Netapp filer firmware update

Pre-requisite

You will need a Netapp Support login

Download packages

Download the relevant firmware patch (i.e. 9.5p7) and disk firmware (if applicable) from Netapp

For example, for disk firmware, locate the appropriate disk model in the following matrix: https://mysupport.netapp.com/site/downloads/firmware/disk-drive-firmware
To download the disk firmware, click on "Download all current Disk Firmware - Published to NSS on 19-JUL-19" (or whatever is appropriate) and, at the bottom of the page, either click on Download .zip or Download .gz (usually Download .zip)

To download the patch, click on "Download the Disk Qualification Package - Published to NSS on 8-AUG-19 (Revision/Datecode: 20190404)" (or whatever is appropriate) and, at the bottom of the page, either click on Download .zip or Download .gz (usually Download .zip)

Apply the update(s)

Login to the Netapp GUI

Click on Configuration
Click on Cluster
Click on Update
Note that the Cluster History tab will show you the last update paths.

Click on the Cluster Update tab to update to the new patch level
Select "Add from Local Client" and select the firmware file that you downloaded from the Netapp site earlier
From Available software images, tick the appropriate patch from the list
Click on Next
Click on Validate
Check and warnings and decide whether or not to proceed

If you get an error about LIFs not being home, check:

filer01::> network interface show -is-home false

              Logical   Status   Network   Current   Current Is

Vserver   Interface   Admin/Oper Address/Mask   Node   Port   Home

----------- ---------- --------- ----------------- ------------- ------- ----

filer01-svm01
filer01-svm01_nfs_lif1
up/up   10.8.8.105/23   filer01-04   a0a-500 false

Send the LIFs home:
filer01::> network interface revert *
1 entry was acted on.

filer01::>

Check again:
filer01::> network interface show -is-home false
There are no entries matching your query.

filer01::>
Validate again.

If you decide to proceed, click on Next
Leave Advanced Options as they are i.e. the "recommended" options are ticked
Click on Update
If you see a LIF warning message, click on OK
Tick "Continue update with warnings"
Click on Continue

Wait until the update finishes

You can check the progress via cli:
filer01::> cluster image show-update-progress

Estimated Elapsed
Update Phase Status Duration Duration
------------------- ---------------- -------------- --------------
Pre-update checks completed 00:10:00 00:00:52
Data ONTAP updates in-progress 01:17:00 00:36:23

Details:

Node name Status Status Description
------------------- ---------------- -------------------------------------
filer01-03 in-progress Verifying Data ONTAP version.
filer01-04 completed
6 entries were displayed.

filer01::>

It gets to the stage where it looks finished but the GUI isn't updating.
Check on the cli that the update is finished:

filer01::> cluster image show-update-progress

Estimated Elapsed
Update Phase Status Duration Duration
------------------- ---------------- -------------- --------------
Pre-update checks completed 00:10:00 00:00:52
Data ONTAP updates completed 01:17:00 00:41:42
Post-update checks completed 00:10:00 00:00:00
3 entries were displayed.

Updated nodes: filer01-03, filer01-04.

filer01::>

Also:
filer01::> cluster image show-update-history

Package Start Completion Previous Updated
Status Version Time Time Component ID Version Version
---------- --------- ---------- ---------- ------------ --------- ---------

```
successful 9.1P5 6/28/2017 6/28/2017 filer01-03 9.1 9.1P5
 12:29:45 12:49:57
successful 9.3P4 5/8/2018 5/8/2018 filer01-03 9.1P5 9.3P4
 12:33:30 13:38:07
successful 9.3P8 11/14/ 11/14/ filer01-03 9.3P4 9.3P8
 2018 2018
 10:58:52 11:26:24
successful 9.5P1 3/12/2019 3/12/2019 filer01-03 9.3P8 9.5P1
 11:49:06 12:17:09
successful 9.5P4 6/17/2019 6/17/2019 filer01-03 9.5P1 9.5P4
 12:05:31 12:27:12
successful 9.5P7 8/28/2019 8/28/2019 filer01-03 9.5P4 9.5P7
<=====
 10:37:06 10:59:00
successful 9.1P5 6/28/2017 6/28/2017 filer01-04 9.1 9.1P5
 12:29:45 13:09:31
successful 9.3P4 5/8/2018 5/8/2018 filer01-04 9.1P5 9.3P4
 12:33:30 14:42:13
successful 9.3P8 11/14/ 11/14/ filer01-04 9.3P4 9.3P8
 2018 2018
 10:58:52 11:47:37
successful 9.5P1 3/12/2019 3/12/2019 filer01-04 9.3P8 9.5P1
 11:49:06 12:40:13
successful 9.5P4 6/17/2019 6/17/2019 filer01-04 9.5P1 9.5P4
 12:05:31 12:47:21
successful 9.5P7 8/28/2019 8/28/2019 filer01-04 9.5P4 9.5P7
 10:37:06 11:18:48
successful 8.3.2 7/14/2016 7/14/2016 filer01a 8.3P1 8.3.2
 08:41:31 09:02:57
successful 9.1 1/28/2017 1/28/2017 filer01a 8.3.2 9.1
 06:09:48 06:31:10
successful 8.3.2 7/14/2016 7/14/2016 filer01b 8.3P1 8.3.2
 08:41:31 09:23:10
successful 9.1 1/28/2017 1/28/2017 filer01b 8.3.2 9.1
 06:09:48 06:50:51
16 entries were displayed.

filer01::>
```

Then reload the GUI.

Check on the GUI that there are no error messages.
Go to the Dashboard

Note that the emergency events are most likely due to the migration that occured during the update i.e.

monitor.globalStatus.critical: This node has taken over filer01-03

If there are warnings about the LIF not being at home, send it home (as above)

It may be necessary to update some/all disk firmware separately.

Click on Storage
Click on Aggregates & Disks
Click on Disks
Click on the Inventory tab
Click on the Settings "wheel" on the right hand side and tick Firmware Version and Model
Filter on the appropriate disk model and check the firmware level

If an update is necessary, first check that no update is in progress:

```
filer01::> set -privilege advanced

Warning: These advanced commands are potentially dangerous; use them only when
directed to do so by NetApp personnel.
Do you want to continue? {y|n}: y

filer01::*> storage disk firmware show-update-status

Number Average Total
 Update Waiting Duration Completion
Node State Download /Disk (Sec) Est. (Min) Unable to Update
------------------ ------- -------- ----------- ---------- -------------------
filer01-03 idle 0 120 0 -
filer01-04 idle 0 120 0 -
2 entries were displayed.

filer01::*>
```

Check current firmware revision for the model in question:
```
filer01::> storage disk show -fields firmware-revision,model -model
X477_HMKPX04TA07

disk firmware-revision model
------ ---------------- ----------------

Info: This cluster has partitioned disks. To get a complete list of spare disk
capacity use "storage aggregate show-spare-disks".
 This cluster has storage pools. To view available capacity in the storage pools
use "storage pool show-available-capacity".
1.1.4 NA00 X477_HMKPX04TA07
1.1.5 NA00 X477_HMKPX04TA07
1.1.7 NA00 X477_HMKPX04TA07
1.1.8 NA00 X477_HMKPX04TA07
1.1.9 NA00 X477_HMKPX04TA07
1.1.10 NA00 X477_HMKPX04TA07
1.1.11 NA00 X477_HMKPX04TA07
1.1.12 NA00 X477_HMKPX04TA07
1.1.13 NA00 X477_HMKPX04TA07
1.1.14 NA00 X477_HMKPX04TA07
1.1.15 NA00 X477_HMKPX04TA07
1.1.16 NA00 X477_HMKPX04TA07
1.1.17 NA00 X477_HMKPX04TA07
1.1.19 NA00 X477_HMKPX04TA07
1.1.20 NA00 X477_HMKPX04TA07
1.1.21 NA00 X477_HMKPX04TA07
1.1.22 NA00 X477_HMKPX04TA07
1.1.23 NA00 X477_HMKPX04TA07
18 entries were displayed.
```

Download the disk firmware package onto the node:

```
filer01::*> set diag
filer01::*> system node systemshell -node filer01-03

diag@127.0.0.1's password:

Warning: The system shell provides access to low-level
diagnostic tools that can cause irreparable damage to
the system if not used properly. Use this environment
only when directed to do so by support personnel.
```

```
filer01-03%


In the command below, change the user and source as appropriate!!

filer01-03% scp chrisg@10.5.128.7:Download/all.zip /mroot/etc/
filer01-03% unzip -o /mroot/etc/all.zip -d /mroot/etc


The update will start automatically. This is because the filer is setup for
background firmware updates:
filer01::> storage disk option show
Node BKg. FW. Upd. Auto Copy Auto Assign Auto Assign Policy
------------- ------------- ------------ ------------- -----------------
filer01-03 on on on default
filer01-04 on on on default
2 entries were displayed.


filer01::>

Note that if BKg. isn't set to "on", you can set it by doing:
filer01::> storage disk option modify -node filer01-03 -bkg-firmware-update on


After you have exited the shell:
filer01::> storage disk show -fields firmware-revision,model -model
X477_HMKPX04TA07

disk firmware-revision model
------ ---------------- ----------------

Info: This cluster has partitioned disks. To get a complete list of spare disk
capacity use "storage aggregate show-spare-disks".
 This cluster has storage pools. To view available capacity in the storage pools
use "storage pool show-available-capacity".
1.1.4 NA00 X477_HMKPX04TA07
1.1.5 NA01 X477_HMKPX04TA07
1.1.7 NA00 X477_HMKPX04TA07
1.1.8 NA00 X477_HMKPX04TA07
1.1.9 NA00 X477_HMKPX04TA07
1.1.10 NA00 X477_HMKPX04TA07
1.1.11 NA00 X477_HMKPX04TA07
1.1.12 NA00 X477_HMKPX04TA07
1.1.13 NA00 X477_HMKPX04TA07
1.1.14 NA00 X477_HMKPX04TA07
1.1.15 NA00 X477_HMKPX04TA07
1.1.16 NA00 X477_HMKPX04TA07
1.1.17 NA00 X477_HMKPX04TA07
1.1.19 NA00 X477_HMKPX04TA07
1.1.20 NA00 X477_HMKPX04TA07
1.1.21 NA00 X477_HMKPX04TA07
1.1.22 NA00 X477_HMKPX04TA07
1.1.23 NA00 X477_HMKPX04TA07
18 entries were displayed.

filer01::*> storage disk firmware show-update-status


Number Average Total
 Update Waiting Duration Completion
Node State Download /Disk (Sec) Est. (Min) Unable to Update
----------------- ------- -------- ----------- ---------- --------------------
filer01-03 idle 1 120 2 1.1.7
 1.1.4
```

```
 1.1.8
 1.1.10
 1.1.9
 1.1.12
 1.1.11
 1.1.13
 1.1.16
 1.1.14
 1.1.17
 1.1.15
 1.1.19
 1.1.21
 1.1.20
 1.1.22
filer01-04 idle 0 120 0 -
2 entries were displayed.


...


filer01::*> storage disk firmware show-update-status


Number Average Total
 Update Waiting Duration Completion
Node State Download /Disk (Sec) Est. (Min) Unable to Update
------------------ ------- -------- ----------- ---------- -------------------
filer01-03 running 1 120 2 1.1.9
 1.1.12
 1.1.11
 1.1.13
 1.1.16
 1.1.14
 1.1.17
 1.1.15
 1.1.19
 1.1.21
 1.1.20
 1.1.22
filer01-04 idle 0 120 0 -
2 entries were displayed.


filer01::*> storage disk firmware show-update-status


Number Average Total
 Update Waiting Duration Completion
Node State Download /Disk (Sec) Est. (Min) Unable to Update
------------------ ------- -------- ----------- ---------- -------------------
filer01-03 idle 9 120 18 -
filer01-04 idle 0 120 0 -
2 entries were displayed.


filer01::*> storage disk show -fields firmware-revision,model -model
X477_HMKPX04TA07


disk firmware-revision model
------ ----------------- ----------------
1.1.4 NA01 X477_HMKPX04TA07
1.1.5 NA01 X477_HMKPX04TA07
1.1.7 NA01 X477_HMKPX04TA07
1.1.8 NA01 X477_HMKPX04TA07
1.1.9 NA01 X477_HMKPX04TA07
1.1.10 NA01 X477_HMKPX04TA07
1.1.11 NA01 X477_HMKPX04TA07
1.1.12 NA01 X477_HMKPX04TA07
```

```
1.1.13 NA01 X477_HMKPX04TA07
1.1.14 NA01 X477_HMKPX04TA07
1.1.15 NA01 X477_HMKPX04TA07
1.1.16 NA01 X477_HMKPX04TA07
1.1.17 NA01 X477_HMKPX04TA07
1.1.19 NA01 X477_HMKPX04TA07
1.1.20 NA01 X477_HMKPX04TA07
1.1.21 NA01 X477_HMKPX04TA07
1.1.22 NA01 X477_HMKPX04TA07
1.1.23 NA01 X477_HMKPX04TA07
18 entries were displayed.
```