

PowerScale Node Firmware Package 12.4.2

Release notes

January 2025

The firmware package is available for download from [Dell Product Support](#). Follow the instructions in this guide to update the firmware.

 **NOTE:** If you require assistance with the node firmware update, contact [Dell Product Support](#) and open an SR ticket.

Supported platforms and system requirements	2
Confirming free space	2
New features and resolved issues	2
Known issues	2
Firmware versions	3
Upgrade considerations	7
Where to get help.....	8
Additional options for getting help	8

Supported platforms and system requirements

Before updating the Node Firmware Package (NFP) on the node, confirm that the OneFS version and node hardware model support the new firmware.

You must meet the following requirements for this NFP version:

- OneFS 9.0.0 and later
- Isilon Generation 5 models: X210
- Isilon Generation 6 models: A200, A2000, F800, F810, H400, H500, H600, and H5600
- PowerScale Flash models: F200, F210, F600, F710, F900, and F910
- PowerScale Accelerator models: B100 and P100
- PowerScale Archive and Hybrid models: A300, A300-L, A3000, A3000-L, H700, and H7000

 **NOTE:** OneFS 9.9.0.0 requires NFP 12.1 minimum.

 **NOTE:** For NFS over RDMA users the following versions are required: OneFS 9.2.1.15 or later, 9.3.0.8 or later, 9.4.0.5 or later, or 9.5.0.0 or later.

Confirming free space

Before upgrading the node firmware package, ensure that there is enough free space available for the node firmware binaries. Approximately 800MB of free space in /ifs/ is required, and up to 300 MB of free space in /tmp on each PowerScale Flash and Accelerator model.

New features and resolved issues

New features

- There are no new features in this release

Resolved issues

- Upstream security patches
 - Refer to the Dell Security Advisories, Notices, and Resources site for a complete list of patches included in this PowerScale NFP release

Known issues

- After installing the NFP, a node may have reported previous BIOS and Broadcom BCM5720 firmware versions (UDSPS-1061: B100, F200, F600, F700, F900, and P100)
 - Workaround: Restart iDRAC and retry firmware assessment
- The NFP install failed to make progress on the firmware update (UDSPS-1258: B100, F200, F600, F700, F900, and P100)
 - Workaround: Retry the NFP installation

Firmware versions

The following tables list the firmware devices and versions included in the node firmware package. These tables are organized by platform type and generation.

PowerScale Accelerator and Flash Nodes

PowerScale's Accelerator and Flash nodes leverage Dell's PowerEdge server platforms and include firmware device versions qualified specifically for the PowerScale storage appliance configuration. The Rev Locked firmware devices identified in the tables below are included in the NFP and are installed via the PowerScale Non-Disruptive Upgrade (NDU) process, whereas the balance of platform firmware (e.g., power supply) may only be installed during manufacturing.

 **NOTE:** The PowerScale 16G BIOS, CPLD, iDRAC, and VOSS firmware is qualified as a matched set, and must not be upgraded outside of the NDU process.

Table 1. PowerScale Node Firmware: F210, F710, and F910

Firmware Device	Type	Update Version	Rev Locked	Updated in this Release
BIOS	BIOS	2.4.4	Yes	Yes
Backplane 1 (non-F910)	FRMW	7.10	Yes	
Backplane 1 and Backplane 2 (F910 only)	FRMW	3.31	Yes	
Broadcom NetXtreme Gigabit Ethernet (BCM5720)	FRMW	22.31.6	Yes	
Integrated Remote Access Controller (iDRAC)	FRMW	7.10.90.00	Yes	Yes
System CPLD	FRMW	1.2.6	Yes	
Mellanox-CX6-200GbE	200GigE	20.39.1002+DEL0000000052	Yes	
Mellanox-CX6-100GbE	100GigE	22.32.2004+DEL0000000027	Yes	
Mellanox-CX6-25GbE	25GigE	26.36.1010+DEL0000000031	Yes	
VOSS Dell EC NVMe OPAL 7400 RI M.2 110 960GB	FRMW	1.4.0	Yes	
VOSS Dell EC NVMe FIPS 7400 RI M.2 110 960GB	FRMW	2.5.0	Yes	
VOSS Dell EC NVMe ISE 7450 RI M.2 110 960GB	FRMW	1.1.0		
VOSS Dell DC NVMe PM9A3 RI M.2 110 960GB	FRMW	1.0.0	Yes	

Table 2. PowerScale Node Firmware: B100, F200, F600, F900, and P100

Firmware Device	Type	Update Version	Rev Locked	Updated in this Release
BIOS	BIOS	2.22.2	Yes	
Backplane 1	FRMW	4.35	Yes	
Backplane 2 (F900 only)	FRMW	4.35	Yes	
Backplane Expander (F600 only)	FRMW	2.46	Yes	
Broadcom NetXtreme Gigabit Ethernet (BCM5720)	FRMW	22.31.6	Yes	
Dell HBA330 Mini (N/A PowerScale F900 nodes)	FRMW	16.17.01.00	Yes	
Emulex LightPulse LPe31002 (B100 only)	16Gb FC	03.05.23	Yes	
Integrated Remote Access Controller (iDRAC)	FRMW	7.00.00.174	Yes	
Intel Gigabit Ethernet (i350-t rNDC)	FRMW	22.0.9	Yes	
Mellanox-CX6-100GbE	100GigE	22.32.2004+DEL0000000027	Yes	
Mellanox-CX6-25GbE	25GigE	26.36.1010+DEL0000000031	Yes	
Mellanox-CX5-100GbE	100GigE	16.35.1012+DEL0000000004	Yes	
Mellanox-CX4-25GbE	25GigE	14.32.2004+DEL2420110034	Yes	
Mellanox-CX3	IB/40 GbE	2.42.5000+EMC0000000004	Yes	

PowerScale Archive and Hybrid Nodes

The firmware in this table is controlled by the PowerScale Non-Disruptive Upgrade (NDU) process and applies to all PowerScale Archive and Hybrid nodes unless otherwise noted.

Table 3. PowerScale Archive and Hybrid Node Firmware: A300, A3000, H700, and H7000

Firmware Device	Purpose / Type	Update Version	Updated in this Release
MLKadpt_skylanders	BMC - Adaptive Cooling	02.80	
MLKbem_mongoose	Battery Charge Circuit	03.20	
MLKbem_mongoose_lw_mlb	Battery Charge Circuit	03.20	
MLKcatamaran	SAS controller (Catamaran V2)	0028.0015.0000.0000	
MLKccdes	Catamaran CDES	1.10.8+21.00	
MLKccdes_catamaran	Catamaran CDES V2	1.10.8+21.00	
MLKcdes	CDES-2 (Gen6-MLK)	2.44.0+0.18.0+21.00	
MLKcec_region0	Cryptographic Embedded Controller	02.00	
MLKcec_region1	Cryptographic Embedded Controller	32.02	
MLKcec_region3	Cryptographic Embedded Controller	00.03	
MLKcmd_rev_table	CMD Revision Table (not software)	20.85	
MLKcmd_100dc12pin	CMD Image	02.13.75.03	
MLKcmd_64pin	CMD Image	02.05.102.02	
MLKcmd_64pincos	CMD Image (Catamaran V2)	02.09.117.03	
MLKbios_gryphon	BIOS	10.79	
MLKpost_gryphon	POST	10.43	
MLKserdes_infinitymlk	SERDES	00.50	
MLKspime_gryphon	BIOS ME	8.00	
MLKuefi_fw_volume	UEFI	40.87	
MLKeth_infinitymlk	1GbE LAN FW	02.64	
MLKfp_fpinffw	Front Panel LED Infinity	02.0c	
MLKfp_fpioc	Front Panel LED Infinity	00.0b	
MLKfullbios_gryphon_post	SP SPI ROM	10.79	
MLKfw_map_table	Firmware Map Table (not software)	40.52	
MLKgem_skylanders	BMC - Main (GEM)	45.66	
MLKps0_gen2_artesyn_optimus	CFF PSU	02.14	
MLKps0_gen2_artesyn_ramjet	CFF PSU	02.14	
MLKps0_gen3_acbel_optimuswr	CFF PSU	03.01	
MLKps0_gen3_artesyn_ramjet	CFF PSU	02.30	
MLKps1_gen2_artesyn_optimus	CFF PSU	02.14	
MLKps1_gen2_artesyn_ramjet	CFF PSU	02.14	
MLKps1_gen3_acbel_optimuswr	CFF PSU	03.01	
MLKps1_gen3_artesyn_ramjet	CFF PSU	02.30	
MLKsas_catamaran	Gen6 SAS controller UEFI driver	0015.0004.0000.0000	
MLKsas_infinitymlk	SAS controller	0001.0004.0000.11193	
MLKssp_infinitymlk	BMC - SSP	01.44	
MLKvrd0_infinitymlk_infineon	Voltage Regulator	01.01	
MLKvrd1_infinitymlk_infineon	Voltage Regulator	01.01	
MLKvrd2_infinitymlk_infineon	Voltage Regulator	01.01	
MLKvrd3_infinitymlk_infineon	Voltage Regulator	01.02	
MLKvrd0_infinitymlk_TI	Voltage Regulator	01.01	
MLKvrd1_infinitymlk_TI	Voltage Regulator	01.01	
MLKvrd2_infinitymlk_TI	Voltage Regulator	01.01	
MLKvrd3_infinitymlk_TI	Voltage Regulator	01.01	
Network Interface Cards	Mellanox CX3 IB/40GbE	2.42.5000+EMC0000000004	

Firmware Device	Purpose / Type	Update Version	Updated in this Release
	Mellanox CX4-25GbE	14.32.2004+DEL2420110034	
	Mellanox CX5-100GbE	16.35.1012+DEL0000000004	
	Mellanox CX6-25GbE	26.36.1010+DEL0000000031	
	Mellanox CX6-100GbE	22.32.2004+DEL0000000027	
	Mellanox CX6 IB/40GbE	20.37.1014+EMC0000000029	

Isilon Generation 6 Nodes

Firmware packages listed in this section with the prefix DE refer to low-compute archive nodes, and the EP prefix refers to medium or high-compute performance nodes based on the processor or chipset.

Table 4. Isilon Generation 6 Node Firmware: A200, A2000, H400, H500, H5600, H600, F800, and F810

Isilon Platform	Firmware Device	Update Version	Updated in this Release
A200, A2000, and H400	DEadpt_moons	01.80	
	DEbcc_infinity	Replaced by DEbem_mongoose_lw and DEbem_mongoose	
	DEbem_mongoose_lw (bcc f/w)	03.20	
	DEbem_mongoose (bcc f/w)	03.20	
	DEbios_banshee	37.44	
	DEbmc_bblock_moons	01.40	
	DEbmc_main	24.52	
	DEccdes	1.10.8+21.00	
	DEcdes	2.44.0+0.18.0+21.00	
	DEcmd_100d815pin	03.08.103.01	
	DEcmd_mam_64pin	02.05.102.02	
	DEcmd_cat_64pin	02.05.102.02	
	DEeth_infinity	02.52	
	DEeth_sageville_infinity	0128.0000.0005.0195	
	DEfp_fpinffw	02.0c	
	DEfp_fpioc	00.0b	
	DEpost_banshee	28.18	
	DEps	gen2_artesyn: 02.14 zeus_acbel: 04.12 gen3_acbel_optimuswr: 03.01 gen3_artesyn_ramjet: 02.30	
	DEsas_catamaran	0015.0004.0000.0000	
	DEsas_infinity	0001.0004.0000.11193	
	DEserdes_banshee	08.00	
	DEspime_banshee	04.00	
	DEssp_infinity	02.84	
	DEuefi_fw_volume_infinity	03.43	
H500, H5600, H600, F800, and F810	DEvrd0_banshee_stmicro	02.01	
	DEvrd1_banshee_stmicro	01.00	
	EPadpt_moons	01.80	
	EPbcc_infinity	Replaced by EPbem_mongoose_lw and EPbem_mongoose	
	EPbem_mongoose_lw (bcc f/w)	03.20	
	EPbem_mongoose (bcc f/w)	03.20	
	EPbios_warthog	32.54	
	EPbmc_bblock_moons	01.40	
	EPbmc_main	24.52	
	EPccdes	1.10.8+21.00	
	EPcdes	2.44.0+0.18.0+21.00	
	EPcmd_100d815pin	03.08.103.01	
	EPcmd_mam_64pin	02.05.102.02	
	EPcmd_cat_64pin	02.05.102.02	
	EPeth_infinity	02.52	

Isilon Platform	Firmware Device	Update Version	Updated in this Release
	EPfp_fpinffw	02.0c	
	EPfp_fpioc	00.0b	
	EPpost_warthog	22.17	
	EPps	gen2_artesyn: 02.14 zeus_acbel: 04.12 gen3_acbel_optimuswr: 03.01 gen3_artesyn_ramjet: 02.30	
	EPsas_catamaran	0015.0004.0000.0000	
	EPsas_infinity	0001.0004.0000.11193	
	EPserdes_warthog	08.00	
	EPspime_warthog	10.00	
	EPssp_infinity	02.84	
	EPuefi_fw_volume_infinity	03.43	
	EPvrd0_warthog_stmicro	01.01	
	EPvrd1_warthog_stmicro	01.01	
	EPvrd2_warthog_stmicro	01.01	
Network Interface Cards	Emulex LightPulse FC Adapter (Fibre Channel + 10GbE)	11.4.204.21	
	Mellanox CX-3 IB/10GbE	2.42.5000+ISL1090110018	
	Mellanox CX-3 IB/40GbE	2.42.5000+EMC0000000004	
	Mellanox CX-3 (40GbE)	2.42.5000+EMC1090111023	
	Mellanox CX-3 (10GbE)	2.42.5000+EMC0000000002	
	Mellanox CX-4 (25GbE)	14.32.2004+DEL2420110034	
	Innova 40GbE Compression NIC (F810 only)		
	FPGA	0x100a+0x100a	
	Firmware	16.28.1002+EMC0000000017	

Isilon Generation 5 Nodes

This section identifies the firmware components managed by the Non-Disruptive Upgrade (NDU) process.

Table 5. Isilon Generation 5 Node Firmware: X210

Isilon Platform (if not common)	Hardware Component	Update Version	Updated in this Release
X210	Front panel	UI.01.36	
	BMC	1.25.9722	
	NVRAM	rp180d01+rp1	
	CMC	02.07	
	CMCSDR	00.03	
	CMD	02.0d+4c+01	
	CFFPS	Octane: 09.0b Octane_Acbel: 0A.01	
	DiskExp	0910+0210	
	Lsi DiskCtrl	20.00.04.00	
Network Interface Cards	Mellanox CX3 (InfiniBand)	4.8.930+205-0002-05_A	
Network Interface Cards	Qlogic NetXtreme II BCM57810(10GbE)	7.13.0	

Upgrade considerations

Before you begin a firmware upgrade, be aware of the effect the upgrade process has on cluster operations.

Each node is upgraded and can restart automatically when the upgrade is complete. There are three upgrade options: parallel (recommended), rolling (slowest), or simultaneous (fastest). The time taken for upgrade is reduced substantially by using the simultaneous option. Simultaneous upgrades update the cluster firmware in less time than parallel or rolling upgrades. However, there is slightly more risk for client disruption during a simultaneous upgrade.

 **NOTE:** If there is a partial upgrade, the system generates an alert indicating that a firmware upgrade has not been applied.

Run a firmware assessment

The firmware upgrade process uses the upgrade logs for firmware assessments. It summarizes data gathered by `isi_upgrade_logs` and provides that information in a report.

The Node Firmware Package must be in the `/ifs` directory.

1. To run an assessment, enter the following command:
`isi upgrade firmware assess --fw-pkg=/ifs/<path to NFP>`
2. To see the results and obtain the report, enter the following command:
`isi_upgrade_logs --get-fw-report`
3. Follow the recommendations in the report.

The assessment might take an extended amount of time to complete based on cluster size, activity, platform types, etc.

Upgrade the firmware

Upgrade nodes to the current firmware package.

To determine which nodes require upgrading, view the firmware assessment report.

1. Follow the recommendations in the firmware assessment report.
2. To upgrade the nodes to the current firmware package, run the following command:
`isi upgrade cluster firmware start --fw-pkg=/ifs/<path to nfp> --nodes-to-upgrade=<node number> <--rolling | --parallel | --simultaneous>`

 **NOTE:** You must choose either the rolling, simultaneous, or parallel upgrade option for the command to function. If you are unsure which option to choose, `--parallel` is the recommended option.

3. To check the progress of the firmware upgrade, run the following command at any time:
`isi upgrade cluster nodes firmware progress list`
4. When the upgrade completes, run the firmware assessment report and if any nodes still need an upgrade, repeat steps 1 and 2 on those nodes.
5. The firmware upgrade is complete when the firmware assessment report does not list any nodes that need upgrades.

Where to get help

The [Dell Technologies Support site](#) contains important information about products and services including drivers, installation packages, product documentation, knowledge base articles, and advisories.

A valid support contract and account might be required to access all the available information about a specific Dell Technologies product or service.

Additional options for getting help

This section contains resources for getting answers to questions about PowerScale products.

Dell Technologies support	• https://www.dell.com/support/incidents-online/contactus/product/isilon-onefs.
Telephone support	• United States: 1-800-SVC-4EMC (1-800-782-4362) • Canada: 1-800-543-4782 • Worldwide: 1-312-725-5401 • Local phone numbers for a specific country or region are available at https://www.dell.com/support/incidents-online/contactus/product/isilon-onefs.
PowerScale OneFS Documentation InfoHubs	• https://www.dell.com/support/kbdoc/000152189/powerscale-onefs-info-hubs
Dell Community Board for self-help	• https://www.dell.com/community

Notes, cautions, and warnings

 **NOTE:** A NOTE indicates important information that helps you make better use of your product.

 **CAUTION:** A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

 **WARNING:** A WARNING indicates a potential for property damage, personal injury, or death.