

# Dell EMC DD OS

Version 7.X

## DD OS USB Installation Guide


REVISION 02

May 2020

This guide provides instructions for installing DD OS from a USB key (a.k.a. keychain drive, thumb drive, or flash memory stick).


This document applies to the following systems:

- DD4200
- DD4500
- DD6300
- DD6800
- DD6900
- DD7200
- DD9300
- DD9400
- DD9500
- DD9800
- DD9900

 **CAUTION** This document does not apply to DD3300 systems. Contact Dell EMC Support to re-image a DD3300 system.

This installation method is intended for:

- New systems that are shipped without DD OS software on the system disk
- Overwriting a system's DD OS software

 **Note:** For information about other upgrade methods, refer to the *DD OS Release Notes* for the DD OS version you want to install and the *DD OS Administration Guide* and *DD OS Command Reference Guide* for the current version of DD OS.

This document covers the following topics:

• <a href="#">Requirements</a> .....	2
• <a href="#">Downloading installation files</a> .....	2
• <a href="#">Writing the DD OS image to a USB key</a> .....	2
• <a href="#">Installing and configuring DD OS software</a> .....	8
• <a href="#">Changing the boot order for DD6900, DD9400, and DD9900 systems</a> .....	10
• <a href="#">EMC online support site access</a> .....	12

# Requirements

## USB key with DD OS image

You need a dedicated USB 2.0-compatible key, 4 GB or larger, to install the software.

Instructions for downloading the USB image for DD OS and loading it onto a USB key are provided in [Downloading installation files](#) on page 2 and [Writing the DD OS image to a USB key](#) on page 2.

## Time required

The typical time needed to install and configure the DD OS software is 75 minutes:

- 45 minutes to install the software
- 30 minutes to configure the installed software

# Downloading installation files


### About this task

Contact Support to request access to the USB image for the version of DD OS you need. Download the DD OS USB image and Win32 Disk Imager tool (required for Windows environments). These are provided in a single .ZIP file.

### Procedure

1. Log in to the location provided by Support and find the DD OS USB image for the release.  
USB image names take the form `x.x.x.x_USB_Image`, where `x.x.x.x` is the DD OS release number.
2. Download the image and accept the End User License Agreement (EULA) to start the transfer.

If using Windows, a USB Image Writer utility is required to make the USB drive bootable, which is included in the download.

 **Note:** The **Checksum** button displays the MD5 value for the ZIP download file. The MD5 value for the image file is in the ZIP archive.

# Writing the DD OS image to a USB key

This section provides instructions for:

- Windows systems (see below)
- Linux/Unix systems (see [Using Linux/Unix systems](#) on page 7)

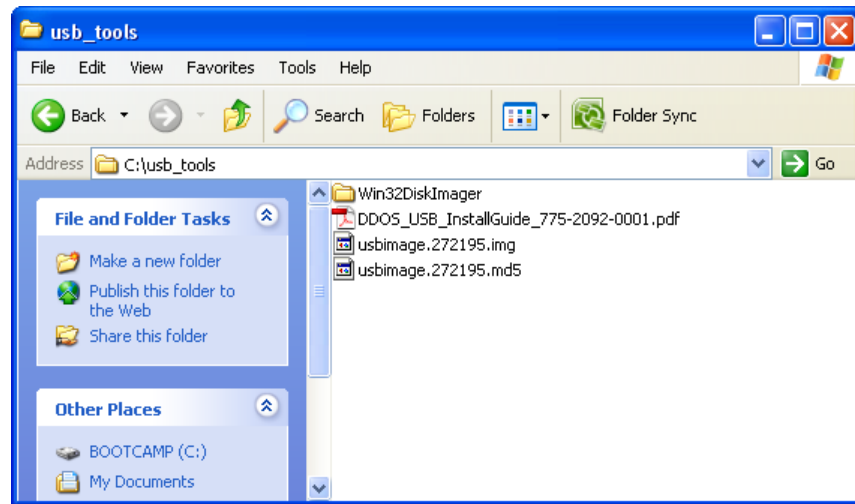
## Using Windows systems

### Procedure

1. Create a USB work folder in Windows, such as `C:/usb_tools`.
2. Unzip the download file and move the folder contents into your USB work folder.

Your USB work folder should contain the following:

- Win32DiskImager tool folder
- This installation guide (.pdf)
- The DD OS USB image file (.img)
- The image file's MD5 checksum (.md5)

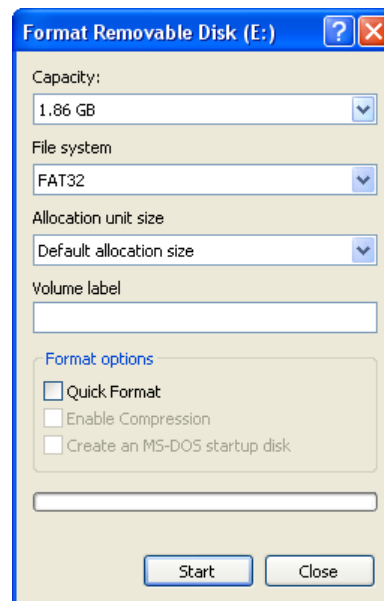


### 3. Format the USB key.

- Insert a 4 GB or larger USB key into your computer's USB port.
- Go to My Computer and note the letter assigned to the USB key. For example, E.

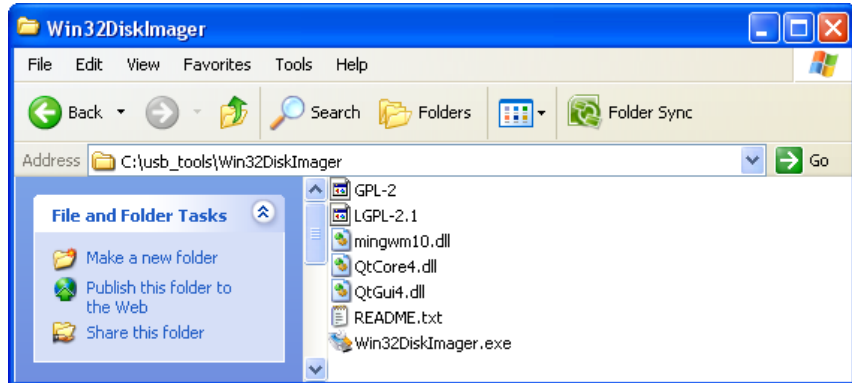
**CAUTION** Copy off any files you want to keep; the key will be reformatted and all data will be lost.

- Right-click the USB key icon and select **Format** from the menu. The formatting menu appears.

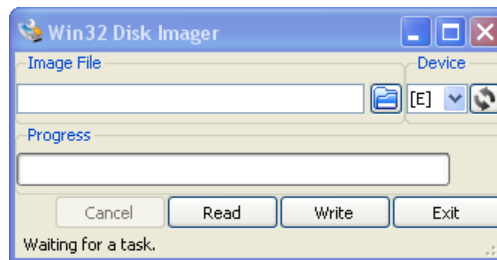


- Select **FAT32** as the file system, clear **Quick Format** (if necessary), then click **Start** to begin formatting the USB key.

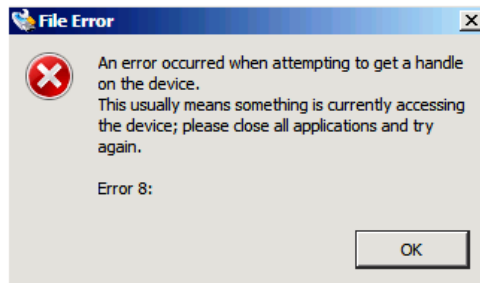
4. Write the DD OS image to the USB key.
  - a. Open the Win32DiskImager folder in your USB work folder.



- b. Double-click Win32DiskImager.exe to launch the application.

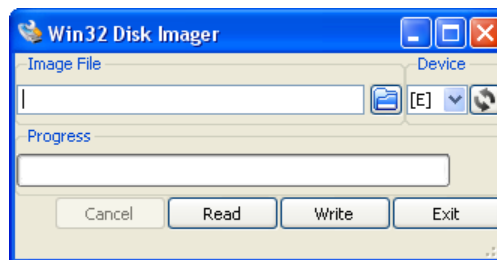


**Note:** When you launch Win32DiskImager, this error message may appear:

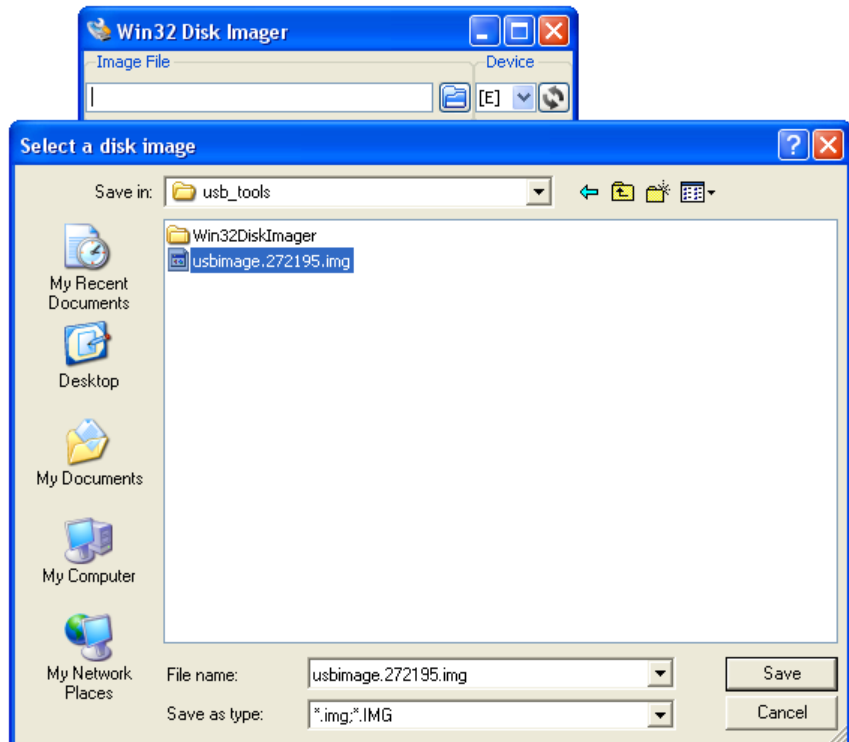


Click **OK** to ignore it.

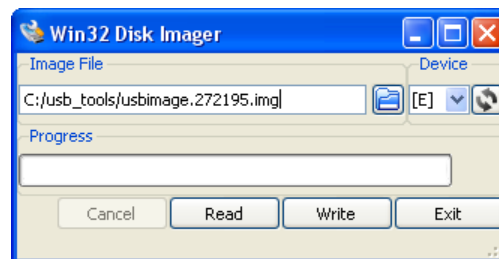
- c. Click the refresh icon. Then select the USB key to which you will write the DD OS image by clicking the down arrow icon under Device and selecting the target USB key from the list. USB device E is shown.



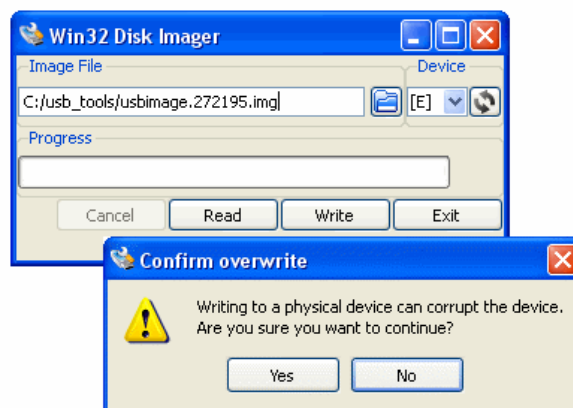
- d. Select the image file to be written to the USB key. Start by clicking the folder icon in the Win32 Disk Imager window and then click the up folder icon in the image selection window. Select the image file and click **Save**.



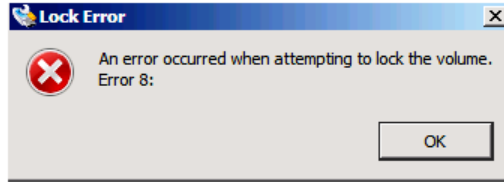
The image selection window disappears and the image name appears in the Win32 Disk Imager tool.



e. Click **Write**, then **Yes** to confirm and start the write operation.

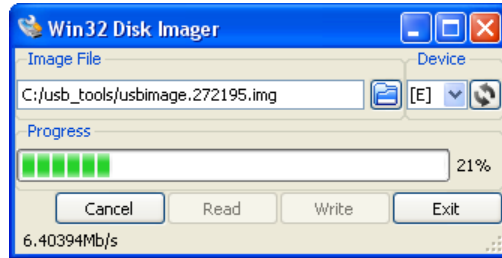


**Note:** When you click **Write**, this message may appear.



This error indicates that the USB key is being used by other processes, such as being opened by Internet Explorer when it is plugged in. To continue, close these processes and try again.

The write operation starts, indicated by progress bars.



When the write operation completes, click **Exit** to quit the program.

- f. Go to My Computer, right-click the USB key, and select **Eject** to unmount it. Then remove the key from your computer.

## Using Linux/Unix systems


### Procedure

1. Log in to your Linux or Unix computer as `root`.
2. Create a USB work directory to hold the download files.
3. Unzip the download file and move the folder contents into your USB work directory.

Your USB work folder should contain the following:

- `Win32DiskImager` tool subdirectory (not used for Linux/Unix)
- This installation guide (`.pdf`)
- The DD OS USB image file (`.img`)
- The image file's MD5 checksum (`.md5`)

4. Insert a 4 GB or larger USB key into your computer's USB port.

 **CAUTION** Copy off any files you want to keep; the key will be reformatted and all data will be lost.

5. Run `mount` to find the device name, or, if your system does not automount, run `dmesg` and look for USB information:

```
# mount
```

or

```
# dmesg
```

An example device name is `/dev/sdc`.

6. Unmount the USB drive.

For example, to unmount device `/dev/sdc` enter:

```
# umount /dev/sdc
```

7. Write the DD OS image to the USB key.

For example, to write image `/ws/toolsbin/mkusb2/usbimage.272195.img` to USB key `/dev/sdc`, enter the following command as root:

```
# dd if=/ws/toolsbin/mkusb2/usbimage.272195.img of=/dev/sdc
```

8. Sync the USB key:

```
# sync;sync;sync
```

9. Remove the USB key from your computer.

# Installing and configuring DD OS software

## About this task

**Note:** You may need to change your system's BIOS settings before you can boot from a USB key and install software. Contact Support for assistance before starting the steps below.

## Procedure

1. Connect a console to the system, if not present, using one of these methods:
  - **Remote serial link:** Use for a serial console or laptop with terminal emulation software such as Secure CRT, PuTTY, or HyperTerminal (required for running DD OS commands). A null modem cable with a DB-9 female connector is required. Laptops without a serial DB-9 connector should use a USB/Serial adapter (not included) with the null modem cable. Connect the console or laptop or the standard DB-9 male or micro DB-9 female port on the system.
  - **Direct connection:** Use for a PS/2 or USB keyboard with a VGA monitor, or KVM console. Connect the P/S2 keyboard and mouse to the system's DIN-type ports, the USB keyboard to the system's USB-A port, and the VGA monitor to the system's DB-15 female port.
2. Insert the USB key with the DD OS image into a USB port on the system. (For USB port locations, refer to your system's *Hardware Overview* manual.)
3. If the system is powered down, power it up as follows:
  - If the system has a power button on the front, press it.
  - If the system does not have a power button on the front, remove (if inserted) the AC power cords from the power supplies, wait until the power supply LEDs have turned off, then reconnect the power cords.

Skip to step 5.

4. If the system is powered up with a system prompt on the console, then log in as sysadmin (or an administrator-level user) and enter:

```
# system reboot
```

**Note:** The factory default password is the serial number on your system. For its location, refer to your system's *Installation Guide*.

If the default password has been changed, you need to use the new password.

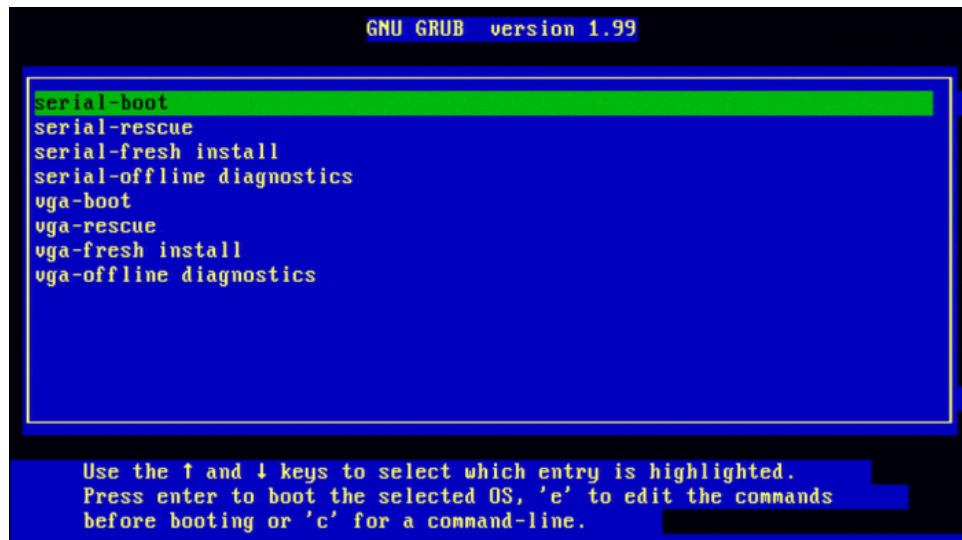
Answer **yes** to the `Are you sure?` prompt.

5. As the system reboots, confirm that it is booting from the USB key by checking the activity light (LED) on the key, if present.

**Note:** If the system appears to be booting from the internal disk rather than the USB key, contact Support for assistance.

6. A boot menu appears.





Scroll down using the down arrow key to highlight the **fresh install** option for your console interface, then press **Enter** to select it.

If you selected **serial-fresh install**, a screen summarizing serial console connection settings will appear for 10 seconds, or until you press any key.

**Note:** Offline diagnostics are not available for all systems. For more information, refer to the *DD OS Offline Diagnostics Suite User's Guide* for your DD OS version.

7. Before software installation starts, the following prompt appears:

```
Confirm: Do you want to delete all existing data? [deleteallexistingdata/quit]
```

**WARNING** Entering `deleteallexistingdata` destroys the information on all system controller disks and expansion disks, including DD OS software, configuration settings, and data.

Continue with the DD OS installation by manually entering:

```
deleteallexistingdata
```

**Note:** If there is no response after you enter the prompt phrase, verify that the correct interface was selected in the boot menu.

8. After installation completes, the system automatically reboots.

Remove the USB key when the installation process prompts that it will be rebooting.

**Note:** Remove the USB key now to ensure rebooting from the system disk. You do not use the USB key after DD OS is installed on the system.

9. After the system reboots from disk, you are prompted to log in. Log in as `sysadmin` with the default password `abc123`.

10. After logging in, you are prompted to accept the End User License Agreement (EULA).

**Note:** Service personnel should respond to the EULA prompt as follows:

- If the customer is present, show the customer the EULA, and how to view it later. Then you or the customer can accept the EULA and continue with the installation.

- If the customer is not present, press **Ctrl+C** to bypass the EULA. The customer can accept the EULA later (when first logging on to the system). Under no circumstances are you to accept the EULA for the customer.

11. You are prompted to enter additional configuration information. Follow the instructions in the system installation guide, available on the Online Support site.

After software configuration is complete, all DD OS commands and system resources are available.

## Changing the boot order for DD6900, DD9400, and DD9900 systems

DD6900, DD9400, and DD9900 systems running DD OS 7.2 or higher need to reset the boot order in the system BIOS after a fresh install. This procedure does not apply to any other system models.

### About this task

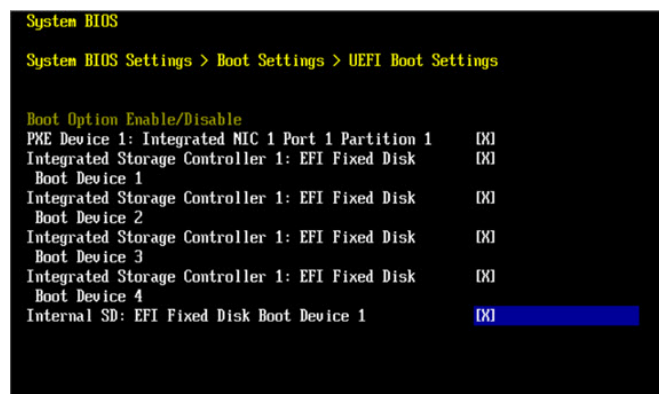
This procedure may be done in the system BIOS, or through the iDRAC GUI.

## Changing the system boot order from the system BIOS

### Procedure

1. Connect to the system serial console or connect KVM to the system.
2. Reboot the system.
3. During the system boot process, press **F2** to access the BIOS menu.
4. Select **Boot Settings > UEFI Boot Settings**.
5. Deselect **Internal SD: EFI Fixed Disk Boot Device 1**.

**Figure 1** Disable IDSDM boot from the system BIOS



6. Save the changes and exit the BIOS menu.

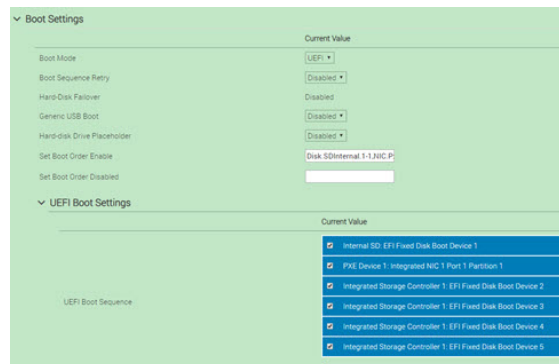
## Changing the system boot order from iDRAC

### Procedure

1. In a web browser, type the iDRAC IP address specified during iDRAC configuration.
2. Login with the customer-provided username and password.
3. Select **Configuration > BIOS Settings > Boot Settings**.

4. Type `Disk.SDInternal.1-1` in the **Set Boot Order Disabled** field.
5. Remove `Disk.SDInternal.1-1` from the **Set Boot Order Enabled** field.

**Figure 2** Disable IDSDM boot from iDRAC



6. Click **Apply**.
7. Click **Apply And Reboot**.

## EMC online support site access

For documentation, release notes, software updates, or information about Dell EMC products, go to the Online Support at <https://support.emc.com>. (Support log in is required.)

### Product Information

For technical support resources that may enable you to resolve a product issue before contacting Customer Service, go to the following Support by Product pages on Online Support (registration required) <https://support.emc.com>.

After logging in to the appropriate Support by Product page, you can access product documentation, release notes, software updates, Knowledge base articles, How-to and troubleshooting information, hardware, and software compatibility guides or information about our products, licensing, and service.

### Troubleshooting and Technical Support

For information about our products, software updates, licensing, and service, go to Online Support (registration required) at <https://support.emc.com>. After logging in, locate the appropriate Support by Product page.

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