

# 用 DrakX 安装

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Mageia 的官方文档



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用 DrakX 安装

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## 用 DrakX 安装

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其他人不一定能在此手册中看到你所看到的安装页面。这取决于你的硬件规格以及安装时的选项。

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### 1. 选择和使用 ISO

#### 1.1. 简介

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. 介质

##### 1.2.1. 定义

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. 传统安装媒介

#### 1.2.2.1. 通用特性

- 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 媒介

#### 1.2.3.1. 通用特性

- 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. Live DVD KDE

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

#### 1.2.3.3. Live DVD GNOME

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

#### 1.2.3.4. Live DVD Xfce

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

### 1.2.4. Net install media

#### 1.2.4.1. 通用特性

- 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. 下载和检查媒介

### 1.3.1. 下载中

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. 检查下载文件的完整性

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. 刻录或转储 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. 将ISO文件刻录到CD或DVD

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. 写入 ISO 到 U 盘

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. 使用 Mageia 的图形化工具

您可以使用 [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] 这样的图形化工具来操作。

#### 1.4.2.2. 使用 Windows 下的图形化工具

您可以尝试：

- [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. 打开一个终端
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. DrakX , Mageia 的安装器

无论您是刚接触 GNU-Linux 的新人，还是老手，Mageia 安装器都能帮您轻松安装或升级系统。

### 2.1. 安装步骤

- The install process is divided into a number of steps - the status of which is indicated in a panel to the left of the screen.
- Each step has one or more screens, which may also have Advanced sections with extra, less commonly required options.
- Most screens have Help buttons for further details about the particular step.



If at some point during the install you decide to abort 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 keys `Ctrl+Alt+F2` together. After that, press `Ctrl+Alt+Delete` together to reboot.

### 2.2. 安装欢迎屏幕

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

The welcome menu screen has various options, however the default option will start the installer, and is normally all that you will need.

### 2.2.1. Legacy (BIOS) Systems

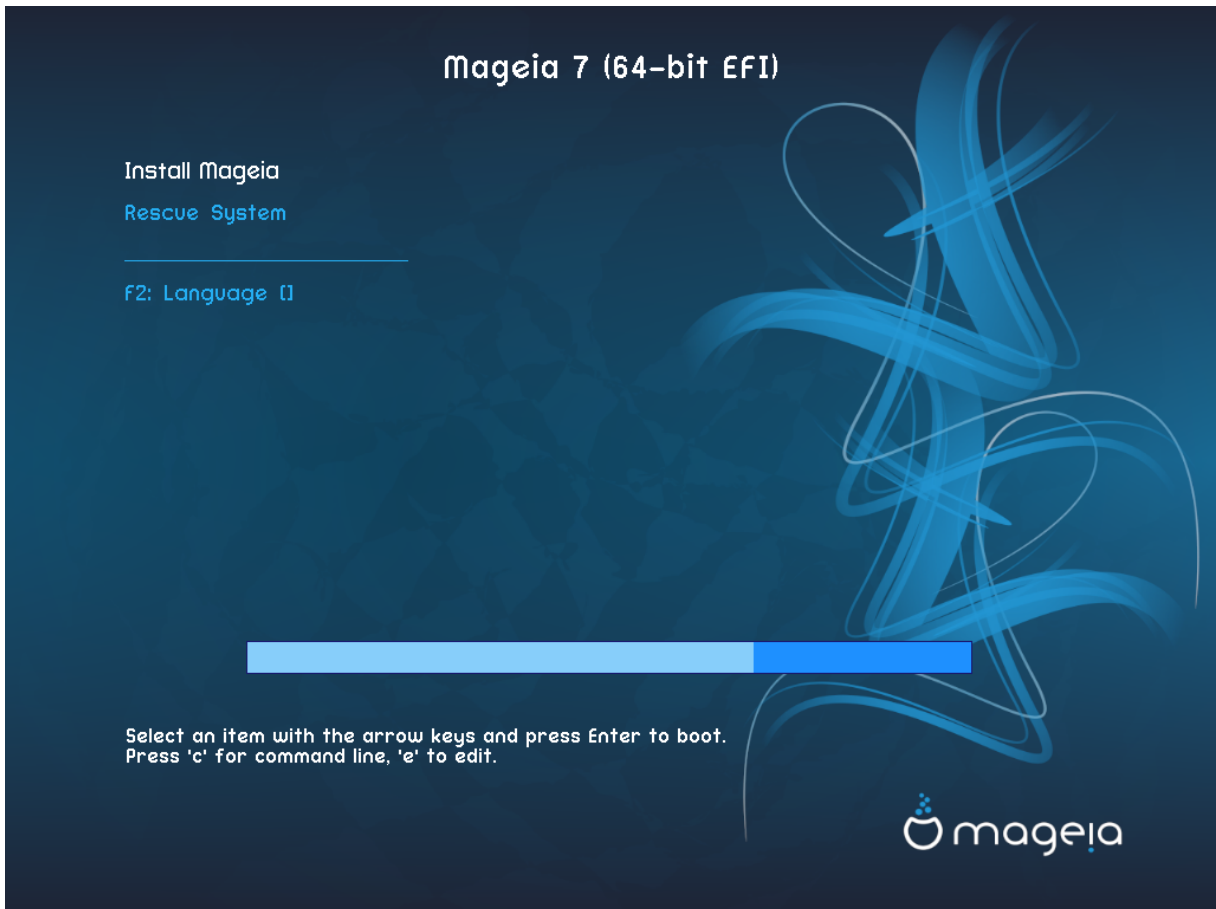


#### Menu

- Install Mageia  
Install Mageia to a hard disk. This is the default option, and will automatically start after a short while unless another option is selected.
- Rescue System  
This option allows you to either re-install the bootloader for an existing Mageia installation or you can use it to restore a Windows bootloader.
- Memory Test  
Test the installed RAM by performing multiple read and write operations. Reboot to end the test.
- F2: Language  
Press F2 for alternative languages.

### 2.2.2. UEFI Systems

From this screen, you can access options by pressing e to enter the edit mode. To come back to this screen, press Esc to quit without saving or press F10 to save and quit.



## Menu

- Install: Start the Install process
- Rescue: This option allows you to either re-install the bootloader for an existing Mageia installation or you can use it to restore a Windows bootloader.
- F2: Language: Press F2 for alternative languages.

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

## 2.3. 安装问题和问题解决方案

### 2.3.1. 不使用图形界面

- After the initial screen you did not progress to the Language Selection screen. This can happen with some graphic cards and older systems. Try using low resolution by typing `vgalo` 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 press `Esc` at the Welcome screen and confirm with `ENTER`. You will be presented with a black screen with a `boot:` prompt. Type text and press `ENTER` to continue with the installation in text mode.

### 2.3.2. 安装停止

If the system appeared to freeze during the installation, this may be a problem with hardware detection. In this case the automatic hardware detection may be bypassed and dealt with later.

To try this, type `noauto` at the prompt. This option may also be combined with other parameters as necessary.

### 2.3.3. 内存问题

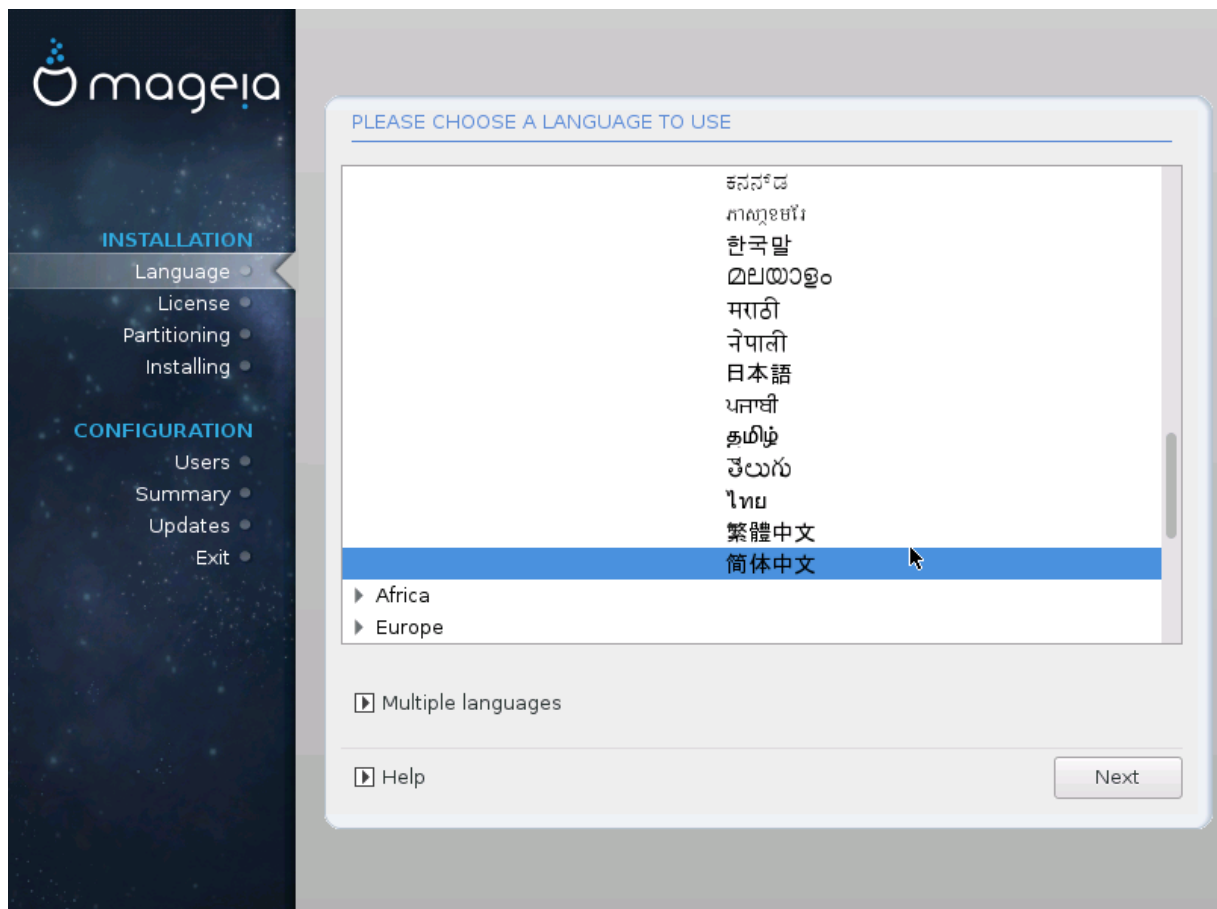
This will rarely be needed, but in some cases the hardware may report the available RAM incorrectly. To specify this manually, you can use the `mem=xxxM` parameter, where `xxx` is the correct amount of RAM. e.g. `mem=256M` would specify 256MB of RAM.

### 2.3.4. 动态分区

If you converted your hard disk from Basic format to Dynamic format in Microsoft Windows, then it is not possible to install Mageia on this disc. To revert to a Basic disk, see the Microsoft documentation: <http://msdn.microsoft.com/en-us/library/cc776315.aspx>.

## 3. 请选择要使用的语言

- 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 (or others) will require several languages to be installed on your system, then you should use the Multiple languages option to add them now. It will be difficult to add extra language support after installation.

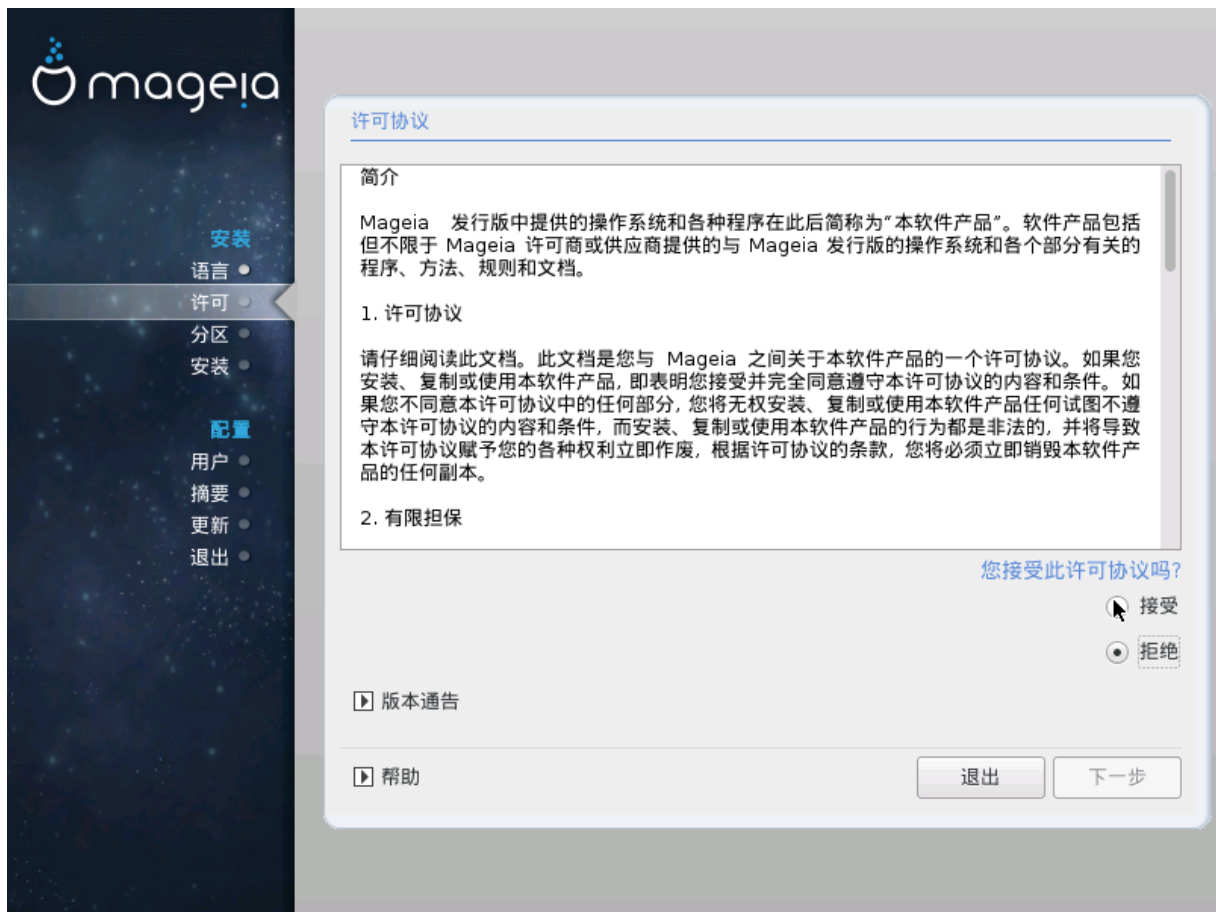




Even if you choose more than one language, you must first choose one as your preferred language from the main list of languages. It will also be marked as chosen in the Multiple languages screen.

- If your keyboard language is not the same as your preferred language, then it is advisable to install the required language for 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 for your system post-installation in the Mageia Control Center → System → localization for your system.

## 4. 许可证和发行说明



### 4.1. 许可协议

- 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 proceed, simply select Accept and then click on Next

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

## 4.2. 发行说明

Important information about this particular Mageia release can be viewed by clicking on the Release Notes button.

## 5. 设置SCSI

DrakX will normally detect hard disks correctly. However, with some older SCSI controllers it may be unable to determine the correct drivers to use and subsequently fail to recognise the drive.

If your device is not recognised, 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. 新安装或升级



- Install

Use this option to perform a fresh installation of Mageia. This will format the root partition (/), but can preserve a pre-existing /home partition (a dedicated /home partition, rather than being incorporated within the root (/) partition itself).

- Upgrade

Use this option to upgrade an existing installation of Mageia.





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 has reached its "End Of Life" then it is better to do a "clean" install instead, while preserving your /home partition.

---



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 Ctrl+Alt+Home. Do NOT do this later in the install.

---

## 7. 键盘

DrakX 会根据您的语言为您选择合适的键盘。若找不到合适的键盘，则会自动选择美式键盘。

- 请确保该选项正确。如果您不知道您的键盘类型，请查阅您的电脑配件规格，或询问电脑供应商，或查看键盘上的标签。您也可以参考这里的内容：[en.wikipedia.org/wiki/Keyboard\\_layout](http://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 fuller list, and select your keyboard there.



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

---

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

## 8. Partitioning

### 8.1. 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

若此选项可用，表面安装程序找到了现存的 Linux 分区，并且可以将其用于 Mageia 的安装。

- Use Free Space

若硬盘上有未使用的区域，此选项将会把 Mageia 安装到该区域中。

- 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.



将会缩小 Windows 分区的大小。该分区必须为“clean”状态，即上一次使用 Windows 时必须正常地关机或重启。同时，该分区也应当进行碎片整理，即便不能将文件碎片完全移出待使用区域。我们推荐您对个人文件进行备份后再进行此操作。

---

- Custom Disk Partitioning

允许您完全控制系统在硬盘上的安装方式。

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.

## 8.2. 选择挂载点



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 yourself.

- To the left of the drop-down menus is a list of available partitions. For example: sda is a hard drive - and 5 is a partition number, followed by the (capacity, mount point, filesystem type) of the partition.
- If you have several partitions, you can choose various 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 perhaps /Data for all your data files.
- For any partitions that you don't need to make use of, you can leave the mount point field blank.



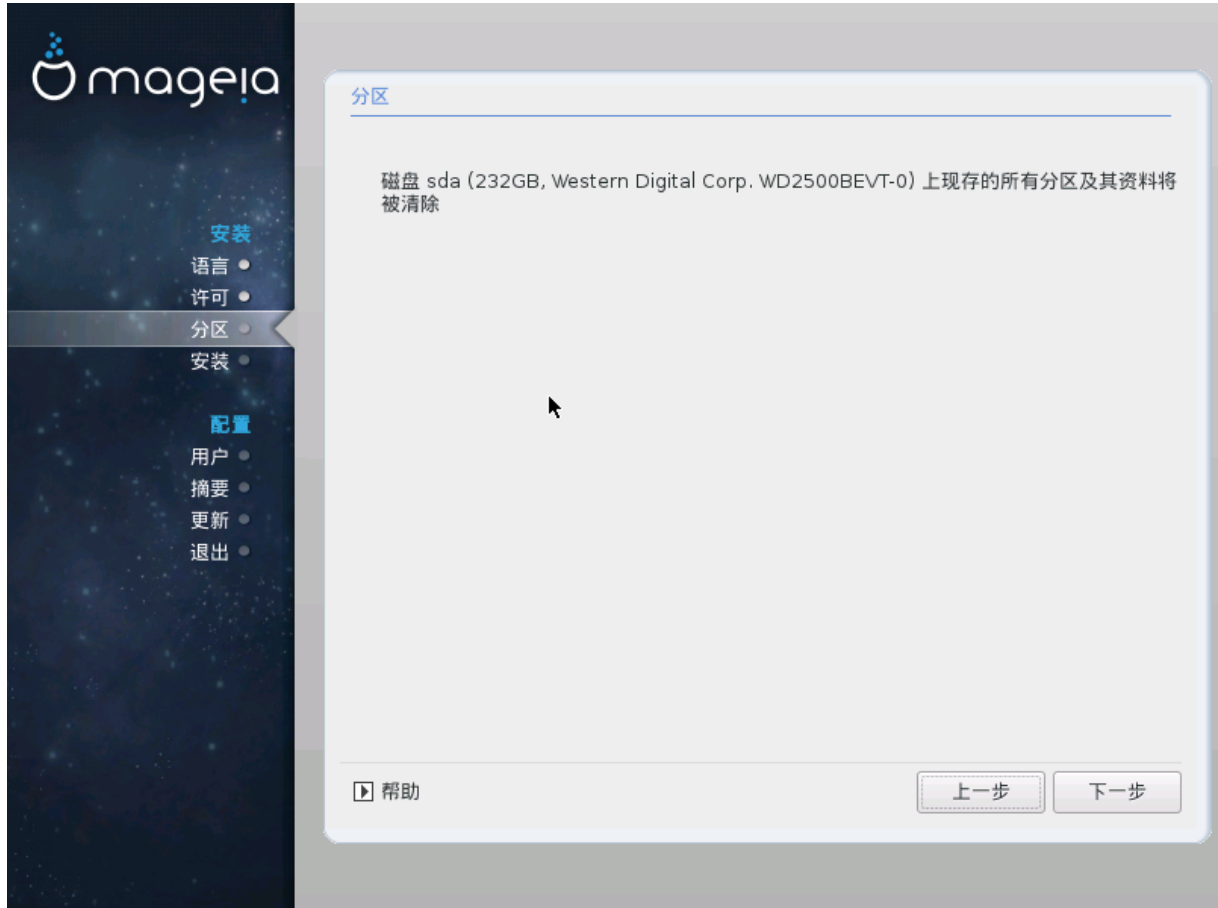
If you make any changes here, ensure you still have a / (root) partition.



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.

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

### 8.3. 确定要格式化的硬盘



- 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.

## 8.4. 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.

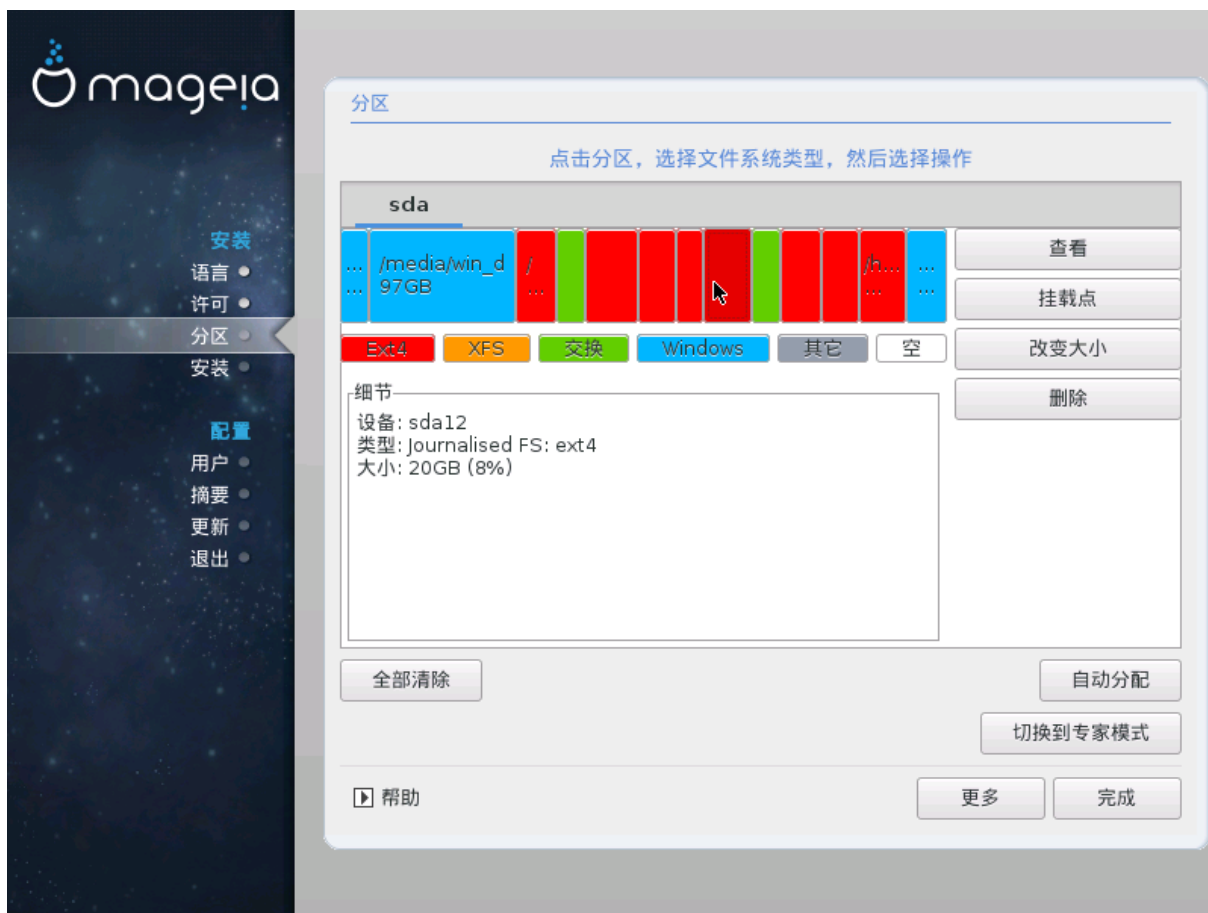
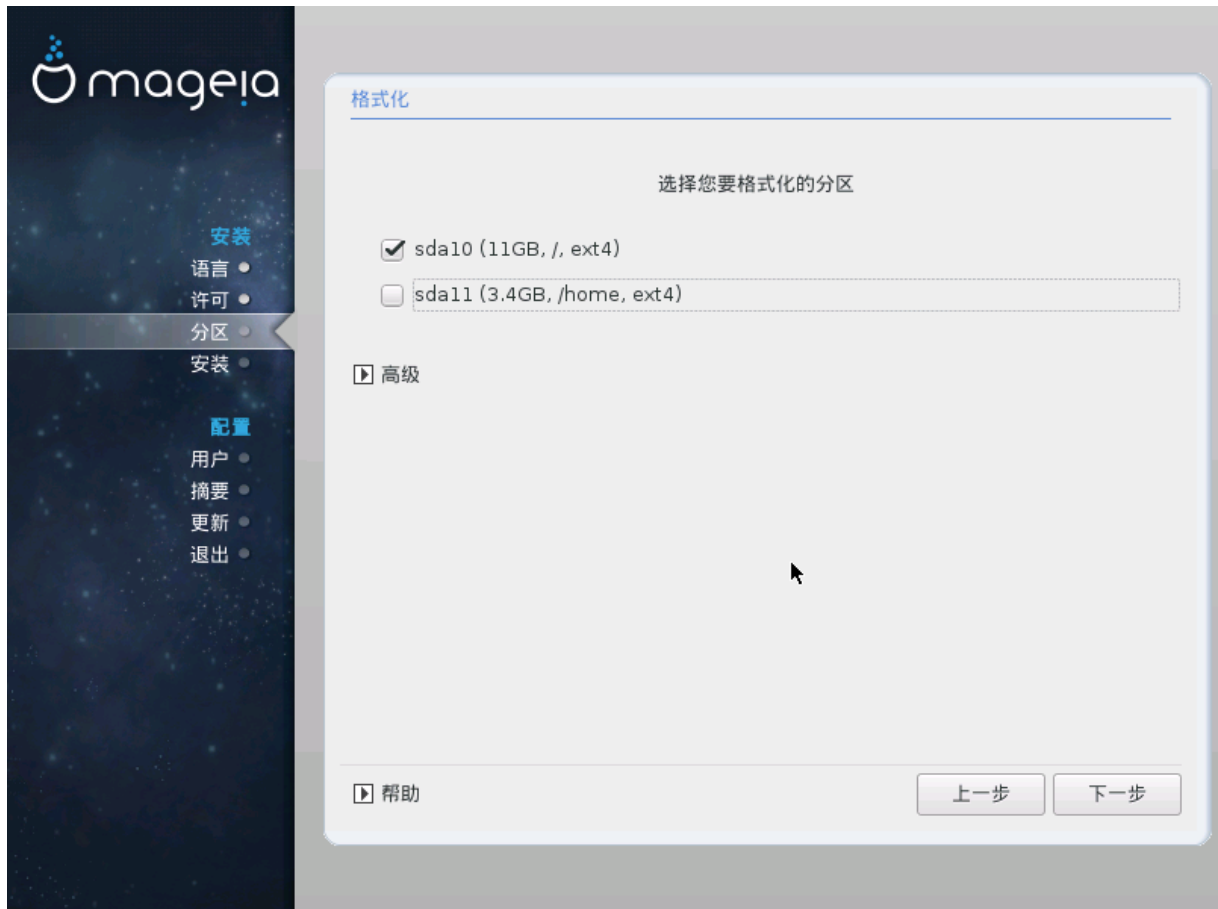


图 1. EFI System Partition

图 2. BIOS boot partition

## 8.5. 格式化



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.

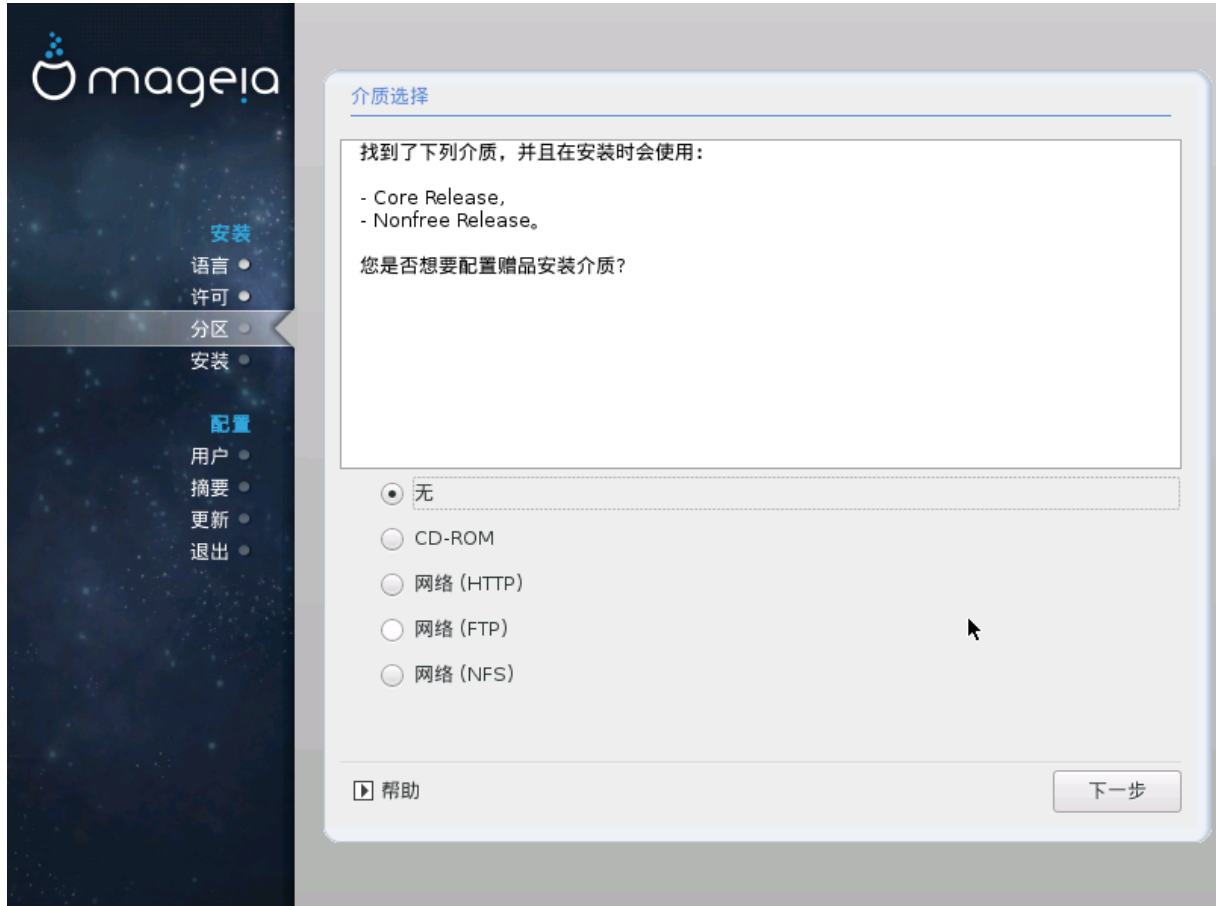
When you are confident about the selections, click on Next to continue.



## 9. Software

### 9.1. Media Selection

#### 9.1.1. Supplemental Installation Media



This screen shows you the list of already recognised 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 during the subsequent steps.

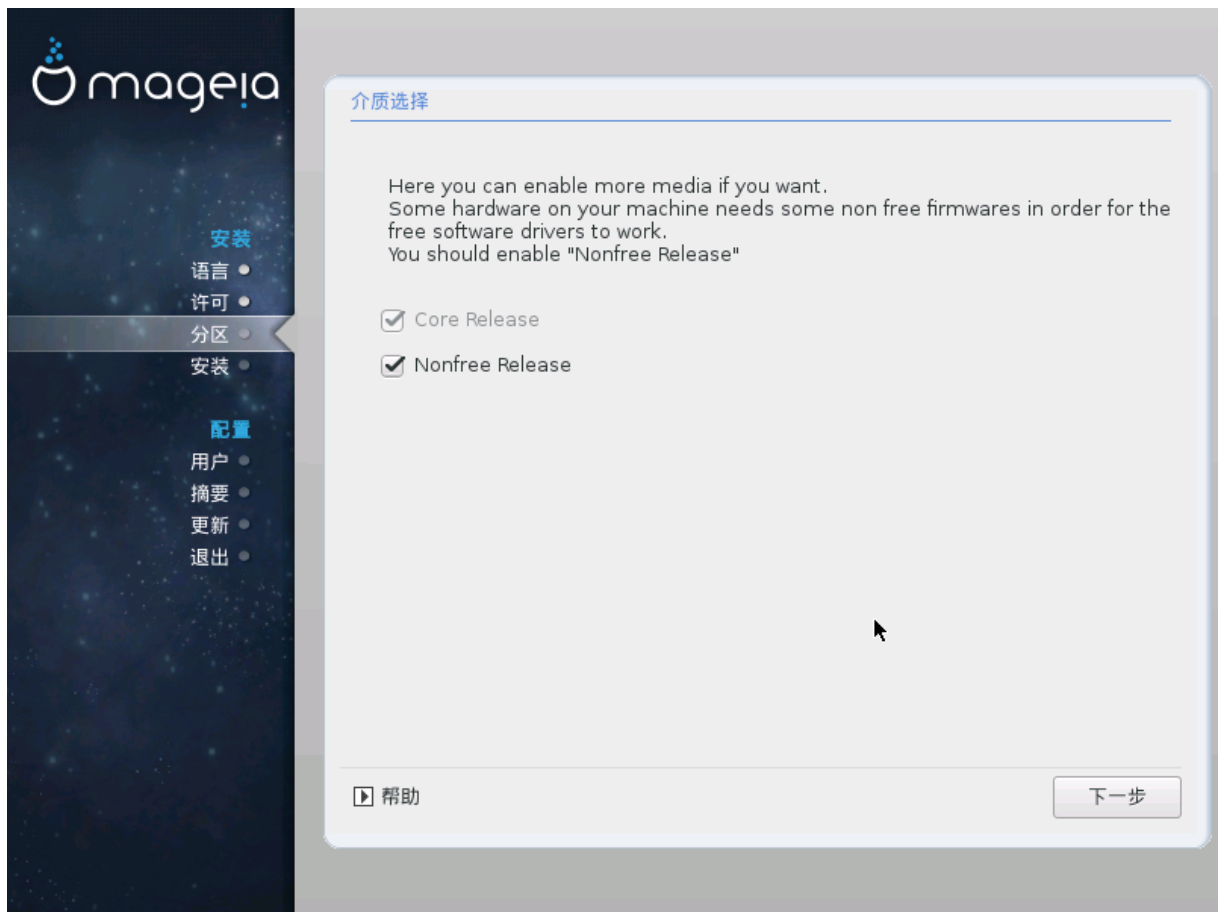
如果需要获取网络资源，请执行以下两步：

1. Choosing and activating 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 selecting 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, the installer will find the needed 32-bit packages there.

### 9.1.2. Available Media



此处列出了可用的仓库。根据所选的安装介质，并非所有仓库都可以使用。所选仓库将决定下一步中可用的软件包。

- Core 仓库无法被禁用，因其包含发行版中的基础软件。
- 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 AMD 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's, etc.

## 9.2. 桌面环境选择

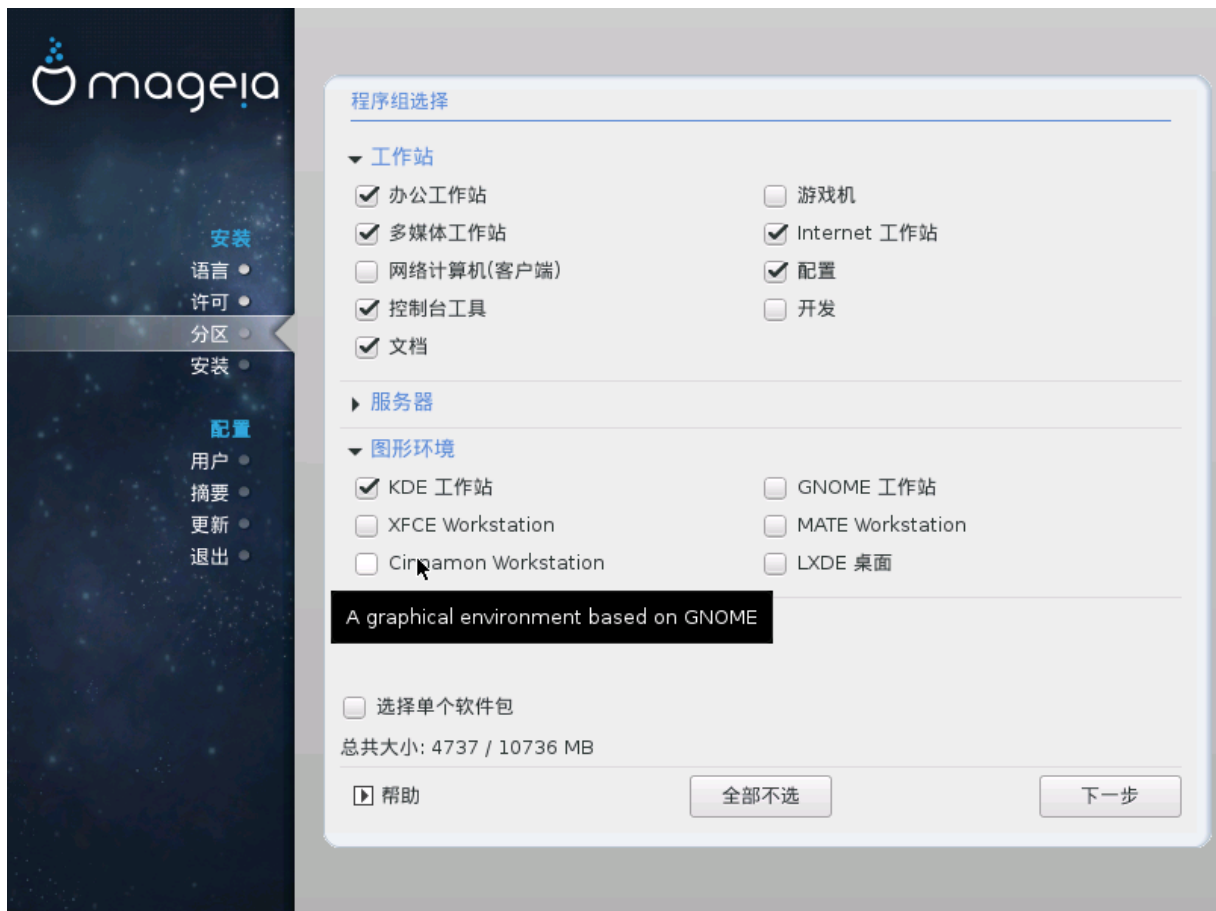
Some choices made here will open other screens with related options.

After the selection step(s), you will see a slideshow during the installation of required packages. The slideshow can be disabled by pressing the Details button.



- Choose whether you prefer to use the KDE Plasma or GNOME desktop environment. Both come with a full set of useful applications and tools.
- Select Custom if you do not wish to use either (or, actually use both) of these, or if you want to modify the default software choices for these desktop environments. The LXDE desktop, for instance, is lighter than the previous two, sporting less eye candy and having fewer packages installed by default.

### 9.3. 选择软件包组



Packages are arranged into common 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

See [Minimal Install](#) for instructions on how to do a minimal install (without or with X & IceWM).

### 9.4. 最小安装

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

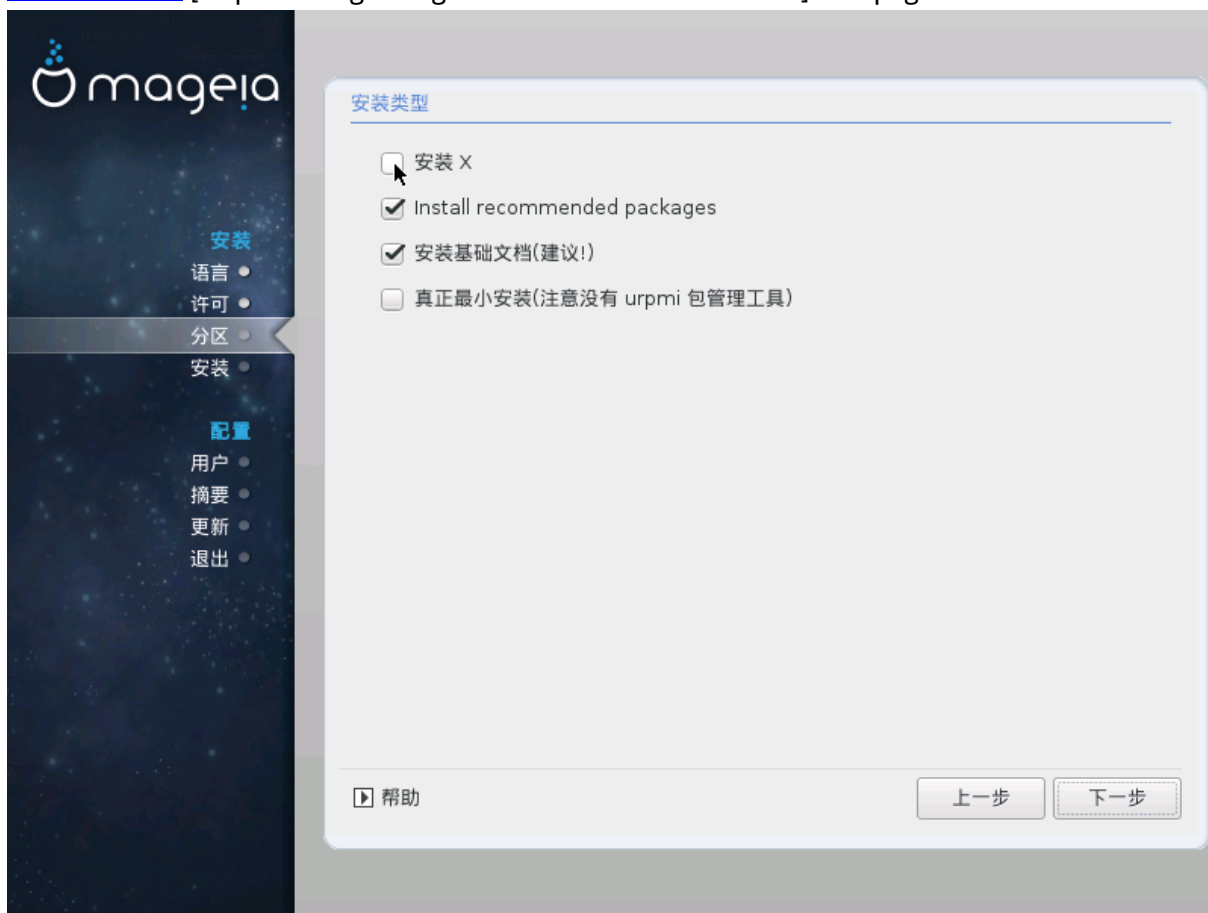
- You can choose a Minimal Installation by de-selecting everything in the Package Group Selection screen, see [Choose Package Groups](#).

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

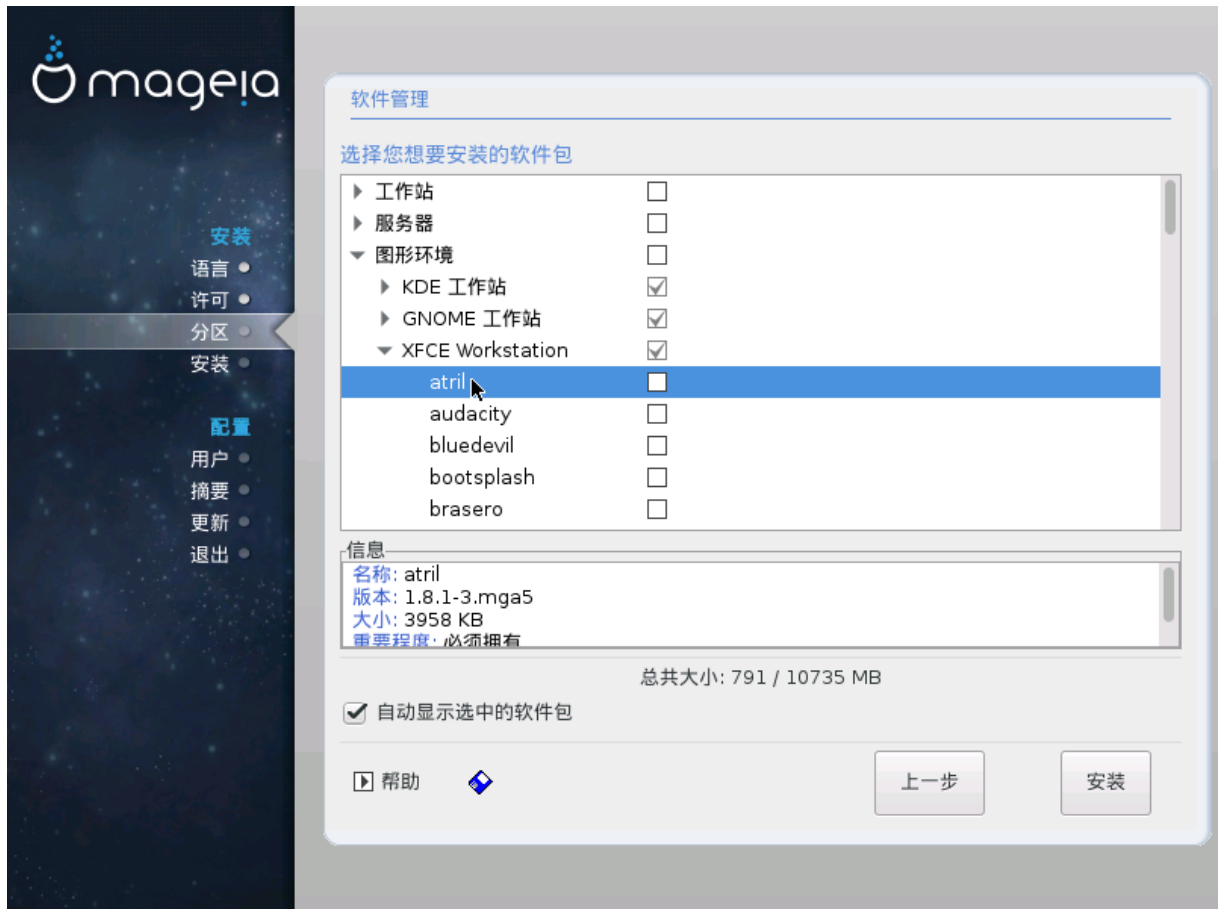
- If you choose this installation method, then the relevant screen (see screenshot below) will offer you a few useful extras to install, such as documentation and "X".

If the With X option is selected, then IceWM (a lightweight desktop environment) will also be included.

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.



## 9.5. 选择单个软件包



Here you can add or remove any extra packages to customize 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.

## 10. User Management



### 10.1. 设置管理员（root 账户）密码：

It is advisable for all Mageia installations to set a superuser (Administrator) password, usually called the root password in Linux. As you type a password into the top box a 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 underneath, to check that the first entry was not mistyped.



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.

### 10.2. 输入用户名

Add a User here. A regular user has fewer privileges than the superuser (root), but enough to use the Internet, office applications or play games and anything else the average user might use a computer for.

- Icon
  - Click on this button if you want to change the user's icon
- Real Name

Insert the user's real name into this text box

- Login Name

Enter the user login name or let DrakX use a version of the user's real name. The login name is case-sensitive.

- Password

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 [注意](#))

Password (again): Retype the user password. DrakX will check that you have not mistyped the password.



Any users added while installing Mageia, will have a home directory that is both read and write protected (umask=0027)

You can add any extra needed users in the Configuration - Summary step during the install. Choose User management.

也可以在安装完成后改变访问权限。

---

### 10.3. User Management (advanced)

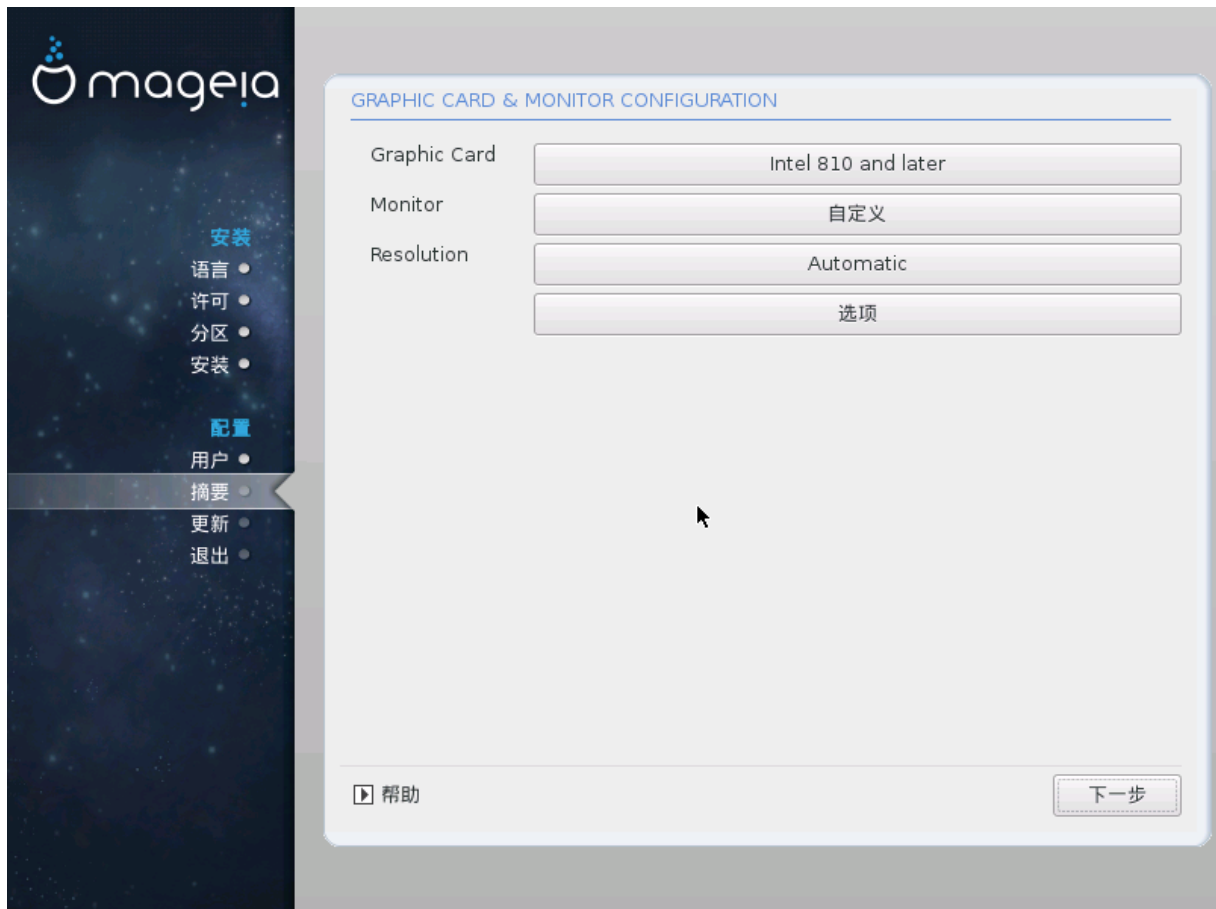
The Advanced option allows you to edit further settings for the user you are adding.

- Shell: This drop-down list allows you to change the shell available to any user you added in the previous screen. Options are Bash, Dash and Sh
- User ID: Here you can set the user ID for any user you added in the previous screen. If you are unsure what the purpose of this is, then leave it blank.
- Group ID: This lets you set the group ID. Again, if unsure, leave it blank.



## 11. Graphical Configuration

### 11.1. 显示卡和显示器配置



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 Plasma, GNOME, LXDE or any other graphical environment to work well, the following "X" settings need to be correct.

Choose the appropriate settings manually if you think the details are incorrect, or if none are shown.

- Graphic Card

If you need to, you can select a specific card from this expandable list. See [第 11.2 节 “选择一个X服务器\(配置您的显示卡\)”](#).

- Monitor

You can choose Plug 'n Play, if applicable, or choose your monitor from the Vendor or Generic lists. Choose Custom if you prefer to manually set the horizontal and vertical refresh rates of your monitor. See [第 11.3 节 “选择您的显示器”](#).

- Resolution

The resolution and color depth of your monitor can be set here.

- Test

The test button does not always appear during install. If the option is there, and you test your settings, you should be asked to confirm that your settings are correct. If you answer Yes, 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 result is satisfactory. If the test option is not available, then make sure your settings are on the safe side.

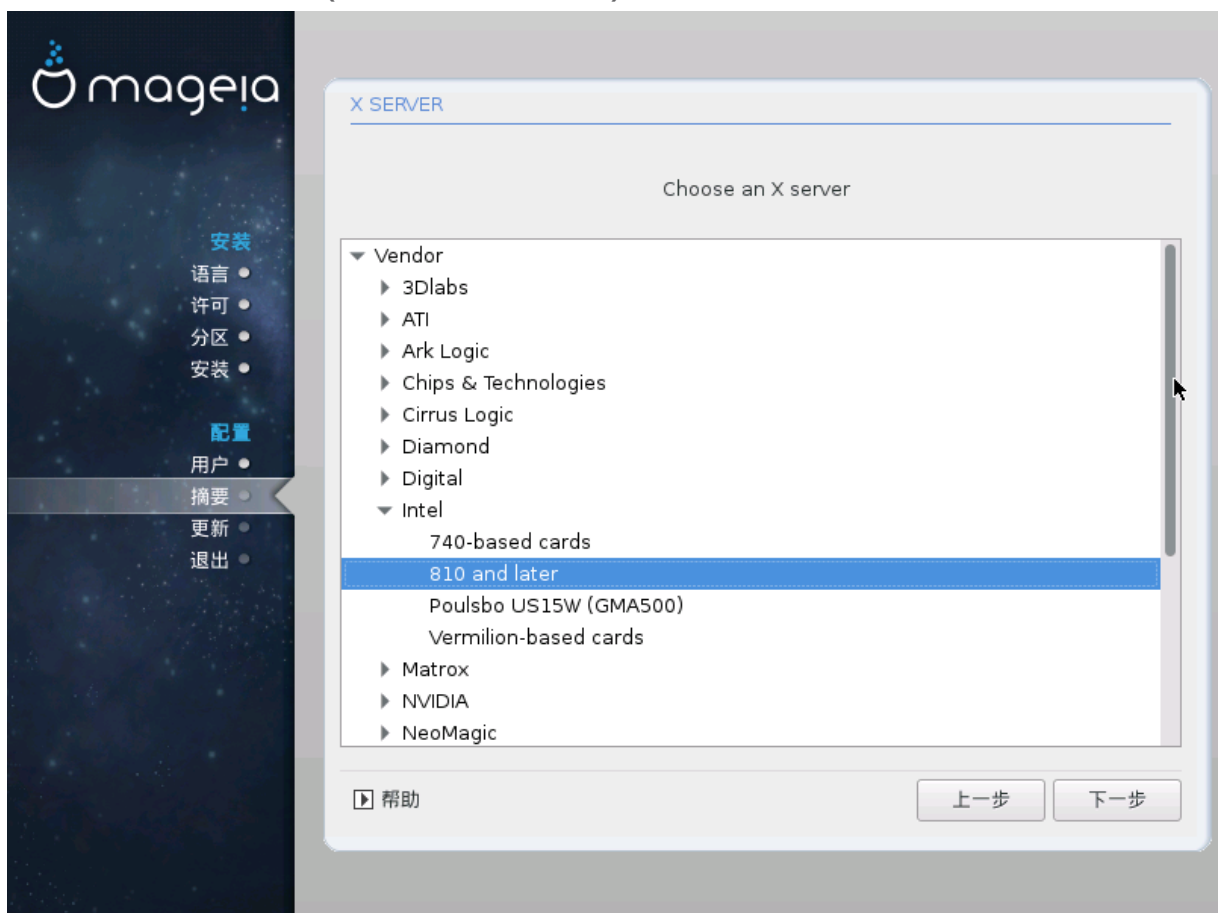
- Options

Here you can choose to enable or disable various options.



There is a risk of damaging a monitor if you choose refresh rates that are outside the frequency range of that monitor. This applies to older CRT displays: modern monitors will reject an unsupported frequency and normally enter standby mode.

## 11.2. 选择一个X服务器(配置您的显示卡)



DrakX 有齐全的显卡数据库，一般情况下可以正确识别您的视频设备。

若安装程序无法正确检测您的显卡，请在以下列表选择一个合适的配置：

- Vendor
- then the make of your card
- and the model 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, which provides more than 40 generic

and open source video card drivers. If you still can't find a specific 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 Command Line Interface

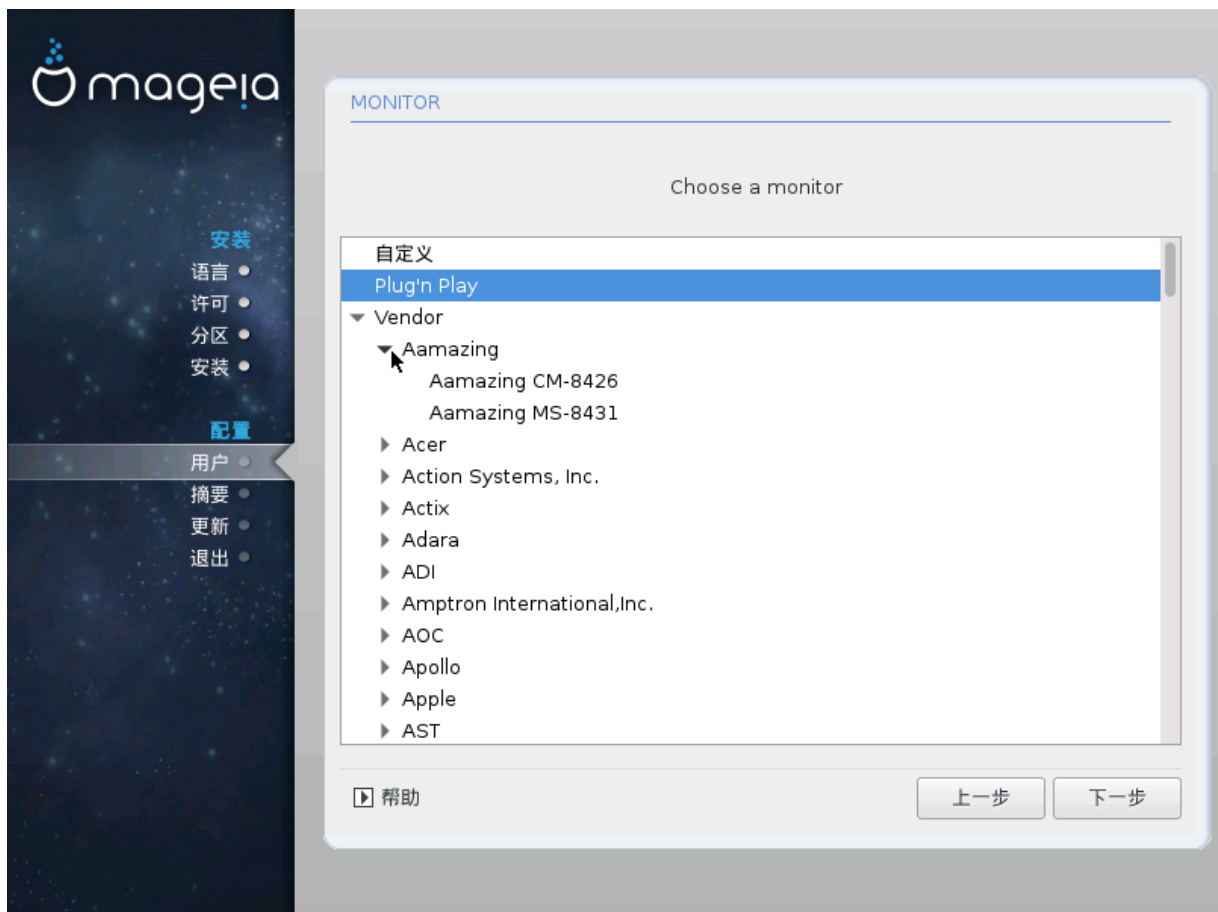
Some video card manufacturers provide proprietary drivers for Linux which may only be available in the Nonfree repository and in some cases only from the card manufacturers' websites. The Nonfree repository needs to be explicitly enabled to access them. If you didn't enable it previously, you should do this after your first reboot.

### 11.3. 选择您的显示器

DrakX 有齐全的显卡数据库，一般情况下可以正确识别您的视频设备。



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.



自定义

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.

请不要选择与您的显示器不匹配的同步范围，这样做可能损害显示器。若仍有疑问，请查询显示器文档。

Plug'n Play This is the default option and automatically tries to determine the monitor type from the monitor database.

Vendor 若安装程序无法正确检测您的显示器，请在以下列表选择一个合适的配置：

- Manufacturer
- Monitor model

Generic Selecting this group will list 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.

## 12. Bootloader

### 12.1. 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.

## 12.2. Bootloader Setup

### 12.2.1. 引导程序的主要选项



- 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.

- Password

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

### 12.2.2. 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.

## 12.3. Other Options

### 12.3.1. 使用现存的引导器

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.

### 12.3.2. 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.

### 12.3.3. 添加或修改引导菜单项

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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## 13. Configuration Summary

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



As a general rule, it is recommended that you accept the default settings unless:

- 您预知该默认配置存在问题
  - 您尝试了默认配置，但安装失败
  - some other factor mentioned in the detailed sections below is an issue
- 

### 13.1. 系统参数

- Timezone

DrakX selects a timezone for you, depending on your preferred language. You can change it if needed. See also [Configure Timezone](#)

- Country / Region

If the selected country is wrong, it is very important that you correct the setting. See [Select Country](#)

- Bootloader

DrakX proposal for the bootloader setting

Do not change anything, unless you know how to configure GRUB2. For more information, see [Bootloader](#)

- User management

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

- Services

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

You should check carefully before changing anything here - a mistake may prevent your computer from operating correctly. For more information, see [Configure Services](#)

## 13.2. 硬件参数

- Keyboard

Configure your keyboard layout according to your location, language and type of keyboard.



如果您发现键盘布局错误、需要更正，请注意：在更改配置后，之前设置的密码也可能发生改变。

---

- Mouse

您可以添加或配置其他触控设备、平板、轨迹球等。

- Sound card

The installer will use the default driver if one is available.

If there is no actual default driver for your sound card, there may be other possible alternative drivers available to choose from. If this is the case, but you think the installer has not made the most appropriate choice, you can click on Advanced to manually specify a driver.

- Graphical interface

This section allows you to configure your graphics card(s) and displays. For more information, see [第 11.1 节“显示卡和显示器配置”](#)





### 13.3. 网络和 Internet 参数

- Network

You can configure your network here, but for network cards with non-free drivers it is better to do that after reboot, using 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 monitor 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 obtain the parameters you need to enter here.

### 13.4. 安全

- Security Level

The Security level for your computer, in most cases the default setting (Standard) is adequate for general use. Select the option which best suits your usage.

- Firewall

The firewall allows you to manage which network connections are allowed on your computer. The safe and secure default is to allow ZERO inbound connections. This does not stop you connecting outbound and using your computer normally.

Please be aware that the Internet is a high risk network where there are continuous attempts to probe and attack systems. Even seemingly “safe” connections such as ICMP (for ping) have been used as covert data channels for exfiltrating data by malicious persons.

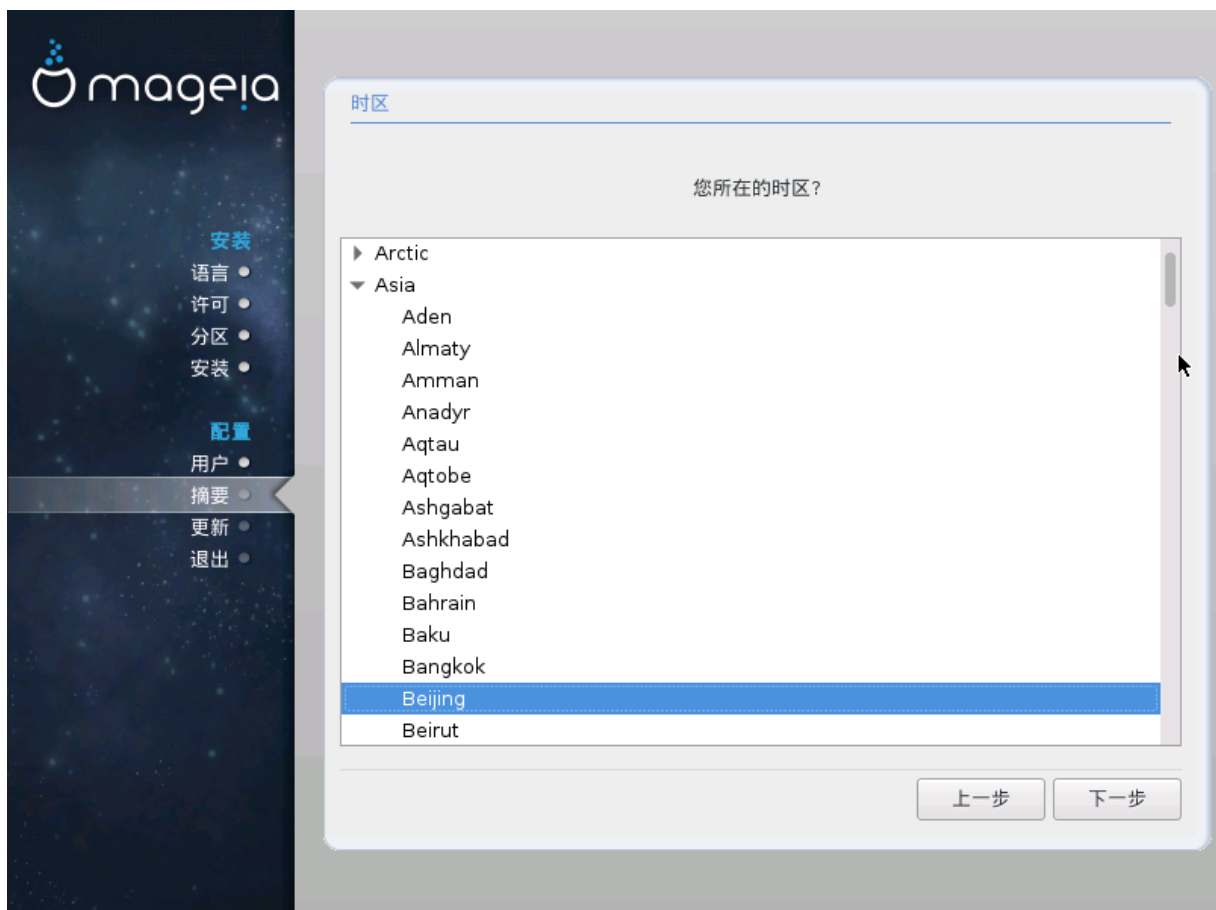
For more information, see [Firewall](#).



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

## 14. Locale

### 14.1. 配置时区



- 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.



若您安装了多个操作系统，请确保硬件时钟均被设为本地时间，或均为 UTC/GMT。

---

## 14.2. 选择您所在的国家/地区

- 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 being unable to use a Wireless network.
- If your country isn't in the list, click the Other Countries option and choose your country / region there.



If your country is only in the Other Countries list, after clicking OK it may seem that a country from the main list was chosen. Despite this, DrakX will actually apply your choice.

---

### 14.2.1. 输入法

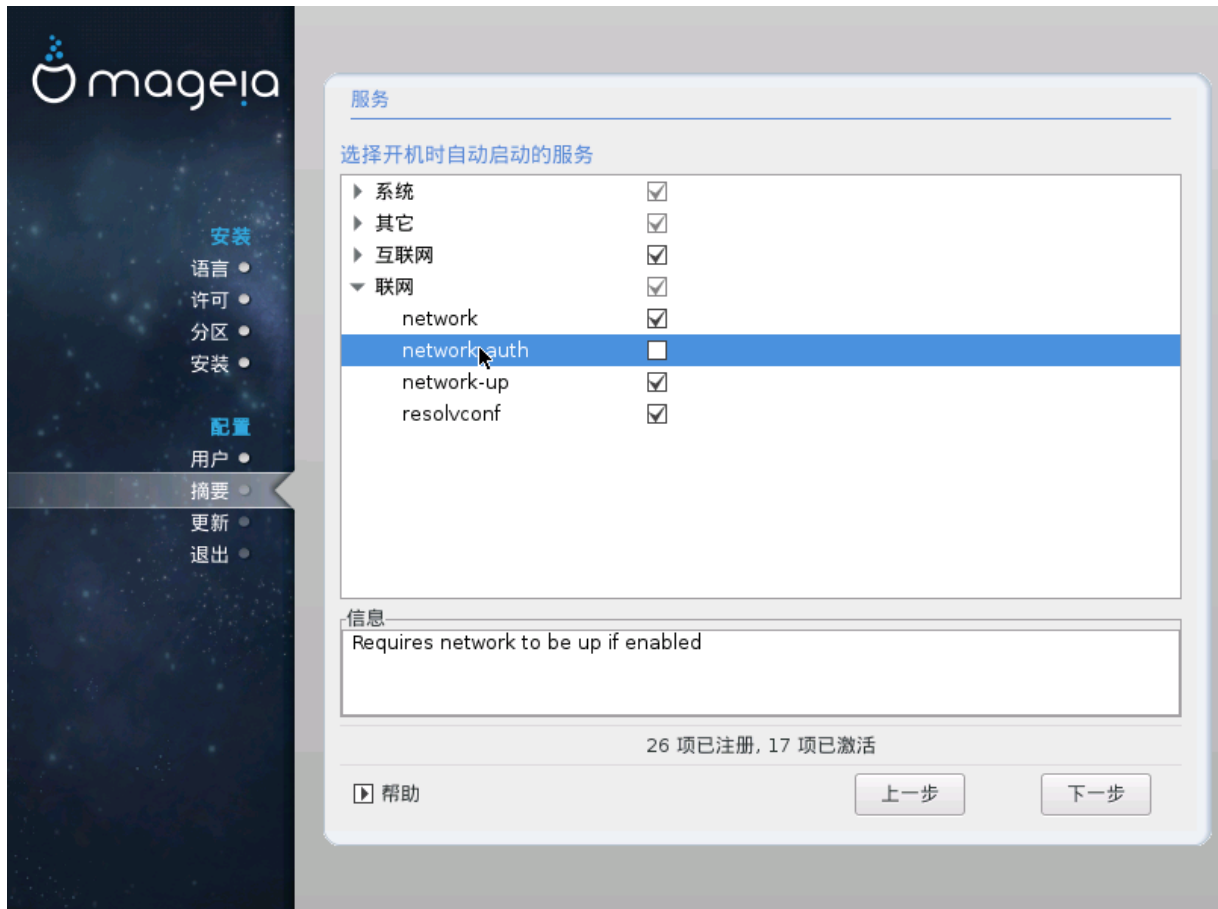
In the Other Countries screen you can also select an input method (at the bottom of the list). Input methods allow users to input multilingual characters (Chinese, Japanese, Korean, etc). IBus is the default input method, so users should not need to configure it manually. Other input methods (SCIM, GCIN, 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 post-install via Configure your Computer → System, or by running `localedrake` as root.

---

## 15. 配置服务

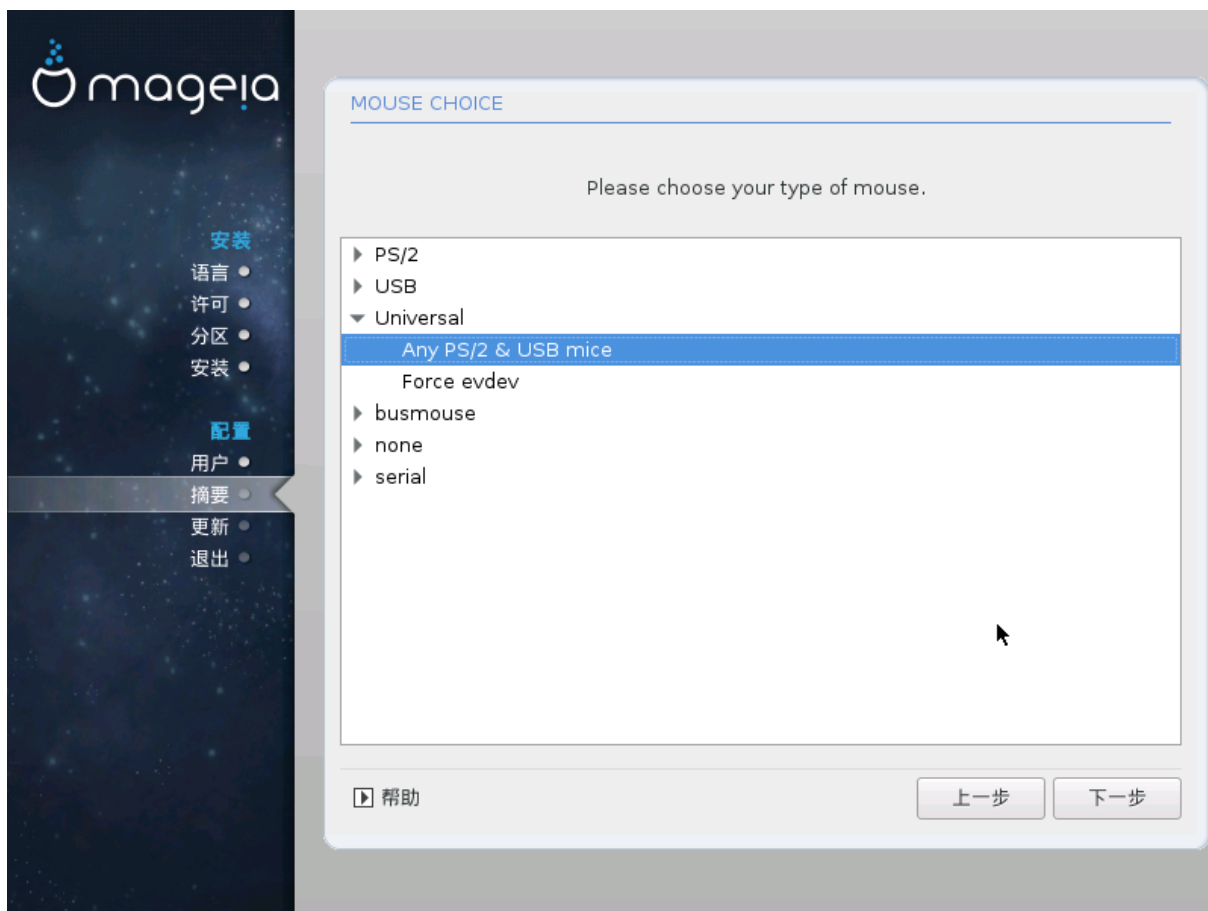


Here you can choose which services should start when you boot your system.

- Click on a triangle to expand a group to all the relevant services. The settings DrakX chose are usually good.
- 若高亮选中服务，则可在下方的信息框中查看此服务的细节。

只有在您完全了解您的行为的风险后再作出改动。

## 16. 选择鼠标

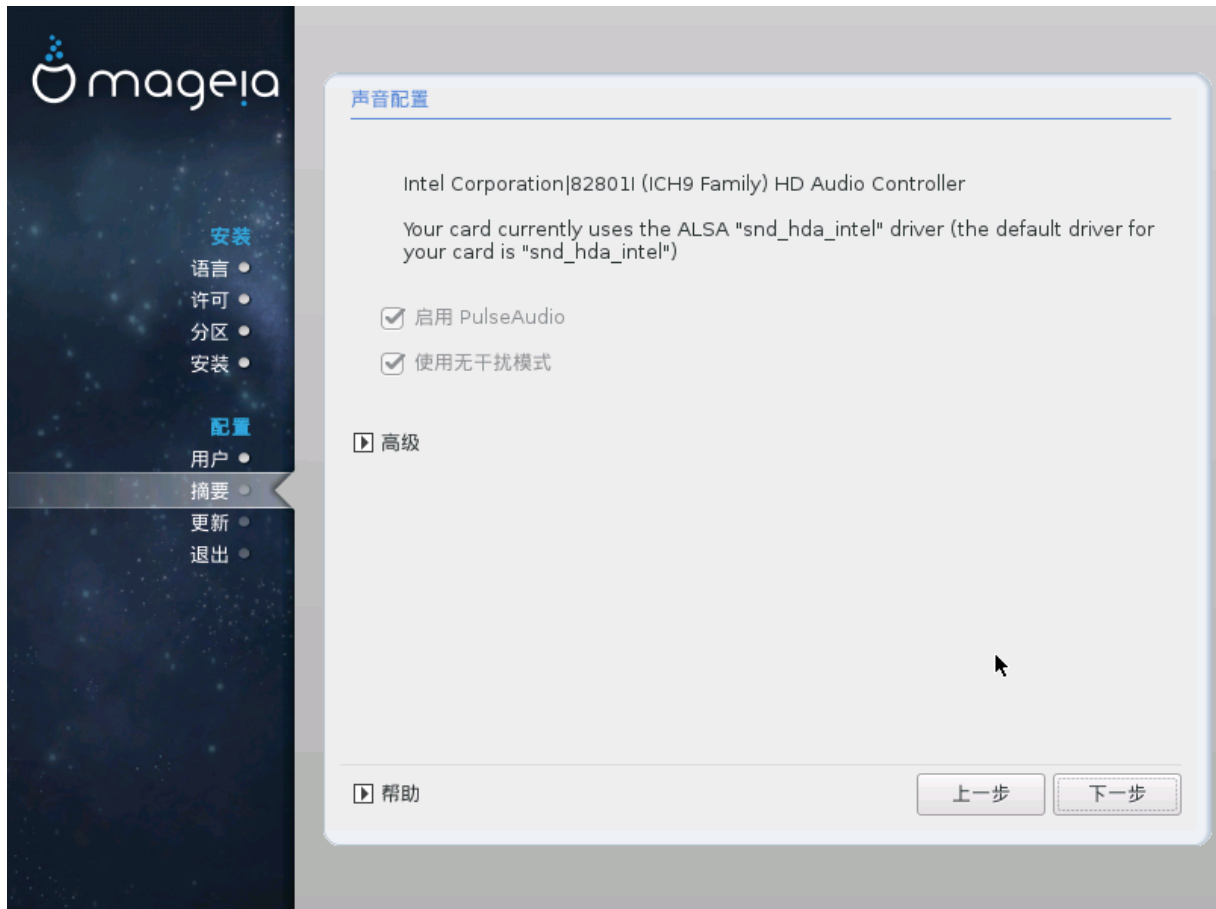


若您对鼠标的响应速度不满意，可以在这里进行调整。

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.

## 17. 声音配置



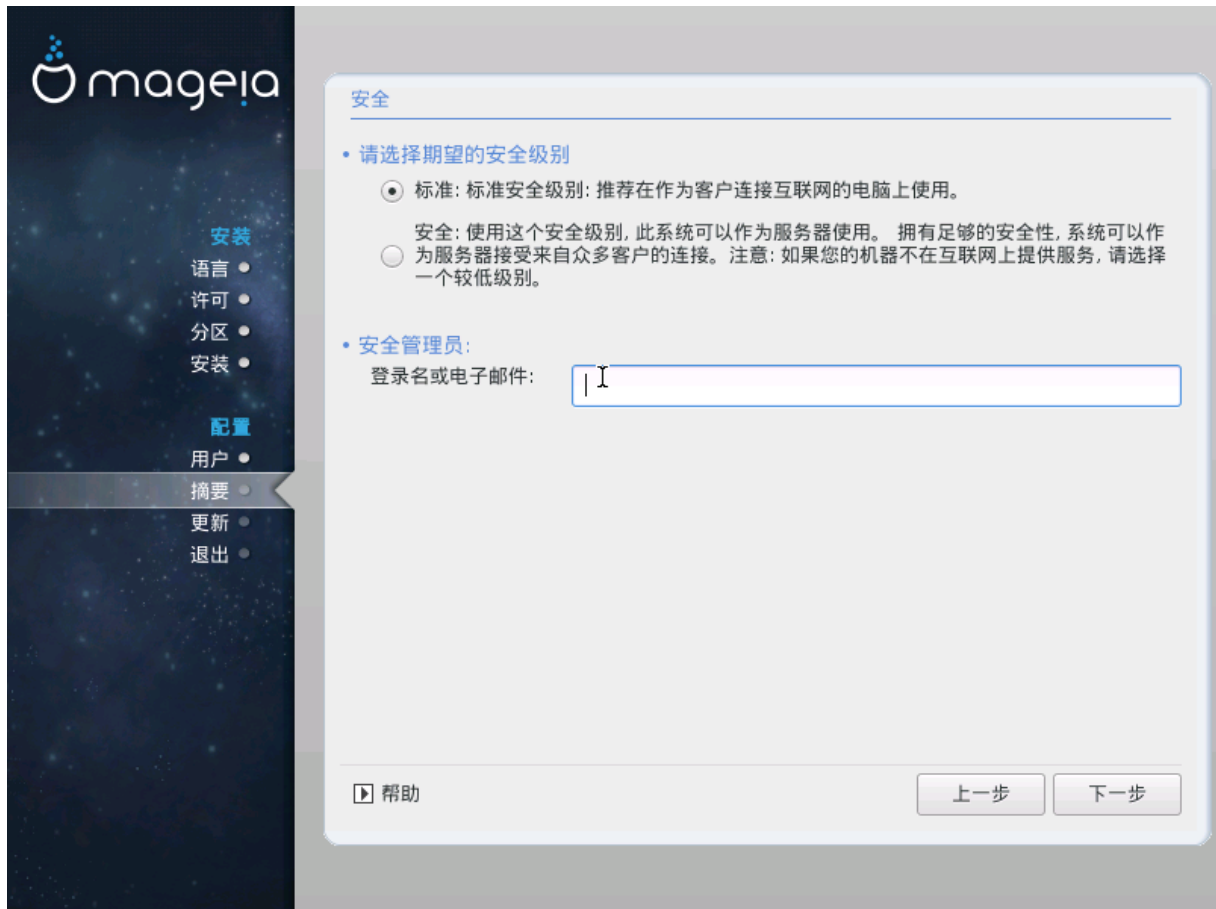
This screen shows the details of the sound card driver chosen for you by the installer, and this driver should work without problems.

However, if you encounter any issues post-install, then run draksound or start this tool via Mageia Control Center → Hardware → Sound Configuration. Then, in the draksound or Sound Configuration screen, click on Troubleshooting to find useful advice about how to solve the problem.

### 17.1. 高级

If there is no actual default driver for your sound card, there may be other possible alternative drivers available to choose from. If this is the case, but you think the installer has not made the most appropriate choice, you can click on Advanced to manually specify a driver.

## 18. 安全级别



Please choose the desired security level

Standard is the default, and recommended setting for the average user.

Secure will create a highly protected system - for instance if the system is to be used as a public server.

Security Administrator

This item allows you to configure an email address to which the system will send security alert messages when it detects situations which require notification to a system administrator.

A good, and easy-to-implement, choice is to enter <user>@localhost - where <user> is the login name of the user to receive these messages.



The system sends such messages as Unix Mailspool messages, not as "ordinary" SMTP mail: this user must therefore be configured for receiving such mail!

It will always be possible to adjust your security settings post-install in the Security section of the Mageia Control Center.

## 19. Firewall

This section allows you to configure some simple firewall rules: they determine which type of message from the Internet will be accepted by the target system. This, in turn, allows the corresponding services on the system to be accessible from the Internet.

In the default setting (no button is checked), no service of the system is accessible from the network. The Everything (no firewall) option enables access to all services of the machine - an option that does not make much sense in the context of the installer since it would create a totally unprotected system. Its veritable use is in the context of the Mageia Control Center (which uses the same GUI layout) for temporarily disabling the entire set of firewall rules for testing and debugging purposes.

All other options are more or less self-explanatory. As an example, you will enable the CUPS server if you want printers on your machine to be accessible from the network.

### Advanced

The Advanced option opens a window where you can enable a series of services by typing a list of "couples" (blank separated)

<port-number>/<protocol>

- <port-number> is the value of the port assigned to the service you want to enable (e.g. 873 for the RSYNC service) as defined in RFC-433;

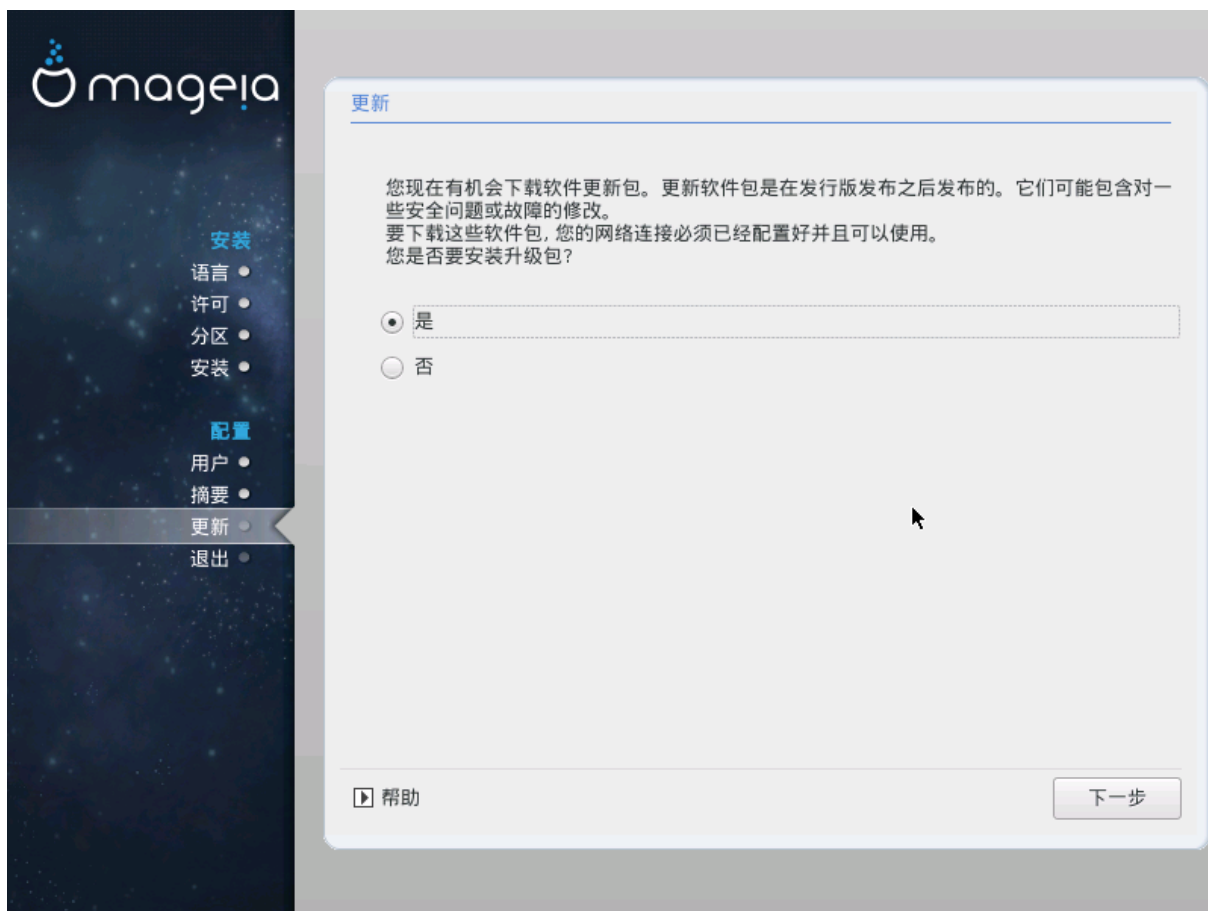
- <protocol> is one of TCP or UDP - the internet protocol that is used by the service.

For instance, the entry for enabling access to the RSYNC service therefore is 873/tcp.

In case a service is implemented to use both protocols, you specify 2 couples for the same port.



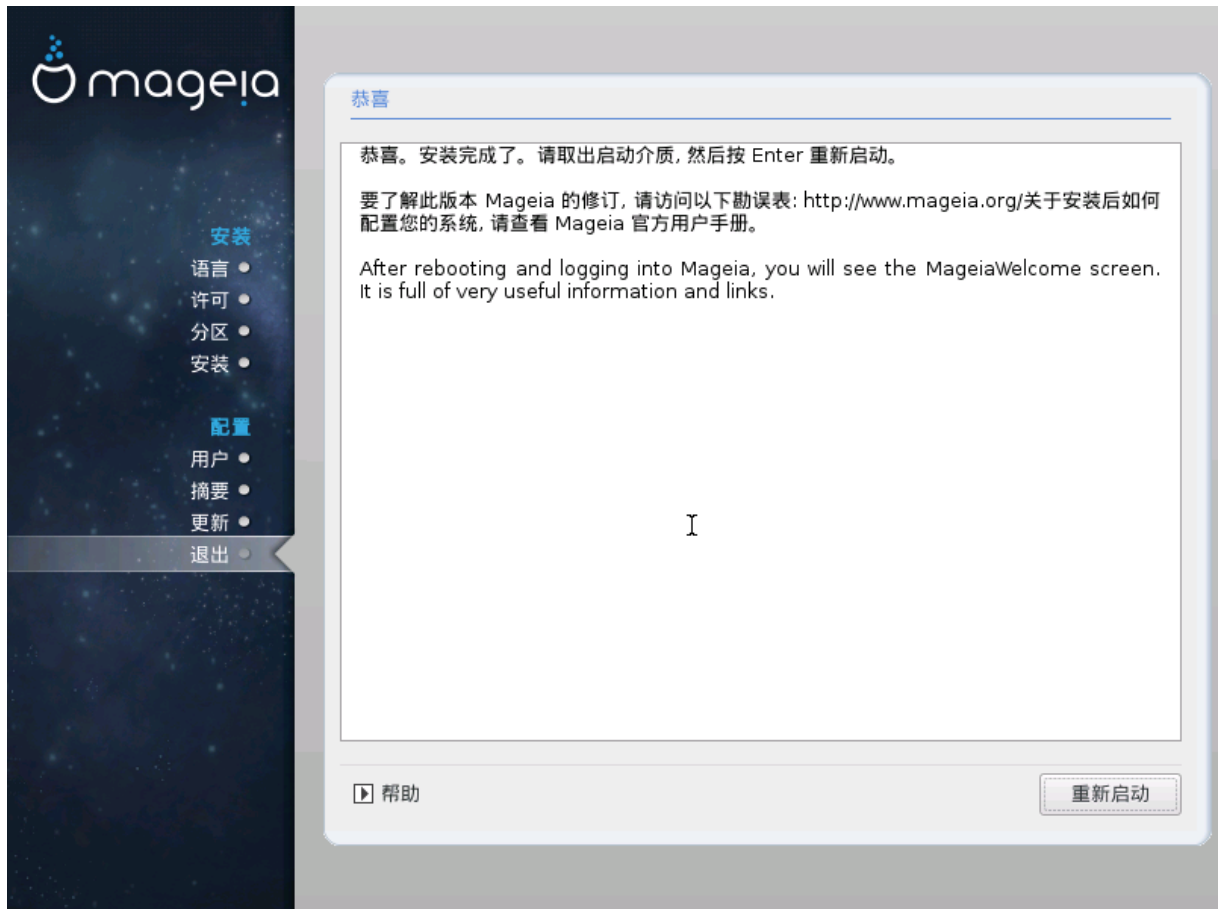
## 20. 更新



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

- Select 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
- Press Next to continue

## 21. 恭喜



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

After rebooting, you can use the bootloader screen to choose which operating system to start (if there are more than one on your computer).

若您没有调整引导器的配置，将会自动启动 Mageia。

Enjoy!

Visit [www.mageia.org/en/](http://www.mageia.org/en/) [http://www.mageia.org/en/] if you have any questions or want to contribute to Mageia

## 22. 卸载Mageia

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.