

Supplemental Bonus to Ubuntu Unleashed 2010

Updates, Installing and Upgrading to Ubuntu 10.04 LTS

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What's New in 10.04 LTS

Anyone reading this already knows that Ubuntu 9.10 was good. Still, the sort of person willing to register a book online to receive an upgrade kit is also the sort of person who is unlikely to be content to sit still with what they know when something better might be just over the horizon. With that in mind, let's take a quick tour of the new and shiny features in the new release, Ubuntu 10.04 LTS.

First of all, this is a long-term support (LTS) release. That means 10.04 will be supported with security updates from Ubuntu for a longer time than typical Ubuntu releases: three years on the desktop and five for server installations, as opposed to the usual 18 months that standard releases receive.

One past criticism of Linux-based operating systems when compared to other, more popular ones, is that they didn't come with video editing software. That has now changed. Ubuntu 10.04 LTS includes Pitivi (Figure 1), an easy-to-use video editor that will help you take what you record with your digital camera, edit it, add or change the audio track, and then render it so that it can be uploaded to popular video hosting services or enjoyed on other devices.

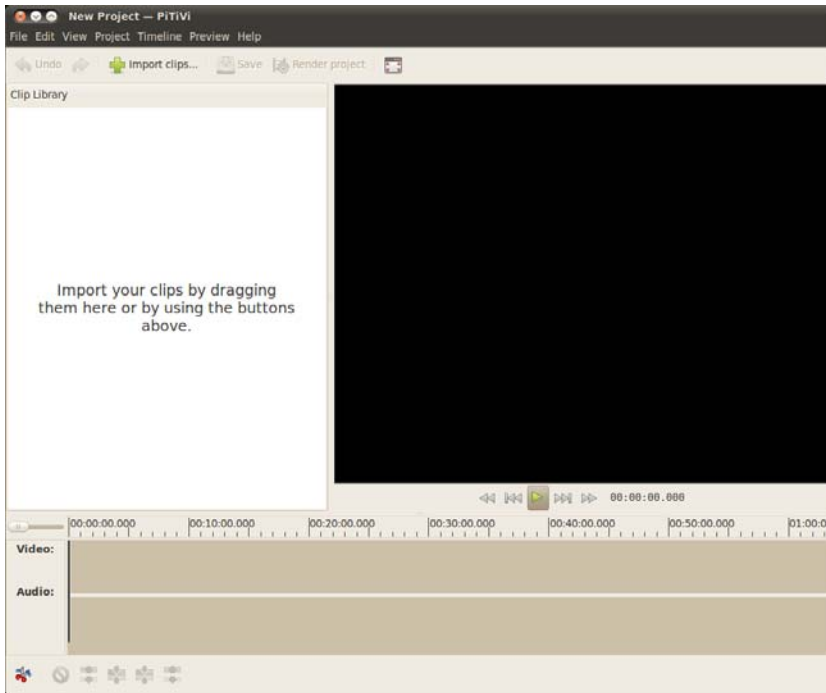


FIGURE 1 Pitivi

Ubuntu 10.04 is now “social from the start,” which is the developers' way of saying that your default desktop is designed to interact with popular social media easily and without requiring you to open your web browser. Want to see what your friends are tweeting about? Interested in the latest status updates on Facebook? Wondering whether anyone is trying to chat with you? No problem, just enter your account details in the new Me menu (Figure 2) to connect to your chat channels and broadcast accounts right on your desktop.

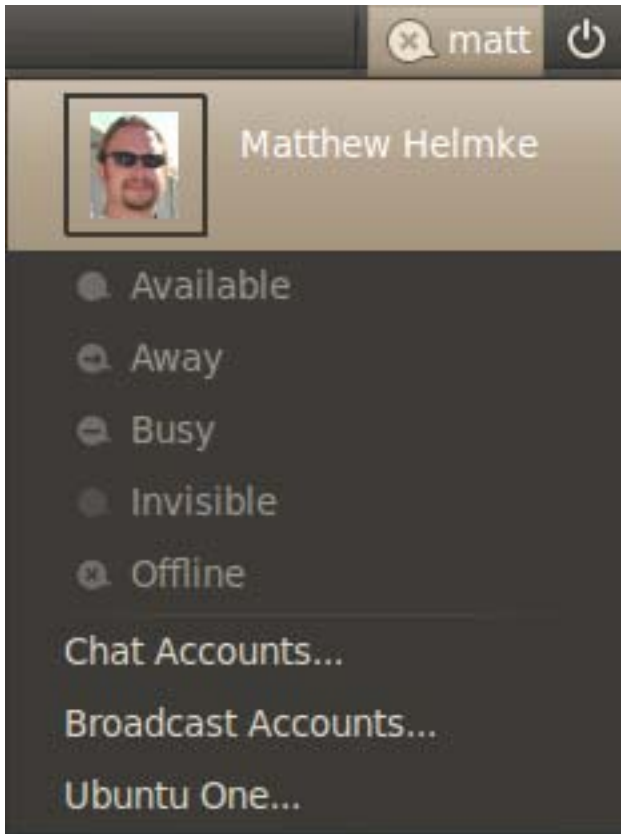


FIGURE 2 The Me menu

You can now buy music from your favorite popular artists without using a different operating system. Newly integrated into Ubuntu's music player, Rhythmbox, is the Ubuntu One Music Store (Figure 3). Simply sign up for a free account with Ubuntu's new Ubuntu One cloud storage, have a credit card ready, and you will be able to begin paying for legal digital downloads of your favorite tunes and automatically store them online so that you may quickly and easily access them from any computer.

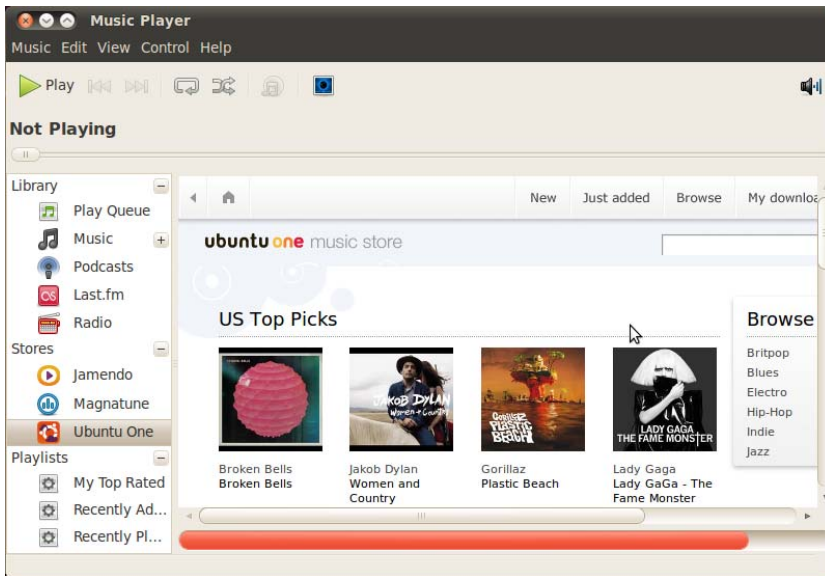


FIGURE 3 Ubuntu One Music Store in Rhythmbox

In addition to the music store feature, the Ubuntu One cloud storage provides anyone who signs up for a free account with 2GB of storage that can also be used to sync your bookmarks, contacts, pictures, and other files, as well as keep them safely backed up. If that isn't enough space, it is possible to increase that space to 50GB for a small monthly fee (Figure 4).

Lest you think that all the improvements have been superficial, we should note some changes under the hood as well. The new release also uses the 2.6.32 Linux kernel, X.org 7.5 with X Server 1.7, and the just released GNOME 2.30 desktop environment. Boot time is significantly improved, often to a mere 20 seconds, with Ubuntu's switch to the Plymouth boot loader from the previous Usplash. Plymouth is a graphical boot system with a text mode backup. It is pretty (Figure 5), and it is smooth. The Ubuntu developers made a lot of behind-the-scenes adjustments to decrease boot speed as well, so this is easily the fastest booting desktop Linux so far, with a goal of reducing that even further in the next release. For example, HAL, which was an older default method of communication between hardware and software, has been removed in favor of using newer and faster methods. This has helped decrease boot and resume-from-suspend times.



FIGURE 4 Ubuntu One

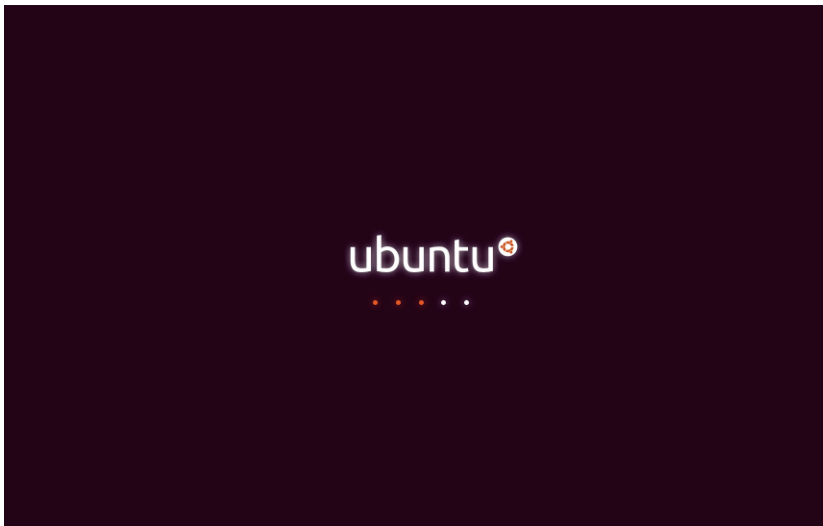


FIGURE 5 Plymouth in action

Of course, that leads us to the new default desktop background and theme. Professionally trained members of the design team have begun work on a complete reimagining of the desktop experience, and Ubuntu 10.04 LTS is the first step in the process. What we have is a lovely new look and style (Figure 6) that is already

stunning and which will form the foundation for even more innovation in future releases. Gone are the browns of the past and a new imagery based on “light” with new icons, indicators, wallpaper, and two themes—the default *Ambiance*, which is one of the first dark themes to be shipped by default by any operating system, and *Radiance*, which has brighter colors.

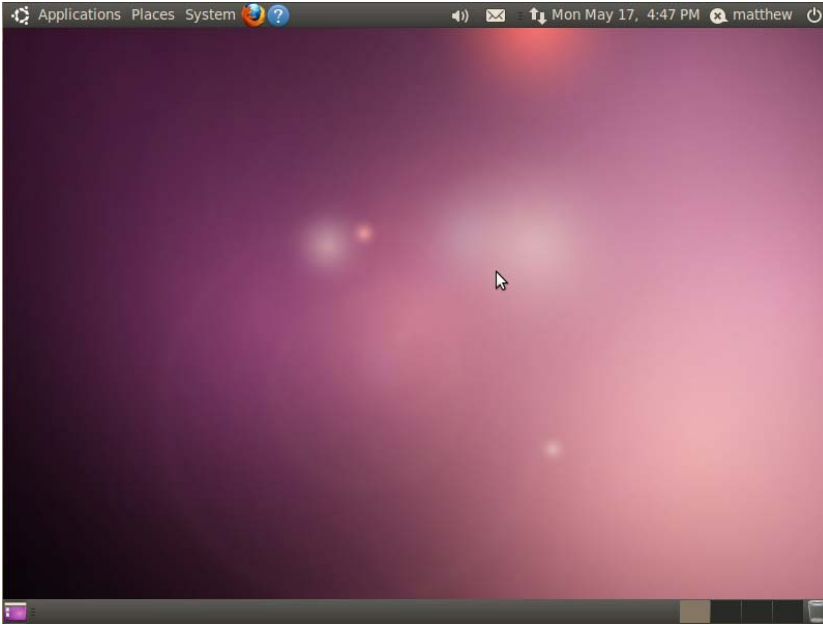


FIGURE 6 The new Ubuntu desktop

Simple Scan (Figure 7) is a new program that makes using a scanner to digitize documents and photos much easier than in the past and is now installed by default.

One last exciting update we want to highlight is the Ubuntu Software Center, which has received significant improvements over the previous edition (Figure 8). It has a cleaner look, a smoother feel, and is still filled with wonderful applications and accessories that can be installed without cost. Navigation is easier than ever, and programs are organized into very useful categories for easy discovery and installation/removal. One useful feature is the addition of a *Featured Applications* button that takes you to a list of the most commonly installed and useful applications as chosen by members of the community.

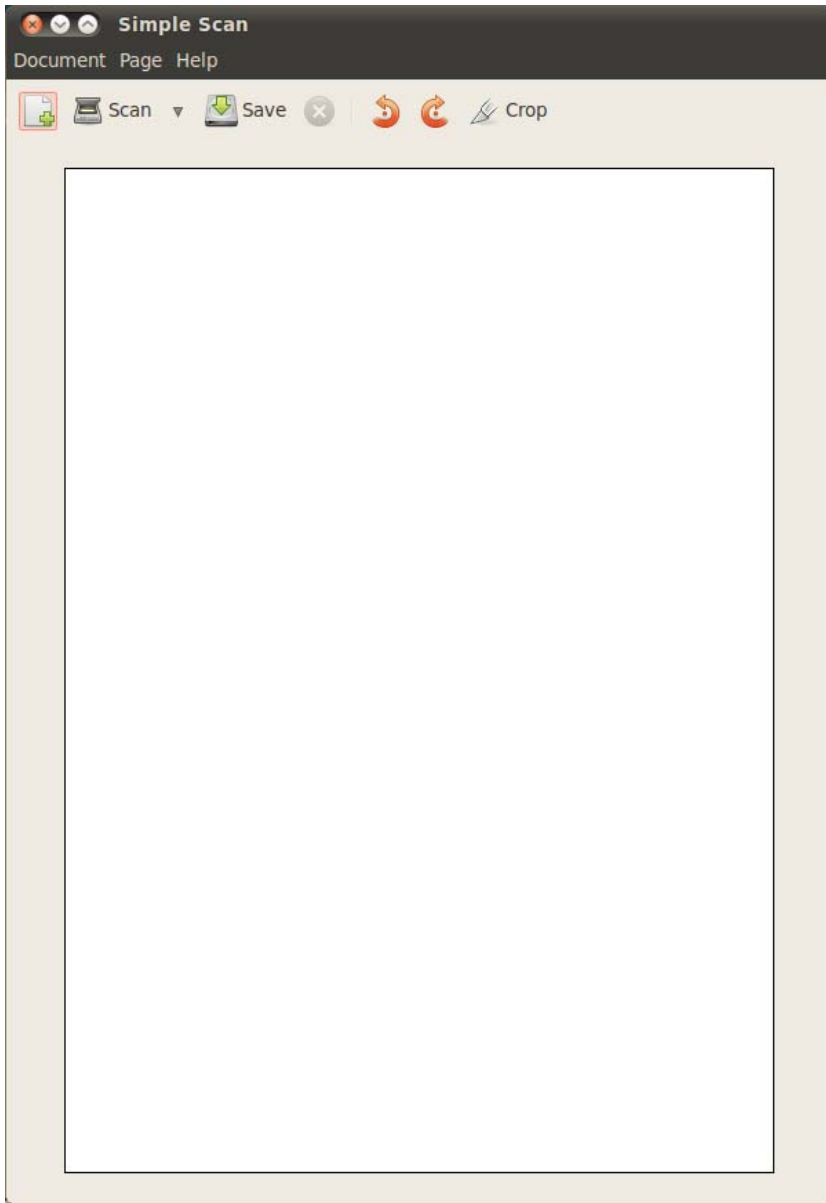


FIGURE 7 Simple Scan



FIGURE 8 Ubuntu Software Center

Before You Begin the Installation

Ubuntu is one of the easiest distros to install. In this bonus supplement, we cover how to get started with the install disc, including booting into Ubuntu 10.04 LTS live CD or DVD to test your system. Then we cover the actual installation of Ubuntu 10.04 LTS, looking at the various options available. The whole process is fairly pain-free under Ubuntu, as you are about to learn.

Installing a new operating system is a major event, and you should make sure that you have properly thought through what is going to take place. The first thing to consider is how the hardware will be affected by the software that you propose to install. Although Ubuntu will run well on an extremely wide variety of hardware, checking out your hardware components is worthwhile because there might be a banana skin waiting for you to slip up on. The following sections provide some areas for you to investigate and think about, and might even save you hours of frustration when something goes wrong.

Start by researching and documenting your hardware. This information could prove helpful later on during the installation.

Researching Your Hardware Specifications

At the absolute minimum, it is a good idea to know the basics of your system, such as how much RAM you have installed and what type of mouse, keyboard, and monitor you have. Knowing the storage capacity of your hard drive is also useful because it will help you plan how you will divide the storage space it contains for Ubuntu. Although installation and hardware problems have become quite rare over the past few Ubuntu releases, they do occasionally crop up, especially with the newest hardware that might

not yet have software drivers available. Most popular hardware older than a year or so is likely to work just fine, though there are no guarantees. The more information you have, the better prepared you will be if you encounter any problems.

Installation Options

Ubuntu is most commonly installed by end users using the live CD or DVD of the desktop edition. This is also a great way to test your computer's hardware before you make any permanent changes to your system. If you can successfully boot your computer from the Ubuntu CD or DVD, your system will run just as well, and quite a bit faster, when you choose to install Ubuntu to your hard drive.

Planning Partition Strategies

Partitioning is a topic that can strike fear into the hearts of novice Linux users. Coming from a Microsoft world, where you might just be used to having one hard drive, it can seem a bit strange to use an operating system that makes partitioning important. Depending on your requirements, you may opt to use the default setting, which is a single large partition to contain all your files, or you might want to segment your installation across several partitions to match your individual needs. One common partitioning scheme is to create a small partition called `/swap`, about 1.5 times the size of your RAM, a second partition of about 15GB called `/` for all the system files, and a third called `/home` that will use the rest of the hard drive's space and will house all your data files.

To plan the best partitioning scheme, research and know the answers to these questions:

- ▶ How much disk space does your system require?
- ▶ Do you expect your disk space needs to grow significantly in the future?
- ▶ Will the system boot just Ubuntu, or do you need a dual-boot system?
- ▶ How much data will require backup, and what backup system will work best?

The Boot Loader

During installation, Ubuntu automatically installs GRUB2 (Grand Unified Boot Loader) to the Master Boot Record (MBR) of your hard drive. Handily enough, it also detects any other operating systems, such as Windows, and adds entries in GRUB2 as appropriate. If you have a specific requirement not to install GRUB2 to the MBR, you need to install using the Alternate disc, which will enable you to specify the installation location for GRUB2 and which can be downloaded from ubuntu.com.

Installing from CD or DVD

Most PCs made after 1995 have BIOS support for booting directly from a CD or DVD drive and enable you to set a specific order of devices (such as floppy, hard drive, CD-ROM, or USB) to search for bootable software. Turn on your PC and set its BIOS if required to allow you to do this (usually accessed by pressing a Function or Del key after powering on); then insert your Ubuntu disc and boot to install Ubuntu.

Step-by-Step Installation

This section provides a basic step-by-step installation of Ubuntu from the install disc. The install process itself is fairly straightforward, and you should not encounter any real problems.

It is useful to have your computer ready to connect to the Internet so that you can download updates as soon as you have finished the installation. Although typically you would be recommended to not have your computer connected, Ubuntu's unique security configuration means that it effectively blocks all incoming network ports, so it is fairly secure until you start opening the ports.

Starting the Install

To get started, insert the DVD into your drive and reboot your computer. After a minute or two the initial screen appears and offers a variety of languages for you to use during installation, along with a couple of other options (see Figure 9).

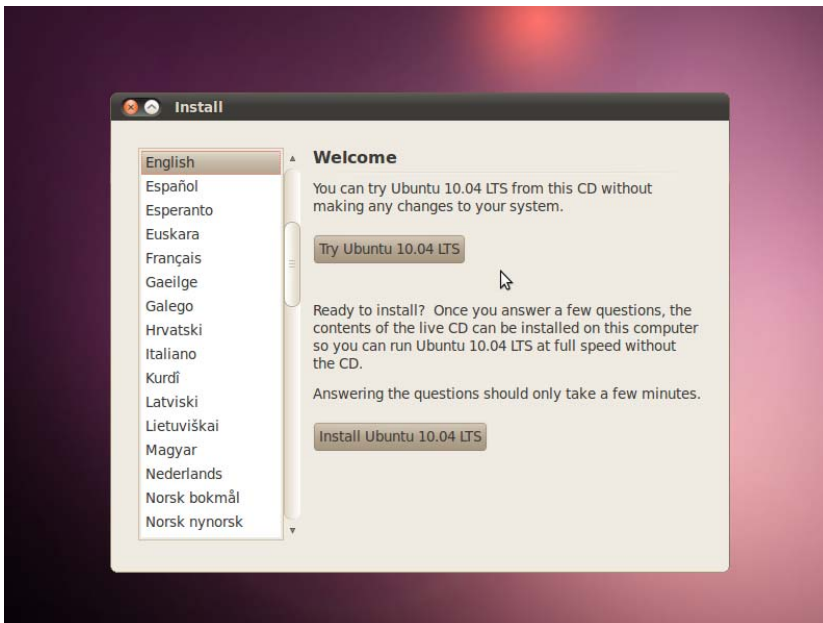


FIGURE 9 Choose a language in this opening screen

From this screen, you may choose to Install Ubuntu 10.04 LTS or to Try Ubuntu 10.04 LTS without making any changes to your system. We suggest you do this the first time to test your hardware, and it's what we will do here.

Ubuntu starts the process by loading components from the DVD into memory, and after a few short seconds you are presented with the GNOME desktop that you can use to start testing things. Bear in mind that Ubuntu loads some parts of itself from memory and other parts from the DVD, so it will not be a true representation of the real performance of Ubuntu and will run noticeably slower than when it is installed to a hard drive. Instead, it's designed to give you a taste of what to expect and enables you to test it with your hardware.

Thanks to the work that has gone into Ubuntu 10.04 LTS, the majority of your hardware should be fine, and you can proceed with the installation of Ubuntu. You do this by double-clicking the Install icon helpfully located on your desktop (see Figure 10).



FIGURE 10 The helpful Install icon

NOTE

If you find that some things don't work, don't panic. In these cases, Google is definitely your friend, and you should do some research to see whether anyone else has had similar problems or whether they've managed to install on similar hardware. Another great place to get help is the Ubuntu Forums at <http://ubuntuforums.org>, where you can interact with thousands of other Ubuntu fans.

After a couple of seconds, the Installation Welcome screen appears and prompts you to select a language (see Figure 11). As you can see, Ubuntu supports a wide range of languages. Click Forward when you have selected your language.

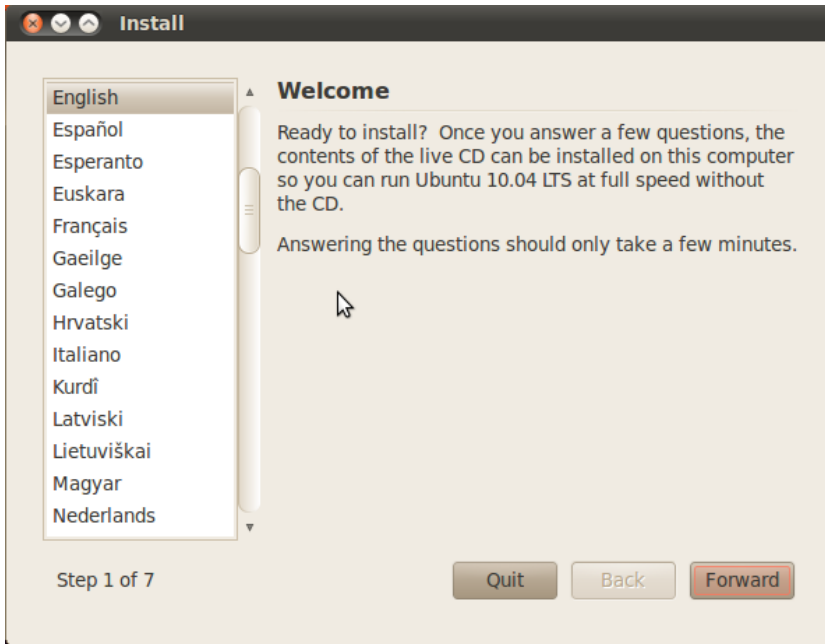


FIGURE 11 Welcome

The next screen asks you to specify your location in the world. This is used to set time and region options, so find the city closest to you on the map and select it. Figure 12 shows that we have selected London, but it could be another city that is closer to you. Ubuntu automatically chooses the time zone and detects the offset from Greenwich mean time (GMT). Click Forward to continue to the next screen.

Following the Time and Region screen is the keyboard layout selection screen. Ubuntu will give a good guess at what type of keyboard is connected to your computer, but it enables you to change it if it differs. Make sure to find the correct layout for your keyboard (see Figure 13). If in doubt, use the text box at the bottom of the screen to try out all the keys.



FIGURE 12 Where are you?

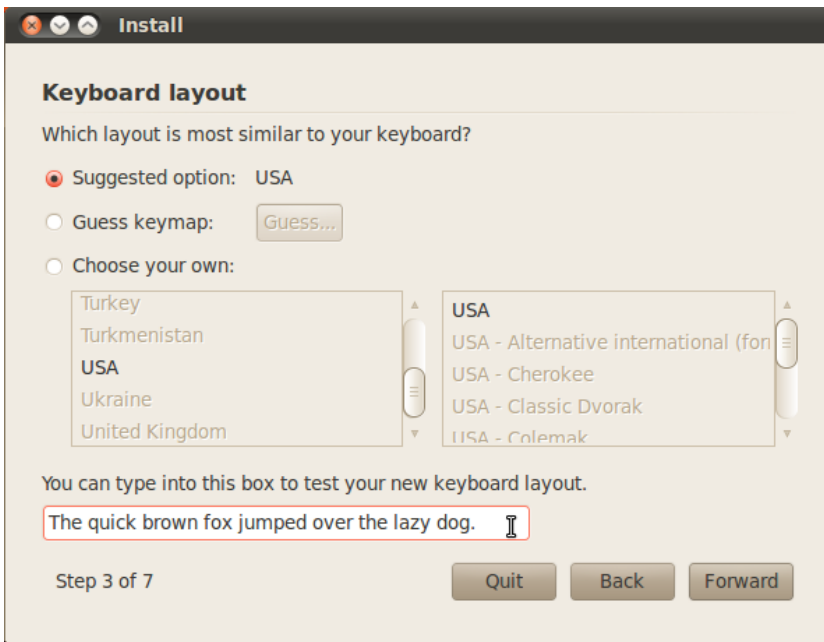


FIGURE 13 Keyboard layout

When you are happy that the keyboard layout is correct, click Forward to move to the partitioning.

Partitioning under Linux used to be somewhat of a black art, but Ubuntu has made it easy. In Figure 14 notice that I am installing over a previous Ubuntu installation (9.10) and that Ubuntu 10.04 LTS noticed. It gives me the option to install alongside the previous installation or to erase and use the entire disk, which is the typical choice of most end users. Also available is the option to manually partition the hard drive, a welcome choice for more advanced users.

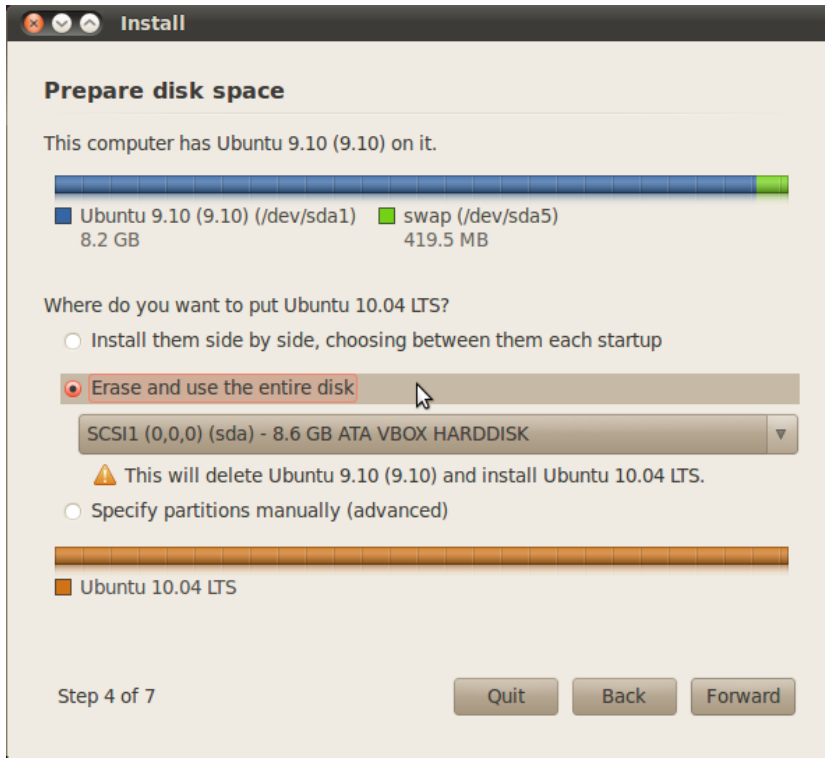


FIGURE 14 Prepare disk space

After your partition settings have been completed, you'll be presented with a dialog box asking you for your identity, so that Ubuntu can create its first user. Here you need to input your full name, your required username and password, and the name of the computer onto which you are installing (Figure 15).

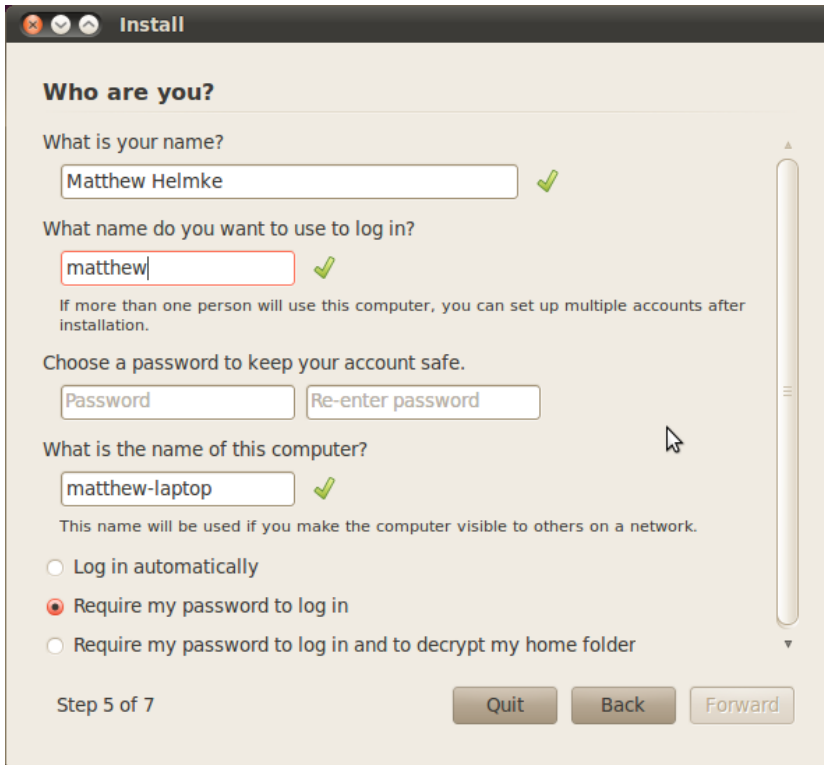


FIGURE 15 Who are you?

NOTE

When you set your password, be sure to remember what you entered! If you forget it, you will not be able to do much with your new system because you will not be able to log on to it.

When setting a password, make sure it has a mixture of letters and numbers to make it more secure. For example, a good example of a password is T1a5c0p. Although this might seem like garbage at first glance, the easy way to remember it is by remembering the phrase This Is A Good Choice Of Password, shortened to Tiagcop, and finally substituting some of the letters with similar-looking numbers. Experiment with some phrases to see what you can come up with.

If you are installing alongside another operating system, a Migration Assistant will appear and offer to help you by finding some of your settings on the other operating system and bring them over to Ubuntu 10.04 LTS, such as browser bookmarks and more. Most will not see this because the installer skips this step when it is not needed.

The final screen summarizes what you've chosen to do, and you should go over the settings list to make sure there are no surprises. If all is well, now is a good time to make sure your computer is connected to the Internet so it can download some updates and access Internet servers to assist with configuration as it installs. This isn't required,

but it is quite convenient and recommended. Click the Install button (Figure 16) to begin the installation, and you will be treated to a nice-looking slide show that outlines some of the features of Ubuntu 10.04 LTS while the installation occurs.



FIGURE 16 Ready to install

When the installation has completed, you will be prompted to reboot, and then you can log in to Ubuntu at the welcome page (Figures 17 and 18) and you will arrive at the default Ubuntu desktop (Figure 19).

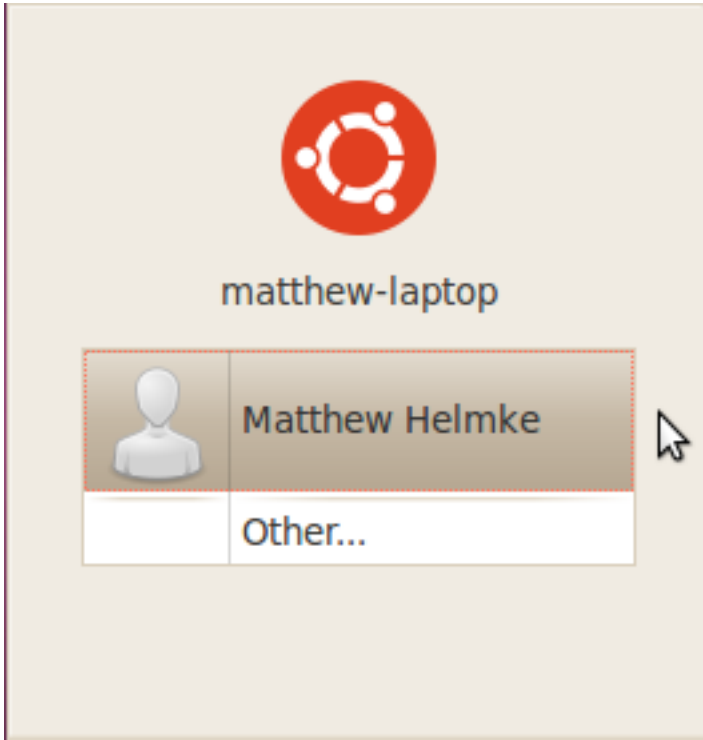


FIGURE 17 Click your username

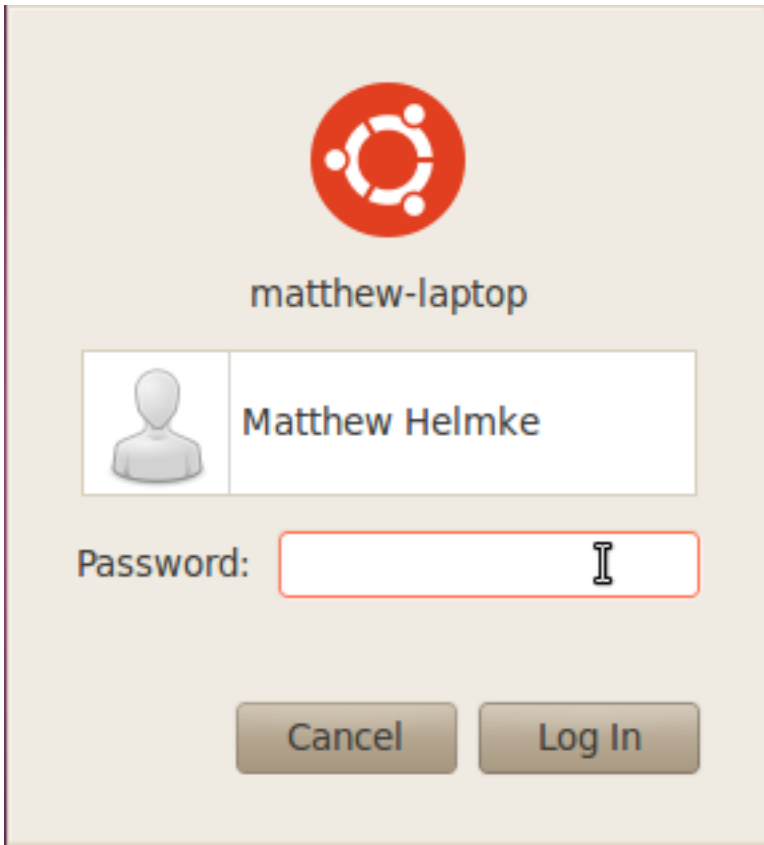


FIGURE 18 Enter your password and click Log On to begin using your new system

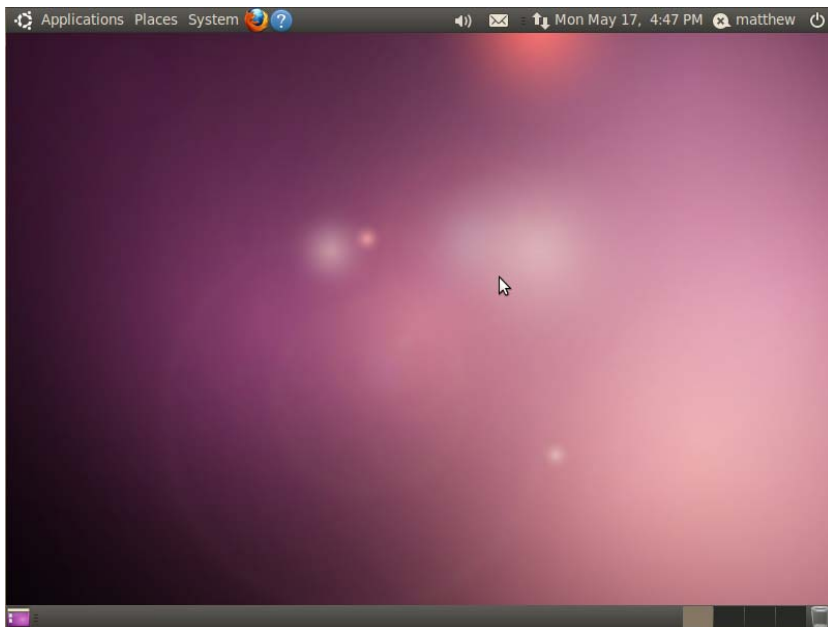


FIGURE 19 Enjoy your new Ubuntu 10.04 LTS desktop

First Update

The first thing you might need to do with your new system is update it to the latest package versions. You do this mainly to ensure that you have the latest security updates available.

You can do this in a couple of ways in Ubuntu, but the easiest way to do it is to open your menu on the top panel and click System > Administration > Update Manager. Your screen will darken, and you will be asked for a password. This password is the same as the one you used to log in to your system and is used in this case to authorize Ubuntu to make a systemwide change (install software, on this occasion). Figure 20 shows the Update Manager in action.

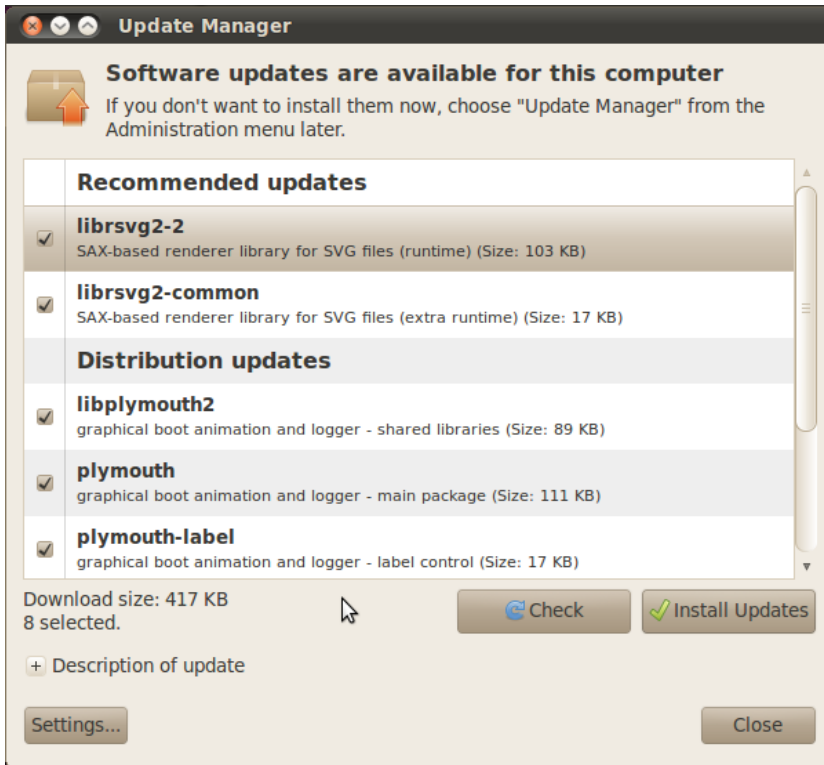


FIGURE 20 Update Manager

The application is easy to use because it automatically retrieves information on all the possible updates available to you. Just click Install Updates to start downloading and installing the necessary package updates.

If you want more information, click the Show Details arrow or, if you want Ubuntu to check again, click the Check button to force Ubuntu to refresh the updates.

Wubi—The Easy Installer for Windows

One of the new additions to the Ubuntu CD and DVD is Wubi, which enables you to install an Ubuntu system within Windows. In effect, Wubi creates a large file to hold all the Ubuntu information and provides a way, using the Windows bootloader, to boot into Ubuntu without having to do any partitioning. What's more, it's almost as fast as the real thing and much faster than a Live CD or DVD. To get started with Wubi you simply insert the Ubuntu disc into your CD or DVD drive while Windows is booted, and follow the on screen directions.

Wubi creates an image file on your hard drive and modifies the Windows bootloader to allow you to boot into Ubuntu or Windows. Don't worry, though; your hard disk hasn't actually been modified, but a rather large file has been created to hold Ubuntu. When

you restart your system you'll see the Ubuntu option, and you may press the down-arrow key and Enter to begin booting into your new Ubuntu system.

If you decide that you want to do a proper installation, you'll need to remove Ubuntu and Wubi. Fortunately, as part of the Wubi installation, an entry is added to the Add/Remove Programs tool in Windows allowing you to quickly and easily remove Wubi and the associated Ubuntu installation. Just remember to back up any files that you want to keep!

Shutting Down

At some point, you are going to want to shut down your computer. As with most things in Linux, there are different ways to do it. You can use the Quit icon (Figure 21), located in the upper-right corner of your screen, or use the same button located in the System menu. Either way, you can choose to shut down or restart your system. You also can choose to hibernate (which saves a copy of the running state to disk and shutdowns) or suspend (which saves the current running state to memory). Hibernation is slow and doesn't save any time from the normally quick boot speed of Ubuntu 10.04 LTS, but suspend can be quite convenient.



FIGURE 21 The shutdown options button

Upgrading from Ubuntu 9.10

You can easily upgrade from Ubuntu 9.10 by inserting the Ubuntu 10.04 disc into the drive while 9.10 is running. A pop-up window appears and asks if you want to upgrade (Figure 22). Just follow the simple onscreen directions.

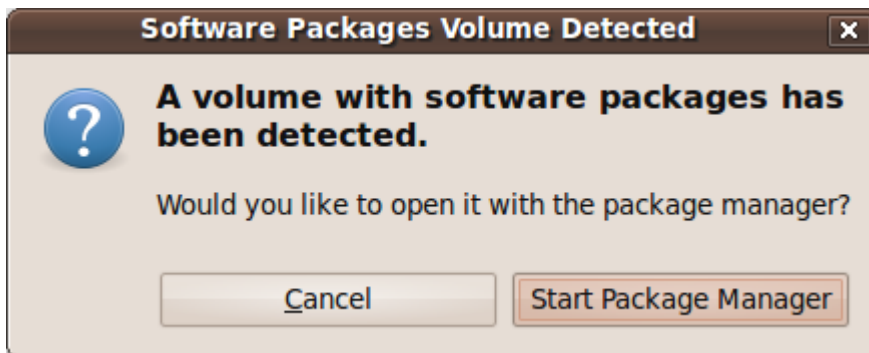


FIGURE 22 A volume with software packages has been detected

You may also do an online upgrade without a disc using Update Manager by clicking the Upgrade button when it appears (Figure 23). Again, just follow the onscreen instructions while you are connected to the Internet and you will be all set.

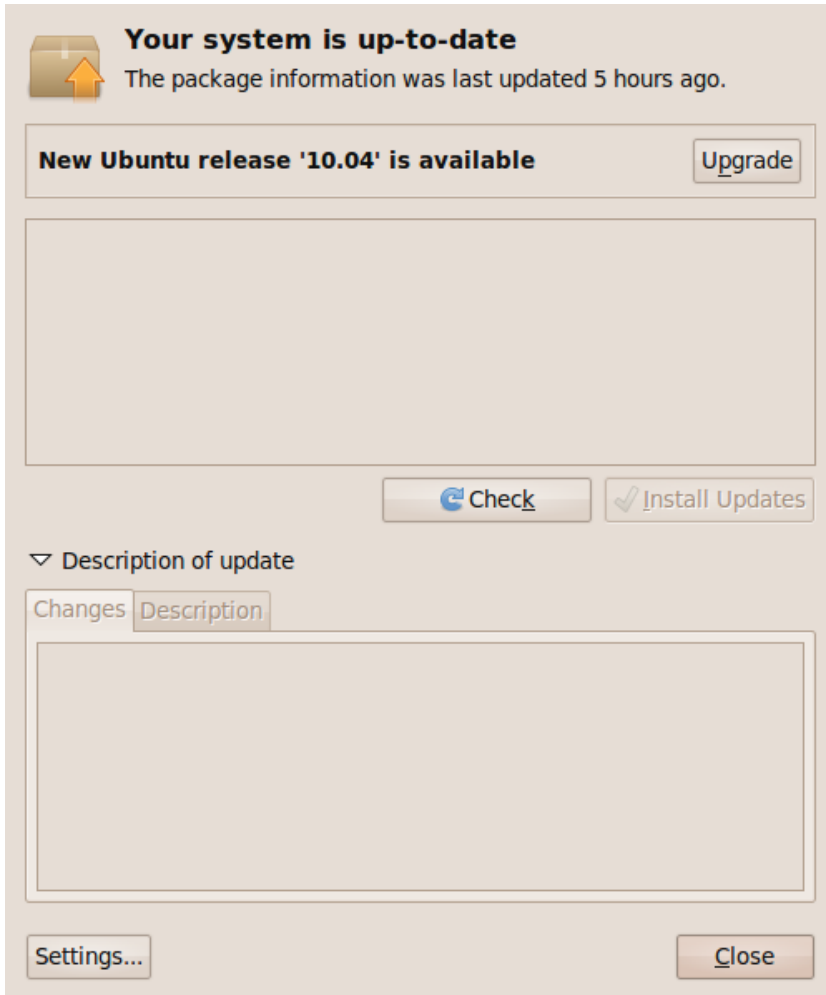


FIGURE 23 New Ubuntu release 10.04 is available

Troubleshooting

Most people will encounter no problems while installing Ubuntu, but that is not a guarantee. No operating system is capable of supporting every piece of hardware out there, and there are times when an uncommon piece of equipment, old or new, might not be supported. Other times, the fault can lie with the install media. Here are some quick and easy things you can check if you run into problems installing Ubuntu 10.04 LTS.

If your system fails to boot from the CD or DVD:

- ▶ Check your BIOS settings to make sure they are set to boot from the proper drive.
- ▶ Check your install CD or DVD to see whether there was a problem with it. Can it be read in another machine?
- ▶ Check your equipment to make sure it is working. If it is old, there is a chance that it might not have drivers available or work properly with Ubuntu.

If all else fails, check the documentation at <https://help.ubuntu.com/10.04/installation-guide/i386/boot-troubleshooting.html> and <https://help.ubuntu.com/community/Installation> for more help.