

# Dell EMC PowerEdge Systems SUSE Linux Enterprise Server 11

Installation Instructions And Important Information

## 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.

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# Installation Instructions

## Topics:

- [Overview](#)
- [Installing and re-installing your operating system](#)
- [Device drivers](#)
- [Updating your system packages](#)
- [Configuring your system settings](#)

## Overview

This document provides the following information:

- Instructions for installing and reinstalling the operating system on your Dell EMC system.
- Sources of additional information.

## Installing and re-installing your operating system

You can install and reinstall SUSE Linux Enterprise Server 11 on your system using one of the following options:

- Installing with Unified Server Configurator (USC).
- Using the Dell EMC Systems Build and Update Utility media.
- Using the SUSE Linux installation media for custom installation.
- Installing SUSE Linux Enterprise Server 11 in the Unified Extensible Firmware Interface (UEFI) Mode.
- Installing on systems with a Dell EMC Utility Partition (DUP).

**NOTE:** It is recommended that you use the *Unified Server Configurator* media to install and reinstall SUSE Linux Enterprise Server 11.

If you want to perform a custom installation using the SUSE Linux installation media, perform additional manual modifications or install additional packages that are not located on the SUSE Linux installation media.

For information about performing manual modifications, see the topic [Important Information](#).

To download additional software, see [Dell.com/support](#).

## Installing SUSE Linux Enterprise Server 11 with Unified Server Configurator (USC)

USC provides an **OS Deployment** wizard that assists you with the installation of SUSE Linux Enterprise Server 11.

**NOTE:** USC may not provide the latest drivers that are required to complete the installation of the operating system. Download the latest drivers from [Dell.com/support](#), or use the *Dell EMC Systems Management Tools and Documentation* media.

**NOTE:** Unified Server Configuration—Lifecycle Controller Enabled (USC-LCE), comes with embedded drivers that are factory installed. It is recommended that you run the Platform Update wizard to ensure that you have the latest drivers before you begin installing the operating system. For more information, see [Updating The Platform Using The Platform Update wizard](#) section in the *Dell EMC Unified Server Configurator - Lifecycle Controller Enabled User Guide* at [Dell.com/support/manuals](#).

To begin installation using the **OS Deployment** wizard:

1. Boot the system and press <F10> within 10 seconds of the Dell EMC logo being displayed.

2. Click **OS Deployment** in the left pane.
3. Click **Deploy OS** in the right pane.

**NOTE:** If your system has a RAID controller, you must configure RAID before you continue with the installation of drivers. For more information, see the *Optional RAID Configuration* section in the *Dell EMC Unified Server Configurator - Lifecycle Controller Enabled User Guide* at [Dell.com/support/manuals](http://Dell.com/support/manuals).

4. From the list of operating systems, select **SUSE Linux Enterprise Server 11 64-bit** and click **Next**.

USC or USC-LCE extracts the required drivers to an internal USB drive named OEMDRV under `/linux/suse/x86_64-sles11/install/*.rpm`.

After the drivers are extracted, USC or USC-LCE prompts you to insert the operating system installation media.

5. Insert the SUSE Linux Enterprise Server 11 media, and then click **Next**.
6. Click **Finish** to reboot the system.

**NOTE:** Upon reboot, the system prompts you to press a key to boot to the operating system media. If you do not press a key, the system boots to the hard drive.

7. Continue with the operating system installation by booting to the operating system media.

It is recommended that you update your system with the drivers extracted in step 4, after the operating system installs.

The extracted drivers are located under the OEMDRV drive at: `/linux/suse/x86_64-sles11/install`.

**NOTE:** Ensure that you complete the operating system installation within 18 hours because all the copied drivers are removed automatically from the internal USB after 18 hours. To remove the drivers before 18 hours, reboot the system, press **<F10>** and re-enter USC.

Use the following command to install the drivers: `rpm -UvH *rpm`

For more information, see the *Common Features* section in the *Dell EMC Unified Server Configurator-Lifecycle Controller Enabled User Guide* at [Dell.com/support/manuals](http://Dell.com/support/manuals).

## Using the Dell EMC Systems Build and Update Utility media

The *Dell EMC Systems Build and Update Utility* media provides the following installation benefits:

- Automates the installation process.
- Restores the pre-installed settings including the RPM modules and the partition scheme, for a pre-installed operating system.
- Allows the operating system to deliver additional software or customization specific to Dell EMC PowerEdge systems, including the correct device drivers for detected hardware components.

Insert the *Dell EMC Systems Build and Update Utility* media into your CD/DVD drive and reboot your system. Follow the directions on the screen and the instructions in the documentation that came with the media.

## Using the SUSE Linux installation media

To perform a custom installation using the SUSE Linux installation media:

1. Insert the SUSE Linux Installation media into your CD/DVD drive and boot the system.
2. Ensure that the CD/DVD drive is the first boot device:
  - If your system has a conventional BIOS, press **<F2>** during boot to enter the BIOS and set the optical drive as the first boot device.
  - If your system supports Unified Extensible Firmware Interface (UEFI), press **<F11>** during boot to initiate the UEFI boot manager and set the boot mode to **Boot from CD** option. For more information on UEFI based installation, see [Installing SUSE Linux Enterprise Server 11 In The UEFI Mode](#).
3. Choose **Install** from the **Boot** menu.  
The **SUSE Linux Yet Another Startup Tool (YaST)** installer loads.
4. Follow the instructions on your screen and complete the installation.

For more information, see the operating system manuals in the SUSE Linux Enterprise Server 11 installation media.

# Installing SUSE Linux Enterprise Server 11 in the UEFI mode

To install SUSE Linux Enterprise Server 11 in the UEFI mode:

1. Boot the system and press <F2> to go to the system setup.
2. Select **Boot Settings** and change **Boot Mode** from BIOS to UEFI.  
Reboot the system.
3. Insert the SUSE Linux Enterprise Server 11 media in the CD/DVD drive.
4. Ensure that the first boot device is your optical drive.  
If the first boot device is not your optical drive, go to **UEFI Boot Settings** and change the boot order.
5. Select **Continue** to boot from the SUSE Linux Enterprise Server 11 media.  
The YaST installation screen is displayed.
6. Proceed with the installation until the **Installation Settings** screen is displayed.
7. Click **Partitioning**.
8. Select **Custom Partitioning (for experts)** and click **Next**.

 **NOTE:** Delete the previous partitions and volume groups if any.

9. Click **Expert** and select **Create New Partition Table**.
10. Select **GPT** and click **OK**.
11. Add a primary partition of 200 MB for the boot partition.
12. Select mount point for the partition created as `/boot/efi`. Select **Format Partition** and **File System** type as FAT.
13. Create other partitions according to your requirement.
14. Continue the installation process.  
After the installation is complete, check that the entry for SUSE Linux Enterprise Server 11 is added in **UEFI Boot Manager** and use it to boot the system.

## Installing SUSE Linux Enterprise Server 11 on systems with a Dell EMC Utility Partition

The Dell EMC Utility Partition (DUP ) contains diagnostics and other utilities that can be initiated during system boot. If you are installing or reinstalling SUSE Linux Enterprise Server 11 on a system with a Dell EMC Utility Partition, install the boot loader on the first sector of the boot partition. This retains the option of booting from the Utility Partition as the system does not overwrite the Master Boot Record (MBR).

To install SUSE Linux Enterprise Server 11 on systems with a Dell EMC Utility Partition:

1. In the **Installation Settings** screen, click **Expert**, and then click **Booting**.  
The **Boot Loader Settings** window is displayed.
2. Click **Boot Loader Installation**.
3. Select **Boot** from **Boot Partition**.  
SUSE Linux Enterprise Server 11 is installed on your system.

 **NOTE:** If you have a utility partition, view the existing partitions in the installer. The utility partition is located on the `/dev/sda1` partition. By default, YaST does not overwrite this partition.

## Device drivers

Device driver packages available with the SUSE Linux Enterprise Server 11 media may not support newer Dell EMC PowerEdge systems. Dell EMC provides these device drivers as RPM packages that can be installed on your system.

If you need the latest drivers to complete installation, Dell EMC provides device drivers as KMP/DKMS packages that can be installed using the standard RPM installation procedure.

You can download the following from **Dell.com/support**:

- Latest drivers or a driver disk image
- The Dynamic Kernel Module Support (DKMS) framework

For more information about using Kernel Module Package (KMP), see the *Partner Linux Driver Process Introduction* page at [suse.com/partners/isv](https://www.suse.com/partners/isv).

## Updating your system packages

SUSE periodically releases software updates to fix bugs, address security issues, and add new features. You can download these updates from [suse.com/support](https://www.suse.com/support). It is recommended that you update your system software to the latest revisions before you deploy your system.

To download and install package updates automatically, see the *SUSE Linux Enterprise Server Deployment Guide* at [suse.com/documentation](https://www.suse.com/documentation).

## Configuring your system settings

To configure your system after the installation, including hardware, software, and services, use **SUSE Linux Yet Another Startup Tool (YaST)**.

To start **YaST** in a text console:

1. Type `/sbin/yast` at the command prompt.
2. In the X Window system, type `/sbin/yast2`.

You can choose **YaST** either from the **System** menu item on the K desktop environment (KDE) or from the main menu in GNOME.

## Important Information

This section details information about software fixes, issues, and additional information for using SUSE Linux Enterprise Server 11 on your Dell EMC system.

**NOTE:** Hibernation/sleep (S3, S4) mode is not supported on Dell EMC PowerEdge systems.

### Topics:

- [Consistent naming of network devices](#)
- [Issues and resolutions](#)

## Consistent naming of network devices

In the earlier versions of Linux, the interface names assigned by the operating system did not map to the corresponding ports on the system board or on the add-in network adapters. For example, eth0 need not necessarily be associated with port **Gb1** on the system.

SUSE Linux Enterprise Server 11 SP 2 has a new feature that supports consistent naming of network devices. The new naming scheme uses **biosdevname udev helper utility**, developed by Dell EMC and released under the General Public License (GPL), to suggest new names based on the location of the network adapters on the system as suggested by system BIOS.

The **biosdevname utility** enables the system BIOS to logically assign and map Ethernet interface names with the respective physical ports on the system board or the add-in network adapters.

The new naming convention is as follows:

#### Lan-On-Motherboard/embedded interfaces

```
em<port number>_<virtual function instance/NPAR index>
(ethernet-on-motherboard <1,2..>)
```

#### PCI add-in interfaces

```
p<slot number>p<port number>_<virtual function instance/NPAR index>
```

**NOTE:** The new naming scheme is enabled by default on Dell EMC systems. To disable the new naming scheme, run the command line `biosdevname=0`, during installation.

**NOTE:** For more information on the biosdevname utility and the new naming scheme, see the document that describes the new naming convention for network devices at [linux.dell.com/files/whitepapers/](http://linux.dell.com/files/whitepapers/).

## Issues and resolutions

This section details information about general issues, causes, and workarounds applicable to SUSE Linux Enterprise Server 11.

### Kernel panic occurs when OMSA services are started on SUSE Linux Enterprise Server 11.x

**Description:** Kernel panic occurs when OpenManage Server Administrator (OMSA) services are started on SUSE Linux Enterprise Server 11.x.

**Workaround:** Download and install the latest kernel version from the suse repository.

**Cause:** The Kernel might spend more time in servicing the kernel timer functions and set a flag to prevent the other code from resetting the timer hardware (APIC timer). The kernel then programs the timer hardware for a timeout up to 100 ms to run the kernel timer functions. At the next timer hardware interrupt, this flag is cleared, where the flag can be ignored for the specific code path. When the flag is ignored, the timer hardware might be set to an

incorrect timeout value. This incorrect timeout value might be over 10 seconds and during this time no kernel timer functions can be run.

## Invalid naming conventions for the ports of Emulex OneConnect OCe14102-UX-D card when NPAR-EP is enabled

- Description:** Red Hat Enterprise Linux 11.x with Emulex card naming conventions by biosdevname may not be accurate for all the networking devices. As a result partitions 3 and 4 of all the four ports of Emulex is not named as expected.
- Workaround:** Add kernel boot parameter "biosdevname=0" this return back to ethN naming.
- Cause:** Biosdevname has the limitation, which cannot handle more than 7 PCI functions.

## Unable to boot SUSE Linux Enterprise Server 11 SP3 when HBA mode is enabled in Broadcom card

- Description:** Unable to boot SUSE Linux Enterprise Server 11 SP3 if the HBA mode is enabled, and initiator and target (LUN) are in different subnet.
- Workaround:** Ensure the HBA is disabled, and initiator and target in the same subnets.
- Cause:** The initiator is unable to discover the target if they are in the different subnets.

## Invalid naming conventions for ports in Intel and NDC cards

- Description:** The naming conventions for Intel and NDC cards in SUSE Linux Enterprise Server 11 SP3 by biosdevname might not be accurate for all the networking devices.
- Workaround:** Add kernel boot parameter "biosdevname=0" and the naming convention reverts to eth naming.
- Cause:** Limitation in the biosdevname.

## SUSE Linux Enterprise Server 11 SP3 stops functioning when executing the BMC DUP operation continuously

- Description:** SUSE Linux Enterprise Server 11 SP3 stops functioning when executing the BMC DUP updates and downgrade operation continuously.
- Workaround:** Restart the system.
- Cause:** IPMI driver is not responding.

## SUSE Linux Enterprise Server 11 fails when DSDT in the BIOS has IPMI Opreigion enabled

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

```
[ 4.724118] ACPI Error: No handler for Region [IPMI] (ffff880c04d8c240)
[IPMI] (20110623/evregion-373)
```

```
[ 4.724122] ACPI Error: Region IPMI (ID=7) has no handler (20110623/exfldio-292)
```

**Workaround**

There is no functionality loss. This issue will be fixed in a future release of SUSE Linux Enterprise Server 11.

**Cause**

This feature is enabled in BIOS as per ACPI 4.0 specifications. Platforms that require IPMI Opreion enabled in BIOS for Power Meter usage display the ACPI error messages. The kernel does not have handlers to support the methods in IPMI Opreion.

## IPv6 LUN discovery fails on SUSE Linux Enterprise Server 11 SP3

**Description**

Booting the system through iSCSI fails when it is configured over IPv6 with Broadcom 57840 adapter. The installation of SUSE Linux Enterprise Server 11 SP3 on iSCSI LUN is successful but does not boot the system through LUN after the first reboot.

**Workaround**

This issue will be fixed in a future release of SUSE Linux Enterprise Server 11.

**Cause**

This issue occurs only when the iSCSI LUN is configured to boot using IPv6. The IPv6 module (ipv6.ko) is missing in the **initrd** that is created during OS installation. This causes the IPv6 module to fail as the module is not loaded during the first system boot when system tries to start the LUN discovery using IPv6.

## SUSE Linux Enterprise Server 11 SP3 Xen does not boot in UEFI

**Description**

Installing SUSE Linux Enterprise Server 11 SP3 with the Xen kernel after changing the boot loader to boot the Xen kernel by default, the system attempts to boot and fails displaying the error message `No memory for trampoline` and redirects to the UEFI boot menu.

**Workaround**

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

**Cause**

The Xen kernel requires memory capacity below 1 MB to boot. The UEFI boot mode does not allocate memory capacity below 1 MB.

## ethtool displays incorrect supported and advertised link modes for Mellanox connectX-3 40 GB adapter

**Description**

On Dell EMC PowerEdge Systems with Mellanox ConnectX-3 40 GB adapter, ethtool does not report 40 GB in Supported and Advertised link modes.

```
#ethtool p4p1
Settings for p4p1:
Supported ports: [ TP ]
Supported link modes: 10000baseT/Full
Supported pause frame use: No
Supports auto-negotiation: No
Advertised link modes: 10000baseT/Full
```

**Workaround**

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

**Cause**

The ethtool utility in SUSE Linux Enterprise Server 11 SP3 does not recognize the 40 GB Supported and Advertised link modes.

## Ports are named incorrectly as renameXXX instead of pXpY

- Description** In systems with 28 network ports, the driver names the ports incorrectly. It loads them in a different order according to the message log. Each time it tries to load them it misses between ports 1 and 5 and names it **renameXXX** instead of **pXpY**.
- Workaround** Add the kernel boot parameter `biosdevname=0` to rename it to the **ethN** naming convention.  
This issue will be fixed in a future release of SUSE Linux Enterprise Server 11.
- Cause** The issue occurs because the **addslot** function in **biosdevname** shows the same **index\_in\_slot** value for two or more interfaces on a given PCI slot. The **index\_in\_slot** value is used as a port number. This results in two or more interfaces getting the same port number, causing the port to be renamed **renameN**.  
This issue is specific to add-in adapters on the PCI slot. It is not seen with onboard adapters.

## Unable to boot the operating system when the HBA mode is enabled and target LUN is in a different subnet

- Description** Unable to boot SUSE Linux Enterprise Server 11 SP3 when the HBA mode is enabled and the target LUN is in a different subnet.
- Workaround** There is no workaround available when the iSCSI offload or the HBA mode is enabled and the initiator and target are in different subnets.  
Ensure that initiator and the target are in the same subnet when the iSCSI offload or HBA mode is enabled.  
Or  
Use software iSCSI or ensure that the HBA and iSCSI offload is in disabled mode.
- Cause** Though the default gateway is specified in the NIC firmware, the Address Request Protocol (ARP) is sent with the target's IP address and not with the default gateway IP. Hence it shows that the gateway information is not reaching the offload component.

## Distributed WebServer (DWS) connection does not work in SUSE Linux Enterprise Server 11 SP3

- Description** Dell EMC OpenMange System Administrator (OMSA) uses the Distributed WebServer (DWS) login to manage remote nodes. The DWS connection will not work if your system has the **sblim-sfcb-1.3.11-0.19.1** rpm installed from the SUSE Linux Enterprise Server 11 SP3 OS DVD.
- Workaround** Download and install the latest sblim-sfcb versions from the suse repository.
- Cause** This issue occurs because the local interface crashes. Ensure that the log file pipe is closed at all times.

## Biosdevname names SR-IOV Virtual Functions From Intel NDC as ethN

- Description** On systems running SUSE Linux Enterprise Server 11 SP2 and Intel Ethernet NDC controller, the **biosdevname utility** names the single root I/O virtualization (SR-IOV) virtual functions (VFs) from 10GbE port of Intel rNDC as **ethN** instead of the following format:

```
em<port number>_<virtual function instance>
```

This issue affects systems with integrated NDCs which have SR-IOV virtual functions enabled.

**Workaround** To turn off the new naming convention, enter the kernel command line parameter, `biosdevname=0` in the boot command line during and after installation.

This issue is fixed in SUSE Linux Enterprise Server 11 SP3. For more information, see [linux.dell.com](http://linux.dell.com).

**Cause** SR-IOV Virtual Functions from integrated NDCs do not have SMBIOS type 41 records. To retrieve the port number, use the SMBIOS device type instance from the physical function to which the virtual functions belong.

## irqbalance classifies network interfaces with custom or renamed interfaces as class other

**Description** `irqbalance` classifies network interfaces such as `dmz`, `iscsi`, and `emN` or `pXpY` as `class other` instead of `class ethernet`. This affects **biosdevname** names when it is enabled in the system.

**Workaround** This issue is fixed in SUSE Linux Enterprise Server 11 SP3.

## Unable to boot the system after the PERC H700 card is replaced on SUSE Linux Enterprise Server 11 SP2

**Description** After replacing the PERC H700 controller card and importing the entire configuration, the file system fails to load displaying the following error message:

```
could not find /dev/disk/by-id/scsi-<id-number>-part2
```

This issue is also seen in SUSE Linux Enterprise Server 11 SP1.

**Workaround** Use the `/disk/by-uuid` method during installation to create **fstab** entries. Mounting the file system using the Universally Unique Identifier (UUID) solves the problem. The UUID file system property does not change with hardware changes, unless the hard drive is formatted.

This is working as designed. For more information see, <https://www.suse.com/documentation/>.

**Cause** SUSE by default uses the **by-id** method to create **fstab** entries during installation. It is a combination of serial numbers from the controller, disk, and partition name. As **Serial number of the controller** is part of the disk id the number changes when the controller is replaced. This causes the system boot failure.

## SUSE Linux Enterprise Server 11 SP2 displays error message in /var/log/messages and dmesg log files

**Description** SUSE Linux Enterprise Server 11 SP2 64 bit systems may display MCE errors during a thermal event when the power budget is set in iDRAC.

The following error message is displayed in the `/var/log/messages` log file and the **dmesg** log file:

```
[Hardware Error]: Machine check events logged.
```

**Workaround** This issue will be fixed in a future release of SUSE Linux Enterprise Server 11 SP2 maintenance update kernel.

**Cause** The thermal interrupt handler triggers the error messages.

## Error message on starting IPMI drivers while installing OMSA

**Description** On starting Intelligent Platform Management Interface (IPMI) service on PowerEdge R620, T620, M620, R720, and R720xd systems, the system log displays the following message: `Could not enable interrupts, failed set, using polled mode.`

Although the message indicates the operating system is in the polling mode, the Linux driver continues to work in the interrupt mode.

**Workaround** This is working as designed. This issue will be addressed in a later version of the iDRAC firmware.

## Assigning iSCSI LUN target to Intel 10G network controller stops the operating system booting

**Description** When attempting to install the operating system on iSCSI Logical Unit Numbers (LUN) with the Intel 10G network controller (Intel card X520 and Intel Ethernet X520-DA2 Server Adapter), the system stops responding at the boot screen (after POST).

**Workaround** Disable the local storage controller from the BIOS menu and then proceed with the iSCSI based installation.

**Cause** This error occurs because the BIOS 0xE820 code does not return the first 0xE820 entry to match int 12 interface and hence does not comply with ACPI specification.

## IPMI commands result in high CPU utilization

**Description** On Dell EMC PowerEdge systems managed through IPMI, IPMI commands issued to the Baseboard Management Controller (BMC) could result in the **kipmid** thread consuming high CPU time.

**Workaround** The issue is addressed with the driver option – **kipmid\_max\_busy\_us** to the **ipmi\_si** driver module.

Create a file `/etc/modprobe.d/ipmi.conf` to set an option with the command `options ipmi_si kipmid_max_busy_us=300` and reload the **ipmi\_si** module.

## Soft lockup in the TCP network stack hangs the system

**Description** Soft lockup in the TCP network stack hangs the system with channel bonding and makes IPv6 idle.

**Workaround** Disable IPv6 with bonding.

**Cause** This issue occurs because of a combination of switch setting and network topology. This issue is caused by a bug in the TCP network.

## IPMI driver times out on SUSE Linux Enterprise Server 11 in the UEFI mode

**Description** When SUSE Linux Enterprise Server 11 is in the UEFI Mode, the Intelligent Platform Management Interface (IPMI) driver times out.

**Workaround** To work around this issue, do one of the following:

- Enable the IPMI driver to use the Keyboard Controller Style (KCS) interface as follows:

```
# modprobe ipmi_msghandler
```

```
# modprobe ipmi_si type="kcs" ports="0xca8" regspacings="4"
```

```
# modprobe ipmi_devintf
```

- Add the **ipmi\_si** option `options ipmi_si type="kcs" ports="0xca8"regspacings="4"` into the `/etc/modprobe.conf` file.

## Combined residency of the ACPI C-states is low when SUSE Linux Enterprise Server 11 is idle

<b>Description</b>	When SUSE Linux Enterprise Server 11 is idle, the ACPI C-states, C1 and C3, are not efficiently used to save system power consumption. The expected combined residency of these states at the idle state of the system is between 95 and 99 percent. However, the actual used combined residency is only 50 percent.
<b>Workaround</b>	This issue will be fixed in a future release of SUSE Linux Enterprise Server 11.
<b>Cause</b>	This issue occurs because <b>pmtimer</b> overflow due to which the time of the Cx states incorrect message.

## PCI-e errors on certain slots display error messages

<b>Description</b>	When there is a hardware failure in a PCI slot or controller of the system, the PCIe Advanced Error Reporting (PCIAER) does not report the PCI error.
<b>Workaround</b>	Boot the system with <code>pci=noaer</code> as the default value, to enable the system to report the PCI error and allow the BIOS to handle the error reporting task.
<b>Cause</b>	This issue is caused by a bug in the PCIAER feature.

## Unable to boot from remote iSCSI LUN (SUSE Linux Enterprise Server 11 IPv6)

<b>Description</b>	If the IPv6 iSCSI connection between BCM 57710 NIC and the Dell EMC EqualLogic target is enabled before the installation of the operating system, the LUN may not install the operating system.
<b>Cause</b>	This issue occurs only in NICs that support iSCSI boot and IPv6. The DHCPv6 client daemon is not used by SUSE Linux Enterprise Server 11 initrd. Thus, the iSCSI cannot read the IPv6 address during the system boot, which disconnects the initiator from the IPv6 iSCSI portal of the Dell EMC EqualLogic target.

## SUSE Linux Enterprise Server 11 X86\_64 does not respond as the operating system reboots in the UEFI mode

<b>Description</b>	If SUSE Linux Enterprise Server 11 is rebooted in the UEFI mode, the system may occasionally not respond during the reboot.
<b>Workaround</b>	This issue will be fixed in a future release of SUSE Linux Enterprise Server 11.
<b>Cause</b>	This issue occurs only when the bash is running its signal handler.

## PowerEdge R805, M805, and M905 systems running on SUSE Linux Enterprise Server 11 may reboot with some PCI or Mezzanine cards

<b>Description</b>	When Qlogic or Emulex fiber channel cards are present in PowerEdge R805, M805, and M905 systems, and you load the drivers for the cards, SUSE Linux Enterprise Server 11 (and other Linux kernels later than 2.6.27) may cause the system to reboot. The drivers are: <ul style="list-style-type: none"><li>• <b>qla2xxx.ko</b> for Qlogic</li><li>• <b>lpfc.ko</b> for Emulex</li></ul>
<b>Workaround</b>	For PowerEdge R805: <ul style="list-style-type: none"><li>• Set the <b>Optical Drive Controller</b> under <b>Integrated Devices</b> to <b>On</b> in system setup.</li></ul>

This changes the system resource assignments to ensure that the issue does not occur.

If this workaround fails:

- Add the kernel parameter `acpi=noirq` to the kernel command line to prevent the linux kernel from using the I/O APICs.

For PowerEdge M805 and M905:

- Add the kernel parameter `acpi=noirq` to the kernel command line to prevent the linux kernel from using the I/O APICs.

This issue will be fixed in a future BIOS update for the respective PowerEdge systems.

#### Cause

This issue occurs because the Linux kernel changes the memory address assignments of certain add-on PCI devices such that they overlap the second I/O Advanced Programmable Interrupt Controller (APIC) in the system.

## Video issues—using the Video Electronics Standard Association (VESA) driver

#### Description

You can use the generic VESA driver instead of the original driver, in case you experience graphics related problems.

 **NOTE: The VESA driver has limited resolution and color depth support.**

#### Workaround

To change the video driver on your SUSE Linux Enterprise Server 11 system:

1. Edit the `/etc/X11/xorg.conf` file.
2. In the **Device** section, search for a line beginning with **Device** and replace the name of the driver with **VESA**.  
For example: `Device vesa`
3. Restart X Window.

## No UEFI boot entry for SUSE Linux Enterprise Server 11 after a UEFI based installation

#### Description

During SUSE Linux Enterprise Server 11 installation, systems that support UEFI reboot, start with the **Configuration** phase after the **Installation** phase. During boot, there is no UEFI boot entry for the partially installed SUSE Linux Enterprise Server 11.

#### Workaround

This issue will be fixed in a future release of SUSE Linux Enterprise Server 11 or firmware update.

To fix this issue, manually create a UEFI boot entry.

1. During boot, press **F11** to enter the **UEFI Boot Manager**.  
The **UEFI Boot Manager** screen is displayed.
2. Select **UEFI Boot Settings**.  
The **UEFI Boot Settings** screen is displayed.
3. Select **Add Boot Option**.  
The **File Explorer** screen is displayed.
4. Select the controller on which you installed SUSE Linux Enterprise Server 11.
5. Select **efi > SuSE > elilo.efi**.  
The **Modify Boot Option Description** screen is displayed.
6. Edit the **Description** to read **SLES 11** and press **Esc** to close this screen.  
The **UEFI Boot Manager** screen and the **SLES 11** boot entry is displayed.
7. Select the **SLES 11** boot entry to boot to SUSE Linux Enterprise Server 11.

#### Cause

This is caused due to the way Linux creates the GUID Partition Table (GPT) partition.

## The system intermittently stops responding with the Matrox G200eW graphics adapter

- Description** Systems using the Matrox G200eW graphics adapter might stop responding when the system starts.
- Workaround** Download and install the latest driver version from [Dell.com/support/drivers](https://www.dell.com/support/drivers).
- Cause** This issue is caused by a bug in the video driver.

## Switching to text mode from GUI mode does not work with UEFI

- Description** On systems with Matrox G200eW graphics adapters, the display flickers and goes blank when you switch to text mode by using Ctrl+Alt+F1 or switch to run level 3.
- Workaround** Download and install the latest driver from [Dell.com/support](https://www.dell.com/support).  
Alternatively, you can use the VESA driver to work around this issue.
- Cause** This issue is caused by a bug in the **Matrox mga** video driver.

## IPMI may not start on systems that boot through UEFI

- Description** The IPMI kernel modules might fail to load on systems that boot through UEFI. As a consequence, services that depend on IPMI may be affected.
- Workaround** Add the line to `/etc/modprobe.conf` before starting the **IPMI** service:
- ```
options ipmi_si type="kcs" ports="0xca8" regspacings="4"
```
- This issue will be fixed in a future release of SUSE Linux Enterprise Server 11 kernel update.
- Cause** This is caused due to a kernel bug that sets the **IPMI** driver to use the **Block Transfer** (BT) interface instead of the **KCS** interface.

## iSCSI login through BCM57710 over IPv6 fails intermittently with Dell EMC EquaLogic targets

- Description** iSCSI initiator login to an iSCSI target, through a Broadcom BCM57710 over IPv6, may fail sometimes due to a bug in the kernel's TCP/IP stack. The login failures are more prominent with a Dell EMC EquaLogic target.
- Workaround** Disable Load Receive Offload (LRO) using one of the following methods:
- To disable LRO during boot or installation, pass it as a parameter during boot to the kernel command line by typing the command `bnx2x.disable_tpa=1`.
  - To disable LRO on a running system, type the following command at the command prompt `# ethtool -K <eth-interface> lro off`
  - To disable LRO during subsequent reboots, add the line `options bnx2x disable_tpa=1` to the `/etc/modprobe.conf` file.
- This issue will be fixed in a future release of SUSE Linux Enterprise Server 11.
- Cause** The issue occurs when the group IP address of the Dell EMC EquaLogic storage is redirected to other IPs within the iSCSI SAN for better load balancing.
- With other iSCSI targets, retry attempts to login to the single IP address succeed, and do not cause login failures.

## Dell EMC Update Packages might fail to update firmware on UEFI based systems

|                    |                                                                                                                                                                                                                                                                               |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description</b> | <p>On systems configured to boot through UEFI, running a DUP to update the firmware or BIOS from the operating system may fail.</p> <p>DUP relies on a warm reboot of the system, whereas Linux performs a cold reset of the system while running on a UEFI based system.</p> |
| <b>Workaround</b>  | <p>To get DUP to work on these systems, pass the following parameters to the kernel command line during boot:<br/><code>reboot=k</code></p> <p>For subsequent reboots, pass the <code>reboot=warm</code> parameter to the <code>/boot/grub/menu.lst</code> file.</p>          |

## SUSE Linux Enterprise Server 11 Service Pack 4 signed rpm installation fails

|                    |                                                                                                                                                                                                                                           |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description</b> | <p>Installation of rpms that are signed with subkey fails and reports that signature is invalid.</p>                                                                                                                                      |
| <b>Cause</b>       | <p>During package installation, parsing subkeys overwrites the data in the main key which causes bogus signature checking failures and the installation fails. An easy fix is to make rpm ignore subkeys.</p>                             |
| <b>Solution</b>    | <p>Download the upgraded rpm package at <a href="https://ptf.suse.com/a4508678dc8ee2c11453898fb347f199/sles11-sp4/14842/x86_64/20180222/">https://ptf.suse.com/a4508678dc8ee2c11453898fb347f199/sles11-sp4/14842/x86_64/20180222/</a></p> |

# Getting help

## Topics:

- [Contacting Dell EMC](#)
- [Related documentation](#)
- [Documentation resources](#)
- [Downloading the drivers and firmware](#)
- [Documentation feedback](#)

## Contacting Dell EMC

Dell EMC provides several online and telephone based support and service options. If you do not have an active internet connection, you can find contact information about your purchase invoice, packing slip, bill, or Dell EMC product catalog. Availability varies by country and product, and some services may not be available in your area.

To contact Dell EMC for sales, technical assistance, or customer service issues:

1. Go to [Dell.com/support](https://Dell.com/support).
2. Select your country from the drop-down menu on the lower right corner of the page.
3. For customized support:
  - a. Enter your system Service Tag in the **Enter your Service Tag** field.
  - b. Click **Submit**.  
The support page that lists the various support categories is displayed.
4. For general support:
  - a. Select your product category.
  - b. Select your product segment.
  - c. Select your product.  
The support page that lists the various support categories is displayed.
5. For contact details of Dell EMC Global Technical Support:
  - a. Click [Global Technical Support](#).
  - b. The **Contact Technical Support** page is displayed with details to call, chat, or email the Dell EMC Global Technical Support team.

## Related documentation

**NOTE:** For all Dell EMC PowerEdge and Dell EMC Storage documentation, go to [Dell.com/support/home](https://Dell.com/support/home) and enter the system Service Tag to get your system documentation.

**NOTE:** For all operating system documents, go to [www.dell.com/operatingsystemmanuals](http://www.dell.com/operatingsystemmanuals).

- For information on deploying and administering the SUSE Linux Enterprise Server 11 operating system, read through the product documentation available on the *Dell EMC Unified Server Configurator - Lifecycle Controller Enabled* or see the **SUSE Linux Enterprise Server 11** page at [suse.com](http://suse.com).
- You can download operating system updates and the latest kernel updates at [suse.com/customercenter](http://suse.com/customercenter).
- You can download the latest BIOS, firmware, and operating system packages tailored for your Dell EMC hardware from [Dell.com/support](https://Dell.com/support).
- Dell EMC's public mailing lists promote community involvement among Dell EMC customers who use Linux. To sign up for these lists, see [lists.us.dell.com](http://lists.us.dell.com).

# Documentation resources

This section provides information about the documentation resources for your server.

**Table 1. Additional documentation resources for your server**

| Task                    | Document                                                                                                                                                                                                                            | Location                                                                                              |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Setting up your server  | For information about installing the server into a rack, see the rack documentation included with your rack solution or the <i>Getting Started Guide</i> that is shipped with your server.                                          | <a href="https://www.dell.com/poweredgemanuals">https://www.dell.com/poweredgemanuals</a>             |
|                         | For information about turning on the server and the technical specifications of your server, see the <i>Getting Started Guide</i> that is shipped with your server.                                                                 | <a href="https://www.dell.com/poweredgemanuals">https://www.dell.com/poweredgemanuals</a>             |
| Configuring your server | For information about the iDRAC features, configuring and logging in to iDRAC, and managing your server remotely, see the <i>Integrated Dell Remote Access Configuration Tool User's Guide</i> .                                    | <a href="https://www.dell.com/idracmanuals">https://www.dell.com/idracmanuals</a>                     |
|                         | For information about installing the operating system, see operating system documentation.                                                                                                                                          | <a href="https://www.dell.com/operatingsystemmanuals">https://www.dell.com/operatingsystemmanuals</a> |
|                         | For information about understanding Remote Access Controller Admin (RACADM) subcommands and supported RACADM interfaces, see the <i>iDRAC RACADM CLI Guide</i> .                                                                    | <a href="https://www.dell.com/idracmanuals">https://www.dell.com/idracmanuals</a>                     |
|                         | For information about updating drivers and firmware, see <a href="#">Download drivers and firmware</a> topic in this document.                                                                                                      | <a href="http://www.dell.com/support/drivers">www.dell.com/support/drivers</a>                        |
| Managing your server    | For information about server management software offered by Dell EMC, see the <i>Dell EMC Systems Management Overview Guide</i> .                                                                                                   | <a href="https://www.dell.com/openmanagemanuals">https://www.dell.com/openmanagemanuals</a>           |
|                         | For information about setting up, using, and troubleshooting OpenManage, see the <i>Dell EMC OpenManage Server Administrator User's Guide</i> .                                                                                     | <a href="https://www.dell.com/openmanagemanuals">https://www.dell.com/openmanagemanuals</a>           |
|                         | For information about installing, using, and troubleshooting Dell EMC OpenManage Essentials, go to <a href="http://www.dell.com/openmanagemanuals">www.dell.com/openmanagemanuals</a> > <i>OpenManage Essentials User's Guide</i> . | <a href="https://www.dell.com/openmanagemanuals">https://www.dell.com/openmanagemanuals</a>           |
|                         | For information about installing and using Dell SupportAssist, see the                                                                                                                                                              | <a href="https://www.dell.com/serviceabilitytools">https://www.dell.com/serviceabilitytools</a>       |

**Table 1. Additional documentation resources for your server (continued)**


| Task                                                 | Document                                                                                                                                                                                                                                                                                                  | Location                                                                                         |
|------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
|                                                      | Dell EMC <i>SupportAssist Enterprise User's Guide</i> .                                                                                                                                                                                                                                                   |                                                                                                  |
|                                                      | For understanding the features of Dell EMC Lifecycle Controller (LC), see the <i>Lifecycle Controller User's Guide</i> .                                                                                                                                                                                  | <a href="https://www.dell.com/idracmanuals">https://www.dell.com/idracmanuals</a>                |
|                                                      | For information about partner programs enterprise systems management, see the <i>OpenManage Connections Enterprise Systems Management</i> documents.                                                                                                                                                      | <a href="https://www.dell.com/esmmanuals">https://www.dell.com/esmmanuals</a>                    |
|                                                      | For information about viewing inventory, performing configuration, and monitoring tasks, remotely turning on or off servers, and enabling alerts for events on servers and components using the Dell EMC Chassis Management Controller (CMC), see the <i>Chassis Management Controller User's Guide</i> . | <a href="https://www.dell.com/esmmanuals">https://www.dell.com/esmmanuals</a>                    |
| Working with the Dell EMC PowerEdge RAID controllers | For information about understanding the features of the Dell EMC PowerEdge RAID controllers (PERC) and deploying the PERC cards, see the Storage controller documentation.                                                                                                                                | <a href="http://www.dell.com/storagecontrollermanuals">www.dell.com/storagecontrollermanuals</a> |
| Understanding event and error messages               | For information about checking the event and error messages generated by the system firmware and agents that monitor server components, see the Dell EMC Event and Error Messages Reference Guide.                                                                                                        | <a href="http://www.dell.com/openmanagemanuals">www.dell.com/openmanagemanuals</a>               |
| Troubleshooting your system                          | For information about identifying and troubleshooting the PowerEdge server issues, see the <i>PowerEdge Servers Troubleshooting Guide</i> .                                                                                                                                                               | <a href="https://www.dell.com/poweredgemanuals">https://www.dell.com/poweredgemanuals</a>        |

## Downloading the drivers and firmware

Dell EMC recommends that you download and install the latest BIOS, drivers, and systems management firmware on your system.

Ensure that you clear the web browser cache before downloading the drivers and firmware.

1. Go to **Dell.com/support/drivers**.
2. Under the **Drivers & Downloads** section, type the Service Tag of your system in the **Service Tag or Express Service Code** box, and then click **Submit**.

 **NOTE:** If you do not have the Service Tag, select **Detect My Product** to allow the system to automatically detect your Service Tag, or under **General support**, navigate to your product.

3. Click **Drivers & Downloads**.  
The drivers that are applicable to your selection are displayed.

4. Download the drivers to a USB drive, CD, or DVD.

## Documentation feedback

You can rate the documentation or write your feedback on any of our Dell EMC documentation pages and click **Send Feedback** to send your feedback.