

Dell EMC PowerEdge Systems Red Hat Enterprise Linux 7

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

Red Hat Enterprise Linux 7.x 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 Red Hat Enterprise Linux 7.x, see the documentation at www.redhat.com/support.

Operating system architecture

Dell EMC supports the x86_64 version of Red Hat Enterprise Linux 7.x on Dell EMC PowerEdge servers. To check if your PowerEdge system supports Red Hat Enterprise Linux 7.x, see the operating systems support matrix at www.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 x86_64 or an equivalent host. For information about installing a Red Hat Enterprise Linux 7.x virtualized guest, go to www.access.redhat.com/documentation.

Memory

The following table lists the system memory requirements for the x86_64 architecture of Red Hat Enterprise Linux 7.x:

Table 1. Memory requirements for x86_64 architecture

Memory	Size
Minimum recommended system memory	1 GB per logical CPU
Maximum certified system memory	64 TB

NOTE: The kernel supported maximum system memory might be greater than the value listed in this table. For more information, see www.redhat.com/rhel/compare.

Bootable disk size

By default, Red Hat Enterprise Linux 7.x 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 Red Hat installation media or through Red Hat Network.

Languages

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

Storage partitions

The following tables list the partition schemes for a preinstalled Red Hat Enterprise Linux 7.x operating system.

Table 3. Preinstalled Red Hat Enterprise Linux partitions and mount points for the primary hard disk drive

Mount Point	Size (MB)	Partition Type	Volume Group
Utility Partition	32–326	FAT 32	N/A
/	1024	XFS	LogVol00
/boot	200	XFS	N/A
Swap	automatic	Linux swap	LogVol01
/usr	7168	XFS	LogVol02
/tmp	500	XFS	LogVol03
/var	5120	XFS	LogVol04
/home	1024	XFS	LogVol05

Table 4. Preinstalled Red Hat Enterprise Linux partitions and mount points for 50 GB hard disk drive and 64 GB RAM

Mount Point	Size (MB)	Partition Type	Volume Group
Utility Partition	32–326	FAT 32	N/A
/	1024	XFS	LogVol00
/boot	200	XFS	N/A

Mount Point	Size (MB)	Partition Type	Volume Group
Swap	Vendor recommended	Linux swap	LogVol01
/usr	10240	XFS	LogVol02
/tmp	500	XFS	LogVol03
/var	6144	XFS	LogVol04
/home	2048	XFS	LogVol05

NOTE: The size of the default Logical Volume Management (LVM) partitions (such as /usr and /tmp) is based on a single 36 GB hard drive. If you have a larger hard drive or multiple hard drives, use the various native LVM tools to resize the existing partitions and create partitions, as per your custom requirements.

NOTE: The minimum swap size is 250 MB. For memory up to 4 GB, it is recommended that the minimum swap size of at least 2 GB. For the recommended swap size, see www.access.redhat.com/documentation.

Creating the Red Hat Enterprise Linux 7.x installer media

Red Hat Enterprise Linux 7.x installer ISOs are available for download from www.access.redhat.com/downloads for the users with valid Red Hat Enterprise Linux 7.x subscription.

For more information about the Red Hat Enterprise Linux 7.x subscription, see the *Red Hat Enterprise Linux Registration Activation* document at www.dell.com/operatingsystemmanuals.

For the systems ordered with factory installed Red Hat Enterprise Linux 7.x, the installer ISOs and source code ISOs are available at:

- Installer ISOs: `/var/iso_files/os_image/`
- Source code ISOs: `/var/iso_files/source_image/`

Installing or reinstalling Red Hat Enterprise Linux 7.x

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 Red Hat Enterprise Linux 7.x 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 Red Hat Enterprise Linux 7.x with Lifecycle Controller](#)
- [Installing Red Hat Enterprise Linux 7.x on systems with a Dell EMC Utility Partition](#)
- [Installing Red Hat Enterprise Linux 7.x on devices that support multipathing](#)
- [Installing Red Hat Enterprise Linux 7.x on iSCSI storage](#)
- [Installing Red Hat Enterprise Linux 7.x on FCoE-enabled storage](#)
- [Add-on device drivers](#)
- [Updating your system packages using the Red Hat Network](#)
- [Important information](#)

Installing Red Hat Enterprise Linux 7.x with Lifecycle Controller

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

Lifecycle Controller (LC) provides an **OS Deployment wizard** that assists you with the installation of Red Hat Enterprise Linux 7.x.

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.

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**.

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 **Red Hat Enterprise Linux 7.7x86_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 Red Hat Enterprise Linux 7.x 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.

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.

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 Red Hat Enterprise Linux 7.x on systems with a Dell EMC Utility Partition

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

The Dell EMC Utility Partition contains diagnostics and other utilities that can be initiated during system boot. If you are installing or reinstalling Red Hat Enterprise Linux 7.x 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 Dell EMC Utility Partition as the system does not overwrite the MBR.

To install Red Hat Enterprise Linux 7.x:

- 1 Select the appropriate option in **Which type of installation would you like?**

NOTE: Such that the existing Dell EMC Utility Partition is not deleted.

- 2 Select **Review and Modify partitioning layout** and click **Next**.
- 3 Review the partition setup and click **Next**.
- 4 Confirm to **Write changes to disk**.
- 5 When prompted to install the boot loader, click **Change Device**.
- 6 Select **First sector of boot partition** and click **OK**.
- 7 Follow the instructions on your screen and complete the installation.

NOTE: By default, the installer does not overwrite the utility partition.

Installing Red Hat Enterprise Linux 7.x on devices that support multipathing

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

- 1 Configure the storage array to enable multipathing.

To configure the storage array for your system, see the specific PowerVault system documentation at Dell.com/powervaultmanuals.

- 2 After the storage array is set up, follow the *Prerequisite Steps* for using multipath devices from the *Dell EMC PowerVault MD3200 and MD3220 Storage Arrays Owner's Manual* at Dell.com/powervaultmanuals.
- 3 During the operating system installation, select **Specialized Storage Devices** on the **Storage Devices** page.
- 4 Click **Next**.
- 5 On the **Storage Device Selection** page, click the **Multipath Devices** tab.
- 6 Select the multipath device that is displayed on this window and continue with the installation.

Installing Red Hat Enterprise Linux 7.x on iSCSI storage

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

Red Hat Enterprise Linux 7.x-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 by using the Software iSCSI initiator

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

- 1 Configure the network interface controllers to access the iSCSI storage.
- 2 During the operating system installation, select **Specialized Storage Devices** on the **Storage Devices** screen, and then click **Next**.
- 3 On the **Storage Device Selection** screen, click **Advanced Storage Options** to connect to the iSCSI target or FCoE SAN.
- 4 Select **Add iSCSI Target** and click **Add Drive**.
- 5 On the **Configure iSCSI Parameters** screen, provide the required information, and click **Add Target** to connect to the iSCSI target.

Installing using the hardware iSCSI initiator

CAUTION: Back up all data from the system before installing or upgrading the operating system.

- 1 Configure the network interface controllers to access the iSCSI storage.
- 2 During the operating system installation, select **Specialized Storage Devices** on the **Storage Devices** screen, and then click **Next**.
- 3 On the **Storage Device Selection** screen, click the **Other SAN Devices** tab.
- 4 Select the SAN device that is displayed on this screen and continue with the installation.

Installing Red Hat Enterprise Linux 7.x 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 Red Hat Enterprise Linux 7.x media are packaged as kernel module packages (kmods). For devices that require updated drivers other than those present on the Red Hat Enterprise Linux 7.x media, see www.dell.com/support.

NOTE: Your system does not require a driver update if there are no driver packages available on www.dell.com/support.

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 kmod`

NOTE: For more information on add-on drivers, see the Red Hat Enterprise Linux driver update program at www.access.redhat.com.

Updating your system packages using the Red Hat Network

NOTE: To update your system with the latest operating system packages using RHN (Red Hat Network) service, see www.rhn.redhat.com.

Red Hat 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 performing a manual download from the RHN service at www.rhn.redhat.com.
- By using the `yum` utility.

It is recommended that you use the RHN service to update your system software to the latest revisions before deploying your system.

Important information

biosdevname utility

In the earlier versions of Red Hat Enterprise Linux, the interface names that are 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 `port0` on the system board.

The `biosdevname` utility enables the operating system 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 interfaces `em <port number>`
(`ethernet-on-motherboard <1,2,...>`)

PCI add-in interfaces `p<slot number>p<port number>_<virtual function instance>`

For more information on the `biosdevname` utility and the new naming scheme, see www.linux.dell.com/files/whitepapers.

NOTE: If you do not want to use the new naming scheme, you can turn it off during installation or post installation by passing the kernel command line parameter `biosdevname=0`. The new naming scheme is enforced by default at the time of installation and run time on supported Dell EMC systems.

Trusted Platform Module 2.0 support on Red Hat Enterprise Linux 7.3

Trusted Platform Module (TPM) 2.0 requires kernel support and userspace support. The userspace support is implemented by using the following utilities:

- [tpm2.0-tools](#)
- [TPM2.0-TSS](#)

Red Hat Enterprise Linux (RHEL) 7.3 offers kernel support for TPM 2.0. The userspace packages such as *tpm2.0-tools* and *TPM2.0-TSS library* are not present in RHEL 7.3.

Issues or limitations before installation

Topics:

- Installing Red Hat Enterprise Linux 7 by using the iDRAC Virtual Media does not resume if the iDRAC network is set to the shared LOM mode
- Unable to shut down Red Hat Enterprise Linux 7 when you select Graceful shutdown option or when you press power button on system
- Kernel panic occurs when OMSA services are started on Red Hat Enterprise Linux 7
- Unable to install Red Hat Enterprise Linux 7 in the UEFI mode

Installing Red Hat Enterprise Linux 7 by using the iDRAC Virtual Media does not resume if the iDRAC network is set to the shared LOM mode

Description: When installing Red Hat Enterprise Linux 7 by using the iDRAC Virtual Media, where the iDRAC network is set to **Shared LOM** mode, Red Hat Enterprise Linux 7 installer initiates a reset on the LAN on Motherboard (LOM) devices.

Applies to: Red Hat Enterprise Linux 7

Cause: If **Spanning Tree** is enabled on the switch, there could be a delay in the switch port forwarding network traffic. This delay results in loss of connection to iDRAC or Virtual Media and the installation stops. After sometime the connectivity is restored but the installer but the installation does not resume. This is an expected behavior from the installer.

Workaround: Disable **Spanning Tree Protocol** (STP) or set **PortFast** on the uplink port to the iDRAC, during the Virtual Media installation.

Unable to shut down Red Hat Enterprise Linux 7 when you select Graceful shutdown option or when you press power button on system

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 suspended state and stops all the tasks or does nothing. So, firmware updates through iDRAC would take longer than expected as iDRAC sends out Graceful shutdown signal but the system does not shut down.

Applies to: Red Hat Enterprise Linux 7.0, 7.1, 7.2, 7.3, 7.4, 7.5, and 7.6

Cause: By default, the **Power button action** is mapped to the **Suspended** state in the System settings.

Solution: Update the **Power button action** manually to perform shut down by one of the following methods:

- Go to **Power settings > Suspend & Power button actions**, and then select **Power off** for "When the Power button is pressed"

or

Run the command: "gnome-tweak-tool", and then go to **Power settings > Suspend & Power button actions** for "When Power Button is pressed"

- Execute the following commands with root privileges:

a `gsettings set org.gnome.settings-daemon.plugins.power button-power shutdown`

or

`gsettings set org.gnome.settings-daemon.plugins.power power-button-action 'interactive'`

b `dconf update`

- Change the default behavior using the following steps:

a Create a file using `/etc/dconf/db/local.d/01-power` with the following contents:

```
[org/gnome/settings-daemon/plugins/power]
button-sleep='nothing'
button-suspend='nothing'
button-hibernate='nothing'
button-power='shutdown'
```

b Create a file using `/etc/dconf/db/local.d/locks/01-power` with the following contents:

```
/org/gnome/settings-daemon/plugins/power/button-sleep
/org/gnome/settings-daemon/plugins/power/button-suspend
/org/gnome/settings-daemon/plugins/power/button-hibernate
/org/gnome/settings-daemon/plugins/power/button-power
```

c Run the command: `dconf update`

d User must log out and log in again before the system-wide settings take effect.

① **NOTE:** The above workaround may not work when the system is locked. GNOME prevents the accidental shutdown when 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 pressing the power button unless the user is active and logged in OS.

① **NOTE:** The preceding steps are not applicable to RHEL 7.4. The workaround for RHEL 7.4 is to install the acpid package, and replace `/etc/acpi/actions/power.sh` content with the following content:

```
#!/bin/sh

PATH=/usr/sbin:/usr/bin

shutdown -h now
```

Kernel panic occurs when OMSA services are started on Red Hat Enterprise Linux 7

Description: Kernel panic occurs when OpenManage Server Administrator (OMSA) services are started on Red Hat Enterprise Linux 7.

Applies to: Red Hat Enterprise Linux 7.0

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). Then it programs the timer hardware for a timeout up to 100 milliseconds to run the kernel timer functions. At the next timer hardware interrupt, this flag is cleared. However, there is a bug in the kernel where this flag can be ignored in one specific code path. When this happens, the timer hardware can be set to the wrong timeout value. This incorrect timeout value can be over 10 seconds during this time no kernel timer function runs.

Workaround: Update the kernel to Z-stream kernel.

Unable to install Red Hat Enterprise Linux 7 in the UEFI mode

- Description:** During the installation of Red Hat Enterprise Linux 7, the Anaconda installer is unable to create boot entry using `EFIbootmgr`, in the UEFI mode.
- Applies to:** Red Hat Enterprise Linux 7.0
- Cause:** `EFIbootmgr` is unable to create a UEFI boot entry, when boot variables of Hard drive C: (under BIOS) is greater than 1024 bytes. This is a known limitation.
- Workaround:**
- 1 Remove all the bootable devices shown under `Hard Drive C:` (listed in BIOS under F11 option).
 - 2 Boot into legacy BIOS, and change the boot setting to UEFI mode.
 - 3 Reboot the server, re insert the devices that are removed under `Hard Drive C:` and reinstall.

Getting help

Topics:

- [Contacting Dell EMC](#)
- [Related documentation for Linux](#)
- [Documentation resources](#)
- [Download 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.

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 Red Hat Enterprise Virtualization, see the product documentation available at www.access.redhat.com/documentation.

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 www.dell.com/ossupport.

Linux videos on Dell EMC PowerEdge servers

To view the videos related to supported operating systems for Dell EMC PowerEdge servers, go to [Supported Operating Systems for Dell EMC PowerEdge Systems](#).

Table 5. Linux videos on Dell EMC PowerEdge servers

Video title	Links
OS Deployment - Installing and configuring Red Hat Enterprise Linux 7 by using PXE install method	https://www.youtube.com/watch?v=EIDLxsfctlo
Unattended OS Installation, BIOS Mode	https://www.youtube.com/watch?v=iYunu3TIXik
Unattended OS Installation, UEFI Mode	https://www.youtube.com/watch?v=G2ORV1Rt5VU

Documentation resources

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

Table 6. 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.	www.dell.com/poweredgemanuals
	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.	www.dell.com/poweredgemanuals
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> .	www.dell.com/idracmanuals
	For information about installing the operating system, see operating system documentation.	www.dell.com/operatingsystemmanuals
	For information about understanding Remote Access Controller Admin (RACADM) subcommands and supported RACADM interfaces, see the <i>iDRAC RACADM CLI Guide</i> .	www.dell.com/idracmanuals
	For information about updating drivers and firmware, see Download drivers and firmware topic in this document.	www.dell.com/support/drivers
Managing your server	For information about server management software offered by Dell EMC, see the <i>Dell EMC Systems Management Overview Guide</i> .	www.dell.com/openmanagemanuals
	For information about setting up, using, and troubleshooting OpenManage, see the <i>Dell EMC OpenManage Server Administrator User's Guide</i> .	www.dell.com/openmanagemanuals
	For information about installing, using, and troubleshooting Dell	www.dell.com/openmanagemanuals

Task	Document	Location
	EMC OpenManage Essentials, go to www.dell.com/openmanagemanuals > <i>OpenManage Essentials User's Guide</i> .	
	For information about installing and using Dell SupportAssist, see the <i>Dell EMC SupportAssist Enterprise User's Guide</i> .	www.dell.com/serviceabilitytools
	For understanding the features of Dell EMC Lifecycle Controller (LC), see the <i>Lifecycle Controller User's Guide</i> .	www.dell.com/idracmanuals
	For information about partner programs enterprise systems management, see the <i>OpenManage Connections Enterprise Systems Management</i> documents.	www.dell.com/esmmanuals
	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> .	www.dell.com/esmmanuals
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.	www.dell.com/storagecontrollermanuals
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.	www.dell.com/openmanagemanuals
Troubleshooting your system	For information about identifying and troubleshooting the PowerEdge server issues, see the <i>PowerEdge Servers Troubleshooting Guide</i> .	www.dell.com/poweredgemanuals

Download 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 www.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.