

DM Series firmware update

DM Series storage firmware update procedures

The Lenovo logo is positioned in the top right corner of the slide. It consists of the word "Lenovo" in a white, sans-serif font, oriented vertically. The text is set against a rectangular background with a vertical color gradient that transitions from green at the top to blue at the bottom.

Lenovo

DM Series firmware update procedures

DM Series firmware updates can be performed using either:

- ThinkSystem Storage Manager
- The console CLI

Updating firmware from ThinkSystem Storage Manager

There are three stages in the firmware update procedure: Select, Validate, and Update.

Click each step in turn to see the procedure

Step



Updating firmware from ThinkSystem Storage Manager

Log in to ThinkSystem Storage Manager, and then select **Configuration** to expand the selection list.

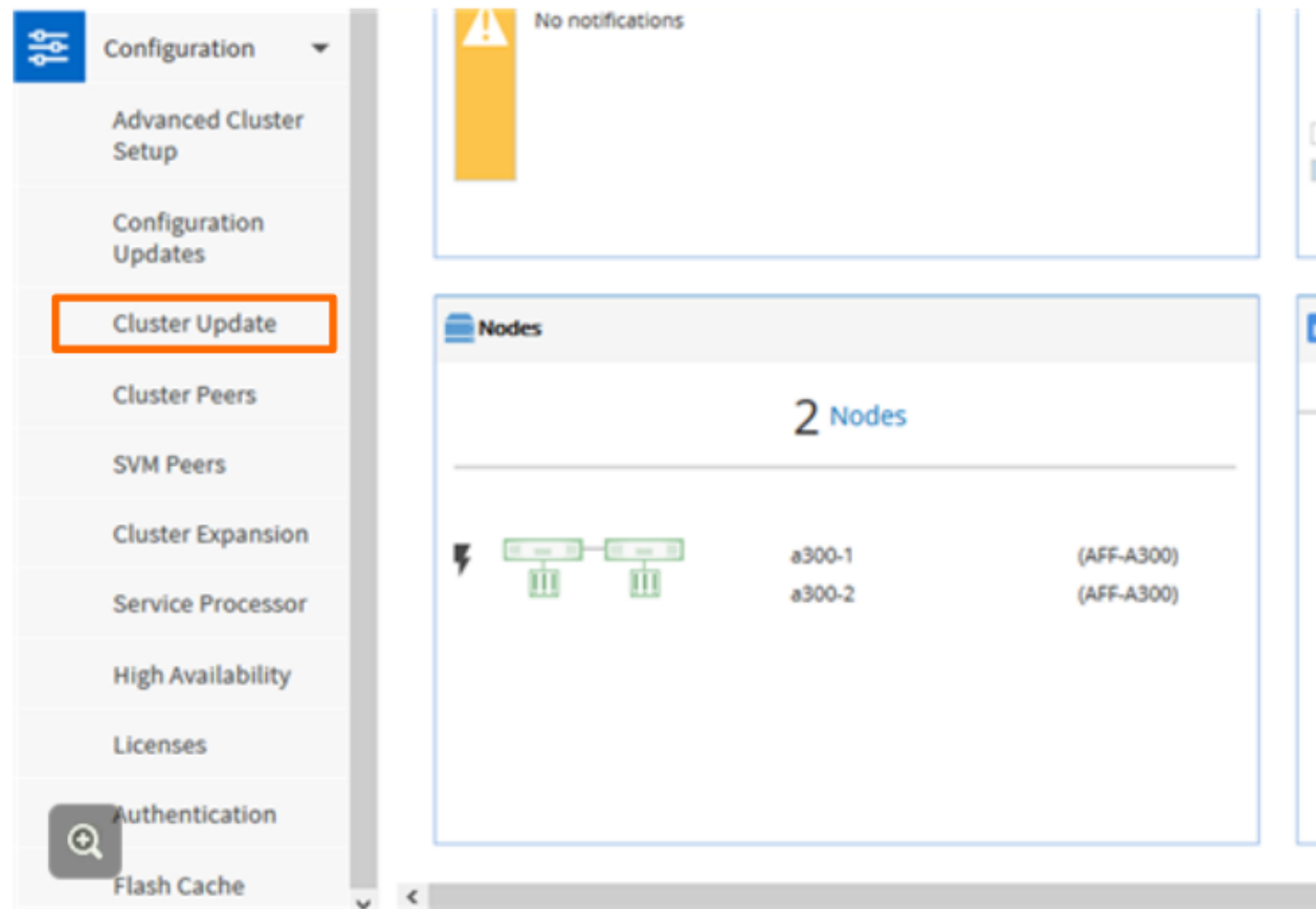
The screenshot shows the ThinkSystem Storage Manager for DM Series interface. The top navigation bar includes a search bar and a user profile icon. The left sidebar contains a menu with the following items: Dashboard, Applications & Tiers, Storage, Network, Protection, Events & Jobs, and Configuration. The 'Configuration' item is highlighted with an orange box. The main content area displays three panels: 'Alerts and Notifications' showing '4 Ports down' and 'No notifications', 'Health Overview' showing 'Capacity', 'Efficiency', and 'Protection' tabs, and 'Performance' showing a line graph of latency over time.

Step

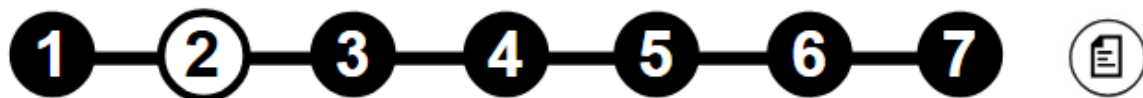


Updating firmware from ThinkSystem Storage Manager

Select **Cluster Update** from the selection list under the **Configuration**.



Step



Updating firmware from ThinkSystem Storage Manager

On the **Cluster Update** page, the firmware image file can be uploaded from an http or ftp server (with no authentication) by selecting **Add from Server**. It can also be uploaded directly from the client that the ThinkSystem Storage Manager is running on by selecting **Add from Local Client**.

After the file has been uploaded, it will be visible in the **Available Software Images** section. Click **Next**.

Click to view screenshot

Add from Server screenshot

Cluster Update

Cluster Update Update History

Refresh

Cluster Software (ONTAP) Update

This operation updates the selected ONTAP image on the cluster. The cluster remains online and continues to serve data during the upgrade.

[Tell me more about preparing for an ONTAP cluster update.](#)

1 Select 2 Validate 3 Update

Cluster Version Details

Current cluster version: NetApp Release 9.4P1: Sat Jul 21 03:28:44 UTC 2018

[Show version details for nodes or HA pairs](#)

Available Software Images

You can download the software image from the [Lenovo Support site](#) to an HTTP or FTP server on your network, or to your local client, and then add it to the list of Available Software Images.

Select one of the software images to continue with the update.

Available Software Images: 9.4P1 (Image build time: 21-Jul-2018 03:28:44 AM UTC)

Add from Server Add from Local Client Delete

Next

Step



Updating firmware from ThinkSystem Storage Manager

Add from Server screenshot



Add a New Software Image

Enter the URL of the HTTP or FTP server where the software image is located.

? URL:

Add **Close**

Step



Updating firmware from ThinkSystem Storage Manager

Click **Validate**.

A series of **Warnings** about what might happen if your system is active will be displayed.

Work through the instructions in the **Advice** column to fix the errors.

Cluster Update

Cluster Update

Cluster Update Update History

Cluster Software (Data ONTAP) Update

The update installs the selected Data ONTAP image on specified nodes. You can download the software images from the [NetApp website](#). The update can take some time depending on your cluster setup.

[Tell me more about preparing for a Data ONTAP cluster update.](#)

Select Validate Update

You have chosen to validate the cluster to check if the cluster is ready to be updated. Click Validate to start the process. It

Current Cluster Version:

Version being Updated to:

Validate

Warnings

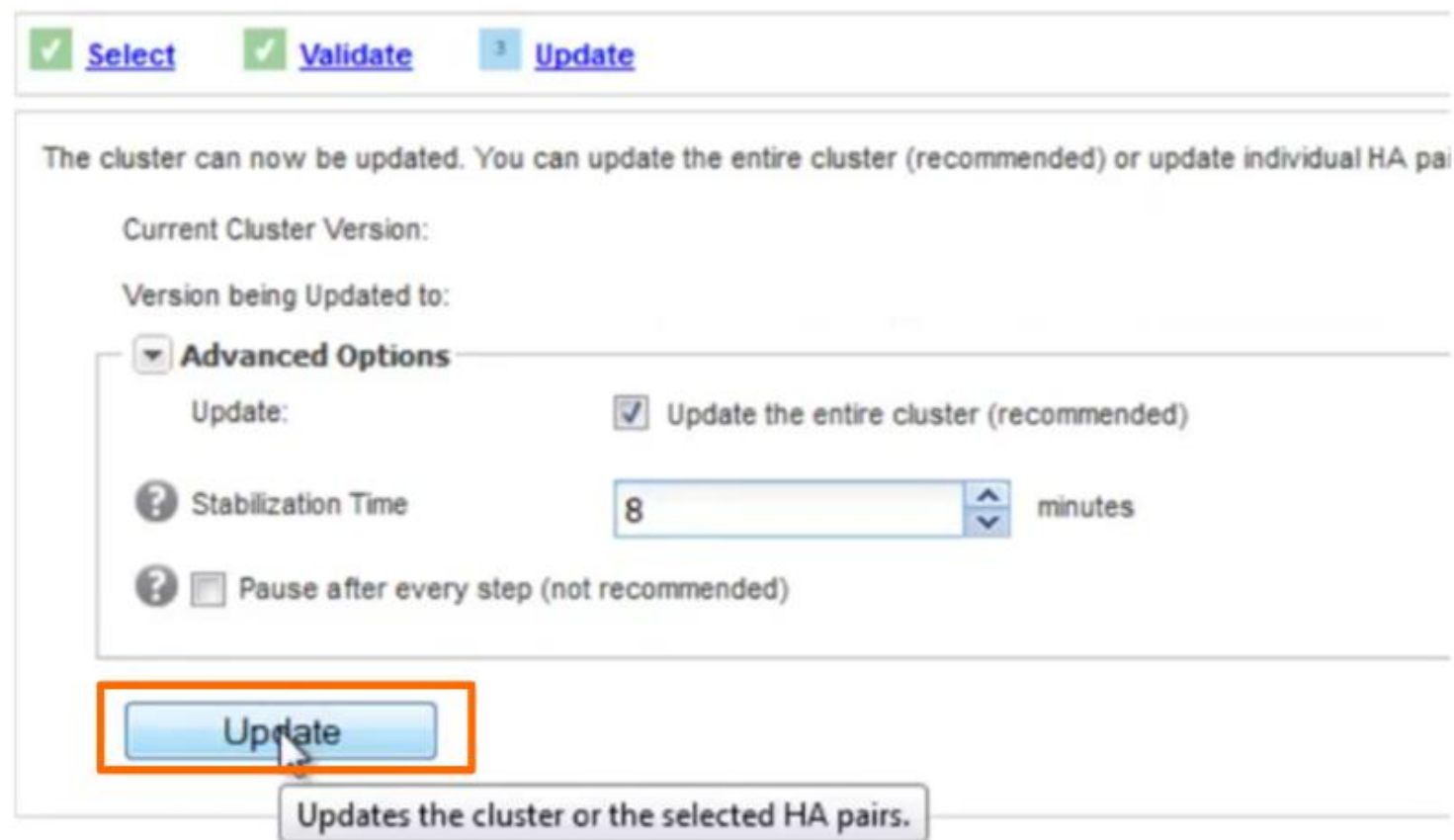
Pre-Update Check	Status	Error	Advice
CIFS status	⚠	CIFS is currently in use. Any unprotecte...	Stop all unprotected CIFS workloads bef...
Manual checks	⚠	Manual validation checks need to be p...	Refer to the Upgrade Advisor Plan or "P...
NFS mounts	⚠	This cluster is serving NFS clients. If NF...	Use NFS hard mounts, if possible.
Name Service Configuration DNS Check	⚠	None of the configured DNS servers ar...	Delete the DNS server, or verify that the...
SAN compatibility	⚠	Since this cluster is configured for SAN...	All SAN components-including target Da...

Step



Updating firmware from ThinkSystem Storage Manager

Click **Next** to move on to the Update phase.
Click **Update** for the additional validation process.



✓ [Select](#) ✓ [Validate](#) 3 [Update](#)

The cluster can now be updated. You can update the entire cluster (recommended) or update individual HA pairs.

Current Cluster Version:

Version being Updated to:

Advanced Options

Update: ☒ Update the entire cluster (recommended)

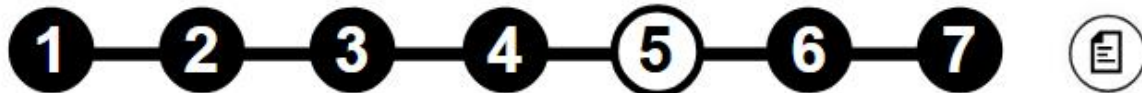
? Stabilization Time minutes

? ☐ Pause after every step (not recommended)

Update

Updates the cluster or the selected HA pairs.

Step



Updating firmware from ThinkSystem Storage Manager

Select the **Continue update with warnings** check box, and then click **Continue**. The update will be started with the first node.

Disk status	✓	-TEMP-	-TEMP-
High Availability status	✓	-NA-	-NA-
LIF status	✓	-NA-	-NA-
LIFs on home node status	✓	-NA-	-NA-

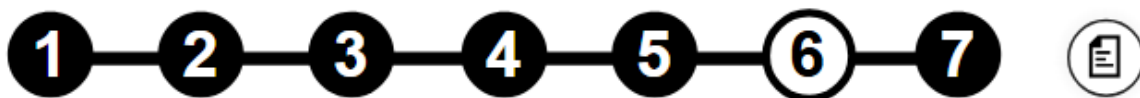
Detailed Status of the Selected Pre-Update Check:

Select the Pre-Update check to view the detailed advice and action.

☒ Continue update with warnings


Continue Cancel

Step





Updating firmware from ThinkSystem Storage Manager

The update will take over an hour and you will see the status change in the ThinkSystem Storage Manager as each node is completed.

 Update in progress...

Estimated Time Left: 1 hour 26 minutes 13 seconds

Approximate Time Elapsed: 47 seconds

Node	Status	Approximate Time Elapsed
FAS8200_Dev_1		1 seconds
FAS8200_Dev_2		1 seconds

Detailed Status of the Selected Node:

Step



Updating firmware from the CLI

There are three stages in the firmware update procedure: Select, Validate, and Update.

Click each step in turn to see the procedure

Step



Updating firmware from the CLI

Issue the following command at the admin privilege level when you are logged in at the CLI:

```
cluster image package get -url <http or ftp location>
```

Example:

```
cluster1::> cluster image package get -url http://www.example.com/software/9.4/image.tgz
Software get http://www.example.com/software/9.4/image.tgz started on node node0
Downloading package. This may take up to 10 minutes.
98% downloaded
There is no update/install in progress
Status of most recent operation:
      Run Status:      Working
      Exit Status:     Success
      Phase:           Download
      Exit Message:
Processing Package.
Process package Complete
```



Step

1

2

3

4

5

6



Updating firmware from the CLI

Issue the following command to verify that the software package is available in the cluster package repository:

```
cluster image package show-repository
```

Example:

```
cluster1::> cluster image package show-repository
Package Version
-----
9.4.0
```

Step

1

2

3

4

5

6



Updating firmware from the CLI

Issue the following command to verify that the cluster is ready to be upgraded nondisruptively:

```
cluster image validate -version  
package_version_number
```

This command checks the cluster components to validate that the upgrade can be completed nondisruptively, and then provides the status of each check and any required action you must take before performing the software upgrade. You can proceed to the next step after completing all the identified required actions.

```
cluster1::> cluster image validate -version 9.4.0  
It can take several minutes to complete validation...  
Pre-update Check      Status      Error-Action  
-----  
Aggregate status      OK  
CIFS status           OK  
Cluster health        OK  
status  
Disk status           OK  
High Availability     OK  
status  
LIF status            OK  
LIFs on home node     OK  
MetroCluster          OK  
configuration status  
SnapMirror status     OK  
Volume status         OK  
mgmt epoch status     OK  
mgmt RDB ring status  OK  
vifmgr epoch status   OK  
vifmgr RDB ring      OK  
status  
vldb epoch status     OK  
vldb RDB ring status  OK  
Overall Status        OK  
17 entries were displayed.
```

Step **1** — **2** — **3** — **4** — **5** — **6**



Updating firmware from the CLI

If desired, generate a software upgrade estimate with the following command:

```
cluster image update -version package_version_number -estimate-only
```

The software upgrade estimate displays details about each component to be updated, and the estimated duration of the upgrade. This step is optional.

Step



Updating firmware from the CLI

Issue the following command to perform the software upgrade:

```
cluster image update -version package_version_number
```

- This command validates that each cluster component is ready to be upgraded, installs the target ONTAP image on each node in the cluster, and then performs a nondisruptive upgrade in the background.
- If an issue is encountered, the update will pause and prompt you to take corrective action.
- You can use the `cluster image show-update-progress` command to view details about the issue.
- After correcting the issue, you can resume the update by using the `cluster image resume-update` command.
- If the cluster consists of two through six nodes, a rolling upgrade is performed.
- If the cluster consists of eight or more nodes, a batch upgrade is performed by default. If desired, you can use the `-force-rolling` parameter to specify a rolling upgrade instead.
- After completing each takeover and each giveback, the upgrade will wait for eight minutes to enable client applications to recover from the pause in I/O that occurs during the takeover and giveback. If your environment requires more or less time for client stabilization, you can use the `-stabilize-minutes` parameter to specify a different amount of stabilization time.

Step  1 2 3 4 5 6 

Updating firmware from the CLI

Example:

```
cluster1::> cluster image update -version 9.4.0
Starting validation for this update. Please wait..
It can take several minutes to complete validation...
Non-Disruptive Check   Status   Error-Action
-----
Aggregate status       OK
CIFS status             OK
Cluster health         OK
status
Disk status             OK
High Availability       OK
status
LIF status              OK
LIFs on home node       OK
MetroCluster            OK
configuration status
SnapMirror status       OK
Volume status           OK
mgmt epoch status       OK
mgmt RDB ring status    OK
vifmgr epoch status     OK
vifmgr RDB ring         OK
status
vldb epoch status       OK
vldb RDB ring status    OK
Overall Status          OK
17 entries were displayed.
Would you like to proceed with update ? {y|n}: y
Starting update...
```

Step

