Contents

Chapter 1. Introduction...................................................................................................................... 1
Chapter 2. Component Versions................................................................................................. 2
Chapter 3. Change Requests...................................................................................................... 3
  3.1 General............................................................................................................................................. 3
  3.2 CMDaemon.................................................................................................................................... 3
  3.3 Workload Management............................................................................................................. 4
  3.4 Container Engines....................................................................................................................... 5
  3.5 Monitoring...................................................................................................................................... 5
Chapter 1. Introduction

These document covers the NVIDIA Base Command™ Manager (BCM) 10.23.11 software release on NVIDIA DGX SuperPOD™ configurations. Except for Chapter 2, the information herein is the same as in the NVIDIA Base Command Manager Release Notes.

Information about BCM and DGX SuperPOD is available at:
> [https://docs.nvidia.com/base-command-manager/](https://docs.nvidia.com/base-command-manager/)
> [https://docs.nvidia.com/dgx-superpod/index.html](https://docs.nvidia.com/dgx-superpod/index.html)
Chapter 2. Component Versions

DGX SuperPOD component versions for this release are in Table 1.

Table 1. Common component versions

<table>
<thead>
<tr>
<th>Component</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCM ISO</td>
<td>10.23.11</td>
</tr>
<tr>
<td>DGX OS</td>
<td>6.1.0</td>
</tr>
<tr>
<td>Ubuntu</td>
<td>Ubuntu 22.04.1 LTS</td>
</tr>
<tr>
<td>Enroot</td>
<td>3.4.1-1</td>
</tr>
<tr>
<td>CUDA toolkit</td>
<td>12.2</td>
</tr>
<tr>
<td>DCGM</td>
<td>3.1.8</td>
</tr>
<tr>
<td>Cumulus OS</td>
<td>5.5.1</td>
</tr>
<tr>
<td>Mellanox InfiniBand Switch (DGX H100)</td>
<td>MLNX OS version: 3.11.1014</td>
</tr>
<tr>
<td></td>
<td>HCA Firmware: CX7 - 28.36.2024</td>
</tr>
<tr>
<td>Mellanox InfiniBand Switch (DGX A100)</td>
<td>MLNX OS version: 3.11.1014</td>
</tr>
<tr>
<td></td>
<td>HCA Firmware: CX7 - 28.36.2024</td>
</tr>
<tr>
<td>Slurm</td>
<td>23.02.6</td>
</tr>
<tr>
<td>Mellanox OFED Driver (A100 and H100)</td>
<td>23.10-0.5.5.0 (Slpoin and DGX nodes)</td>
</tr>
<tr>
<td>DGX kernel</td>
<td>5.15.0-1040-nvidia</td>
</tr>
<tr>
<td>GPU Driver</td>
<td>535.129.03</td>
</tr>
<tr>
<td>Lustre Client</td>
<td>lustre-client-modules-5.19.0-45-generic</td>
</tr>
<tr>
<td>UFM</td>
<td>UFM 3.0 SDN version: 1.3.1</td>
</tr>
<tr>
<td>HPL</td>
<td>hpc-benchmarks:23.10</td>
</tr>
<tr>
<td>NCCL</td>
<td>tensorrt:23.10-py3</td>
</tr>
</tbody>
</table>
Chapter 3. Change Requests

3.1 General

3.1.1 New Features

- Added support for SLES15 SP5

3.1.2 Improvements

- Changed NVIDIA Container Toolkit default values for
  - accept-nvidia-visible-devices-as-volume-mounts (false -> true)
  - accept-nvidia-visible-devices-envvar-when-unprivileged (true -> false)
- Updated cuda-driver package to 535.129.03

3.2 CMDaemon

3.2.1 New Features

- Added a cmsh command (wlm grid) to create a timelapse view of the jobs that have run
- Added a special default gateway value (255.255.255.255) to use the one provided by dhcpd
- Added cmsh command to show dhcpd leases
- Added Border Gateway Protocol (BGP) overview for Cumulus switches
- Added Link Layer Discovery Protocol (LLDP) overview for Cumulus switches
- Added bootstrap.pem and signature checks in cm-check-certificates and switched from MD5 to SHA1

3.2.2 Improvements

- Allow nodes to be automatically powered off or reset upon installer failure
- Allow devices to be identified by serial in DHCP
- Relaxed SSL checks when registering a new Cumulus switch via ZTP
- Improved CMDaemon startup speed in HA mode
Prevent multiple identical failover group status
Added a flag to allow changing a user home directory to an existing directory
Added a flag to allow pythoncm.cluster to allow entity.commit without suffering from update-race-conditions
Write chrony.conf instead of ntp.conf in node-installer on RHEL9
Allow role exclude list entries for provisioning to be removed using exclude list snippets starting with '+'

3.2.3 Fixed Issues

- Fixed counting of nodes and accelerators towards the license limit
- Fixed service status in cmsh of a lite-node
- Fixed crash in ArchOSInfo::is_arch_os when cm-config-os-arch is not installed on the head node
- Store services added to lite-node to DB
- Fixed cmsh imageupdate --pattern <path>

3.3 Workload Management

3.3.1 New Features

- Automatically configure non-MIG GPUs in Slurm when detected
- Updated slurm23.02 packages to version 23.02.6 (CVE-2023-41914)
- Added new package pyxis-sources to allow building pyxis in air-gapped environments

3.3.2 Improvements

- Allow the management of jobs even if one of the nodes has an incorrect configuration in slurm.conf

3.3.3 Fixed Issues

- Fixed configuring AutoDetect in slurm.conf if GRES is set with addtogresconf=no in the slurm client role
- Cleaned up database node entries of Slurm jobs that were requeued
- Fixed pyxis epilog failure when unpacked images are shared and user does not specify a container name
- Install enroot dependencies on Ubuntu 20.04
3.4 Container Engines

3.4.1 Improvements

- Stopped using deprecated upstream Kubernetes repositories (versions 1.23 and older are no longer available)
- Introduced support for RAPIDS Accelerator for Apache Spark in the Jupyter kernel templates

3.5 Monitoring

3.5.1 New Features

- Collect new DCGM metrics: DCGM_FI_DEV_POWER_VIOLATION and DCGM_FI_DEV_THERMAL_VIOLATION
- Added ManagedServicesOk health check to lite devices

3.5.2 Improvements

- Increased the variability and frequency of the ssh2node healthcheck to reduce load on the head nodes
- Optimized startup of compute nodes in clusters with a large number of nodes and many monitored jobs
- Do not use linear interpolation for health check data, but rather the last known value

3.5.3 Fixed Issues

- Fixed a monitoring bug which prevented new device metrics from being saved to the database if CMDaemon on the head node was restarted right after they were created
- Fixed job-metrics in the base-view monitoring tree
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