Ubuntu 16.04.3 for Dell EMC PowerEdge Servers

Release Notes

DELL EMC

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.

2017 - 12

Rev. A01

Contents

1

Overview

Ubuntu is an open source operating system software, which is one of the Linux distribution systems, based on Debian architecture. Ubuntu runs on the architectures, including Intel, AMD, and ARM-based machines. Ubuntu is published by Canonical Ltd, who offers commercial support.

Ubuntu Support by Dell EMC

Ubuntu Support by Dell EMC entitles customers to Ubuntu Server Technical Support from Dell EMC Technical support for one, three, or five years of contract period.

NOTE: Only issues relating to Dell EMC servers running Ubuntu are discussed in this document.

Ubuntu Server installer media

Ubuntu Server installer ISOs are available for download from https://www.ubuntu.com/server.

The default server ISO image is the General Availability (GA) kernel-Linux 4.4, but the Hardware Enablement (HWE) Kernel (Linux 4.10) can be selected optionally. For more information about Rolling LTS Enablement Stack, see https://wiki.ubuntu.com/Kernel/RollingLTSEnablementStack.

For information about advanced deployment techniques using Metal as a Service (MAAS), see https://docs.ubuntu.com/maas/2.1/en/.

Using MAAS, you can use the hardware with the latest version of Ubuntu Server LTS and SRU kernel. For more information about Stable Release Updates (SRU), see https://wiki.ubuntu.com/StableReleaseUpdates.

2

Issues and Resolutions

Topics:

Ubuntu 16.04.3 installation with Hardware-Enablement kernel fails when NUMA is disabled

Description:	On the Dell EMC's 14th generation of PowerEdge servers with 28 cores multi-socket CPUs and when NUMA is disabled, the OS installation with Hardware-Enablement kernel fails and displays blank screen.
Applies to:	Ubuntu 16.04.3 on Dell EMC's 14th generation of PowerEdge servers such as R740, R740xd, R940, R640, R540, T440, T640, M640, M640p, FC640
Cause:	The below patch that maps the CPU to a node is incorrect: `x86/acpi: Set persistent cpuid <-> nodeid mapping when booting (commit - dc6db24d2476cd09c0ecf2b8d80313539f737a89 )`
Solution:	Enable NUMA or reduce the number of core to 26 or below.

Ubuntu 16.04.3 cannot detect NVDIMMs

Description:	While installing Ubuntu-16.04.3 through ISO without enabling network, NVDIMMs are not listed as persistent memory devices.
Applies to:	Ubuntu 16.04.3
Cause:	By default, the ISO comes with a `grub2-common` package of version: `2.02~beta2-36ubuntu3.12` which does not have the required NVDIMM enablement in it. This results in OS detecting the NVDIMMs as normal memory instead of persistent memory.
Solution:	Update the `grub2-common` package to version:`2.02~beta2-36ubuntu3.13` or later which have the NVDIMM enablement patches in them.

PERC 10 and QLogic QL41xxx cards do not support Ubuntu 16.04.3 and earlier versions

Description:	Ubuntu 16.04.3 and earlier versions do not support the following:

- PERC 10: H740p, H840
- QLogic NICs: QL41264, QL41164, QL41262.

Applies to: Ubuntu 16.04.1, 16.04.2, and 16.04.3

Cause: Ubuntu 16.04.3 and earlier versions do not contain inbox drivers for PERC 10 and QLogic NICs.

Solution: This issue can be ignored because there is no functionality loss. These components will be supported in a later version of Ubuntu.

Ubuntu 16.04.3 installer does not recognize the device name of PCIe SSDs

Description: While trying to install Ubuntu 16.04.3 on PowerEdge 14th generation servers, the installer displays the name of PCIe SSDs as `Unknown`.

Applies to: Ubuntu 16.04.3

Cause: Udev is responsible for obtaining all the device details, which are not populating the model name for PCIe SSDs. This leads installer to recognize PCIe SSD disks as `Unknown model`.

Solution: Enumeration of the disks are correct. A user can differentiate the disks based on enumeration or disk-slot numbers and proceed with installation.

An error message is displayed during Ubuntu 16.04.3 installation

Description: During Ubuntu 16.04.3 installation on PowerEdge R640 servers, the following error message is displayed: `Error parsing PCC subspaces from PPCT`

Applies to: Ubuntu 16.04.3

Cause: The kernel configuration file has CONFIG_MAILBOX and CONFIG_PCC enabled in Ubuntu by default. Also, when the BIOS acpi dump was checked the PCCT defines only a "Generic Communications Subspace" or Type-0 and not Type-1 and Type-2. Whereas the acpi_pcc_probe () takes count of only these 2 missing/not-defined PCC subspace types.

Solution: This issue can be ignored because there is no functionality loss.

ACPI error messages related to IPMI in Ubuntu 16.04 LTS dmesg logs are displayed

Description: `dmesg` displays the following ACPI-IPMI related error messages on system startup:

```
ACPI Error: No handler for Region [IPMI] (ffff880c04d8c240) [IPMI] (20110623/
evregion-373)

ACPI Error: No handler for Region [IPMI] (ffff880c04d8c240) [IPMI] (20110623/
evregion-373)
```

Applies to: Ubuntu 16.04.3

Cause: The DSDT feature of IPMI Op-region is enabled in BIOS, per ACPI 4.0 specifications. Platforms that require IPMI Op-region enabled in BIOS for Power Meter usage display these ACPI error messages since the kernel does not have handlers to support the methods in IPMI Op-region.

Solution: This issue can be ignored because there is no functionality loss.

ACPI Error kernel fail to assign BAR registers to PCI device message in Ubuntu 16.04 LTS

Description: dmesg displays the following BAR failure messages on system startup:

```
pci :BAR 6: failed to assign [mem size 0x00100000 pref
```

Applies to: Ubuntu 16.04.3

Cause: The Linux PCIe layer tries to allocate all PCIe BARs in every boot. Home agent devices on Intel Xeon processors are not expected to have BAR registers. The home agent devices however return a positive value when queried by kernel.

Solution: This issue can be ignored because there is no functionality loss.

3

Getting help

Topics:

Ubuntu support by Dell EMC

- Dell EMC Technical Support requires purchase of ProSupport and Ubuntu Support by Dell EMC.
- Purchasing Ubuntu Support by Dell EMC from Dell EMC, provides L1, L2 support from Dell EMC, and L3 support from Canonical for the OS related issues.

Native driver support

- Ubuntu Server is supported by Native drivers only.
- Hardware Enablement is provided by subsequent version of Ubuntu Server from Canonical.
- Bug fixes and Security updates are handled and delivered by Canonical through the Ubuntu update process.

For more information on Ubuntu Long term Support (LTS) Enbalement stack, see https://wiki.ubuntu.com/Kernel/LTSEnablementStack.

Contacting Dell

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

Dell 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 for sales, technical support, or customer service issues:

1. Go to **Dell.com/support.**
2. Select your support category.
3. Verify your country or region in the **Choose a Country/Region** drop-down list at the bottom of the page.
4. Select the appropriate service or support link based on your need.