

# Dell EMC PowerEdge Systems SUSE Linux Enterprise Server 15

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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# Overview

SUSE Linux Enterprise Server 15 is available on the 64-bit Intel architecture.

Topics:

- [System configuration requirements](#)
- [Reviewing preconfiguration options](#)

## System configuration requirements

For more information on system configuration requirements for SUSE Linux Enterprise Server 15, see the documentation at [www.suse.com/documentation](http://www.suse.com/documentation).

## Operating system architecture

Dell EMC supports the x86\_64 version of SUSE Linux Enterprise Server 15 on all Dell EMC PowerEdge servers. To check if your PowerEdge system supports SUSE Linux Enterprise Server 15, see the operating systems support matrix at [Dell.com/ossupport](http://Dell.com/ossupport).

**NOTE:** If you require the x86 version of the operating system, Dell EMC recommends that you run it as a VM on SUSE Linux Enterprise Server 15 x86\_64 or an equivalent host. For information about installing a SUSE Linux Enterprise Server 15 virtualized guest, go to [www.suse.com/documentation](http://www.suse.com/documentation).

## Memory

The following table lists the system memory requirements for the x86\_64 architecture of SUSE Linux Enterprise Server 15:

**Table 1. Memory requirements for x86\_64 architecture**

Memory	Size
Minimum recommended system memory	512 MB per logical CPU
Maximum certified system memory	64 TiB

## Bootable disk size

By default, SUSE Linux Enterprise Server 15 configures partitions that are based on the boot mode of the system.

**Table 2. Bootable disk size**

Interface	Disk/LUN
BIOS or UEFI	Lesser than 2.2 TB
UEFI	Greater than 2.2 TB

## Reviewing preconfiguration options

The following sections describe packages and options that are installed or preconfigured by Dell EMC.

## Dell EMC preinstalled operating system packages

Dell EMC has preinstalled operating system packages on your system that provides the features that are required by the system users. If you require more features that are not provided by the packages, install more packages from the SUSE installation media or through SUSE Network.

## Languages

Your system is preinstalled with the operating system for English language. However, the main system language can be selected by adjusting the required time zone.

## Storage partitions

The following table lists the partition schemes for a preinstalled SUSE Linux Enterprise Server 15 operating system:

**Table 3. Preinstalled SUSE Linux Enterprise Server partitions and mount points for primary hard drive**

Mount Point	Size (MB)	Partition Type
/boot(Legacy Mode only)	500 MB	XFS
/	50% of disk space	XFS
/swap	Vendor recommended Remaining space after allocating to /, and / boot in Legacy Mode.	Linux swap
/home		XFS

# Creating SUSE Linux Enterprise Server 15 installer media

SUSE Linux Enterprise Server 15 installer ISOs are available for download at [www.suse.com/download-linux/](http://www.suse.com/download-linux/) for users with valid SUSE Linux Enterprise Server 15 subscription.

For systems ordered with factory installed SUSE Linux Enterprise Server 15, the installer ISOs and source ISOs are available at:

- Installer Binary and Source ISOs: `/var/iso_files/installer/`
- Packages Binary and Source ISOs: `/var/iso_files/packages/`

# Installing or reinstalling SUSE Linux Enterprise Server

## Important information before installing

Select the boot mode to be used for the system during installation. There are two boot modes available on Dell EMC PowerEdge Servers.

- BIOS
- UEFI

**NOTE:** The boot configurations of UEFI and BIOS are different. Hence, the installed system must boot using the same firmware that was used during installation. You cannot install the operating system on a system that uses BIOS and then boot this installation on a system that uses UEFI.

**CAUTION:** Back up all the data from the system before installing or upgrading the SUSE Linux Enterprise Server operating system.

To install or reinstall your operating system, use one of the following media or methods:

- Installing using the Lifecycle Controller (LC)
- Installing on the iSCSI storage
- Installing on Fibre Channel over Ethernet (FCoE) enabled storage

Topics:

- [Installing SUSE Linux Enterprise Server with Lifecycle Controller](#)
- [Installing SUSE Linux Enterprise Server on iSCSI storage](#)
- [Installing SUSE Linux Enterprise Server on FCoE-enabled storage](#)
- [Add-on device drivers](#)
- [Updating your system packages by using SUSE Customer Center or Repository Mirroring tool](#)

## Installing SUSE Linux Enterprise Server with Lifecycle Controller

**CAUTION:** Ensure that you back up all the data from the system before installing or upgrading the operating system.

**NOTE:** Lifecycle Controller (LC) may not provide the latest drivers that are required to complete the installation of the operating system. Download the drivers from <https://downloads.dell.com>, or use the *Dell Systems Management Tools and Documentation media*.

**NOTE:** Lifecycle Controller Enabled (LCE) comes with embedded drivers that are factory that is installed. Dell EMC recommends that you run the Platform Update wizard to ensure that you have the latest drivers before you install the operating system. For more information, see the Dell EMC *Lifecycle Controller User's Guide* available at [www.dell.com/idracmanuals](http://www.dell.com/idracmanuals).

To begin installation by using the operating system deployment wizard:

- 1 Boot the system, and press F10. The Dell EMC logo is displayed.
- 2 In the left pane, click **OS Deployment**.

- 3 In the right pane, click **Deploy OS**.

① **NOTE:** If your system has a RAID controller, you must configure RAID before you continue with the installation of drivers.

- 4 From the list of operating systems, select **SUSE Linux Enterprise Server 15x86\_64 bit**.  
LC extracts the driver update disk to an internal USB drive labeled **OEMDRV**.

After the drivers are extracted, LC prompts you to insert the operating system installation media.

- 5 Click **Next**.
- 6 Select **BIOS** or **UEFI** when prompted, and click **Next**.
- 7 Insert the SUSE Linux Enterprise Server installation media, and click **Next**.
- 8 Click **Finish** to reboot the system, and continue with the operating system installation by booting to the operating system media.

① **NOTE:** After 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.

① **NOTE:** All the copied drivers are removed after 18 hours. Complete the operating system installation within 18 hours. To remove the drivers before 18 hours, reboot the system, press **F10**, and reenter LC.

## Installing SUSE Linux Enterprise Server on iSCSI storage

△ **CAUTION:** Ensure that you back up all the data from the system before installing or upgrading the operating system.

SUSE Linux Enterprise Server 15-based systems can connect to an iSCSI storage array either through the iSCSI software stack, an iSCSI Host Bus Adapter (HBA), or an iSCSI offload hardware.

- 1 Configure the network interface controllers to access the iSCSI storage.
- 2 During the operating system installation, select **Specialized Storage Devices** in the **Storage Devices** window, and then click **Next**.
- 3 In the **Storage Device Selection** window, click **Other SAN Devices**.
- 4 Select the SAN device that is displayed in this window, and complete the installation.

## Installing SUSE Linux Enterprise Server on FCoE-enabled storage

△ **CAUTION:** Ensure that you back up all the data from the system before installing or upgrading the operating system.

- 1 During the operating system installation, select **Specialized Storage Devices** in the **Storage Devices** window, and then click **Next**.
- 2 In the **Storage Device Selection** window, click **Add Advanced Target**.  
The **Advanced Storage Options** window is displayed. You can connect to the iSCSI target or the FCoE SAN through this window.
- 3 To configure FCoE SAN, select **Add FCoE SAN** and click **Add Drive**.  
The **Configure FCoE Parameters** window is displayed.
- 4 Select the network interface that is connected to your FCoE switch and click **Add FCoE Disks**.


## Add-on device drivers

All Dell EMC, add-on device driver packages that are not on the SUSE Linux Enterprise Server 15 media are packaged as kernel module packages (kmp). For devices that require updated drivers other than those present on the SUSE Linux Enterprise Server 15 media, see [Dell.com/support/home](http://Dell.com/support/home).

① **NOTE:** If there are no driver packages available on [Dell.com/support/home](http://Dell.com/support/home), your system does not require a driver update.



For a list of add-on device drivers that are installed on your system, type the following command at the command prompt: `rpm -qa | grep kmp`.

 **NOTE:** For more information on add-on drivers, see the driver update program at [www.drivers.suse.com](http://www.drivers.suse.com).

## Updating your system packages by using SUSE Customer Center or Repository Mirroring tool

SUSE periodically releases software updates to fix issues, address security issues, and add new features and hardware support. You can download updated operating system packages and the latest kernel releases and updates:

- By using Repository Mirroring tool
- By using the `zypper` utility

Dell EMC recommends using the SUSE service to update your system software to the latest revisions before deploying your system.

# Getting help

Topics:

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

## Contacting Dell EMC

Dell EMC provides several online and telephone-based support and service options. Availability varies by country, region, and product, and some services may not be available in your area.

To contact Dell EMC for sales, technical assistance, or customer service issues, see [www.dell.com/contactdell](http://www.dell.com/contactdell).

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

## Related documentation for Linux

**NOTE:** For information on deploying Virtualization, see the product documentation available at .

Product documentation from Dell EMC includes:

- Installation Instructions and Important Information Guide
- Release Notes

**NOTE:** For more information on Dell EMC PowerEdge servers compatibility with supported operating systems, see [Dell.com/ossupport](http://Dell.com/ossupport).

## Documentation resources

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

**Table 4. 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="http://www.dell.com/poweredgemanuals">www.dell.com/poweredgemanuals</a>
	For information about turning on the server and the technical specifications of your server, see	<a href="http://www.dell.com/poweredgemanuals">www.dell.com/poweredgemanuals</a>


Task	Document	Location
Configuring your server	the <i>Getting Started Guide</i> that is shipped with 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="http://www.dell.com/idracmanuals">www.dell.com/idracmanuals</a>
	For information about installing the operating system, see operating system documentation.	<a href="http://www.dell.com/operatingsystemmanuals">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="http://www.dell.com/idracmanuals">www.dell.com/idracmanuals</a>
Managing your server	For information about updating drivers and firmware, see <a href="#">Downloading the drivers and firmware</a> topic in this document.	<a href="http://Dell.com/support/drivers">Dell.com/support/drivers</a>
	For information about server management software offered by Dell EMC, see the Dell EMC <i>Systems Management Overview Guide</i> .	<a href="http://www.dell.com/openmanagemanuals">www.dell.com/openmanagemanuals</a>
	For information about setting up, using, and troubleshooting OpenManage, see the Dell EMC <i>OpenManage Server Administrator User's Guide</i> .	<a href="http://www.dell.com/openmanagemanuals">www.dell.com/openmanagemanuals</a>
	For information about installing, using, and troubleshooting Dell EMC OpenManage Essentials, see the Dell EMC <a href="http://Dell.com/openmanagemanuals">Dell.com/openmanagemanuals</a> > <i>OpenManage Essentials User's Guide</i> .	<a href="http://www.dell.com/openmanagemanuals">www.dell.com/openmanagemanuals</a>
	For information about installing and using Dell SupportAssist, see the Dell EMC <i>SupportAssist Enterprise User's Guide</i> .	<a href="http://www.dell.com/serviceabilitytools">www.dell.com/serviceabilitytools</a>
	For understanding the features of Dell EMC Lifecycle Controller (LC), see the <i>Lifecycle Controller User's Guide</i> .	<a href="http://www.dell.com/idracmanuals">www.dell.com/idracmanuals</a>
	For information about partner programs enterprise systems	<a href="http://www.dell.com/esmmanuals">www.dell.com/esmmanuals</a>

Task	Document	Location
	management, see the <i>OpenManage Connections Enterprise Systems Management</i> documents.	
	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="http://www.dell.com/esmmanuals">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://Dell.com/storagecontrollermanuals">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 <i>Event and Error Message Reference Guide for 14th Generation Dell EMC PowerEdge Servers</i> .	<a href="http://Dell.com/openmanagemanuals">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="http://www.dell.com/poweredgemanuals">www.dell.com/poweredgemanuals</a>

## Download the drivers and firmware

It is recommended 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](http://Dell.com/support/drivers).
- 2 In the **Drivers & Downloads** section, enter the Service Tag of your system in the **Enter a Dell Service Tag, Dell EMC Product ID, or Model** field, and then click **Submit**.
 

 **NOTE:** If you do not have the Service Tag, click **Detect PC** to allow the system to automatically detect your Service Tag.
- 3 Click **Drivers & Downloads**.  
A list of applicable downloads is displayed.
- 4 Download the drivers or firmware 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.