



NVIDIA DGX GB300 NVL72

Release Notes v1.0.1 for Multi-Node System Stack
Firmware and Software

Document History

RN-11874-001_1.0.1

Version	Date	Description of Change
01	Oct 10, 2025	Release 1.0.0
02	Dec 19, 2025	Release 1.0.1 <ul style="list-style-type: none">• Added improvements and known issues

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Overview

This document contains detailed information for the NVIDIA® DGX GB300 NVL72 v1.0.1 software/firmware release.

This document includes dependencies and instructions that are specific to this release, the versions provided as part of the release, and a list of known issues and improvements.

Legal Disclaimer: The System SW 1.0.1 GA Release is only for the target product DGX GB300 NVL72 and cannot be used for any other product.

NVIDIA DGX GB300 NVL72 Features

This section outlines the DGX GB300 NVL72 features included in this release, which provides essential operational capabilities to support end-to-end system qualification and validation.

This release includes the following features:

- NVLink Domain
 - 72x1 GPUs
- Fabric Manager
 - Support for NVLink multi-node deployment.
 - Peer-to-Peer Traffic routing/configuration.
 - Single default partition and multiple user partitions, with all available GPUs.
- IMEX Service
 - IMEX Service Peer-to-Peer Memory Import/Export support.
 - IMEX Dynamic Reconnect support.
 - IMEX Service multicast (NVLink SHARP) Import/Export support.
- RM Multi-User/Multi-Job Isolation support.
- Platform information for the compute and switch trays.
- NVIDIA multi-node CUDA®
 - Unicast traffic and multicast.
 - OpenMPI will be supported with NVLink Intranode and MNNVL internode.
 - Multi-Node NvBandwidth.
- NCCL
 - NCCL: All2All, AllReduce, and Unicast.
 - NVSHMEM
- nvidia.nvlink Ansible Collection
 - v1.6.9
- CX8
 - CX8 Telemetry
- DCGM with multi-node testing support

Multi-Node System Software Stack

Package Contents

The tables in this section provide the contents of the system software stack package for the NVIDIA DGX GB300 NVL72 reference design. Refer to the [FW update guide](#) for more information about installation, configuration, and workarounds.

This release includes public posting links necessary for creating the Multi-Node systems stack.

Compute Tray Components

Refer to the *NVIDIA [FW update guide](#)* for more information about the HMC and HMC NO-BIOS firmware bundle and installation instructions.



Note: The following are the host software versions tested with GB300 Release 1.0.1.

Host Software Components

Component	Version
DOCA_Host	3.2.0-125000
MFT Tools	4.34.0-145
GPU Driver	580.105.08
IMEX	580.105.08
Kernel Module Source	NVIDIA-kernel-module-source-580.105.08.tar.xz
CUDA	13.0.1
WinOF-2	25.10.50000
NMX-M	85.1.1100
BF3_BFB	3.2.0-113

HMC

Bundle file: [nvfw_HGX-GBX00_0026_251126.1.0_custom_prod-signed.fwpkg](#)

Component	Version
CPLD	0.22
GPU	97.10.4A.00.0C

Component	Version
EROT	01.04.0031.0000_n04
HMC	GB200Nv1-25.08-B
SBIOS	02.05.13
FPGA	1.60

Component	Filename
CoRIM	HGX-GBX00_0026_251126.1.0_custom_prod-signed.corim
Recovery Firmware	nvfw_HGX-GBX00_0026_251126.1.0_custom_recovery_prod-signed.fwpkg
CRT	nvfw_GB300-P4059_fwpkg_prod_cert.crt
PEM	nvfw_GB300-P4059_fwpkg_prod_pub.pem
VBIOS Only Firmware	g548_0301_893_97104A000C.fwpkg

BMC

Bundle file: `nvfw_DGX-GBX00_0026_251112.1.0_custom_prod-signed.fwpkg`

Component	Version
EROT	<code>01.04.0031.0000_n04</code>
BMC	<code>GB200Nv1-25.08-9</code>
SMA Firmware	<code>0003.00.0220.0001</code>

Component	Filename
CoRIM	<code>DGX-GBX00_0026_251112.1.0_custom_prod-signed.corim</code>
CRT	<code>nvfw_GB300-p4058_corim_prod_cert.crt</code>
PEM	<code>nvfw_GB300-p4058_corim_prod_pub.pem</code>

CX8

Component	Filename
SPO Firmware	<code>fw-ConnectX8-rel-40_47_1026-900-9X86E-00CX-SP0_Ax-UEFI-14.40.10-FlexBoot-3.8.201.signed-MT_0000001226.fwpkg</code>
SPO CoRIM	<code>fw-ConnectX8-rel-40_47_1026-900-9X86E-00CX-SP0_Ax-UEFI-14.40.10-FlexBoot-3.8.201.signed.signed.corim</code>
STO Firmware	<code>fw-ConnectX8-rel-40_47_1026-900-9X86E-00CX-ST0_Ax-UEFI-14.40.10-FlexBoot-3.8.201.signed-MT_0000001513.fwpkg</code>
STO CoRIM	<code>fw-ConnectX8-rel-40_47_1026-900-9X86E-00CX-ST0_Ax-UEFI-14.40.10-FlexBoot-3.8.201.signed.signed.corim</code>

GB300 PS Switch Tray Components

NVOS

Component	Version
NVOS	25.02.4317
SM	2025.06.12
GFM	R580.109
NMX-C	4.21.30
NMX-T	3.5.1
QM3	35.2014.4712

Component	Filename
CoRIM	GB300-P4093_0005_251112.1.1_prod-signed.corim

BMC+FPGA+EROT

Bundle file: `nvfw_GB300-P4093_0004_251112.1.1_prod-signed.fwpkg`

Component	Version
EROT	01.04.0031.0000_n04
BMC	88.0002.1958
FPGA	0.24

Component	Filename
CoRIM	GB300-P4093_0004_251112.1.1_prod-signed.corim

Component	Filename
Recovery Firmware	nvfw_GB300-P4093_0004_251112.1.1_recovery_prod-signed.fwpkg

SBIOS+EROT

Bundle file: nvfw_GB300-P4093_0006_251112.1.1_prod-signed.fwpkg

Component	Version
EROT	01.04.0031.0000_n04
SBIOS	0ACTV_00.01.020

Component	Filename
CoRIM	GB300-P4093_0006_251112.1.1_prod-signed.corim
Recovery Firmware	nvfw_GB300-P4093_0006_251112.1.1_recovery_prod-signed.fwpkg

CPLD

Bundle file: nvfw_GB300-P4093_0007_251112.1.1_prod-signed.fwpkg

Component	Version
CPLD1	CPLD000420_REV0300
CPLD2	CPLD000419_REV0301
CPLD3	CPLD000418_REV0200

NVIDIA/gdrCOPY

NVIDIA/gdrCOPY is a fast GPU memory copy library-based on NVIDIA GPUDirect RDMA technology.

GDRCOPY version 2.5 is a publicly available release.

- The code is released on ([NVIDIA/gdrCOPY](#)).
- The prebuilt packages release is available on [Index of /compute/redis/gdrCOPY](#).
- Refer to [Magnum IO GDRCopy](#) for more information.

Component	Version
Stars	1006
Language	C++

System Software, Tools, and Drivers

Table 2. Public Release Links Associated with this Release

The following table provides a list of the public links associated with this release.

Description	Link
Datacenter Driver Version 580.105.08	Datacenter Driver 580 downloads
CUDA Toolkit 13.0.2	CUDA Toolkit release Note: This is the link for the current release which might not match 13.0.2. If the current release does not match, locate release13.0.2 in the archives at Archive of previous CUDA releases .

Table 3. cuDNN

The following table provides the download information for the cuDNN release.

Component	Version	Location
cuDNN	9.16.0	NVIDIA cuDNN release notes

Table 4. NCCL

The following table provides information about where the NCCL release can be downloaded and links to the latest documentation.

Component	Location
NCCL Homepage	NVIDIA Collective Communications Library (NCCL) Download Page
PIP Wheels	NVIDIA Collective Communication Library (NCCL) Runtime
Github release	NVIDIA NCCL GitHub release
Devzone binaries Current release 2.28.7	NVIDIA NCCL download page (current release) NVIDIA NCCL legacy download page (Legacy releases)
Release notes 2.28.7	NCCL release notes

Table 5. NVSHMEM

The following table provides information about where the NVSHMEM release can be downloaded and links to the latest documentation.

Component	Location
NVSHMEM Homepage	NVIDIA NVSHMEM Homepage
Release 3.4.5	NVIDIA NVSHMEM Downloads
Legacy releases	NVIDIA NVSHMEM Archive of legacy releases
Documentation	<ul style="list-style-type: none"> • Release Notes/Installation Guide: NVIDIA NVSHMEM Release Notes • API Documentation: NVIDIA OpenSHMEM Library (NVSHMEM) Documentation • Best Practice Guide: NVIDIA NVSHMEM Best Practice Guide


Table 6. DLFW Containers

The following table provides a list of the DL Frameworks containers.

Component	Versions	Location
PyTorch	Pytorch version 2.8.0a0 with Nvidia additions as part of DLFW 25.08 container	NGC catalog for PyTorch
Tensor RT	TensorRT Version 10.13.2.2	NGC catalog for TensorRT
JAX	JAX version 0.6.2 with Nvidia additions as a part of DLFW 25.08 Container	NGC catalog for JAX
DL Frameworks Release Notes	25.08	NVIDIA Optimized Frameworks - NVIDIA Docs

Table 7. NVIDIA TensorRT

The following table provides information about where TensorRT can be downloaded and links to the latest documentation.

	<p>Attention: TensorRT version 10.13 includes functional support for GB300. TensorRT (to be released at a future date) will offer performance improvements that utilize GB300 system capabilities.</p>
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Component	Location
TensorRT Homepage	NVIDIA TensorRT Getting Started Documentation Nvonline: 1139359, 1139351, 1139347, 1139356
Release 10.14.1	NVIDIA TensorRT current releases
Legacy releases	NVIDIA TensorRT legacy releases
Documentation	<ul style="list-style-type: none"> Release Notes/Installation Guide: NVIDIA TensorRT Overview and Release Notes API Documentation: NVIDIA TensorRT Documentation
TRT-LLM	nvcv.io/nvidia/tensorrt-llm/release:gb300-ea nvcv.io/nvidia/tensorrt-llm/devel:gb300-ea Source code https://github.com/NVIDIA/TensorRT-LLM/tree/feat/gb300-ea Early build with Beta quality - expect functional and performance issues since the support is in progress.

Table 9. MFT/Tools Firmware Package Contents

The following table provides the versions of the necessary MFT/tools to download the firmware bundle.

Component	Version	Location
DCGM	4.4.1	NVIDIA DCGM
NVSSVT	1.6	NVOnline: 1108364
nvdebug	1.7.0	NVOnline: 1109504
nvfwupd	2.0.7	NVOnline: 1107320
nvrastool	1.5	NVOnline: 1112947
MSTflint	4.34.0-2	Github: MSTflint link

Improvements

This section provides information about the improvements in each release.

Release 1.0.1

- 1. Fixed an issue preventing modification of the Rsyslog TransportProtocol in the NVIDIA Switch BMC from default UDP to TCP or other protocols.** Transport protocol configuration is now supported.
- 2. Resolved an authentication issue that led to a DoS-like state, blocking BMC access and affecting firmware updates and other functionality.**
- 3. The method for identifying and managing GPUs that belong to the same compute tray has been updated.**
- 4. IMEX issue in where outgoing gRPC connections were not reliably detected as lost, is improved by event handling and connection recovery, enabling nvidia-imex to promptly reestablish communication and resume processing when a disconnect occurs.**
- 5. Excessive partition API requests can fill GFM logs.**

Logging has been optimized to capture entries only during actual topology changes, ensuring the preservation of critical information.
- 6. eth0/1 routing was not separated, causing incorrect routing when eth0 was disconnected.**

Added a fix to separate the routing per interface (eth0/1).
- 7. Resolved an intermittent issue where a deadlock in GFM would result in CUDA error "All CUDA-capable devices are busy or unavailable".**
- 8. Resolved an occasional failure with NVLS bind operation (cuMulticastBindMem)**
- 9. FLR reset hangs during GPU engine transaction.**

Fixed by leveraging the hardware engine reset state machine to reliably reset the engine.
- 10. Fixed multicast reference count computation.**

Fixed an issue that caused multicast reference count to be computed incorrectly.
- 11. In rare instances, the PKEY request could be rejected by the subnet Manager.**

Added a fix to remove the race condition and the PKEY database is always cleared before sending the response to the GFM.
- 12. Partitions are deleted from the domain.**

This update addresses the root cause of the GFM crash, ensuring stability and preventing recurrence of the issue.

13. Allow GPUs that are part of a multicast group to be removed from the partition.

Added a fix to allow GPUs that are part of a multicast group to be removed from a partition. The removed GPU is set to a “reset required” state and can’t be used to run workloads until the GPU is reset.

14. Resolved intermittent C2C link training failure during GPU reset.

During GPU reset, the Grace<->Blackwell GPU C2C link training process intermittently fails, leading to unrecoverable host errors and, in some instances, Grace firmware crashes causing the host to reboot.. This issue has been resolved in the updated GPU firmware, which ensures reliable C2C link training during reset.

15. Resolved SGPI_D0 and SGPI_E0 status does not reflect MCIO J80.B12.

Added a fix to report the second presence pin, compared to using just one of the pins.

16. This release includes PCIe link quality improvements that will resolve an occasional PCIe CTO (Completion Timeout) error that could result in a kernel crash.

17. Aligning the behavior of NMX-C API where duplicate partition creation returns RESOURCE_USED on GB300 vs. PARTITION_EXISTS in GB200.

With v1.0.1, GB300 will return NMX_ST_PARTITION_EXISTS (same as GB200).

18. Updated NMX-C to return partitionId in UpdatePartitionResponse for RemoveGpusFromPartition ("User partition") and AddGpusToPartition ("User partition").

Earlier versions failed to return partitionId

19. Resolved incorrect GPU THERM_WARN_INT error message in SEL logs while the GPU was operating still under normal temperature range.

Such an error was occasionally produced during stress test workloads. This was due to an incorrect temperature threshold in some of the code paths.

20. Resolves an intermittent issue where a NCCL all-reduce throughput drops. This occurs only when NVLink SHARP is enabled and control messages from GPU to GFM were dropped (for example, buffer contention), resulting in multicast setup failure. This version adds fixes across the GPU driver, Fabric Manager, and GPU firmware to improve the reliability of NVLS initialization.

Release 1.0.0

1. Fabric Manager improvements:

- GPU's fabric health summary is included in NVIDIA-smi/NVML fabric.health.summary on the compute tray.
- Added a new row fabric.health.incorrect_configuration to include incorrect NVLink fabric configurations in nvidia-smi/NVML.
- Assigned the GPU a unique clique ID when it's unhealthy or not included in the NVLink partition to block p2p traffic.
- Trunk link admin state feature provides ability to manage trunk link states for maintenance purposes.

2. SBIOS fixes:

- Resolved potential memory leaks in RAS_FW that can cause failures when attempting a large amount of GPU error injections
- Resolved an interrupt handling issue in RAS_FW that could cause RAS_FW to miss an interrupt when handling GPU ECC errors
- Resolved an issue in which the PSC ROM certificates occasionally have a signature encoding failure

3. HMC improvements and fixes:

- Resolved an issue with missing alert events from secondary FPGA.
- Resolved an issue with GB200 being displayed incorrectly on GB300 systems.
- Resolved an issue with HMC not flipping i2c MUX to enable FPGA access to ERoT SPI when FPGA_READY is asserted in certain corner cases.
- Resolved an issue with incorrect handling of trailing "/" in Redfish URLs.

4. BMC improvements and fixes:

- Resolved an issue with differentiating BMC reset reasons between normal and watchdog reset.
- Resolved an issue with GB200 being displayed incorrectly on GB300 systems.
- (5457362) Resolved an issue with missing BMC_ERoT_0 serial number when PowerPolicy was set to AlwaysOff.
- Show all allowable ResetType values in BMC UI for System power operations.
- Resolved an issue with `/redfish/v1/TelemetryService/MetricReportDefinitions/{metric_report_definition_s_instance}` after POST `/redfish/v1/TelemetryService/MetricReportDefinitions`.
- Resolved an issue with Virtual Media failing to mount ISO in the BMC web GUI.

5. Resolved Xid143 Error 0x65 Due to FSP Boot Race Condition

A race condition in the FSP firmware occurred when out-of-band SPDM tasks from the Host Management Controller (HMC) accessed a staging buffer during the boot process. This conflict caused the staging buffer contents to fail authentication, leading to an Xid143. This issue is fixed in v1.0GA.

6. XID119 GSP timeout during AC cycle

This release fixes an intermittent issue where a race condition within UEFI causes ATS programming to fail, as indicated by the following messages in dmesg:

```
NVRM: nvAssertFailedNoLog: Assertion failed: pGpu->getProperty(pGpu, PDB_PROP_GPU_ATS_SUPPORTED) @ mem_desc.c:2193
```

7. Resolve the issue for Unreachable Switch BMC After Power-Cycle Workflow Failure

This fix resolves an intermittent issue where an NVSwitch BMC became unreachable after a workflow attempted an auxiliary power cycle of compute and NVSwitch. The problem occurred when orchestration left the NVSwitch in an incomplete power state, making the BMC unresponsive. This update ensures NVSwitch power transitions are handled properly, maintaining BMC reachability after automated reboots.

8. GPU Firmware Version Now Reported in Redfish FirmwareInventory

This release updates the SoftwareInventory "Version" field in Redfish UpdateService for GPUs, allowing for correct firmware identification.

Known Issues

This section provides a list of the known issues.

1. MC powercycle of compute and switch fail to bring up Fabric Manager.

In rare cases, following an unexpected power failure or a switch node crash, Fabric Manager may fail to start due to database (Fabric Manager resource information) corruption.

Workaround: There is currently no method to recover the corrupted data. To restore functionality, perform an NMX-C reset to reinitialize the cluster and Fabric Manager.

2. Segmentation faults occur when running some applications.

During process teardown, applications may encounter segmentation faults under some circumstances.

Workaround: There is currently no workaround, and this issue will be fixed in TRD5.

3. In rare instances, (< .01 %) BMC management interface may fail to train phy link.

In rare instances (< 0.01%), the BMC management interface phy may not link correctly with a switch.

Workaround: Reboot the BMC through the host via ipmi (ipmitool mc reset cold) or through Redfish via the BMC to Host USB Ethernet interface. (curl -k -u "user:password" -X POST https://{bmcip}/redfish/v1/Managers/BMC_0/Actions/Manager.Reset -d '{"ResetType": "ForceRestart"}')

4. Unexpected data (PCB sensor) was detected "/redfish/v1/Chassis/HGX_Chassis_0/Sensors".

Renamed the PCB-Temp sensor to Exhaust-Temp sensor. While the PCB sensor no longer exists in the RF sensor list, the PCB temp events still exist and increment on exhaust temp event occurrence.

Workaround: There is currently no workaround, and this issue will be fixed in a future release.

5. When updating VBIOS, percent complete still shows 0, after the task is complete.

In some cases, the task service indicates a success condition while the progress property remains at '0'. In this case, ignore the progress property and monitor the TaskState and TaskStatus to determine update status.

Workaround: There is currently no workaround, and this issue will be fixed in a future release.

6. Grace needs to clear the dpc_trigger_status.

In hotplug scenarios that involve CX8 downstream devices that enable DPC, some DPC events that are triggered by the hotplug attempts are not correctly handled by RAS firmware. This causes the DPC trigger status to remain set after a hotplug DPC event, which results in the downstream link remaining disabled.

Workaround: Disable DPC for CX8 downstream links before you attempt to hotplug the devices. This issue will be fixed in the next release.

7. NeighborMTUDiscards property is not defined in MetricReportDefinitions

NeighborMTUDiscards property is not defined in MetricReportDefinitions but exists in the Metric Reports.

Workaround: This property will be removed in a future release. Property read will fail - do not use.

8. When an incorrect static topology file(for example 2x36) is specified on a 1x72 topology, FM log displays duplicate control plane error states

When an incorrect static topology file(for example 2x36) is specified on a 1x72 topology, both CONFIG_ERROR_ADDITIONAL_CHASSIS_DETECTED and CONFIG_ERROR_MISSING_CHASSIS are set.

Workaround: There is currently no workaround, and this issue will be fixed in a future NVOS release.

9. GPU Status state missing from metric reports

Status/Status URI is missing from
/redfish/v1/TelemetryService/MetricReports/HGX_ProcessorMetrics_0

Workaround: Status can be read from telemetry service processor metrics (*/redfish/v1/Systems/HGX_Baseboard_0/Processors/GPU_{GpuId}#/Status/State*). This issue will be fixed in a future release.

10. Disable access link retraining

The GPU Access Link Retraining feature is disabled in this release. After upgrading, a compute tray reboot or GPU reset is required. With this release, a compute tray reboot or GPU reset is also required to bring GPU NVLink back online when a switch tray is rebooted or power-cycled for any reason. This feature will be re-enabled in a future NVOS release.

11. Inconsistent GPU memory reported by NSM, nvidia-smi, and Redfish

Multiple management interfaces report different total GPU memory values: NSM Type 3 (0x0C) and nvidia-smi (-q -d MEMORY) return 284,208 MiB, while Redfish TotalMemorySizeMiB returns 285,324 MiB. This occurs when querying inventory or memory capacity from NSM, nvidia-smi, MODS, and Redfish.

Reporting inconsistency may cause confusion in monitoring, inventory reconciliation, or capacity planning. There is no data-loss or security impact identified.

Workaround: There is currently no workaround, and this issue will be fixed in a future release.

12. BMC PCIe link reset causes SBIOS exception.

When the PCIe link between the Grace CPU and BMC is reset at runtime, the system might take a fatal exception, which generates a Fatal CPER event. This issue only impacts the NVIDIA reference design but might impact partners.

Workaround: Customers should avoid ungraceful PCIe link resets to the BMC while systems are operational. Partners that do not route PCIe to the BMC are not impacted by this issue.

13. No mechanism to disable host IPMI interface

This firmware release does not provide a mechanism to disable the host IPMI interface and any privileged user running on a compute tray can send IPMI commands to the BMC on the same compute tray.

Workaround

A future BMC firmware release will provide an interface to restrict host IPMI commands. In the meantime, necessary access controls need to be implemented on the compute trays to limit host privileged access by users not authorized to access the BMC.

14. Fan Control and Leak Detector user configured settings that are modified through Redfish PATCH API will reset to default after BMC firmware update.

Some Fan Control and Leak Detector properties are configurable through the PATCH method on Redfish. For example, the user is able to modify whether the BMC will shutdown the Chassis when a leak is detected through this API:

```
curl -s -k -u ${USER}:${PASSWORD}
https://${BMCIP}/redfish/v1/Chassis/Chassis_0/Oem/Nvidia/Policies/LeakDetectionPolicy --request PATCH -d '{"PolicyEnabled":true}
```

This setting will persist through BMC resets and tray power cycles, but will not currently survive a BMC firmware update.

Workaround

Check and reapply any desired settings after a BMC firmware update.

15. The Redfish Firmware Inventory API intermittent fails to fetch certain firmware endpoints

The Redfish API to retrieve the current FirmwareInventory:

```
curl -s -k -u ${USER}:${PASSWORD}  
https://\${BMCIP}/redfish/v1/UpdateService/FirmwareInventory
```

Would be missing some firmware inventory endpoints on rare occasions. The cause has been identified and the fix will be included in a future BMC release.

Workaround

Re-run the same Redfish API.

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