



## **Release Notes**

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The following pages provide information on the supported platforms, changes and new features, and reports on software known issues as well as bug fixes.

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# Changes and New Features

## Info

For an archive of changes and features from previous releases, please refer to "[Change Log History](#)".

## Changes and New Features in 24.10 LTSU1

- Added Redfish support to get [OOB network 3-port switch port link status](#)
- Added current limitation alarm events to BMC system event log (SEL)
- Integrated UE/CE memory/CPU cache ECC error recording into [BMC CPER logger](#)
- Added support for ipmitool commands to [configure IPv6 gateway](#).
- Added support for [RAS logging](#).

## Backward Compatibility Breaking Changes in this Release

The following changes in DOCA 2.9.1 (BSP 4.9.1) and BMC 24.10-LTSU1 break backward compatibility and therefore require customers to upgrade all DOCA software components to the latest available version to avoid anomalous behavior:

Software Component	Change Description
BMC	IPMB channel relocation – The IPMB channel used by the BlueField BMC to retrieve data from the BlueField Arm is now utilizing a dedicated I2C interface. This change is aimed at improving the serviceability of the interface.
FlexIO	Fixing a mandatory hardware limitation found the updated firmware version breaks backward compatibility between the software layers

# Supported Platforms and Interoperability

## Supported NVIDIA BlueField-3 Platforms

SKU	PSID	Description
900-9D3B6-00CV-AA0	MT_0000000884	NVIDIA BlueField-3 B3220 P-Series FHHL DPU; 200GbE (default mode) / NDR200 IB; Dual-port QSFP112; PCIe Gen5.0 x16 with x16 PCIe extension option; 16 Arm cores; 32GB on-board DDR; integrated BMC; Crypto Enabled
900-9D3B6-00SV-AA0	MT_0000000965	NVIDIA BlueField-3 B3220 P-Series FHHL DPU; 200GbE (default mode) / NDR200 IB; Dual-port QSFP112; PCIe Gen5.0 x16 with x16 PCIe extension option; 16 Arm cores; 32GB on-board DDR; integrated BMC; Crypto Disabled
900-9D3B6-00CC-AA0	MT_0000001024	NVIDIA BlueField-3 B3210 P-Series FHHL DPU; 100GbE (default mode) / HDR100 IB; Dual-port QSFP112; PCIe Gen5.0 x16 with x16 PCIe extension option; 16 Arm cores; 32GB on-board DDR; integrated BMC;Crypto Enabled
900-9D3B6-00SC-AA0	MT_0000001025	NVIDIA BlueField-3 B3210 P-Series FHHL DPU; 100GbE (default mode) / HDR100 IB; Dual-port QSFP112; PCIe Gen5.0 x16 with x16 PCIe extension option; 16 Arm cores; 32GB on-board DDR; integrated BMC; Crypto Disabled

## Self-hosted BlueField-3 Platforms

Check the following table for the SKUs of controller board :

Part Number	Description
900-9D3B6-	NVIDIA BlueField-3 B3220SH E-Series FHHL Storage Controller, 200GbE (default mode) / NDR200 IB, Dual-port QSFP112, PCIe Gen5.0 x16 with x16

Part Number	Description
00CV-DA0	PCIe extension option, 16 Arm cores, 32GB on-board DDR, integrated BMC, Crypto Enabled, Tall Bracket
900-9D3C6-00CV-GA0	NVIDIA BlueField-3 B3220SH E-Series No Heatsink FHHL Storage Controller, 200GbE (default mode) / NDR200 IB, Dual-port QSFP112, PCIe Gen5.0 x16 with x16 PCIe extension option, 16 Arm cores, 48GB on-board DDR, integrated BMC, Crypto Enabled, Tall Bracket
900-9D3C6-00CV-DA0	NVIDIA BlueField-3 B3220SH E-Series FHHL Storage Controller, 200GbE (default mode) / NDR200 IB, Dual-port QSFP112, PCIe Gen5.0 x16 with x16 PCIe extension option, 16 Arm cores, 48GB on-board DDR, integrated BMC, Crypto Enabled, Tall Bracket

## Supported NVIDIA BlueField-2 Platforms

NVIDIA SKU	Legacy OPN	PSID	Description
900-9D218-0073-ST1	MBF2H51 2C- AESOT	MT_000 000072 3	BlueField-2 P-Series DPU 25GbE Dual-Port SFP56; integrated BMC; PCIe Gen4 x8; Secure Boot Enabled; Crypto Disabled; 16GB on-board DDR; 1GbE OOB management; FHHL
900-9D218-0083-ST2	MBF2H51 2C- AECOT	MT_000 000072 4	BlueField-2 P-Series DPU 25GbE Dual-Port SFP56; integrated BMC; PCIe Gen4 x8; Secure Boot Enabled; Crypto Enabled; 16GB on-board DDR; 1GbE OOB management; FHHL
900-9D208-0086-ST4	MBF2M5 16C- EECOT	MT_000 000072 8	BlueField-2 E-Series DPU 100GbE/EDR/HDR100 VPI Dual-Port QSFP56; integrated BMC; PCIe Gen4 x16; Secure Boot Enabled; Crypto Enabled; 16GB on-board DDR; 1GbE OOB management; Tall Bracket; FHHL
900-9D208-0086-SQ0	MBF2H51 6C- CECOT	MT_000 000072 9	BlueField-2 P-Series DPU 100GbE Dual-Port QSFP56; integrated BMC; PCIe Gen4 x16; Secure Boot Enabled; Crypto Enabled; 16GB on-board DDR; 1GbE OOB management; Tall Bracket; FHHL
900-9D208-0076-ST5	MBF2M5 16C- CESOT	MT_000 000073 1	BlueField-2 E-Series DPU 100GbE Dual-Port QSFP56; integrated BMC; PCIe Gen4 x16; Secure Boot Enabled; Crypto Disabled; 16GB on-board DDR; 1GbE OOB management; Tall Bracket; FHHL

<b>NVIDIA SKU</b>	<b>Legacy OPN</b>	<b>PSID</b>	<b>Description</b>
900-9D208-0076-ST6	MBF2M5 16C- EESOT	MT_000 000073 2	BlueField-2 E-Series DPU 100GbE/EDR/HDR100 VPI Dual-Port QSFP56; integrated BMC; PCIe Gen4 x16; Secure Boot Enabled; Crypto Disabled; 16GB on-board DDR; 1GbE OOB management; Tall Bracket; FHHL
900-9D208-0086-ST3	MBF2M5 16C- CECOT	MT_000 000073 3	BlueField-2 E-Series DPU 100GbE Dual-Port QSFP56; integrated BMC; PCIe Gen4 x16; Secure Boot Enabled; Crypto Enabled; 16GB on-board DDR; 1GbE OOB management; Tall Bracket; FHHL
900-9D208-0076-ST2	MBF2H51 6C-EESOT	MT_000 000073 7	BlueField-2 P-Series DPU 100GbE/EDR/HDR100 VPI Dual-Port QSFP56; integrated BMC; PCIe Gen4 x16; Secure Boot Enabled; Crypto Disabled; 16GB on-board DDR; 1GbE OOB management; Tall Bracket; FHHL
900-9D208-0076-ST1	MBF2H51 6C- CESOT	MT_000 000073 8	BlueField-2 P-Series DPU 100GbE Dual-Port QSFP56; integrated BMC; PCIe Gen4 x16; Secure Boot Enabled; Crypto Disabled; 16GB on-board DDR; 1GbE OOB management; Tall Bracket; FHHL
900-9D218-0083-ST4	MBF2H53 2C- AECOT	MT_000 000076 5	BlueField-2 P-Series DPU 25GbE Dual-Port SFP56; integrated BMC; PCIe Gen4 x8; Secure Boot Enabled; Crypto Enabled; 32GB on-board DDR; 1GbE OOB management; FHHL
900-9D218-0073-ST0	MBF2H53 2C- AESOT	MT_000 000076 6	BlueField-2 P-Series DPU 25GbE Dual-Port SFP56; integrated BMC; PCIe Gen4 x8; Secure Boot Enabled; Crypto Disabled; 32GB on-board DDR; 1GbE OOB management; FHHL
900-9D208-0076-ST3	MBF2H53 6C- CESOT	MT_000 000076 7	BlueField-2 P-Series DPU 100GbE Dual-Port QSFP56; integrated BMC; PCIe Gen4 x16; Secure Boot Enabled; Crypto Disabled; 32GB on-board DDR; 1GbE OOB management; FHHL
900-9D208-0086-ST2	MBF2H53 6C- CECOT	MT_000 000076 8	BlueField-2 P-Series DPU 100GbE Dual-Port QSFP56; integrated BMC; PCIe Gen4 x16; Secure Boot Enabled; Crypto Enabled; 32GB on-board DDR; 1GbE OOB management; FHHL
900-9D218-0073-ST4	MBF2H51 2C- AEUOT	MT_000 000097 2	BlueField-2 P-Series DPU 25GbE Dual-Port SFP56; integrated BMC; PCIe Gen4 x8; Secure Boot Enabled with UEFI disabled; Crypto Disabled; 16GB on-board DDR; 1GbE OOB management

NVIDIA SKU	Legacy OPN	PSID	Description
900-9D208-0076-STA	MBF2H516C-CEUOT	MT_0000000973	BlueField-2 P-Series DPU 100GbE Dual-Port QSFP56; integrated BMC; PCIe Gen4 x16; Secure Boot Enabled with UEFI disabled; Crypto Disabled; 16GB on-board DDR; 1GbE OOB management
900-9D208-0076-STB	MBF2H536C-CEUOT	MT_0000001008	BlueField®-2 P-Series DPU 100GbE Dual-Port QSFP56, integrated BMC, PCIe Gen4 x16; Secure Boot Enabled with UEFI Disabled; Crypto Disabled; 32GB on-board DDR; 1GbE OOB management; Tall Bracket; FHHL

## Supported OpenBMC

- [OpenBMC 2.9.0](#)
- Linux Kernel 5.10
- U-boot 2019.04



# Known Issues

## Info

Please make sure to also be aware of the known issues and limitations of the BSP [here](#).

Ref #	Issue
4178704	<p>Description: When deleting an IPv4/6 static IP address via the Redfish interface, an unexpected failure message may occur even though the operation has actually succeeded. Example for an IPv6 address:</p> <pre>redfish/v1/Managers/Bluefield_BMC/EthernetInterfaces/eth0 -d '{"IPv6StaticAddresses": [{"Address": "0000:0000:0000:0000::0000", "PrefixLength": 64}]}'</pre> <p>Workaround: N/A</p> <p>Discovered in version: 24.10-LTSU1</p>
3922872	<p>Description: In the <code>Systems/Bluefield/LogServices/Dump/Entries</code> Redfish schema, the <code>Originator</code> and <code>OriginatorType</code> fields are not persistent following a BMC reboot.</p> <p>Workaround: N/A</p> <p>Discovered in version: 24.10</p>
4123370	<p>Description: The error notification is not clear on BFB Update when RShim is not owned by the BMC.</p> <p>Workaround: N/A</p> <p>Discovered in version: 24.10</p>
4048	<p>Description: The AllowableValues in the response for a GET request to the <code>Chassis/Bluefield_ERoT/ResetActionInfo</code> scheme are not updated by the</p>

Ref #	Issue
673	BMC.
	Workaround: N/A
	Discovered in version: 24.10
4127461	Description: On BlueField-2, when the BMC comes up after reboot and the SEL buffer is full, it takes about 30 seconds for the BMC to finish setting up all of the SEL entries. Until then, adding more entries or querying the existing ones cannot be done.
	Workaround: N/A
	Discovered in version: 24.10
N/A	Description: Ownership of RShim may be ambiguous when ownership is forced by a new host causing several BMC features to not work due to the ownership conflict.
	Workaround: Reboot the BMC after moving RShim ownership to a new host. This ensures the BMC correctly synchronizes with the current RShim ownership status.
	Discovered in version: 24.07
3877835	Description: <code>openbmctool</code> is no longer supported.
	Workaround: The supported management interfaces are IPMItool and Redfish.
	Discovered in version: 24.07
4027478	Description: BMC's IP aliasing feature allows multiple IP addresses to be assigned to a single network interface, which permits the interface to respond to different IP addresses.
	Workaround: N/A
	Discovered in version: 24.07
3995907	Description: The Redfish schema for BlueField data ports ( <code>Systems/Bluefield/EthernetInterfaces</code> ) displays only the valid IP and MAC addresses. Other attributes associated with this schema should be ignored and considered as not current.
	Workaround: N/A
	Discovered in version: 24.07
3995907	Description: The update to <code>ipmitool</code> version 1.8.19 has introduced inconsistencies between the tool and the BMC implementation, leading to

Ref #	Issue
	incomplete information being displayed when executing the <code>lan print</code> command.
	Workaround: N/A
	Discovered in version: 24.07
39 95 89	Description: The DPU BMC is equipped to detect ECC errors from the BlueField Arm system and record these errors in the BMC SEL. For SEL events related to single-bit ECC errors, the BMC does not recognize the resolution status on the BlueField Arm and consequently logs <code>"Resolved": false</code> irrespective of the actual state.
9	Workaround: N/A
	Discovered in version: 24.07
39 25	Description: When changing the BMC IPv6 address configuration from static to DHCP, the static IP address in the IPv6 list does not get disabled.
81	Workaround: N/A
5	Discovered in version: 24.07
38 99	Description: After executing <code>sel clear</code> , the event log in <code>LogServices</code> generates <code>Error.LogsCleared</code> .
71	Workaround: N/A
9	Discovered in version: 24.07
40 05 37	Description: DPU BMC does not support the following attributes and schemas within the <code>Systems/Bluefield</code> Redfish schema: <code>MemorySummary</code> , <code>Memory</code> , <code>Processors</code> , <code>Storage</code> , <code>GraphicalConsole</code> , and <code>PowerMode</code> .
3	Workaround: N/A
	Discovered in version: 24.07
39 95 90	Description: The BlueField power cycle relies on the PCIe PERST/ALL_STANDBY. If the host does not disconnect the PCIe link, the DPU BMC would cancel the power cycle request to avoid causing server errors. Since the power cycle command is asynchronous, it always returns success; however, if it fails, a new SEL log is created to indicate that the command has not executed.
6	Workaround: Get the status from the BMC SEL.
	Discovered in version: 24.07

Ref #	Issue
3998661	<p>Description: The <code>ipmitool set static ip</code> command deletes both IPv4 and IPv6 then creates IPv4 static IP, then changes the IPv4 address causing 1 more create and delete events.</p> <p>Workaround: N/A</p> <p>Discovered in version: 24.07</p>
3914629	<p>Description: When "Force PXE" is set right before installing a BFB image via BMC RShim, BlueField PXE boot fails to boot from NET-OOB-IPV4.</p> <p>Workaround: N/A</p> <p>Discovered in version: 24.04</p>
4064373	<p>Description: The DPU BMC LLDP represents the eth0 interface. If the user initiates a VLAN interface on top of eth0, the LLDP schema does not function as expected and the transmitted data does not accurately describe the eth0 attribute or the newly created VLAN.</p> <p>Workaround: N/A</p> <p>Discovered in version: 24.04</p>
3994990	<p>Description: During a power cycle of the BlueField, the <code>ipmb_host</code> driver running on the BlueField OS may crash due to communication issues with the BlueField BMC, causing the BlueField OS to become stuck.</p> <p>Workaround: Perform an additional reboot or reset to the BlueField.</p> <p>Discovered in version: 24.01</p>
3725502	<p>Description: Recording user operations takes place regardless of the action's success.</p> <p>Workaround: N/A</p> <p>Discovered in version: 24.01</p>
3598450	<p>Description: The boot process may stall following a non-graceful reboot.</p> <p>Workaround: Do not issue force reboot to the BlueField BMC.</p> <p>Discovered in version: 24.01</p>
3664596	<p>Description: When declaring only a secondary NTP server, this server acts as the primary one.</p> <p>Workaround: N/A</p>

Ref #	Issue
	Discovered in version: 24.01
37 47 28 5	<p>Description: The ipmitool command to force PXE in BMC modifies both the IPMI and Redfish request settings. When Redfish is enabled in UEFI, Redfish takes priority, so all PXE boot entries are attempted and before regular boot continues.</p> <p>Workaround: Redfish must be disabled if IPMI force PXE retry behavior is expected.</p> <p>Discovered in version: 24.01</p>
36 62 41 7	<p>Description: The Arm UEFI is crucial for rapid system booting, activating the NIC for host network communication. The Arm UEFI tries to fetch Redfish host credentials from the DPU BMC during boot-up. If not done within a designated timeframe, UEFI skips Redfish setup and boots the OS, ignoring any Redfish server settings or updates.</p> <p>Workaround: Reboot the BlueField Arm core again.</p> <p>Discovered in version: 24.01</p>
36 68 92 5	<p>Description: If a VLAN setup is necessary for a specific interface on the BMC, finish all other network configurations (such as DHCP/STATIC) on the interface before implementing the VLAN setting (because the VLAN inherits all configurations from the existing interface).</p> <p>Workaround:</p> <ol style="list-style-type: none"> <li>1. Initialize the network interface: <pre data-bbox="305 1224 1463 1528">ipmitool lan set 1 ipsrc static ipmitool lan set 1 ipaddr &lt;ip&gt; ipmitool lan set 1 netmask &lt;netmask&gt; ipmitool lan set 1 defgw ipaddr &lt;gateway-ip&gt;</pre> </li> <li>2. Set the VLAN: <pre data-bbox="305 1570 1463 1728">ipmitool lan set 1 vlan id &lt;vlan-id&gt;</pre> </li> </ol> <p>Discovered in version: 23.10</p>
35 34	Description: The BMC and BlueField utilize a shared IPMB channel for IPMI communication. If multiple requests coincide on this interface, users may encounter

Ref #	Issue
150	<p>command failures with timeout indications.</p> <p>Workaround: Raise the retry counter for IPMITool requests by using the command <code>ipmitool -R 20 *</code>.</p> <p>Discovered in version: 23.10</p>
3631199	<p>Description: If Redfish is enabled in the UEFI menu (default), then Secure Boot configuration done from Redfish overrides Secure Boot configuration done from UEFI.</p> <p>Workaround: Disable Redfish in UEFI menu and update secure boot state.</p> <p>Discovered in version: 23.10</p>
3654930	<p>Description: If the BlueField BMC firmware has been upgraded from version 2.8.2-x or older to version 23.03 or newer, it is necessary to execute a <a href="#">factory reset</a> of the BlueField BMC.</p> <p>Workaround: N/A</p> <p>Discovered in version: 23.03</p>
3637527	<p>Description: The BlueField Redfish BIOS/UEFI supports only UEFI mode for <code>BootSourceOverrideMode</code>. If a user configures the <code>BootSourceOverrideMode</code> to <code>legacy</code>, all override settings are disregarded by the BIOS/UEFI.</p> <p>Workaround: Set <code>BootSourceOverrideMode</code> to <code>UEFI</code>.</p> <p>Discovered in version: 23.10</p>
3634649	<p>Description: In the Redfish <code>Systems/Bluefield</code> schema, the <code>LastResetTime</code> attribute does not accurately capture the system reset values.</p> <p>Workaround: N/A</p> <p>Discovered in version: 23.09</p>
3634603	<p>Description: When the BlueField operates in NIC mode, the Arm core does not load any OS. In this scenario, any BMC functionality that relies on extracting data from the OS through the IPMB channel will be unavailable or limited. including:</p> <ul style="list-style-type: none"> <li>• Firmware inventory schema</li> <li>• Chassis schema</li> <li>• Sensors</li> </ul>

Ref #	Issue
	Workaround: N/A
	Discovered in version: 23.10
3609525	Description: Following a reboot of BlueField's BMC, it is necessary to wait 30 seconds to allow for the complete loading of system services before initiating a reboot of BlueField itself.
	Workaround: N/A
	Discovered in version: 23.09
3590634	Description: When updating the BMC's firmware, it is critical to maintain the system powered on until the update process is finished.
	Workaround: N/A
	Discovered in version: 23.09
3599824	Description: In NIC mode, the BMC's Redfish chassis schema contains only limited information about BlueField. This is because, in this mode, the OS is not available to supply the necessary information to the BMC.
	Workaround: N/A
	Discovered in version: 23.09
3605254	Description: Following a system power cycle, both the BlueField and BMC boot independently which may lead to BlueField's UEFI boot process to complete before the BMC's. As a result, when attempting to establish Redfish communication, the BMC may not yet be prepared to respond.
	Workaround: Power cycle; Redfish; boot
	Discovered in version: 23.09
3388059	Description: When BlueField-2 boots and its services are loaded, there is a possibility that the IPMI over RMCP may become unresponsive due to the default timeout for commands being set to 1 second.
	Workaround: Increase the default timeout to 10 seconds when sending IPMI RMCP commands using the <code>-N</code> option. Example command:
	<pre>sudo ipmitool -I lanplus -C 17 -N 10 -H &lt;BMC-IP&gt; -U &lt;BMC-User&gt; -P &lt;BMC-Password&gt; mc info</pre>

Ref #	Issue
	Discovered in version: N/A



# Bug Fixes in This Version

## Info

For an archive of bug fixes from previous releases, please refer to [Bug Fixes History](#).

Ref #	Issue
41 28 18 9	Description: When updating the BFB image on a BlueField-2 system via HTTP/HTTPS using Redfish, the operation may fail if the system is overloaded.  Discovered in version: 24.10
41 29 71 8	Description: If the path of installation of the bfb image (i.e., <code>DPU_OS</code> in " <a href="#">Deploying BlueField Software Using BFB from BMC</a> ") is called and the RShim on the host is not connected, the BMC takes the RShim. If the RShim on the host is connected, calling this path returns an error.  Discovered in version: 24.10
41 35 00 1	Description: The serial number is missing from SMBIOS table 3 and from Redfish schema <code>/Chassis/Card1</code> .  Discovered in version: 24.10
41 51 17 8	Description: The <code>ipmid</code> and <code>netipmid</code> processes have an inconsistent view of the user database until changes propagate to <code>netipmid</code> .  Discovered in version: 24.10

# Bug Fixes History

Ref #	Issue
4047689	<p>Description: While running the reprovisioning script from BMC, the RShim boot device appears to be busy which causes the script to fail without completing the process.</p> <p>Fixed in version: 24.10</p>
4146640	<p>Description: In the event of a server reboot, the BMC may boot before the host and take control of the RShim before the host.</p> <p>Fixed in version: 24.10</p>
3991930	<p>Description: The reported dump entry creation date is not initialized properly and reports the default system date <code>1970-01-01T00:28:43.991149+00:00</code> when creating a dump entry using the LogService on the Redfish interface.</p> <p>Fixed in version: 24.10</p>
4064371	<p>Description: The BMC dump collection is missing the <code>varfilelist.log</code> and <code>slabinfo.log</code> files.</p> <p>Fixed in version: 24.10</p>
3906500	<p>Description: Using the header <code>connection: close</code> in a Redfish request terminates the <code>x-auth-token</code> session</p> <p>Fixed in version: 24.07</p>
3875280	<p>Description: UUID and SKU properties are intermittently unavailable after BlueField BMC reboot.</p> <p>Fixed in version: 24.07</p>
3888140	<p>Description: When warm rebooting the BlueField OS, the IPMB channel between the BlueField and BlueField BMC may fail to function due to underlying I2C channel issues. If this occurs, all functionality relying on this channel are affected, including:</p> <ul style="list-style-type: none"> <li>• IPMI commands from the BlueField OS to the BlueField BMC and vice versa</li> <li>• Redfish BlueField inventory schema</li> <li>• Redfish network schema of the BlueField OOB and network interfaces</li> </ul>

Ref #	Issue
	<ul style="list-style-type: none"> <li>BlueField sensor information</li> </ul>
	Fixed in version: 24.07
3878990	Description: The BMC may provide incorrect bootstrap credentials to the UEFI. This results in the failure of any BIOS configurations.
	Fixed in version: 24.07
3855648	Description: The manager factory reset action is named <code>ResetToDefaults</code> instead of <code>ResetType</code> as per the Redfish Data Model specification.
	Fixed in version: 24.07
3599016	Description: After a BFB update, it takes the BMC ~30 seconds to sync with the true values from the DPU reflected in the command <code>ipmitool sensor list</code> .
	Fixed in version: 24.04
3837485	Description: In some instances, consecutive core dumps occur, and since extracting the NIC debug log is a lengthy operation, this could result in log mismatch and inaccurate information.
	Fixed in version: 24.04
3780188	Description: Add bad syndrome pipe also in dynamic mode.
	Fixed in version: 24.04
3634701	Description: In the Redfish <code>Systems/Bluefield</code> schema, the <code>Description</code> attribute is of a generic type and does not specify the DPU system.
	Fixed in version: 24.04
3662417	Description: The BMC may provide incorrect bootstrap credentials to the UEFI. This would result in the failure of any BIOS configurations.
	Fixed in version: 24.01
3715528	Description: The <code>TransferProtocol@Redfish.AllowableValues</code> under the <code>simpleUpdate</code> service is held in a double list, deviating from the DMTF definition.
	Fixed in version: 24.01

Ref #	Issue
35 61 67 7	<p>Description: It is not possible to modify the values of the BootOrder, BootOverride, and Secure Boot attributes from the UEFI menu because they are set by default to be configured from Redfish interface.</p> <p>Fixed in version: 23.09</p>
35 66 03 6	<p>Description: After performing BF BMC factory reset, the <code>/home/root/.ssh</code> directory is deleted which causes the first attempt to confirm the host identity and initiate a BFB update procedure to fail while displaying the error message:</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>"Host is unknown"</p> </div> <p>Fixed in version: 23.09</p>
35 87 96 8	<p>Description: VLAN 4040 serves as a dedicated VLAN for facilitating Redfish communication between UEFI and DPU BMC. However, if the OOB RJ45 port is connected to an unmanaged switch or hub, the VLAN traffic from VLAN 4040 may spill over into the broader LAN network which may lead the local UEFI to unintentionally communicate with a remote BMC instead of the intended local BMC.</p> <p>Fixed in version: 23.09</p>
34 78 79 6	<p>Description: Rarely, it is possible for the BMC to exceed the boot timeout set by the root of trust. In such case, the RoT initiates a second reboot of the BMC, which is expected to result in a successful boot.</p> <p>Fixed in version: 23.09</p>
36 04 14 8	<p>Description: In the uncommon scenario where, following a system power cycle, the DPU fails to boot successfully, the BMC would be unable to retrieve network data from the DPU's operating system. This leads to an absence of information in the Redfish chassis schema, which is responsible for describing the network adapters.</p> <p>Fixed in version: 23.09</p>
36 00 00 4	<p>Description: Description: In dual-port DPU, the DPU's Redfish schema, specifically the "chassis NetworkAdapters", will replicate the data from port 1 into port 2.</p> <p>Fixed in version: 23.09</p>
35 60 55 9	<p>Description: If the DPU OS's OOB interface is disabled, it may lead to an issue that results in the DPU BMC losing network connectivity. This problem arises when the UEFI enables the OOB port (e.g., PXE, Redfish), but the OS does not load the necessary services and OOB kernel driver. In this scenario, the physical link remains active despite the OS driver not functioning, causing the hardware queue to</p>

Ref #	Issue
	<p>become filled. Consequently, flow control pause packets are sent to the onboard 3-port switch, which may eventually lead to the DPU BMC losing its network connectivity.</p> <p>Fixed in version: 23.09</p>
N/A	<p>Description: If the NIC BMC boots with non-default network configuration under <code>/run/initramfs/rw/cow/etc/systemd/network/*</code>, then the dedicated VLAN 4040 which supports the Redfish host interface with the UEFI BIOS device is not created.</p> <p>Fixed in version: 23.09</p>
3554128	<p>Description: <code>dmidecode</code> output does not match "<code>ipmitool fru print</code>" output.</p> <p>Fixed in version: 23.07</p>
2930671	<p>Description: A power cycle of the system might result in BMC MAC change.</p> <p>Fixed in version: 2.8.2-34</p>
3444360	<p>Description: IPMI LAN print does not work in stateful DHCPv6.</p> <p>Fixed in version: 2.8.2</p>
200767989	<p>Description: SOL console receives a garbage message when it is connected.</p> <p>Fixed in version: 2.8.2</p>
200748177	<p>Description: PXE boot via OOB interface enters grub mode when cold rebooting the x86 host against BFB version 3.7.0.</p> <p>Fixed in version: 2.8.2</p>

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# Change Log History

## Changes and New Features in v24.10

- To ensure FRU device information is consistent across different system components, NVIDIA Networking is aligning the BlueField BMC FRU board product name with the system product name. This means that there would be two variations of BlueField BMC FRUs in the field. The following are the supported deviations:

FRU Field	Rev-1 (Old)	Rev-2 (New)
FRU Device Description	Nvidia-BMCMezz (ID 169)	BlueField-3 DPU (ID 243)
Board Manufacturing Date	<Board-mfg-date>	<Board-mfg-date>
Board Manufacturer	Nvidia	Nvidia
Board Product	Nvidia-BMCMezz	BlueField-3 DPU
Board Serial	<Board-serial>	<Board-serial>
Board Part Number	<Board-part-number>	<Board-part-number>

- Security enhancements – Introduced a new BIOS option to disable the IPMI channel between the BlueField Arm cores and its BMC. By default, this interface is enabled. However, a new BIOS attribute accessible via Redfish now permits disabling this interface for enhanced security.
- IPMB channel relocation – The IPMB channel used by the BlueField BMC to retrieve data from the BlueField Arm is now utilizing a dedicated I2C interface. This change is aimed at improving the serviceability of the interface.
- Temperature monitoring – Added the BlueField Arm DDR sensor to the BlueField BMC sensor list. This addition enables the monitoring of DDR temperature ([ddr\\_temp](#)), ensuring better performance and reliability.
- Event logging enhancements – Introduced several new event alarms:
  - BlueField data port module over current event ([Module Critical Power Consumption](#))

- BlueField data port module temperature event ([Module Temperature Going High/Low](#))
- BlueField Arm frequency change event ([Arm Frequency Change](#))

**i Note**

These alarms are now logged to the BMC System Event Log (SEL) for better event tracking and system diagnostics.

- [BIOS Debug Mode](#) – An option has been added to enable BIOS debug mode, facilitating advanced troubleshooting and system analysis

## Changes and New Features in v24.07

- Extended DHCP mode setting to provide control for each IP version. In the current version, IPMITool includes a dedicated function to control the mode for both IPv4 and IPv6. For more details, please refer to section "[Configuring IPv6 Mode](#)".
- Updated Linux kernel from version 5.15 to 6.1
- Upgraded BlueField BMC Linux packages:
  - libpam 1.6 to 1.61
  - curl 8.5 to 8.7.1
  - bash 3.2.57 to 5.2.21
  - DNSmasq 2.9
  - glibc 2.39
  - ipmitool 1.8.19
  - busybox 1.36.1
  - rsyslog 8.2402.0

- The DPU BMC no longer supports openbmctool; all APIs are now accessible via Redfish
- The Redfish schema at `/redfish/v1/Cables/` is no longer supported. The data port link state is now accessible through the `Chassis/Card1/NetworkAdapters/NvidiaNetworkAdapter/Ports` schema which includes the link state for the available data ports.
- The size of the BMC dump entry container is no longer limited to only two BMC dump entries. The limit now applies to the total amount of memory stored in the container, thus allowing more BMC dump entries to be stored in it depending on their size ([Creating BMC Dump Task](#)).
- Added support for the IPMI OEM command to configure the guest tunnel ([Guest Tunnel](#))
- Extended the BMC log to capture Redfish/IPMI command configurations initiated by the user of the BMC ([System Logs](#))
- RAS record UE/CE faults of MEM into BMC SEL ([RAS Errors](#))
- Enhanced Redfish BFB SimpleUpdate to support HTTP/HTTPS file transfer policy ([Installing BFB](#))
- Introduced rsyslog capability to log BMC SEL entries and Arm console output to a remote server ([Rsyslog](#))
- Network re-provisioning ([Bare-metal Reprovisioning](#)):
  - Added an option in network re-provisioning for BMC to halt instead of reset after provisioning, allowing users to choose when to reset the DPU after provisioning is complete
  - Added support for ATF/UEFI and NIC firmware golden image versioning
- Added support for RShim force ownership request

## Changes and New Features in v24.04

- Updated RShim user space driver to version 2.0.27
- Added an additional FRU device to the DPU BMC to reflect DPU Arm FRU information ([System FRU](#))



- Introduced a redfish command to reset the DPU BMC eROT (Glacier) ([Activating New CEC](#))
- Implemented support for sending sysrq controls to the DPU Arm through the SOL interface ([SysRq Support in SOL](#))
- Change the Redfish BFB software update and Redfish system dump to try automatically to acquire the RShim interface
- Added Redfish schema to provide DPU description, base MAC, and base GUID ([DPU Information](#))
- Introduced Redfish schema to support `MultipartHttp UpdateService` for DPU BMC and CEC Firmware update ([BMC and CEC Firmware Operations](#))
- Added Redfish schema for the BlueField Arm network interfaces (OOB and data ports) ([BlueField Host Network Interface](#))
- Included LLDP Redfish schema for the BlueField BMC's 1Gb/s interface (LLDP in Redfish)
- Enhanced Redfish support for the service identification property ([Product Instance Identifier](#))
- Enforced ipmitool user privilege policy

## Changes and New Features in v24.01

- Expanded the BMC dump log to incorporate data from the NIC firmware. A new log containing NIC device debug information has been introduced and is now accessible on NVIDIA® BlueField®-3 systems.
- Enabled DPU BMC to facilitate soft shutdown requests to the embedded CPU via both IPMI and Redfish protocols
- Upgraded the Linux Kernel version to 5.15 in the OpenBMC system
- Added IPMI and Redfish commands to disable/enable DPU Arm out-of-band (OOB) access to the management network
- Added new entries to the BMC system event log (SEL) or BMC operation log, enhancing support for BMC operations
- Incorporated a Redfish command for the deployment of BIOS CA certificates

- Updated BMC [password policy](#)
- Added support for simple `HttpMultiPart` update for [BMC and eROT firmware](#)

## Changes and New Features in v23.10

- NVIDIA® BlueField®-3 Redfish enhancements:
  - Included phosphor-logging entry for dumping `/dev/rshim/misc` messages
  - Implemented Redfish-based firmware configuration for switching between BlueField DPU mode and NIC mode for BlueField-3
  - Added an OEM API for enabling/disabling BMC RShim, offering more control over this critical component
- Enhanced debuggability for the DPU BMC which includes the ability to store DPU console/serial logs for troubleshooting and analysis
- Deployment of a more restrictive firewall policy to enhance system security
- Added power-capping control capabilities from the DPU BMC, providing greater power management flexibility
- Added an OEM API for key-based authentication
- Incorporated the `wget` application into the BMC OS
- Enhanced the system with the ability to enable/disable the DPU OOB port using IPMI commands
- Removed DPU BMC SMBus master capabilities
- CEC1736 EC firmware upgrade to version 00.02.0152.0000 – the boot completion timeout for CEC1736 has been increased from 2 minutes to 8 minutes in this version to ensure that the BMC completes its boot process within the allotted time. If the BMC fails to boot within that period, the CEC1736 initiates a reset of the BMC.

### **Note**

This change may lead to undesired system behavior:

- If a new BMC firmware update is in progress during this period, the CEC1736 reverts to the previous version of the BMC firmware
- If the BMC fails to provide six boot complete indications, the CEC1736 interrupts the BMC boot process, necessitating a full reset cycle to recover the DPU BMC

## Changes and New Features in v23.09

- The NCSIoMCTPoSMBus interface has been activated to facilitate communication between the DPU BMC and the NIC subsystem. This activation has introduced several enhanced functionalities to the NIC subsystem's firmware, including:
  - Configuring and retrieving the DPU's operational mode
  - Configuring and retrieving the status of the RShim
  - Retrieving the strap values of the NIC subsystem on the DPU
  - Obtaining information about the OS state
- Added the ability to control BIOS secure boot configuration through the Redfish interface

## Changes and New Features in v23.07

- Allow programmatic changing of BIOS/UEFI parameters via the Redfish API
- Support UEFI HTTP boot using Redfish
- Allow programmatic mechanism for changing BIOS/UEFI boot order using Redfish
- Implemented the Certificate, CertificateLocations, and CertificateService schema in the NIC BMC, including certificate information
- Implemented Redfish-based firmware update using the SimpleUpdate SCP schema for DPU recovery
- DPU BMC indication of the reset/reboot state

## Changes and New Features in v23.04-3

- Added support for BMCs of BlueField-3 DPUs
- Add support for Serial Console Redirection
- Added Redfish service with the underlying schemas:
  - Redfish chassis schema to represent the DPU chassis elements including:
    - `/redfish/v1/Chassis/Card1`
    - `/redfish/v1/Chassis/Bluefield_BMC`
    - `/redfish/v1/Chassis/Bluefield_ERoT`
  - Redfish sensor schema:
    - `/redfish/v1/Chassis/Card1/Sensors/`
  - NetworkAdapter schema representing a physical network adapter capable of connecting to a computer network:
    - `/redfish/v1/Chassis/Card1/NetworkAdapters`
  - NetworkDeviceFunction schema representing a logical interface that a network adapter exposes:
    - `/redfish/v1/Chassis/Card1/NetworkAdapters/{NetworkAdapterName}/NetworkDeviceFunctions`
  - Port schema containing properties that describe a port of a switch, controller, chassis, or any other device that could be connected to another entity:
    - `/redfish/v1/Chassis/Card1/NetworkAdapters/{NetworkAdapterName}/Ports`
  - Management subsystem schema:
    - `/redfish/v1/Managers/Bluefield_BMC`
  - Updated service and the properties that affect the service itself for Redfish implementation:
    - `/redfish/v1/UpdateService`
  - Redfish FirmwareInventory schema:

- /redfish/v1/UpdateService/FirmwareInventory
- Redfish log service:
  - /redfish/v1/Managers/Bluefield\_BMC/LogServices
- Redfish user account for the system manager:
  - /redfish/v1/AccountService
  - /redfish/v1/AccountService/Roles
  - /redfish/v1/SessionService/Sessions
- Redfish session service properties:
  - /redfish/v1/SessionService
- Redfish task service:
  - /redfish/v1/TaskService

## Changes and New Features in 2.8.2-34

- Updated LLDPAD to be enabled by default

## Changes and New Features in 2.8.2

- First software GA release

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