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Chapter 1.
DGX-1 SYSTEM FW UPDATE CONTAINER
OVERVIEW

The NVIDIA DGX-1 System Firmware Update container is the preferred method for updating firmware on the DGX-1 System. It provides an easy method for updating the firmware to the latest released versions, and uses the standard method for running Docker containers.

This document describes firmware components that can be updated, any known issues, and how to run this container.

Features

‣ Automates firmware (FW) update for DGX-1 System firmware, such as the system BIOS, BMC, and power supplies.
‣ Provides flexibility to update individual or all FW components
‣ Embeds the following
  ▪ Qualified FW binaries for supported components
  ▪ Flash update utilities and supporting dependencies
  ▪ Manifest file which lists
    ▪ Target platform and firmware version numbers
    ▪ Sequence in which FW update should be applied
    ▪ “On-Error” policy for every FW component
‣ Supports interactive and non-interactive firmware update

How to Use

The NVIDIA DGX-1 System software includes Docker software required to run the container.

See the NVIDIA DGX-1 System User Guide for instructions on updating the system firmware using this container.
Chapter 2.
DGX-1 WITH TESLA P100

2.1. Version 20181106

The DGX-1 with Tesla P100 Firmware Update container version 20181106 is available.

- Package name: nvidia-dgx-fw-0101-20181106.tar.gz
- Image name: nvidia-dgx-fw-0101-20181106

Contents of the DGX-1 System Firmware Container

This container includes the firmware binaries and update utilities for the firmware listed in the following table.

<table>
<thead>
<tr>
<th>Component</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBIOS</td>
<td>S2W_3A06</td>
</tr>
<tr>
<td>VBIOS</td>
<td>86.00.41.00.05</td>
</tr>
</tbody>
</table>

Changes in this Release

- Container
  - Removed BMC, PSU, and SSD firmware updates due to potential issues with the update process.
- System BIOS
  - Updated to version S2W_3A06
    Updated microcode to address Spectre vulnerability.
2.2. Version 20181011

The DGX-1 with Tesla P100 Firmware Update container version 20181011 is available.

- Package name: `nvidia-dgx-fw-0101-20181011.tar.gz`
- Image name: `nvidia-dgx-fw-0101-20181011`

Contents of the DGX-1 System Firmware Container

This container includes the firmware binaries and update utilities for the firmware listed in the following table.

<table>
<thead>
<tr>
<th>Component</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMC</td>
<td>3.27.30</td>
</tr>
<tr>
<td>SBIOS</td>
<td>S2W_3A06</td>
</tr>
<tr>
<td>PSU (Liteon)</td>
<td>00.03.07</td>
</tr>
<tr>
<td>SSD (Samsung)</td>
<td>GXM1103Q</td>
</tr>
<tr>
<td>VBIOS</td>
<td>86.00.41.00.05</td>
</tr>
</tbody>
</table>

Changes in this Release

- **Container**
  - Improved PSU firmware update robustness.
  - Added faulty PSU firmware detection capability to the `show_version` option, advising the user to reflash the firmware if needed. A forced reflash should then be performed.

- **BMC**
  - Updated to version 3.27.30
    - Added support for SNMPv3. Can be set from the BMC dashboard. Cannot be set using `ipmitool`.

- **System BIOS**
  - Updated to version S2W_3A06
    - Updated microcode to address Spectre vulnerability.

2.3. Known Issues
2.3.1. Recovery for PSU Update Failure

Issue
On rare occasions, the recovery mechanism in the container may not be able to recover from a failure in the PSU update process.

Action to Take
If the container does not recover, contact NVIDIA Enterprise Support for assistance.

2.3.2. SNMPv3 Traps are not Available for the BMC

Issue
The BMC is not capable of sending SNMPv3 traps at this time.

Workaround
From the BMC dashboard->SNMP Community Settings, enable traps for SNMPv2.
3.1. Version 20181107

The DGX-1 with Tesla V100 Firmware Update container version 20181107 is available.

- Package name: `nvidia-dgx-fw-0102-20181107.tar.gz`
- Image name: `nvidia-dgx-fw-0102-20181107`

Contents of the DGX-1 System Firmware Container

This container includes the firmware binaries and update utilities for the firmware listed in the following table.

<table>
<thead>
<tr>
<th>Component</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBIOS</td>
<td>S2W_3A06</td>
</tr>
<tr>
<td>VBIOS</td>
<td>88.00.18.00.01 (16 GB)</td>
</tr>
<tr>
<td></td>
<td>88.00.43.00.04 (32 GB)</td>
</tr>
</tbody>
</table>

Changes in this Release

- **Container**
  - Removed BMC and PSU firmware updates due to potential issues with the update process.

- **System BIOS**
  - Updated to version S2W_3A06
    - Updated microcode to address Spectre vulnerability.
3.2. Version 20181010

The DGX-1 with Tesla V100 Firmware Update container version 20181010 is available.

- Package name: `nvidia-dgx-fw-0102-20181010.tar.gz`
- Image name: `nvidia-dgx-fw-0102-20181010`

Contents of the DGX-1 System Firmware Container

This container includes the firmware binaries and update utilities for the firmware listed in the following table.

<table>
<thead>
<tr>
<th>Component</th>
<th>Version</th>
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<tbody>
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<td>BMC</td>
<td>3.27.30</td>
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Changes in this Release

- **Container**
  - Improved PSU firmware update robustness.
  - Added faulty PSU firmware detection capability to the `show_version` option, advising the user to reflash the firmware if needed. A forced reflash should then be performed.
- **BMC**
  - Updated to version 3.27.30
    - Added support for SNMPv3. Can be set from the BMC dashboard. Cannot be set using ipmitool.
- **System BIOS**
  - Updated to version S2W_3A06
    - Updated microcode to address Spectre vulnerability.

3.3. Known Issues
3.3.1. Recovery for PSU Update Failure

**Issue**
On rare occasions, the recovery mechanism in the container may not be able to recover from a failure in the PSU update process.

**Action to Take**
If the container does not recover, contact NVIDIA Enterprise Support for assistance.

3.3.2. SNMPv3 Traps are not Available for the BMC

**Issue**
The BMC is not capable of sending SNMPv3 traps at this time.

**Workaround**
From the BMC dashboard->SNMP Community Settings, enable traps for SNMPv2.
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