Ubuntu Server 20.04 LTS for Dell EMC PowerEdge Servers

Release Notes

June 2022
Rev. A06

DELL Technologies

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.

Contents

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Release summary

Topics:

Version

Ubuntu Server 20.04 LTS

Release date

September 2020

Priority and recommendations

RECOMMENDED: Dell EMC highly recommends applying this update as soon as possible. The update contains changes to improve the reliability and availability of your Dell EMC system.

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Compatibility

Topics:

Supported systems

yx4x and yx5x Dell EMC PowerEdge servers.

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New and enhanced in this release

For information about the new and enhanced features of Ubuntu 20.04 LTS, see www.ubuntu.com/server.

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Important notes

The default server ISO image is the general availability (GA) kernel-Linux 5.4. To download Ubuntu Server installer media and ISO images, go to www.ubuntu.com/download/server. Links to download Ubuntu Server 20.04.1 LTS and the canonical Ubuntu 20.04 release notes are found on this page.

NOTE: By default, the Subiquity installer download is available. Ubuntu 20.04 does not support the Debian-installer.

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Fixes

Topics:

A bus fatal error is detected on BCM57XX card

Description	The operating system and iDRAC reports a bus fatal error on BCM57XX card when the reboot command is issued from the operating system. The error message is due to the driver accessing the device when it is powered off by the shutdown process. This error message can be ignored.
Solution	The issue is resolved in Ubuntu 20.04.4 SRU kernel version linux - 5.4.0-110.124.
Systems affected	All Dell EMC PowerEdge systems with BCM57XX network card.
Applies to	Ubuntu 20.04
Tracking number	190284, 190236, 190026, and 190852

Intel E810 and X710-T4L(device id 0x15ff) network cards are not detected after Ubuntu 20.04 is installed

Description	On installing Ubuntu 20.04, the Intel E810 and X710-T4L(device id 0x15ff) network cards are not detected due to the missing enablement patches in the server generic kernel.
Solution	The operating system kernel must be updated with HWE kernel with the following command: `sudo apt-get install --install-recommends linux-generic-hwe-20.04`
Systems affected	All Dell EMC PowerEdge servers with Intel E810 and X710-T4L(device id 0x15ff) network cards.
Applies to	Ubuntu 20.04
Tracking number	19073

Installing GPGPU CUDA drivers results in installing GNOME desktop

Description	When in text mode, installing GPGPU CUDA drivers using the below command results in installing GNOME desktop: `apt-get install cuda-drivers`
Solution	Use the below command to install CUDA drivers: `apt install -y --no-install-recommends cuda`

Systems affected	All Dell EMC PowerEdge servers supporting NVIDIA GPGPUs.
Applies to	Ubuntu 20.04
Tracking number	196786

USB devices connected to high-speed USB hubs may not be detected in Ubuntu 20.04.2

Description	USB keyboard and other USB devices connected to high-speed hubs may not be detected in Ubuntu 20.04.2 kernel version 5.4.0-78 and later. The issue is intermittent.
Workaround	Not available. A reboot may restore the device function, but it is not guaranteed.
Solution	The issue is resolved in Ubuntu 20.04.2 kernel version 5.4.0-84.94.
Systems affected	All Dell EMC PowerEdge systems
Applies to	Ubuntu 20.04.2 kernel version 5.4.0-78 and later.
Tracking number	207765

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Known issues

Topics:

Booting into operating system fails on systems with TPM 1.2 chips

Description	On systems with TPM 1.2 chips, booting into operating system fails when **TPM Security** field is set to **On without Pre-boot Measurements** in BIOS.
Cause	When the option **On without Pre-boot Measurements** is set in BIOS, the shim utility cannot write to TPM PCR registers. Shim considers this as a fatal error and fails to boot.
Workaround	In BIOS, set **TPM Security** field to **On with Pre-boot Measurements**.
Systems affected	All Dell EMC PowerEdge systems supporting TPM 1.2
Applies to	Ubuntu 20.04 and later.
Tracking number	209250, 209177

Ubuntu server suspends automatically when idle

Description	After a period of inactivity, Ubuntu server goes into suspend mode if **Automatic Suspend** option under **Power** settings is set **ON**. This may result in undesired side effects such as blank screen or a system crash.
Workaround	Change the power settings. 1. Go to **Settings > Power**. 2. In the **Suspend and power button** section, select **Off** from the **Automatic Suspend** option.
Systems affected	All Dell EMC PowerEdge servers
Applies to	Ubuntu 20.04

Unable to shut down Ubuntu when the graceful shutdown option from iDRAC is selected or when power button is pressed on the server

Description

When you select the **Graceful Shutdown** option from any system management interface such as iDRAC or press the power button, the system goes to a suspended state and all the tasks stop if **Power Button action** option under **Power settings** is set to **suspend**. Even the firmware updates from iDRAC interface that requires restart, takes longer time to update, and the system will be Hard reset upon iDRAC watchdog time expiration.

Workaround

Change the power settings.

1. Go to **Settings > Power**.
2. In the **Suspend & power Button** section, select **Power Off** from the **Power Button Action** drop-down list.

NOTE: The workaround may not work when the system is locked. Gnome prevents accidental shutdown when the system is locked. As a security precaution, Gnome does not allow any power related actions such as shutdown from any system management interfaces like iDRAC or when the power button is pressed unless the user is active and logged-in to OS.

Systems affected All Dell EMC PowerEdge systems

Applies to Ubuntu 20.04

NVIDIA out-of-box driver fails to load when system has NVIDIA GPGPUs on Ubuntu 20.04

Description

NVIDIA out-of-box (OOB) driver fails to load when the system has four NVIDIA GPGPUs on Ubuntu 20.04. The dmesg displays the following message:

```
nvidia: probe of 0000:17:00.0 failed with error -1
nvidia: probe of 0000:65:00.0 failed with error -1
```

Dmesg also displays the following messages indicating that setting up of standard BAR registers for the GPGPUs has failed:

```
pci 0000:17:00.0: BAR 1: no space for [mem size 0x2000000000 64bit pref]
pci 0000:17:00.0: BAR 1: failed to assign [mem size 0x2000000000 64bit
pref]
pci 0000:17:00.0: BAR 0: no space for [mem size 0x01000000]
pci 0000:17:00.0: BAR 0: failed to assign [mem size 0x01000000]
```

Workaround Pass **pci=realloc=off** kernel parameter.

Systems affected All Dell EMC PowerEdge systems supporting NVIDIA GPGPUs.

Applies to Ubuntu 18.04 and later.

Tracking number 203262

Intel E810 and X710-T4L(device id 0x15ff) network cards are not detected after Ubuntu 20.04 is installed

Description

On installing Ubuntu 20.04, the Intel E810 and X710-T4L(device id 0x15ff) network cards are not detected due to the missing enablement patches in the server generic kernel.

Workaround	The operating system kernel must be updated with HWE kernel with the below command: `sudo apt-get install --install-recommends linux-generic-hwe-20.04`
Systems affected	All Dell EMC PowerEdge servers with Intel E810 and X710-T4L(device id 0x15ff) network cards.
Applies to	Ubuntu 20.04
Tracking number	190732

Ubuntu deployment through MaaS fails with Broadcom network cards BCM57xx

Description	MaaS PXE boot stops responding while loading kernel and initial RAM disk (initrd). This behavior was observed only with the AMD systems with BIOS version 2.0.3.
Workaround	Use BIOS version 1.7.4
Systems affected	All Dell EMC PowerEdge systems with AMD Rome processors.
Applies to	Ubuntu 20.04
Tracking number	195848

The name of the NVMe device may change when it is hot-inserted after a surprise removal

Description	If an NVMe device is hot inserted after it was previously surprise removed when I/O operations are accessing the device, the name of the NVMe device may change or will not retain the same name that is assigned prior to surprise removal. Dmesg displays the following messages:
	`kernel:  nvme nvme3: failed to mark controller CONNECTING`
	`kernel:  nvme nvme3: Removing after probe failure status: -16`
	The functionality of the NVMe device is not affected.

Systems affected	Dell EMC PowerEdge R740XD, Dell EMC PowerEdge R740XD2 Dell EMC PowerEdge R7525.
Applies to	Ubuntu 20.04.01
Tracking number	181799

NVMe devices are enumerated in namespace 2 when hot-inserted into the server after being surprise removed

Description	When an NVMe device from a RAID 1 MD array is hot-inserted after being surprise removed, the device is enumerated in namespace 2 although only one namespace is enabled. The device is named as **nvme2n2** instead of **nvme2n1**. This issue is observed on Dell Express Flash PM1725a device. The functionality of the NVMe device is not affected.
Workaround	Pass the **multipath=N module parameter** to the **nvme_core driver**.
Systems affected	Dell EMC PowerEdge R740XD, Dell EMC PowerEdge R740XD2 Dell EMC PowerEdge R7525.
Applies to	Ubuntu 20.04.01
Tracking number	181814

/proc/mdstat and mdadm -D commands display incorrect statuses when two NVMe devices are surprise removed from a RAID 5 MD array

Description	When two of three NVMe devices are surprise removed from a RAID 5 MD array, the command **cat/proc/mdstat** displays the array status incorrectly as **active**. Similarly, when the status of the MD RAID is queried using the **mdadm -D /dev/mdN**command, the number of **active** and **working** devices displayed is two. Only the status of the array reported is incorrect. However, when I/O operations are performed, I/O errors are observed as expected.
Cause	When the number of devices that are surprise removed exceeds the number of devices that are required for the array to function, the MD status is not updated.
Systems affected	All Dell EMC PowerEdge systems
Applies to	Ubuntu 20.04.01
Tracking number	182820

Status of the RAID 0 LV is displayed as Available when one of the members of the RAID array is surprise removed

Description	When Logical Volume Manager (LVM) is used to create a RAID 0 array and a member of the RAID array is surprise removed, the **lvdisplay** command shows the LV status as **Available**.
Solution	Use the command **lvs -o +lv_health_status** to check the status of the RAID array. The command displays the output **Partial** when a member of the RAID array is removed.
Systems affected	All Dell EMC PowerEdge systems
Applies to	Ubuntu 20.04.01
Tracking number	175865

BIOS Dell Update Packages (DUPs) will not run on Ubuntu 20.04

Description	When the operating system DUP method is used to update the system BIOS, the firmware update fails to run on Dell EMC PowerEdge R240, R340, T140, T340 severs.
Cause	This issue is specific to Intel Mehlow platforms where the Intel MEI driver is causing the firmware update from running.
Workaround	Perform the firmware updates through iDRAC or Lifecycle Controller (LC). Excluding the Intel MEI and mei_me drivers allows the BIOS DUP to function.
Systems affected	Dell EMC PowerEdge R240, R340, T140, T340 severs.
Applies to	Ubuntu 20.04
Tracking number	178459

Ubuntu Server 20.04 live image installation fails due to a loss of network connectivity

Description	The Ubuntu Server 20.04 live image installation fails due to a loss of network connectivity. The live image is designed to update all the packages to the latest version and then proceed with installation.
Solution	For seamless installation of Ubuntu Server 20.04, at least one network connection is required.
Systems affected	All yx4x and yx5x Dell EMC PowerEdge servers.
Applies to	Ubuntu 20.04
Tracking number	168103

CCP initialization failed error encountered after Ubuntu.20.04 is installed

Description	The following error message is displayed after Ubuntu 20.04 is installed: `ccp initialization failed` Functionality of the operating system is not affected, and the error message can be ignored.
Cause	The CCP engine is disabled in the system BIOS. The operating system recognizes the CCP engine however, it is not initialized.
Systems affected	All yx4x and yx5x Dell EMC PowerEdge servers.
Applies to	Ubuntu 20.04
Tracking number	169087

NVMe drive is not detected after multiple hot plug operations

Description NVMe drive is not detected when multiple hot plug operations are performed.

Cause A race condition that is related to MSI interrupts and their handling in the **pciehp** driver interrupt service routine causes this issue.

Workaround

1. Read the **Slot Status Register** in the PCI Express Capability structure by running the following command:

   ```
   setpci -s e0:03.2 CAP_EXP+0x1a.w
   Output: 0148 (value returned)
   ```

2. Clear the event bits that are impacted by running the following command:

   ```
   setpci -s e0:03.2 CAP_EXP+0x1a.w=0x0108
   ```

3. Read the **Slot Status Register** again to confirm that event bits are cleared by running the following command:

   ```
   setpci -s e0:03.2 CAP_EXP+0x1a.w
   Output: 0040 (value returned)
   ```

4. Unplug the drive and then plug-in the drive after clearing the event bits.

Systems affected All yx4x and yx5x Dell EMC PowerEdge servers.

Applies to Ubuntu 20.04

Tracking number 172420

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Limitations

- Installing a graphical user interface on servers is not supported by Ubuntu. For more information, see
  - Server GUI https://help.ubuntu.com/community/ServerGUI.
  - Desktop or GUI environment on a server https://answers.launchpad.net/ubuntu-certification/+faq/2765.
- Dell EMC PowerEdge RAID Controller S150 is not supported on Ubuntu 20.04 LTS. For more information about the limitations of this release, see Ubuntu 20.04 (Focal Fossa) Release Notes.

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Updating Ubuntu

For instructions on how to update Ubuntu 20.04 from Ubuntu 18.04, see www.help.ubuntu.com/community/FocalUpgrades.

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Resources and support

For more information about the features of this release, see www.wiki.ubuntu.com/FocalFossa/ReleaseNotes#Ubuntu_Server.
Topics:

Identifying the series of your Dell EMC PowerEdge servers

The PowerEdge series of servers from Dell EMC are divided into different categories based on their configuration. They are referred as YX2X, YX3X, YX4X, YX4XX, or YX5XX series of servers. The structure of the naming convention is described below:

The letter Y denotes the character in the server model number. The character denotes the form factor of the server. The form factors are listed below:

- C- Cloud
- F- Flexible
- M or MX- Modular
- R- Rack
- T- Tower

The letter X denotes the numbers in the server model number. The number denotes multiple characteristics about the server. They are listed as follows:.

- The first digit (X) denotes the value stream or class of the server.
  - 1-5—iDRAC basic
  - 6-9—iDRAC Express
- The second digit denotes the series of the server. It is retained in the server naming convention and does not replace the letter X.
  - 0—series 10
  - 1—series 11
  - 2—series 12
  - 3—series 13
  - 4—series 14
  - 5—series 15
- The last digit (X) always denotes the make of the processor as described below:
  - 0-Intel
  - 5-AMD

NOTE: For servers that use an AMD processor, the model number is made up of four digits instead of three. The third digit (X) denotes the number of processor sockets that the series of server supports.

- 1–one socket server
- 2–two socket server

Table 1. PowerEdge servers naming convention and examples

YX3X servers	YX4X servers	YX4XX servers	YX5XX servers
PowerEdge M630	PowerEdge M640	PowerEdge R6415	PowerEdge R6515

Table 1. PowerEdge servers naming convention and examples (continued)

YX3X servers	YX4X servers	YX4XX servers	YX5XX servers
PowerEdge M830	PowerEdge R440	PowerEdge R7415	PowerEdge R7515
PowerEdge T130	PowerEdge R540	PowerEdge R7425	PowerEdge R6525

Latest Release Notes

To access the latest Release Notes for this version:

1. Go to www.dell.com/support/home/en-us/products/software_int/software_operating_systems.
2. Click the link for this version of Ubuntu.
3. Click **Documentation**.

Related documents and links

Following are the documents and links that are related to Ubuntu 18.04:

Table 2. Related documents and links

URL	For information about
www.discourse.ubuntu.com/c/support-help-requests	Online support for Ubuntu 20.04
www.linux.dell.com/repo/community/ubuntu/	Dell EMC Ubuntu repository
www.help.ubuntu.com/lts/installation-guide/amd64/index.html	Installation Guide

Accessing documents using product selector

You can also access documents by selecting your product.

1. Go to www.dell.com/manuals.
2. In the **Choose from all products** section, click **View products**.
3. Click **Software and Security**, and then click **Operating Systems**.
4. To view the document, click the wanted product version.

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Contacting Dell EMC

Dell EMC provides several online and telephone-based support and service options. Availability varies by country and product, and some services may not be available in your area. To contact Dell EMC for sales, technical support, or customer service issues, go to www.dell.com/contactdell.

If you do not have an active Internet connection, you can contact information on your purchase invoice, packing slip, bill, or the product catalog.