

CAELinux 2007 Installation guide

J. Cugnoni, www.caelinux.com, 2007

This guide is intended to help you start and install CAELinux 2007 on your computer. CAELinux 2007 is distributed as a liveDVD, which means that you can run all the softwares by simply booting from the DVD. But for enhanced performance and customization, it is highly recommended to use a native installation of CAELinux on your hard disk.

This guide presents two installation scenarios:

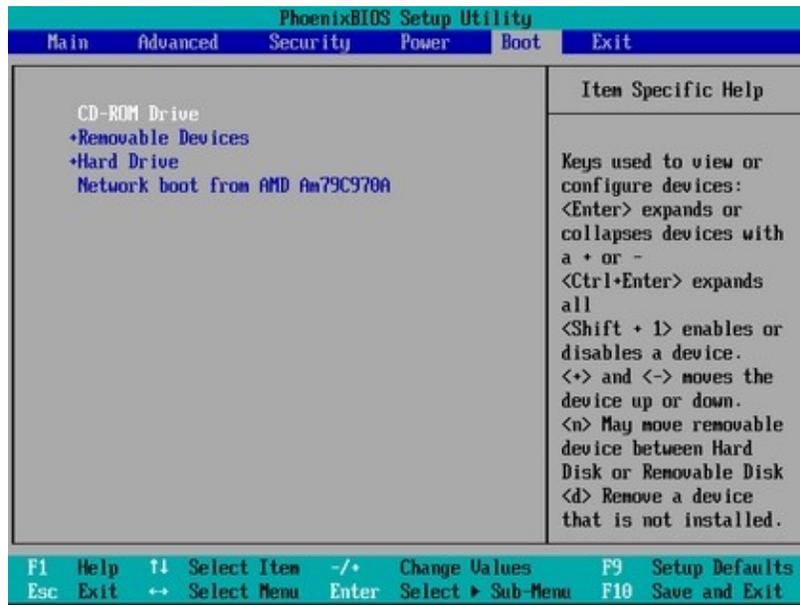
- A) installation of CAELinux 2007 on an empty hard disk
- B) installation of CAELinux 2007 in dual-boot with Windows

Please note that CAELinux is a customization of the excellent PCLinuxOS distribution. For more details and documentation on PCLinuxOS, please visit www.pclinuxos.com. If you like CAELinux, we also encourage you to support the efforts of the PCLinuxOS development community with a small donation. CAELinux would not have been so good without their great contribution!

Starting CAELinux 2007 from the LiveDVD

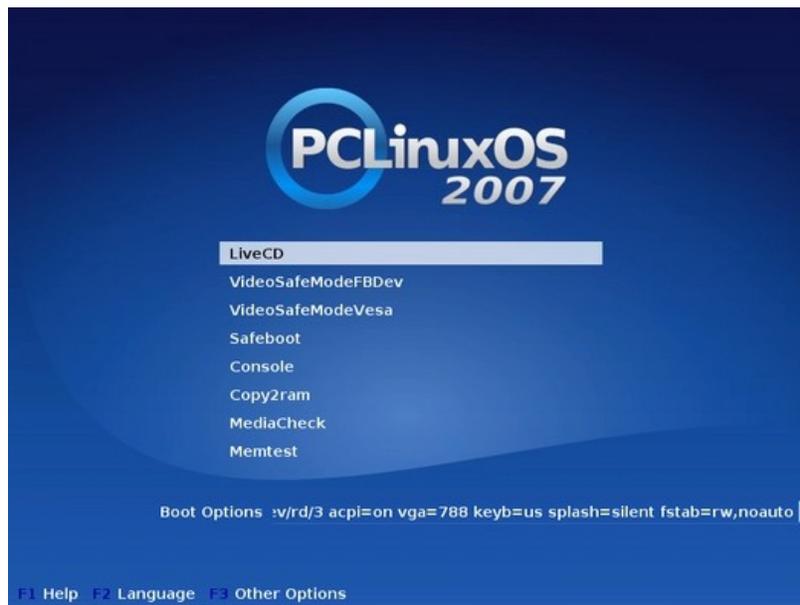
In all cases, you will need to start CAELinux 2007 in liveDVD mode before you can try the tutorials or install the linux distribution to you hard disk. To use the liveDVD, you will have to insert the DVD in your drive and restart your computer to start your PC from the DVD drive (please note that DVD drives are usually called CD-ROM in the BIOS...). Depending on your type of BIOS & boot options, booting the computer from the DVD may or may not be the default choice.

If starting from the DVD is not automatic, you will need to change the Boot settings in your BIOS. To do it, enter the BIOS when the computer starts; depending on you computer, you will need to press F1, F2, F8, or DEL (see your computer manuals for more details). Then in BOOT options, put your DVD drive at the top of the priority list.



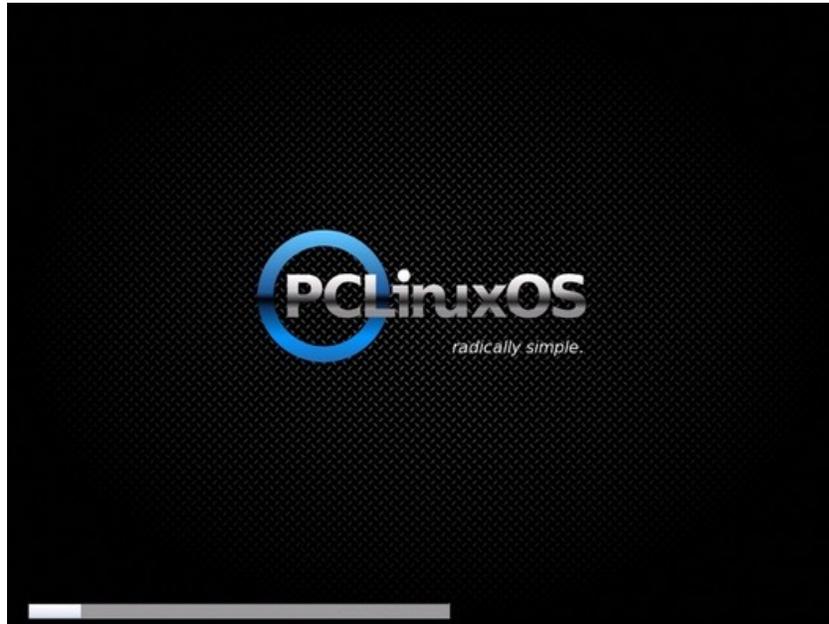
One recent computers, you may also find an option to display a “Boot device selection menu” which allows you to simply select which media you would like to boot at computer startup.

When the computer boots from the DVD, you will see this 'Start up menu':



By default, the system will start in the “LiveCD” mode, but if you experience problems, you can also try to boot in “VideoSafeModeVesa” (uses the generic VESA driver to circumvent graphic card compatibility problems) or “MediaCheck” (checks if the DVD media has some errors before starting the system). The other options should be used only in critical cases.

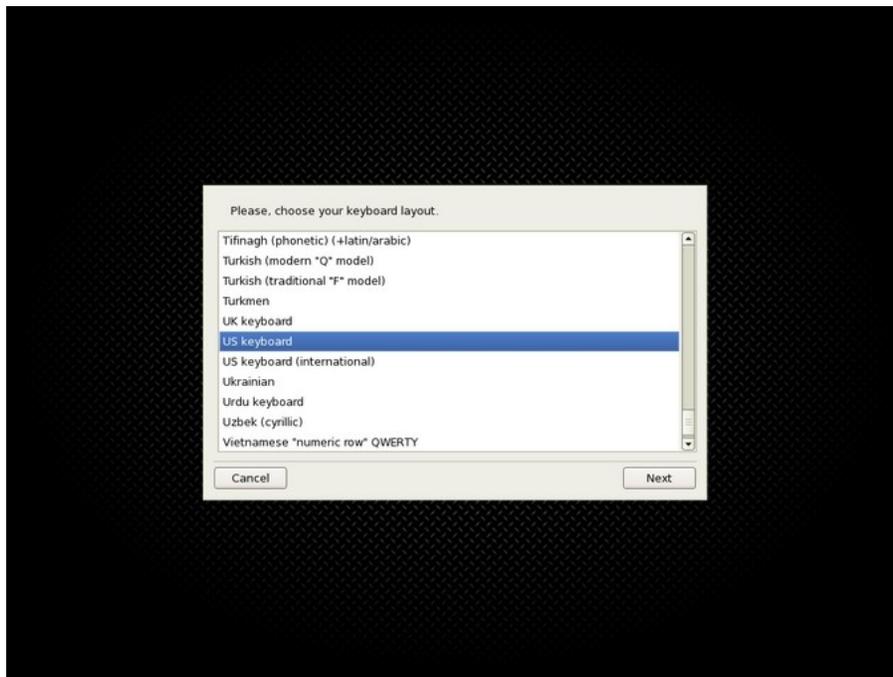
So now press Enter to start the system in LiveCD mode; you will then see the startup screen:



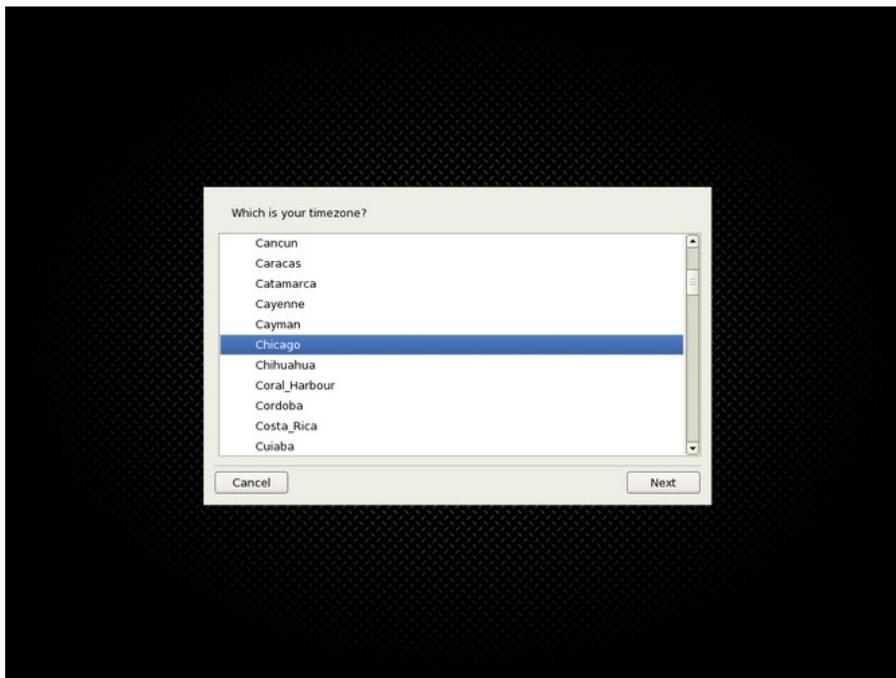
If you would like to have more information about the boot process & possible messages, just press ESC to activate “verbose” mode:

```
Using IPI No-Shortcut mode
ACPI: (supports S0<6>): tsc clocksource has been installed.
S1 S5)
md: Autodetecting RAID arrays.
md: autorun ...
md: ... autorun DONE.
RAMDISK: Compressed image found at block 0
UFS: Mounted root (ext2 filesystem).
--- MRLIVECD LINUXRC -----
Setting up kernel parameters: input: AT Translated Set 2 keyboard as /class/input/input0
[ OK ]
Restoring udev files: [ OK ]
Creating randisk - usable memory (511742/1023484/1035768kB) [ OK ]
Creating 2.6 root filesystem (511742/1035768kB) on /dev/shm: [ OK ]
Making extra nodes: [ OK ]
Loading basic cdrom modules for Kernel 2.6 [LOADED]
Loading compressed loop module: [LOADED]
Probing SCSI devices: [LOADED]
Starting USB support [ OK ]
Probing USB devices: [LOADED]
[ OK ]
Searching for the loop image: /dev/hdc [ OK ]
[ OK ]
Mounting loop image on /initrd/loopfs:
--- Exiting LINUXRC -----
--- MRLIVECD RC.SYSINIT -----
Setting up AUFS
-- rc.sysinit: Starting hwdetect -----
HWDetect - MAIN -----
Initialising USB controllers
```

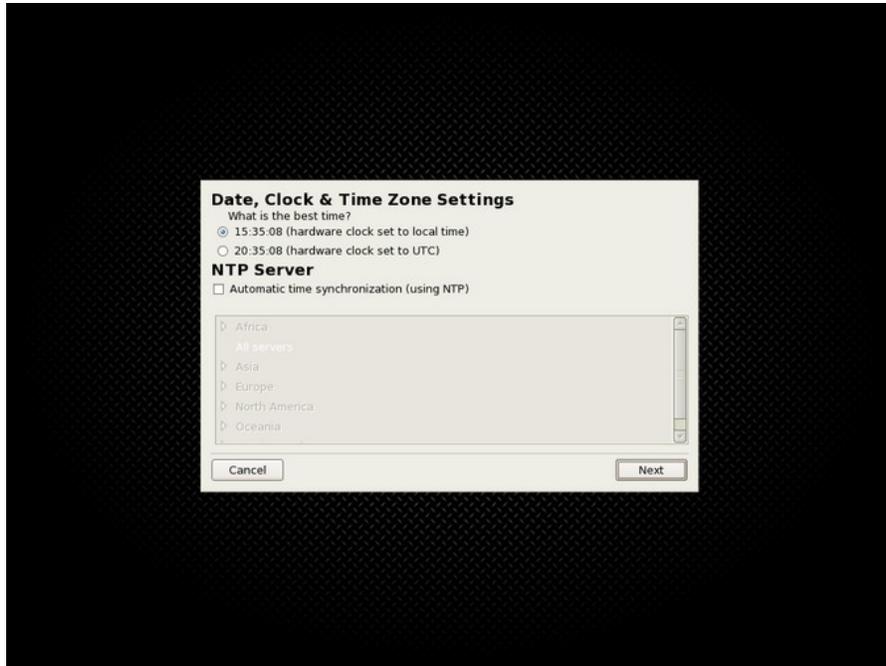
When the system has successfully started, you will see the initial configuration wizard. In this first window, select your preferred keyboard layout & click Next.



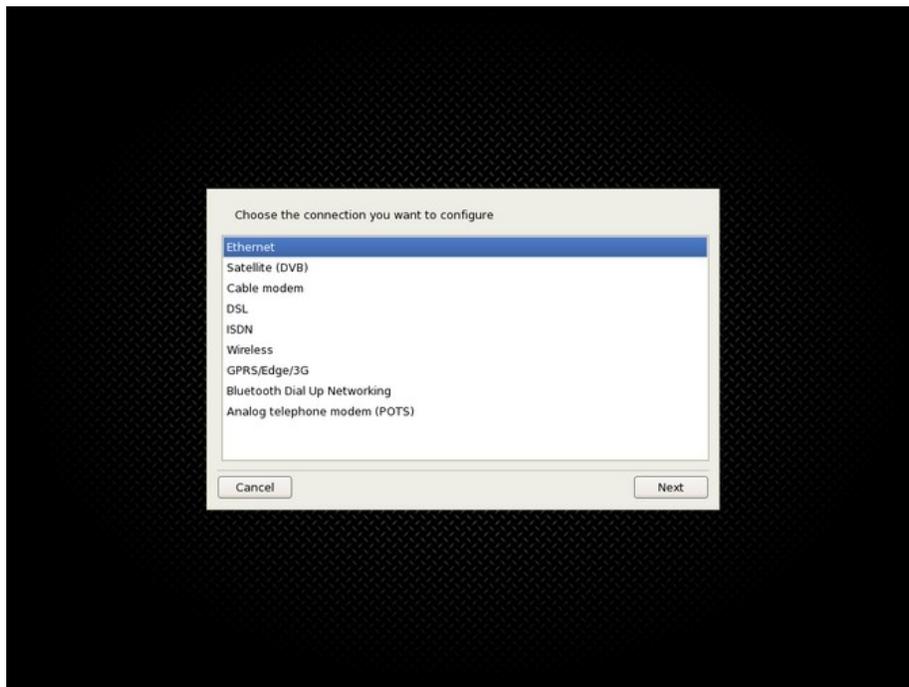
Now select a city near your place (for time zone selection).



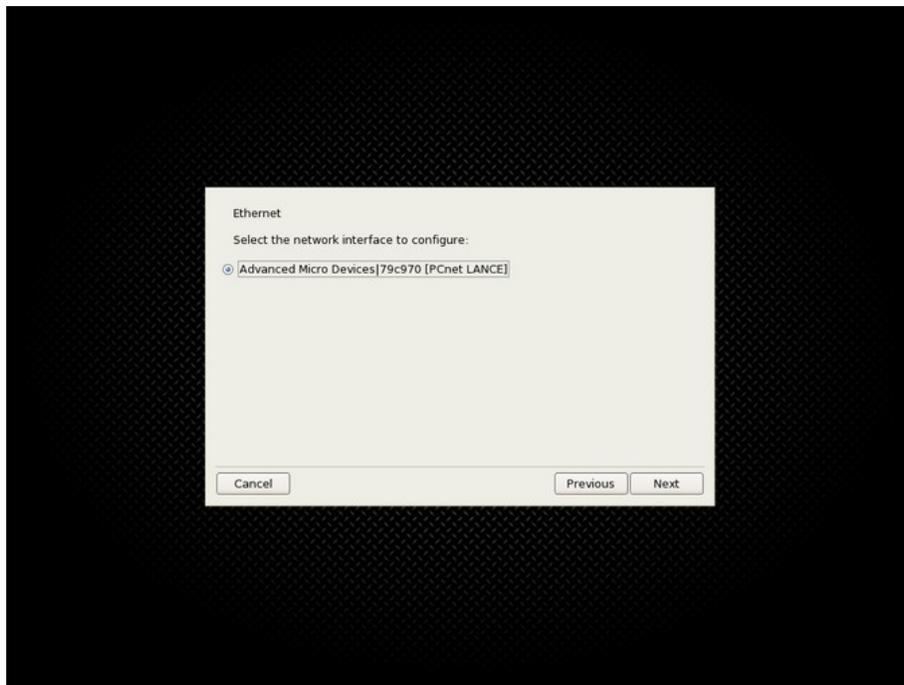
Now select or adjust the time settings.



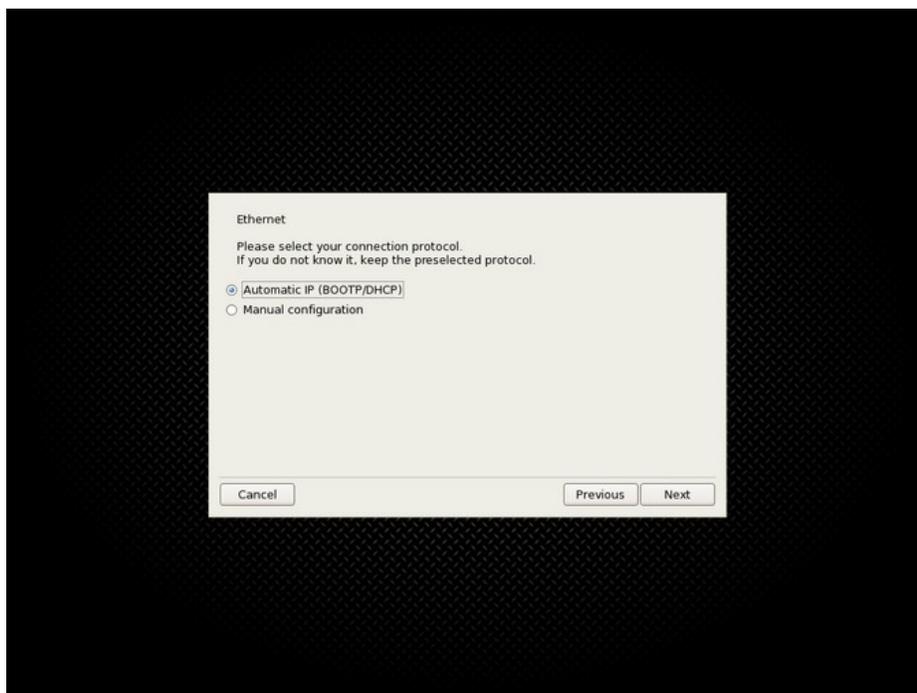
In the next part of the configuration wizard, you have the opportunity to setup network & interface parameters. If you do not want to configure the network at this stage, just press "Cancel". To go on in the setup of the network, select a type of network connection for internet access, for example Ethernet.



Select the network interface to configure:



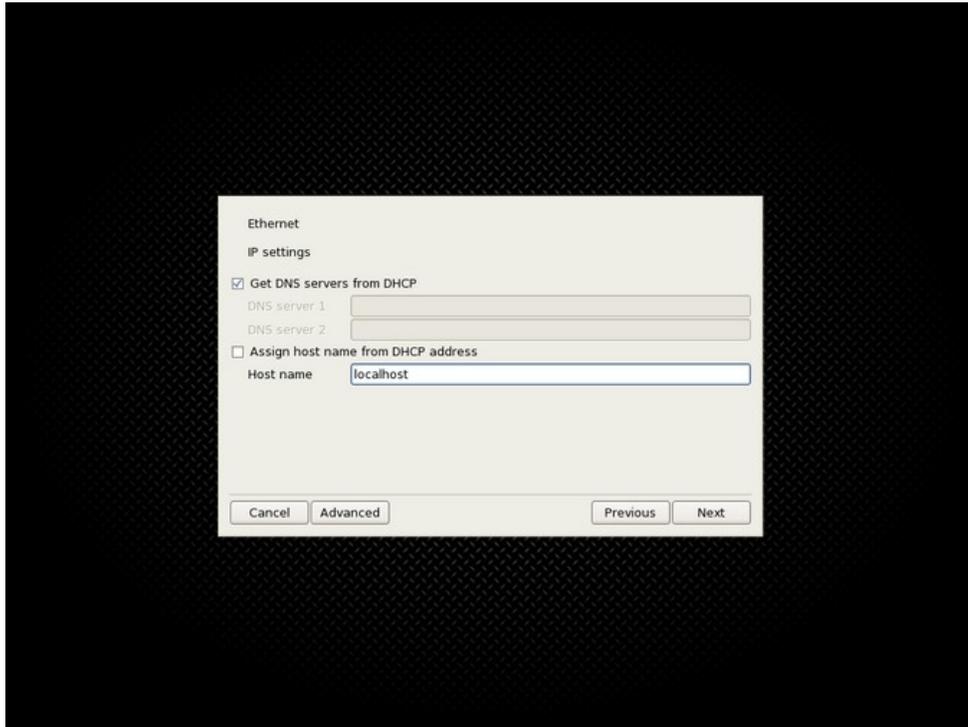
And choose between Automatic (DHCP) or manual IP configuration. If you don't know your IP address settings, it probably means that DHCP is the right choice (to be used with ADSL routers for example).



In this next page, you will need to define the settings for DNS & hostname. If you selected DHCP before, it is probably a good choice to use also DHCP to configure

the DNS.

CAUTION: be sure to uncheck 'assign host name from DHCP'
and to define host name = localhost



Using these settings, all the included softwares will work without any manual change of their settings (some CAE application are designed to work in a well defined network environment!!).

Finally, click twice on Next to activate the network connection:



Congratulation, the network was successfully configured:



Logging in and opening a KDE desktop session:

In CAELinux 2007, there are two predefined user accounts:

caelinux

This is the default user of CAELinux 2007 and it is highly recommended to use this account for everyday normal usage.

Login : *caelinux*

Password: *caelinux*

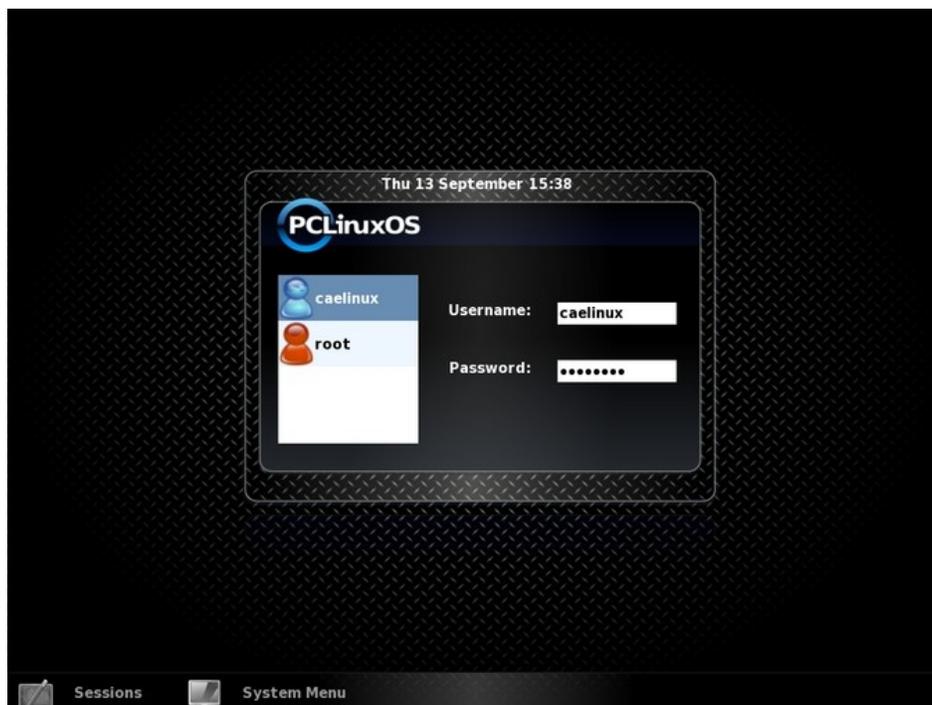
root

This account is the “super administrator” user of the distribution. You should only use it to install & configure your computer.

Login : *root*

Password: *root*

In the login screen below, click a user account, and enter the password. Validate with Enter.

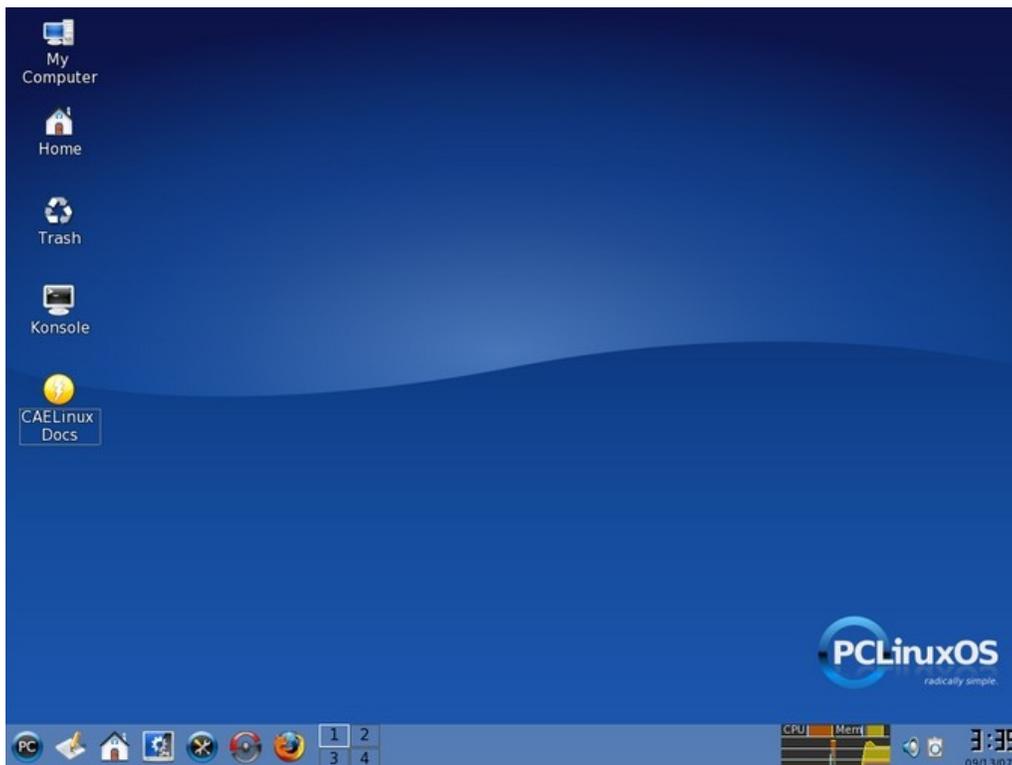


Note that you can also shutdown or restart the system in the System menu below and select alternative session option in the Sessions menu.

The KDE desktop will now be loaded ...



Finally, here is how the KDE desktop of CAELinux 2007 looks like:



The most important links are proposed on the desktop:

- "My Computer" summarize all the resources / media available on your computer;

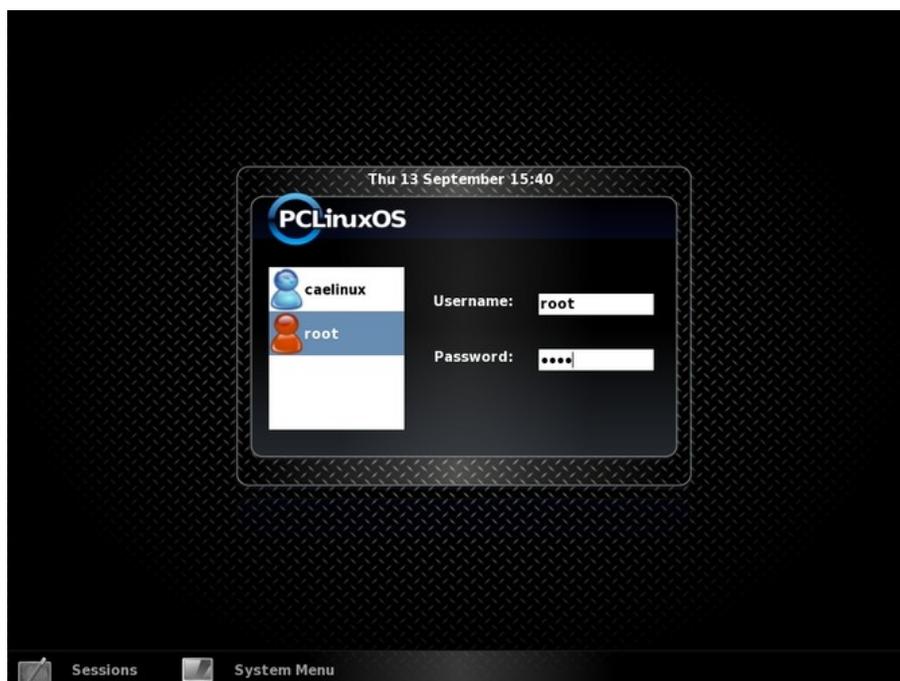
- “Home” is a link to your personal folder.
- In the main tool bar, the first icon is called the K-menu (similar to the well-known Windows Start menu) and give you access to all the installed programs.
- The 5th icon (at the left of the “S” icon) will open the “PCLinuxOs Control Center”, which give you access to all the configuration settings of your computer.

To learn more on CAELinux 2007 and its content you should then have a look at the “CAELinux Docs” link on the desktop. Here you will find a “GettingStarted” document and several tutorials to start learning how to use all these great open source CAE softwares.

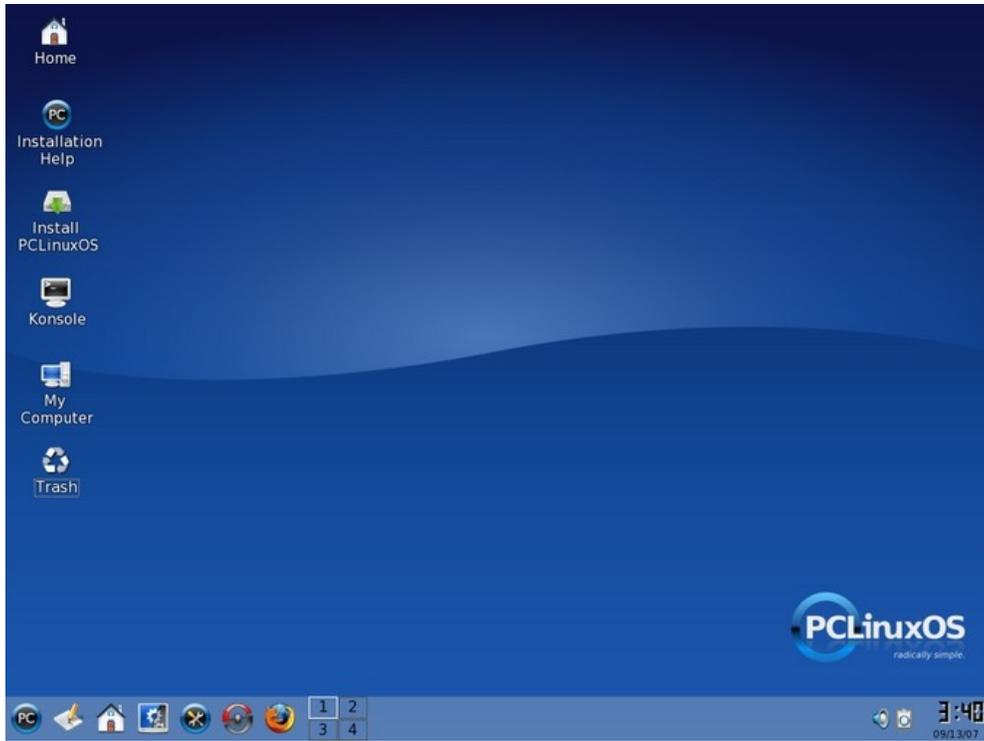
Installing CAELinux 2007 on a blank hard disk

Installing CAELinux to hard disk is a really simple task. To start with the simplest case, we will first see how to install CAELinux to a blank hard disk.

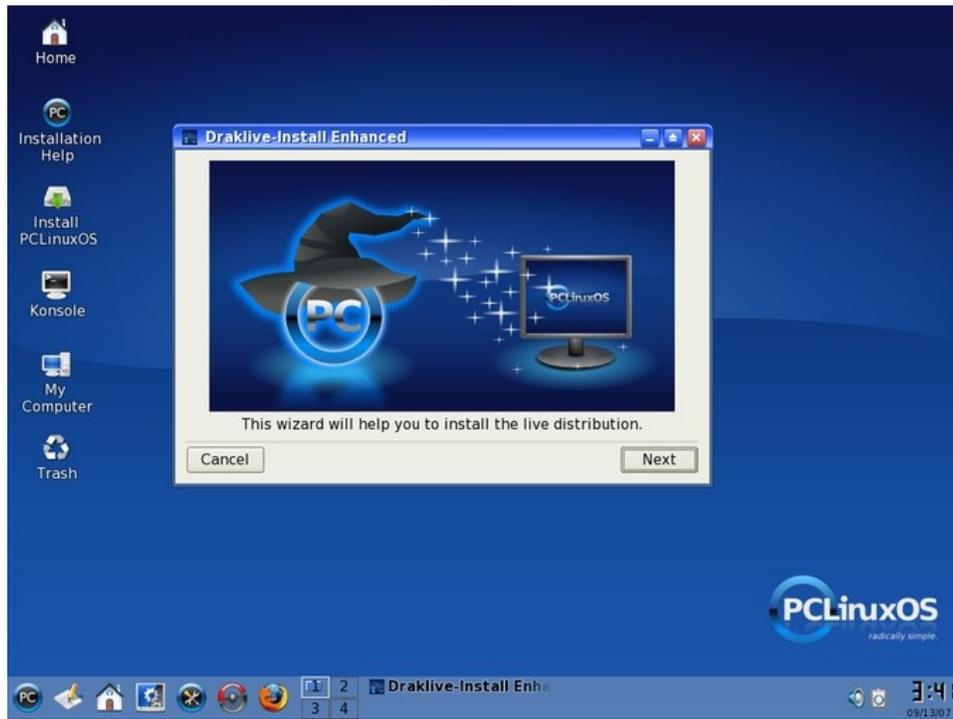
First of all, open a session as “root”:



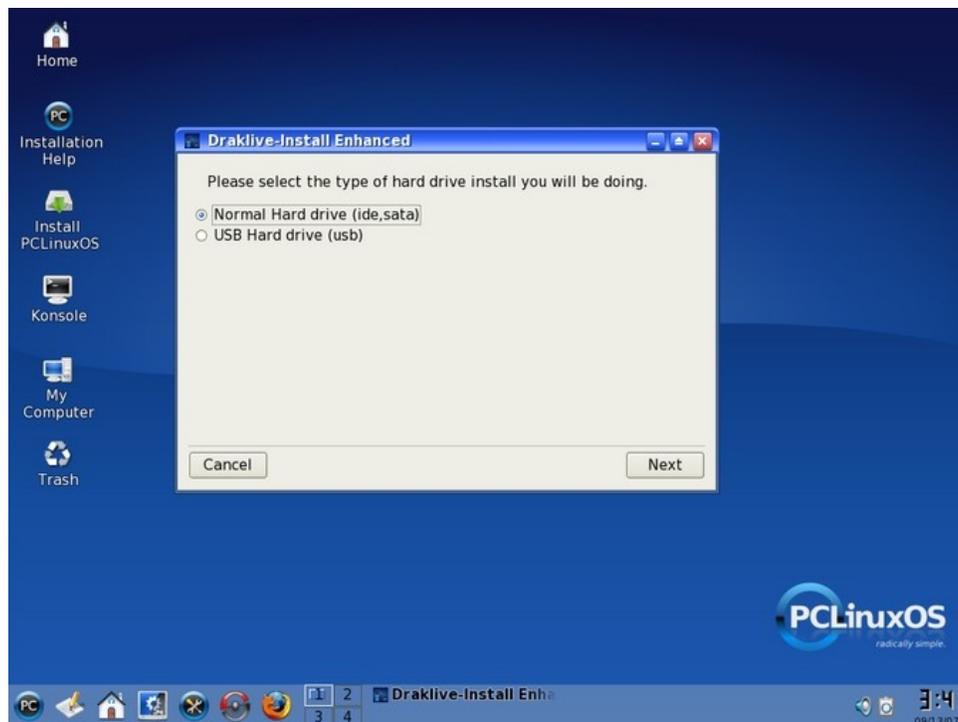
On the desktop, click “Install PCLinuxOS” to start the installer



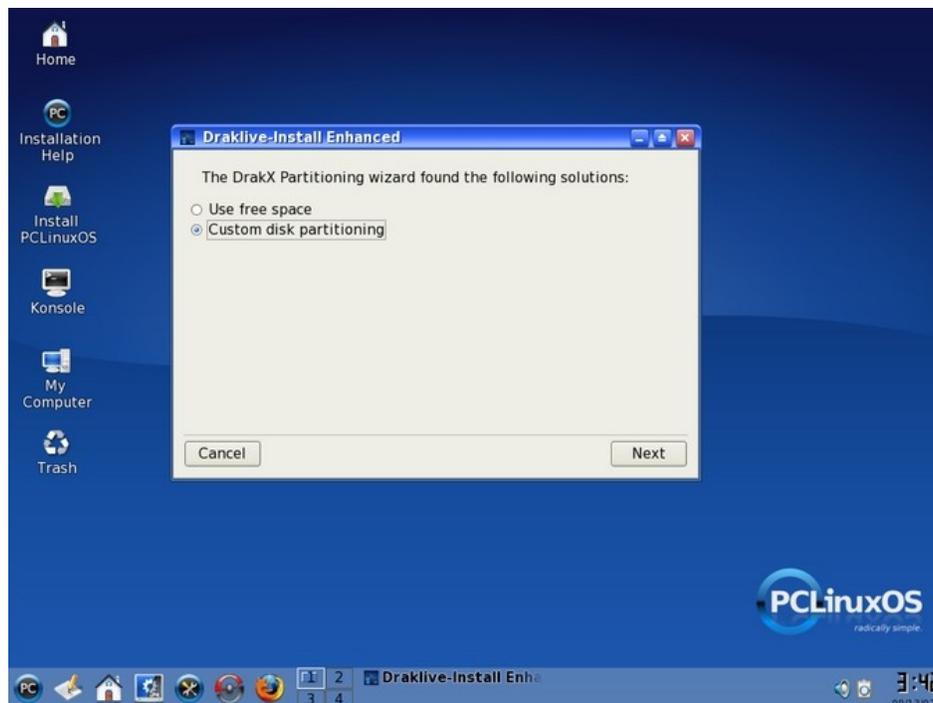
Click Next to start the installation Wizard:



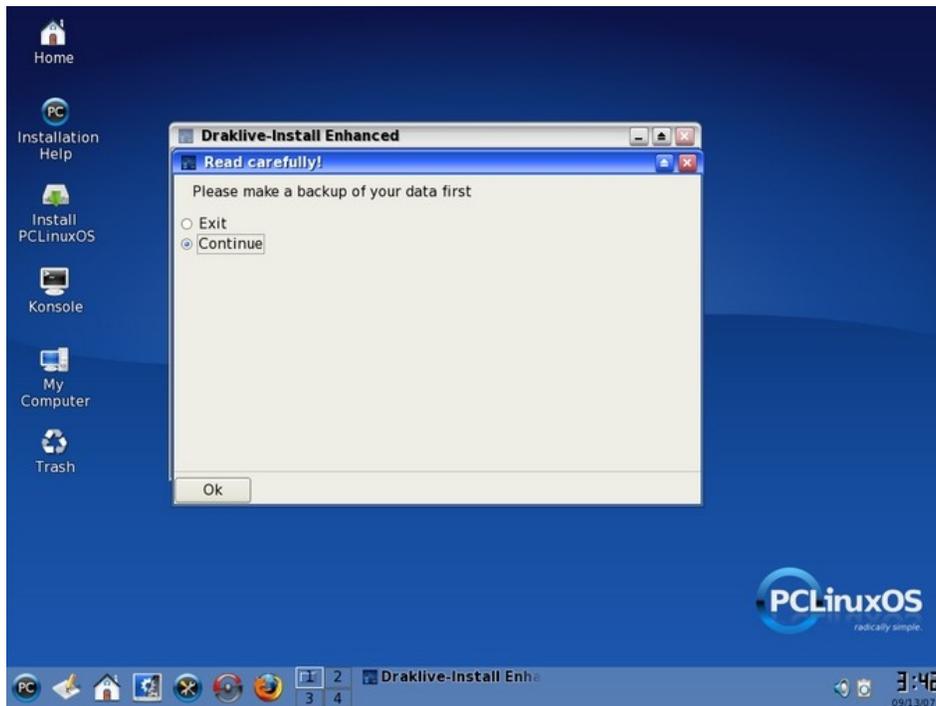
Select "Normal Hard drive":



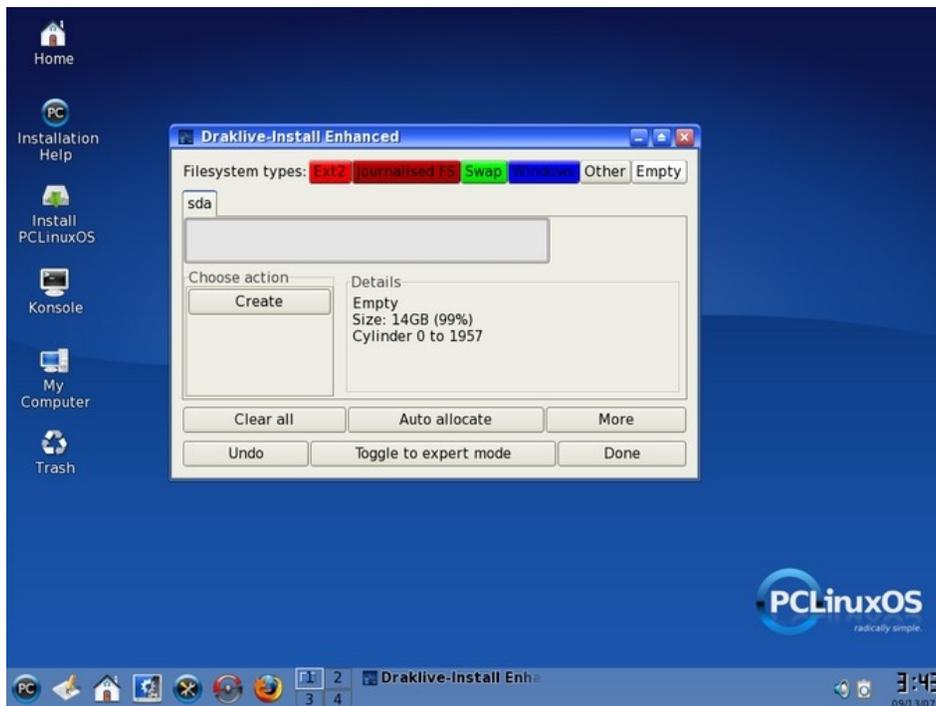
Choose "Custom disk partitioning":



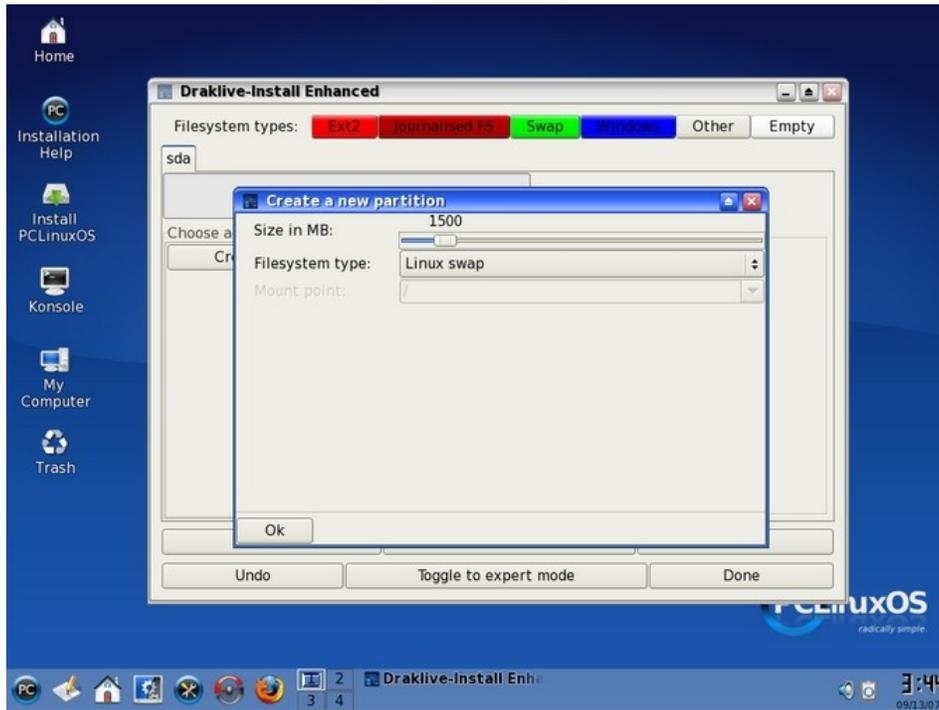
Validate with "Continue":



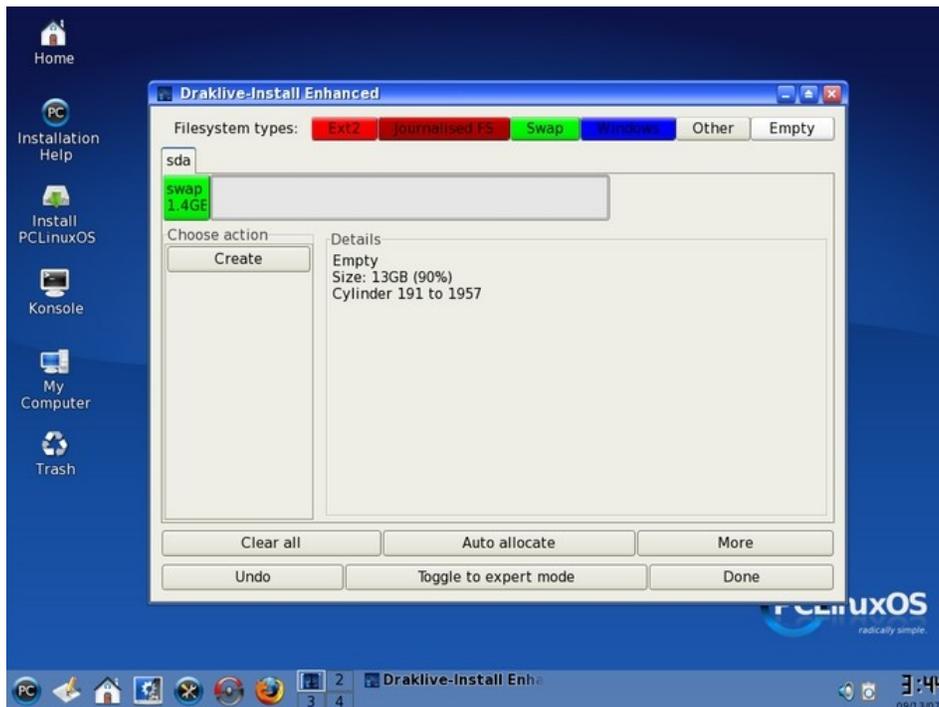
In this next window, you can manage your hard disk partition as you would do it with other tools like Partition Magic for example. Click in a “blank” area on your hard disk and click “Create” to create new partitions.



First, you will need to create a Linux Swap partition of approx. 1.5 Gb (can be less if necessary). Move the cursor to adjust the size of the new partition & click OK.

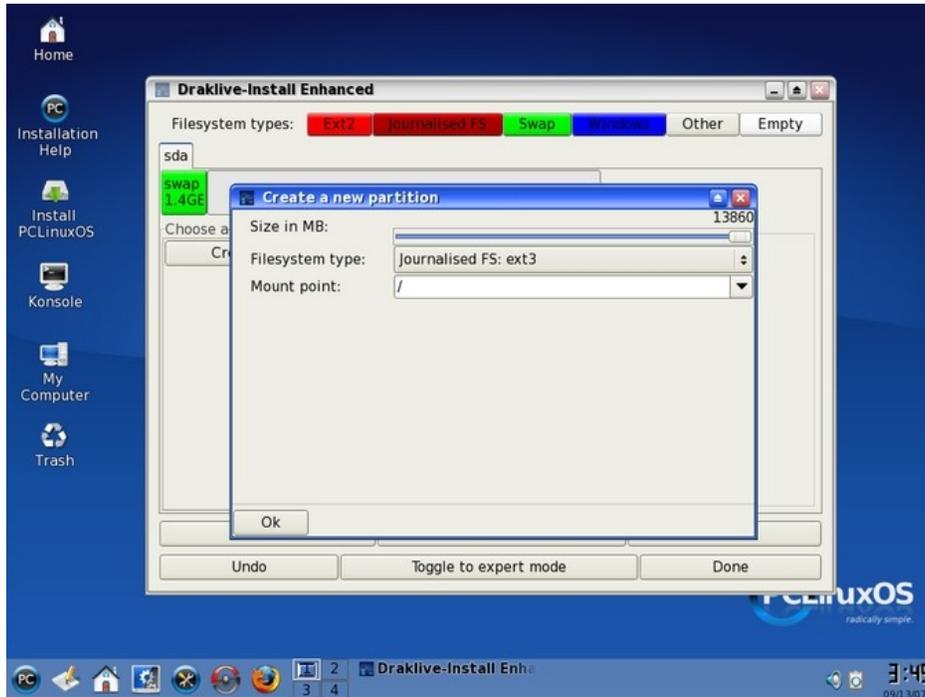


This what you get after this first step. Now click the “blank” area on your hard drive map and click once again on Create.

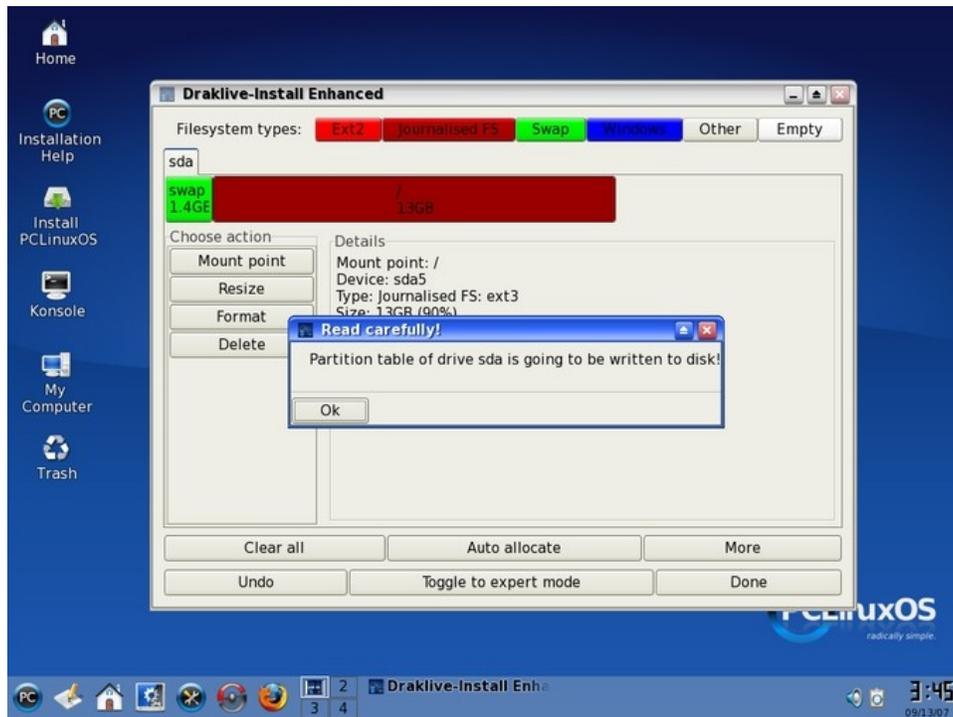


The content of CAELinux 2007 is compressed on the DVD and will take approx.

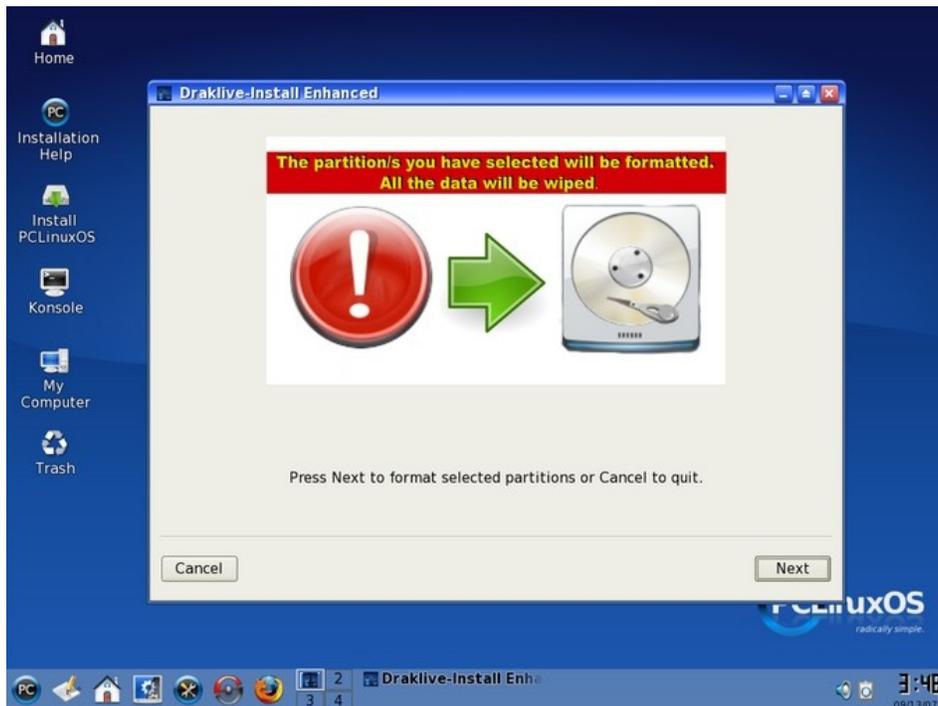
8Gb of hard disk space once installed. To work in good conditions, we strongly recommend to only use a single “root” (or “/”) partition of approx. 15Gb. The preferred file system type is “Journalized FS: Ext3”. Adjust the cursor, select “Ext3” file system, check that mount point = / and click OK to create a large “/” partition.



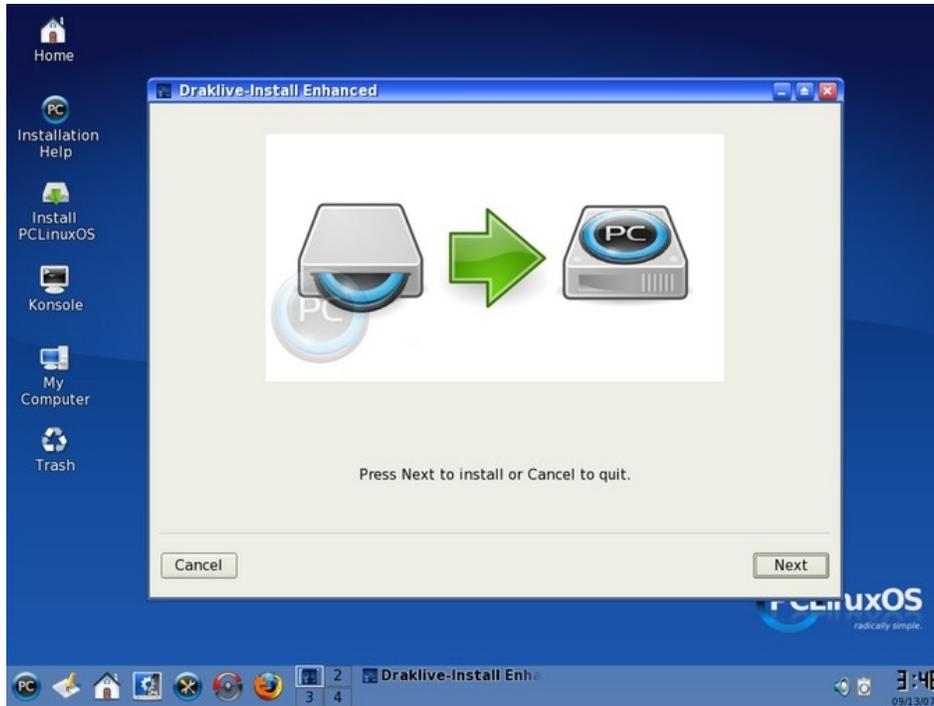
Now you have all the necessary partitions to continue the installation. Click “Done” and confirm with “OK”.



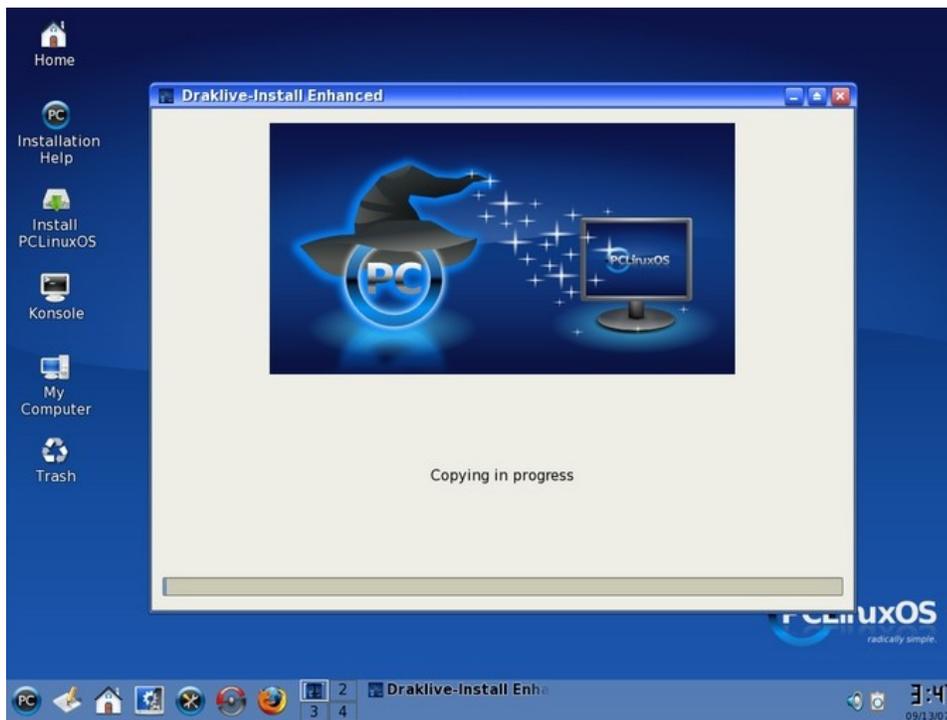
In the next window, you should confirm that you want to format the newly created root ("/") partition.



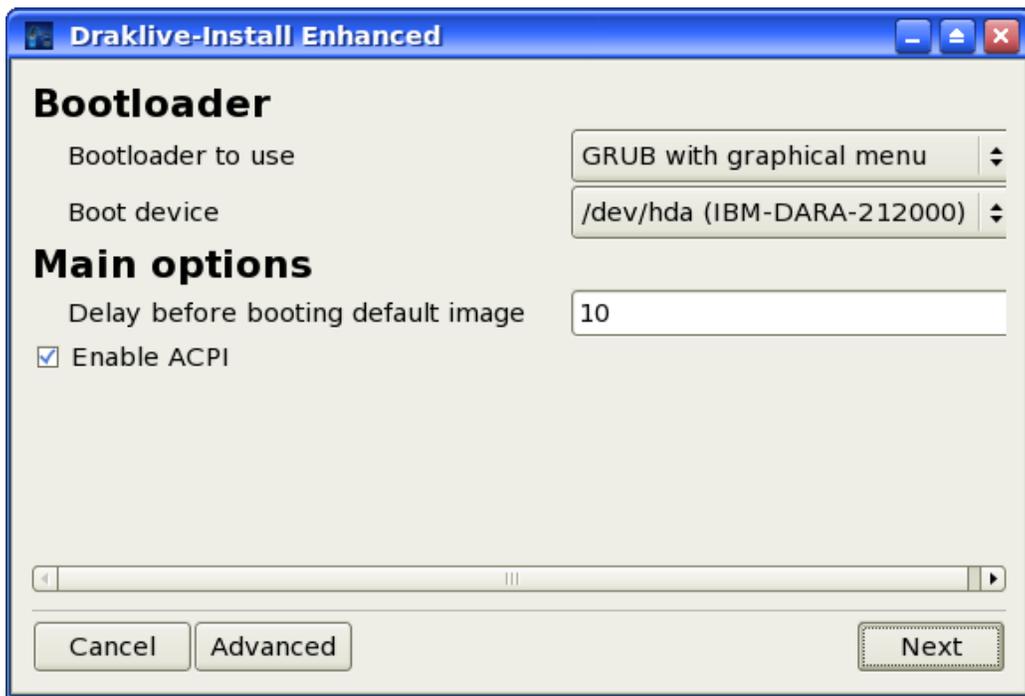
Click "Next" to start copying the files to the hard disk.



During the file copy, you can continue your activity in the OS as usual, or if you prefer have a coffee ;-)

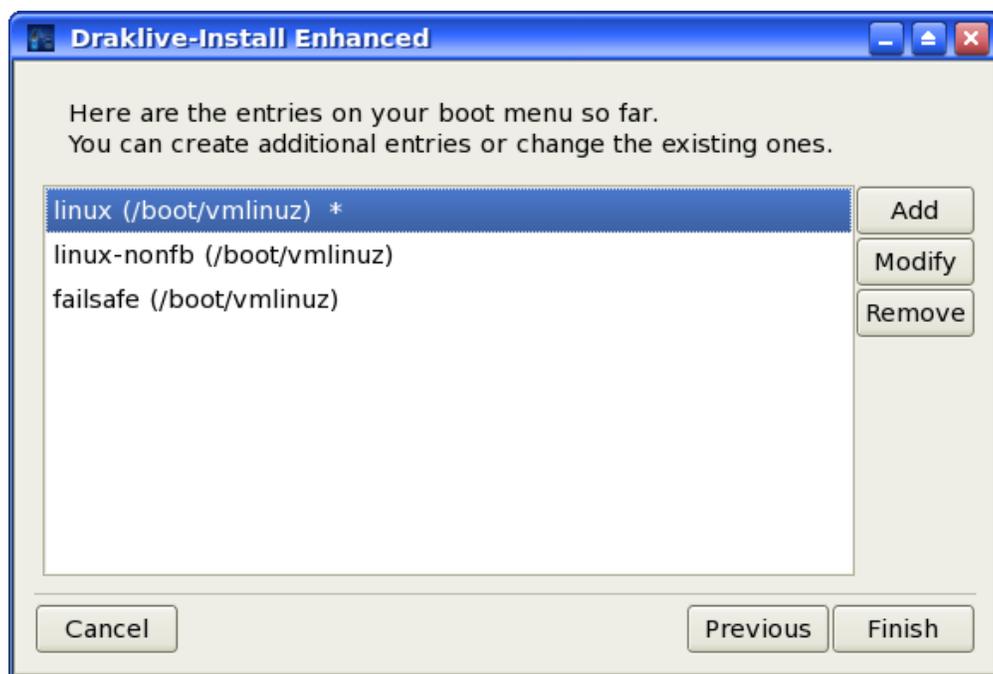


Now we have reached the last stages of the installation. To be able to boot your new OS, you will need to install a boot loader. We recommend that you install the “Grub” boot loader in the MBR (this is the default option). Click Next.

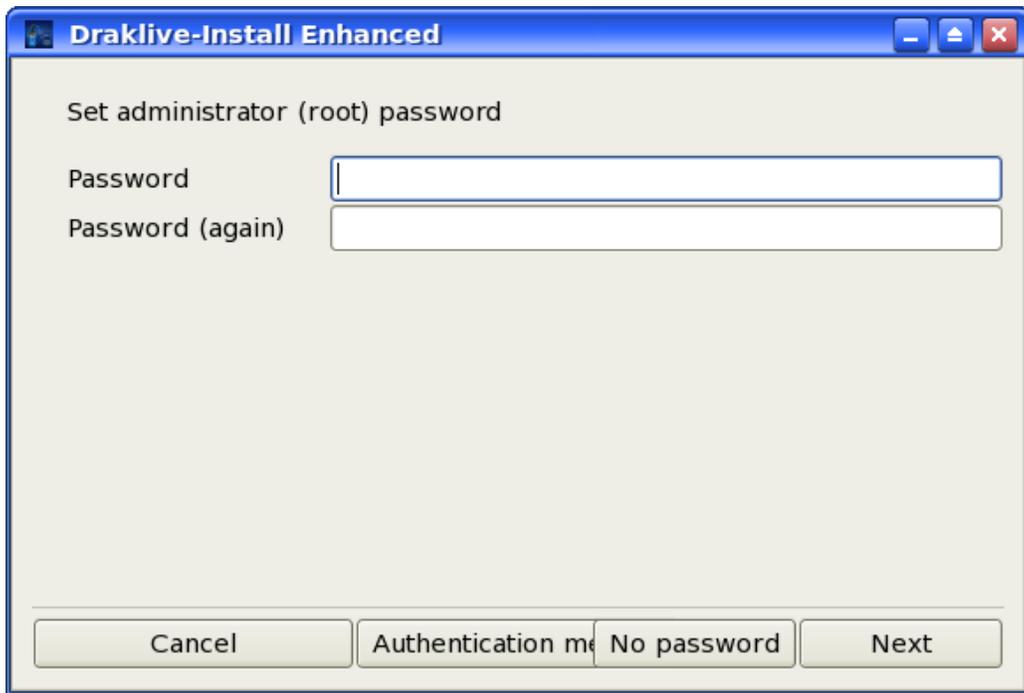


Finally, you can configure the entries (menu) of the bootloader. If you don't have any other OS installed; you should just click Next to accept the default settings.

If you have any FAT or NTFS partition in the system, you will see one or more “Windows_X” entries that will allow you to boot any Microsoft OS installed on these partitions. If you have another Linux OS installed on another partition, you should manually add an entry with its boot options by clicking “Add”.

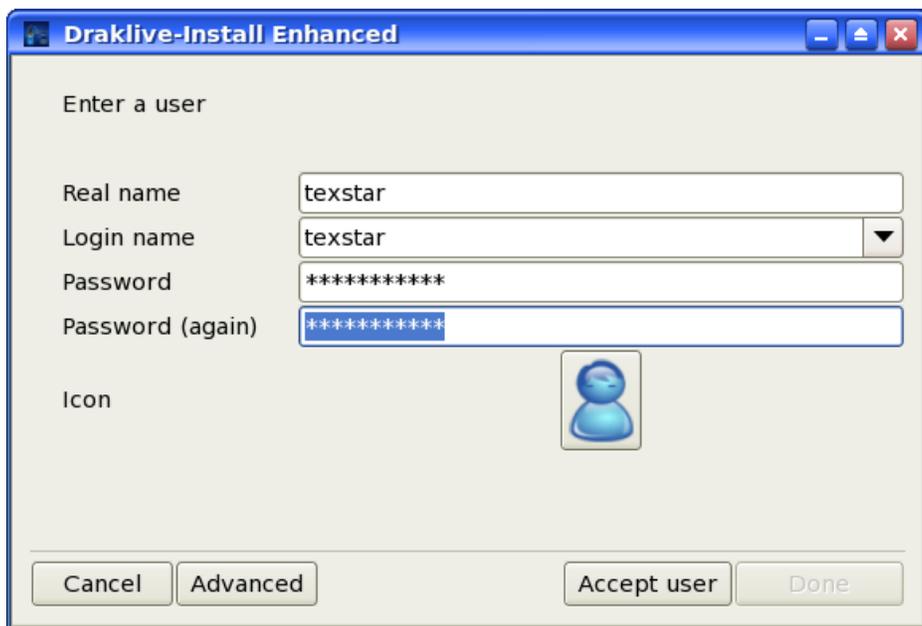


Finally, you should change the password of the 'root' user. Try to select a rather complex password, which is recommended to be at least 8 character long and should contain a combination of at least 3 type of characters (lower & upper case, numbers, symbols). Enter your root password twice and click Next.

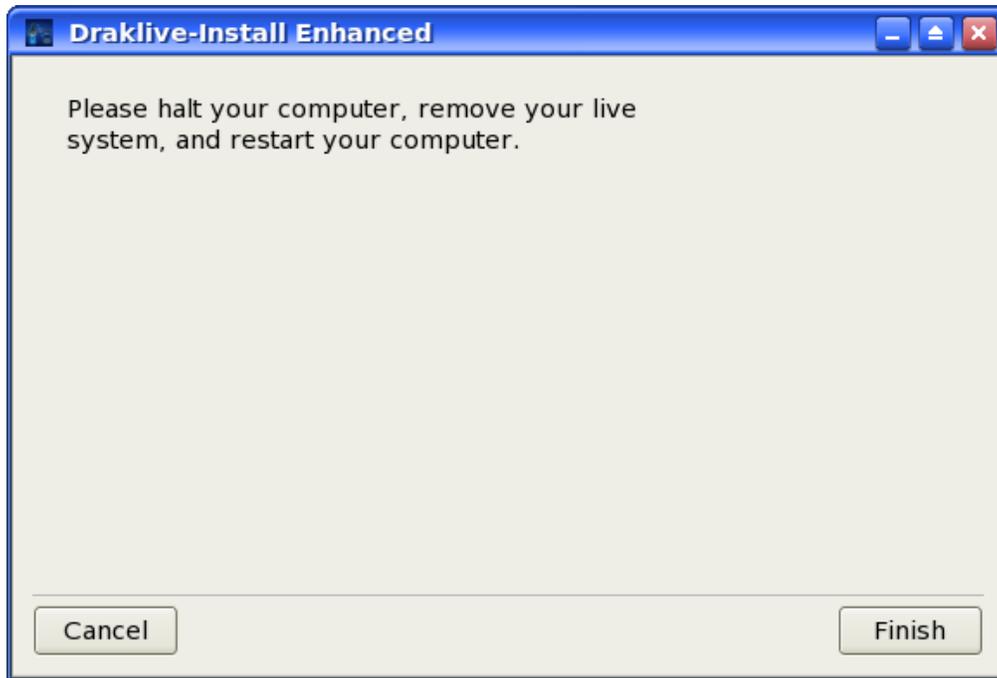


Finally, you can add other user accounts. Please note that the predefined user called "caelinux" (pass: "caelinux") is already present by default. Normally, all the softwares should work for newly created users, but we still recommend that you keep the "caelinux" account if something does not work as it should.

Click "Done" to continue.



Congratulation, you have finished the installation of CAELinux 2007 !! When you reboot your computer, you should be able to start CAELinux directly from your hard disk.



Troubleshooting the installation:

- If the system hangs during the file copy operation, please try to boot the DVD in "Mediacheck" mode to be sure that the DVD does not contain any error and is fully readable.
- If the file copy operation appears to be successful (the file copy window closes) but you do not see the bootloader installation window, it probably means that your installation partition is not large enough. Please make sure to install the system to a single root partition ("/") of at least 10Gb.

Installing CAELinux 2007 in dual-boot with Windows

You can also easily install CAELinux in parallel to Windows (any version up to XP SP2). As Windows will probably use the whole space available on your hard disk, you will probably need to resize the Windows partitions to free some space to install CAELinux. The resizing of the Windows partition can be done directly from within the CAELinux/PCLinuxOS installation wizard.

Warning: Resizing a partition is always a risky procedure, be sure to backup your data first !!!

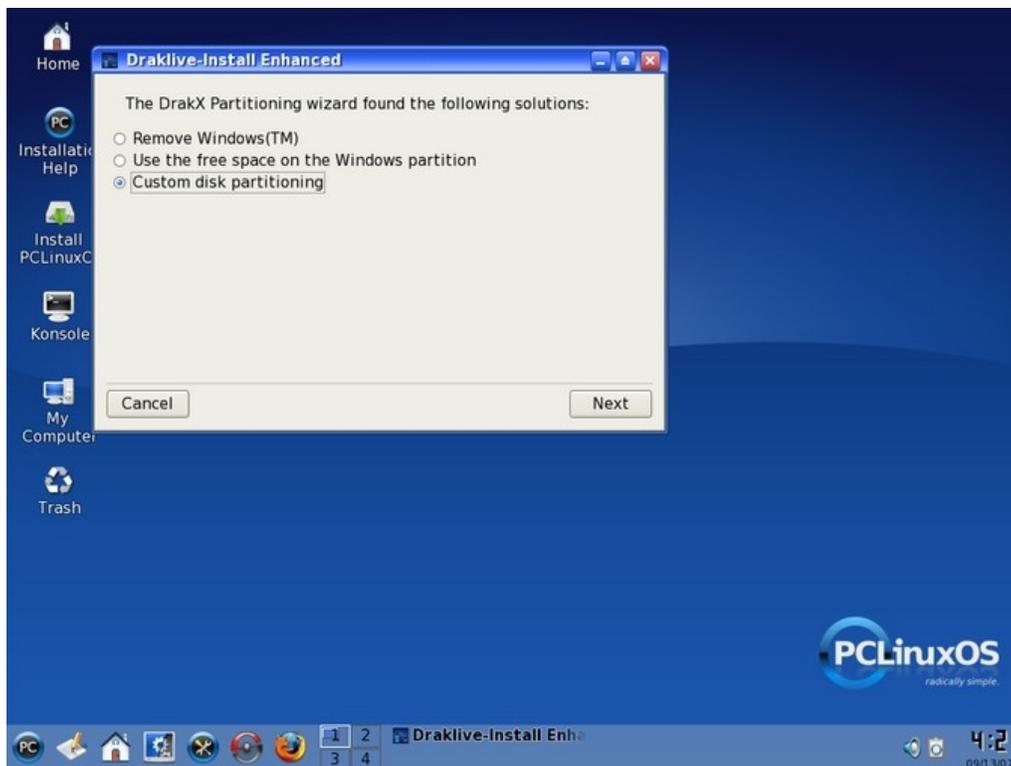
This guide will only show you the steps that differs from the standard installation

procedure described previously. We highly recommend you to read the previous section first

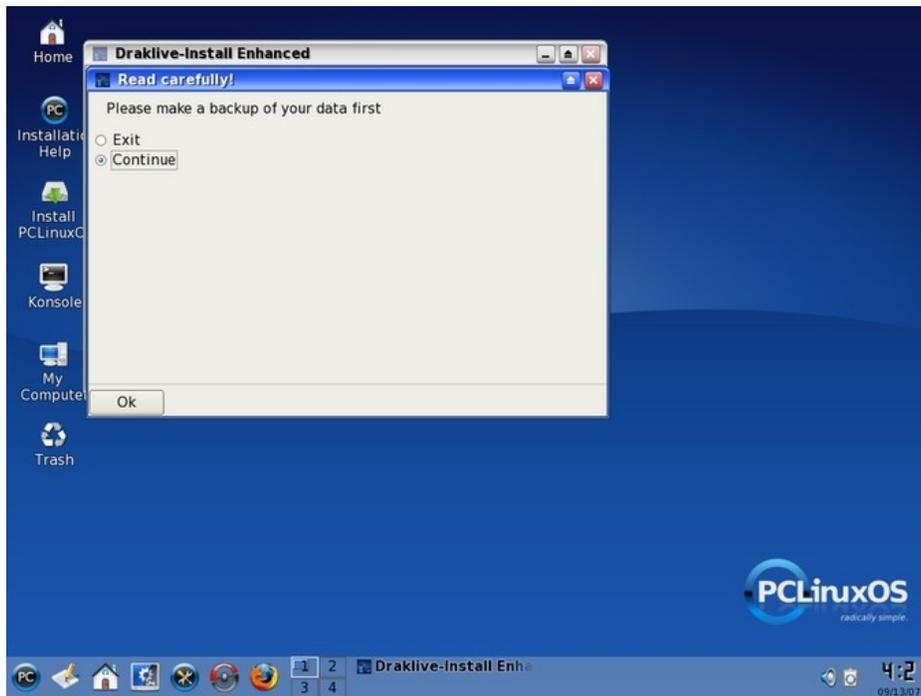
First of all, we recommend that you **defragment your FAT/NTFS Windows partition** before you start the installation procedure. To do so, boot your Windows OS, and run the disk defragmenter tool (this may take a few hours to complete!!)

If you skip this defragmentation step, the maximum size of your future Linux partition could be seriously limited or the resizing of the partition could fail (without creating any damage hopefully).

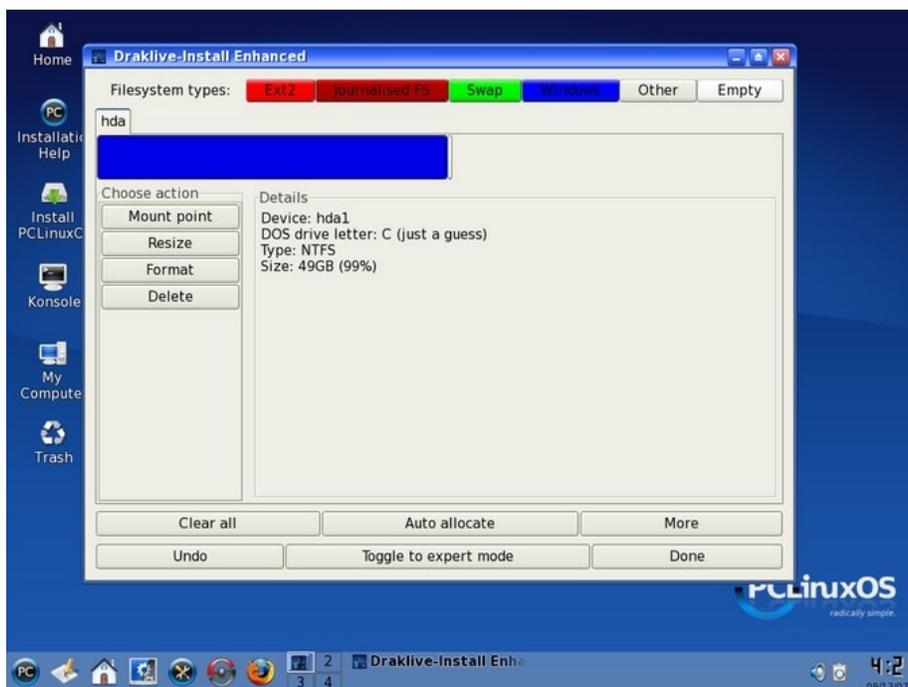
Now start the system from the CAELinux DVD and run the installation procedure as described in the previous section. When you reach the Partitioning wizard window, choose "Custom disk partitioning":



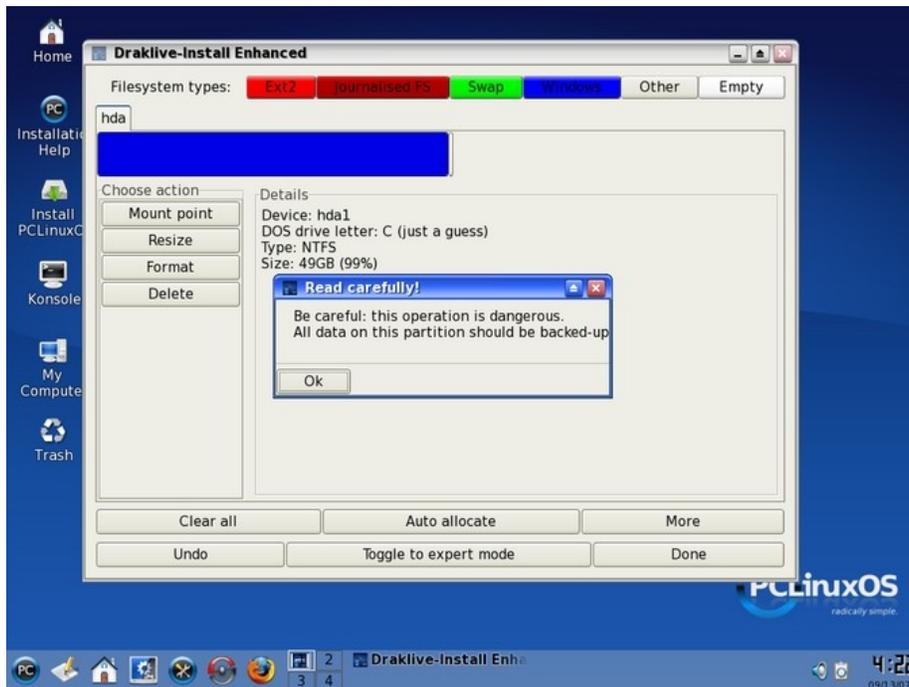
Validate with "Continue":



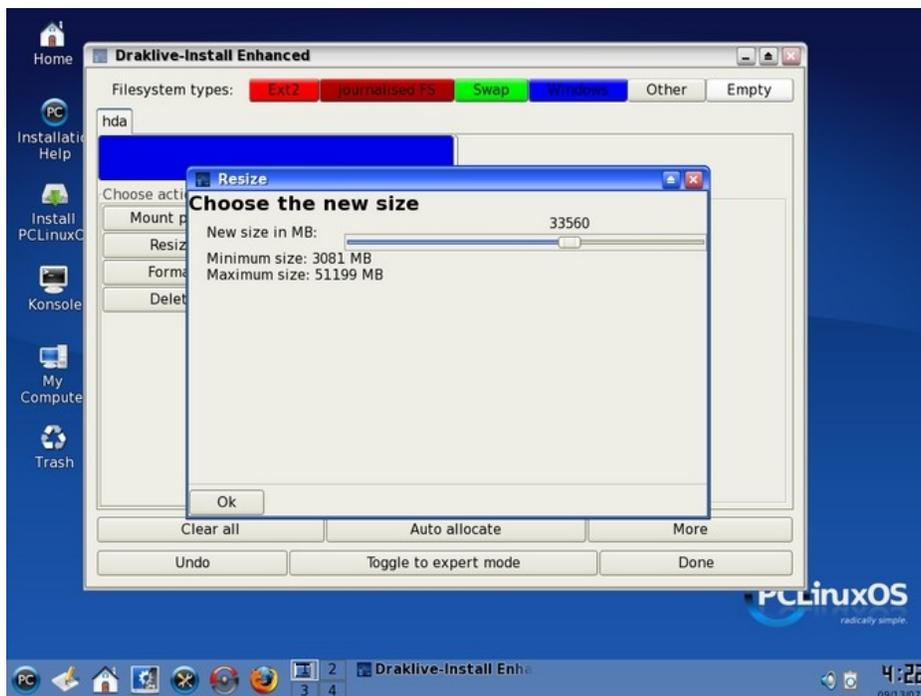
In this next window, you can manage your hard disk partition as you would do it with other tools like Partition Magic for example. To make some free space for CAELinux, click in your existing Windows partition on your hard disk and then click "Resize".



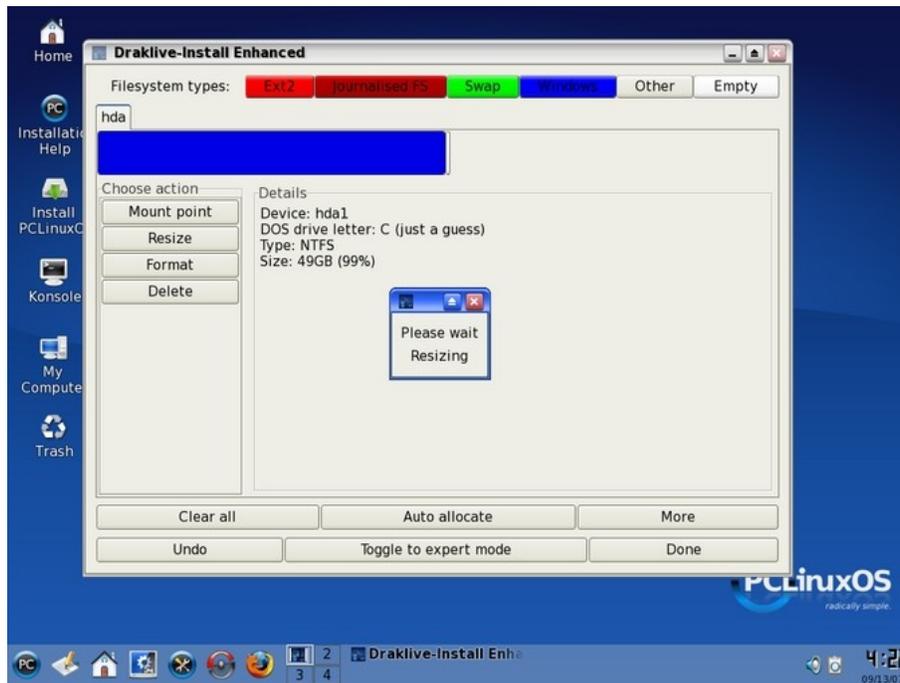
Once again, resizing a partition can be risky , backup your data first !!
Click OK.



In the next window, you can choose the new size of your Windows partition. Adjust the slider bar so that you have at least 15Gb free space after resizing the Windows partition. Then click OK.



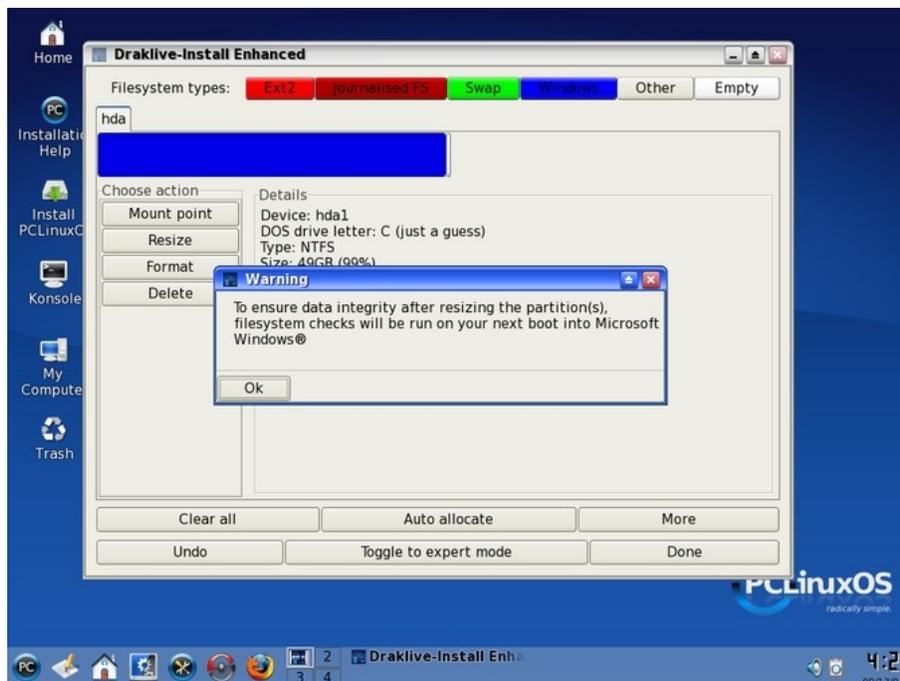
The partition resizing will now run, this should not take a lot of time, but DO NOT INTERRUPT this process!!



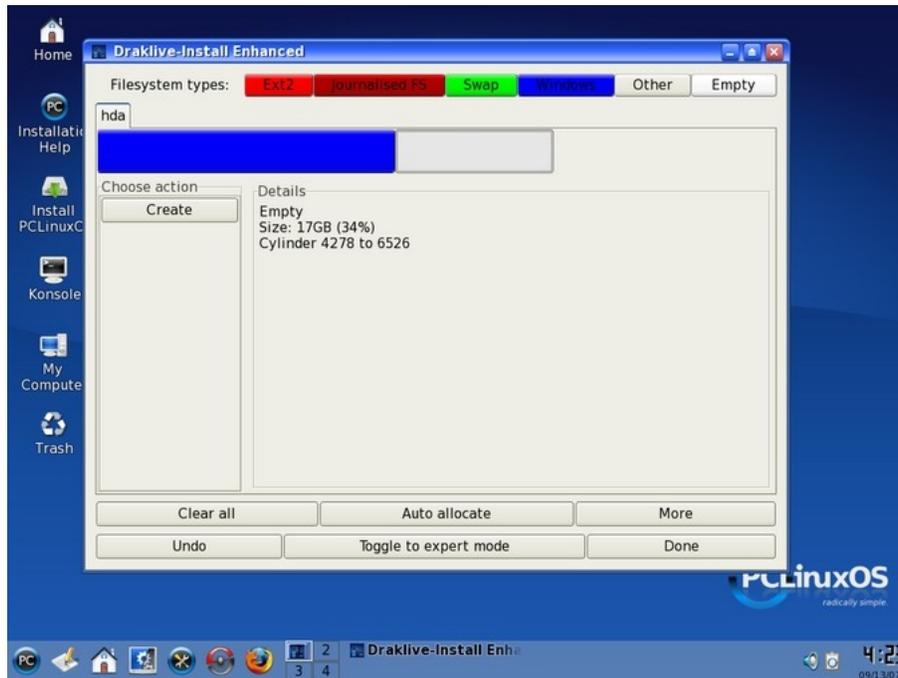
If any problem occurs, you will see an error report window. Please note the error message if something happens. The most frequent cause of error is that your Windows partition is not well defragmented (clusters are used near the end of the partition). In this case, try to free less space or re-run the Windows defragmentation tool and retry the installation procedure.

When the Windows partition has been successfully resized, you will see the following dialog. After installing CAELinux, the next time you will boot Windows, a full file system verification will run. Do not interrupt this verification too !!

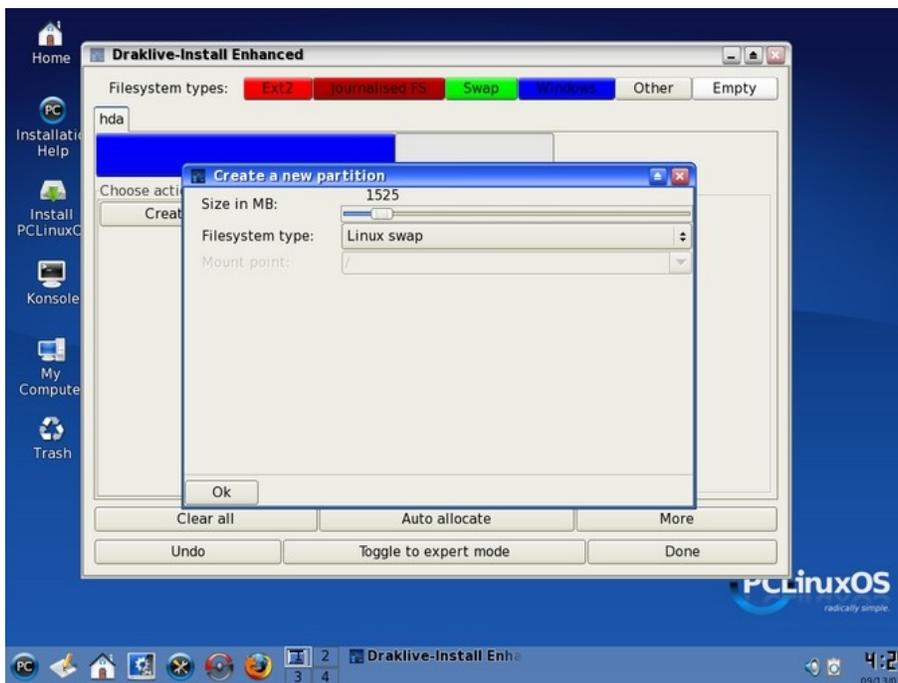
Click OK.



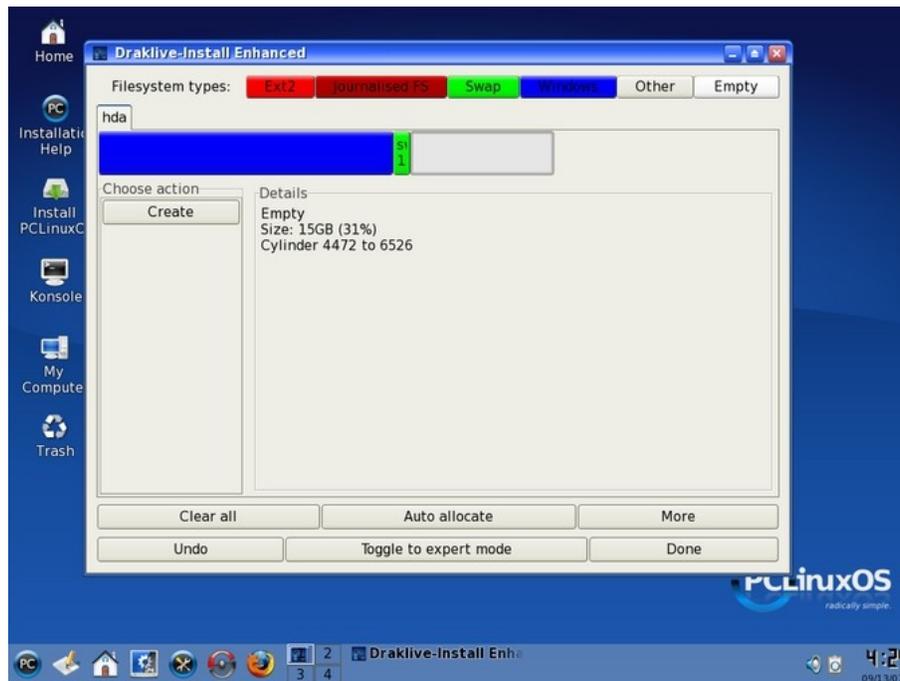
Now we have created enough free space to install CAELinux in a native linux partition. Click the free space after your Windows partition and choose “Create” to continue.



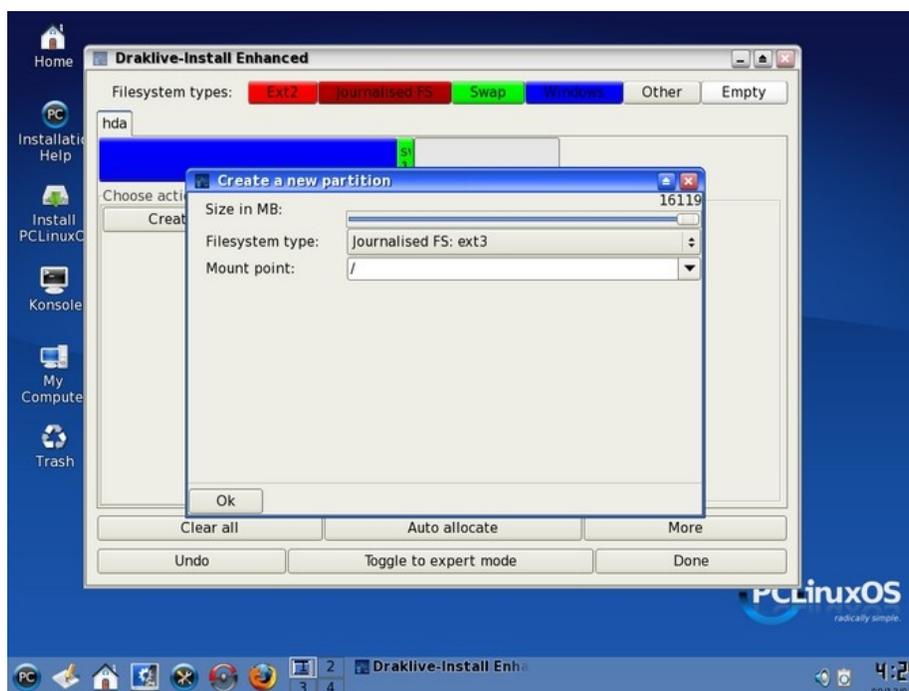
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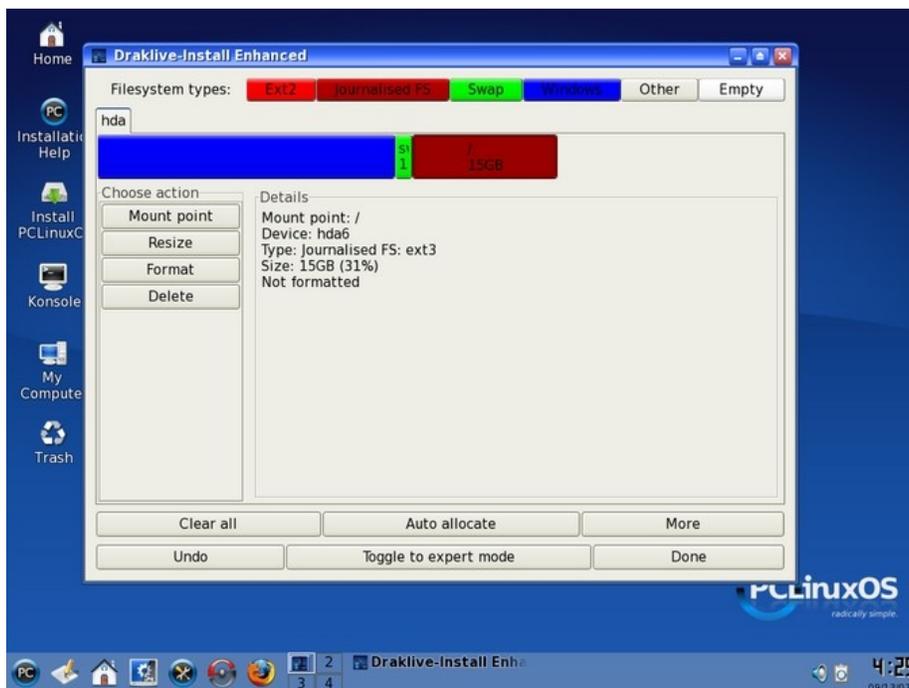
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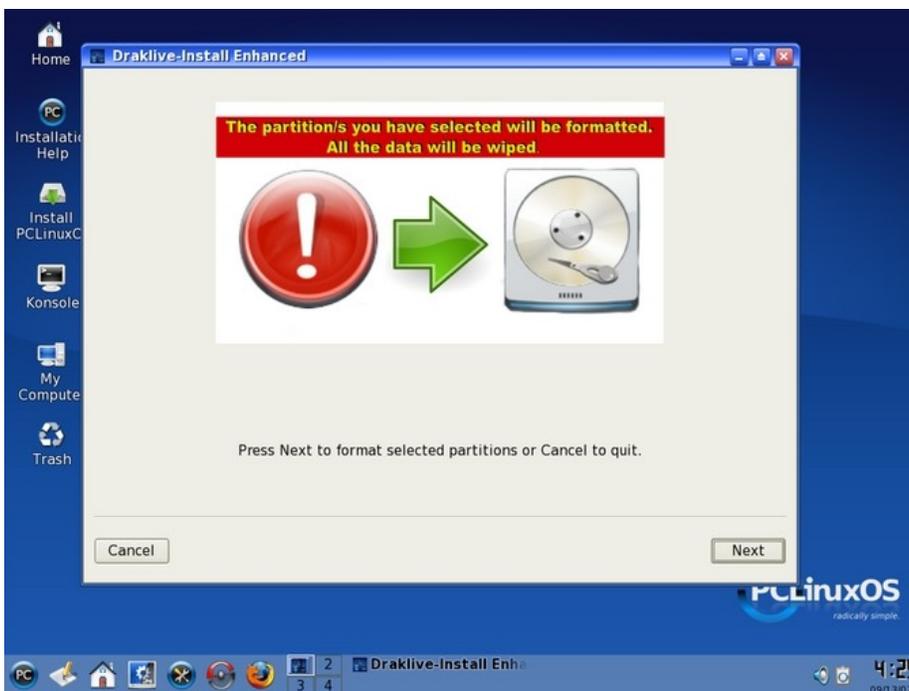
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Now you have all the necessary partitions to continue the installation. Click “Done” and confirm with “OK”.



In the next window, you should confirm that you want to format the newly created root (“/”) partition.



Now you should continue the installation process as described in the previous section. When it comes to the boot loader installation, you will see a “Win_C” entry in the boot menu. At the next reboot, you will be able to select the OS that you want to boot (either Linux or Windows).