DG Series firmware updates

Update procedures

DG Series firmware update procedures

DG Series firmware updates can be performed using either:
- Storage Manager
- The console CLI
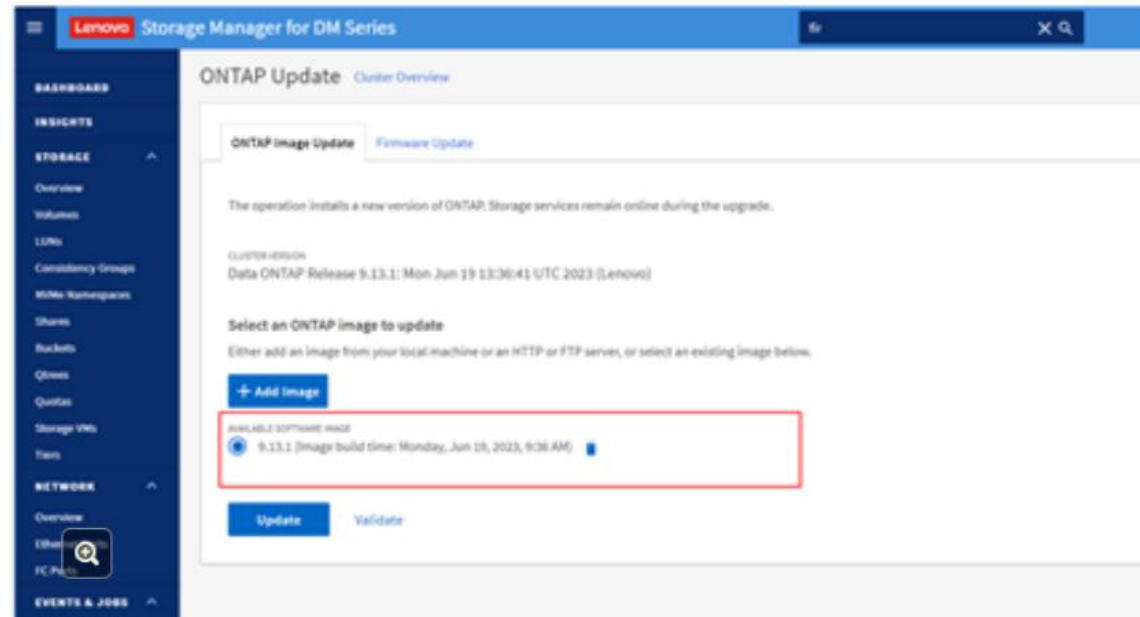
Updating firmware from Storage Manager

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

Click each number in turn to see the procedure.

Step ①—**②**—**③**—**④**

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

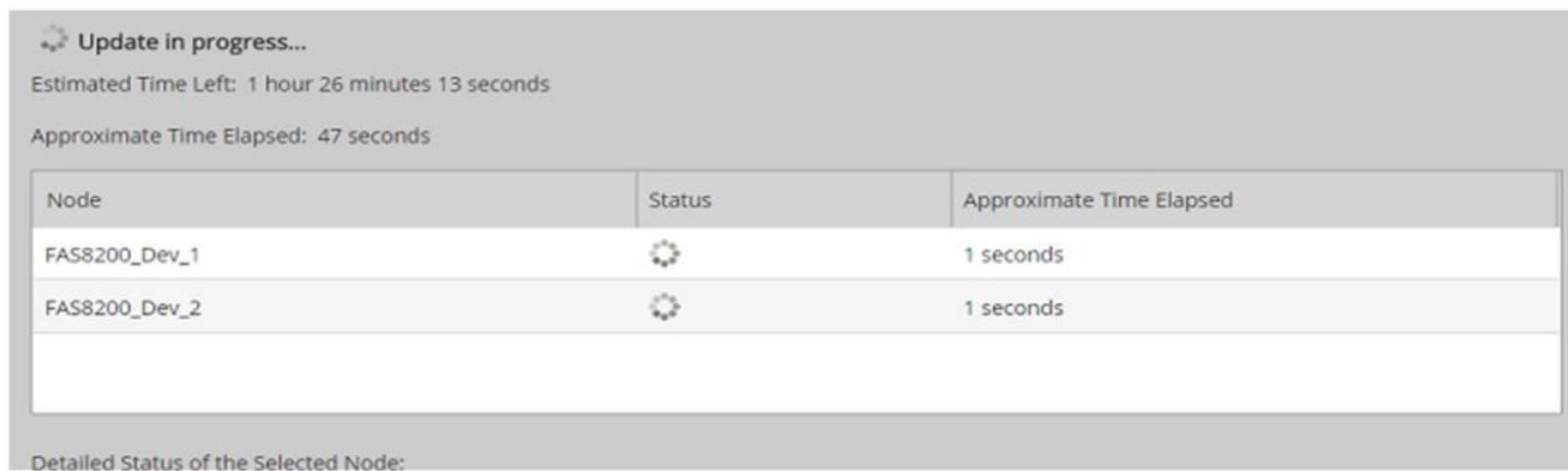| Pre-Update Check	Status	Error	Advice	⚙
CIFS status	⚠	CIFS is currently in use. Any unprotecte...	Stop all unprotected CIFS workloads bef...	
Manual checks	⚠	Manual validation checks need to be p...	Refer to the Upgrade Advisor Plan or "P...	
NFS mounts	⚠	This cluster is serving NFS clients. If NF...	Use NFS hard mounts, if possbile.	
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 **1**—**2**—**3**—**4**

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.

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

Update in progress...

Estimated Time Left: 1 hour 26 minutes 13 seconds

Approximate Time Elapsed: 47 seconds

Detailed Status of the Selected Node:

Step ❶—❷—❸—❹

Lenovo

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 ❶—❷—❸—④
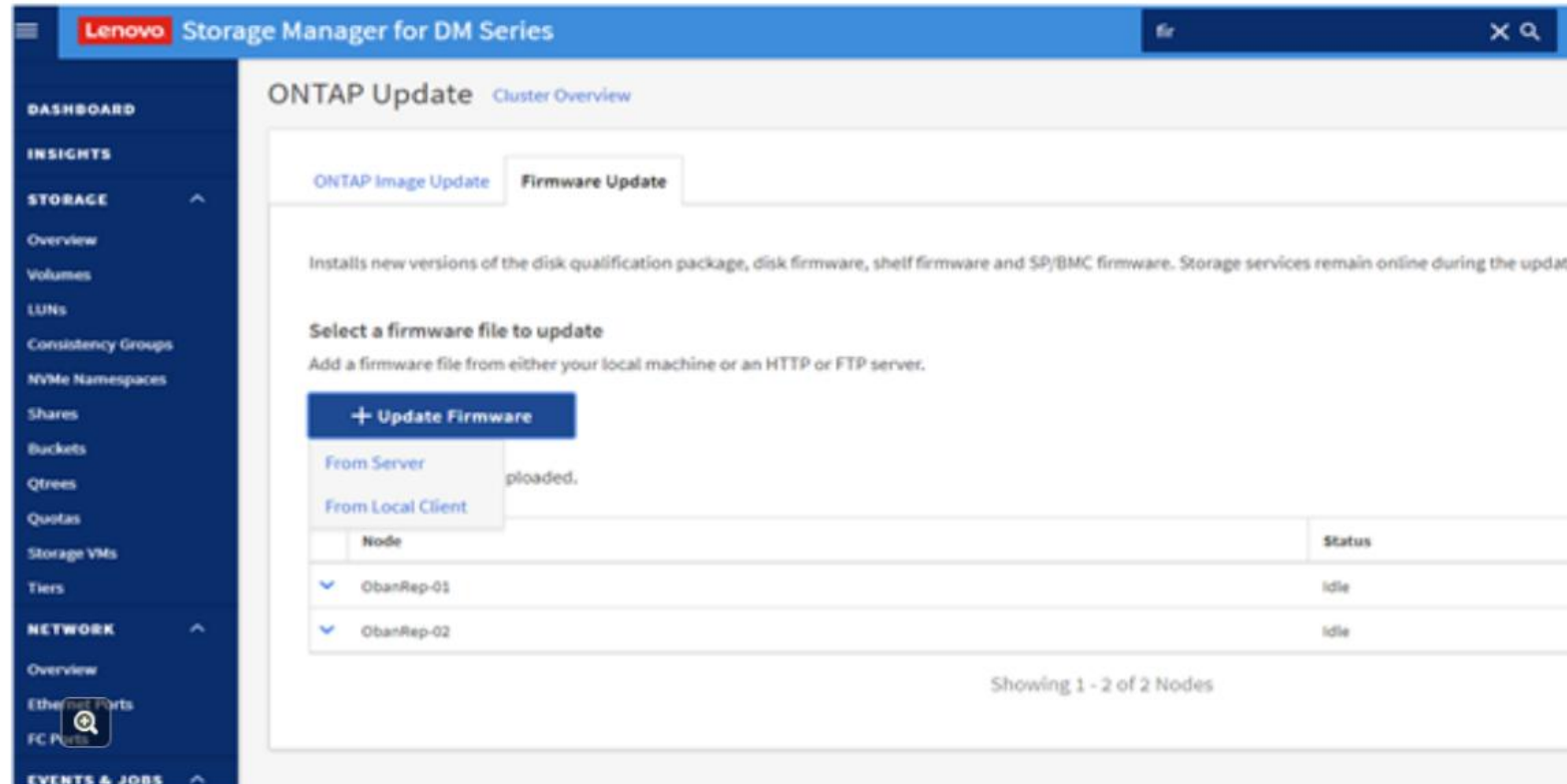
Updating firmware from the CLI

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

Lenovo

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
```
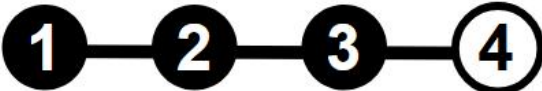
Step ① — ② — ③ — ④ — ⑤ — ⑥

Lenovo
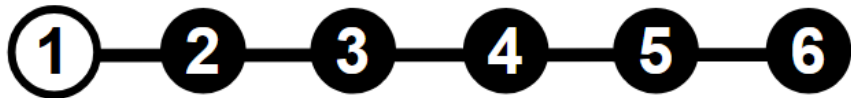
Updating firmware from the CLI

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:
`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 ❶—❷—❸—❹—❺—❻

Lenovo

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 ①—②—③—④—⑤—⑥

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.

Step ①—②—③—④—⑤—⑥

Lenovo
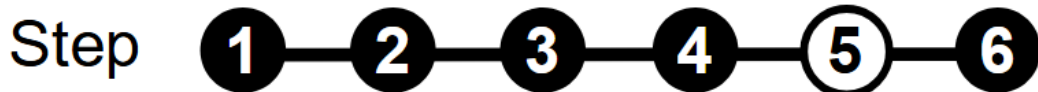
Updating firmware from the CLI

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 ① ② ③ ④ ⑤ ⑥
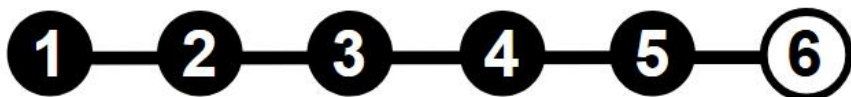
Summary

This course enabled you to:
- Describe the ThinkSystem DG5200, DG7200, DG242N, and their components
- List the features and specifications
- Describe the cable connections for the DG5200, DG7200, and DG242N
- Provide an update of the ONTAP software bundle
- Describe the problem determination steps and explain how to troubleshoot issues with the DG storage systems
- Describe the FRU replacement procedures
- Describe the software and firmware upgrade procedures

thanks.