of the hotfix installation for each node. The nodes in the table are grouped by type:

      - Admin Nodes
      - Gateway Nodes
      - Storage Nodes
      - Archive Nodes

      > The progress bar reaches completion, and then the primary Admin Node is shown first with stage "Complete."



8. Optionally, sort the lists of nodes in each grouping in ascending or descending order by **Site**, **Name**, **Progress**, **Stage**, or **Details**. Or, enter a term in the **Search** box to search for specific nodes.
9. Approve the grid nodes that are ready to be updated. Approved nodes of the same type are upgraded one at a time.

> Do not approve the hotfix for a node unless you are sure the node is ready to be updated.When the hotfix is applied to a grid node, some services on that node might be restarted. These operations might cause service interruptions for clients that are communicating with the node.

- Select one or more **Approve** buttons to add one or more individual nodes to the hotfix queue.
- Select the **Approve All** button within each grouping to add all nodes of the same type to the hotfix queue. If you have entered search criteria in the **Search** box, the **Approve All** button applies to all the nodes selected by the search criteria.

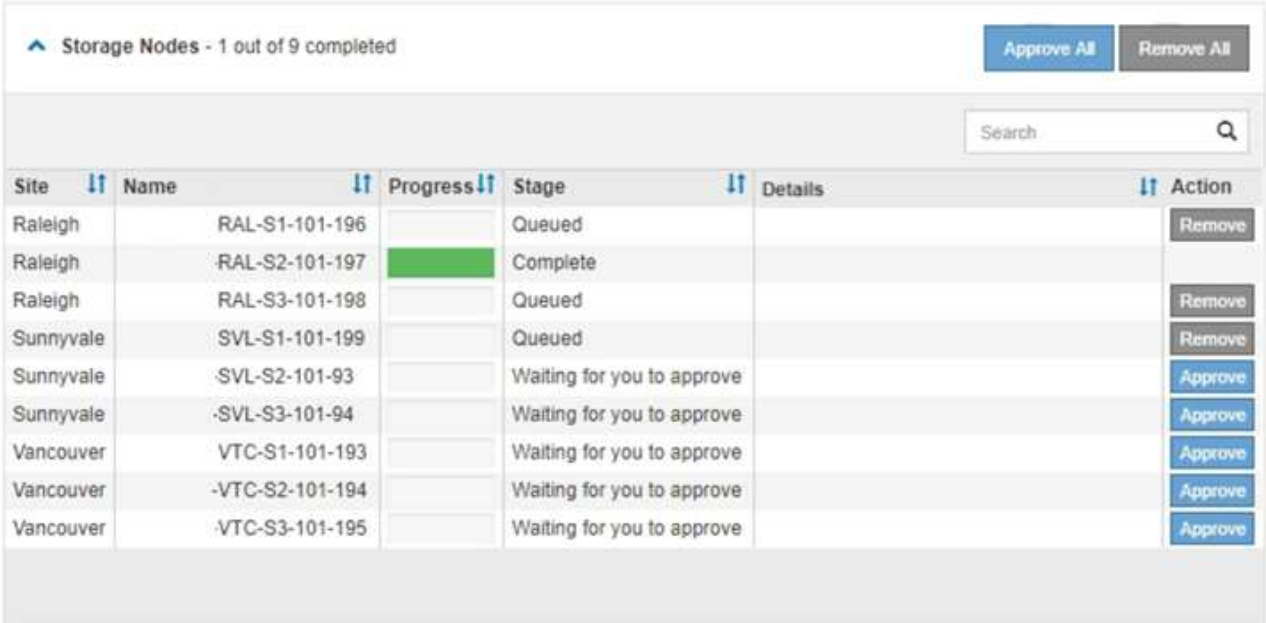
> The **Approve All** button at the top of the page approves all nodes listed on the page, while the **Approve All** button at the top of a table grouping only approves all nodes in that group. If the order in which nodes are upgraded is important, approve nodes or groups of nodes one at a time and wait until the upgrade is complete on each node before approving the next node(s).

- Select the top-level **Approve All** button at the top of the page to add all nodes in the grid to the hotfix queue.

> You must complete the StorageGRID hotfix before you can start a different software update. If you are unable to complete the hotfix, contact technical support.

- Select **Remove** or **Remove All** to remove a node or all nodes from the hotfix queue.

  When the Stage progresses beyond “Queued,” the **Remove** button is hidden and you can no longer remove the node from the hotfix process.



10. Wait while the hotfix is applied to each approved grid node.

    When the hotfix has been successfully installed on all nodes, the Hotfix Installation Progress table closes. A green banner shows the date and time the hotfix was completed.

11. If the hotfix could not be applied to any nodes, review the error for each node, resolve the issue, and repeat these steps.

    The procedure is not complete until the hotfix is successfully applied to all nodes. You can safely retry the hotfix process as many times as required until it is complete.

Related information

Administer StorageGRID

Monitor and troubleshoot

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