

# Installatie vanaf een Live-medium

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De Officiële Documentatie voor Mageia



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Ze werd door vrijwilligers in hun vrije tijd geschreven. Neem a.u.b. contact op met het [Documentatie Team](https://wiki.mageia.org/en/Documentation_team) [https://wiki.mageia.org/en/Documentation\_team], als u mee wilt helpen deze handleiding te verbeteren.

## **Installatie vanaf een Live-medium**

## Inhoudsopgave

Installatie vanaf een Live-medium .....	1
1. Selecteer en gebruik ISO's .....	1
1.1. Introductie .....	1
1.2. Media .....	1
1.3. Een medium downloaden en checken .....	3
1.4. Brand of dump het ISO .....	3
2. Start Mageia als Live-systeem .....	6
2.1. Het medium opstarten .....	6
2.2. In BIOS/CSM/Legacy-modus .....	7
2.3. In UEFI-modus .....	8
3. Taalkeuze .....	8
4. Licentie en uitgave-opmerkingen .....	9
4.1. Licentie-overeenkomst .....	9
4.2. Uitgave-opmerkingen .....	9
5. Configureer uw tijdzone .....	9
6. Klok-instellingen .....	9
7. Select Keyboard .....	9
8. Mageia als Live-systeem testen .....	10
8.1. Live-modus .....	10
9. Partitioning .....	10
9.1. Suggested Partitioning .....	10
9.2. Kies de koppelpunten .....	12
9.3. Bevestig het formatteren van de harde schijf .....	12
9.4. Custom Disk Partitioning with DiskDrake .....	13
9.5. Formatteren .....	13
10. Ongebruikt materiaal behouden of verwijderen .....	13
11. Bootloader .....	14
11.1. Grub2 .....	14
11.2. Bootloader Setup .....	15
11.3. Other Options .....	16
12. Herstarten .....	16
13. Gebruikersbeheer .....	17
13.1. Beheerderswachtwoord (root) instellen: .....	17
13.2. Voer een gebruiker in .....	17
14. Login Screen .....	18
15. Mageia deïnstalleren .....	18

## Lijst van figuren

1. EFI System Partition .....	13
2. BIOS boot partition .....	13

## Installatie vanaf een Live-medium

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U zult niet alle installatieschermen zien die in deze handleiding besproken worden. Welke schermen u krijgt hangt af van uw systeem en van de keuzes die u tijdens het installeren maakt.

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## 1. Selecteer en gebruik ISO's

### 1.1. Introductie

Mageia is distributed via ISO images. This page will help you to choose which image best suits your needs.

There are three types of installation media:

- **Classical installer:** Booting with this media provides you with the maximum flexibility when choosing what to install, and for configuring your system. In particular, you have a choice of which Desktop environment to install.
- **LIVE media:** This option allows you to try out Mageia without having to actually install it, or make any changes to your computer. However, the Live media also includes an Installer, which can be started when booting the media, or after booting into the Live operating system itself.



The Live Installer is simpler compared to the Classical Installer - but you have fewer configuration options.

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Live ISOs can only be used to create “clean” installations, they cannot be used to upgrade previously installed Mageia releases.

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- **Net Install:** These are minimal ISO's containing no more than that which is needed to start the DrakX installer and find `DrakX-installer-stage2` and other packages that are needed to continue and complete the install. These packages may be on the PC hard disk, on a local drive, on a local network or on the Internet.

These media are very light (less than 100 MB) and are convenient if bandwidth is too low to download a full DVD, or if you have a PC without a DVD drive or is unable to boot from a USB stick.

More details are given in the next sections.

### 1.2. Media

#### 1.2.1. Definitie

Here, a medium (plural: media) is an ISO image file that allows you to install and/or update Mageia and, by extension, any physical medium (DVD, USB stick, ...) the ISO file is copied to.

You can find Mageia ISO's [here](http://www.mageia.org/en/downloads/) [http://www.mageia.org/en/downloads/].

## **1.2.2. Klassieke installatiemedi**

### **1.2.2.1. Algemene eigenschappen**

- These ISOs use the Classical installer called DrakX
- They are used for performing clean installs or to upgrade a previously installed version of Mageia
- Different media for 32 and 64-bit architectures
- Some tools are available in the Installer “Welcome” screen: *Rescue System*, *Memory Test*, and *Hardware Detection Tool*
- Each DVD contains many available desktop environments and languages
- You'll be given the choice during the installation to add non-free software

## **1.2.3. Live media**

### **1.2.3.1. Algemene eigenschappen**

- Can be used to preview the Mageia operating system without having to install it
- The Live media also includes an Installer.
- Each ISO contains only one desktop environment (Plasma, GNOME or Xfce)
- Different media for 32 and 64-bit architectures
- They contain non-free software

### **1.2.3.2. PLASMA Live DVD**

- Plasma desktop environment only
- All available languages are present
- 64-bit architecture only

### **1.2.3.3. GNOME Live DVD**

- GNOME desktop environment only
- All available languages are present
- 64-bit architecture only

### **1.2.3.4. Xfce Live DVD**

- Xfce desktop environment only
- All available languages are present
- 32 or 64-bit architectures

## **1.2.4. Net install media**

### **1.2.4.1. Algemene eigenschappen**

- Different media for 32 and 64-bit architectures
- First steps are English language only

### 1.2.4.2. *netinstall.iso*

- Contains only free software, for those who prefer to not use non-free software

### 1.2.4.3. *netinstall-nonfree.iso*

- Contains non-free software (mostly drivers, codecs...) for those who need it

## 1.3. Een medium downloaden en checken

### 1.3.1. Downloaden

Once you have chosen your ISO file, you can download it using either http or BitTorrent. In both cases, you are provided with some information, such as the mirror in use and an option to switch to an alternative if the bandwidth is too low.

If http is chosen you will also see some information regarding checksums.

`md5sum`, `sha1sum` and `sha512sum` (the most secure) are tools to check the ISO integrity. Copy one of the checksums (string of alphanumeric characters) for use in the next section.

In the meantime, a window to download the actual ISO will open:

Click on *Save File*, then click *OK*.

### 1.3.2. De integriteit van het gedownloadede medium controleren

The checksums referred to earlier, are digital fingerprints generated by an algorithm from the file to be downloaded. You may compare the checksum of your downloaded ISO against that of the original source ISO. If the checksums do not match, it means that the actual data on the ISO's do not match, and if that is the case, then you should retry the download or attempt a repair using BitTorrent.

To generate the checksum for your downloaded ISO, open a console, (no need to be root), and:

- To use the `md5sum`, type: **`md5sum path/to/the/image/file.iso`**
- To use the `sha1sum`, type: **`sha1sum path/to/the/image/file.iso`**
- To use the `sha512sum`, type: **`sha512sum path/to/the/image/file.iso`**

Example:

```
[sam5@localhost ~]$ md5sum /home/sam5/Downloads/Mageia-4-RC-x86_64-DVD.iso
ec1ce42c4b003b5e9bea6911968195c8 /home/sam5/Downloads/Mageia-4-RC-x86_64-DVD.iso
[sam5@localhost ~]$ █
```

then compare the result (you may have to wait for a while) with the ISO checksum provided by Mageia.

## 1.4. Brand of dump het ISO

The verified ISO can now be burned to a CD/DVD or “dumped” to a USB stick. This is not a standard copy operation, as a bootable medium will actually be created.

### 1.4.1. De ISO op een CD/DVD branden

Whichever software you use, ensure that the option to burn an *image* is used. Burn *data* or *files* is NOT correct. See the [the Mageia wiki](https://wiki.mageia.org/en/Writing_CD_and_DVD_images) [https://wiki.mageia.org/en/Writing\_CD\_and\_DVD\_images] for more information.

### 1.4.2. Dump de ISO op een USB-stick

All Mageia ISOs are hybrids, which means you can dump them to a USB stick and then use that to boot and install the system.



Dumping an image onto a flash device destroys any previous file-system on the device and all existing data will be lost.



Also, the only partition on the flash device will then just be the Mageia ISO partition.

So, if an ISO of about 4GB is written to an 8GB USB stick, the stick will then only show up as 4GB. This is because the remaining 4GB is no longer formatted - hence not currently available for use. To recover the original capacity, you must reformat and repartition the USB stick.

---

#### 1.4.2.1. Gebruik een grafisch hulpmiddel binnen Mageia

U kunt een grafische tool gebruiken, zoals [IsoDumper](https://wiki.mageia.org/en/IsoDumper_Writing_ISO_images_on_USB_sticks) [https://wiki.mageia.org/en/IsoDumper\_Writing\_ISO\_images\_on\_USB\_sticks]

#### 1.4.2.2. Gebruik een grafisch hulpmiddel binnen Windows

Probeer bijv.:

- [Rufus](http://rufus.akeo.ie/?locale=en_US) [http://rufus.akeo.ie/?locale=en\_US] using the "ISO image" option
- [Win32 Disk Imager](http://sourceforge.net/projects/win32diskimager) [http://sourceforge.net/projects/win32diskimager]

#### 1.4.2.3. Using the Command line within a GNU/Linux system



It is potentially *\*dangerous\** to do this by hand. You risk overwriting potentially valuable existing data if you specify the wrong target device.

---

1. Open een terminal
2. Become a *root* (Administrator) user with the command `su -` (don't forget the - )

```
[sam5@localhost ~]$ su -  
Password:  
[root@localhost ~]#  
[root@localhost ~]#  
[root@localhost ~]# █
```



3. Plug in your USB stick - but do not mount it (this also means do not open any application or file manager that could access or read it)
4. Enter the command **fdisk -l**

```
[root@localhost ~]# fdisk -l

Disk /dev/sda: 298.1 GiB, 320072933376 bytes, 625142448 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 4096 bytes
I/O size (minimum/optimal): 4096 bytes / 4096 bytes
Disklabel type: dos
Disk identifier: 0x000db4bf
Partition 3 does not start on physical sector boundary.

Device      Boot      Start          End      Blocks      Id System
/dev/sda1   *          2048      21256191    10627072    83 Linux
/dev/sda2             21256192    63528959    21136384    83 Linux
/dev/sda3             63530964    625137344   280803190+    5 Extended
/dev/sda5             63531008    84873215    10671104    83 Linux
/dev/sda6             84875264    127016959    21070848    83 Linux
/dev/sda7            127019008    135985151     4483072    82 Linux swap / Solaris
/dev/sda8            135987200    198598655    31305728    83 Linux
/dev/sda9            198600704    471588863   136494080    83 Linux
/dev/sda10           471590912    496777994    12593541+    83 Linux
/dev/sda11           496781312    504955079     4086884    82 Linux swap / Solaris
/dev/sda12           504958976    625137344    60089184+    83 Linux

Disk /dev/sdb: 7.5 GiB, 8011087872 bytes, 15646656 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0x15005631

Device      Boot Start          End      Blocks      Id System
/dev/sdb1   *           1      7598079    3799039+    17 Hidden HPFS/NTFS

[root@localhost ~]# █
```

5. Find the device name for your USB stick (by its size), for example /dev/sdb in the screenshot above, is an 8GB USB stick.

Alternatively, you can find the device name with the command **dmesg**. Towards the end of the following example, you can see the device name starting with **sd**, and in this case, **sdd** is the actual device. You can also see that its size is 2GB:

```
[72594.604531] usb 1-1: new high-speed USB device number 27 using
xhci_hcd
[72594.770528] usb 1-1: New USB device found, idVendor=8564,
idProduct=1000
[72594.770533] usb 1-1: New USB device strings: Mfr=1, Product=2,
SerialNumber=3
[72594.770536] usb 1-1: Product: Mass Storage Device
[72594.770537] usb 1-1: Manufacturer: JetFlash
[72594.770539] usb 1-1: SerialNumber: 18MJTWLMPUCC3SSB
```

```
[72594.770713] usb 1-1: ep 0x81 - rounding interval to 128 microframes,
ep desc says 255 microframes
[72594.770719] usb 1-1: ep 0x2 - rounding interval to 128 microframes,
ep desc says 255 microframes
[72594.771122] usb-storage 1-1:1.0: USB Mass Storage device detected
[72594.772447] scsi host8: usb-storage 1-1:1.0
[72595.963238] scsi 8:0:0:0: Direct-Access      JetFlash Transcend 2GB
1100 PQ: 0 ANSI: 4
[72595.963626] sd 8:0:0:0: [sdd] 4194304 512-byte logical blocks: (2.14
GB/2.00 GiB)
[72595.964104] sd 8:0:0:0: [sdd] Write Protect is off
[72595.964108] sd 8:0:0:0: [sdd] Mode Sense: 43 00 00 00
[72595.965025] sd 8:0:0:0: [sdd] No Caching mode page found
[72595.965031] sd 8:0:0:0: [sdd] Assuming drive cache: write through
[72595.967251]  sdd: sdd1
[72595.969446] sd 8:0:0:0: [sdd] Attached SCSI removable disk
```

6. Enter the command: `dd if=path/to/the/ISO/file of=/dev/sdX bs=1M`

Where X=your device name eg: /dev/sdd

Example: `dd if=/home/user/Downloads/Mageia-6-x86_64-DVD.iso of=/dev/sdd bs=1M`



It might be helpful to know that **if** stands for input file and **of** stands for output file

---

7. Enter the command: `sync`
8. This is the end of the process, and you may now unplug your USB stick.

## 2. Start Mageia als Live-systeem

### 2.1. Het medium opstarten

You can boot directly from a Live DVD or USB. Usually, you just need to plug the USB device in or place the DVD in the drive and restart the computer.

If the computer does not automatically boot from the USB or DVD you may need to reconfigure your BIOS Boot Disk priority. Alternatively, you might try accessing the boot device menu to select a device from which the computer will boot.



To access the BIOS or boot menu when the computer is starting, you can try pressing either **F2**, **Del** or **Esc** for the BIOS, or **Esc**, **F8**, **F10** or **F11** for the boot device menu. These (fairly common) keys are just a selection of possible options though.

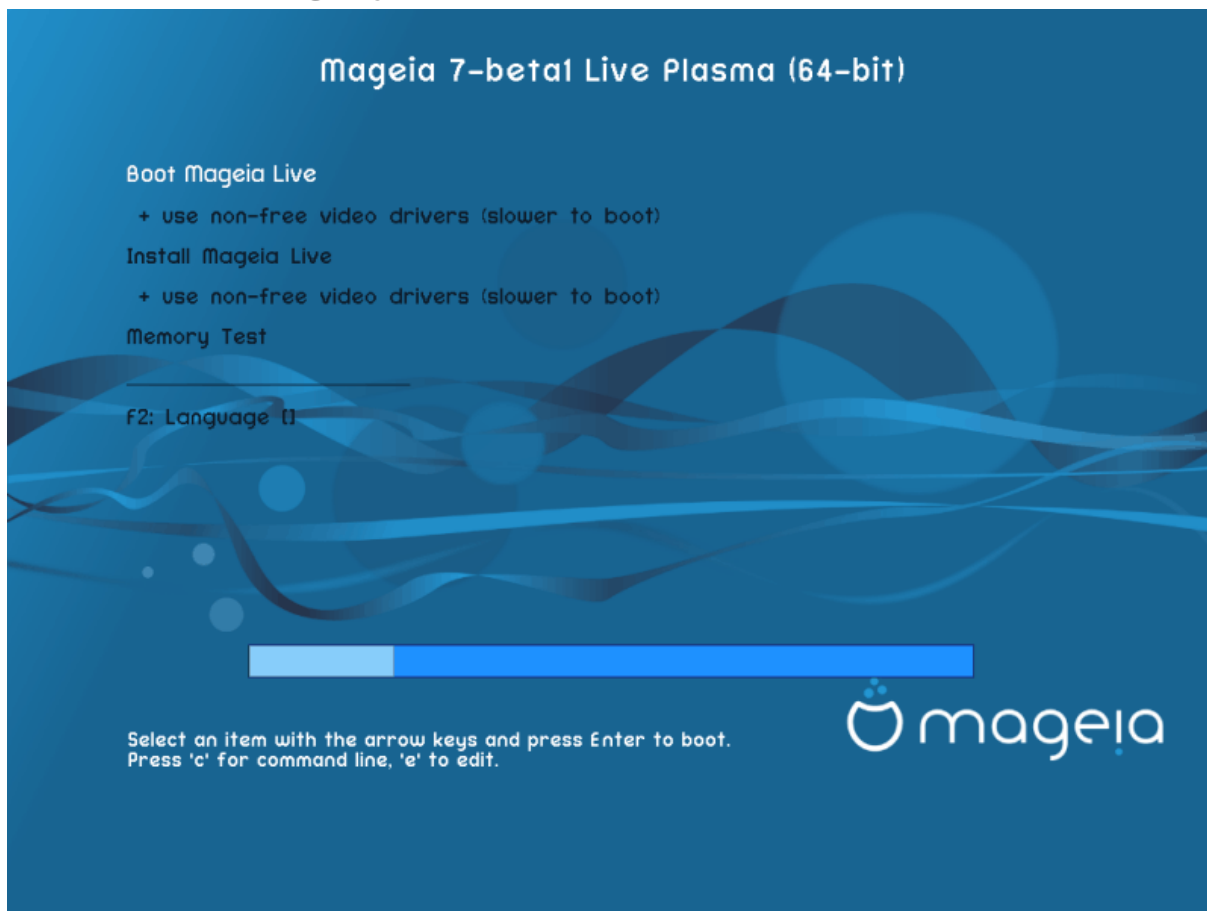
---



The actual screen that you will first see when booting from the Live media will depend on whether your computer motherboard is of the Legacy (BIOS) or UEFI type.

---

## 2.2. In BIOS/CSM/Legacy-modus



Eerste scherm na starten in BIOS-modus

### Menu

- **Boot Mageia**

This option will boot the Mageia Live system from the connected DVD/USB media (expect a very slow system compared to an installed OS).

Once the boot is done, you can proceed to the installation.

– + **use non-free video drivers (slower to boot)**

Boot the Mageia Live system using non-free video drivers

- **Install Mageia**

This option will install Mageia to a hard disk.

– + **use non-free video drivers (slower to boot)**

Install Mageia using non-free video drivers

- **Memory Test**

Test the installed RAM by performing multiple read and write operations. Reboot to end the test.

- **F2 Language**

Press **F2** to have the installer use a specific language during the installation. Use the arrow keys to select the language then press **Enter**.

## 2.3. In UEFI-modus



First screen while booting in UEFI mode

### Menu

- **Boot Mageia**

This option will boot the Mageia Live system from the connected DVD/USB media (expect a very slow system compared to an installed OS). Once the boot is done, you can proceed to the installation

- **Install Mageia**

This option will install Mageia to a hard disk.

- **F2 Language**

Press **F2** to have the installer use a specific language during the installation. Use the arrow keys to select the language then press **Enter**.



If you booted from a USB stick, you will see the above menu options duplicated, and in this case, you should choose from the menu pair that will be suffixed with "USB".

---

## 3. Taalkeuze

- Select your preferred language. Mageia will use this selection during the installation and for your installed system.

- Mageia uses UTF-8 (Unicode) support by default. This may be disabled in the *Multiple languages* screen if you know that it is inappropriate for your language. Disabling UTF-8 applies to all installed languages.
- You can change the language for your system post-installation in the Mageia Control Center → System → localization for your system.

## 4. Licentie en uitgave-opmerkingen

### 4.1. Licentie-overeenkomst

- Lees de voorwaarden van de licentie-overeenkomst a.u.b. aandachtig door, voordat u Mageia installeert.
- Deze voorwaarden hebben betrekking op de gehele Mageia-distributie en moeten aanvaard worden voordat u verder kunt gaan.
- Om verder te gaan, selecteer *Accepteren* en klik vervolgens op *Volgende*.

Als u de licentievoorwaarden niet wenst te accepteren, dan danken we u voor uw interesse in Mageia. Wanneer u op *Weigeren* klikt zal uw computer opnieuw opstarten.

### 4.2. Uitgave-opmerkingen

Belangrijke informatie over deze specifieke Mageia-uitgave kunt u zien door op de *Uitgave-opmerkingen*-knop te klikken.

## 5. Configureer uw tijdzone

- Choose your timezone by choosing your country, or a city close to you in the same timezone.

In the next screen you can choose to set your hardware clock to local time or to GMT, also known as UTC.



Als u meer dan één besturingssysteem op uw computer heeft, zorg dan dat ze allemaal op lokale tijd ingesteld staan, of op UTC/GMT.

---

## 6. Klok-instellingen

Hier dient u te selecteren welke tijd uw computers interne klok heeft, lokale tijd of UTC-tijd.

In the *Advanced* tab, you can enable automatic time synchronization and specify an NTP server.

## 7. Select Keyboard

Here you can set the keyboard layout you wish to use with Mageia.

A suggested keyboard layout (highlighted), has been chosen for you based upon your previously selected language and timezone choices.

## 8. Mageia als Live-systeem testen

### 8.1. Live-modus

This is the screen you will see if you selected the **Boot Mageia** option from the Live media menu.

#### 8.1.1. Hardware testen

One of the aims of using the Live mode is to test that your hardware is correctly managed by Mageia. You can check if all devices have a driver in the Hardware section of the Mageia Control Center:

- netwerkinterface: configureren met net\_applet
- graphics card: if you see the previous screen, it's already OK.
- geluid: een paar tonen werden reeds afgespeeld
- printer: configure your printer/s and print a test page
- scanner: scan een document van ...

If everything is satisfactory, you can proceed with the installation. If not, you can use the *Quit* button to exit.



The configuration settings you apply here are carried over if you decide to proceed with the installation.

---

#### 8.1.2. Start de installatie

To launch the installation of the Live DVD to a hard disk or SSD drive, simply click the *Install on Hard Disk* icon on the Live desktop. You will then see this screen, followed by the [Partitioning](#) step.

## 9. Partitioning

### 9.1. Suggested Partitioning

In this screen you can see the content of your hard drive(s) along with the DrakX partitioning proposals for where to install Mageia.

The actual options available from those shown below will vary according to the layout and content of your particular hard drive(s).

#### Main Options

- **Use Existing Partitions**

Als deze optie beschikbaar is, werden bestaande Linux compatibele partities gevonden die gebruikt kunnen worden voor het installeren.

- **Use Free Space**

Als u ongebruikte ruimte op uw harde schijf heeft die u voor uw nieuwe Mageia-installatie wilt gebruiken, kies dan deze optie.

- **Use Free Space on a Windows Partition**

If you have unused space on an existing Windows partition, the installer may offer to use it. This can be a useful way of making room for your new Mageia installation, but is a risky operation so you should make sure you have backed up all important files!

With this option, the installer displays the remaining Windows partition in light blue and the proposed Mageia partition in dark blue with their intended sizes just underneath. You have the option to modify these sizes by clicking and dragging the gap between both partitions. See the following screenshot:

- **Erase and use Entire Disk**

This option will allocate the entire drive for Mageia



This will erase ALL data on the selected hard drive. Take care! If you intend to use part of the disk for something else, or you already have data on the drive that you are not prepared to lose, then do not use this option.



Merk op dat de Windows partitie hiervoor kleiner gemaakt moet worden, wat niet zonder enig risico is. De partitie moet "schoon" zijn, wat inhoudt dat Windows correct afgesloten moet zijn toen het voor het laatst gebruikt werd en dat het gedefragmenteerd moet zijn. Dit is echter geen garantie dat alle bestanden op de partitie uit het gebied gehaald zijn dat op het punt staat gebruikt te worden. Het wordt sterk aanbevolen om vooraf een kopie van uw persoonlijke bestanden te maken op een andere schijf of lokatie.

- **Custom Disk Partitioning**

Hiermee krijgt u volledige controle over het plaatsen van de installatie op uw harde schijf of schijven.

If you are not using the *Custom disk partitioning* option, then the installer will allocate the available space according to the following rules:

- If the total available space is less than 50 GB, then only one partition is created. This will be the / (root) partition.
- If the total available space is greater than 50 GB, then three partitions are created
  - 6/19 of the total available place is allocated to / with a maximum of 50 GB
  - 1/19 is allocated to swap with a maximum of 4 GB
  - the rest (at least 12/19) is allocated to /home

This means that from 160 GB or greater available space, the installer will create three partitions:

- 50 GB for /
- 4 GB for swap
- and the remainder for /home



If you are using a UEFI system, the ESP (EFI System Partition) will be automatically detected - or created if it does not exist yet - and mounted on `/boot/EFI`. The *Custom disk partitioning* option is the only one that allows to check it has been correctly done.

If you are using a Legacy (also known as BIOS) system with a GPT partitioned disk, you need to create a BIOS boot partition if it doesn't already exist. It should be about 1 MiB with no mount

point. It can be created with the Installer, under *Custom disk partitioning*, like any other partition. Be sure to select “BIOS boot partition” for filesystem type.

See [DiskDrake](#) for information on how to proceed.

---



Some newer drives are now using 4096 byte logical sectors, instead of the previous standard of 512. Due to lack of available hardware, the partitioning tool used in the installer has not been tested with such a drive.

Some SSD devices now use an erase block size over 1 MB. If you have such a device we suggest that you partition the drive in advance, using an alternative partitioning tool like `gparted`, and to use the following settings:

- *Align to* = MiB
- *Free space preceding (MiB)* = 2

Also make sure all partitions are created using an even number of megabytes.

---

## 9.2. Kies de koppelpunten

Hier ziet u de Linux-partities die op de computer gevonden zijn. Als u het niet eens bent met de koppelpunten die DrakX voorstelt, kunt u ze veranderen.

- Links van de keuzevelden staan de beschikbare partities. Bijvoorbeeld: `sda` is een harde schijf en `5` is een *partitienummer*, gevolgd door (*grootte, koppelpunt, bestandstype*) van de partitie.
  - Als u meerdere partities heeft, kunt u verscheidene *koppelpunten* kiezen uit de uitvouwlijsten, zoals `/`, `/home` en `/var`. U kunt zelfs uw eigen koppelpunten maken, bijvoorbeeld `/video` voor een partitie waarop u uw films wilt bewaren, of `/Data` voor al uw gegevensbestanden.
  - U kunt het koppelpuntveld leeg laten voor partities waarvan u geen gebruik hoeft te maken.
- 



Als u veranderingen aanbrengt, zorg dan dat u tenminste een `/` (root)partitie houdt.

---



If you are not sure what to choose, click *Previous* to go back and then tick *Custom disk partitioning*, where you can click on a partition to see its type and size.

---

Als u zeker bent dat de koppelpunten goed zijn, klik dan op *Volgende* en kies of u enkel de partities wilt formatteren die DrakX voorstelt, of meer.

## 9.3. Bevestig het formatteren van de harde schijf

- Click on *Previous* if you are at all unsure about your choice.
-



- Click on *Next* to proceed if you are sure that it is OK to erase **every** partition, **every** operating system and **all data** that might be on that hard disk.

## 9.4. Custom Disk Partitioning with DiskDrake

- Modify the layout of your disk(s) here. You can remove or create partitions, change the filesystem or size of a partition and even view their details before you start.
- There is a tab at the top for every detected hard disk (or other storage device, like a USB key). In the screenshot above there are two available devices: `sda` and `sdb`.
- For all other actions: click on the desired partition first. Then view it, or choose a filesystem and a mount point, resize it or wipe it. *Expert mode* provides more options such as to label (name) a partition, or to choose a partition type.
- Continue until you have adjusted everything to your satisfaction, then click *Done* when you're ready.



1. Take care with the *Clear all* option, use it only if you are sure you want to wipe all partitions on the selected storage device.
2. If you wish to use encryption on your `/` partition you must ensure that you have a separate `/boot` partition. The encryption option for the `/boot` partition must NOT be set, otherwise your system will be unbootable.



- If you are installing Mageia on a UEFI system, check that an ESP (EFI System Partition) is present and correctly mounted on `/boot/EFI`. See Figure 1 below.
  - If you are installing Mageia on a Legacy/GPT system, check that a BIOS boot partition is present and of the correct type. See Figure 2 below.
- 

*Figuur 1. EFI System Partition*

*Figuur 2. BIOS boot partition*

## 9.5. Formatteren

Here you can choose which partition(s) you wish to format. Any data on partitions *not* marked for formatting will be preserved.

Usually, at least the partitions that DrakX selected need to be formatted.

Click on *Advanced* to choose the partitions you want to check for so-called *bad blocks*



If you're not sure you have made the right choice, you can click on *Previous*, again on *Previous* and then on *Custom* to get back to the main screen, where you can choose to view details of your partitions.

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When you are confident about the selections, click on *Next* to continue.

## 10. Ongebruikt materiaal behouden of verwijderen

In this step, the installer looks for unused locales packages and unused hardware packages and you are then given an opportunity to delete them.

If you do not foresee a case where your installation may need to run on different hardware, or that you might need additional localization files then you might wish to accept this proposal.

Clicking *Advanced* will list the unused hardware and localization files that will be removed if you proceed.



The next step is the copying of files to hard disk. This process should just take a little while to complete. When it is finishing you will briefly get a blank screen - this is normal.

## 11. Bootloader

### 11.1. Grub2

#### *Grub2 on Legacy MBR/GPT systems*

- GRUB2 (with or without graphical menu) will be used exclusively as the bootloader for a Legacy/MBR or Legacy/GPT system.
- By default, a new bootloader will be written into either the MBR (Master Boot Record) of your first hard drive or in the BIOS boot partition.

#### *Grub2-efi on UEFI systems*

- GRUB2-efi will be used exclusively as the bootloader for a UEFI system.
- By default, a new bootloader (Grub2-efi) will be written into the ESP (EFI System Partition).

If there are already UEFI-based operating systems installed on your computer (Windows 8 for example), the Mageia installer will detect the existing ESP created by Windows and add grub2-efi to it. If no ESP exists, then one will be created. Although it is possible to have several ESPs, only one is required, whatever the number of operating systems you have.

## 11.2. Bootloader Setup

### 11.2.1. Algemene opties voor de opstartlader

- **Bootloader to use**

This feature is only available to Legacy MBR/BIOS systems. Users of UEFI systems will not see this option here.

- **Boot device**

Don't change this unless you really know what you are doing

- **Delay before booting the default image**

This text box lets you set a delay, in seconds, before the default operating system is started up.

- **Security**

This allows you to set a password for the bootloader. This means a username and password will be required when booting in order to select a booting entry or change settings. This is optional, and most people are not likely to have a need for it. The username is `root` and the password is the one chosen hereafter.

- **Wachtwoord**

Choose a password for the bootloader (optional)

- **Password (again)**

Retype the password and DrakX will check that it matches with the one set above

#### *Advanced*

- *Enable ACPI*

ACPI (Advanced Configuration and Power Interface) is a standard for power management. It can save energy by stopping unused devices. Deselecting it could be useful if, for example, your computer does not support ACPI or if you think the ACPI implementation might cause some problems (for instance random reboots or system lockups).

- *Enable SMP*

This option enables/disables symmetric multiprocessing for multi-core processors

- *Enable APIC*

Enabling this gives the operating system access to the Advanced Programmable Interrupt Controller. APIC devices permit more complex priority models, and Advanced IRQ (Interrupt Request) management.

- *Enable Local APIC*

Here you can set Local APIC, which manages all external interrupts for a specific processor in an SMP system

### 11.2.2. Bootloader Configuration

- **Default**

The operating system to be started up by default.

- **Append**

This option lets you pass information to the kernel or tell the kernel to give you more information as it boots.

- **Probe foreign OS**

If you already have other operating systems installed, Mageia attempts to add them to your new Mageia boot menu. If you don't want this behaviour, then untick the Probe Foreign OS option.

*Advanced*

- *Video mode*

This sets the screen size and colour depth to be used by the boot menu. If you click the down-triangle you will be offered other size and colour depth options.

- *Do not touch ESP or MBR*

Select this option if you don't want a bootable Mageia, but would rather chain-load it from another OS. You will get a warning that the bootloader is missing. Click *Ok* if you are sure you understand the implications, and wish to proceed.

## 11.3. Other Options

### 11.3.1. Een bestaande opstartlader gebruiken

The exact procedure for adding Mageia to an existing bootloader is beyond the scope of this documentation. However in most cases it will involve running the relevant bootloader installation program, which should detect Mageia and automatically add an entry for it in the bootloader menu. See the documentation for the relevant operating system.

### 11.3.2. Installing Without a Bootloader

While you can opt to install Mageia without a bootloader (see section 2.1 Advanced), this is not recommended unless you absolutely know what you are doing, as without some form of bootloader your operating system will be unable to start.

### 11.3.3. Wijzig een opstartmenu-ingang of voeg er een toe

To do this you need to manually edit `/boot/grub2/custom.cfg` or use the software **grub-customizer** tool instead (available in the Mageia repositories).



For more information, see: [https://wiki.mageia.org/en/Grub2-efi\\_and\\_Mageia](https://wiki.mageia.org/en/Grub2-efi_and_Mageia)

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## 12. Herstarten

Once the bootloader has been installed, you will be prompted to halt your computer, remove the live DVD/USB stick and restart the computer.



Ensure that you follow these shut-down and restart instruction steps in the **same** order.

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When you are ready, press *Finish*.

When you restart, you will see a succession of download progress bars. These indicate that the software media lists are being downloaded (see *Software Management*).

## 13. Gebruikersbeheer

### 13.1. Beheerderswachtwoord (root) instellen:

Voor elke Mageia installatie wordt aanbevolen een `superuser`-wachtwoord (beheerderswachtwoord) in te stellen. In Linux heet dit gewoonlijk het *rootwachtwoord*. Terwijl u een wachtwoord in het bovenste tekstvak typt, zal het schildje ernaast van rood via geel in groen verkleuren, afhankelijk van de sterkte van het wachtwoord. Een groen schild betekent dat u een goed wachtwoord heeft. Herhaal het wachtwoord in het volgende vak, ter controle om typfouten uit te sluiten.



Alle wachtwoorden zijn hoofdlettergevoelig. In een wachtwoord is het het beste een mengeling te gebruiken van hoofdletters en kleine letters, cijfers en andere tekens.

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### 13.2. Voer een gebruiker in

Voeg hier een gebruiker toe. Een gebruiker heeft minder rechten dan de `superuser` (root), maar genoeg om te internetten, kantoortoepassingen te gebruiken, te gamen en al het andere te doen waar een normaal mens zijn computer voor gebruikt.

- **Pictogram**

Klik op het pictogram van de gebruiker om het te veranderen.

- **Volledige naam**

Voer de volledige naam van de gebruiker in dit tekstvak in.

- **Aanmeldnaam**

Voer hier de inlognaam van de gebruiker in, of laat DrakX er een kiezen op basis van de volledige naam. **De inlognaam is hoofdlettergevoelig.**

- **Wachtwoord**

Typ het wachtwoord van de gebruiker. Aan het eind van het tekstvak is een schild dat de sterkte van het wachtwoord weergeeft. (Zie ook [Opmerking](#))

**Wachtwoord (nogmaals):** Herhaal het gebruikerswachtwoord. DrakX zal checken of beide wachtwoorden gelijk zijn.



Elke gebruiker die u toevoegt tijdens het installeren van Mageia, krijgt een thuismap die beschermd is tegen zowel lezen als schrijven (`umask=0027`).

Verdere benodigde gebruikers kunt u toevoegen tijdens de installatiestap *Configuratie - Samenvatting*. Kies *Gebruikersbeheer*.

De toegangsrechten kunnen na het installeren ook nog veranderd worden.

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## 14. Login Screen

### SDDM login screen

Finally, you will come to the desktop login screen.

Enter your user name and user password, and in a few seconds you will find yourself with a loaded KDE Plasma or GNOME desktop, depending on which live medium you used. You can now start using and enjoying your Mageia installation.

You can find further documentation in [the Mageia wiki](https://wiki.mageia.org/en/Main_Page) [https://wiki.mageia.org/en/Main\_Page].

## 15. Mageia deïnstalleren

If Mageia didn't convince you or you can't install it correctly - in short you want get rid of it - that is your right and Mageia also gives you the possibility to uninstall. This is not true for every operating system.

After backing up your data, reboot your Mageia installation DVD and select *Rescue system*, then *Restore Windows boot loader*. At the next boot, you will only have Windows, with no option to choose your Mageia operating system.

In Windows, to recover the space used by Mageia partitions: click on Start → Control Panel → Administrative Tools → Computer Management → Storage → Disk Management. You will recognise a Mageia partition because they are labeled Unknown, and also by their size and place on the disk. Right-click on each of these partitions and select *Delete* to free up the space.

If you are using Windows XP, you can create a new partition and format it (FAT32 or NTFS). It will then get a partition letter.

If you have Vista or 7, you have one more possibility, you can extend the existing partition that is at the left of the freed space. There are other partitioning tools that can be used, such as **gparted**, available for both Windows and Linux. As always, when changing partitions, be very careful to back up anything important to you.