

DM Series firmware updates

Update procedures

Lenovo

DM Series firmware update procedures


DM Series firmware updates can be performed using either:

- Storage Manager
- The console CLI

Updating firmware from Storage Manager

Work through the following steps to update the firmware using Storage Manager.

Click each number in turn to see the procedure.

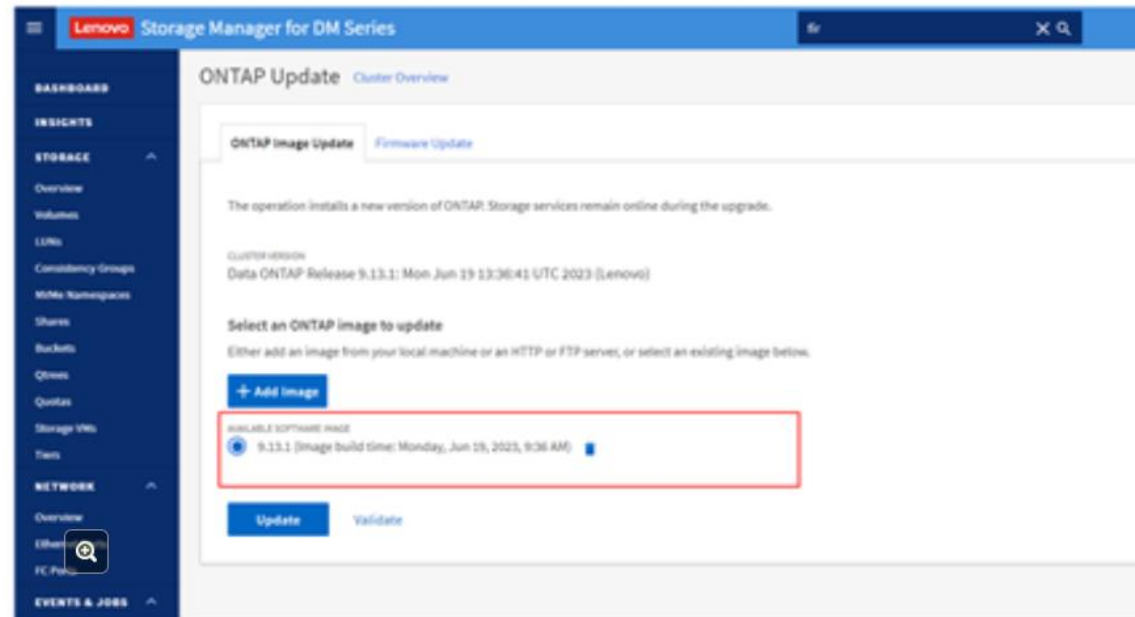


Step



Updating firmware from Storage Manager

- There are three stages to a firmware update: Select, Validate, and Update.
- From the **Cluster → ONTAP update** page, files can be uploaded from an HTTP or FTP server (with no authentication). They can also be uploaded directly from the client that Storage Manager is running on.
- After the file has been uploaded, it will be visible in **AVAILABLE SOFTWARE IMAGE**.









Step ①—②—③—④



Updating firmware from Storage Manager

- Select the image you want to use, and then click **Next**.
- Click **Validate**.
- You will receive a series of warnings if your system is active.

 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...	▼

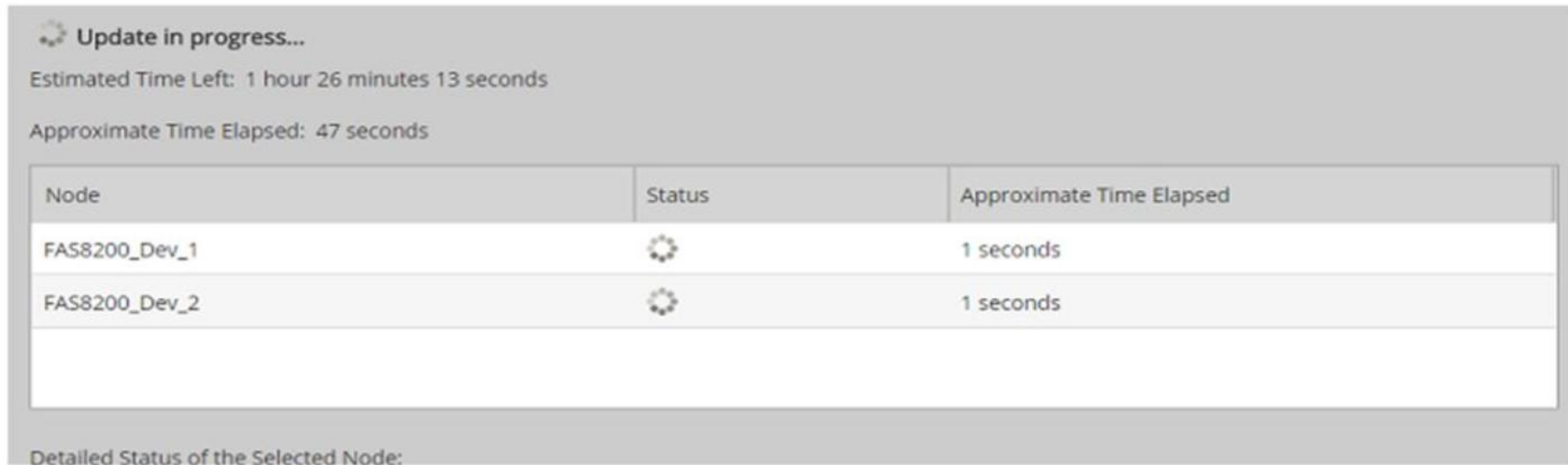
Detailed Status of the Selected Pre-Update Check:

Step



Updating firmware from Storage Manager

- If everything is OK, proceed with the installation.
- The update phase will begin.
- Select **Update** to start the additional validation process.
- Select the **Continue update with warnings** check box, and then click **Continue**.
- The update will begin with the first node.
- The process will take over an hour. As each node is updated, its status will change in Storage Manager.



The screenshot shows a window titled "Update in progress..." with a progress bar. Below the progress bar, it displays "Estimated Time Left: 1 hour 26 minutes 13 seconds" and "Approximate Time Elapsed: 47 seconds". A table lists the nodes being updated, their status, and the time elapsed for each. The table has three columns: "Node", "Status", and "Approximate Time Elapsed". There are two rows of data, both showing a status of "Updating" (represented by a gear icon) and a time elapsed of "1 seconds". Below the table, it says "Detailed Status of the Selected Node:".

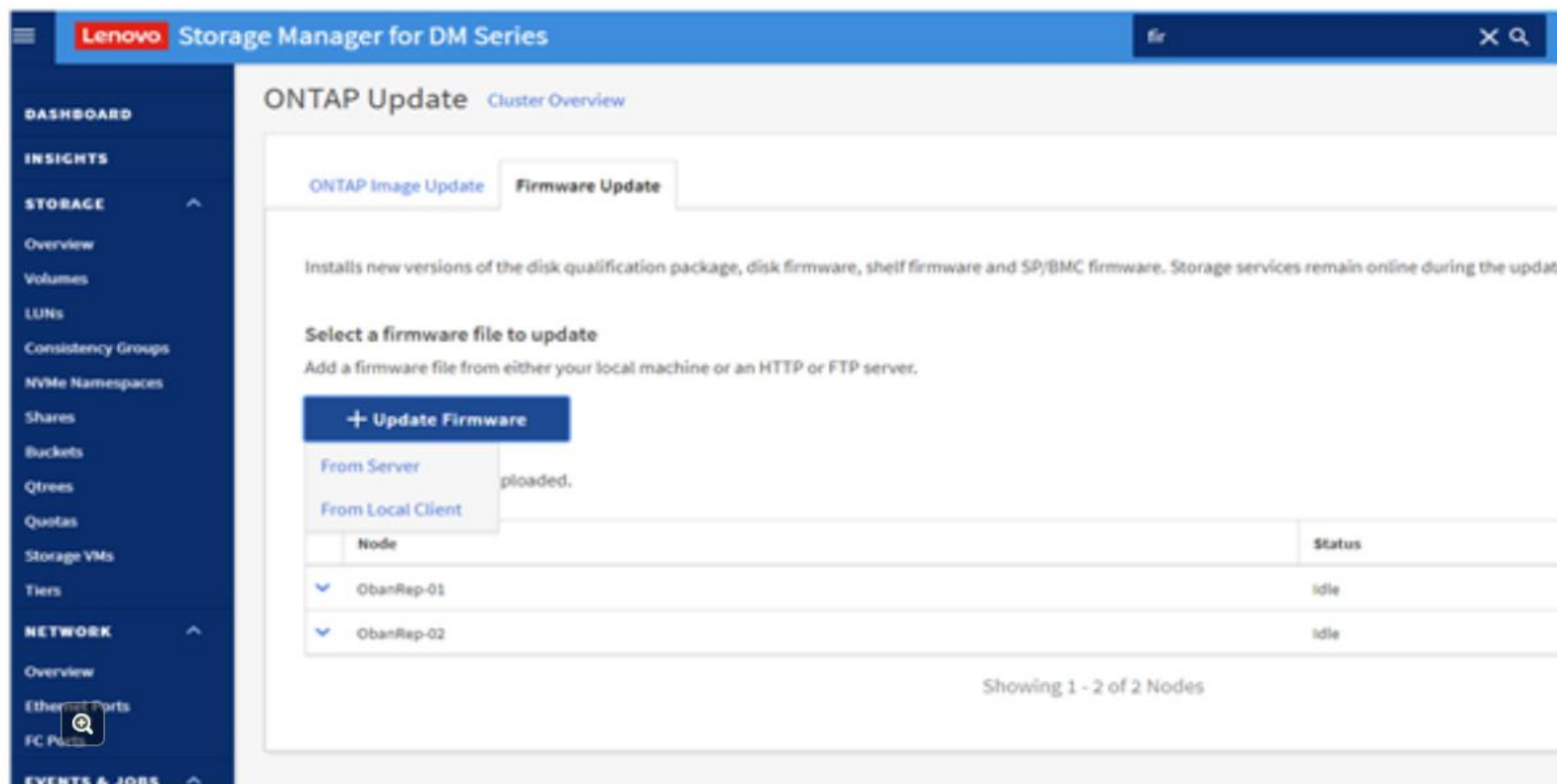
Node	Status	Approximate Time Elapsed
FAS8200_Dev_1	Updating	1 seconds
FAS8200_Dev_2	Updating	1 seconds

Step



Updating firmware from Storage Manager

- In addition to making ONTAP image updates, BMC/SP firmware, disk firmware, expansion unit firmware, and disk qualification packages can be installed from the GUI.




Step



Updating firmware from the CLI

Work through the following steps to update the firmware using the CLI.

Click each number in turn to see the procedure.



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

Updating firmware from the CLI

Issue the following command at the admin privilege level:

```
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



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



Updating firmware from the CLI

Issue the following command:

```
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 status	OK	
Disk status	OK	
High Availability status	OK	
LIF status	OK	
LIFs on home node	OK	
MetroCluster configuration status	OK	
SnapMirror status	OK	
Volume status	OK	
mgmt epoch status	OK	
mgmt RDB ring status	OK	
vifmgr epoch status	OK	
vifmgr RDB ring status	OK	
vldb epoch status	OK	
vldb RDB ring status	OK	
Overall Status	OK	

17 entries were displayed.

Step



Updating firmware from the CLI

To generate a software upgrade estimate, use 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. 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.



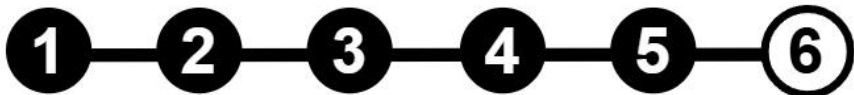
Updating firmware from the CLI

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



Summary

This course enabled you to:

- Describe the ThinkSystem DM3200F, DM5200F, DM5200H, DM7200F, DM242N and their components
- List the features and specifications
- Describe the cable connections for the DM3200F, DM5200F, DM5200H, DM7200F, and DM242N
- Provide an update of the ONTAP software bundle
- Describe the problem determination steps and explain how to troubleshoot issues with the DM storage systems
- Describe the FRU replacement procedures
- Describe the software and firmware upgrade procedures