

Installation with DrakX

The Official Documentation for Mageia



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This manual was produced with the help of the [Calenco CMS](http://www.calenco.com) [http://www.calenco.com] developed by [NeoDoc](http://www.neodoc.biz) [http://www.neodoc.biz].

It was written by volunteers in their free time. Please contact [Documentation Team](https://wiki.mageia.org/en/Documentation_team) [https://wiki.mageia.org/en/Documentation_team], if you would like to help improve this manual.

Installation with DrakX

Table of Contents

Installation with DrakX	1
1. Select and use ISOs	1
1.1. Media	1
1.2. Downloading and Checking Media	2
1.3. Burn or dump the ISO	4
1.4. Mageia Installation	6
2. DrakX, the Mageia Installer	6
2.1. The installation steps	14
2.2. Installation Problems and Possible Solutions	14
3. Please choose a language to use	15
4. License and Release Notes	16
4.1. License Agreement	16
4.2. Release Notes	16
5. Setup SCSI	17
6. Install or Upgrade	18
7. Keyboard	19
8. Partitioning	20
9. Choose the mount points	22
10. Confirm hard disk to be formatted	23
11. Custom disk partitioning with DiskDrake	24
12. Formatting	26
13. Media Selection (Configure Supplemental Installation Media)	27
14. Media Selection (Nonfree)	28
15. Desktop Selection	28
16. Package Group Selection	30
17. Minimal Install	30
18. Choose Individual Packages	32
19. User and Superuser Management	33
19.1. Set Administrator (root) Password:	33
19.2. Enter a user	33
19.3. Advanced User Management	34
20. Graphic Card and Monitor Configuration	35
21. Choose an X Server (Configure your Graphic Card)	36
22. Choosing your Monitor	36
23. Bootloader main options	38
23.1. Using a Mageia bootloader	39
23.2. Using an existing bootloader	39
23.3. Bootloader advanced option	39
24. Add or Modify a Boot Menu Entry	40
25. Summary of miscellaneous parameters	42
25.1. System parameters	42
25.2. Hardware parameters	43
25.3. Network and Internet parameters	44
25.4. Security	44
26. Configure your Timezone	45
27. Select your Country / Region	46
27.1. Input method	46
28. Configure your Services	47
29. Select mouse	48
30. Sound Configuration	49
30.1. Advanced	49

31. Security Level	50
32. Updates	51
33. Congratulations	52

List of Figures

1. Installation Welcome Screen	7
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Installation with DrakX



No one will see all the installer screens that you see in this manual. Which screens you will see, depends on your hardware and the choices you make while installing.

1. Select and use ISOs

1.1. Media

1.1.1. Definition

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

You can find them [here](http://www.mageia.org/en/downloads/) [http://www.mageia.org/en/downloads/].

1.1.2. Classical installation media

1.1.2.1. Common features

- These ISOs use the traditional installer called drakx.
- They are able to make a clean install or an update from previous releases.

1.1.2.2. DVD

- Different media for architecture 32 or 64 bits.
- Some tools are available in the Welcome screen: Rescue System, Memory Test, 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.

1.1.2.3. DVD dual arch

- Both architectures are present on the same medium, the choice is made automatically according to the detected CPU.
- Uses Xfce desktop only.
- Not all languages are available. (be, bg, ca, de, en, es, fr, it, mk, pl, pt, ru, sv, uk) TO BE CHECKED!
- It contains non free software.

1.1.3. Live media

1.1.3.1. Common features

- Can be used to preview the distribution without installing it on a HDD, and optionally install Mageia on to your HDD.
- Each ISO contains only one desktop environment (KDE or GNOME).
- Different media for 32 or 64 bit architectures.
- **Live ISOs can only be used to create clean installations, they cannot be used to upgrade from previous releases.**

- They contain non free software.

1.1.3.2. *Live CD KDE*

- KDE desktop environment only.
- English language only.
- 32 bit only.

1.1.3.3. *Live CD GNOME*

- GNOME desktop environment only.
- English language only.
- 32 bit only.

1.1.3.4. *Live DVD KDE*

- KDE desktop environment only.
- All languages are present.
- Different media for 32 or 64 bit architectures.

1.1.3.5. *Live DVD GNOME*

- GNOME desktop environment only.
- All languages are present.
- Different media for 32 or 64 bit architectures.

1.1.4. *Boot-only CD media*

1.1.4.1. *Common features*

- Each one is a small image that contains 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 when bandwidth is too low to download a full DVD, a PC without a DVD drive or a PC that can't boot from a USB stick.
- Different media for 32 or 64 bit architectures.
- English language only.

1.1.4.2. *boot.iso*

- Contains only free software, for those people who refuse to use non-free software.

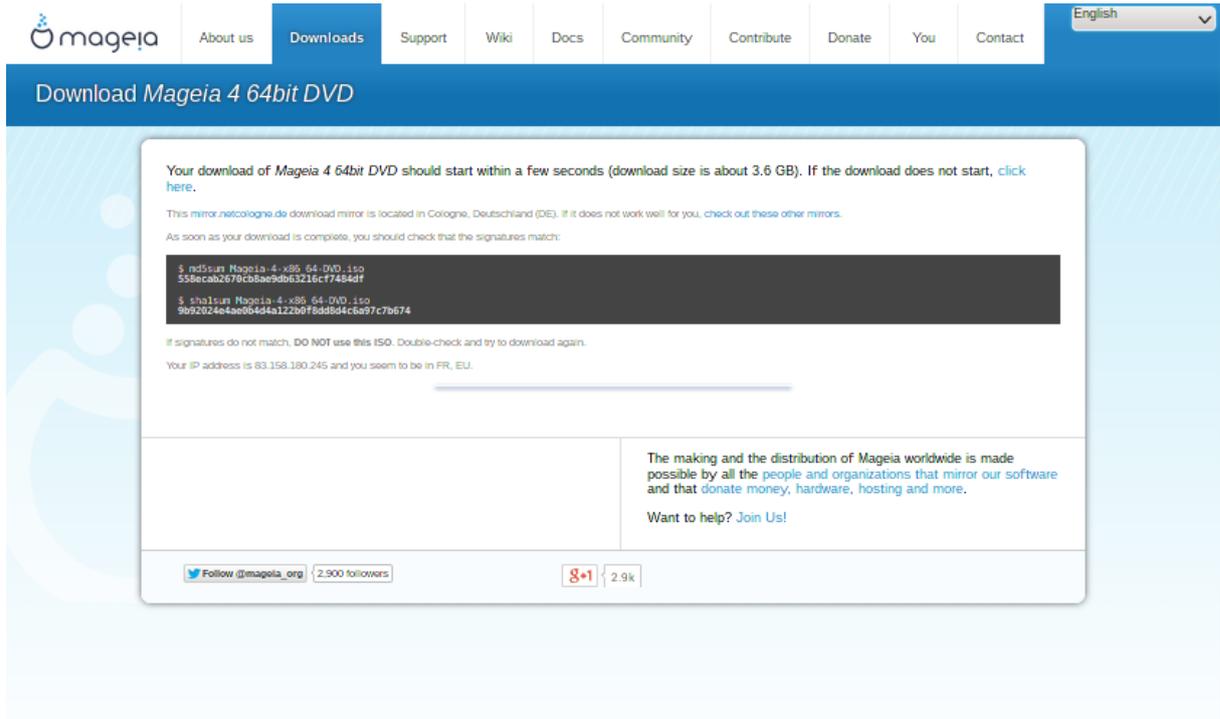
1.1.4.3. *boot-nonfree.iso*

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

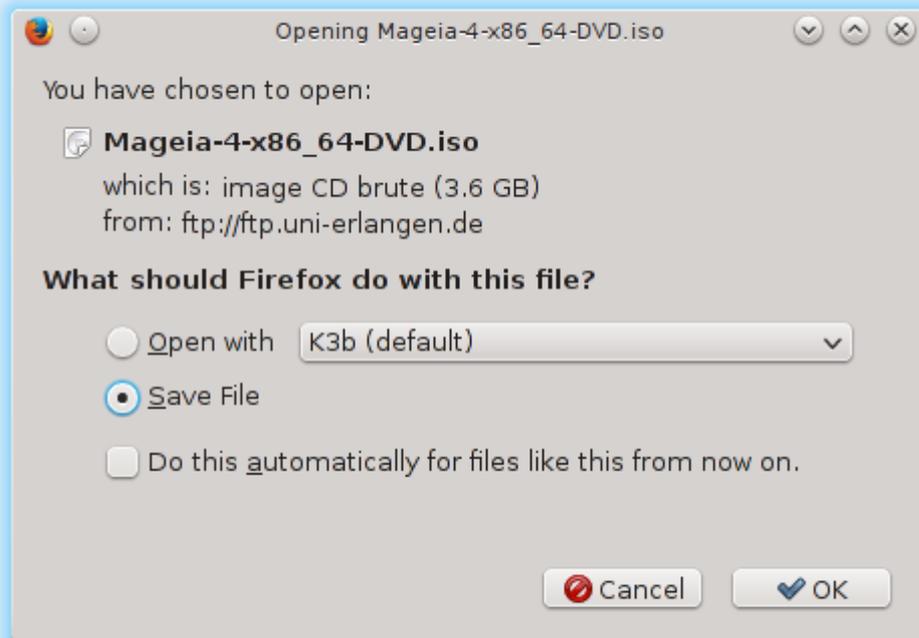
1.2. *Downloading and Checking Media*

1.2.1. *Downloading*

Once you have chosen your ISO file, you can download it using either http or BitTorrent. In both cases, a window gives you some information, such as the mirror in use and the possibility to change if the bandwidth is to low. If http is chosen, you may also see something like



md5sum and sha1sum are tools to check the ISO integrity. Use only one of them. Both hexadecimal numbers have been calculated by an algorithm from the file to be downloaded. When you ask these algorithms to recalculate this number from your downloaded file, either you have the same number and your downloaded file is correct, or the number is different and you have a failure. A failure infers that you should retry the download. Then this window appears:



Check the radio button Save File.

1.2.2. Checking the downloaded media integrity

Open a console, no need to be root, and:

- To use md5sum, type: [sam@localhost]\$ **md5sum path/to/the/image/file.iso.**

- To use sha1sum, type: [sam@localhost]\$ **sha1sum path/to/the/image/file.iso.**

and compare the obtained number on your computer (you may have to wait for a while) with the number given by Mageia. 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 ~]$ █
```

1.3. Burn or dump the ISO

The checked ISO can now be burned to a CD or DVD or dumped to a USB stick. These operations are not a simple copy and aim to make a boot-able medium.

1.3.1. Burning the ISO to a CD/DVD

Use whatever burner you wish but ensure the burning device is set correctly to **burn an image**, burn data or files is not correct. There is more information in [the Mageia wiki](https://wiki.mageia.org/en/Writing_CD_and_DVD_images) [https://wiki.mageia.org/en/Writing_CD_and_DVD_images].

1.3.2. Dump the ISO to a USB stick

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



"dumping" an image onto a flash device destroys any previous file-system on the device; any other data will be lost and the partition capacity will be reduced to the image size.

To recover the original capacity, you must re-format the USB stick.

1.3.2.1. Using Mageia

You can use a graphical tool like [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]

You can also use the dd tool in a console:

1. Open a console
2. Become root with the command **su -** (don't forget the final '-')

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

3. Plug your USB stick (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, it is a 8Go USB stick.
6. Enter the command: **# dd if=path/to/the/ISO/file of=/dev/sdX bs=1M**
Where X=your device name eg: /dev/sdc

Example: `# dd if=/home/user/Downloads/Mageia-4-x86_64-DVD.iso of=/dev/sdb bs=1M`

7. Enter the command: `# sync`
8. Unplug your USB stick, it is done

1.3.2.2. Using Windows

You could try:

- [Rufus](http://rufus.akeo.ie/?locale=en_US) [http://rufus.akeo.ie/?locale=en_US]
- [Win32 Disk Imager](http://sourceforge.net/projects/win32diskimager) [http://sourceforge.net/projects/win32diskimager]

1.4. Mageia Installation

This step is detailed in [the Mageia documentation](http://www.mageia.org/en/doc/) [http://www.mageia.org/en/doc/].

More information is available in [the Mageia wiki](https://wiki.mageia.org/en/Category:Documentation) [https://wiki.mageia.org/en/Category:Documentation].

2. DrakX, the Mageia Installer

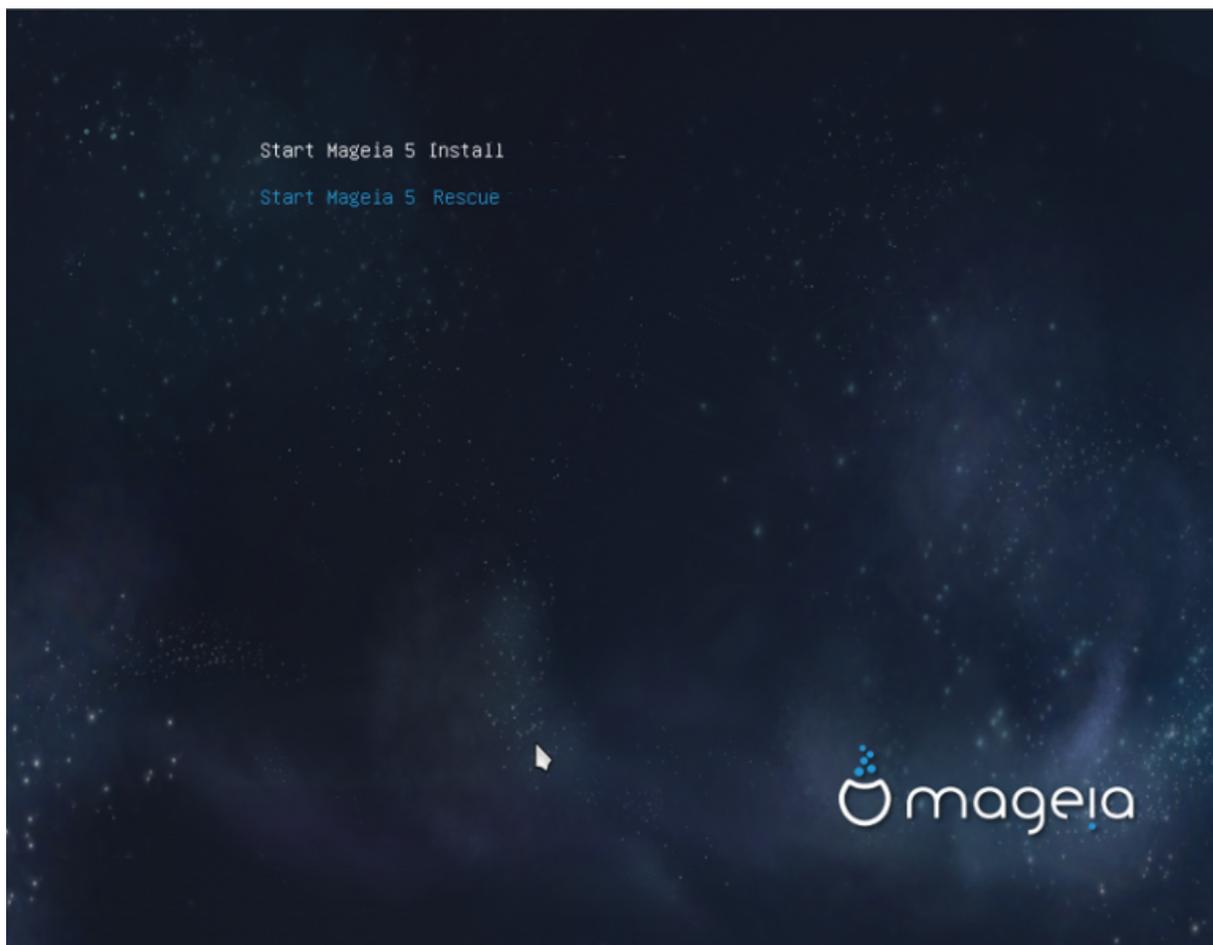
Whether you are new to GNU-Linux or an experienced user, the Mageia Installer is designed to help make your installation or upgrade as easy as possible.

The initial menu screen has various options, however the default one will start the installer, which will normally be all that you will need.

Here are the default welcome screens when using a Mageia DVD, The first one with a legacy system and the second one with an UEFI system:



Figure 1. Installation Welcome Screen



From this first screen, it is possible to set some personal preferences:

- The language (for the installation only, may be different that the chosen language for the system) by pressing the key F2 (Legacy mode only)



Use the arrow keys to select the language and press the key Enter.

Here is for example, the French welcome screen when using a Live DVD/CD. Note that the Live DVD/CD menu does not propose: Rescue System, Memory test and Hardware Detection Tool.



- Change the screen resolution by pressing the F3 key (Legacy mode only).



- Add some kernel options by pressing the **F6** key for the legacy mode or the **e** key for the UEFI mode.

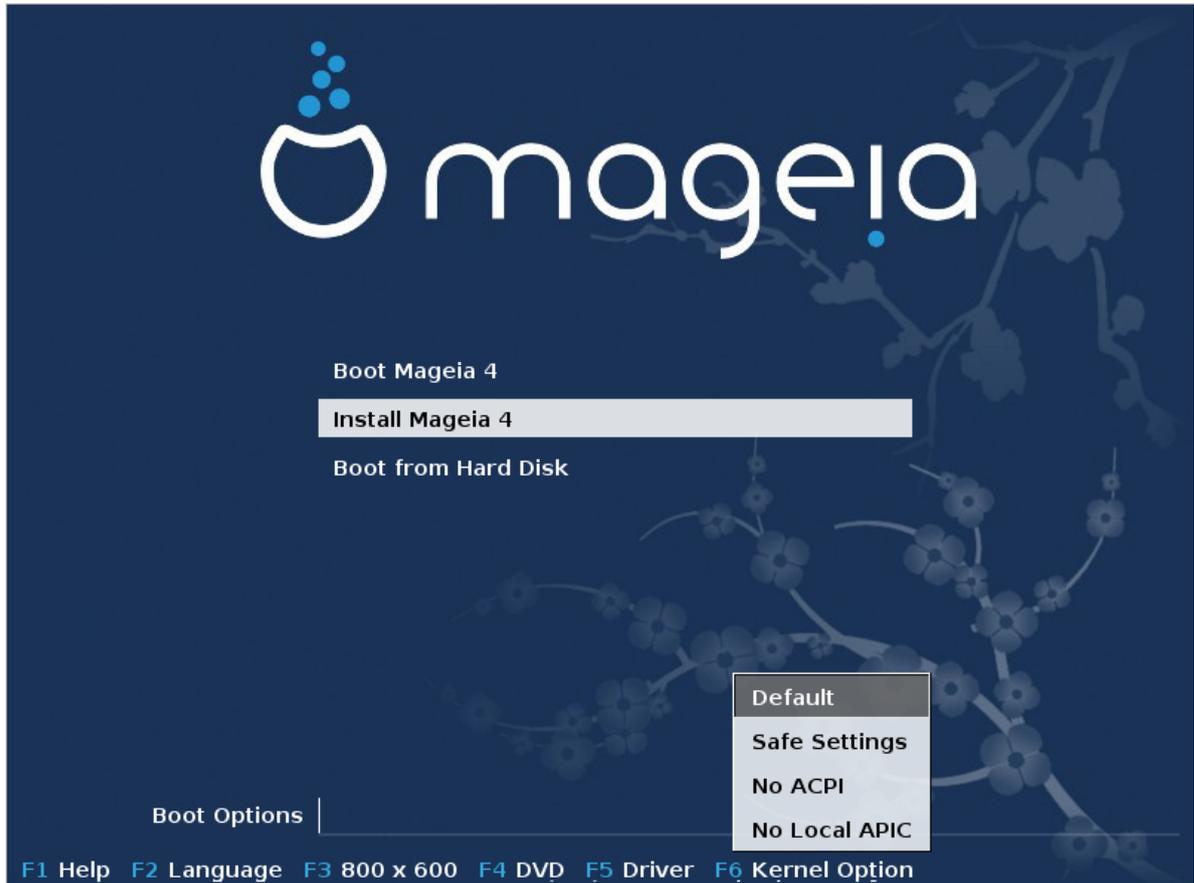
If the installation fails, then it may be necessary to try again using one of the extra options. The menu called by F6 displays a new line called Boot options and propose four entries:

- Default, it doesn't alter anything in the default options.
- Safe Settings, priority is given to the safer options to the detriment of performances.
- No ACPI (Advanced Configuration and Power Interface), power management isn't taken into account.
- No Local APIC (Local Advanced Programmable Interrupt Controller), it is about CPU interruptions, select this option if you are asked for.

When you select one of these entries, it modifies the default options displayed in the Boot Options line.

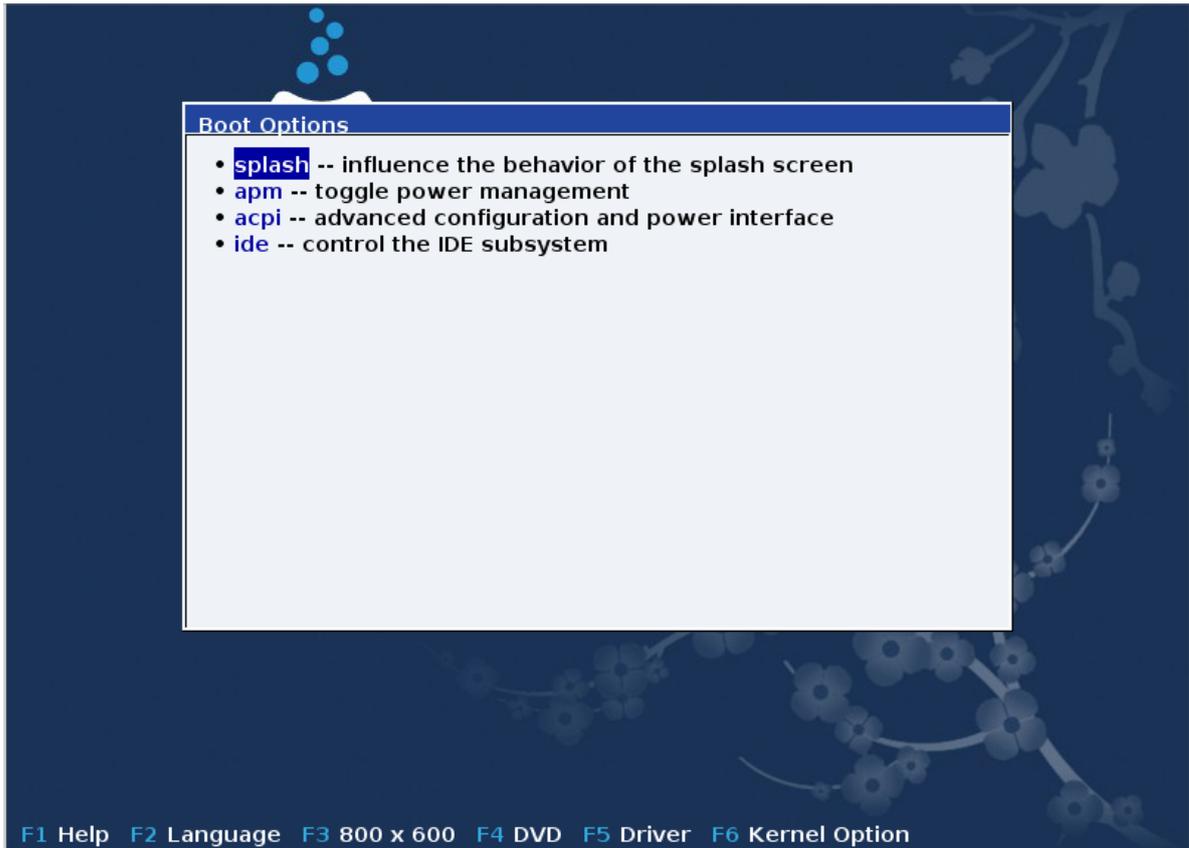


In some Mageia releases, it may happen that the entries selected with the key F6 does not appear in the Boot Options line, however, they are really taken into account.



- Add more kernel options by pressing the key F1 (Legacy mode only).

Pressing F1 opens a new window with more available options. Select one with the arrow keys and press Enter to have more details or press the Esc key to go back to the welcome screen.



The detailed view about the option splash. Press Esc or select Return to Boot Options to go back to the options list. These options can be added by hand in the Boot options line.



The help is translated in the chosen language with the F2 key.

For more information about kernel options on legacy and UEFI systems, see: https://wiki.mageia.org/en/How_to_set_up_kernel_options

Here is the default welcome screen when using a Wired Network-based Installation CD (Boot.iso or Boot-Nonfree.iso images):

It does not allow to change the language, the available options are described in the screen. For more information about using a Wired Network-based Installation CD, see [the Mageia Wiki](https://wiki.mageia.org/en/Boot.iso_install) [https://wiki.mageia.org/en/Boot.iso_install]



The keyboard layout is the American one.

```
                Welcome to Mageia install help

In most cases, the best way to get started is to simply press the <Enter> key.
If you experience problems with standard install, try one of the following
install types (type the highlighted text and press <Enter>):

o  text for text installation instead of the graphical one.
o  linux for standard graphical installation at normal resolution.
o  linux vga=785 for low resolution graphical installation.

To repair an already installed system type rescue followed
by <Enter>.

You can also pass some <specific kernel options> to the Linux kernel.
For example, try linux noapic if your system has trouble operating
your network adapter correctly.
NOTE: You cannot pass options to modules (SCSI, ethernet card) or devices
such as CD-ROM drives in this way. If you need to do so, use noauto mode.

[F1-Help] [F2-Advanced Help]
boot: _
```

2.1. The installation steps

The install process is divided into a number of steps, which can be followed on the side panel of the screen.

Each step has one or more screens which may also have Advanced buttons with extra, less commonly required, options.

Most screens have Help buttons which give further explanations about the current step.



If somewhere during install you decide to stop the installation, it is possible to reboot, but please think twice before you do this. Once a partition has been formatted or updates have started to be installed, your computer is no longer in the same state and rebooting it could very well leave you with an unusable system. If in spite of this you are very sure rebooting is what you want, go to a text terminal by pressing the three keys Alt Ctrl F2 at the same time. After that, press Alt Ctrl Delete simultaneously to reboot.

2.2. Installation Problems and Possible Solutions

2.2.1. No Graphical Interface

- After the initial screen you did not reach the language selection screen. This can happen with some graphic cards and older systems. Try using low resolution by typing `vga=10` at the prompt.
- If the hardware is very old, a graphical installation may not be possible. In this case it is worth trying a text mode installation. To use this hit ESC at the first welcome screen and confirm with ENTER. You will be presented with a black screen with the word "boot:". Type "text" and hit ENTER. Now continue with the installation in text mode.

2.2.2. The Install Freezes

If the system appeared to freeze during the installation, this may be a problem with hardware detection. In this case the automatic detection of hardware may be bypassed and dealt with later. To try this, type `noauto` at the prompt. This option may also be combined with other options as necessary.

2.2.3. RAM problem

These will rarely be needed, but in some cases the hardware may report the available RAM incorrectly. To specify this manually, you can use the `mem=xxxM` parameter, where `xxx` is the correct amount of RAM. e.g. `mem=256M` would specify 256MB of RAM.

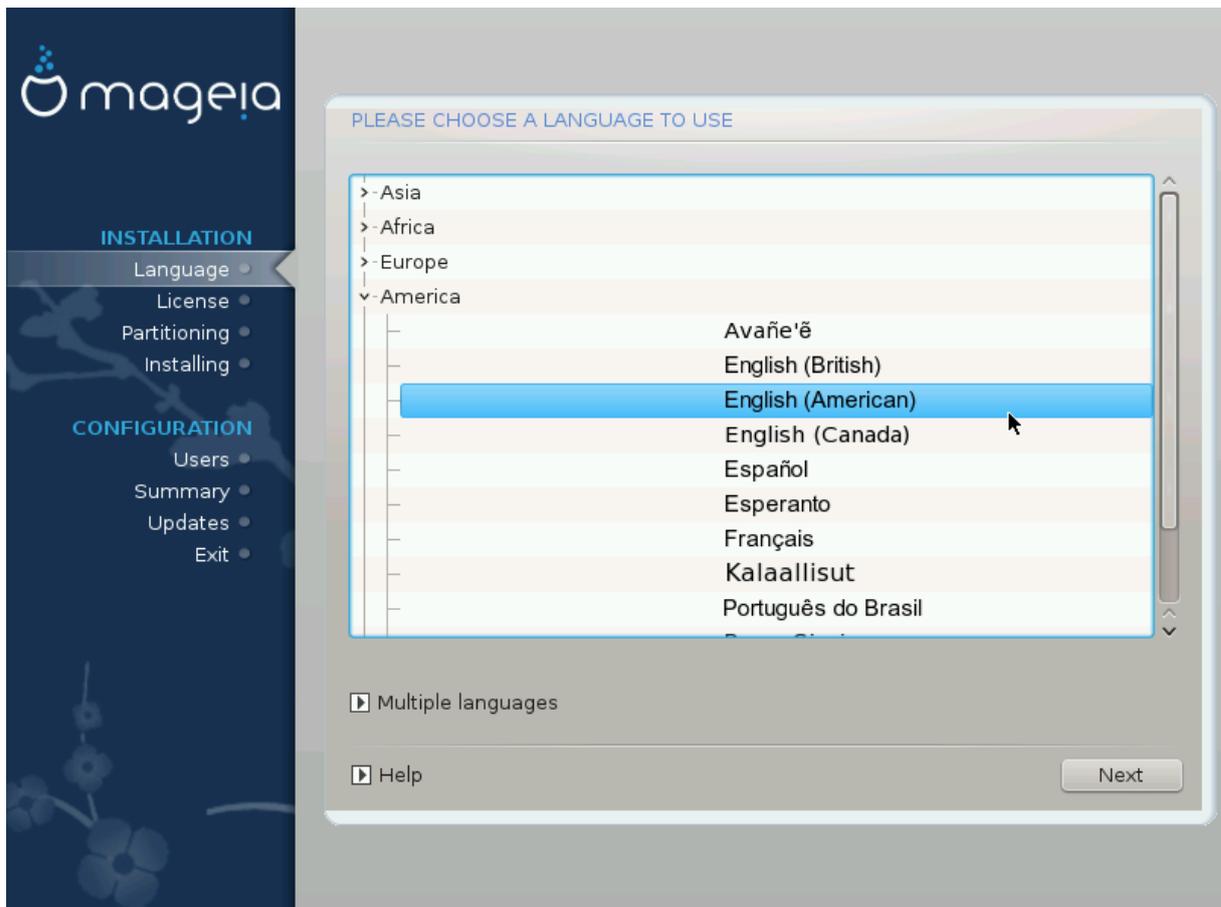
2.2.4. Dynamic partitions

If you converted your hard disk from "basic" format to "dynamic" format on Microsoft Windows, you must know that it is impossible to install Mageia on this disc. To go back to a basic disk, see the Microsoft documentation: <http://msdn.microsoft.com/en-us/library/cc776315.aspx>.

3. Please choose a language to use

Select your preferred language, by first expanding the list for your continent. Mageia will use this selection during the installation and for your installed system.

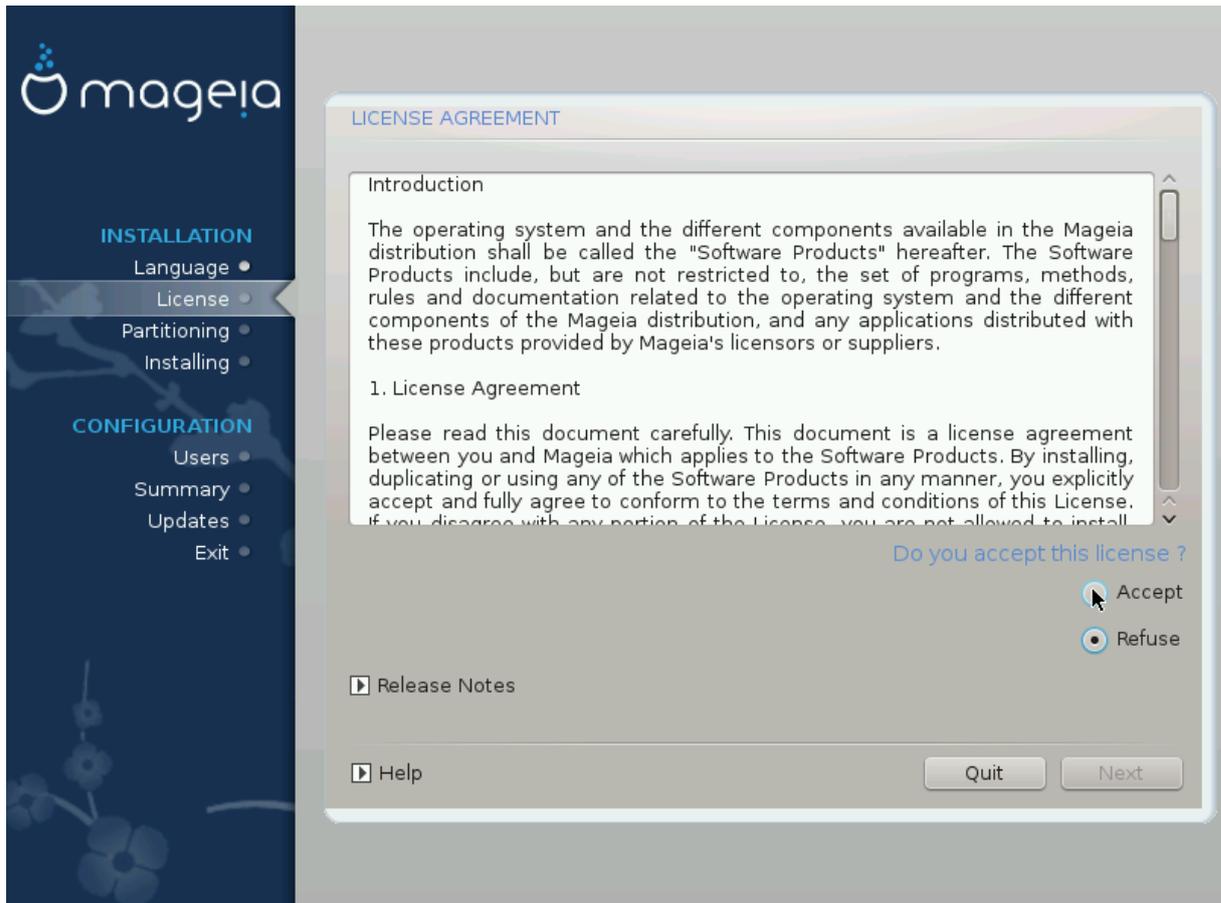
If it is likely that you will require several languages installed on your system, for yourself or other users, then you should use the Multiple languages button to add them now. It will be difficult to add extra language support after installation.



Even if you choose more than one language, you must first choose one of them as your preferred language in the first language screen. It will also be marked as chosen in the multiple languages screen .

- If your keyboard language is not the same as your preferred language, then it is advisable to install the language of your keyboard as well.
- 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 of your system after installation in the Mageia Control Center -> System -> Manage localization for your system.

4. License and Release Notes



4.1. License Agreement

Before installing Mageia, please read the license terms and conditions carefully.

These terms and conditions apply to the entire Mageia distribution and must be accepted before you can continue.

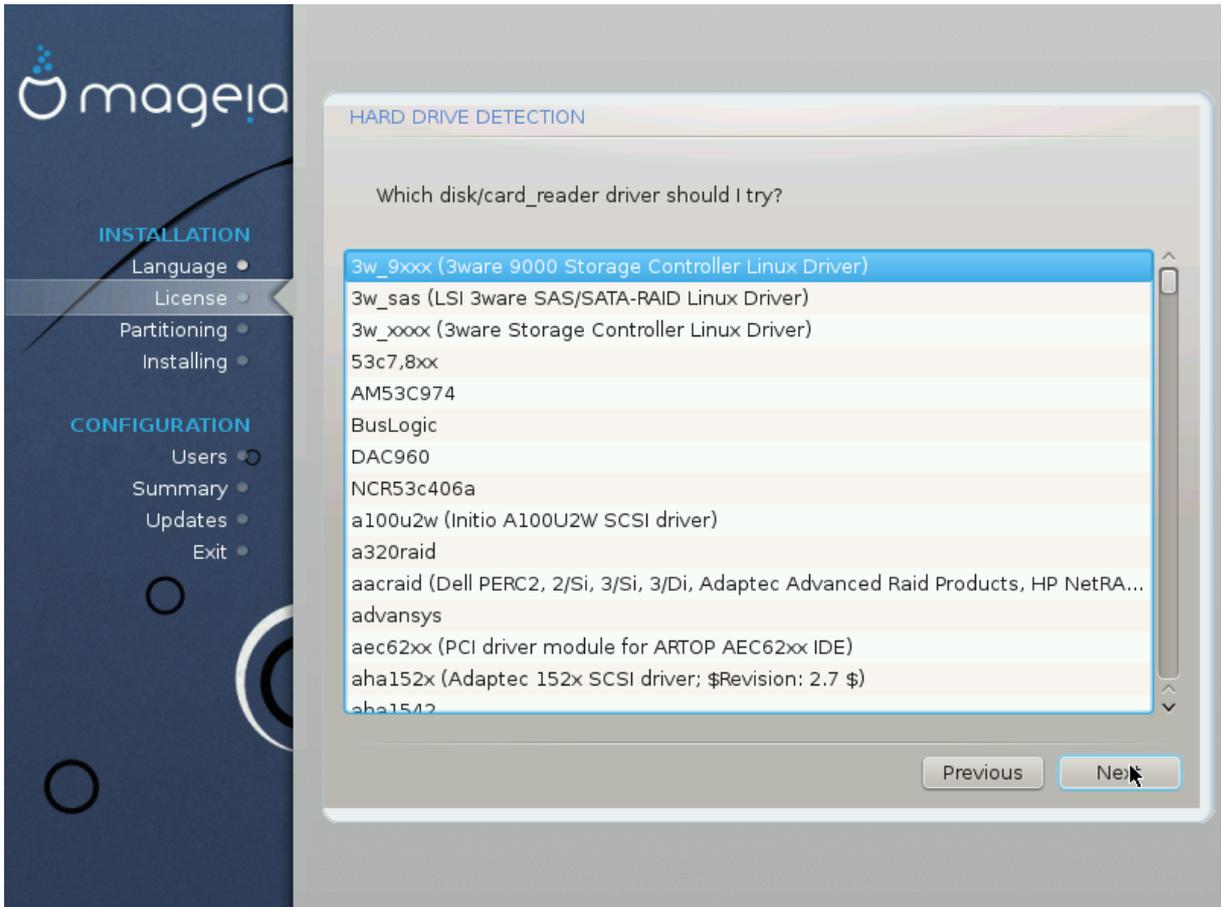
To accept, simply select Accept and then click on Next.

If you decide not to accept these conditions, then we thank you for looking. Clicking Quit will reboot your computer.

4.2. Release Notes

To see what's new in this release of Mageia, click on the Release Notes button.

5. Setup SCSI

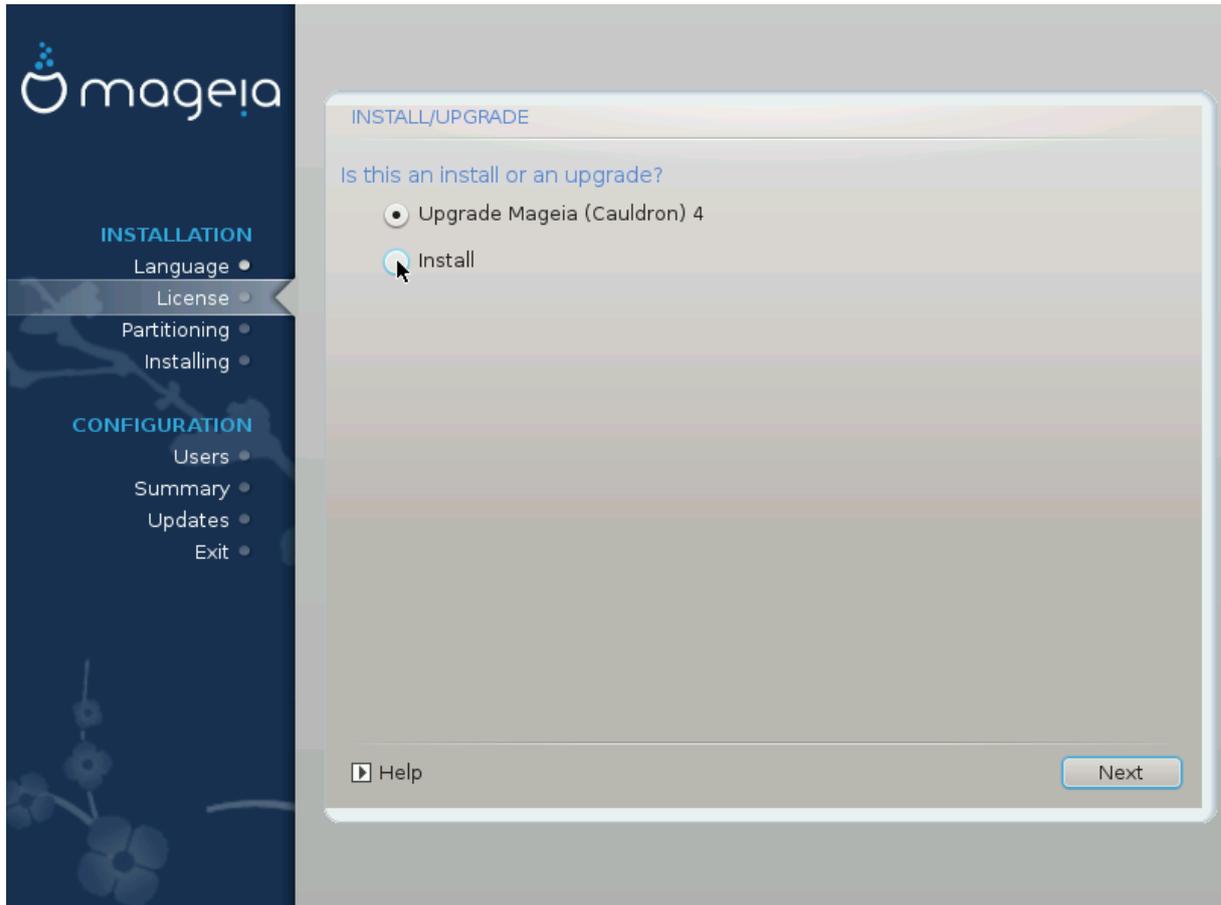


DrakX usually detects hard disks correctly. With some older SCSI controllers it may be unable to determine the correct drivers to use and subsequently fail to recognise the drive.

If this happens, you will need to manually tell Drakx which SCSI drive(s) you have.

DrakX should then be able to configure the drive(s) correctly.

6. Install or Upgrade



- Install

Use this option for a fresh Mageia installation.

- Upgrade

If you have one or more Mageia installations on your system, the installer will allow you to upgrade one of them to the latest release.



Only upgrading from a previous Mageia version that was *still supported* when this installer's version was released, has been thoroughly tested. If you want to upgrade a Mageia version that had already reached its End Of Life when this one was released, then it is better to do a clean install while preserving your /home partition.



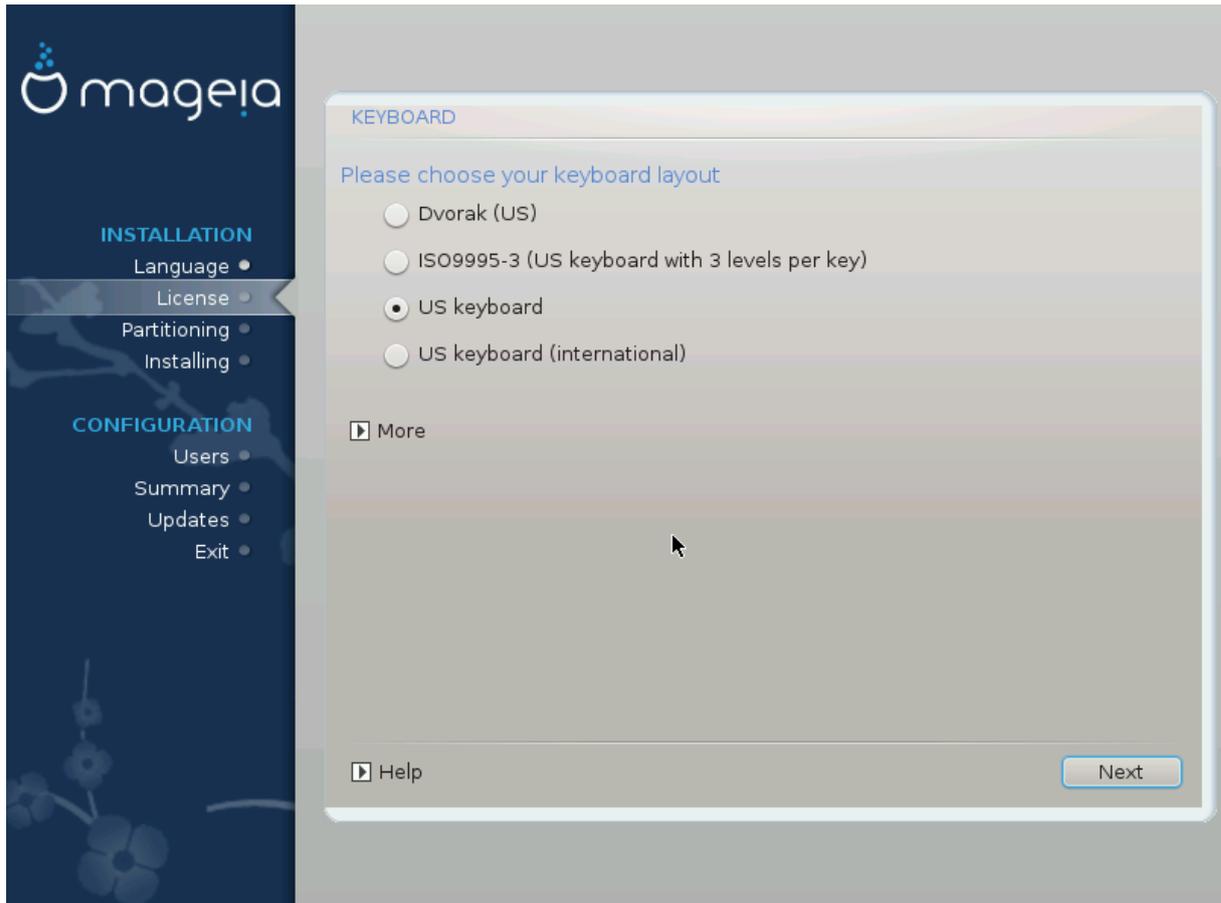
If during install you decide to stop the installation, it is possible to reboot, but please think twice before you do this. Once a partition has been formatted or updates have started to be installed, your computer isn't in the same state anymore and rebooting it could very well leave you with an unusable system. If in spite of that you are very sure rebooting is what you want, go to a text terminal by pressing the three keys Alt Ctrl F2 at the same time. After that, press Alt Ctrl Delete simultaneously to reboot.



If you have discovered that you forgot to select an additional language, you can return from the "Install or Upgrade" screen to the language choice screen by pressing Alt Ctrl Home. Do *not* do this later in the install.

7. Keyboard

DrakX selects an appropriate keyboard for your language. If no suitable keyboard is found it will default to a US keyboard layout.



- Make sure that the selection is correct or choose another keyboard layout. If you don't know which layout your keyboard has, look in the specifications that came with your system, or ask the computer vendor. There may even be a label on the keyboard that identifies the layout. You can also look here: en.wikipedia.org/wiki/Keyboard_layout [http://en.wikipedia.org/wiki/Keyboard_layout]
- If your keyboard isn't in the list shown, click on More to get a full list, and select your keyboard there.



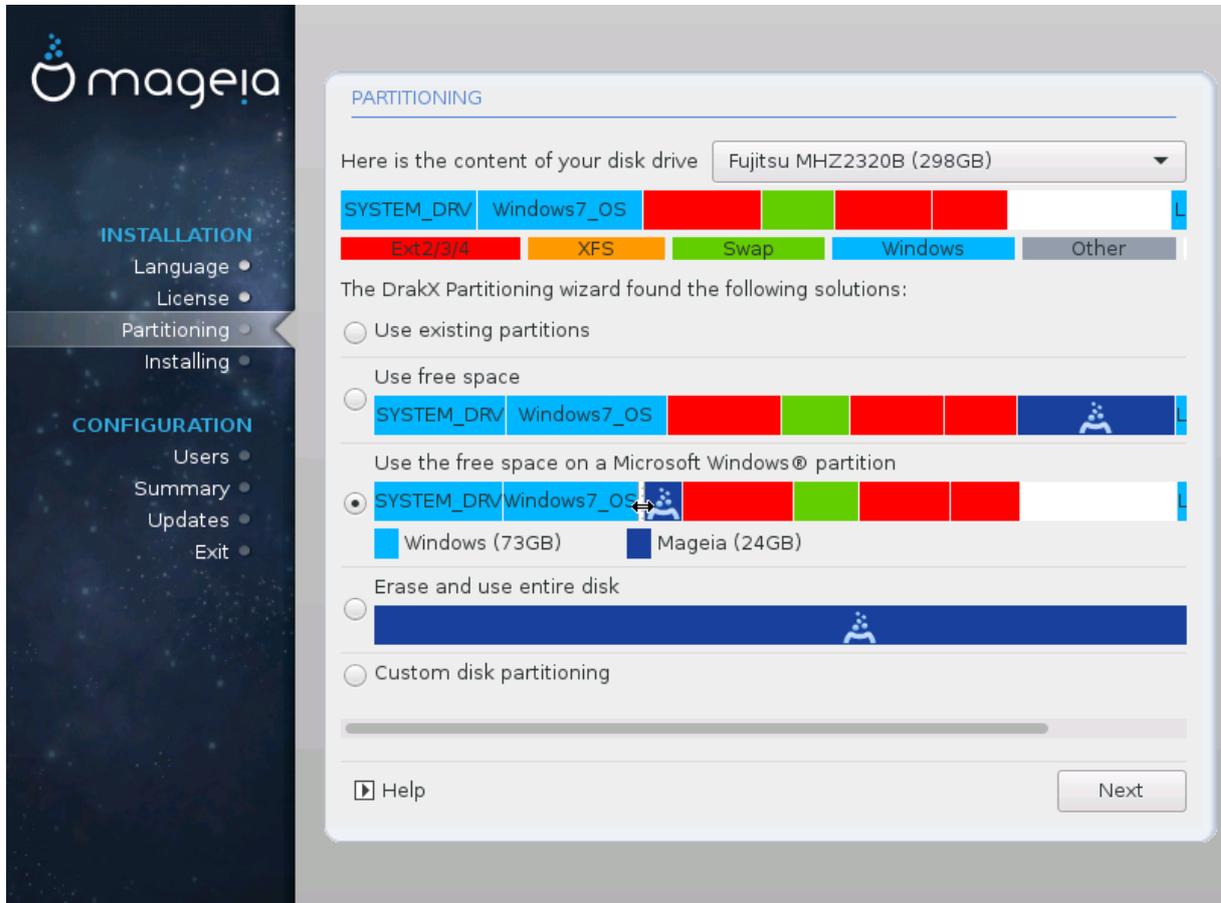
After choosing a keyboard from the More dialog, you'll return to the first keyboard choice dialog and it will seem as though a keyboard from that screen was chosen. You can safely ignore this anomaly and continue the installation: Your keyboard is the one you chose from the full list.

- If you choose a keyboard based on non-Latin characters, you will see an extra dialog screen asking how you would prefer to switch between the Latin and non-Latin keyboard layouts

8. Partitioning

In this screen you can see the content of your hard drive(s) and see the solutions the DrakX partitioning wizard found for where to install Mageia.

The options available from the list below will vary depending on your particular hard drive(s) layout and content.



- Use Existing Partitions

If this option is available, then existing Linux compatible partitions have been found and may be used for the installation.

- Use Free Space

If you have unused space on your hard drive then this option will use it for your new Mageia installation.

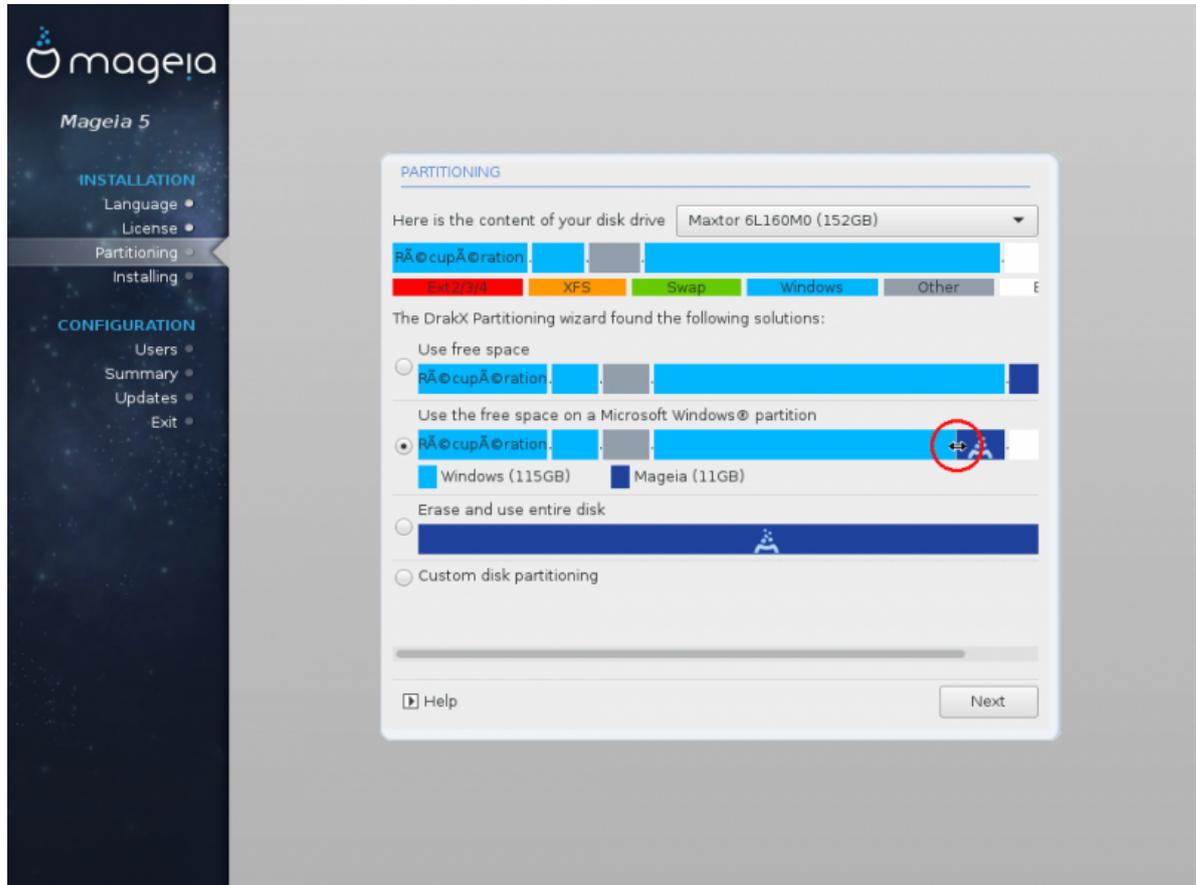
- Use Free Space on a Windows Partition

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!

Note that this involves shrinking the size of the Windows partition. The partition must be "clean", meaning that Windows must have closed down correctly the last time it was used. It must also have been defragmented, although this is not a guarantee that all files in the partition have been moved out of the area that is about to be used. It is highly recommended to back up your personal files.

With this option, the installer displays the remaining Windows partition in light blue and the future Mageia partition in dark blue with their intended sizes just under. You have the possibility to adapt these sizes by clicking and dragging the gap between both partitions. See the screen-shot below.



- Erase and use Entire Disk.

This option will use the complete drive for Mageia.

Note! 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.

- Custom

This gives you complete control over the placing of the installation on your hard drive(s).



Some newer drives are now using 4096 byte logical sectors, instead of the previous standard of 512 byte logical sectors. Due to lack of available hardware, the partitioning tool used in the installer has not been tested with such a drive. Also some ssd drives now use an erase block size over 1 MB. We suggest to pre-partition the drive, using an alternative partitioning tool like gparted, if you own such a device, and to use the following settings:

"Align to" "MiB"

"Free space preceding (MiB)" "2"

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

9. Choose the mount points



Here you see the Linux partitions that have been found on your computer. If you don't agree with the DrakX suggestions, you can change the mount points.



If you change anything, make sure you still have a / (root) partition.

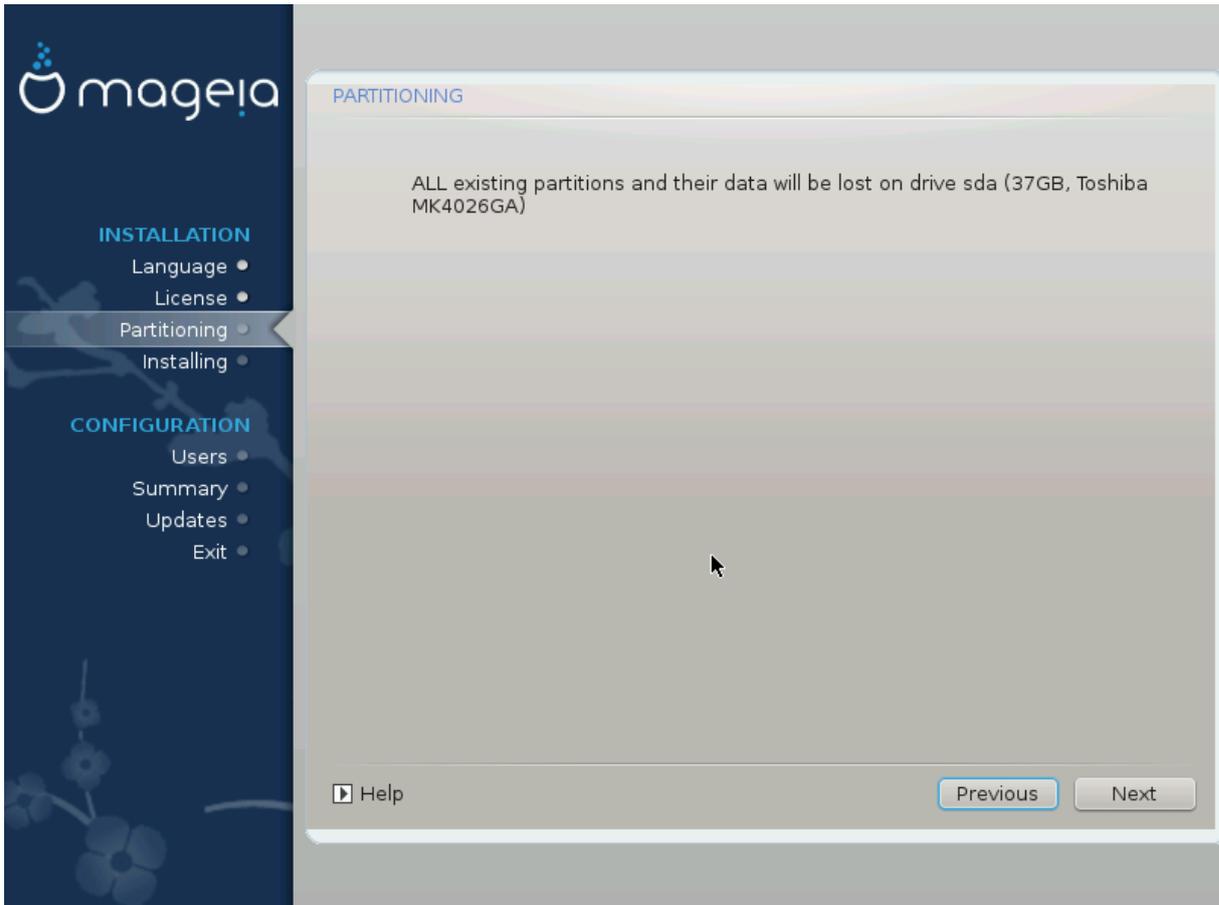
- Every partition is shown as follows: "Device" ("Capacity", "Mount point", "Type").
- "Device", is made up of: "hard drive", ["hard drive number"](letter)], "partition number" (for example, "sda5").
- If you have many partitions, you can choose many different mount points from the drop down menu, such as /, /home and /var. You can even make your own mount points, for instance /video for a partition where you want to store your films, or /cauldron-home for the /home partition of a cauldron install.
- For partitions you don't need to have access to, you can leave the mount point field blank.



Choose Previous if you are not sure what to choose, and then tick Custom disk partitioning. In the screen that follows, you can click on a partition to see its type and size.

If you are sure the mount points are correct, click on Next, and choose whether you only want to format the partition(s) DrakX suggests, or more.

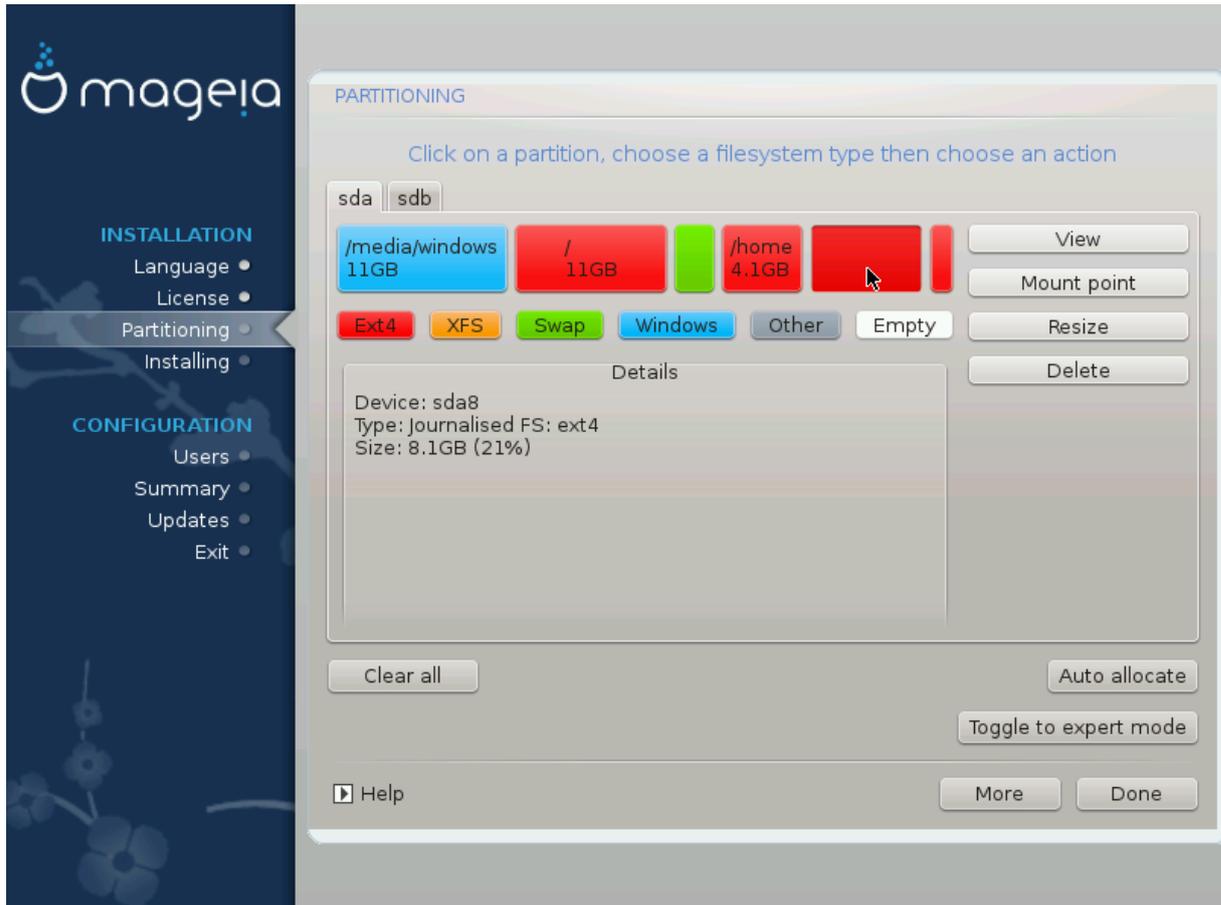
10. Confirm hard disk to be formatted



Click on Previous if you are not sure about your choice.

Click on Next if you are sure and want to erase every partition, every operating system and all data on that hard disk.

11. Custom disk partitioning with DiskDrake



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.

Adjust the layout of your disk(s) here. You can remove or create partitions, change the filesystem of a partition or change its size and even view what is in them before you start.

There is a tab for every detected hard disk or other storage device, like an USB key. For example `sda`, `sdb` and `sdz` if there are three of them.

Push **Clear all** to wipe all partitions on the selected storage device

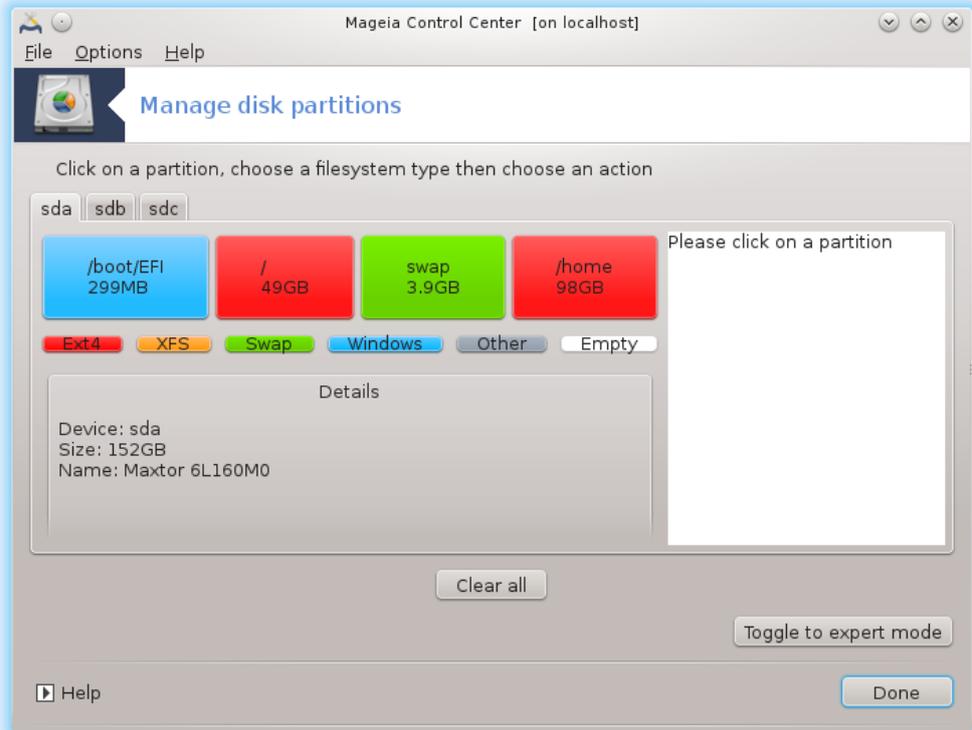
For all other actions: click on the desired partition first. Then view it, or choose a filesystem and a mount point, resize it or wipe it.

Continue until you adjusted everything to your wishes.

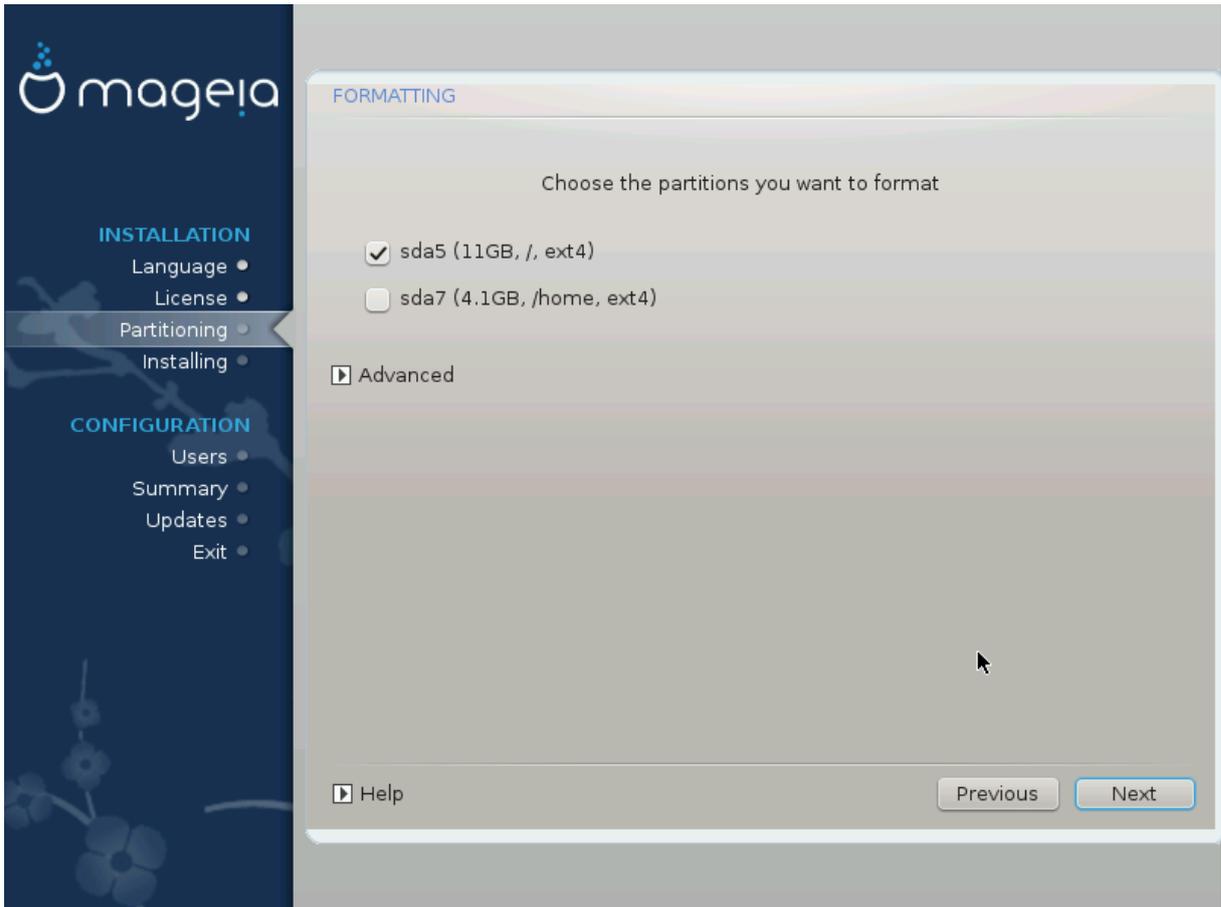
Click **Done** when you're ready.



If you are installing Mageia on an UEFI system, check that an ESP (EFI System Partition) is present and correctly mounted on `/boot/EFI` (see above)



12. Formatting



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

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

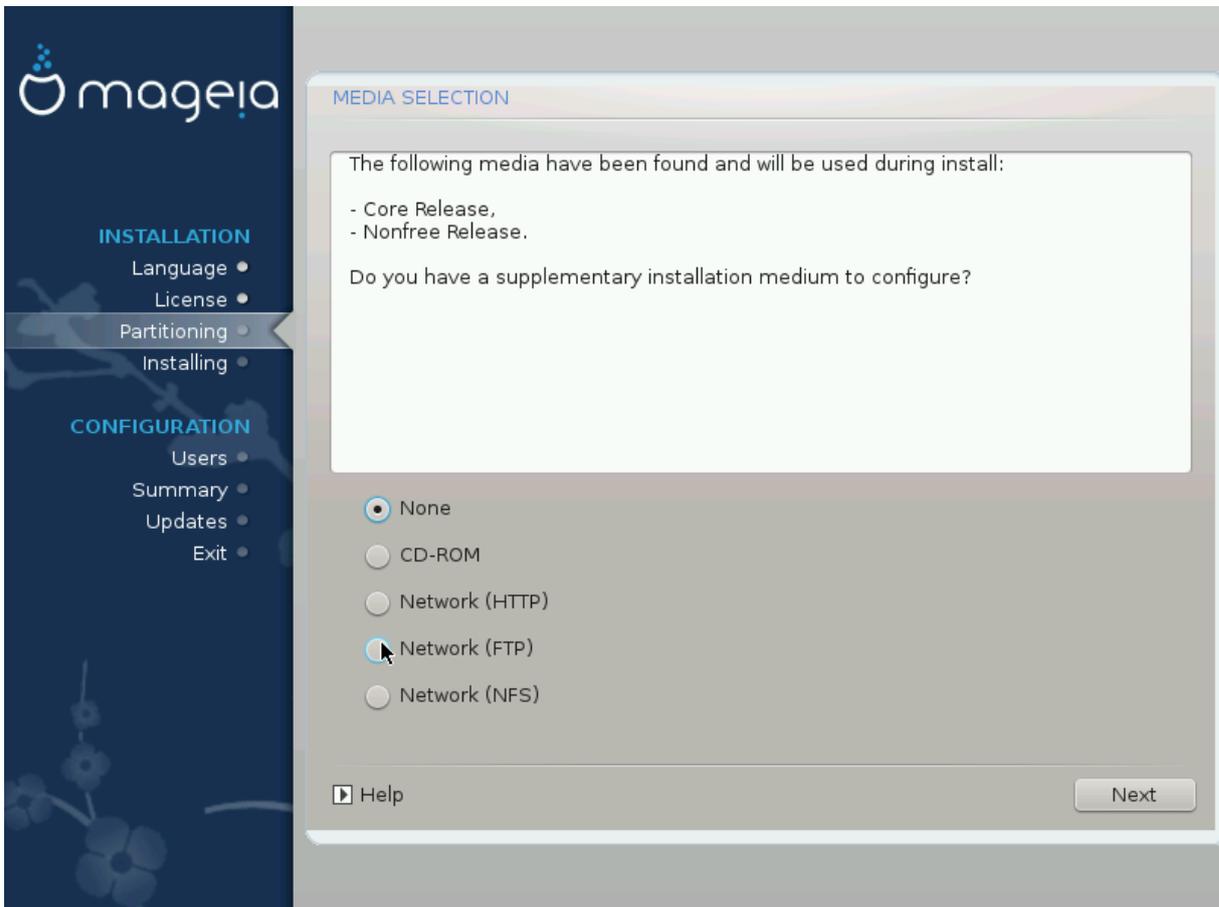
Click on Advanced to choose partitions you want to check for so called *bad blocks*



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. In that screen you can choose to view what is in your partitions.

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

13. Media Selection (Configure Supplemental Installation Media)



This screen gives you the list of already recognized repositories. You can add other sources for packages, like an optical disc or a remote source. The source selection determines which packages will be available for selection during the next steps.

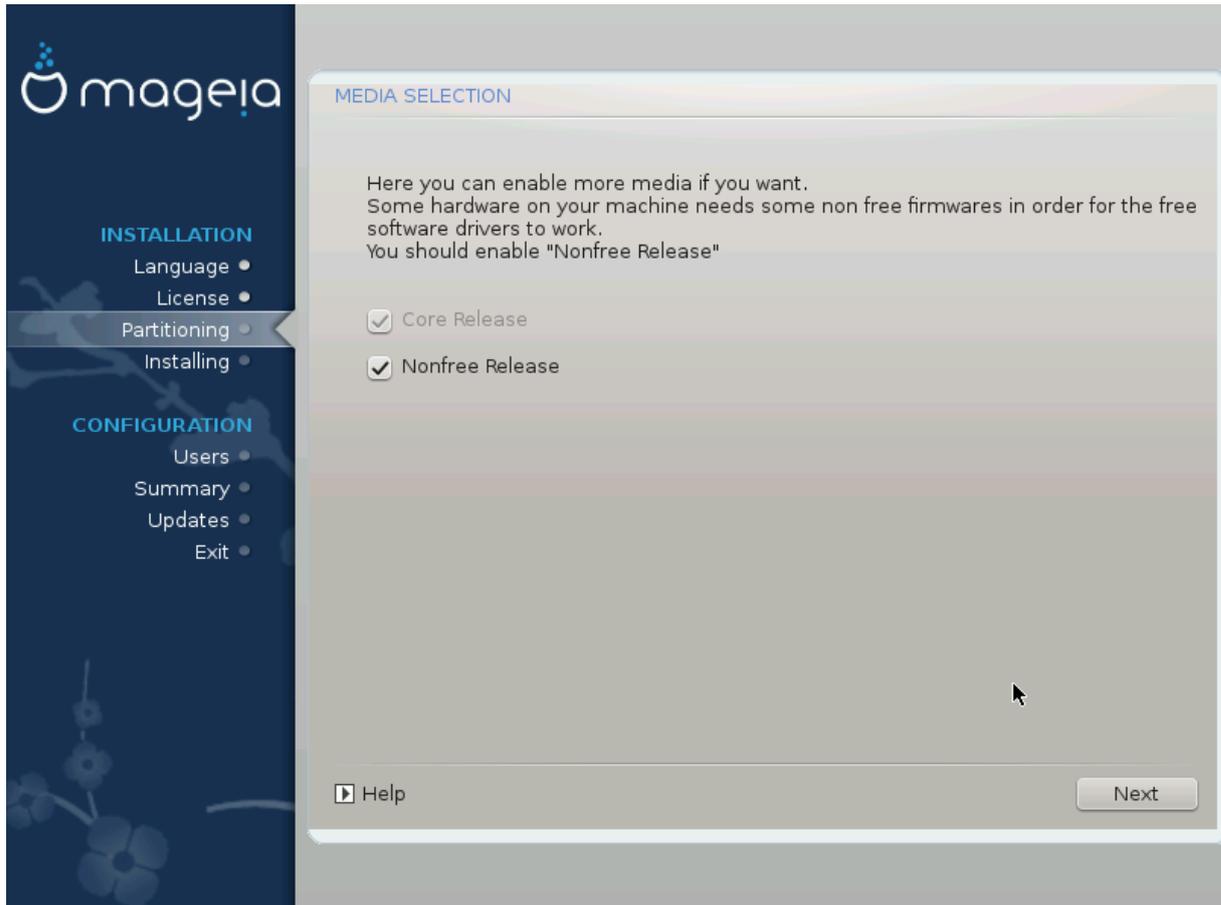
For a network source, there are two steps to follow:

1. Choosing and activation of the network, if not already up.
2. Selecting a mirror or specifying a URL (very first entry). By selecting a mirror, you have access to the selection of all repositories managed by Mageia, like the Nonfree, the Tainted repositories and the Updates. With the URL, you can designate a specific repository or your own NFS installation.



If you are updating a 64 bit installation which may contain some 32 bit packages, it is advised to use this screen to add an online mirror by ticking one of the Network protocols here. The 64 bit DVD iso only contains 64 bit and noarch packages, it will not be able to update the 32 bit packages. However, after adding an online mirror, installer will find the needed 32 bit packages there.

14. Media Selection (Nonfree)



Here you have the list of available repositories. Not all repositories are available, according to which media you use for installing. The repositories selection determines which packages will be available for selection during the next steps.

- The *Core* repository cannot be disabled as it contains the base of the distribution.
- The *Nonfree* repository includes packages that are free-of-charge, i.e. Mageia may redistribute them, but they contain closed-source software (hence the name - Nonfree). For example this repository includes nVidia and ATI graphics card proprietary drivers, firmware for various WiFi cards, etc.
- The *Tainted* repository includes packages released under a free license. The main criteria for placing packages in this repository is that they may infringe patents and copyright laws in some countries, e.g. Multimedia codecs needed to play various audio/video files; packages needed to play commercial video DVD, etc.

15. Desktop Selection

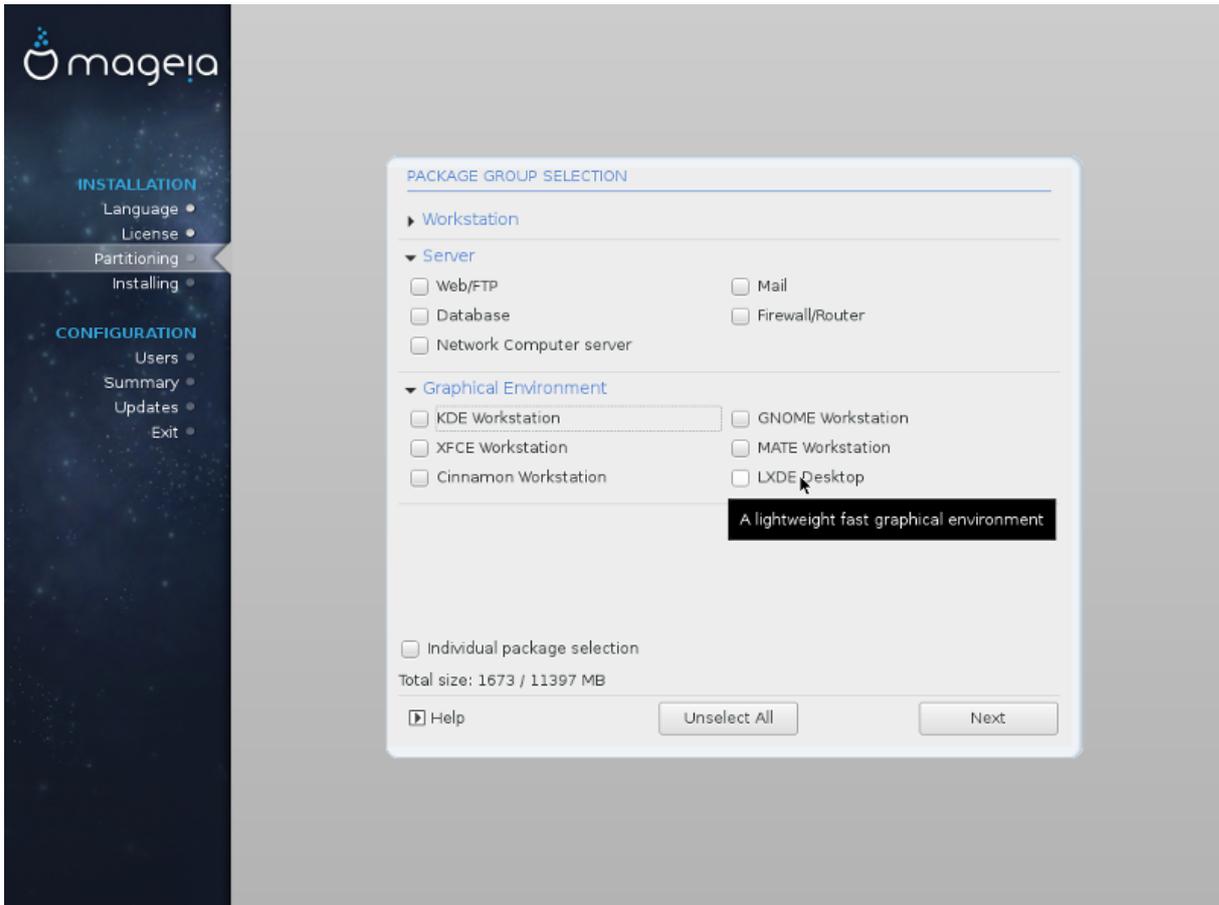
Depending on your selection here, you may be offered further screens to fine tune your choice.

After the selection step(s), you will see a slide show during package installation. The slide show can be disabled by pressing the Details button



Choose whether you prefer to use the KDE or Gnome desktop environment. Both come with a full set of useful applications and tools. Tick Custom if you want to use neither or both, or if you want something other than the default software choices for these desktop environments. The LXDE desktop is lighter than the previous two, sporting less eye candy and fewer packages installed by default.

16. Package Group Selection



Packages have been sorted into groups, to make choosing what you need on your system a lot easier. The groups are fairly self explanatory, however more information about the content of each is available in tool-tips which become visible as the mouse is hovered over them.

- Workstation.
- Server.
- Graphical Environment.
- Individual Package Selection: You can use this option to manually add or remove packages.

Read [Section 17, “Minimal Install”](#) for instructions on how to do a minimal install (without or with X & IceWM).

17. Minimal Install

You can choose a Minimal Installation by de-selecting everything in the Package Group Selection screen, see [Section 16, “Package Group Selection”](#).

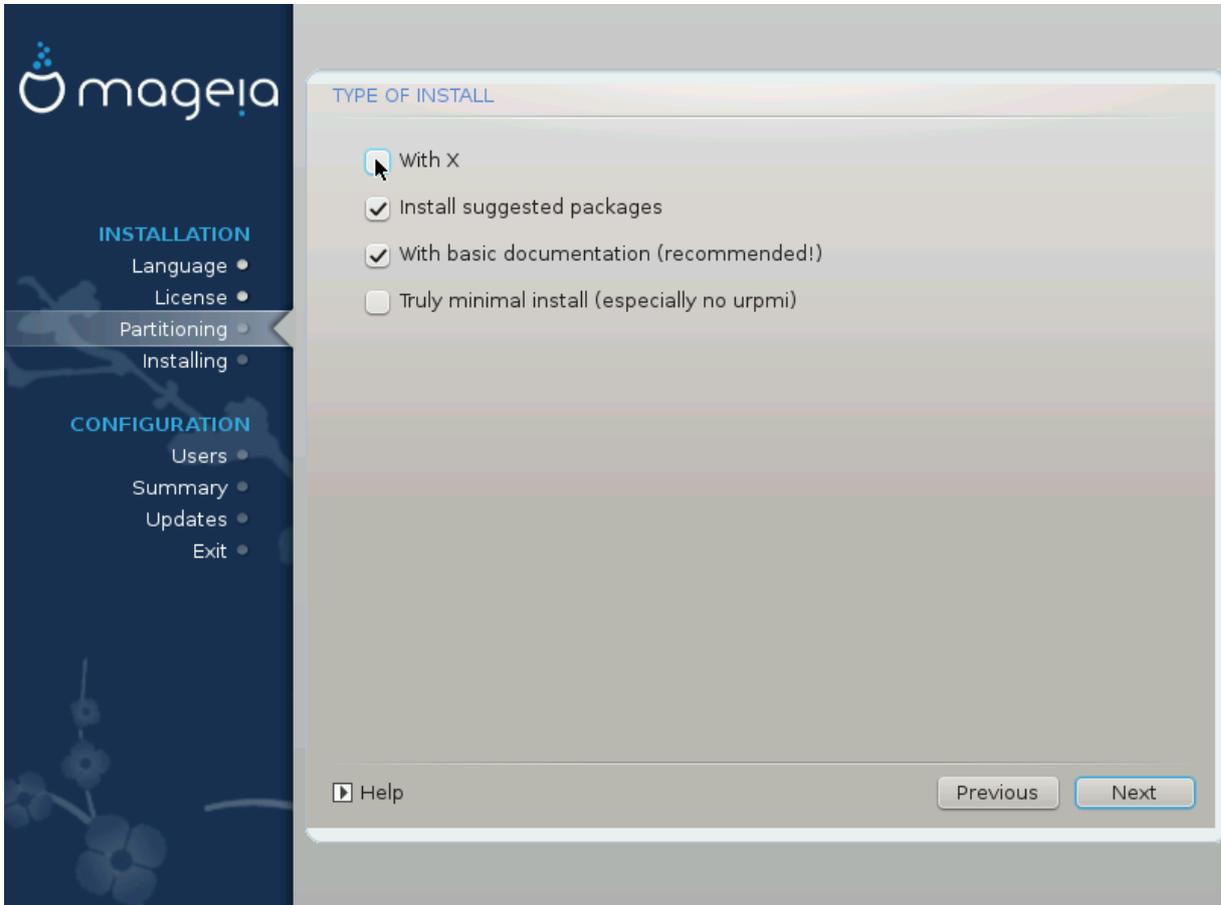
If desired, you can additionally tick the "Individual package selection" option in the same screen.

Minimal Installation is intended for those with specific uses in mind for their Mageia, such as a server or a specialised workstation. You will probably use this option combined with the "Individual package selection" option mentioned above, to fine-tune your installation, see [Section 18, “Choose Individual Packages”](#).

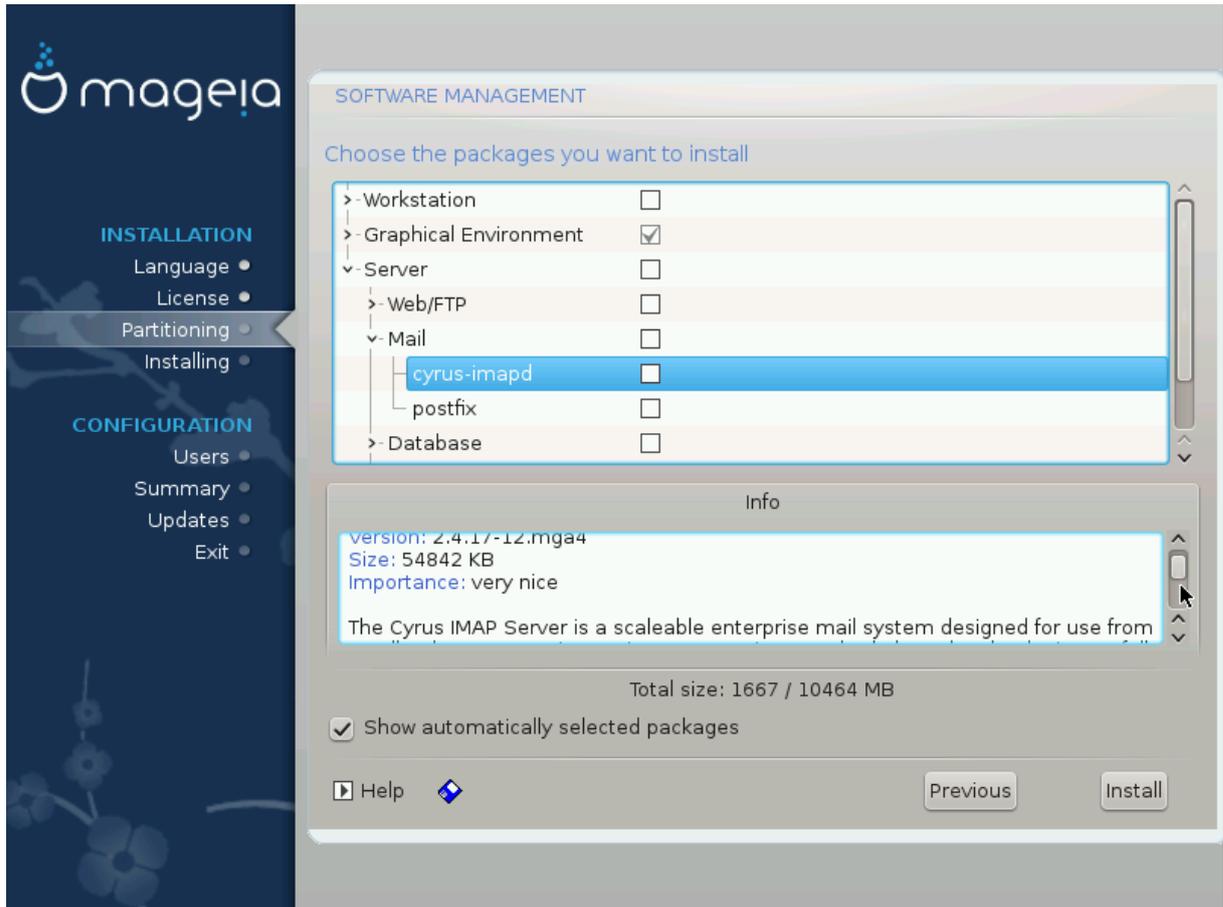
If you choose this installation class, then the related screen will offer you a few useful extras to install, such as documentation and X.

If selected, "With X" will also include IceWM as lightweight desktop environment.

The basic documentation is provided in the form of man and info pages. It contains the man pages from the [Linux Documentation Project](http://www.tldp.org/manpages/man.html) [http://www.tldp.org/manpages/man.html] and the [GNU coreutils](http://www.gnu.org/software/coreutils/manual/) [http://www.gnu.org/software/coreutils/manual/] info pages.



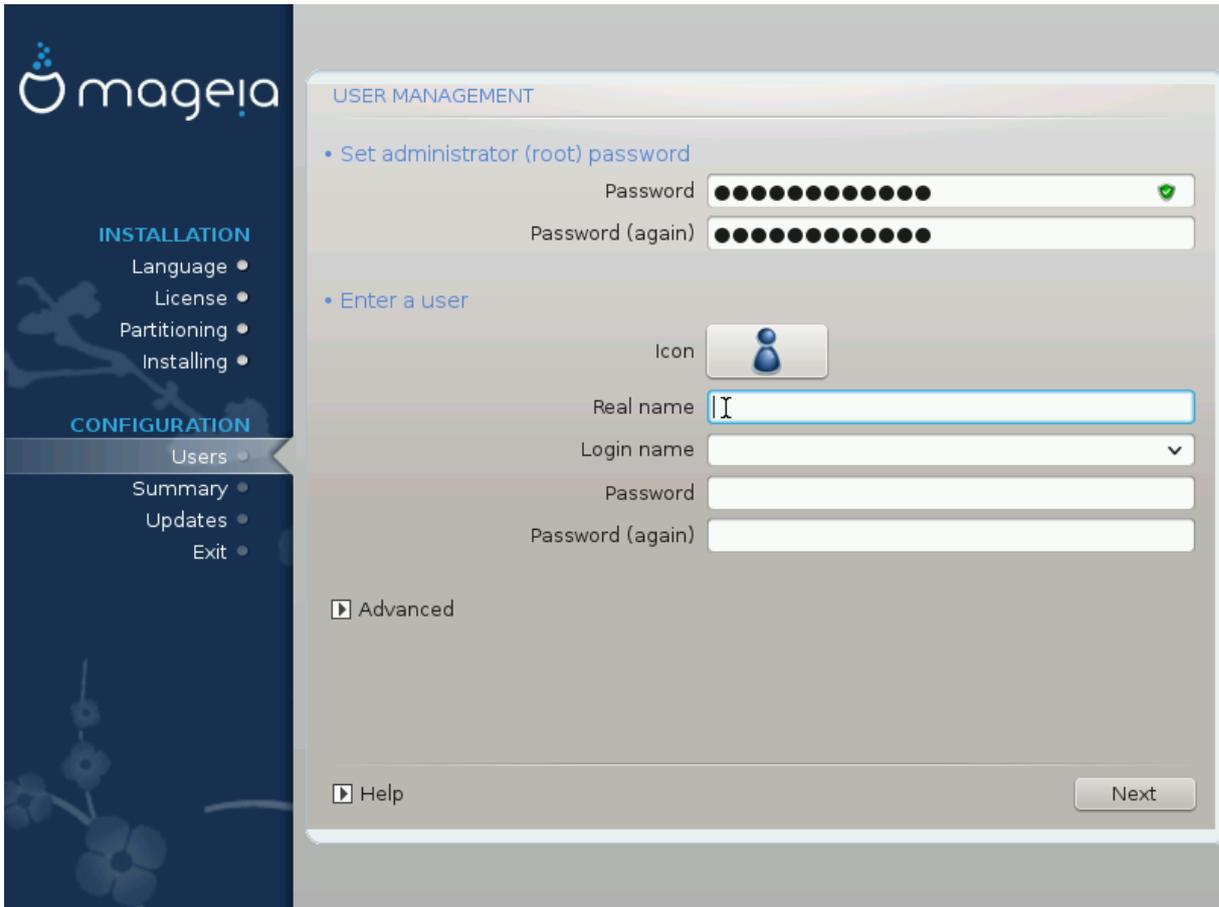
18. Choose Individual Packages



Here you can add or remove any extra packages to customise your installation.

After having made your choice, you can click on the floppy icon at the bottom of the page to save your choice of packages (saving to a USB key works, too). You can then use this file to install the same packages on another system, by pressing the same button during install and choosing to load it.

19. User and Superuser Management



19.1. Set Administrator (root) Password:

It is advisable for all Mageia installations to set a superuser or administrator's password, usually called the *root password* in Linux. As you type a password into the top box the colour of its shield will change from red to yellow to green depending on the strength of the password. A green shield shows you are using a strong password. You need to repeat the same password in the box just below the first password box, this checks that you have not mistyped the first password by comparing them.



All passwords are case sensitive, it is best to use a mixture of letters (upper and lower case), numbers and other characters in a password.

19.2. Enter a user

Add a user here. A user has fewer rights than the superuser (root), but enough to surf the internet, use office applications or play games and anything else the average user does with his computer

- Icon: if you click on this button it will change the users icon.
- Real Name: Insert the users real name into this text box.
- Login Name: Here you enter the user login name or let drakx use a version of the users real name. *The login name is case sensitive.*

- Password: In this text box you should type in the user password. There is a shield at the end of the text box that indicates the strength of the password. (See also [Note](#))
- Password (again): Retype the user password into this text box and drakx will check you have the same password in each of the user password text boxes.



Any user you add while installing Mageia, will have a world readable (but write protected) home directory.

However, while using your new install, any user you add in *MCC - System - Manage users on system* will have a home directory that is both read and write protected.

If you don't want a world readable home directory for anyone, it is advised to only add a temporary user now and to add the real one(s) after reboot.

If you prefer world readable home directories, you might want to add all extra needed users in the *Configuration - Summary* step during the install. Choose *User management*.

The access permissions can also be changed after the install.

19.3. Advanced User Management

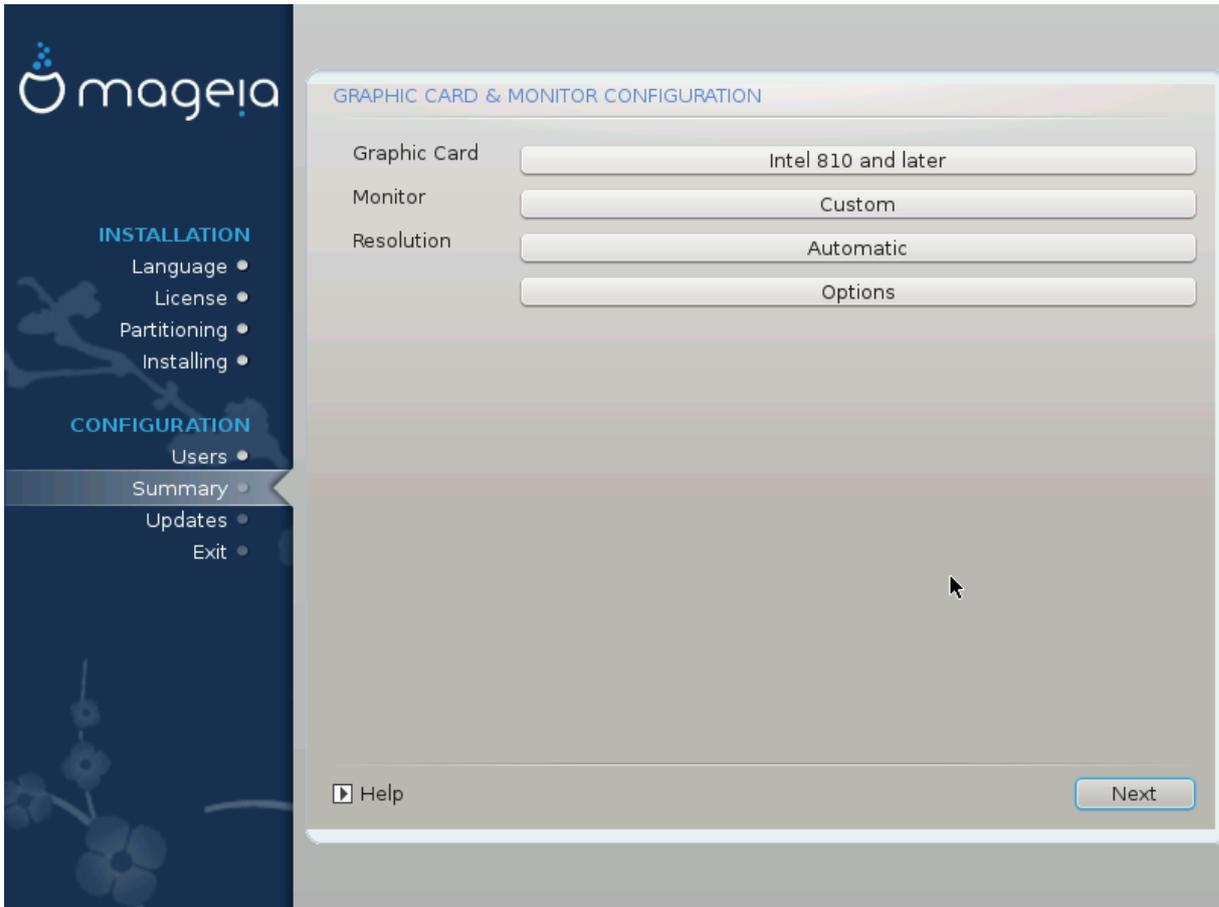
If the advanced button is clicked you are offered a screen that allows you to edit the settings for the user you are adding. Additionally, you can disable or enable a guest account.



Anything a guest with a default *rbash* guest account saves to his /home directory will be erased when he logs out. The guest should save his important files to a USB key.

- Enable guest account: Here you can enable or disable a guest account. The guest account allows a guest to log into and use the PC, but he has more restricted access than normal users.
- Shell: This drop down list allows you to change the shell used by the user you are adding in the previous screen, options are Bash, Dash and Sh
- User ID: Here you can set the user ID for the user you are adding in the previous screen. This is a number. Leave it blank unless you know what you are doing.
- Group ID: This lets you set the group ID. Also a number, usually the same one as for the user. Leave it blank unless you know what you are doing.

20. Graphic Card and Monitor Configuration



No matter which graphical environment (also known as desktop environment) you chose for this install of Mageia, they are all based on a graphical user interface system called X Window System, or simply X. So in order for KDE, Gnome, LXDE or any other graphical environment to work well, the following X settings need to be correct. Choose the correct settings if you can see that DrakX didn't make a choice, or if you think the choice is incorrect.

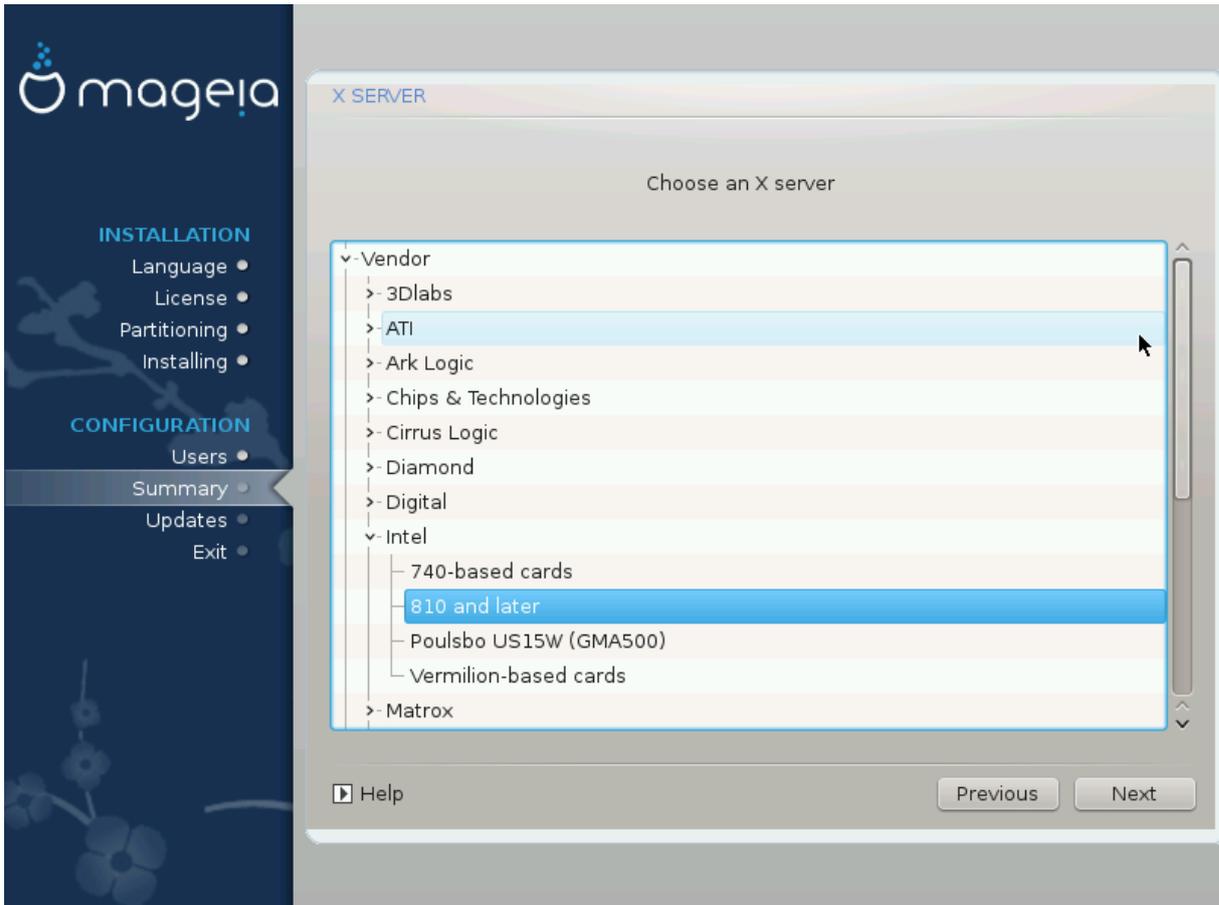
- *Graphic card:* Choose your card from the list if needed.
- *Monitor:* You can choose Plug'n Play when applicable, or choose your monitor from the Vendor or Generic list. Choose Custom if you prefer to manually set the horizontal and vertical refresh rates of your monitor.



Incorrect refresh rates may damage your monitor

- *Resolution:* Set the desired resolution and color depth of your monitor here.
- *Test:* The test button does not always appear during install. If the button is there, you can control your settings by pressing it. If you see a question asking you whether your settings are correct, you can answer "yes", and the settings will be kept. If you don't see anything, you'll return to the configuration screen and be able to reconfigure everything until the test is good. *Make sure your settings are on the safe side if the test button isn't available*
- *Options:* Here you can choose to enable or disable various options.

21. Choose an X Server (Configure your Graphic Card)



DrakX has a very comprehensive database of video cards and will usually correctly identify your video device.

If the installer has not correctly detected your graphic card and you know which one you have, you can select it from the tree by:

- vendor
- then the name of your card
- and the type of card

If you cannot find your card in the vendor lists (because it's not yet in the database or it's an older card) you may find a suitable driver in the Xorg category

The Xorg listing provides more than 40 generic and open source video card drivers. If you still can't find a named driver for your card there is the option of using the vesa driver which provides basic capabilities.

Be aware that if you select an incompatible driver you may only have access to the Commandline Interface.

Some video card manufacturers provide proprietary drivers for Linux which may only be available in the Nonfree repository and in some cases only from the card manufacturers' websites.

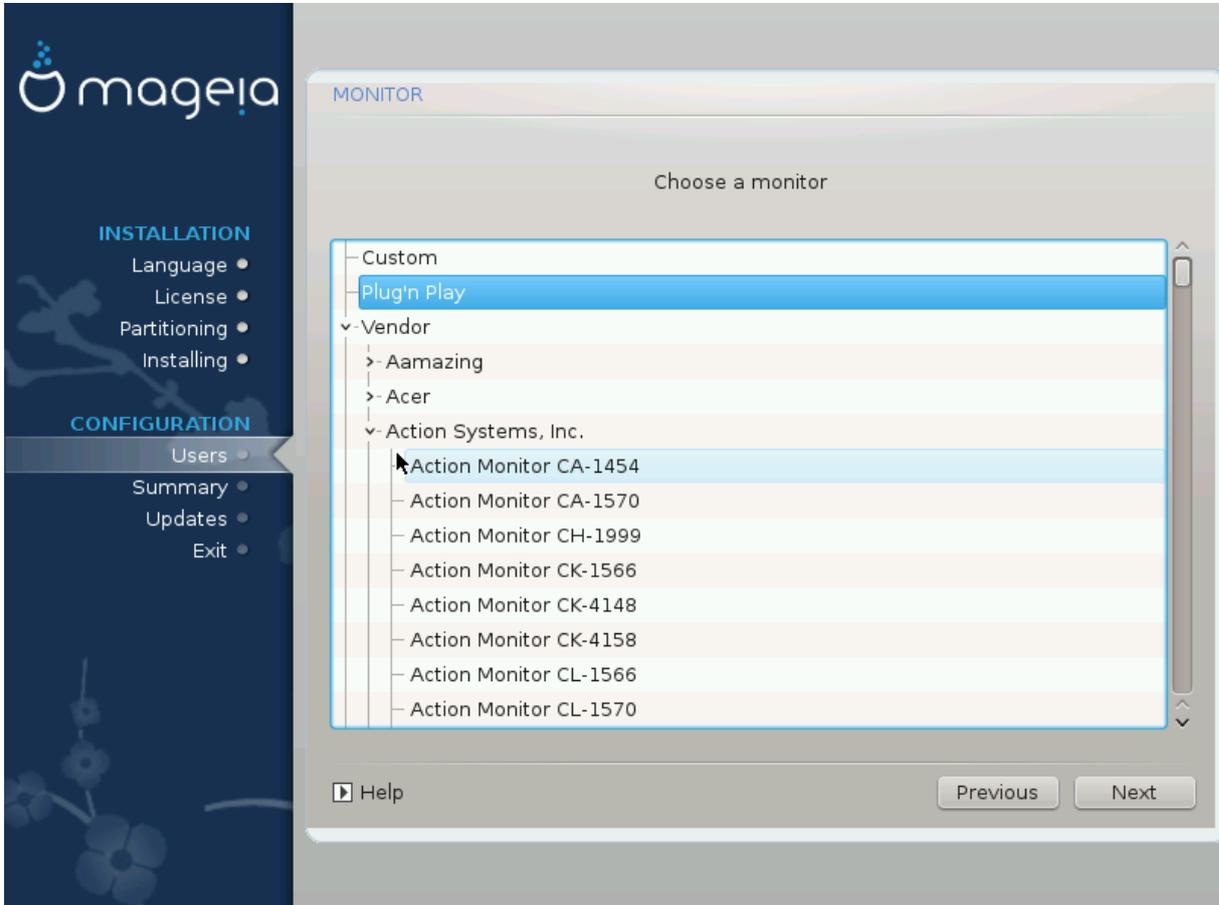
The Nonfree repository needs to be explicitly enabled to access them. If you didn't select it previously, you should do this after your first reboot.

22. Choosing your Monitor

DrakX has a very comprehensive database of monitors and will usually correctly identify yours.



Selecting a monitor with different characteristics could damage your monitor or video hardware. Please don't try something without knowing what you are doing. If in doubt you should consult your monitor documentation



Custom

This option allows you to set two critical parameters, the vertical refresh rate and the horizontal sync rate. Vertical refresh determines how often the screen is refreshed and horizontal sync is the rate at which scan lines are displayed.

It is **VERY IMPORTANT** that you do not specify a monitor type with a sync range that is beyond the capabilities of your monitor: you may damage your monitor. If in doubt, choose a conservative setting and consult your monitor documentation.

Plug 'n Play

This is the default option and tries to determine the monitor type from the monitor database.

Vendor

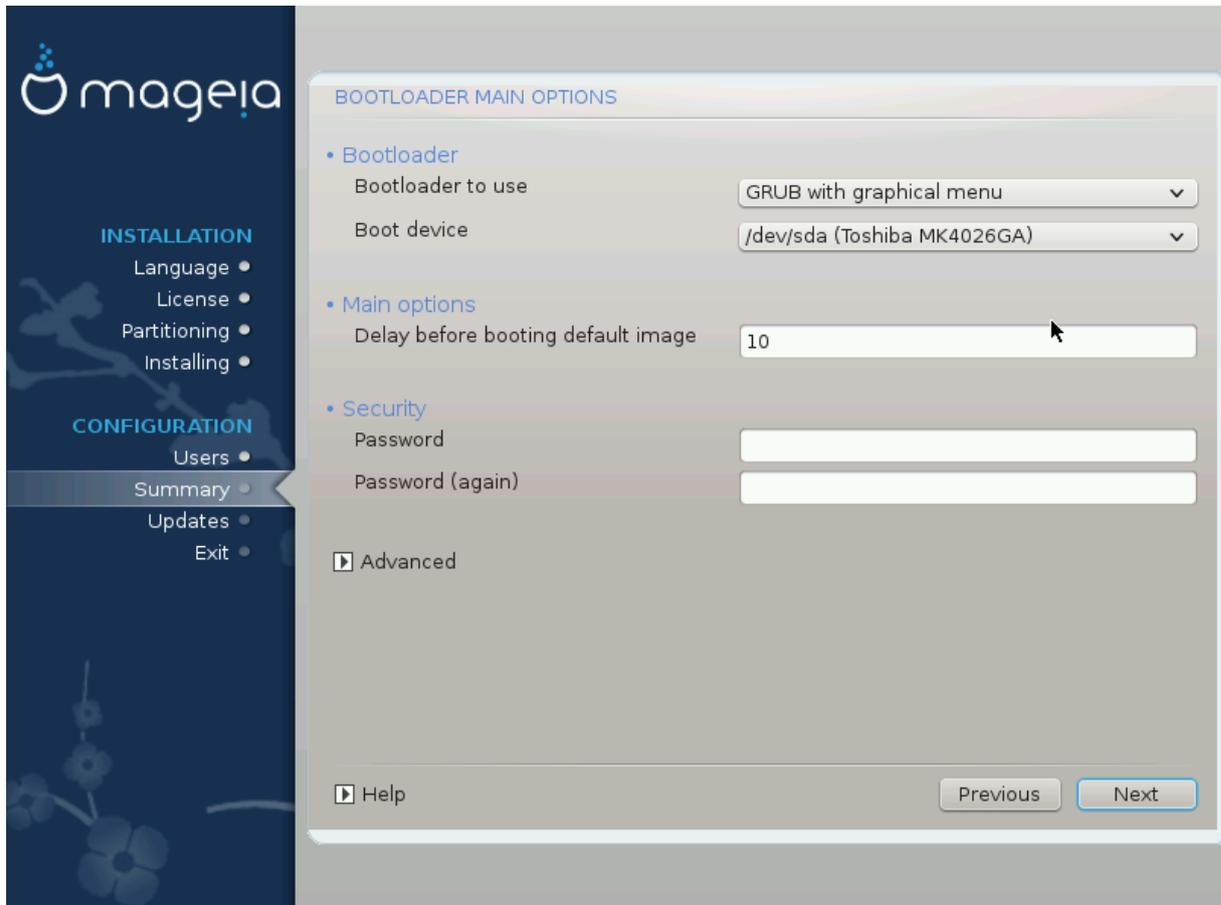
If the installer has not correctly detected your monitor and you know which one you have, you can select it from the tree by selecting:

- vendor
- the monitor manufacturers name
- the monitor description

Generic

selecting this group displays nearly 30 display configurations such as 1024x768 @ 60Hz and includes Flat panel displays as used in laptops. This is often a good monitor selection group if you need to use the Vesa card driver when your video hardware cannot be determined automatically. Once again it may be wise to be conservative in your selections.

23. Bootloader main options



With an UEFI system, the user interface is slightly different as you cannot choose the boot loader (first drop down list) since only one is available

If you prefer different bootloader settings to those chosen automatically by the installer, you can change them here.

You may already have another operating system on your machine, in which case you need to decide whether to add Mageia to your existing bootloader, or allow Mageia to create a new one.



The Mageia graphical menus are nice :)

23.1. Using a Mageia bootloader

By default, Mageia writes a new GRUB (legacy) bootloader into the MBR (Master Boot Record) of your first hard drive. If you already have other operating systems installed, Mageia attempts to add them to your new Mageia boot menu.

Mageia now also offers GRUB2 as an optional bootloader in addition to GRUB legacy and Lilo.



Linux systems which use the GRUB2 bootloader are not currently supported by GRUB (legacy) and will not be recognised if the default GRUB bootloader is used.

The best solution here is to use the GRUB2 bootloader which is available at the Summary page during installation.

23.2. Using an existing bootloader

If you decide to use an existing bootloader then you will need to remember to STOP at the summary page during the installation and click the Bootloader Configure button, which will allow you to change the bootloader install location.

Do not select a device e.g. "sda", or you will overwrite your existing MBR. You must select the root partition that you chose during the partitioning phase earlier, e.g. sda7.

To be clear, sda is a device, sda7 is a partition on that device.



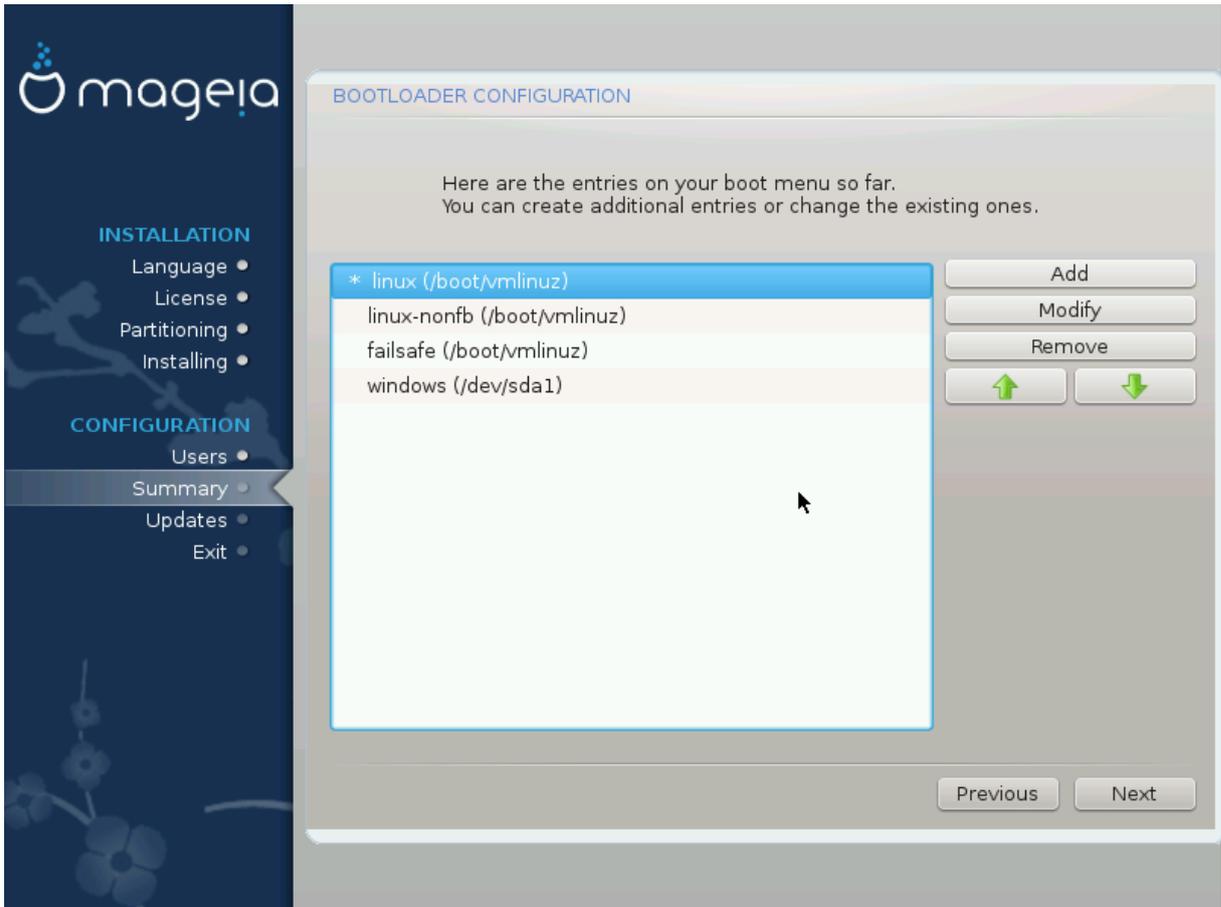
Go to tty2 with Ctrl+Alt+F2 and type `df` to check where your / (root) partition is. Ctrl+Alt+F7 takes you back to the installer screen.

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

23.3. Bootloader advanced option

If you have very limited disk space for the / partition that contains /tmp, click on Advanced and check the box for Clean /tmp at each boot. This helps to maintain some free space.

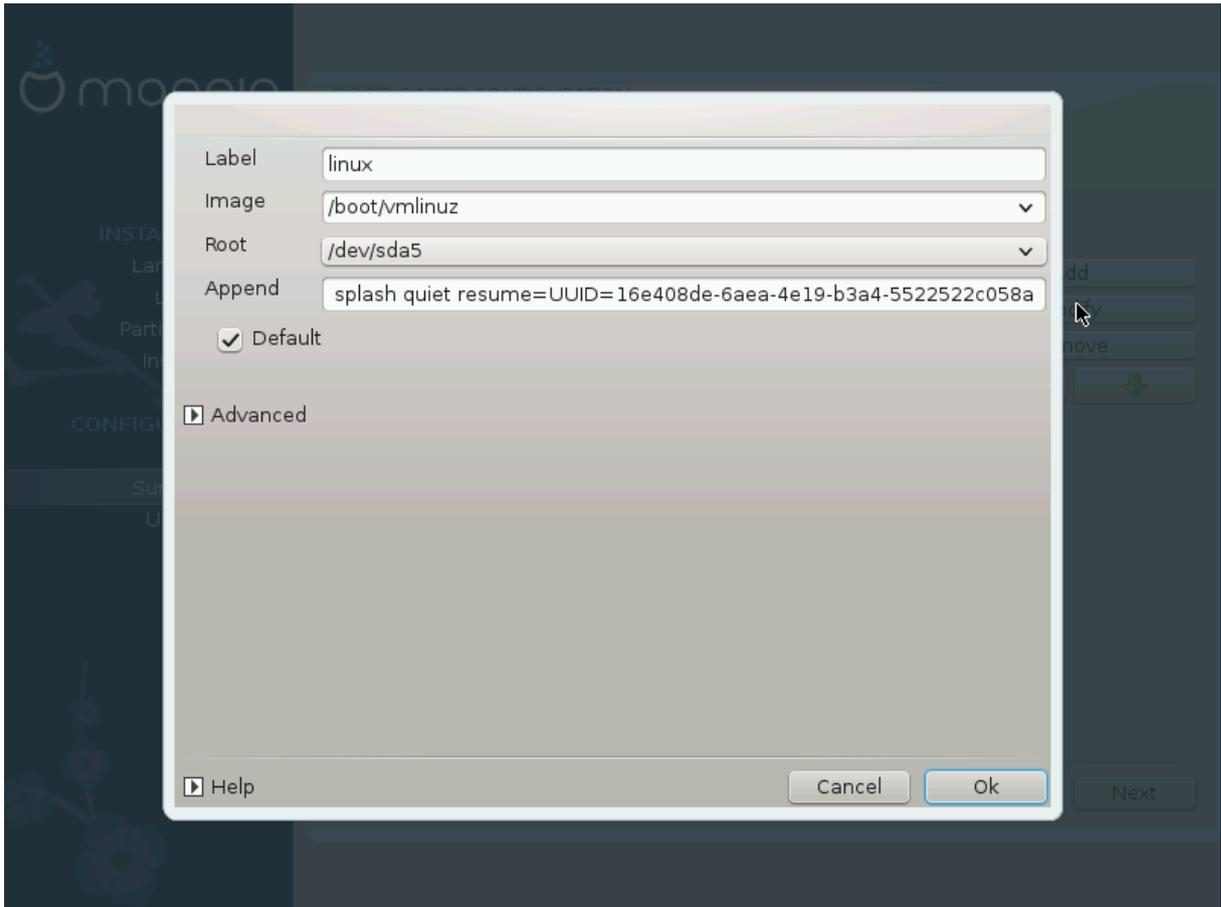
24. Add or Modify a Boot Menu Entry



You can add an entry or modify the one you select first, by pressing the relevant button in the *Bootloader Configuration* screen and editing the screen that pops up on top of it.



If you have chosen Grub 2 as your bootloader, or Grub2-efi for UEFI systems, you cannot use this tool to edit entries at this step, press 'Next'. You need to manually edit `/boot/grub2/custom.cfg` or use `grub-customizer` instead.



Some things that can be done without any risk, are changing the label of an entry and ticking the box to make an entry the default one.

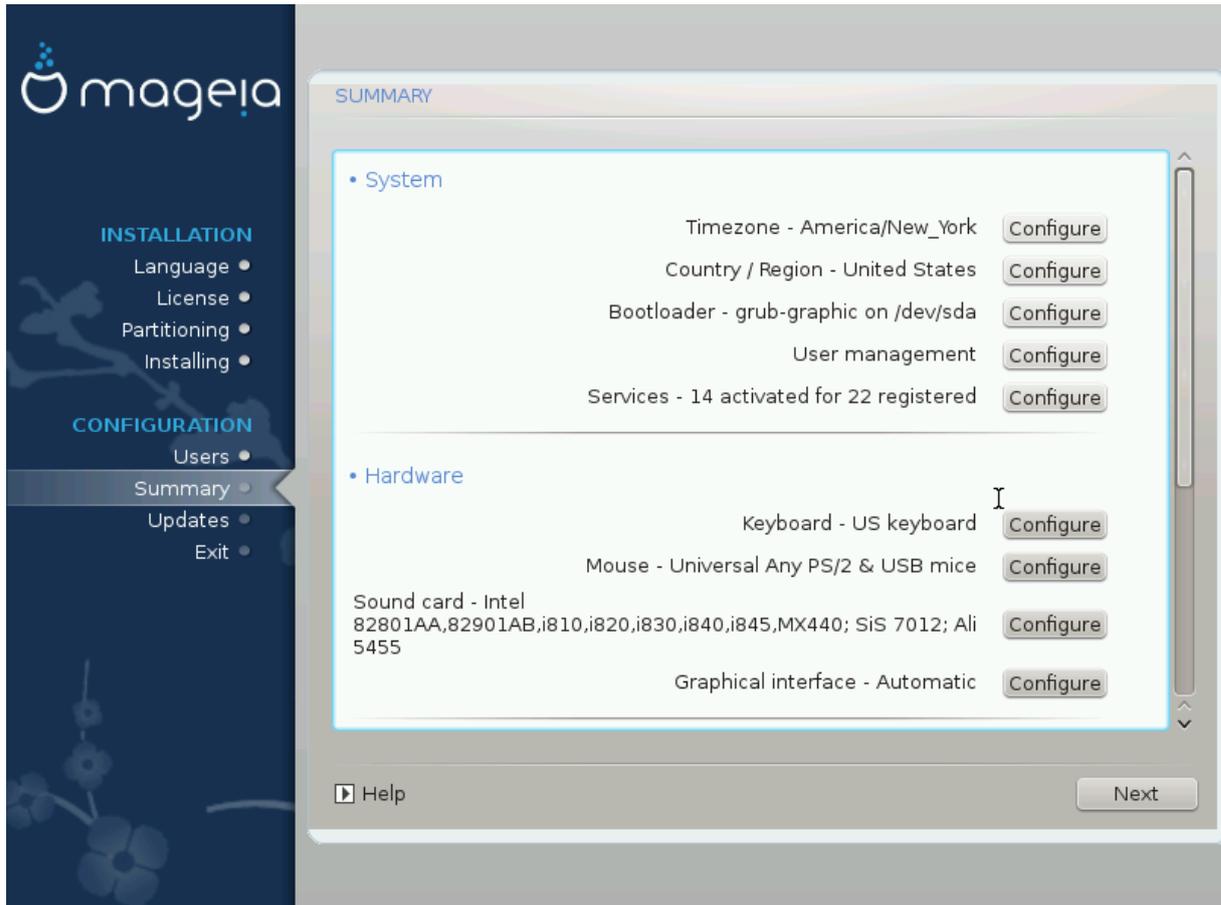
You can add the proper version number of an entry, or rename it completely.

The default entry is the one the systems boots into if you don't make a choice while booting up.



Editing other things can leave you with an unbootable system. Please don't just try something without knowing what you are doing.

25. Summary of miscellaneous parameters



DrakX made smart choices for the configuration of your system depending on the choices you made and on the hardware DrakX detected. You can check the settings here and change them if you want after pressing Configure.

25.1. System parameters

- Timezone

DrakX selected a time zone for you, depending on your preferred language. You can change it if needed. See also [Section 26, “Configure your Timezone”](#)

- Country / Region

If you are not in the selected country, it is very important that you correct the setting. See [Section 27, “Select your Country / Region”](#)

- Bootloader

DrakX has made good choices for the bootloader setting.

Do not change anything, unless you know how to configure Grub and/or Lilo

For more information, see [Section 23, “Bootloader main options”](#)

- User management

You can add extra users here. They will each get their own /home directories.

- Services:

System services refer to those small programs which run the background (daemons). This tool allows you to enable or disable certain tasks.

You should check carefully before changing anything here - a mistake may prevent your computer from operating correctly.

For more information, see [Section 28, “Configure your Services”](#)

25.2. Hardware parameters

- Keyboard:

This is where you setup or change your keyboard layout which will depend on your location, language or type of keyboard.

- Mouse:

Here you can add or configure other pointing devices, tablets, trackballs etc.

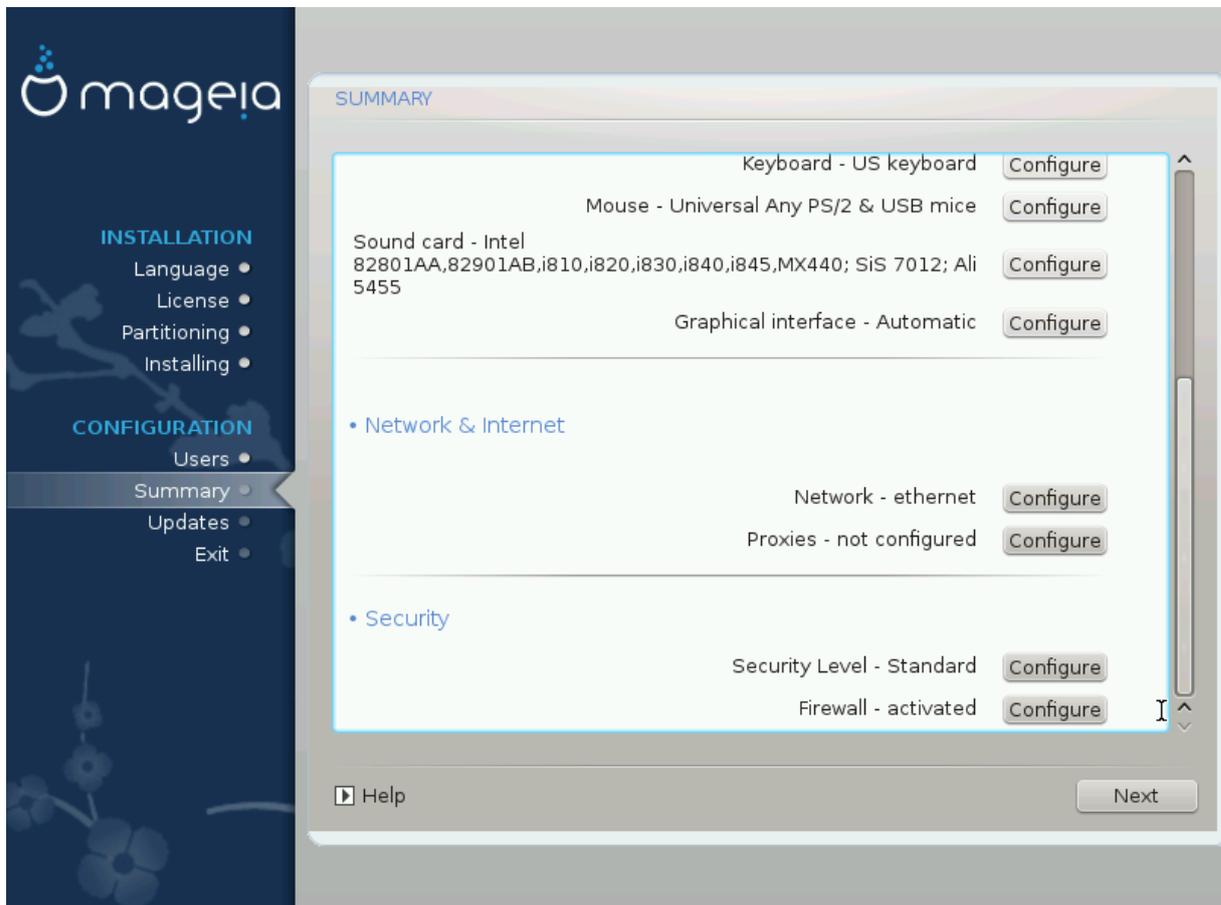
- Sound card:

The installer uses the default driver, if there is a default one. The option to select a different driver is only given when there is more than one driver for your card, but none of them is the default one.

- Graphical interface:

This section allows you to configure your graphic card(s) and displays.

For more information, see [Section 20, “Graphic Card and Monitor Configuration”](#).



25.3. Network and Internet parameters

- Network:

You can configure your network here, but for network cards with non-free drivers it is better to do that after reboot, in the Mageia Control Center, if you have not yet enabled the Nonfree media repositories.



When you add a network card, do not forget to set your firewall to watch that interface as well.

- Proxies:

A Proxy Server acts as an intermediary between your computer and the wider internet. This section allows you to configure your computer to utilize a proxy service.

You may need to consult your systems administrator to get the parameters you need to enter here

25.4. Security

- Security Level:

Here you set the Security level for your computer, in most cases the default setting (Standard) is adequate for general use.

Check the option which best suits your usage.

- Firewall:

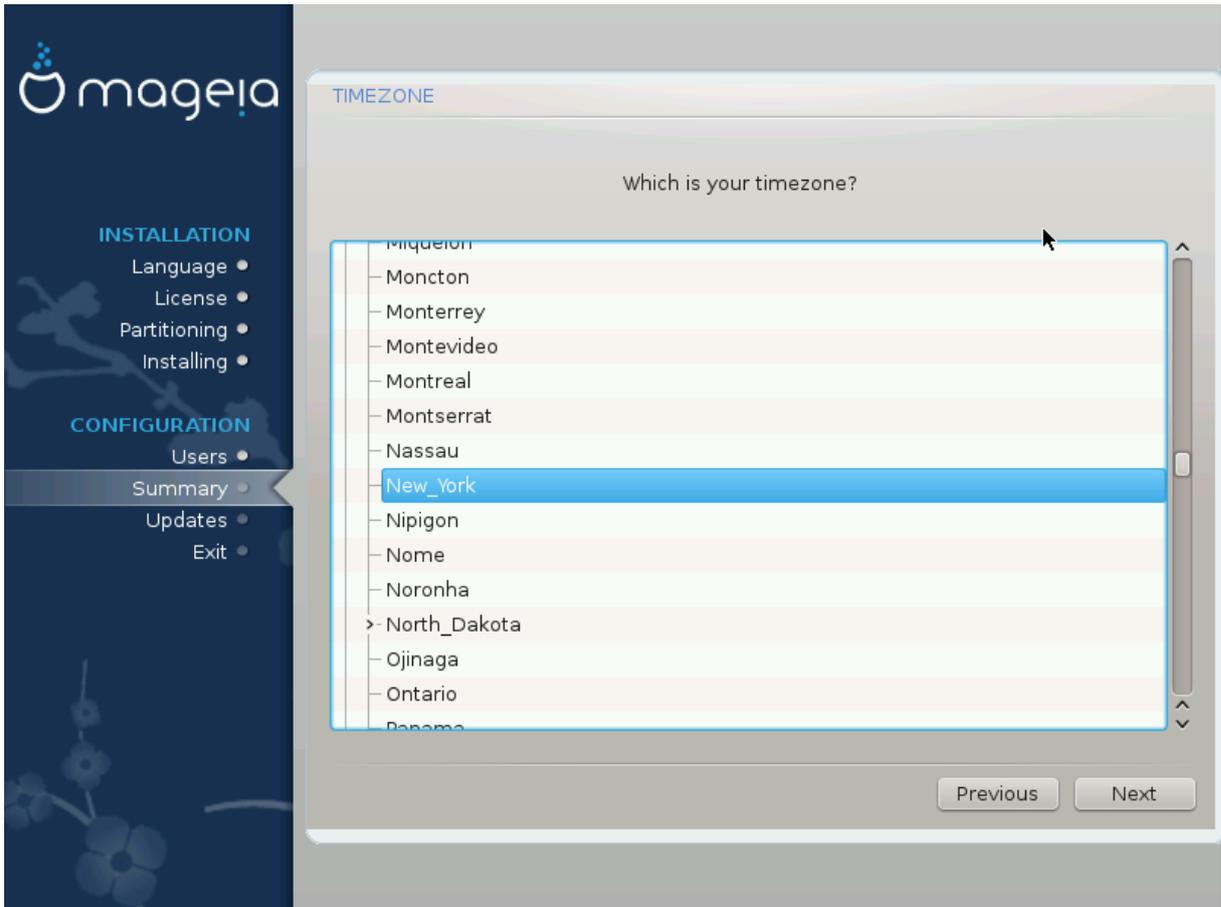
A firewall is intended to be a barrier between your important data and the rascals out there on the internet who would compromise or steal it.

Select the services that you wish to have access to your system. Your selections will depend on what you use your computer for.



Bear in mind that allowing everything (no firewall) may be very risky.

26. Configure your Timezone



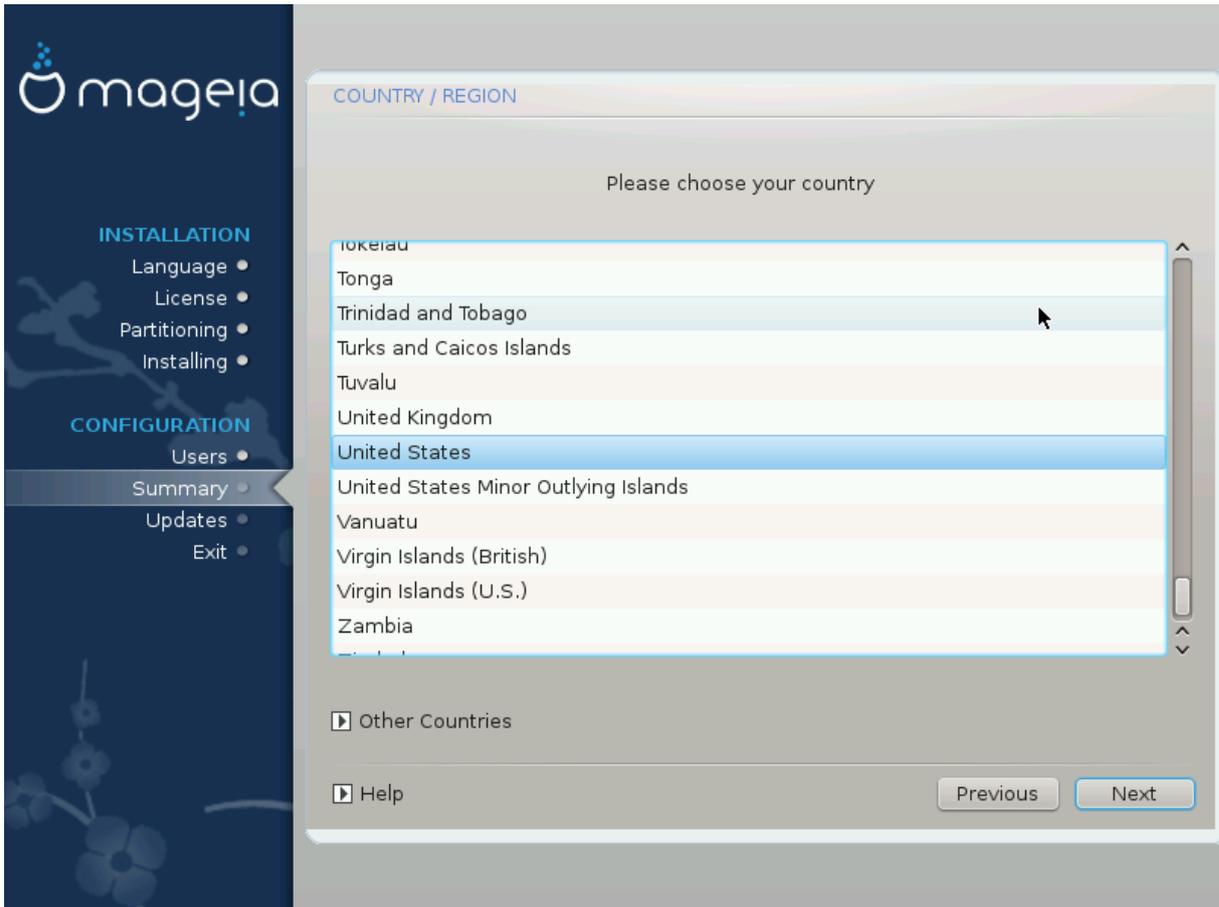
Choose your time zone by choosing your country or a city close to you in the same time zone.

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



If you have more than one operating system on your computer, make sure they are all set to local time, or all to UTC/GMT.

27. Select your Country / Region



Select your country or region. This is important for all kinds of settings, like the currency and wireless regulatory domain. Setting the wrong country can lead to not being able to use a Wireless network.

If your country isn't in the list, click the Other Countries button and choose your country / region there.



If your country is only in the Other Countries list, after clicking OK it may seem a country from the first list was chosen. Please ignore this, DrakX will follow your real choice.

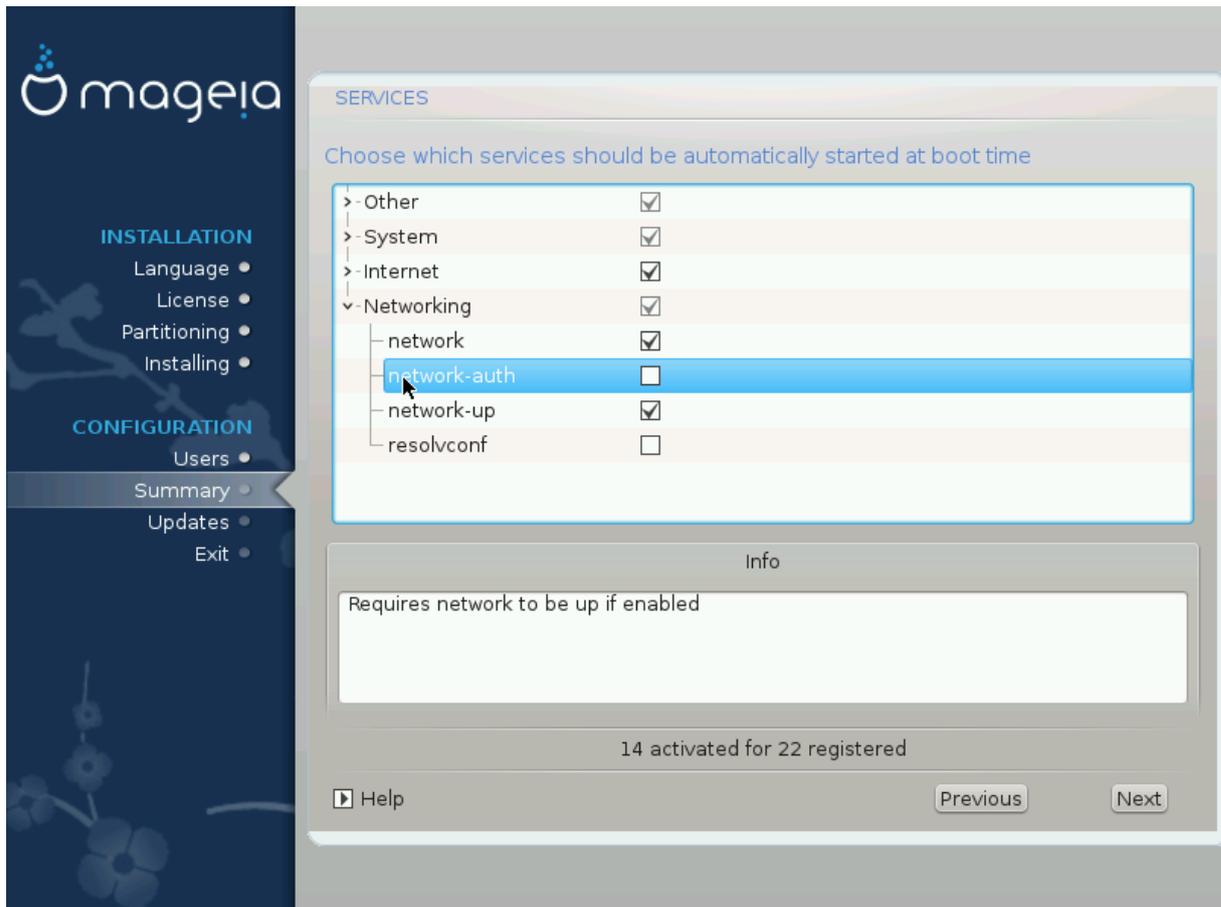
27.1. Input method

In the Other Countries screen you can also select an input method (at the bottom of the list). Input methods allow users to input multilingual characters (Chinese, Japanese, Korean, etc). IBus is the default input method in Mageia DVDs, Africa/India and Asia/no-India Live-CDs. For Asian and African locales, IBus will be set as default input method so users should not need to configure it manually. Other input methods(SCIM, GCIN, HIME, etc) also provide similar functions and can be installed if you added HTTP/FTP media before package selection.



If you missed the input method setup during installation, you can access it after you boot your installed system via "Configure your Computer" -> "System", or by running `localedrake` as root.

28. Configure your Services



Here you can set which services should (not) start when you boot your system.

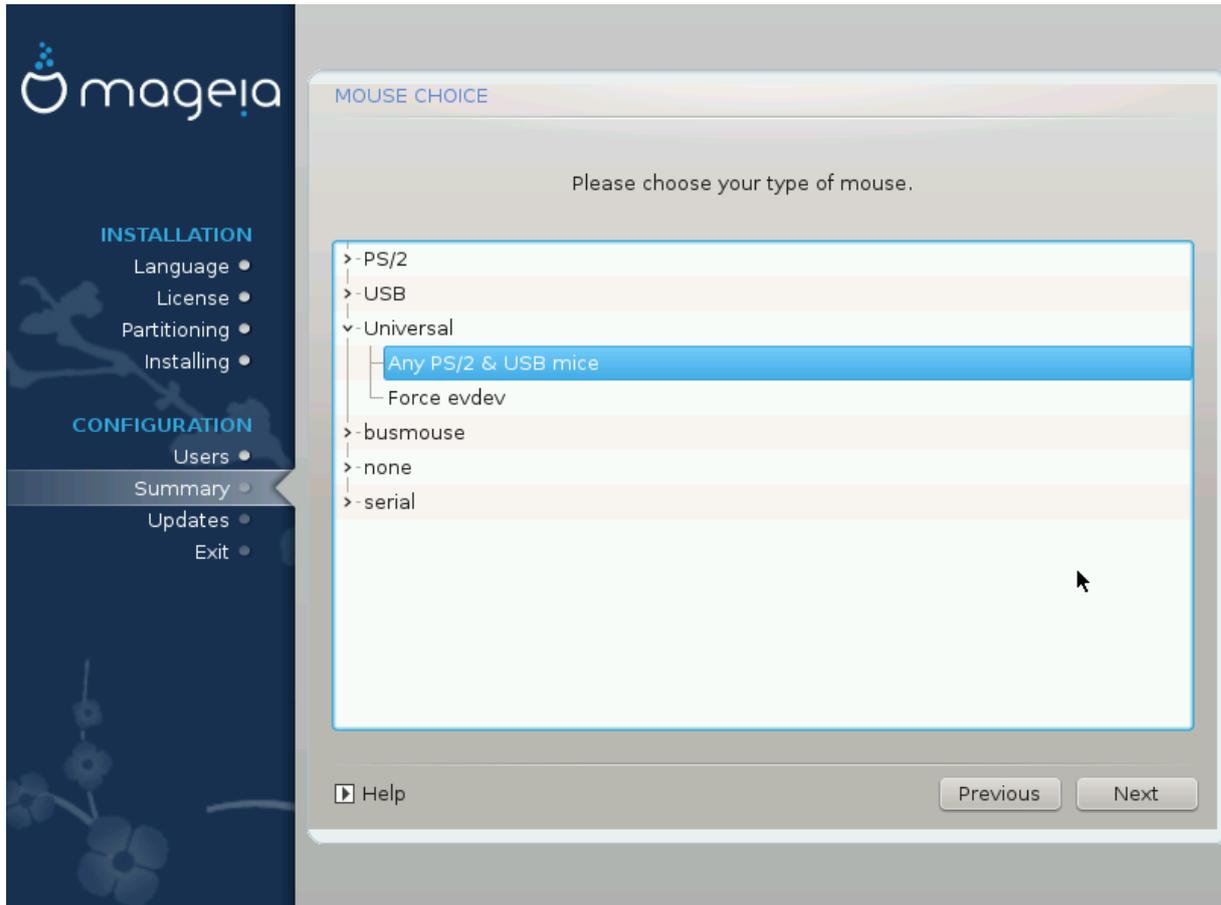
There are four groups, click on the triangle before a group to expand it and see all services in it.

The setting DrakX chose are usually good.

If you highlight a service, some information about it is shown in the info box below.

Only change things when you know very well what you are doing.

29. Select mouse

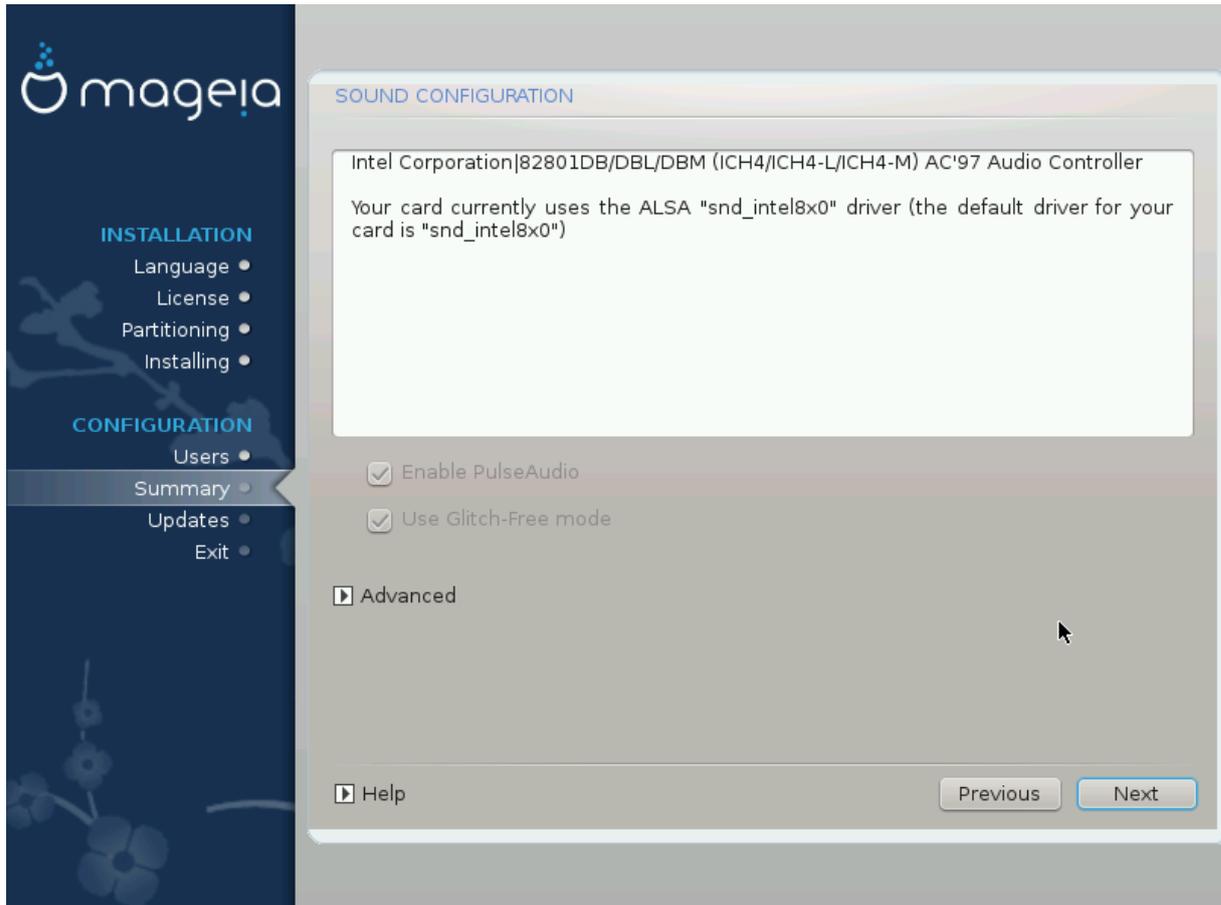


If you are not happy with how your mouse responds, you can select a different one here.

Usually, Universal - Any PS/2 and USB mice is a good choice.

Select Universal - Force evdev to configure the buttons that do not work on a mouse with six or more buttons.

30. Sound Configuration



In this screen the name of the driver that the installer chose for your sound card is given, which will be the default driver if we have a default one.

The default driver should work without problems. However, if after install you do encounter problems, then run **draksound** or start this tool via MCC (Mageia Control Center), by choosing the Hardware tab and clicking on Sound Configuration at the top right of the screen.

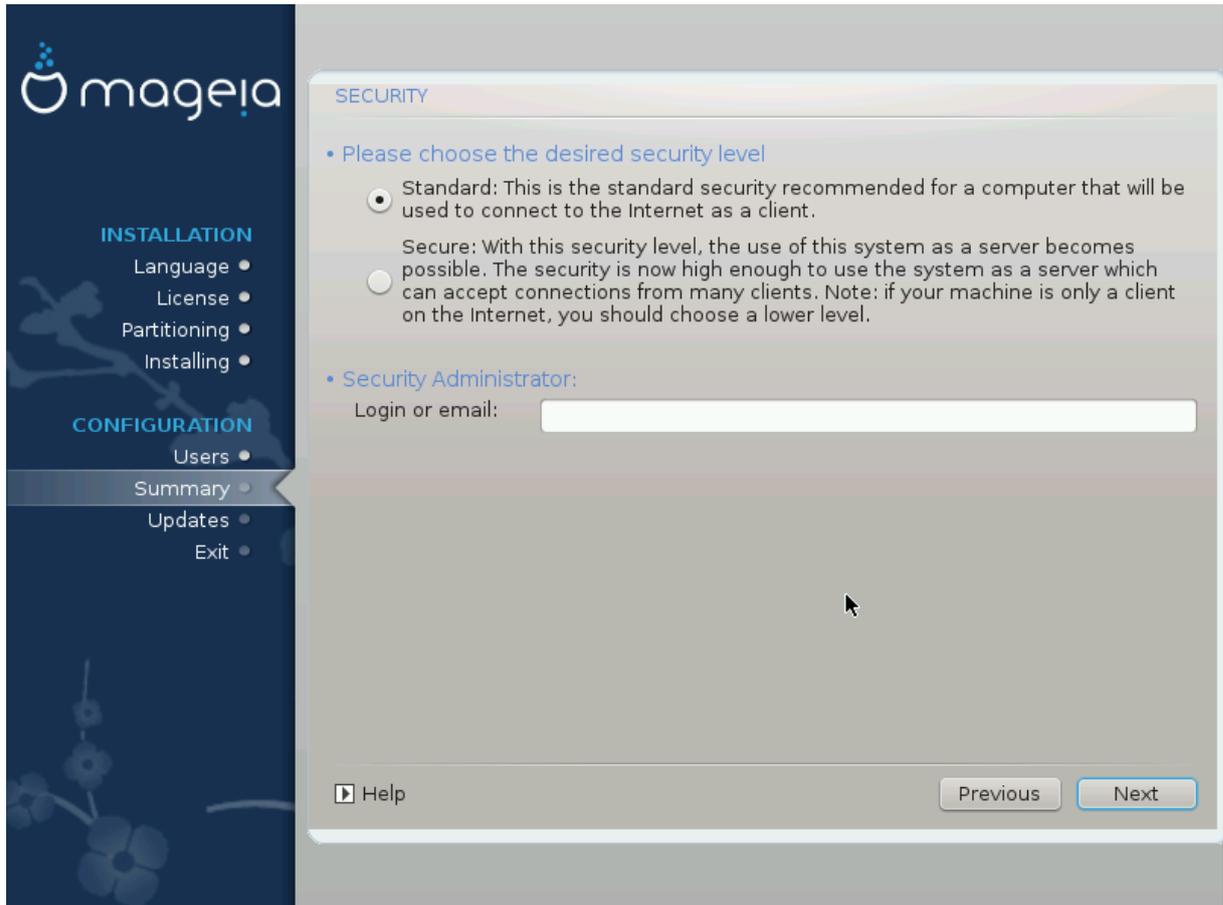
Then, in the draksound or "Sound Configuration" tool screen, click on Advanced and then on Troubleshooting to find very useful advice about how to solve the problem.

30.1. Advanced

Clicking Advanced in this screen, during install, is useful if there is no default driver and there are several drivers available, but you think the installer selected the wrong one.

In that case you can select a different driver after clicking on Let me pick any driver.

31. Security Level

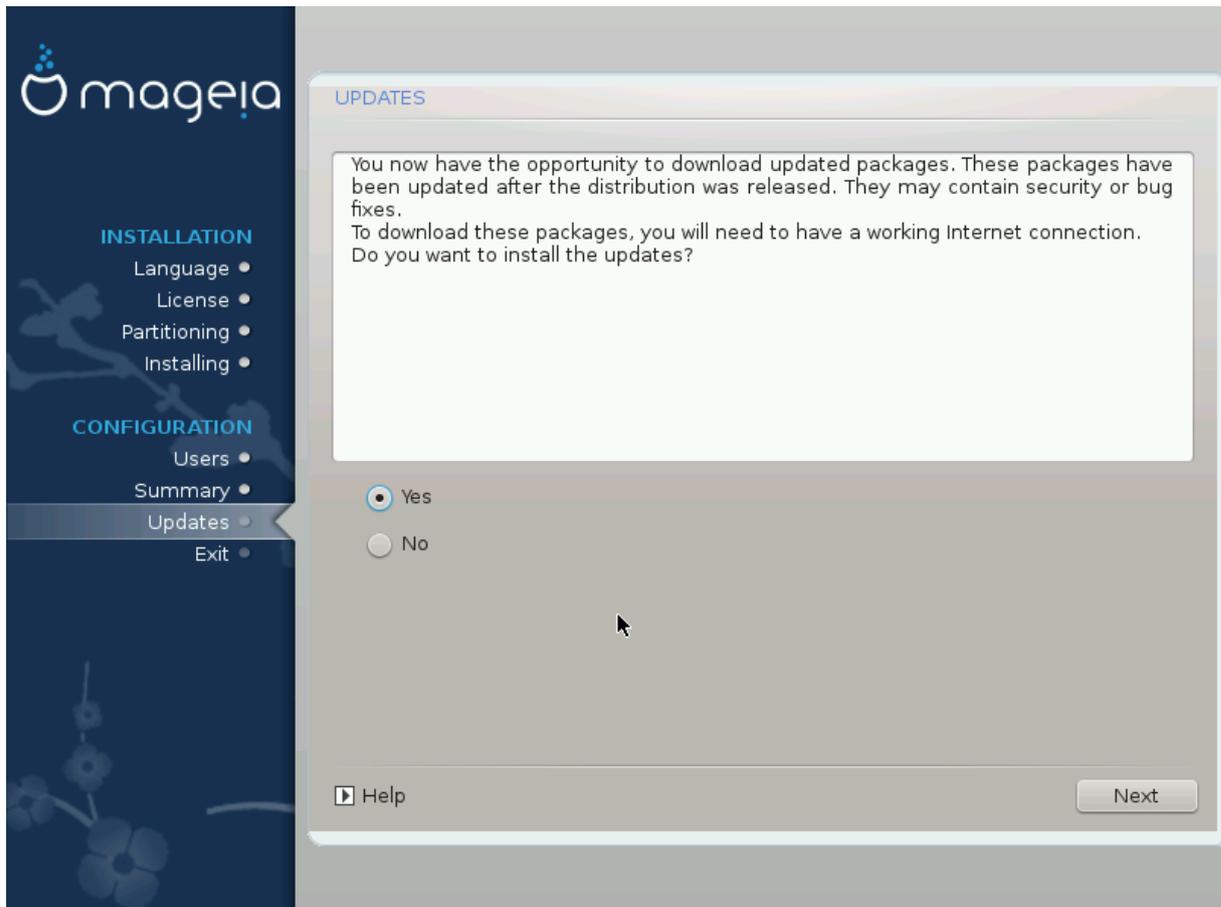


You can adjust your security level here.

Leave the default settings as they are, if you don't know what to choose.

After install, it will always be possible to adjust your security settings in the Security part of the Mageia Control Center.

32. Updates

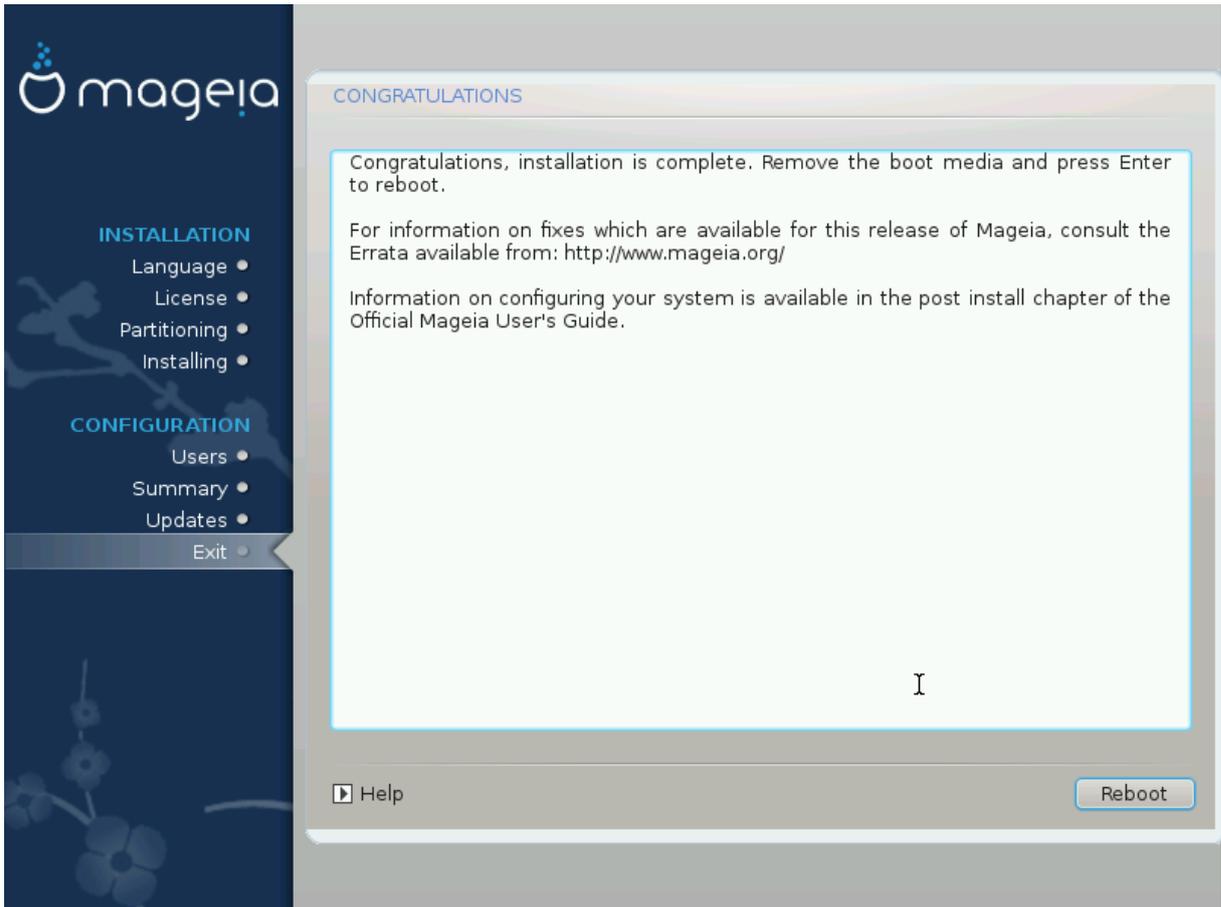


Since this version of Mageia was released, some packages will have been updated or improved.

Choose yes if you wish to download and install them, select no if you don't want to do this now, or if you aren't connected to the Internet

Then press Next to continue

33. Congratulations



You have finished installing and configuring Mageia and it is now safe to remove the installation medium and reboot your computer.

After reboot, in the bootloader screen, you can choose between the operating systems on your computer (if you have more than one).

If you didn't adjust the settings for the bootloader, your Mageia install will be automatically selected and started.

Enjoy!

Visit www.mageia.org if you have any questions or want to contribute to Mageia