

The Easiest Linux Guide You'll Ever Read

An Introduction to Linux for Windows users

Scott Morris

SUSE Linux 10.1

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About the Author

Scott Morris began using computers over 20 years ago, at the age of 10. He has used 25 different versions of 5 different operating systems over this time period. Of those many operating systems, he has experience using MS-DOS, Windows 95, Windows 98, Windows 2000, Windows XP, and Mac OS 9.x – X. He has enjoyed using many different distributions of Linux, including Mandrake, Red Hat, Gentoo, Fedora Core, Debian, and SUSE.

He has worked recently as Editor of the Novell CoolSolutions Linux communities. During his employment there, Novell, along with many other news outlets, has published over 110 of his articles. He gets particular enjoyment out of helping people discover the excitement of the Linux operating system. Articles he has written can be found on his author page, located at:

<http://www.novell.com/coololutions/author/1012.html> .

He also has a personal blog, located at <http://www.suseblog.com>, which he uses for personal enjoyment and to help others. He writes opinions, news, tips, and tricks about the SUSE Linux operating system. This blog is a light-hearted resource for beginning Linux users. The latest version of this book can be found at this website.

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Who should read this book

This book is geared towards Windows users who want to take a look at Linux. Are you interested in trying Linux on your computer? If so, you have found the perfect book. In this book, I will give you a gentle introduction into using Linux, and help you ease into it. The only technical skills you should have include browsing the Internet and downloading files. It will help if you have burned your own CDs before, but such skills are not required. If you have a computer geek handy, that also couldn't hurt. The purpose of this book is to make it easy to try the Linux operating system, particularly for people who are used to Microsoft Windows. Even if you only use your Windows computer for checking email and surfing the Internet, this book was written just for you.

Having used Windows myself for nearly 15 years, I was very used to that platform. I didn't realize how used to it I was until I tried to use something else. As an illustration of what I mean, let's say that you download Linux, and eventually figure out how to download Linux. Even when you finally do get it installed, it is somewhat of a bitter-sweet triumph. On the one hand, you feel good about having successfully gotten that far.

On the other hand, after you have installed it, you sit there, staring blankly at your new desktop wondering what in the world to do next. You may feel somewhat lost. You have heard how wonderful Linux is, but don't know why, or how to make it perform all the impressive tricks. In many cases, you don't even know what those tricks are (at least I didn't when I first started).

If you are considering trying out Linux on your desktop, but have some anxiety about learning everything, from this point on, you have no need to worry. We will take it one step at a time. The top priority of this book is to make everything as easy to learn as possible. I am going to give as much background and explanation as I can.

My goal is that you understand the purpose and concepts involved with each step that we take. I want to go over the *why* as well as the *what*. The more you understand, the better your foundation will be. A good, strong foundation provides a solid base upon which you can build as you learn more. This helps you learn more efficiently, and retain more of what you learn in the future.

Before we try and get Linux to install it, we will discuss some fundamental topics. When you are switching from Windows to Linux, there are some expectations that you will need to change. You are going to be using a brand new platform. You cannot assume that the new platform to be equivalent in all aspects to the old one.

To begin with, we will mold your expectations. If you know what to plan on, your experience will be more pleasant. In other words, there is a mental shift that will take place as well as you switch platforms from Windows to Linux. I want to make that shift as easy and pleasant as possible for you.

If all goes well, this introduction will be painless. At very least, I hope to make the migration process as enjoyable and easy for you as I can.

Your experience will gradually increase as we explore the various aspects of the Linux operating system. As this occurs, you will have questions. You will want to learn more about different things. If, heaven forbid, something goes wrong with your system, you may wish to seek help. You may want to interact with other Linux enthusiasts. You may even wish to share what you have learned with others.

There is almost an endless list of online resources and communities that will address all of these issues and plenty more. I will share with you many great resources that you can use to learn more about Linux. Hopefully, I will be able to help you know where to go for each of the different types of help or information that you seek. This way, if you have a question that I do not address here, you will know where you can find your answer.

An introduction before we start

When you want to learn about something new, what do you do? Research! You likely go online and look things up, go to the library, and talk to anybody who may know something about it. Only *this* time, you don't have to do any of that. I have already done all of this for you. You have everything you need right here to get started with Linux. How easy is that? Grab a Coke, take this book, and head to your favorite armchair. We are going to discuss some of the things that set Linux apart from other operating systems.

Because of how adaptable it is, there are actually several different kinds of Linux. In the Linux world, we say that there are different *distributions*. The most popular distributions of Linux include Red Hat, Ubuntu, SUSE, Mandriva, Debian, and Fedora Core. Perhaps you have heard of some of these. One of the easiest distributions of Linux to use is SUSE Linux. It is this distribution that I will be working with in this text.

First, we will look at some of the ways that SUSE Linux will feel natural to you. It is different, to be sure. However, you will be surprised at how much of it feels familiar to you.

Conversely, we will also go over some of the ways that SUSE Linux will be foreign to you. Because honestly, using Linux is different than using Windows. We will look at these differences and make sure you are comfortable with them before we move on.

More familiar than you think

To start out in your comfort zone, let's look at the parts of Linux that will feel familiar to you. There is quite a bit more that falls into this category than you might think. For example, you have a graphical desktop just like you do on Windows. It has a screen saver, wallpaper, icons and windows, just like you are already used to. You can set the wallpaper to your favorite picture. There is a mouse pointer that you

move around the screen. You use this mouse cursor to select and click on things. There are icons on the desktop that you can click to open. There will be a very familiar windowing system that functions much like what you are already used to in Windows.

Not only will the desktop be similar to what you are familiar with, but many applications will be, also. You have a fully-functional word processor that will work much as you expect it to. Browsing the Internet is simple. In many cases, you will use Firefox, the same program you may already use on Windows to surf the web. Other functionality that Linux offers to you includes email, spreadsheets, mp3 players, video players, and printing; all concepts with which you are very likely already used to. Truth be told, you already know much of how to use Linux. More than you think you do.

Common Myths

To put you more at ease, I want to dispel some common myths people have about using Linux. Peoples' interest in this amazing platform has suffered a bit because they believe things about Linux that are not true. In some cases, they were true in the past, but not anymore. When we see that these are mere myths, the path to learning Linux becomes considerably easier. What are some of the most common misconceptions about Linux?

Myth #1 : *Linux is too hard for a regular computer user. I have heard that it is only for computer geeks because it is too hard to use.*

At the present time, this is complete nonsense. In the beginning, setting up and installing Linux and its programs had to be done by hand at a command prompt. Yucky. However, within the last few years, many types of Linux have become simple enough that young kids are able to install and use them. I have also heard stories about folks well-advanced in years setting up and using Linux. When you first install most types of Linux nowadays, you don't even see the command prompt.

You don't have to work in the command line at any time. This is especially true after you are done installing Linux. Almost the entire operating system can be accessed through graphical, window-based screens. In almost all cases, this includes things like installing software or configuring some aspect of the system. Linux, in most situations, has become quite point-and-click. Once you learn where things are, nearly everything can be accessed through the graphical windows. This is one of the biggest things that makes using Linux easy.

Myth #2 : *Linux has a very limited selection of software.*

There is definitely a lot of software available for Windows. In reality, there is a great overabundance. Linux provides a narrower selection of higher-quality programs. Let's talk about email programs, for example. On Windows, I have tried around 60 different email programs. Of those, about six are mainstream, well-supported, widely used applications (Outlook, Outlook Express, Eudora, Thunderbird, Pegasus, and The Bat). It makes sense that if a great number of people are using a program that it will probably be around for a long time. Not only that, but there are more people who you can ask for help. I recommend using such types of programs wherever possible. For Windows, there are about five mainstream email programs.

On Linux, there are also a handful of them, such as Thunderbird, KMail, Balsa, Mozilla Mail, Opera, and Evolution. On average, the number of available Windows programs is overkill several times over. With Linux, you still have a nice handful of choices without having to sort through an ocean of options. There *are* fewer applications available on Linux. That said, the quality of the good ones is very easily just as good as, in many cases better than, what you find on Windows. This is true especially in recent years, as some applications have reached industrial-strength, enterprise-ready stages of development. Many such applications are employed in full-time use at real companies throughout the world. In the case of email, I recommend using Thunderbird. I will introduce this program along with some other great software later in this book.

Myth #3 : *If Linux and its software are free, they must not be very good quality.*

Quite the opposite is true. Most of the software that runs on Linux is not owned by any one person or company. It is open to the community. This means that anyone who wants to can work on the program and make it better. They do it because they want to improve the software, as they get no other monetary gain from their work. Thus, many such programs have thousands and thousands of programmers working on them to make them genuinely better.

With proprietary systems, the code is generally managed by a small team of programmers who are under great pressure to get their software finished. In some cases, the software is released with bugs and problems in it so that the consumer must be dependent on the vendor for upgrades and fixes.

Because of all of this, many times Linux software is superior to Windows software. This is one of the reasons that Linux has been and still is much more secure than Windows. It has many thousands of people worldwide working to make it as good as it can be. When problems are found, they are fixed within a day or two, and many times within a few hours.

With these few things set straight, we can begin learning more about the Linux operating system. There will be many things similar to what you have already used on Windows. There are also some things that will be different for you. Some things are only minor adjustments. Other things may take a little more getting used to.

In any case, we will not rush through anything in this book. I'd like to make sure that you are as comfortable as possible with the concepts that we discuss. Using the free Linux operating system can be quite rewarding to use. Perhaps the most obvious benefit is in how much money you will save. Hopefully, we will also be able to make it as fun and as enjoyable as possible for you.

Things to know about Linux

We have looked at ways that Linux will feel familiar to you. While there are many, there are some things that may feel a little different. Truthfully, many things *are* slightly different. These will take no time at all to get used to. That said, there are other things that may take a little longer for you to adjust to. I would like to take a few moments to briefly discuss some of these differences. That way, when we get further into this book, you will know what to expect. Let's take a look at some of the major differences between Windows and Linux, and talk about them one at a time. This will give you greater insight and understanding into how Linux works.

#1 : Linux is very versatile and configurable.

One of the somewhat astounding strengths of Linux is its versatility. It can run as a web server, a desktop, or embedded into other systems. There is a distribution of Linux that runs on the Space Shuttle. There is one that controls a military vehicle that actually drives itself. In Canada, they are using Linux to manage coin-operated meter maids. Other distributions run on myriads of electronic devices, such as Apple's iPod.

Because Linux is so versatile, there are many many ways to perform the same task. This may be one of the things that makes people think Linux is so complex. When you are trying to accomplish a task, you may find that there are several ways to accomplish that task. In such cases, it may help to ask a friend familiar with Linux how they do it. Having a mentor available is one great way to get help with your Linux system. If you don't know anyone who knows Linux, please do not worry. There are innumerable resources online where you can turn for help, which I will discuss a little later in this book. As you visit these resources regularly, you will meet people who can help you. Within no time, you will have many online friends who you can ask for help.

#2 : Getting Help with Linux

Speaking of getting help, the Linux way is going to be a little different than what you are used to. When you have trouble in Windows, you may be used to calling technical support for help. I think that many people prefer to go to a live person for help. In many cases, this does usually fix the problem.

However, with this model of problem resolution, you don't usually learn much about what caused the problem or how to fix it next time it occurs. Because of the nature of how you find help with Linux, you do learn quite a bit in the process.

Some of the time, this process involves research done on your own. Do not interpret this to mean that you are completely on your own. Far from it, as it turns out. Once you have fixed a handful of problems, the process of doing so will become second nature for you.

At a later portion of this book, I will outline several very efficient ways of seeking help when things go south. Some of these involve doing your own research, and others methods involve asking other people for help. We will look at how to use some of the great resources. I will demonstrate how easy it truly is to get help with Linux. If you enjoy browsing and reading, many of the resources we will discuss can be used for learning more about Linux.

#3 : The Command Line

In Windows, it is very rarely necessary to use the DOS prompt. In modern distributions of Linux, you are perfectly able to use your computer without ever touching the command line. In the past, this was not the case. For a long time, when you wanted to learn Linux, you had to know the command line inside and out. With some of the more recent flavors of Linux, you can get away without knowing anything about the command line.

That said, one of the major differences between Windows and Linux is the power of the command line. In Windows, it has minimal value, and provides little useful functionality. In Linux, on the other hand, the command line interface provides a

wealth of powerful features, more of which we will discuss later on in this book. For now, it is sufficient to know that if you want to truly say that you know how to use Linux, you should take the time to learn how to use the command line. When we do explore this powerful tool, I will take you through some of the most basic commands.

#4 : Software Installation

I am going to assume that you have installed software on Windows. The process is somewhat simple. You search online for a cheap or free software package that does what you need it to do. You download it to your computer. When the download completes, you usually will double-click on the file you just downloaded, starting the installation process. Most of the time, you just click NEXT several times, and eventually the software gets installed.

The way you install software on Linux is somewhat different than this. If you are using SUSE Linux, the software is all installed with one program, called YAST. This application makes installing software a snap. The basic premise is that you open YAST and do a search for the software you want. In the results that come up, you just check a little box next to the program that you wish to install. You then click a button, and YAST goes about its business of installing your software. Most of these programs will reside on the several different installation CDs which you will already have. No need to go hunting around.

#5 : Security in Linux

One of the overwhelming strengths of Linux is its rock-solid security. With so many thousands of people working on it worldwide, security holes and bugs are found and fixed quickly. One of the great things about this is that you may only have to wait for a few days to get updates. With Windows, studies that have been done have found that you have to wait for about six weeks for security updates. This is bad news. Even worse, hackers know about the security hole for at least four of those six weeks. That means for nearly a month, you run a much higher risk of a

hacker using that security hole to break into your systems. With Linux, by the time the hackers know about a security issue, there are already updates available to fix your system. That sounds like a much better deal to me.

In addition to having quick security updates available, even an unpatched Linux system left out in the open on the Internet is more secure than a similarly unpatched Windows system. Studies have found that unpatched Linux systems left on the Internet last at least four months without being broken into. Unpatched Windows machines last, on average, about 70 minutes.

In my personal experience, I have had Windows computers broken into before I am even done installing Windows on them! I have to keep the computer off the Internet until I am completely done installing Windows, applying all the patches (which you have to be connected to the Internet to even get), and installing all of the anti-spyware, anti-virus, and firewall software. Only then do I cross my fingers and plug it into the Internet. Rather than go through all that anxiety, it is just less hassle to use Linux.

Because Linux is not susceptible to about 99.6% of known viruses and spyware, there are very few anti-virus applications available for it. Do not let this deter you. Because Linux is so secure, there is almost no need for an anti-virus software. Or anti-spyware software. Linux does, however, have an industrial-strength firewall. This is another reason that it provides full security.

Along this same vein, the processes, files, and directories are controlled by a very strict privilege system. Because of this, a user will have permissions to access some things but not others. For example, regular users do not have access to system commands or files. If they did, you can imagine that the system could be breached very quickly. Windows has no such clearly defined access control. This is another reason that Linux is very secure. You can count on the solid security of the Linux platform.

Especially if you have servers at your place of employment, Linux will provide a solid solution to security concerns.

#6 : Names and Locations of Applications

Earlier, we discussed some of the similarities between Linux and Windows. One of those similarities is the graphical desktop with icons, buttons, and a windowed environment. You will probably intuitively know how to use many of these features in Linux.

The system menu in Linux behaves a lot like you are used to. There is a button in the lower left corner of your screen. You click it, and a menu appears. In the menu, there are several submenus. You pause the mouse cursor over the submenus and additional menus and options appear. It is very similar to what you already know from using Windows.

What you have to learn here is where in this menu to find each of the applications. This is no cause for concern. It will not take very long to get used to this. There is even a way to search through the menu for the program you want to run. The ability to search this menu is one more thing that makes Linux easy to use.

You may also very well be used to the names of certain applications. You probably know immediately what Outlook, Word, and Excel are, just by their names. With Linux, the applications will have different names. Again, it is only a matter of time before you will learn the names of these applications. I will even help you cheat just a little.

The main application that is like Microsoft Office is called OpenOffice. A great part about this is that first, it is free. Second, it already comes installed with SUSE Linux, so you won't have to download it separately from anywhere. Another great perk is that by the time you are done installing SUSE Linux, OpenOffice will already be on your computer. Isn't Linux neat?

Getting Help and Learning More

Previously, I said I would talk a little bit about some ways to get help with Linux. Should you have questions or run into trouble, you will take a slightly different approach getting help in Linux than how you do it in Windows. It really isn't all that much harder. It is just different. Coming from Windows, you are likely used to picking up the phone and calling technical support when you have trouble. Although this is not the case when you need help with Linux, there are thousands of people that you can ask for help. The biggest difference is simply that you are not talking to them on the telephone. Instead, they can be found in scores of other places.

What if you are not having trouble? What if you just want to learn more about Linux? You will be pleased to know that there are some great places that you can go to browse leisurely through and learn more about this amazing operating system.

General reading material

If you want to do some general reading about SUSE Linux, there are several places that you can go. Some of these places contain lists of other resources. Great places to learn more about SUSE Linux are listed as follows:

- <http://en.opensuse.org/Communicate>
- <http://www.opensuse.org/>
- <http://www.novell.com/linux/>
- <http://www.novell.com/cool solutions/feature/17218.html>

You can go to each of these places and spend time at your leisure browsing through them. These types of resources will help you learn more about SUSE Linux in general.

Forums

These are arguably the most helpful resource on the Internet. Forums are designed such that they read like conversations. One user posts a question. If someone answers that question, that answer is posted right below the question. In the same way, the rest of the conversation is posted below that. It is this type of format that makes forums very user-friendly and easy to use. A good habit to get into is to read the posting policies of the forums before you post. Some of them have rules that they ask you to follow when posting. Some of the best forums for SUSE Linux are as follows:

- <http://forums.suselinuxsupport.de/index.php>
- <http://www.linuxquestions.org/questions/forumdisplay.php?forumid=60>
- <http://www.suseforums.net/>
- <http://www.linuxforums.org/forum/suse-linux-help/>

In many cases, you can go to the site, create yourself an account, and post your question. Be sure to check back often and to see if your question has been answered.

Mailing Lists

Another great resource for getting help are mailing lists. They are actually very much like forums, except that they use email instead of a website for posting. To get help, you will sign up for the mailing list. Then, you will send a question to the mailing list. At some point, you should get a response from someone regarding your question. A handful of great mailing lists are at the following locations:

- http://www.suse.com/en/private/support/online_help/maillinglists/index.html
- http://en.opensuse.org/Communicate#Mailing_Lists
- <http://groups.yahoo.com/group/suse-newbie/>
- <http://www.novell.com/coololutions/forms/subscribe.html>

There is one listed there for Yahoo. That particular mailing list was created for new Linux users. You can go there and ask whatever question you may have about anything relating to SUSE Linux. You will very likely find a nice person there who would be glad to answer your question or help you.

Other Resources

If you are familiar with wikis, and would like to visit some SUSE Linux wiki pages, here is a handful of them:

- <http://susewiki.org/>
- <http://en.wikipedia.org/wiki/SuSE>
- <http://wiki.linuxquestions.org/wiki/SuSE>
- http://wiki.novell.com/index.php/Cool_Solutions_Wiki_Main_Page
- <http://wiki.suselinuxsupport.de/wikka.php?wakka=SuSELinuxSupport>

If you are interested in reading blogs by other Linux users, you can visit some of these links:

- <http://andreasjaeger.blogspot.com/>
- <http://www.suseroot.com/blog/>
- <http://rubberturnip.org.uk/>
- <http://www.novell.com/ctoblog>
- <http://tirania.org/blog/index.html>
- <http://nat.org/>
- <http://www.suseblog.com/>
- <http://planetsuse.org/>

I have listed all of these resources because I want to help you realize how much help there is available. Take a moment to see how many places you can go when you need help with something. SUSE Linux really has a great support community.

As we go through the rest of this book, you may have questions. Try as I might to cover all bases, I may omit the specific answer you seek. In those cases, I don't want you to feel like you have been left hanging. Pop into one of the forums, introduce yourself, and ask your question. Sign up for a mailing list and fire away with your question. There are thousands of very knowledgeable people who are able and willing to provide help for problems you may encounter.

How do I get Linux?

We have now spent some time looking at the parts of Linux that you will already be used to before you even start. We have also discussed some of the things you may have to spend some time learning. We spent some time looking at ways that you can get help, should you run into problems. With all of this background in place, the next thing to do is get started. The next step I suggest is getting yourself a copy of Linux. There are a number of different ways to do this. I will just cover the two easiest for the sake of simplicity.

Download Linux and put it onto CDs

The most common way to get Linux is simply by downloading it. If you have a fast enough Internet connection and a CD burner, this will be a great way to get Linux. It does take a little technical knowledge. This method requires a couple of steps. As the name of this section implies, you will first download the CD images. Then, you will burn these disc images onto some blank CDs. Let's walk through how to do this.

First, we will download the Disc images. These are simply files containing everything needed to put on the CDs. To get these files, visit this URL:

<http://mirrors.kernel.org/opensuse/distribution/SL-10.1/iso/>

Towards the top of the list on this page, you will see the following files listed:

SUSE-Linux-10.1-GM-i386-CD1.iso

SUSE-Linux-10.1-GM-i386-CD2.iso

SUSE-Linux-10.1-GM-i386-CD3.iso

SUSE-Linux-10.1-GM-i386-CD4.iso

SUSE-Linux-10.1-GM-i386-CD5.iso

You can just click on each filename in the web page to download it. If that doesn't seem to work for you, right-click on the filenames and select "Save Link As..." or "Save Target As..." Then save each one to a location that you will remember.

Once you have all of the files downloaded, you will want to burn them onto blank CDs. You will want to exercise caution here. You want to burn these files *as* CDs. **Burning the CD image file *onto* a CD is not the same thing as burning the CD image *as* a CD.** You want to do the latter.

In many popular CD-burning software applications, there is some kind of option somewhere that will allow you to make a CD from a CD image. It may be called "Burn Disc from Image", "Make CD from ISO", or something similar. As not all software is the same, I cannot tell you exactly what it will say. Fish through the menus of your software, and find the option that will allow you to burn the image *as* a CD. When you have done this, proceed to burn all five of the CD images.

After you have burned the CDs, you are ready to install Linux onto your computer.

Purchasing Linux Installation CDs

Downloading and burning the CD images can be a decent amount of work and take up valuable time. If you do not want to go this route, you can purchase CDs with Linux already on them. This way, you can usually ensure that there will be minimal, if any, problems with the CDs. One way that you can purchase such CDs is from Novell. One benefit of doing this is that you will get official pressed and silkscreened CDs and a DVD with the same data on it. In addition, you will get the nice packaging. Perhaps the biggest benefit of doing it this way is that you will receive complete manuals for using SUSE Linux. Additionally, by purchasing it from Novell, you may also be entitled to some technical support. The page from which you can make your SUSE Linux purchase is found at the following location:

Novell: <http://www.novell.com/products/suselinux/pricing.html>

Installing SUSE Linux

However you choose to get Linux, now you likely want to install it. This next chapter, then, will be about installing SUSE Linux. Although there are several steps to this process, each of them are simple. Where concepts may not be quite so straightforward, I will do my best to explain them in a clear, concise manner. Before we start, let's talk about what kind of installation we want to do.

Installation Options

Because we know that Linux is so versatile, we would do well to decide what kind of installation we would like to perform. There are two main installation types. The first is that when you are going to install Linux to work as a server (which we are not going to do here). The second type is when you will use the computer as a desktop. In this section, we are going to install it as a desktop.

The next thing we will look at is what kind of desktop environment to use. The two biggest choices are KDE and Gnome. In a later chapter, we will take a closer

look at KDE, the K Desktop Environment. For now, just make a mental note that we will be installing KDE as our desktop.

I would also like to take a moment to introduce another concept. It is the concept of running two operating systems on the same computer. You cannot run them both at the exact same time. However, when you boot up your computer, you will be able to pick between booting into Linux and booting into Windows. Many people like to do this. One reason is so they can transition slowly to Linux without having to completely give up Windows all at once. I had a dual-boot machine for about a year before switching exclusively to Linux. Another reason to dual-boot a system is so that people can try Linux out without having to purchase another computer for this purpose.

One reason I might not recommend this method is that it is somewhat permanent on the Windows end. It is difficult to completely restore a computer to run only Windows once you have chosen to dual-boot it. However, if you are planning to eventually phase out Windows, it is very easy to convert a dual-boot computer into one that runs only Linux.

Whether you choose to do a Linux-only installation or a dual-boot installation, I will include instructions for both. You can simply follow the instructions for your choice of installation, and skip the instructions for the other choice. With that, let's take a look at a Linux-only installation, definitely the easiest if you have a spare computer.

Linux-only Installation

You should be reading this section if you want to install Linux onto a computer where it will be the only operating system. If you want to install Linux and also keep Windows on the same computer, skip to the next section.

I want to let you in on a secret. During the installation, you will be taken through a series of screens. The secret is that for most of the screens where it gives you

options, the default choices are usually fine. This means that if you are on a screen where you don't know what to do, you can probably just click NEXT without changing a thing.

While this is true in many cases, it isn't always that easy. Don't worry, though. With the walk-through that we will do here, we will make the installation very easy.

When doing the installation, you can use either a set of CDs or the DVD. The process should be mostly the same for either one. The obvious difference is that with the CDs you will just provide the appropriate CD when the installation asks you for it. With the DVD, everything is on one disc, so you won't need to change discs.

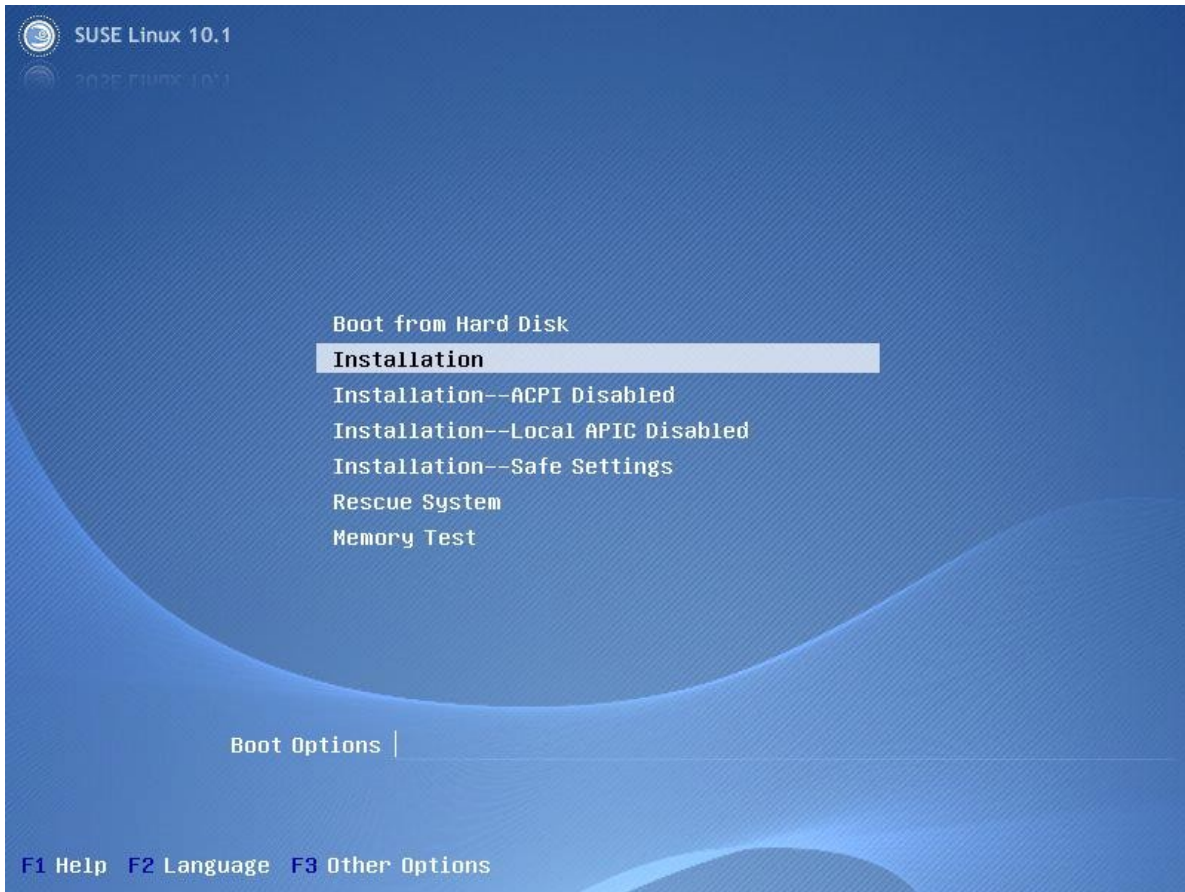
One other thing that you will need to check is that you have sufficient space on your hard disk to hold Linux. SUSE Linux generally takes up about 3 Gigabytes. It is recommended to use at least 5. If you have more space than this, your system should do very well.

Beginning the Installation

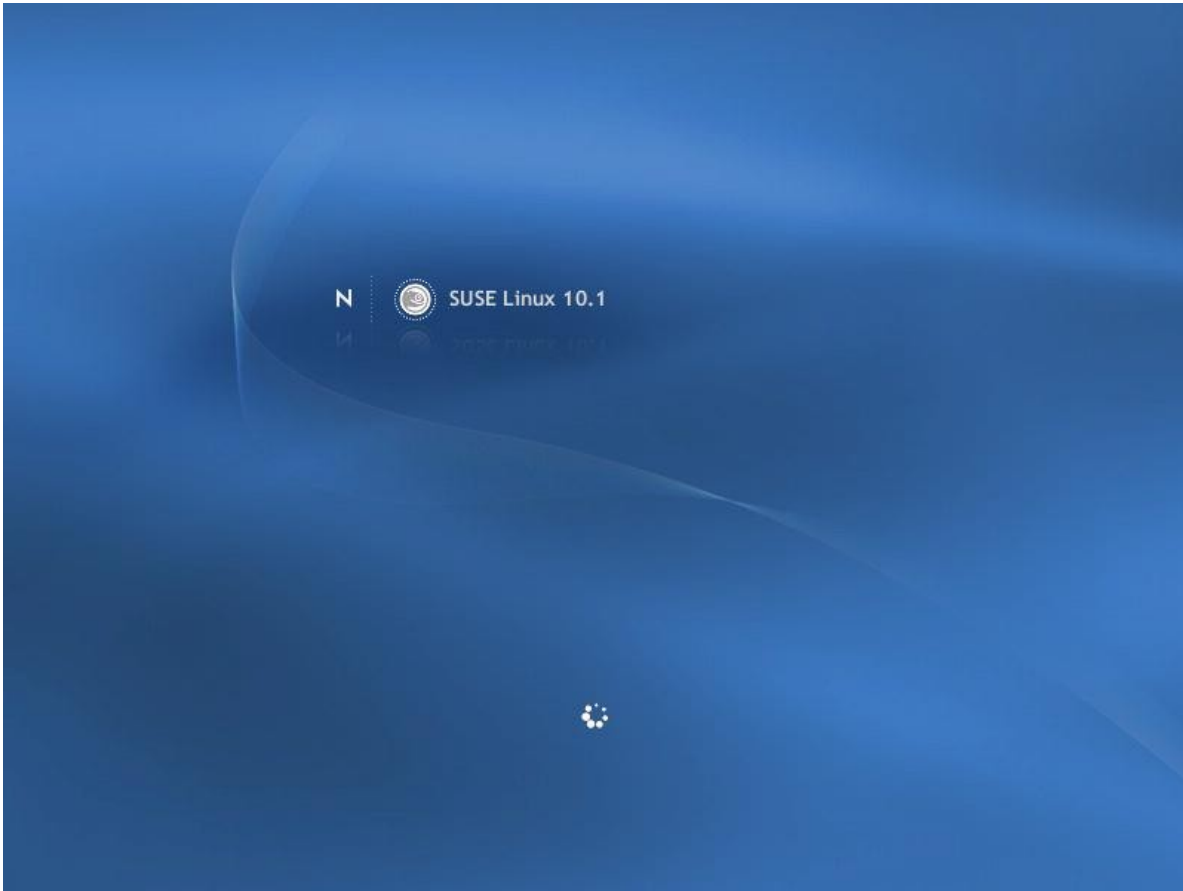
Let's get started. If you are using CDs, put disc 1 into your CD-ROM. If you are using the DVD, insert that disc now.

Power up your computer.

A blue screen will appear after a few moments, with a menu. Select the **INSTALLATION** option (by pressing the down arrow), and press ENTER:

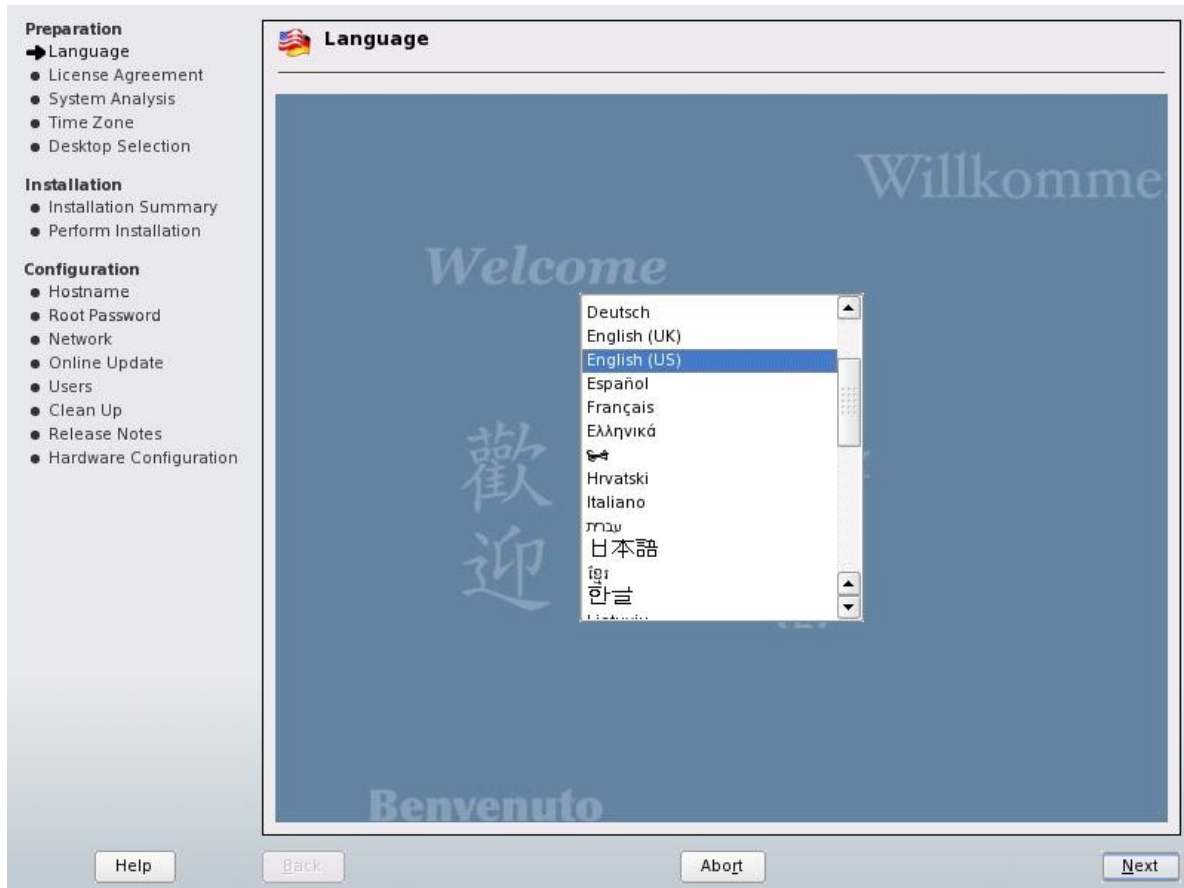


You will see a progress bar for a few seconds that says “Loading Linux kernel”, after which the screen will go black. After a moment, another blue screen will appear, similar to this:

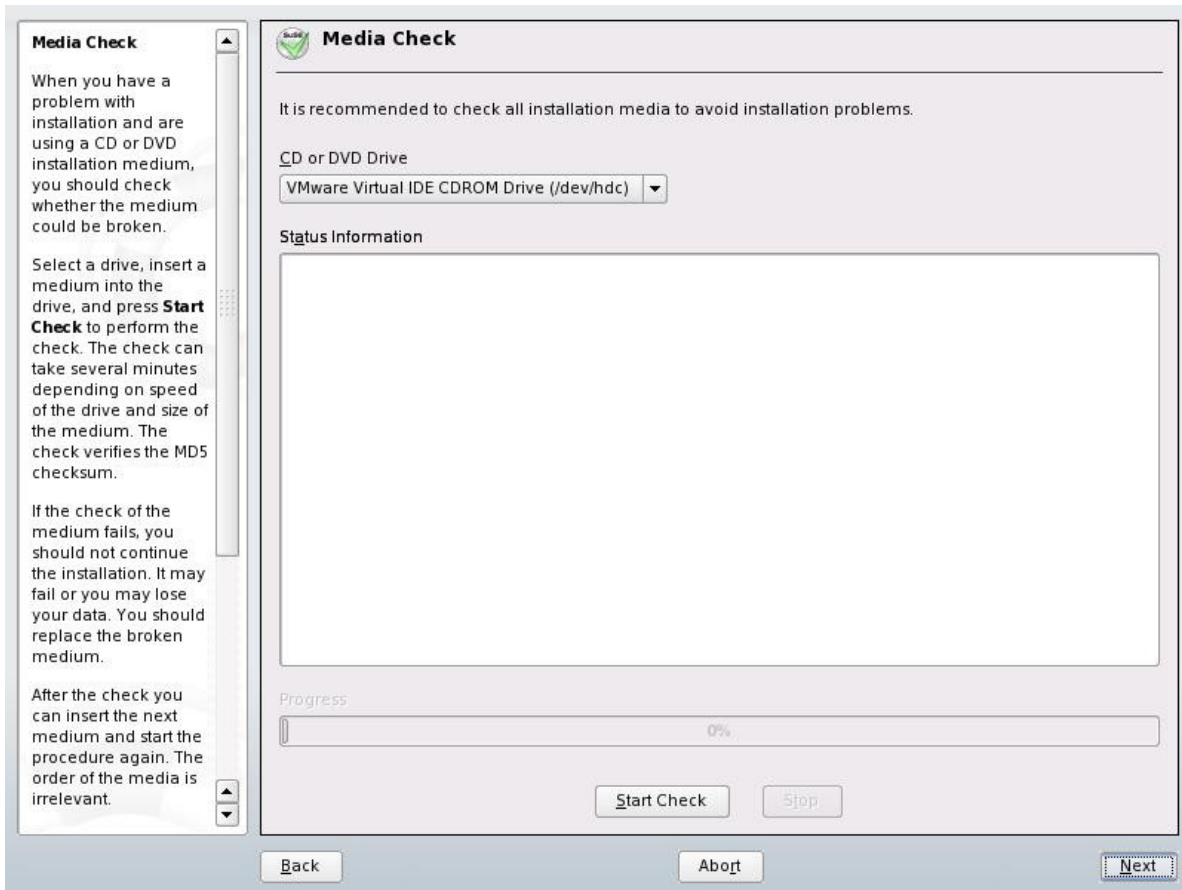


This screen may remain for several minutes while the Installation system is loading.

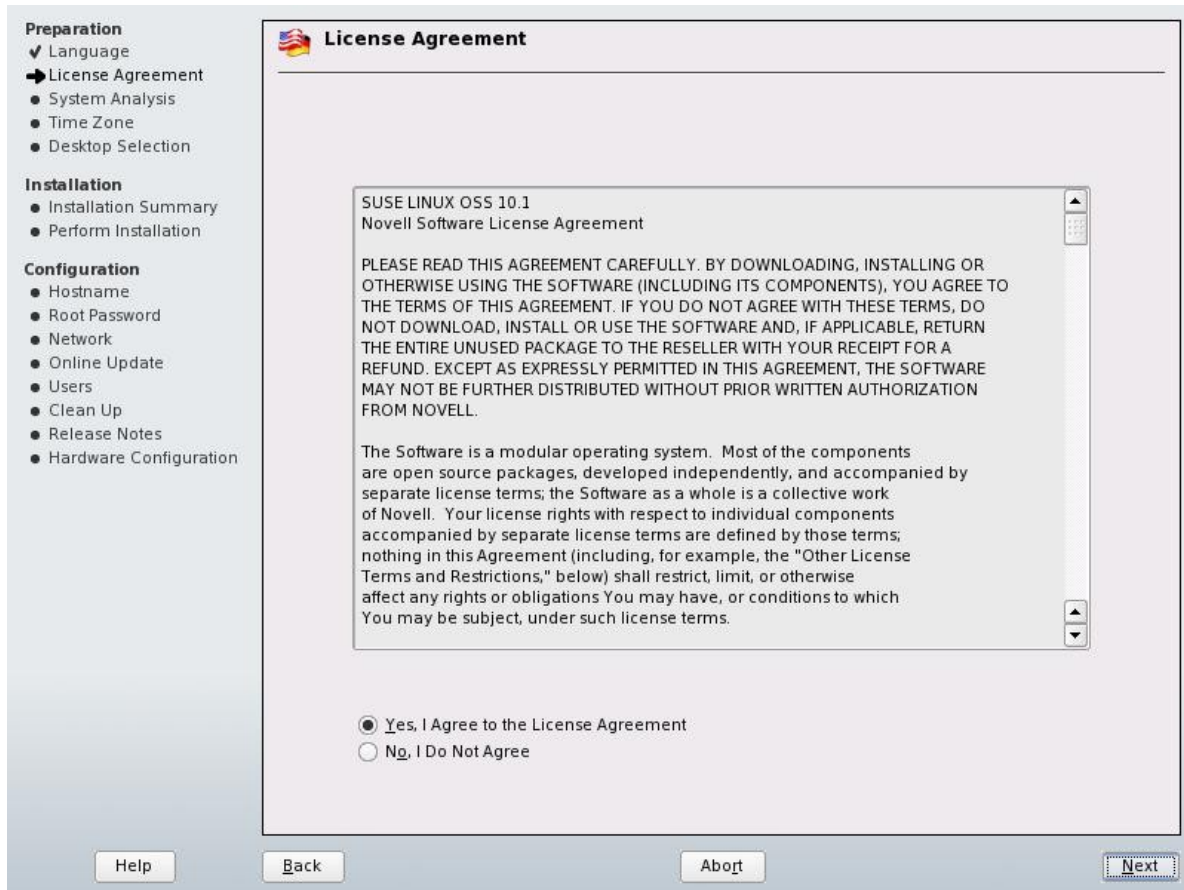
After a few minutes, you will see the LANGUAGE screen appear. This is the first step of the installation. From this screen, select your preferred language, and click NEXT:



You are taken to a screen that suggests you do a media check. If you wish to do this, click **START CHECK**. When you are ready, click **NEXT**:

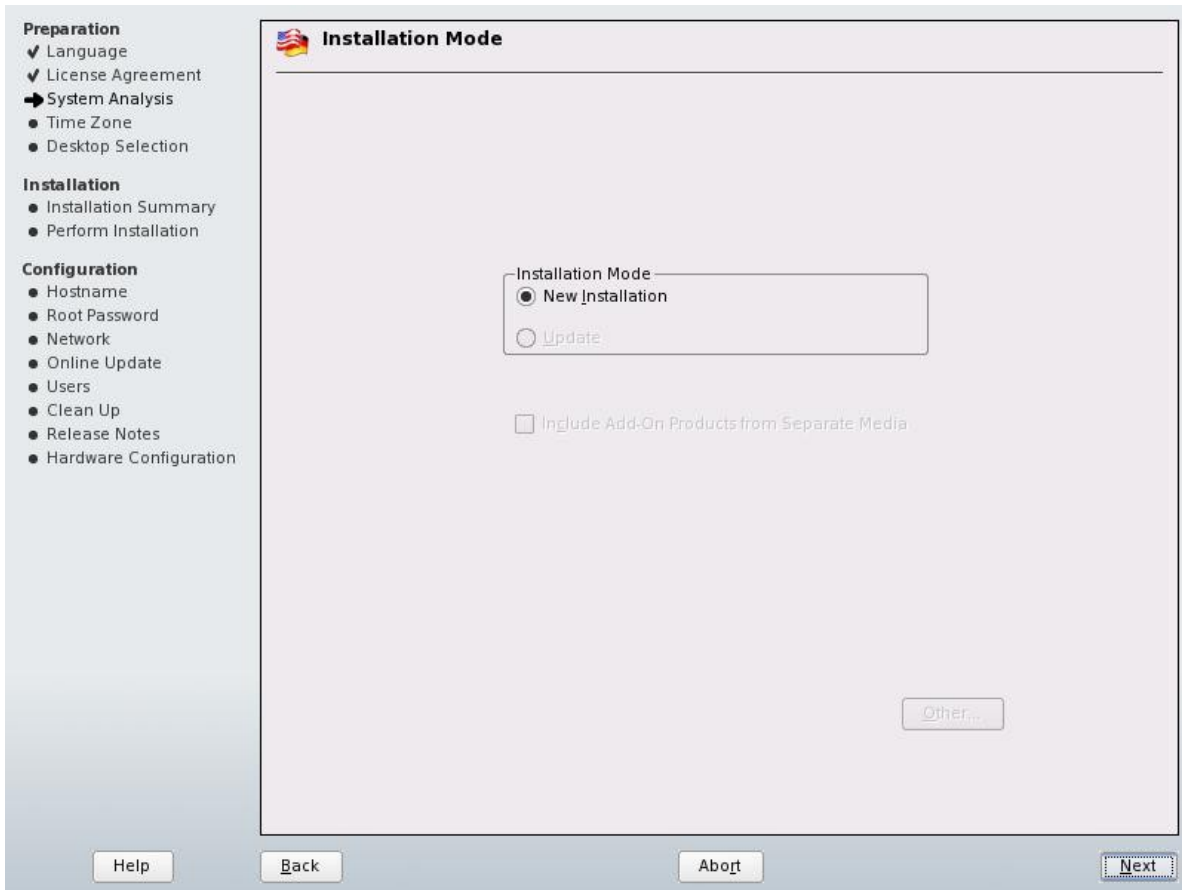


The next screen you see is a license agreement. Make the appropriate selection at the bottom of this screen. Then, click NEXT:

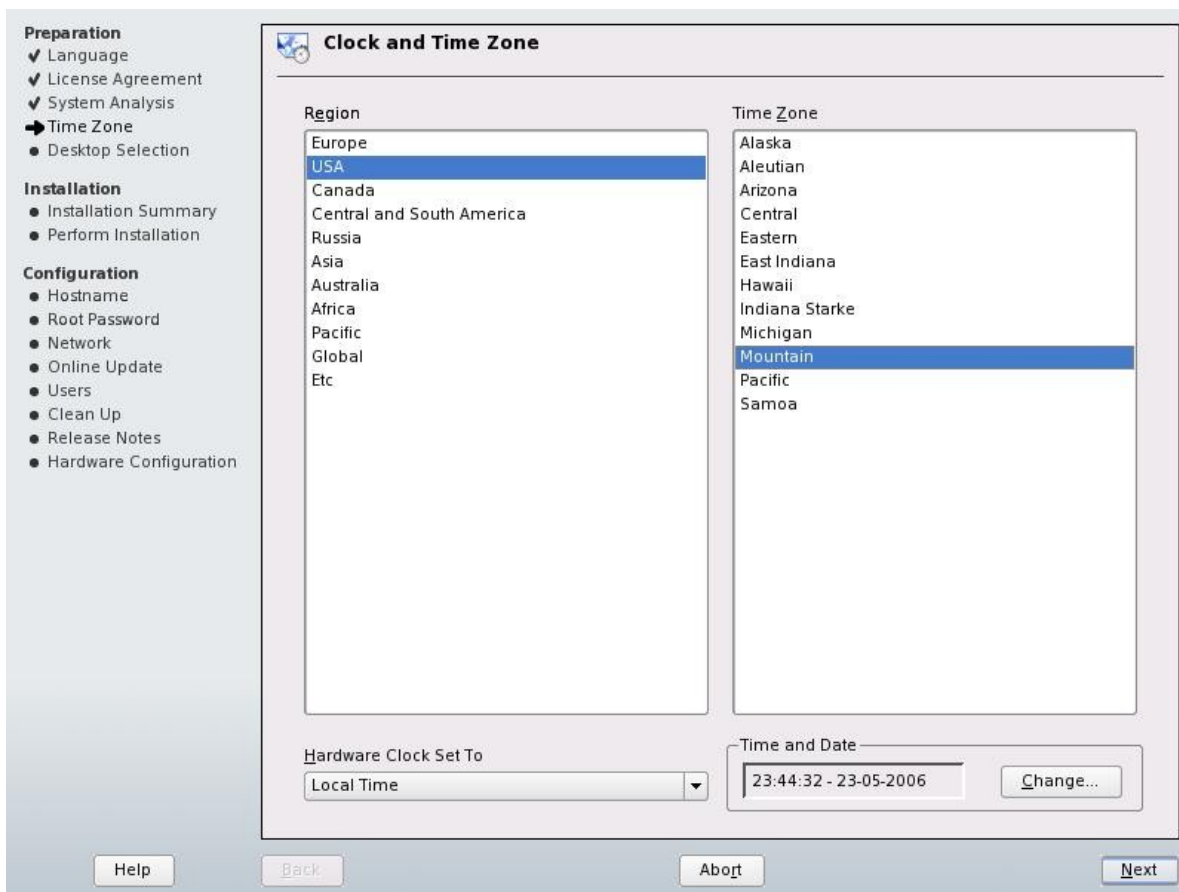


The Installation program will probe several of the parts of your computer. It will stop on a screen entitled "Installation Mode". Select the "New Installation" option.

Click NEXT:



On the next screen, select your region and time zone. In the drop-down called “Hardware Clock set to,” pick “Local Time.” Then, click NEXT:

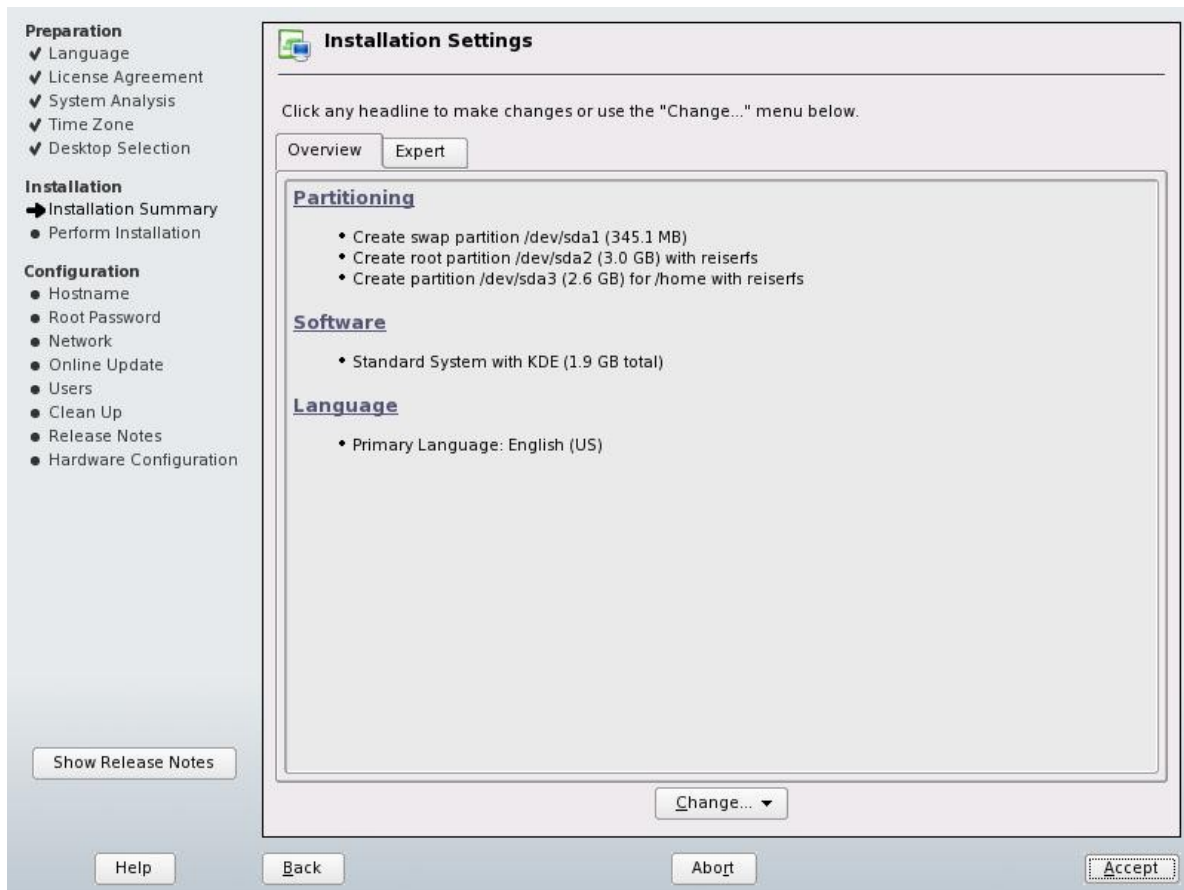


You are taken to a screen where you will select your desktop. For our purposes, we are going to select KDE. Click NEXT:

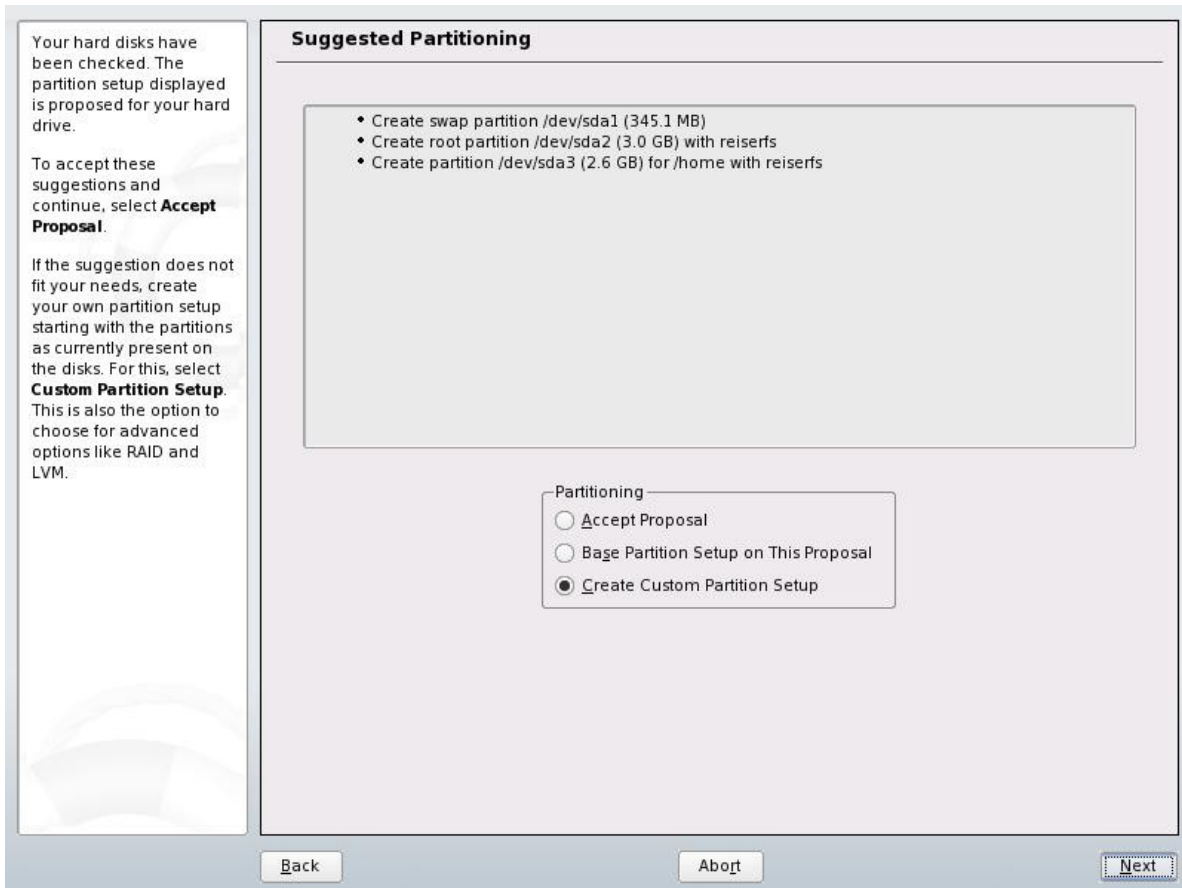


The next screen, called "Installation Settings," will take a few seconds to load. When it does, you will see three sections: Partitioning, Software, and Language. Since we want to make sure that only Linux is installed on this computer, we're going to change the partitioning just a tad. I just want to remind you that if you are installing Linux this way, the entire rest of your hard disk will be wiped clean. If *you are sure* that this is what you want to do, continue.

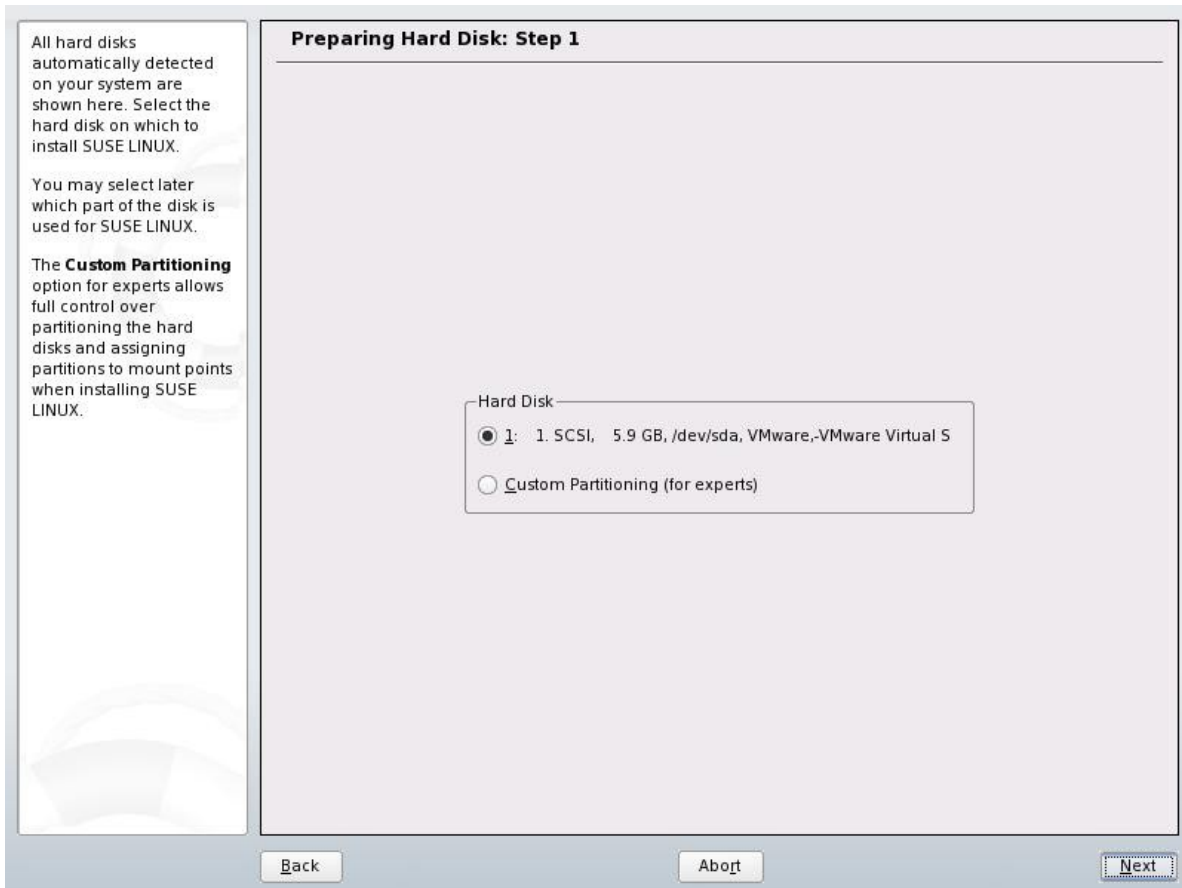
Go ahead and click on the blue PARTITIONING link at the top of this screen:



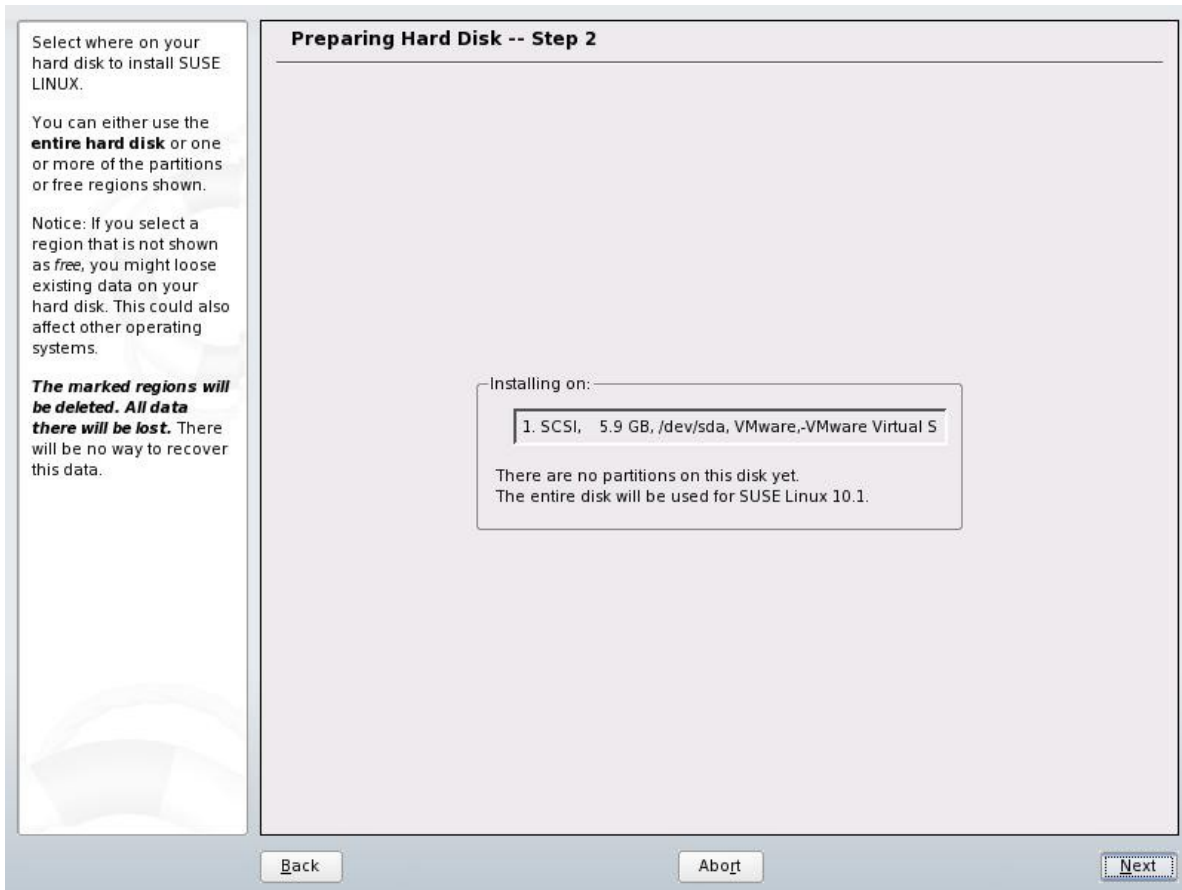
On the next screen, called “Suggested Partitioning,” there is a “Partitioning” box down in the center of the screen. Inside this box, select the “Create Custom Partition setup” radio button. Click NEXT:



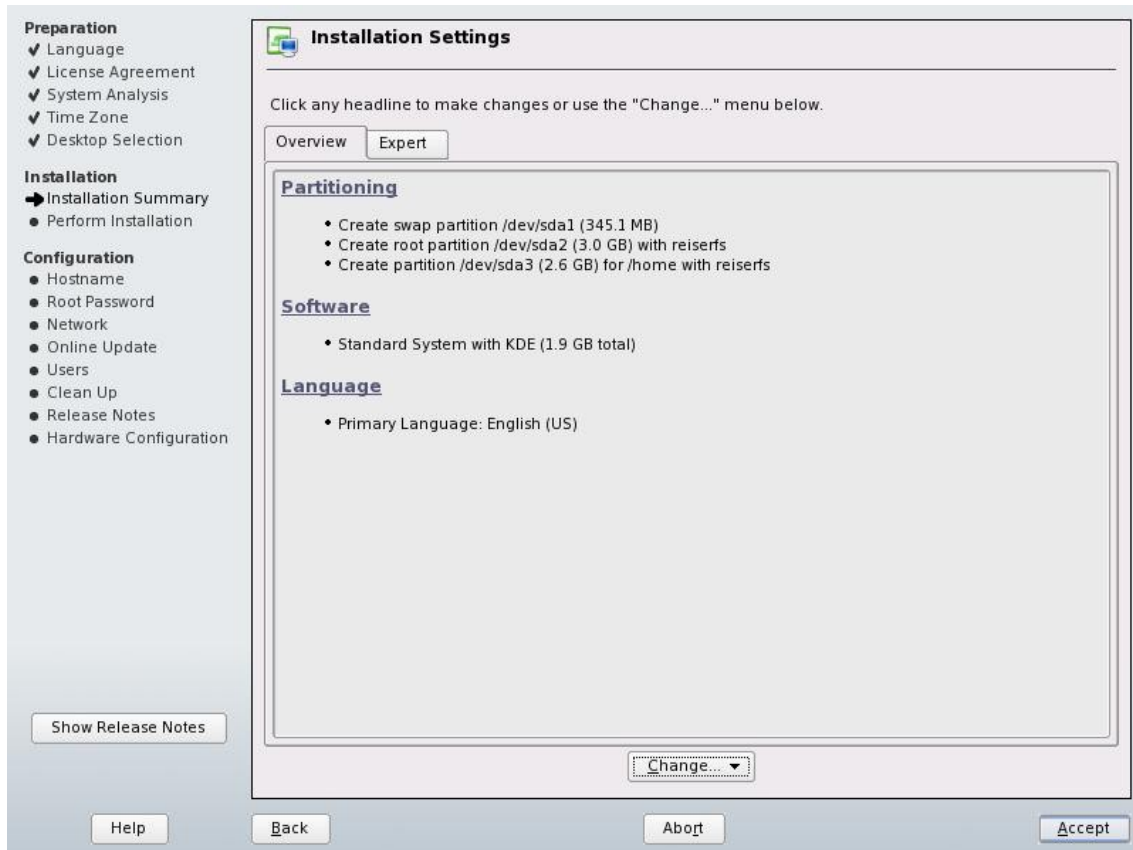
The next screen is called “Preparing Hard Disk: Step 1.” On this screen there is one box. This box is called “Hard Disk.” In this box, simply select the very first radio button. Don't even worry about what it says. Then click NEXT:



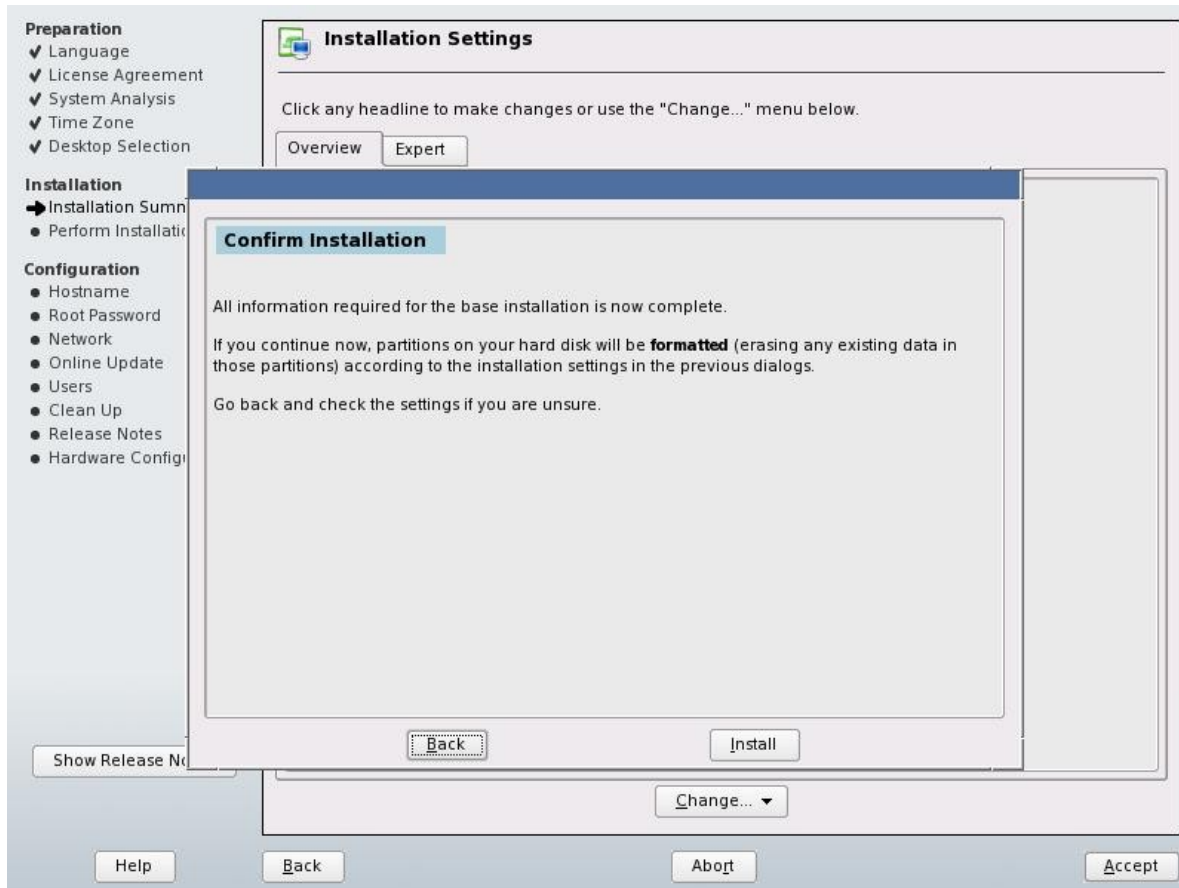
The next screen is called “Preparing Hard Disk: Step 2.” On this screen also, there is only one box. It is called “Installing on:.” If you see a button that says “Use entire hard disk, click it (if not, that is ok). Then, click NEXT:



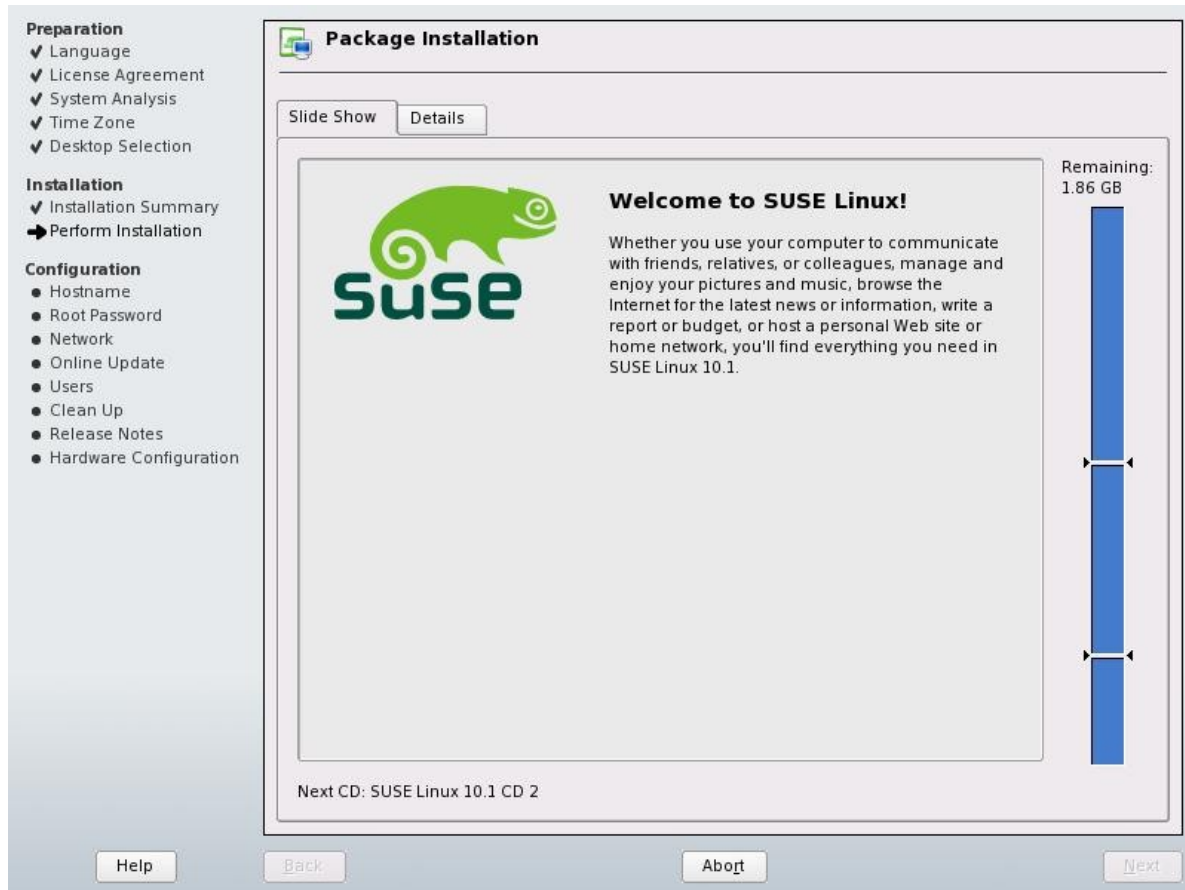
Then, we come back to the “Installation Settings” screen where the installer thinks for a few minutes. When this process finishes, click ACCEPT:



The Installation program asks you if you want to start installing the system to the hard drive. If you are sure you want to do this, click INSTALL:



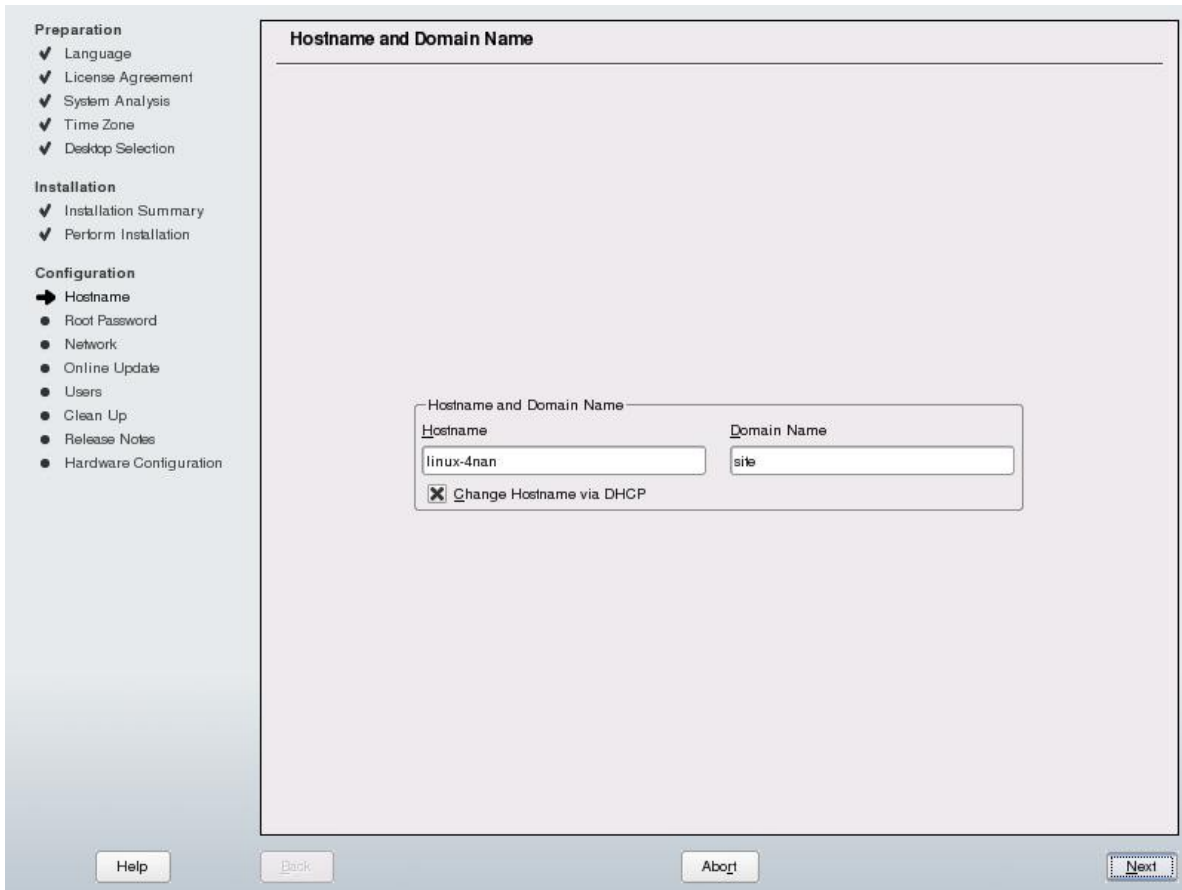
Your system then formats your hard drive. Shortly after this, the installer begins installing the Linux operating system to the hard drive:



Grab your favorite drink and go play some solitaire or something. This step takes quite a while. If you are using CDs, don't go too far. During the installation, you will be asked to insert different CDs throughout this process. If you are using a DVD to install SUSE Linux, you can probably go do something for 30 or 45 minutes. Whether you are installing with CDs or with the DVD, this step takes awhile either way.

Your computer may reboot itself during this installation process. Just let it do its thing, and all will be well.

After all of the files are copied, the next screen you see is called "Hostname and Domain Name." You *do not* need to worry about what any of this is. In most cases, you can leave everything as it is and do what's easy, click NEXT:

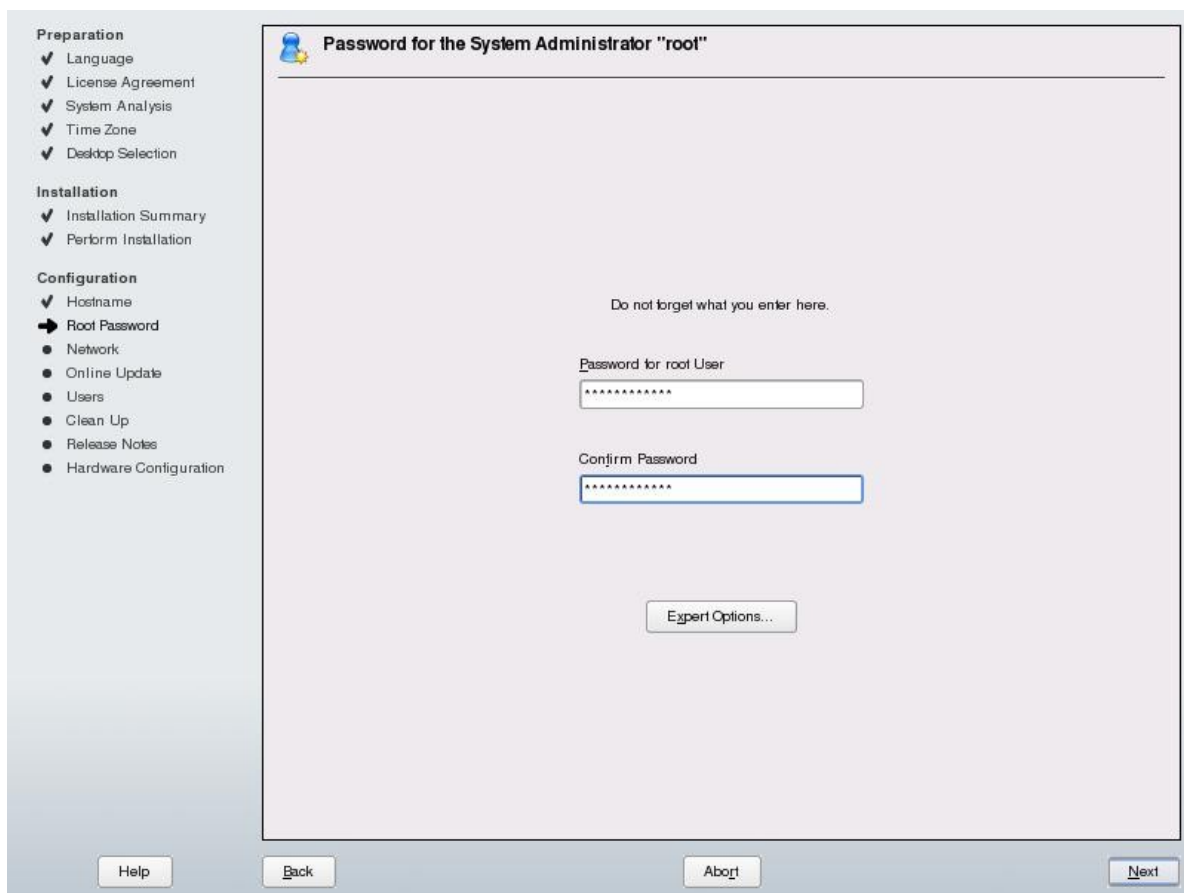


You are taken to the next screen, called "Password for the System Administrator 'root'." The root user is the only user that can make system changes, such as installing software. It is the account of the system administrator. You will need to come up with a really good password here, and then keep it hidden away in a safe place so that no one can find it.

If someone does find it, they may be able to log into your system as the root user. They can then do whatever they want to your computer. We don't want that to happen. To avoid such problems, keep this password hidden and safe.

We will talk more about users in a later chapter.

Go ahead and pick a password for your root user. Enter that password here in the top box, and then again in the bottom box, for verification. When you are ready, click NEXT:

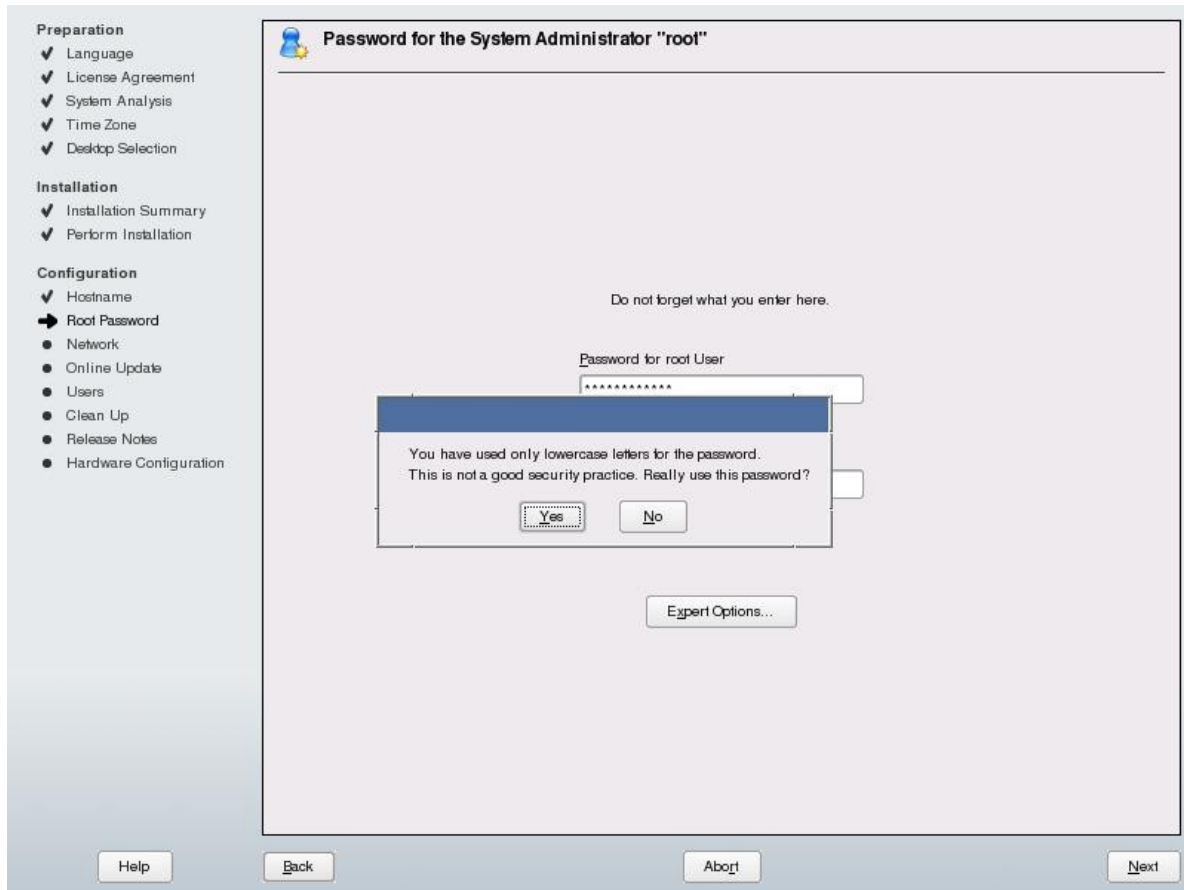


The screenshot shows a window titled "Password for the System Administrator 'root'". On the left is a sidebar with a progress list:

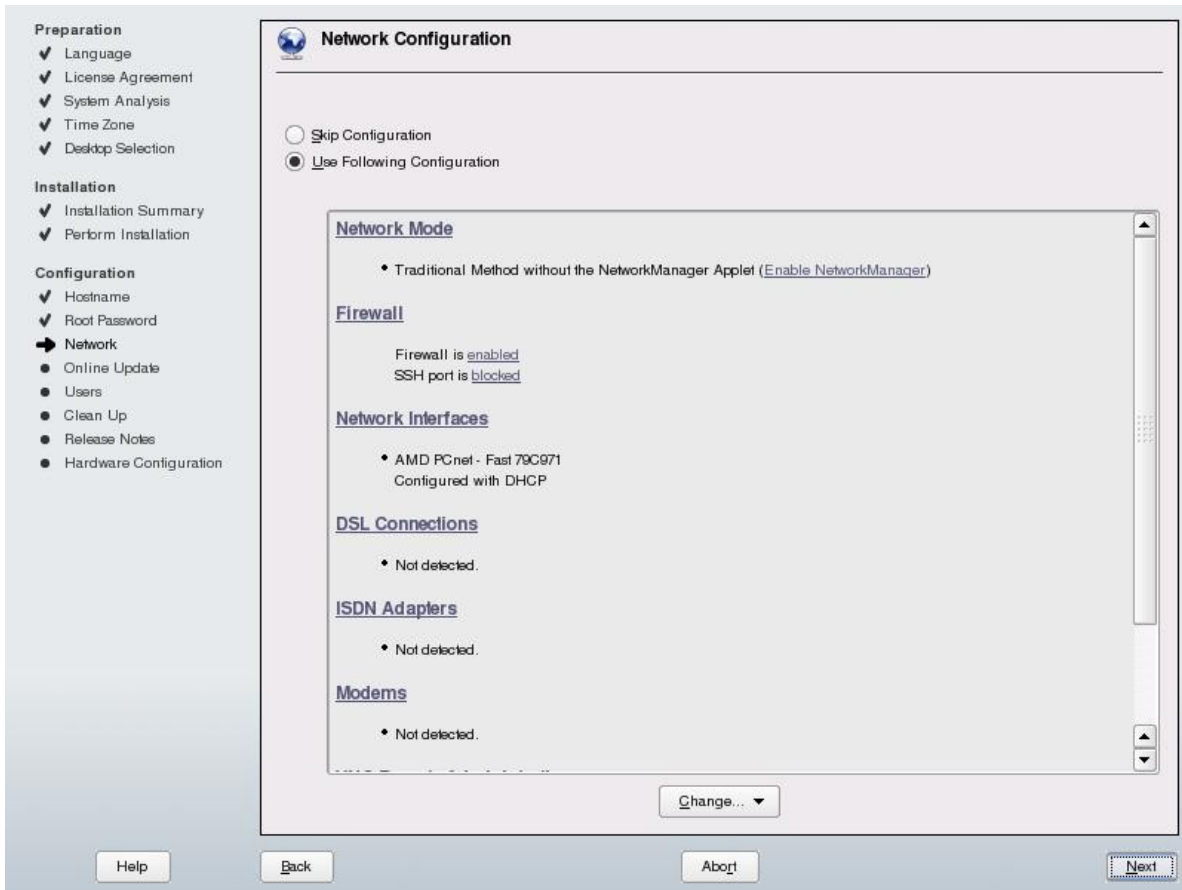
- Preparation
 - ✓ Language
 - ✓ License Agreement
 - ✓ System Analysis
 - ✓ Time Zone
 - ✓ Desktop Selection
- Installation
 - ✓ Installation Summary
 - ✓ Perform Installation
- Configuration
 - ✓ Hostname
 - ➔ Root Password
 - Network
 - Online Update
 - Users
 - Clean Up
 - Release Notes
 - Hardware Configuration

The main area contains the text "Do not forget what you enter here." followed by two password input fields: "Password for root User" and "Confirm Password", both containing masked characters. Below these is an "Expert Options..." button. At the bottom of the window are "Help", "Back", "Abort", and "Next" buttons.

You may see a little box appear warning you about the password you have selected. If you wish to change it, you may do so. If not, click YES:



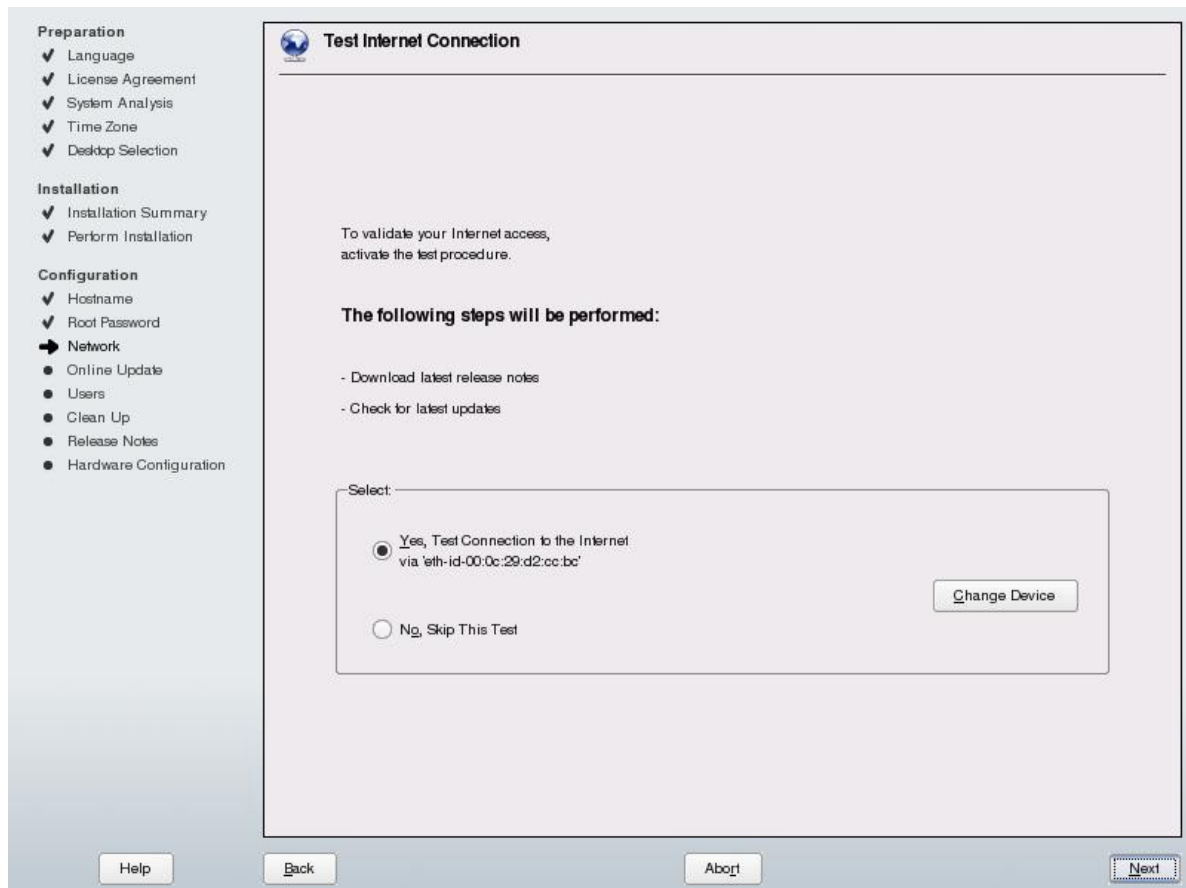
You are then taken to the "Network Configuration" screen. Just like with most other screens in the installation process, you can just click NEXT:



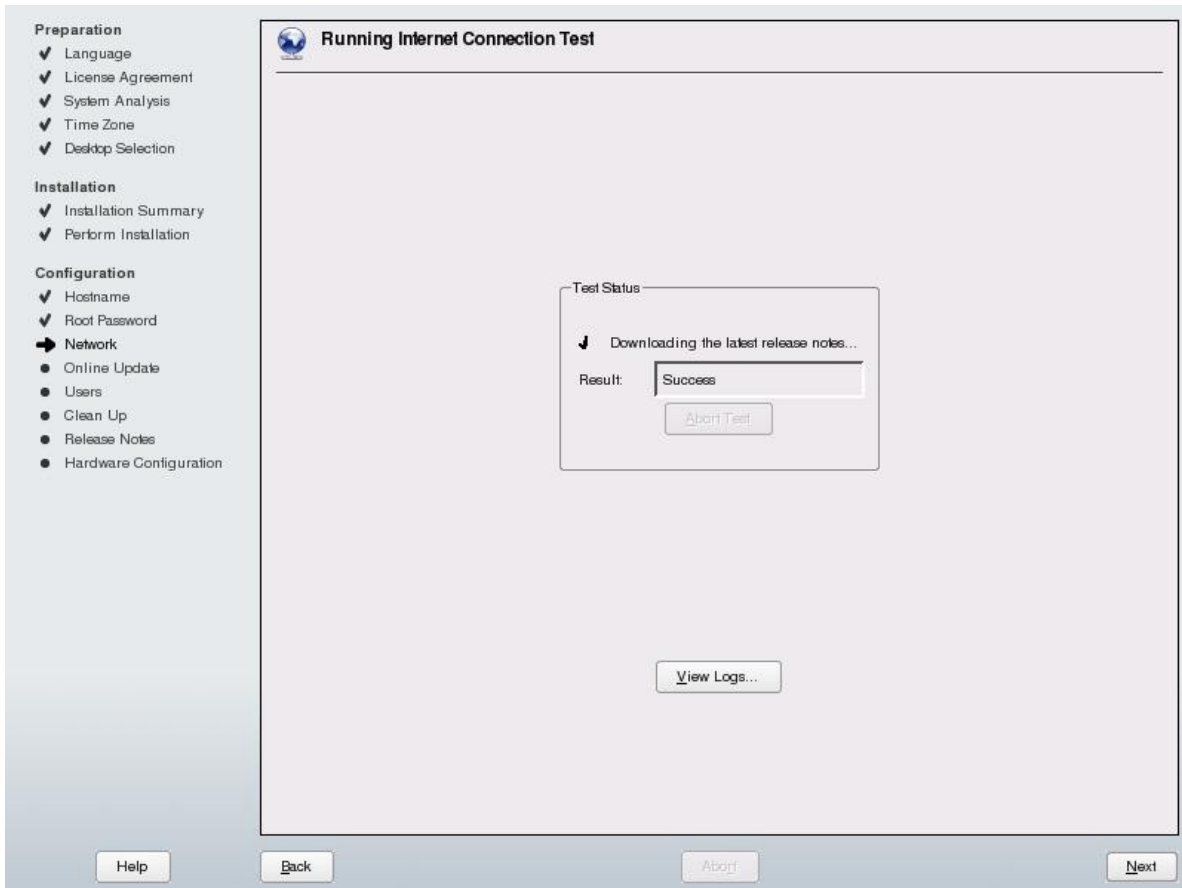
The installer saves your network configuration. It then takes you to the next screen, called "Test Internet Connection." This step will make sure you have a working Internet connection. If you are connected to the Internet, you might as well verify that the connection is working. If you don't want to do this or do not have an Internet connection, you can skip the test. If you wish to skip the test, select "No, Skip This Test," and click the NEXT button. It will take you to the "User Authentication Method" screen, further below.

That all said, I would like to show you what the test looks like.

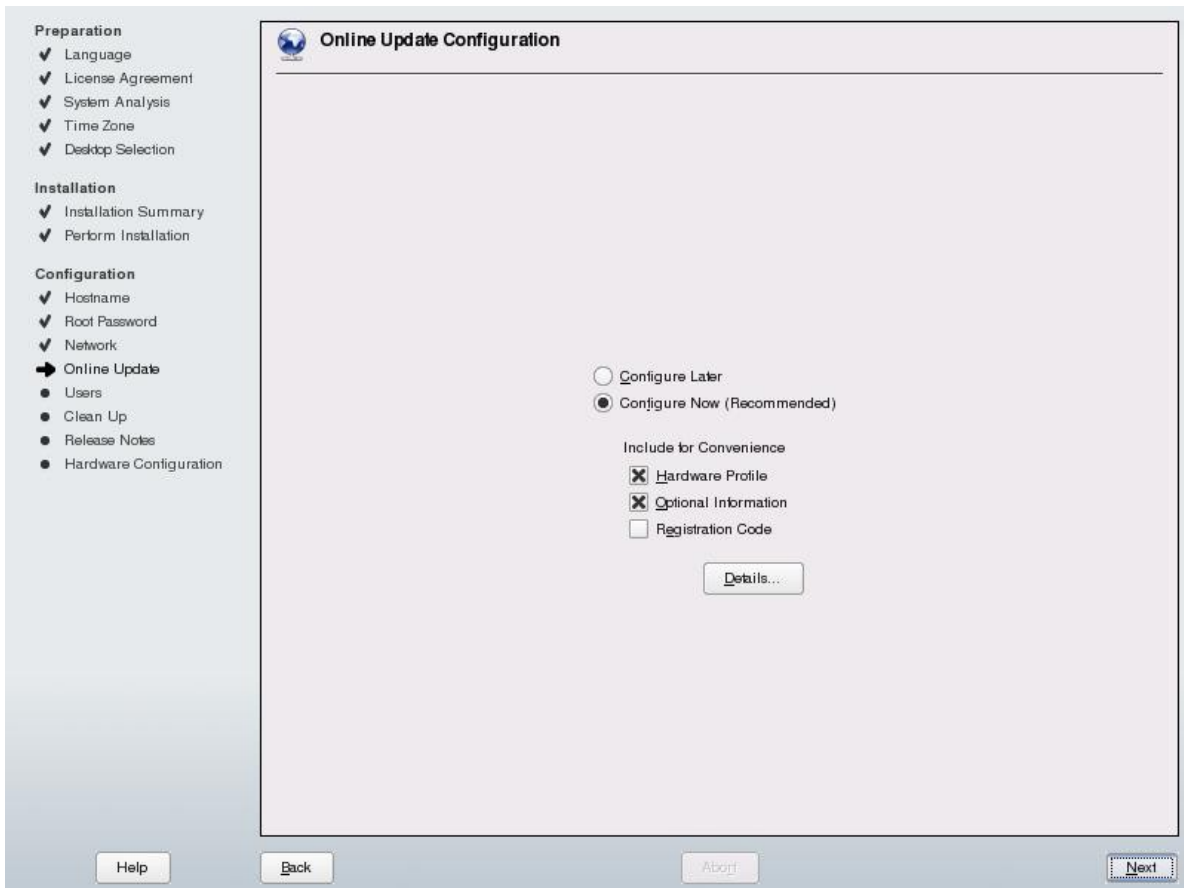
Make sure the "Yes, Test Connection to the Internet" radio button is selected. Then we are going to select NEXT:



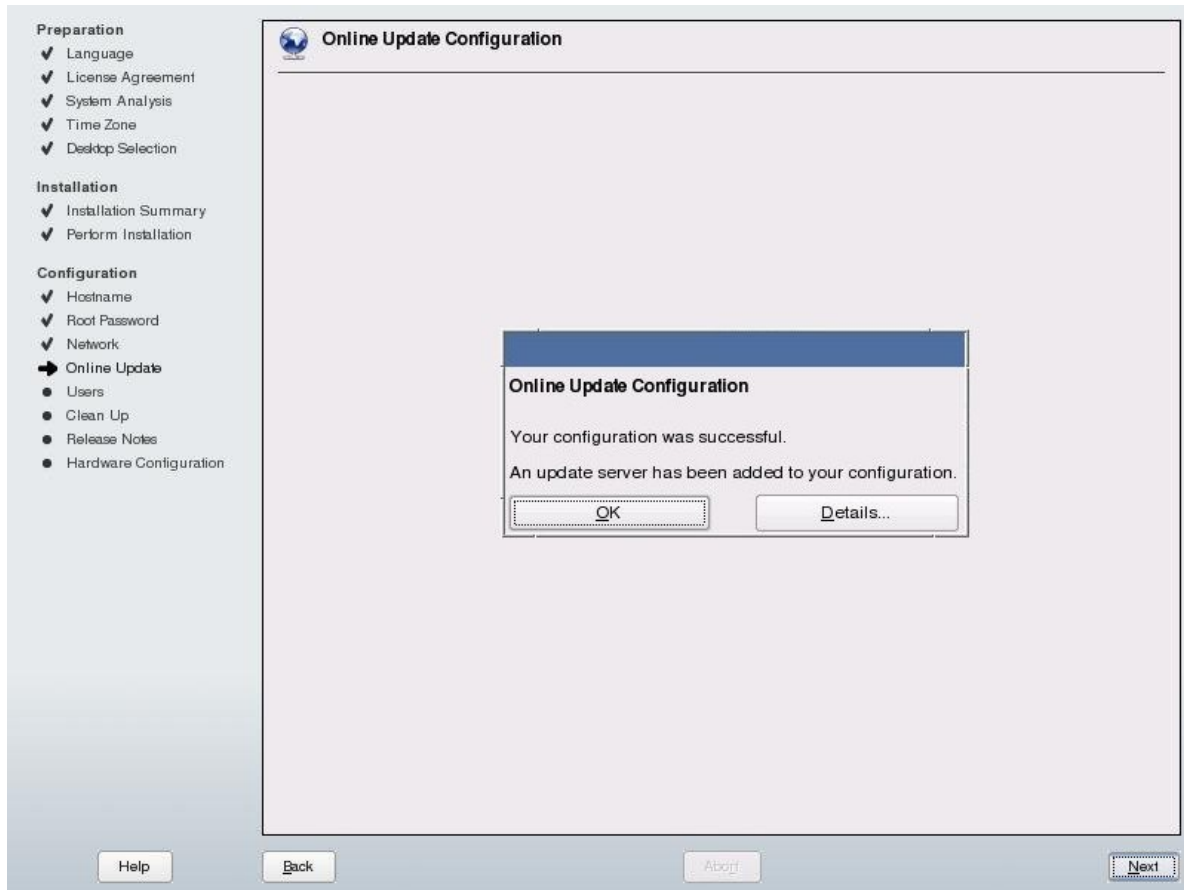
You are taken to the next screen, called "Running Internet Connection Test." In the middle of this screen, there is a TEST STATUS box. In this box, there is a RESULT box. After the test has completed, this box will either tell you that the test was successful, or that it was not successful. Our test passed, so we are going to click NEXT:



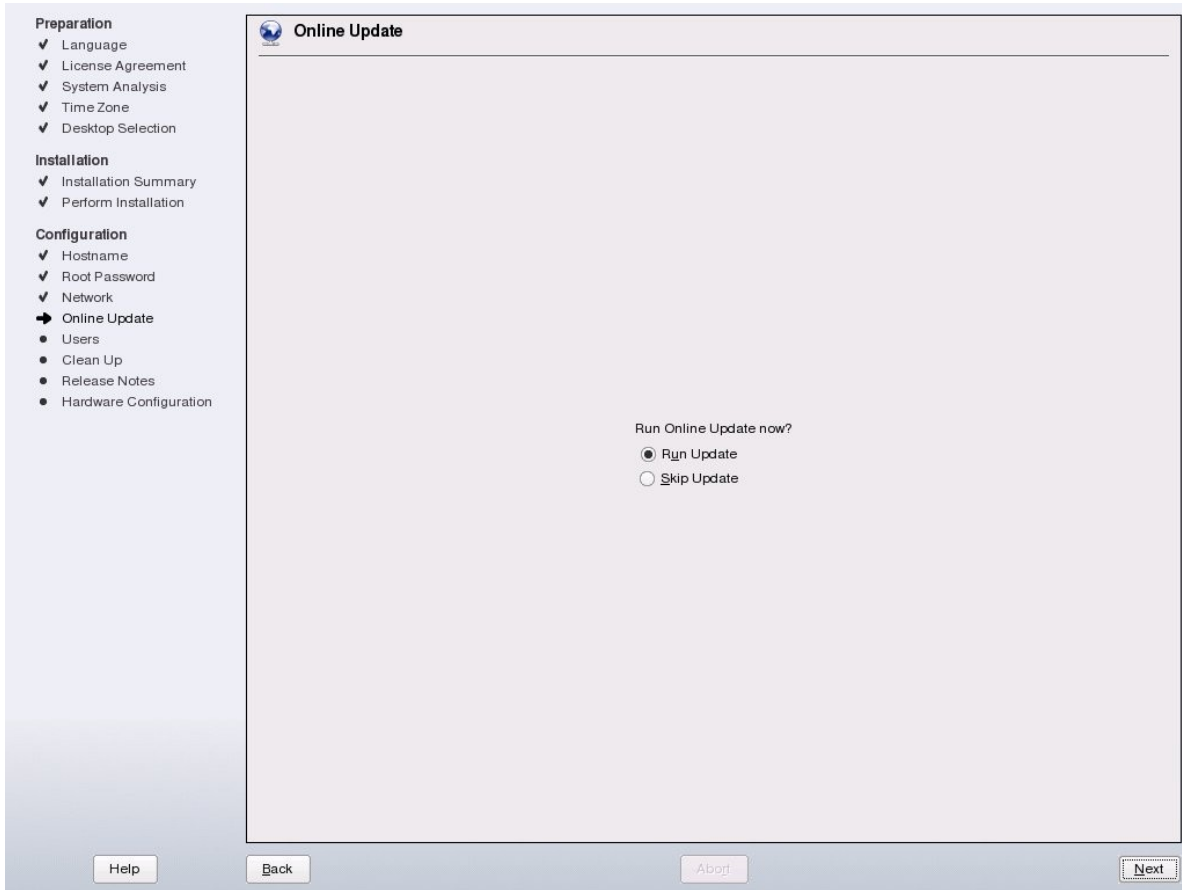
The next screen is called "Online Update Configuration." This is where we tell the system that we want to make sure we get security patches when they are available. We are going to select the "Configure Now (Recommended)" option. Click NEXT:



The system checks for available update servers. If such a server is found, it will be added to the configuration. Click OK:



You will then be asked if you want to run an online update. Select “Run Update” and click NEXT:



You are taken to the update screen. Once you get here, just click ACCEPT:

The screenshot shows a window titled "Update Manager" with a menu bar containing "File", "Package", "Patch", "Extras", and "Help". The "Patch" tab is active, displaying a list of patches with checkboxes. The "foomatic-filters" package is selected in the "Package" list on the right. The "Description" tab for the selected package is active, showing details about the filter scripts.

Patch List:

Patch	Category
<input checked="" type="checkbox"/> Command injection into foomatic-filters.	security
<input checked="" type="checkbox"/> Local privilege escalation in Cron.	security
<input checked="" type="checkbox"/> NetworkManager security update	security
<input type="checkbox"/> An integer overflow has been fixed.	security
<input type="checkbox"/> buffer overflow in avahi	security
<input type="checkbox"/> Code execution via stylesheet attributes in Opera.	security
<input type="checkbox"/> dia security update	security
<input type="checkbox"/> dovecot security update	security
<input type="checkbox"/> Fix Heap Overflows	security
<input type="checkbox"/> mysql security update	security
<input type="checkbox"/> pdns security update	security
<input type="checkbox"/> SUN Java packages prior 1.5.0 update 7 allow DOS.	security
<input checked="" type="checkbox"/> Add support for all IDE major numbers	recommended
<input checked="" type="checkbox"/> BASH can do a segmentation fault	recommended

Package Summary:

Package	Summary	Size	Avail. Ver.	Inst. V
foomatic-filters	Filter Scripts Used by Printer Spoolers		3.0.2-20.3	3.0.2-2

foomatic-filters - Filter Scripts Used by Printer Spoolers

Filter scripts used by the printer spoolers to convert the incoming PostScript data into the printer's native format using a printer and driver-specific, but spooler-independent PPD file.

Authors:

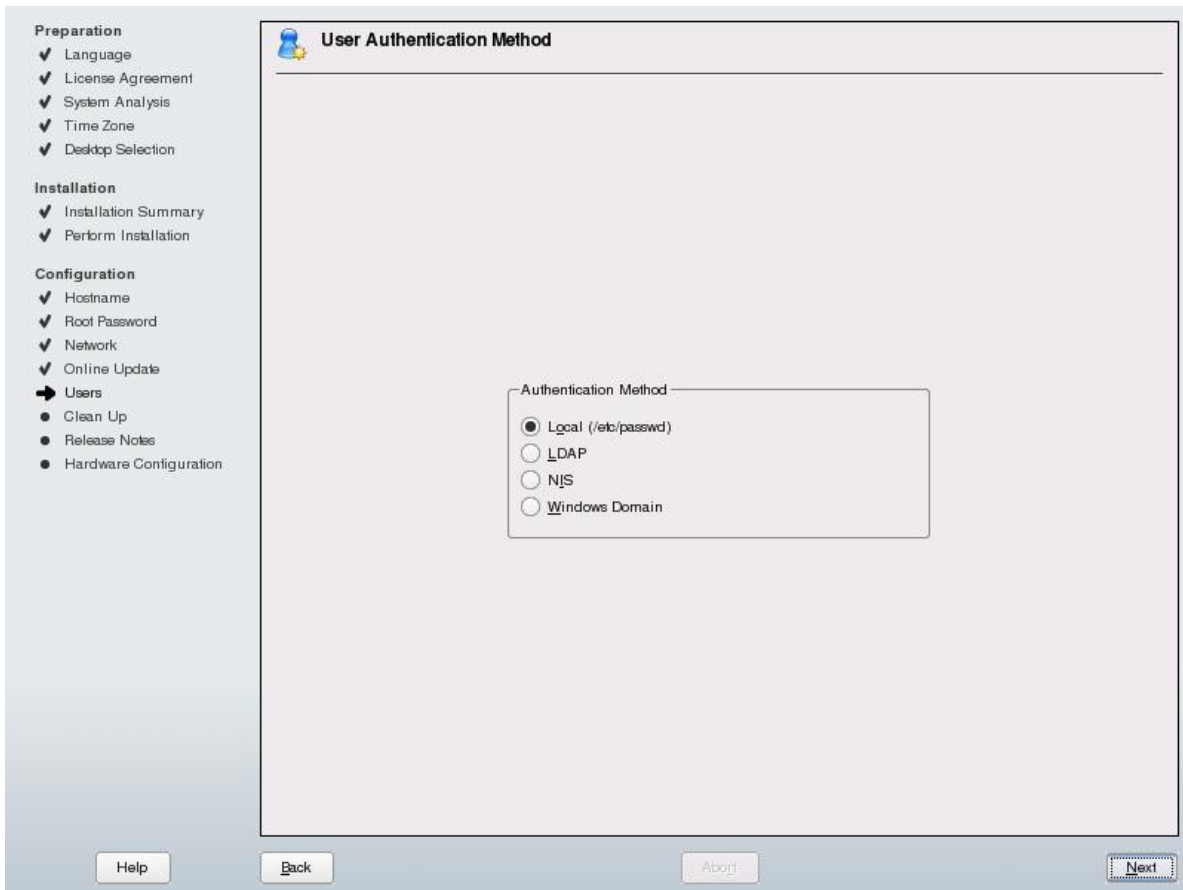
- Till Kamppeter <till.kamppeter@gmx.net>
- Grant Taylor <gtaylor@linuxprinting.org>

Estimated Download Size: 0 B

Name	Disk Usage	Used	Free	Total
/	<div style="width: 10%;"></div> 10%	9623 MB	8.3 GB	9.2 GB
/home	<div style="width: 0%;"></div> 0%	32.1 MB	13.7 GB	13.7 GB

Buttons: Check, Autocheck, Cancel, Accept

You system then retrieves the available patches and installs them. When it is finished, just click NEXT:



This next screen that you see is called "New Local User." This is where you will add your own user account. For normal usage, you should never log in with the root system administrator account. It is highly recommended that you log in with your own personal account. The personal account belongs to you. This is the account that we are defining here. Fill out the page. Then click NEXT:

Preparation

- ✓ Language
- ✓ License Agreement
- ✓ System Analysis
- ✓ Time Zone
- ✓ Desktop Selection

Installation

- ✓ Installation Summary
- ✓ Perform Installation

Configuration

- ✓ Hostname
- ✓ Root Password
- ✓ Network
- ✓ Online Update
- ➔ Users
- Clean Up
- Release Notes
- Hardware Configuration

New Local User

User's Full Name
Scott Morris

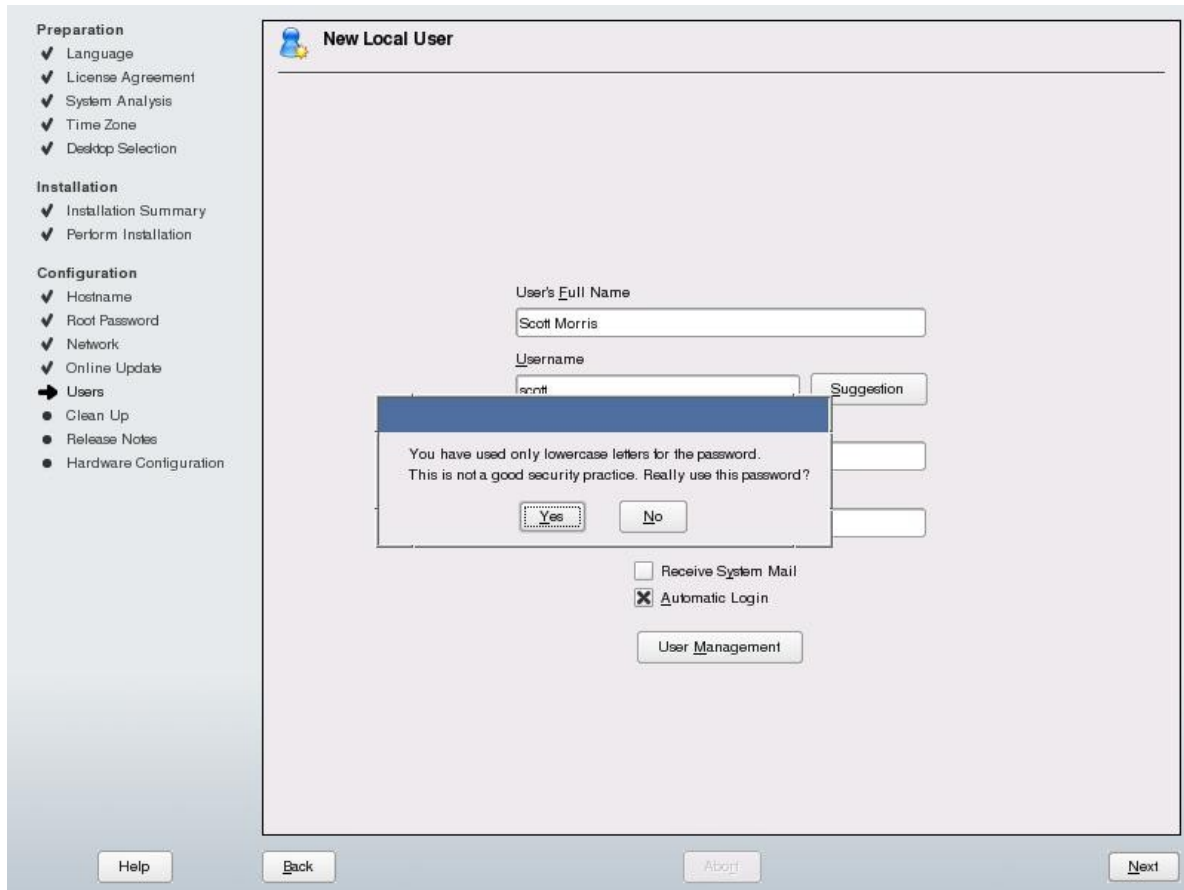
Username
scott

Password

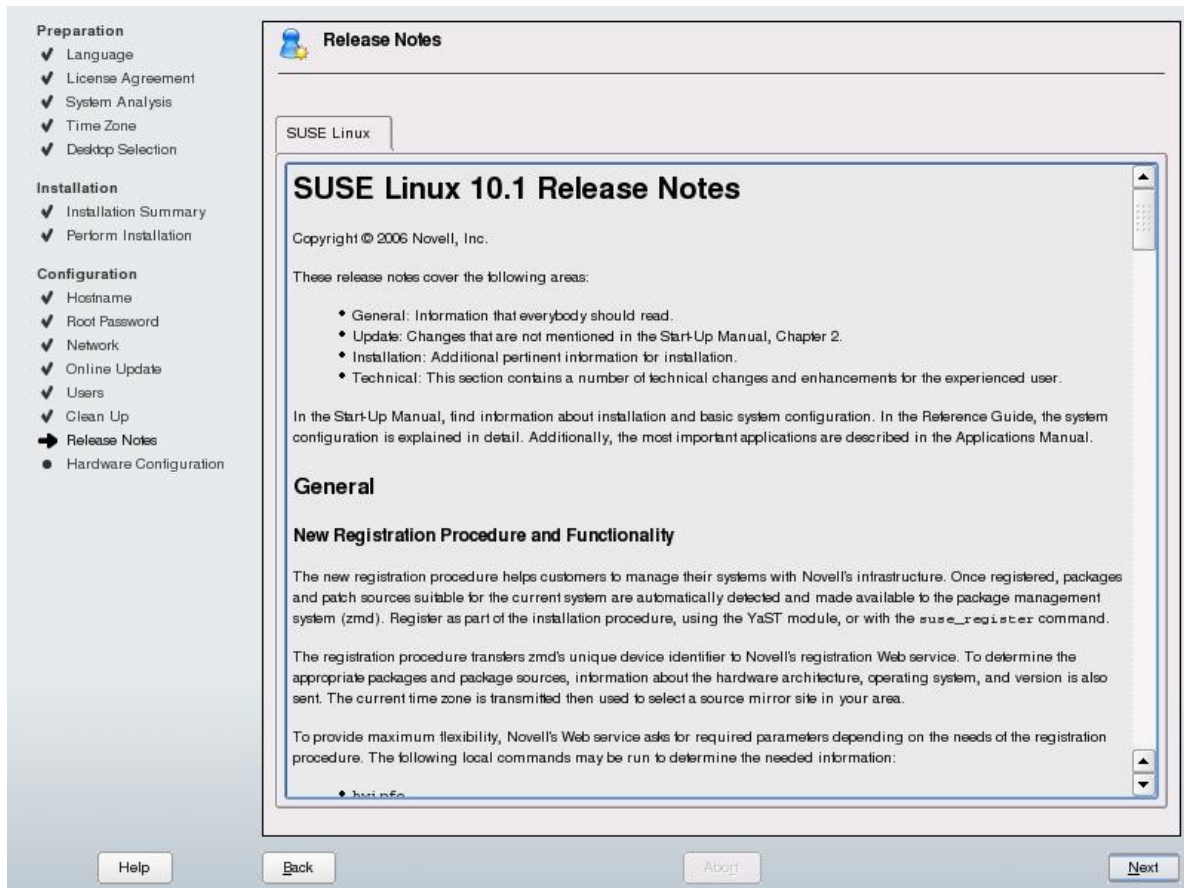
Confirm Password

Receive System Mail
 Automatic Login

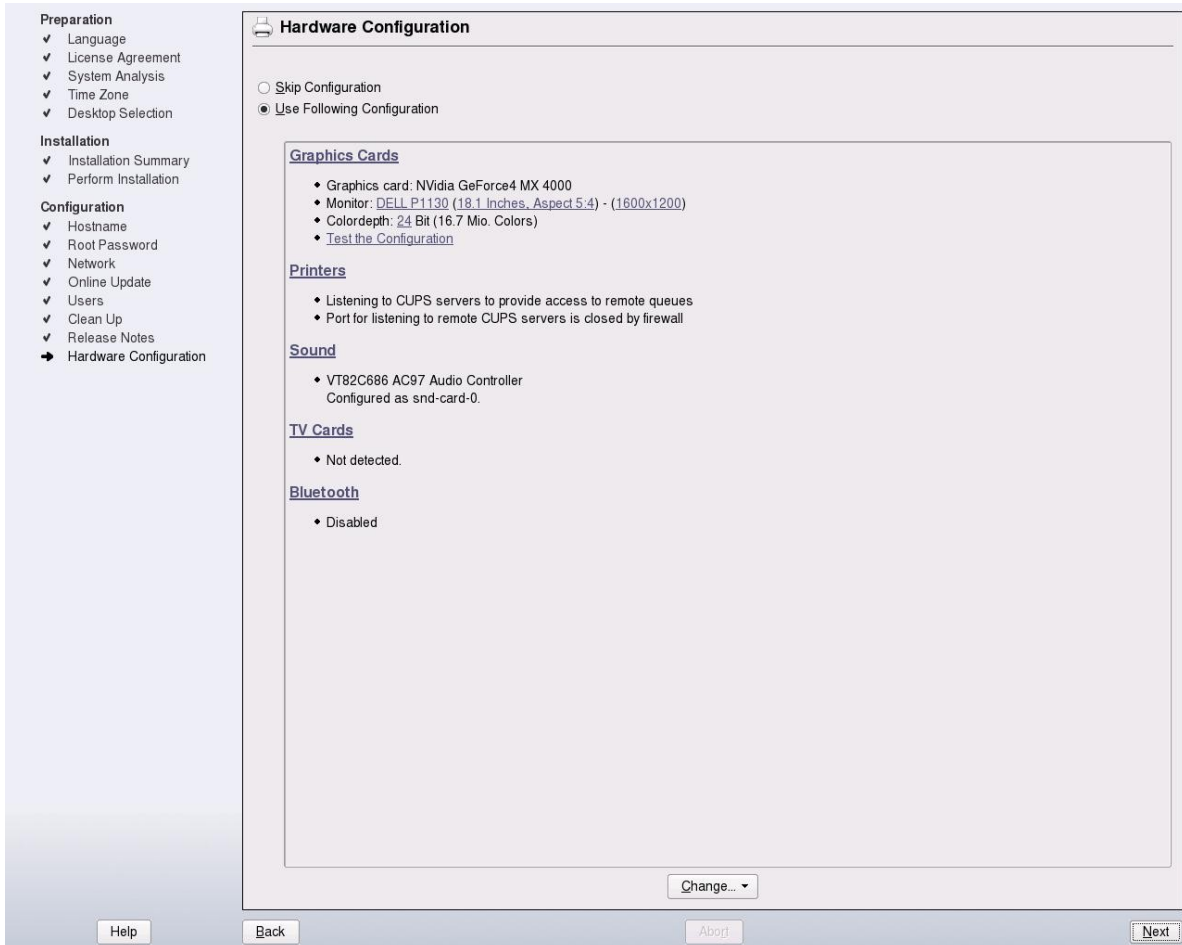
You may see a little box appear warning you about the password you have selected. If you wish to change it, you may do so. If not, click YES:



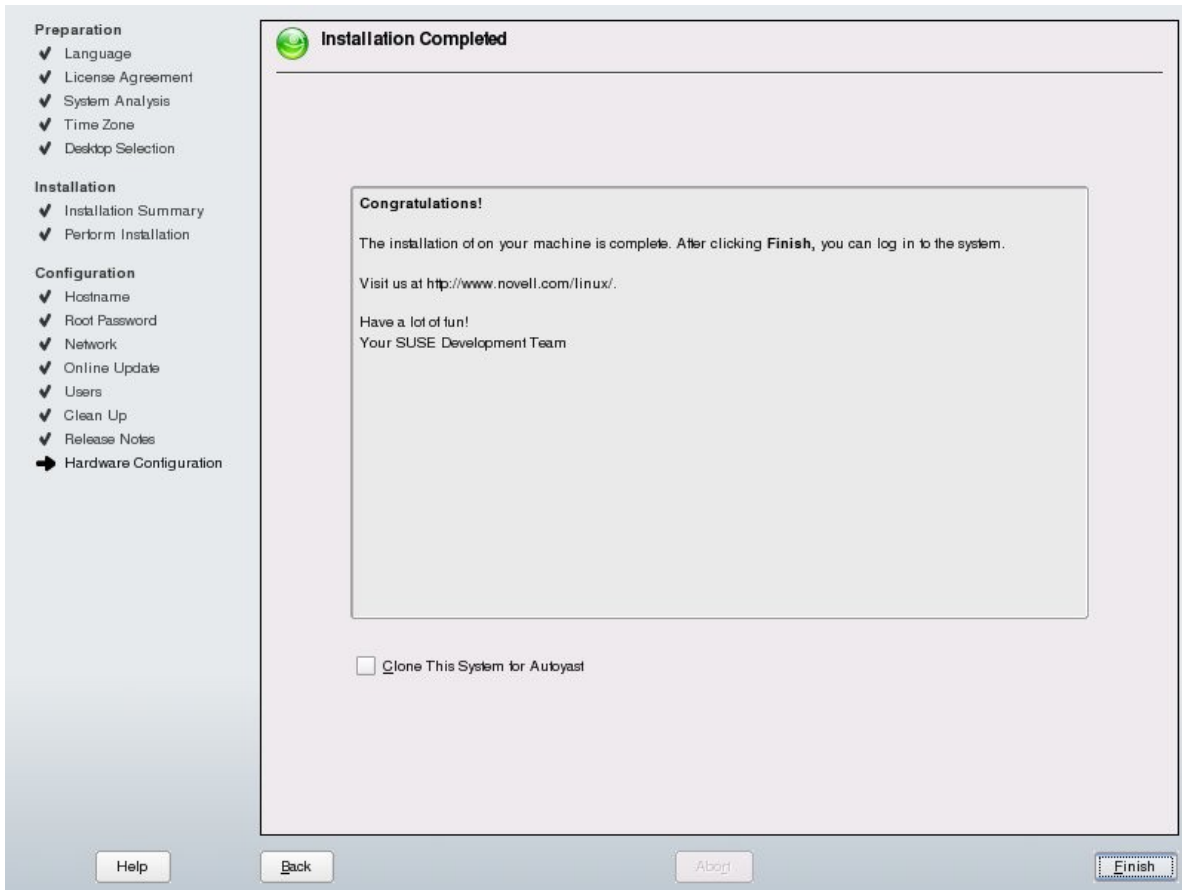
You are taken to another screen, called "Writing the system configuration." You don't need to do anything here. Just watch as it goes through, updating the system configuration for each thing. When it is finished, it will go to the next screen, called "Release Notes" appears. Again, click NEXT:



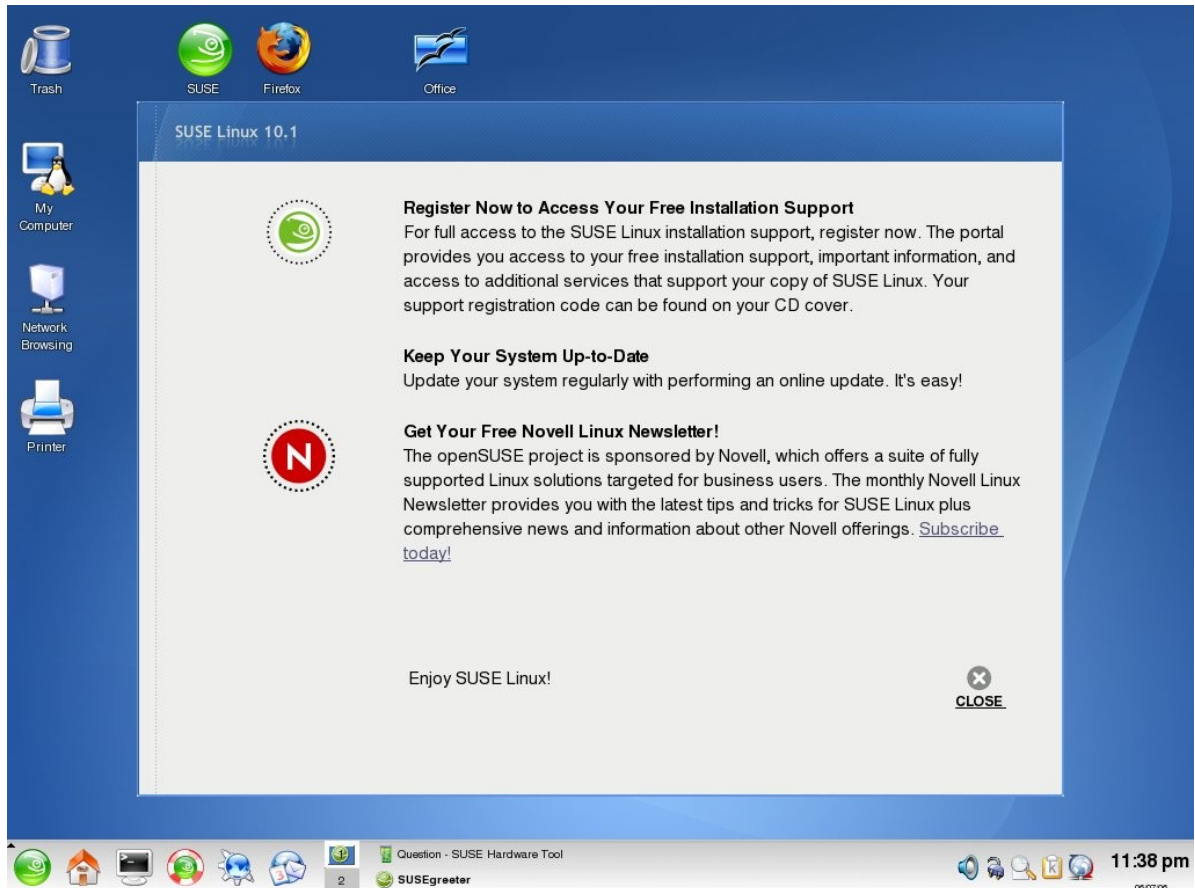
The final step is that the system detects some of the hardware in your computer. The hardware that it is detecting are things like your graphics card, any printers that you have connected to the computer, your sound, TV cards, and bluetooth devices. Again, for the most part, you don't need to worry about changing anything on this screen. Most of the time, you will just be able to click NEXT:



After a moment, you get to the final screen of the installation, called "Installation Completed." On this screen, click FINISH:



After a few moments, you may see some text scrolling up the screen. This is followed by a blue screen with the icon of a lizard. This has a ball rotating around it. A few seconds later, you are logged into your desktop:



There will be a screen open when you log in. It will have a section called "Get Your Free Novell Linux Newsletter!" I recommend signing up for the newsletters relating to Linux. They contain insider tips and tricks written by other Linux users. This is high-quality information, and is totally free. There is a link in the window on your screen that takes you to Novell's website.

In the page that comes up, find the "Cool Solutions" section. Click on the subscription link. I highly suggest signing up for this. These newsletters give you tips, tricks, and other great content that will teach you how to better use your new SUSE Linux operating system.

Once you have signed up for these newsletters, you can close all open windows on your desktop. You can skip the next section below, called "Sharing the computer between Linux and Windows" Go to the section called "Introduction to Users and Groups."

Sharing the computer between Linux and Windows

As with the previous section where we were installing Linux by itself on a computer, for most of the screens where it gives you options, the default choices are usually fine. I want to let you in on a secret. During the installation, you will be taken through a series of screens. The secret is that for most of the screens where it gives you options, the default choices are usually fine. This means that if you are on a screen where you don't know what to do, you can probably just click NEXT without changing a thing.

While this is true in many cases, it isn't always that easy. Don't worry, though. With the walk-through that we will do here, we will make the installation very easy.

When doing the installation, you can use either a set of CDs or the DVD. The process should be mostly the same for either one. The obvious difference is that with the CDs you will just provide the appropriate CD when the installation asks you for it. With the DVD, everything is on one disc, so you won't need to change discs.

Before getting started, I would suggest that you defragment your hard drive in Windows. This may make it a little safer to put Linux on the drive with Windows. Defragmenting simply moves all the Windows data to one part of the drive, freeing space for the Linux installation. If you do not do this, the Windows data may be scattered over too broad an area on the hard drive, and you may not be able to install Linux.

If you are not familiar with how to defragment your hard drive in Windows, I would ask someone you know to help you with this.

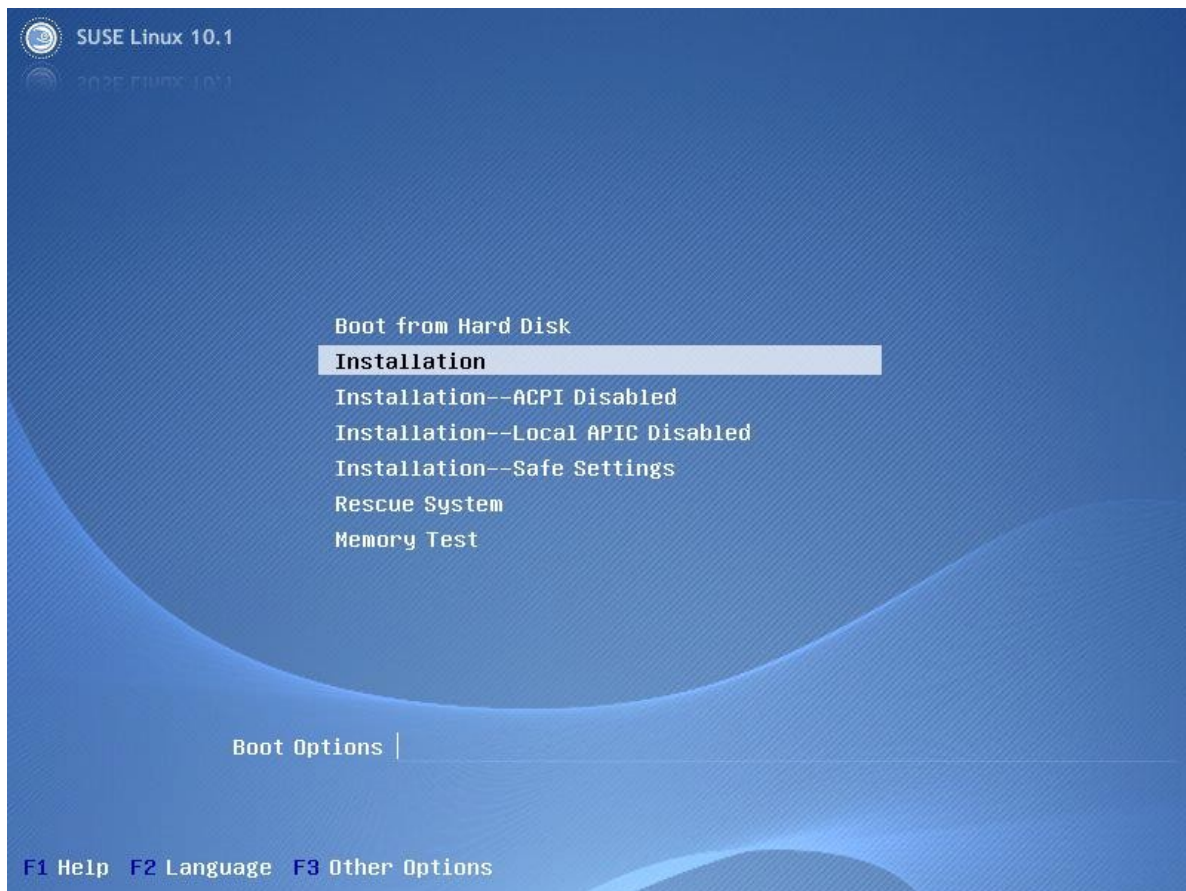
Also, this has the potential to render your computer unbootable in either Windows or Linux. While that is extremely unlikely, I want to make you aware that it is a possibility. I have never had this happen to me. However, I would suggest that you back up all important data from Windows before you get started with the process outlined below.

Beginning the Installation

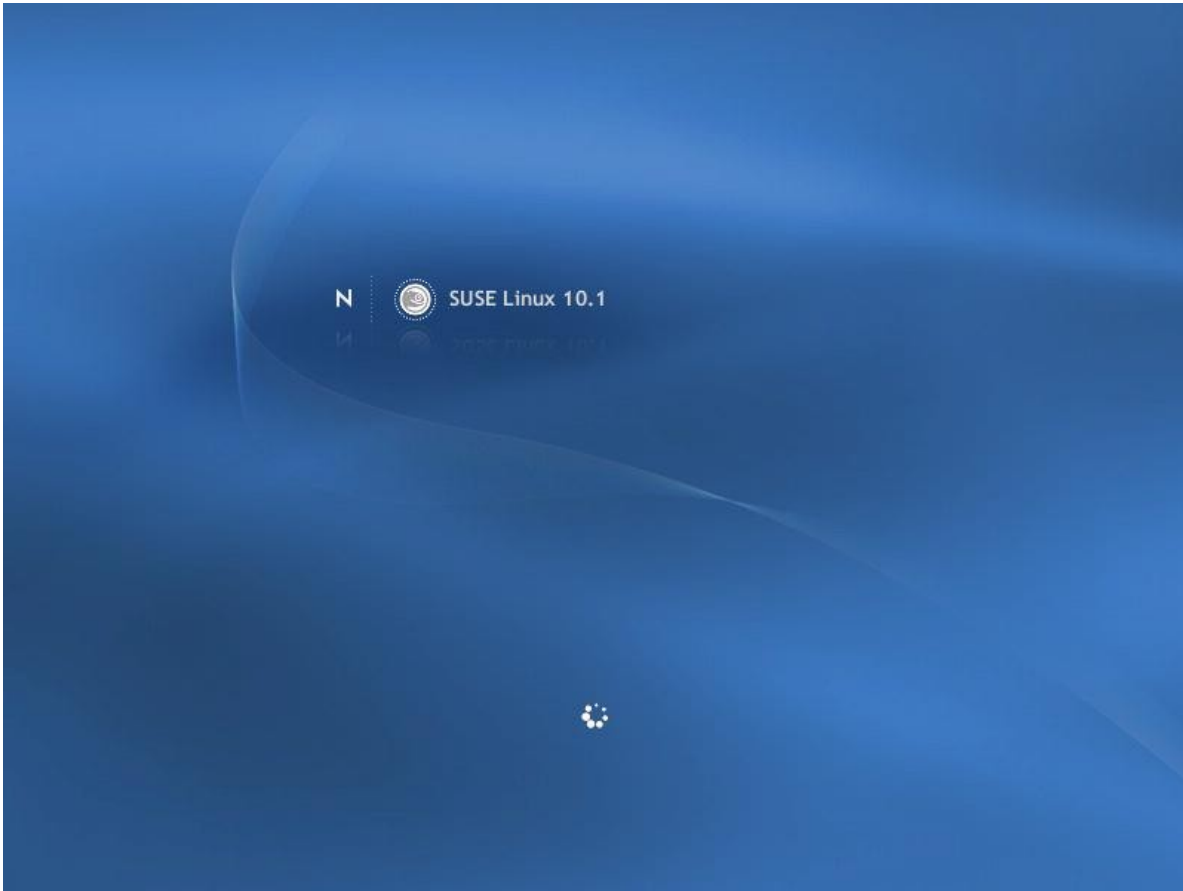
Let's get started. If you are using CDs, put disc 1 into your CD-ROM. If you are using the DVD, insert that disc now.

Power up your computer.

A blue screen will appear after a few moments, with a menu. Select the INSTALLATION option (by pressing the down arrow), and press ENTER:

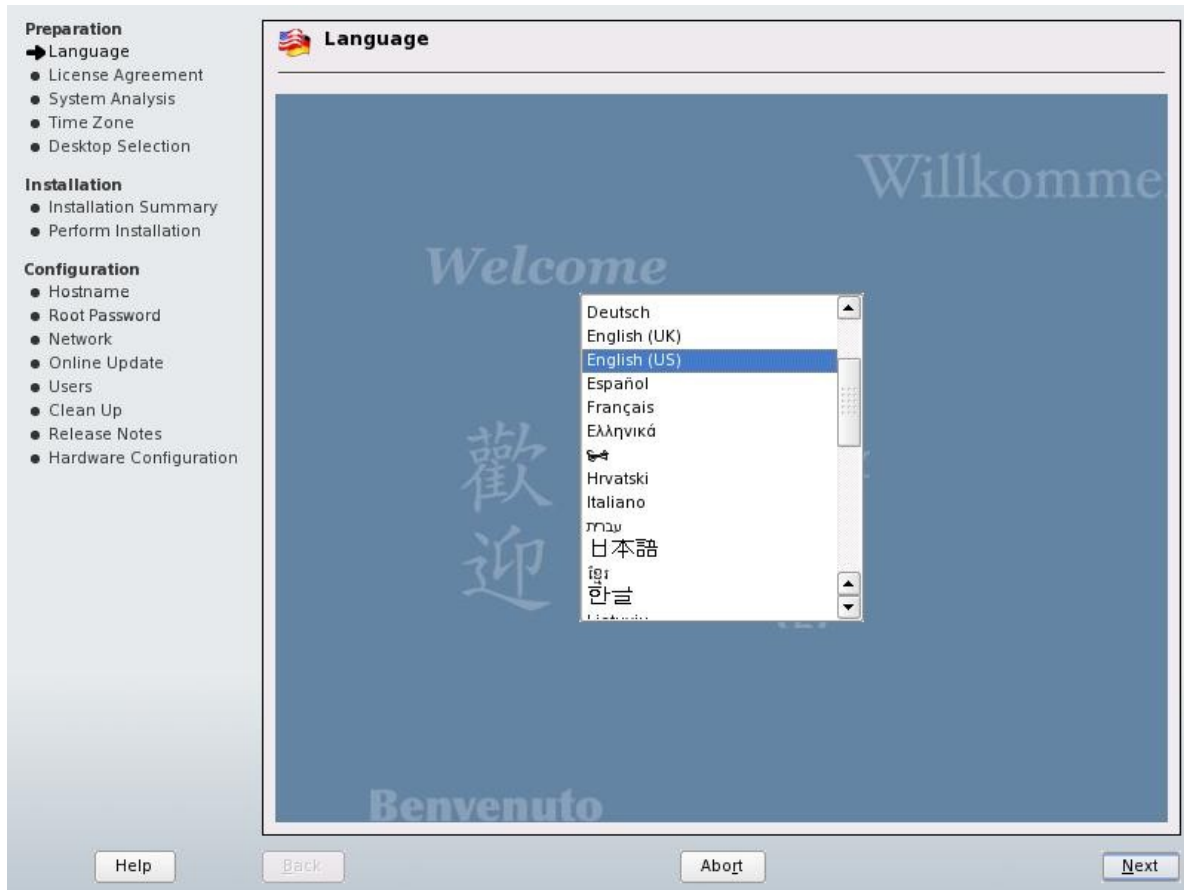


You will see a progress bar for a few seconds that says “Loading Linux kernel”, after which the screen will go black. After a moment, another blue screen will appear, similar to this:

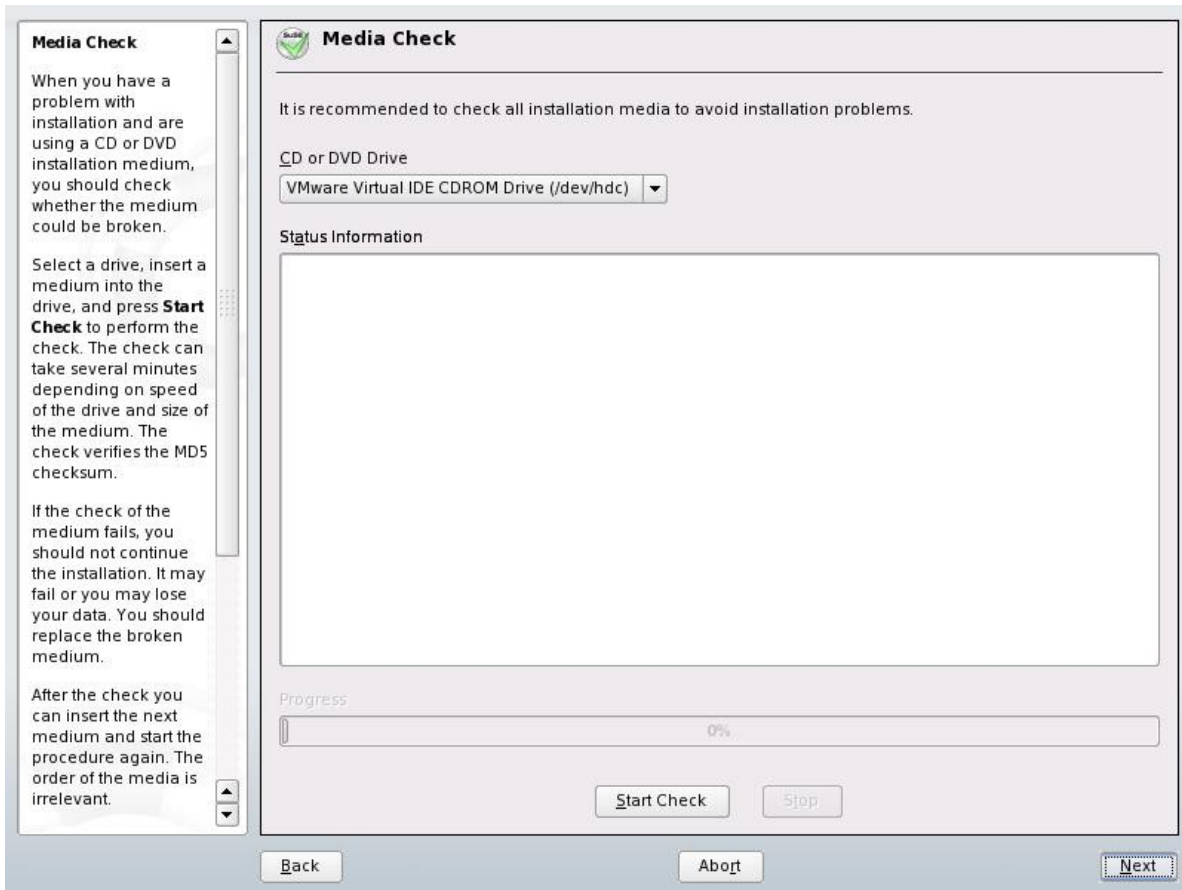


This screen may remain for several minutes while the Installation system is loading.

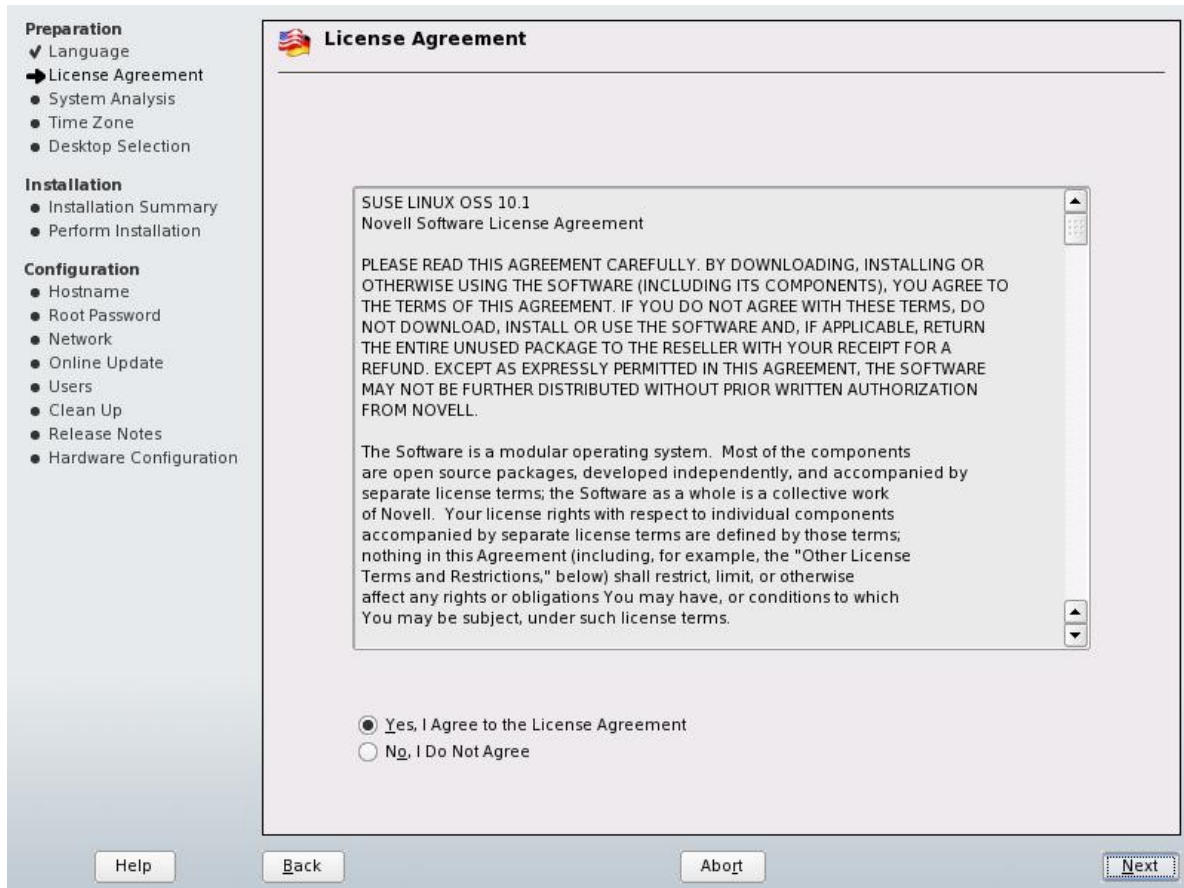
After a few minutes, you will see the LANGUAGE screen appear. This is the first step of the installation. From this screen, select your preferred language, and click NEXT:



You are taken to a screen that suggests you do a media check. If you wish to do this, click **START CHECK**. When you are ready, click **NEXT**:

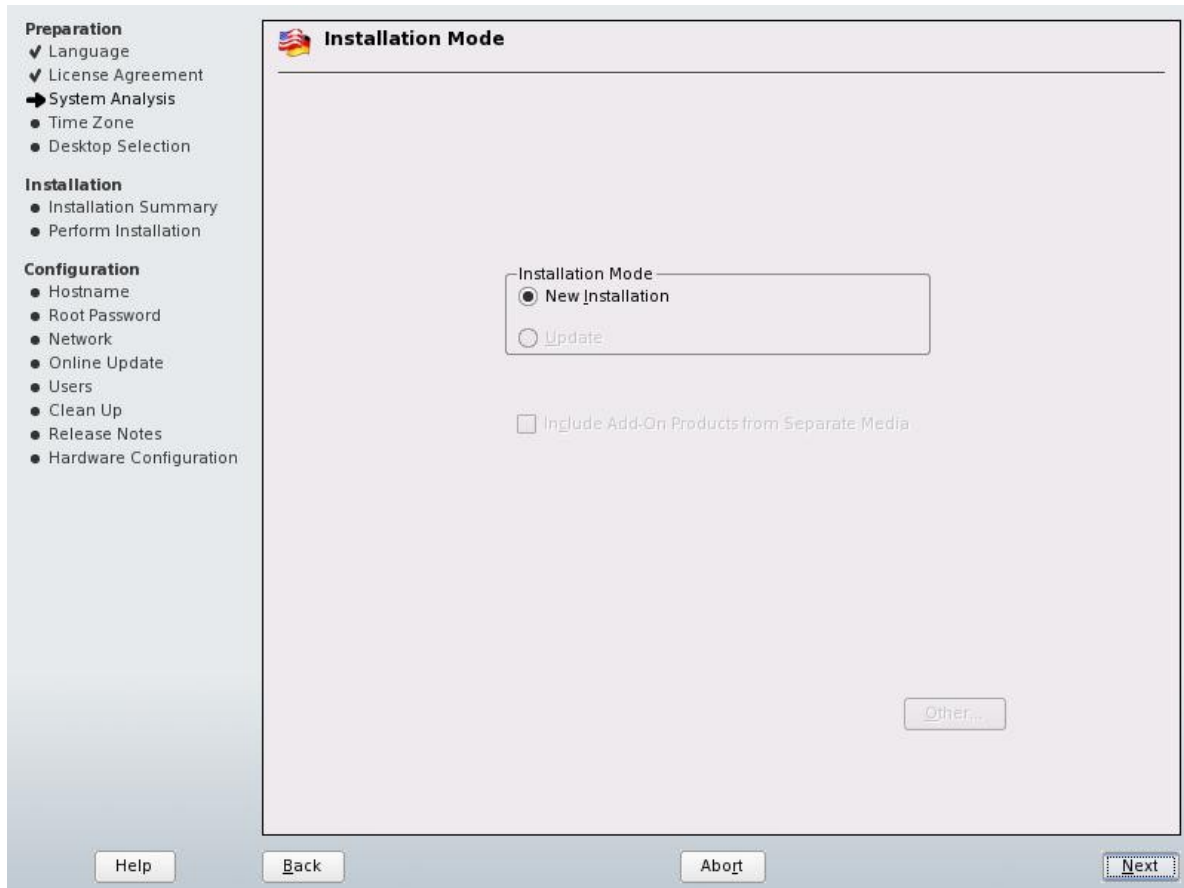


The next screen you see is a license agreement. Make the appropriate selection at the bottom of this screen. Then, click NEXT:

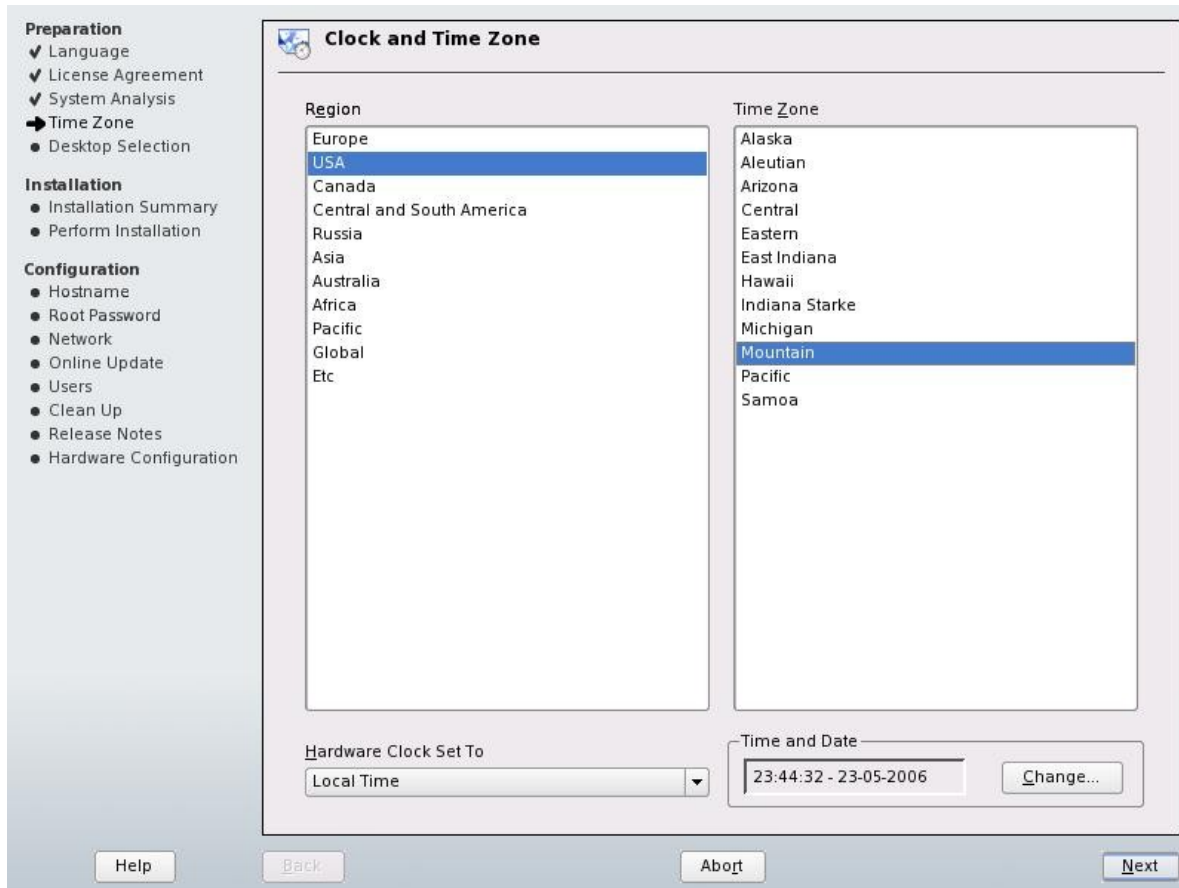


The Installation program will probe several of the parts of your computer. It will stop on a screen entitled "Installation Mode". Select the "New Installation" option.

Click NEXT:



On the next screen, select your region and time zone. In the drop-down called “Hardware Clock set to,” pick “Local Time.” Then, click NEXT:



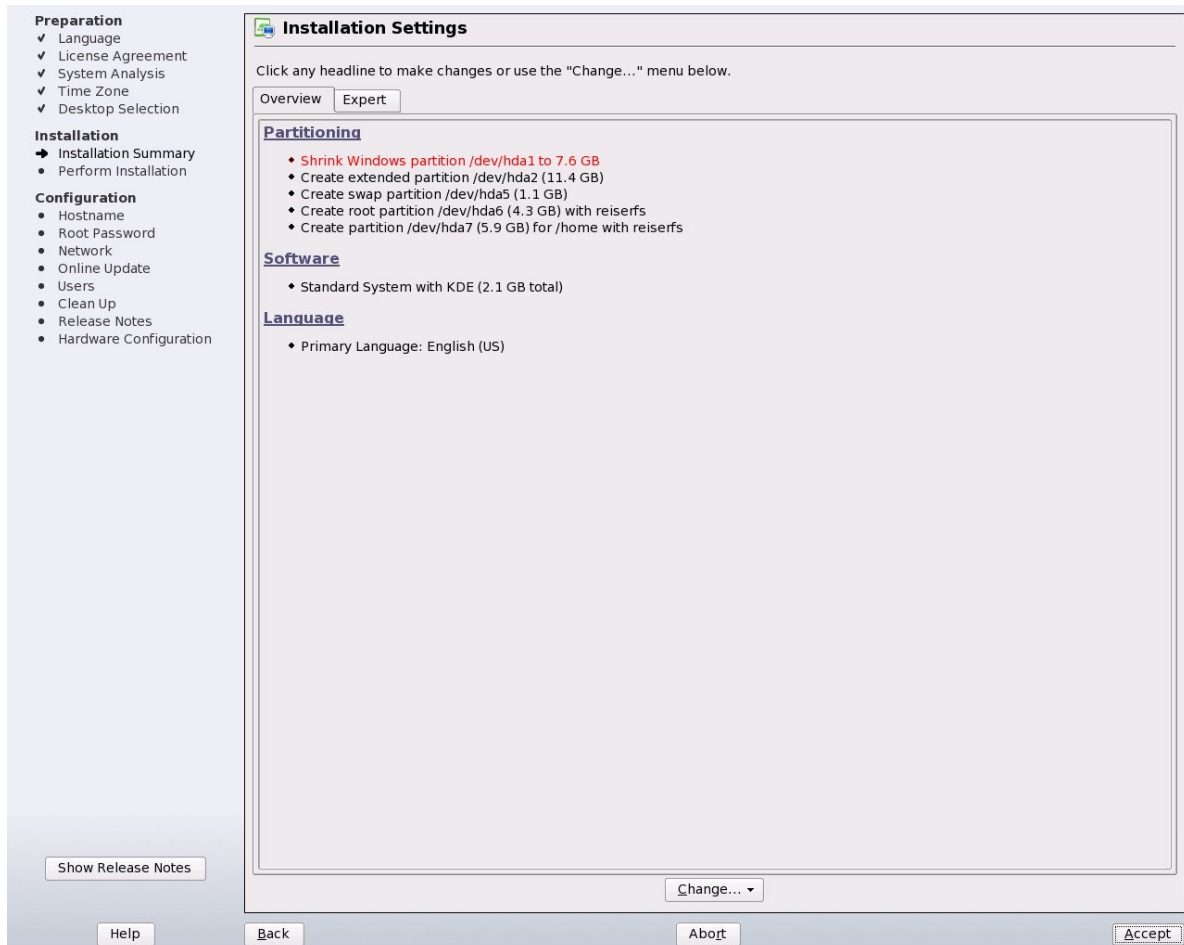
You are taken to a screen where you will select your desktop. For our purposes, we are going to select KDE. Click NEXT:



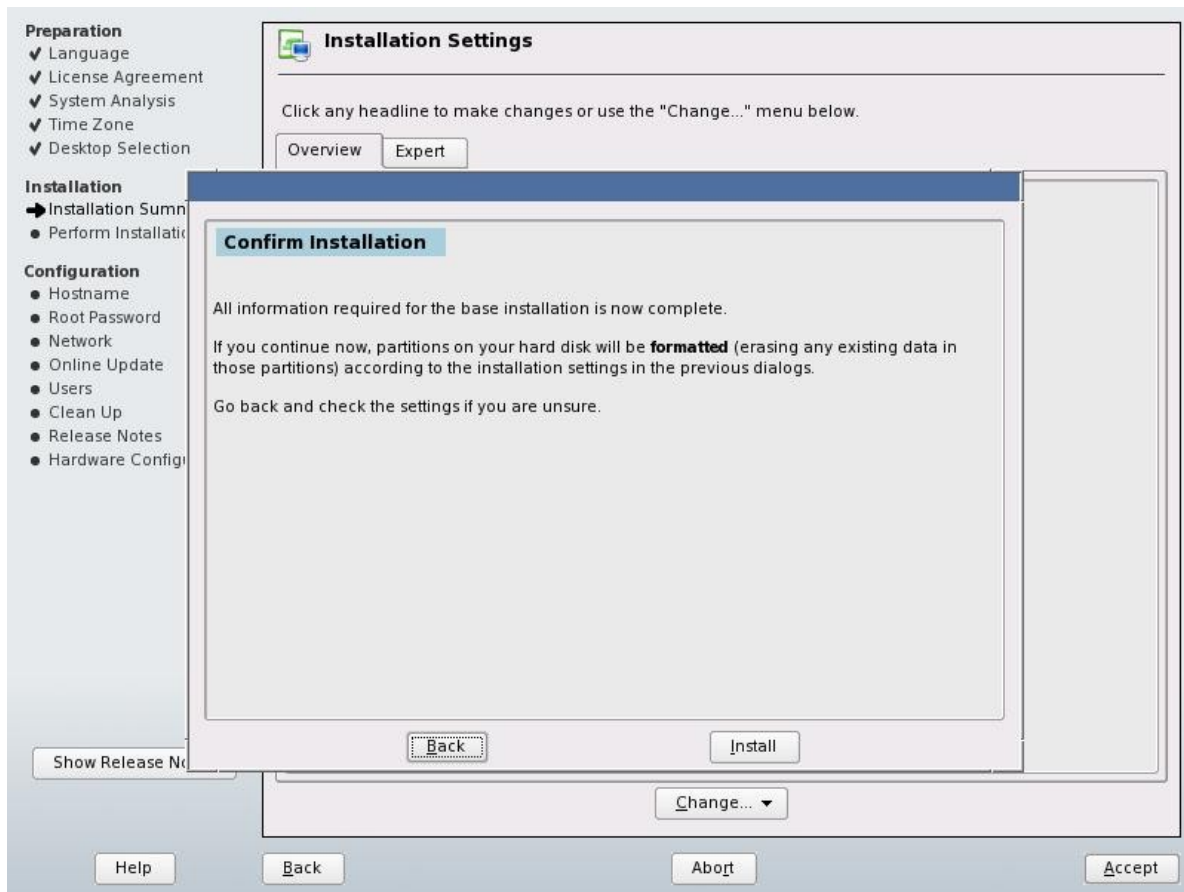
The next screen, called "Installation Settings," will take a few seconds to load. When it does, you will see three sections: Partitioning, Software, and Language. In the Partitioning section, you can see that it has recognized the Windows partition. It will probably propose to shrink the partition so as to fit SUSE Linux on the same drive. In most cases, it is safe to click ACCEPT here without changing anything.

Remember, however, that you are modifying your Windows installation. If your system is rendered useless by this operation, please do not attempt to hold me responsible. It is very unlikely that anything will go wrong here. In almost every case that I have performed this operation, it has been a success.

That all said, we'll click ACCEPT:



The Installation program asks you if you want to start installing the system to the hard drive. If you are sure you want to do this, click INSTALL:

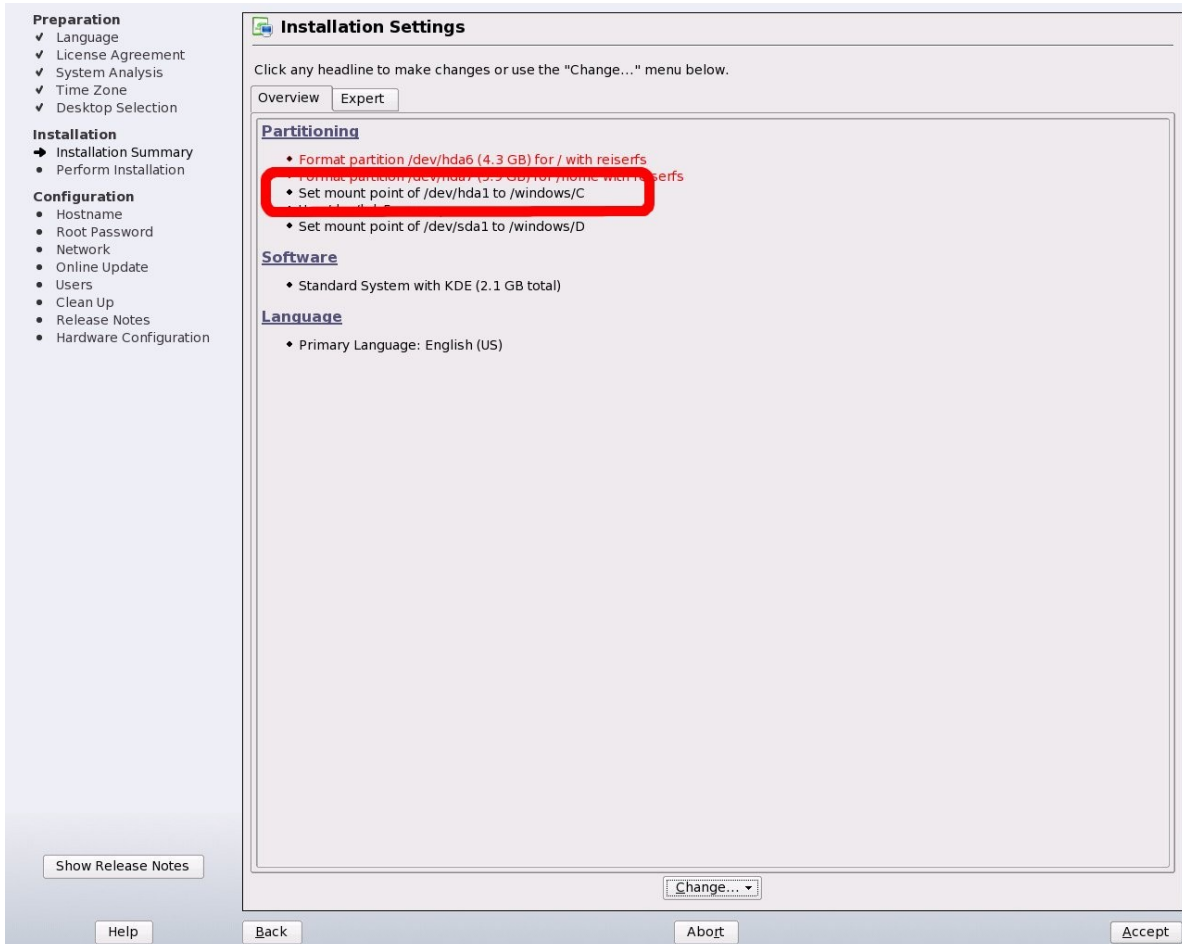


Everything should go smoothly. Once in a great while, however, things hit a snag. In cases where this operation was not a success, the SUSE Linux installer basically says, “There was a problem, and I cannot resize the Windows partition.” This is OK because it has not modified the hard drive a single bit. You can simply take the CD out of the drive and restart the computer, and you will be able to get right back into Windows.

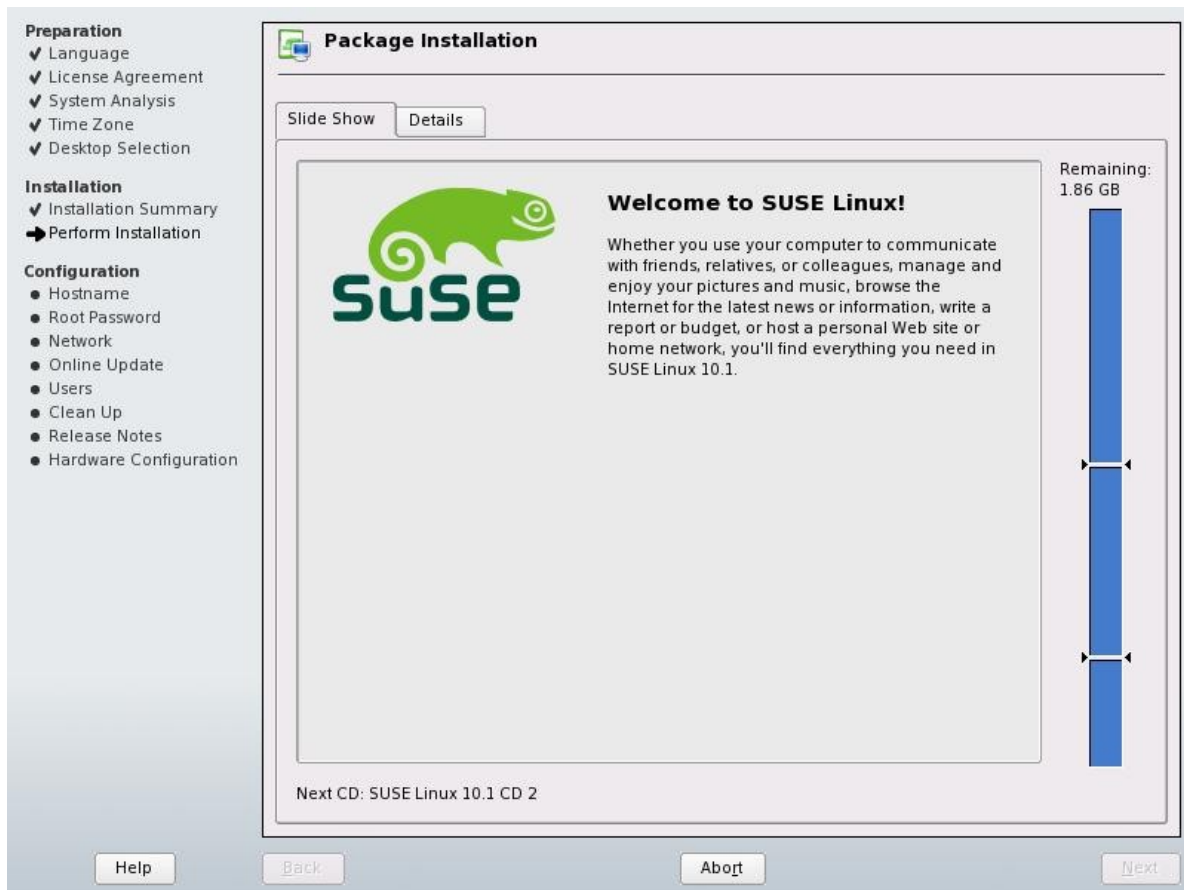
If this error should present itself, you will still need to resize your Windows partition. This can easily be done with a great program called Partition Magic. Usage of Partition Magic is outside the scope of this book. You can probably call technical support for the program, however, and get help using it. Alternatively, if you have a resident computer geek nearby, that person would come in handy should

you need to use Partition Magic to resize your Windows drive. Just be sure to tell them that you need at least 5 Gigabytes free for your Linux installation. If you do end up using Partition Magic to resize your drive, you can restart the SUSE Linux installation without any problem.

This time, it will not say that it needs to resize the Windows partition, but instead it may say “Set mount point of /dev/hda1 to /windows/C” or something very similar:



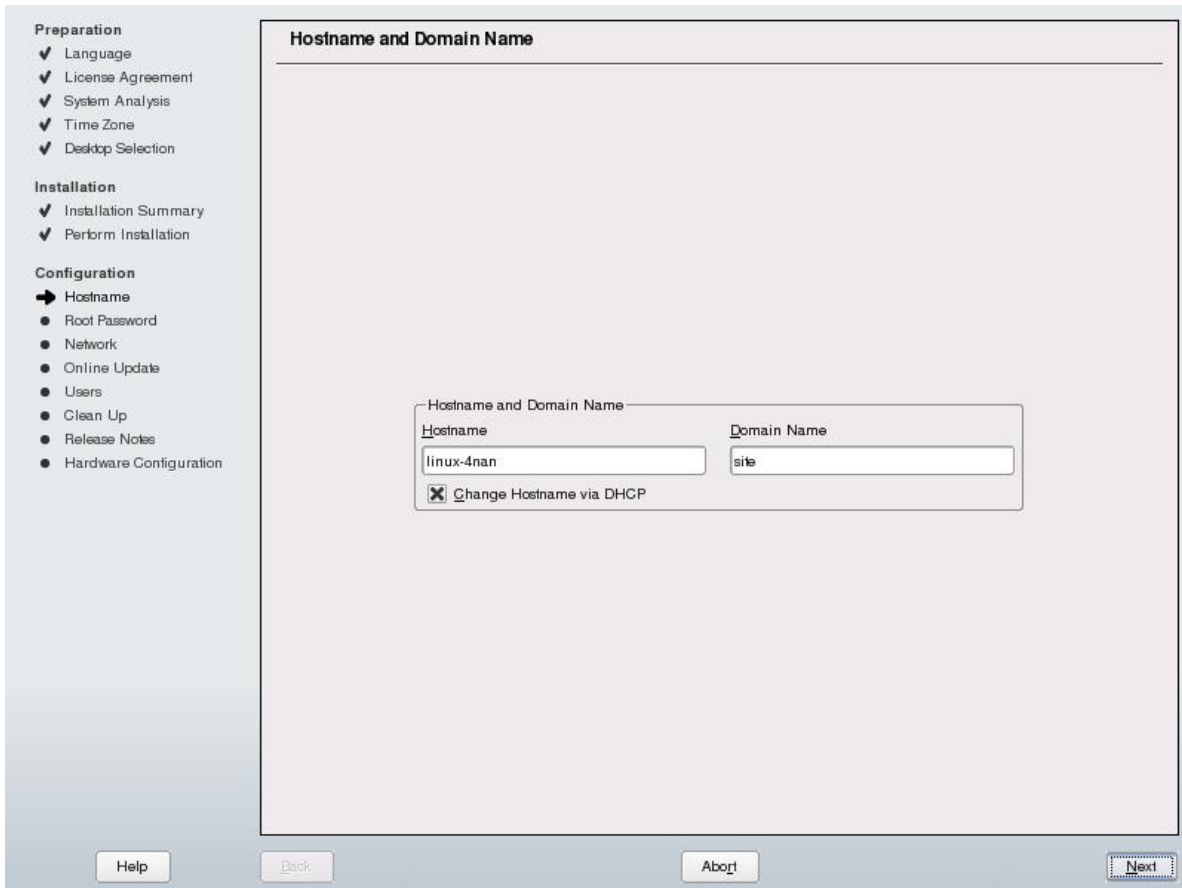
If you have no problems at this stage of the installation, your system will create some partitions to install Linux onto, and format them. Shortly after this, the installer begins installing the Linux operating system to the hard drive:



Grab your favorite drink and go play some solitaire or something. This step takes quite a while. If you are using CDs, don't go too far. During the installation, you will be asked to insert different CDs throughout this process. If you are using a DVD to install SUSE Linux, you can probably go something for 30 or 45 minutes. Whether you are installing with CDs or with the DVD, this step takes awhile either way.

Your computer may reboot itself during this installation process. Just let it do its thing, and all will be well.

After all of the files are copied, the next screen you see is called "Hostname and Domain Name." You *do not* need to worry about what any of this is. In most cases, you can leave everything as it is and click NEXT:



You are taken to the next screen, called "Password for the System Administrator 'root'." The root user is the only user that can make system changes, such as installing software. It is the account of the system administrator. You will need to come up with a really good password here, and then keep it hidden away in a safe place so that no one can find it.

If someone does find it, they may be able to log into your system as the root user. They can then do whatever they want to your computer. We don't want that to happen. To avoid such problems, keep this password hidden and safe.

We will talk more about users in a later chapter.

Go ahead and pick a password for your root user. Enter that password here in the top box, and then again in the bottom box, for verification. When you are ready, click NEXT:

The screenshot shows a window titled "Password for the System Administrator 'root'". On the left is a sidebar with a progress list:

- Preparation**
 - ✓ Language
 - ✓ License Agreement
 - ✓ System Analysis
 - ✓ Time Zone
 - ✓ Desktop Selection
- Installation**
 - ✓ Installation Summary
 - ✓ Perform Installation
- Configuration**
 - ✓ Hostname
 - ➔ Root Password
 - Network
 - Online Update
 - Users
 - Clean Up
 - Release Notes
 - Hardware Configuration

The main area contains the following text and fields:

Do not forget what you enter here.

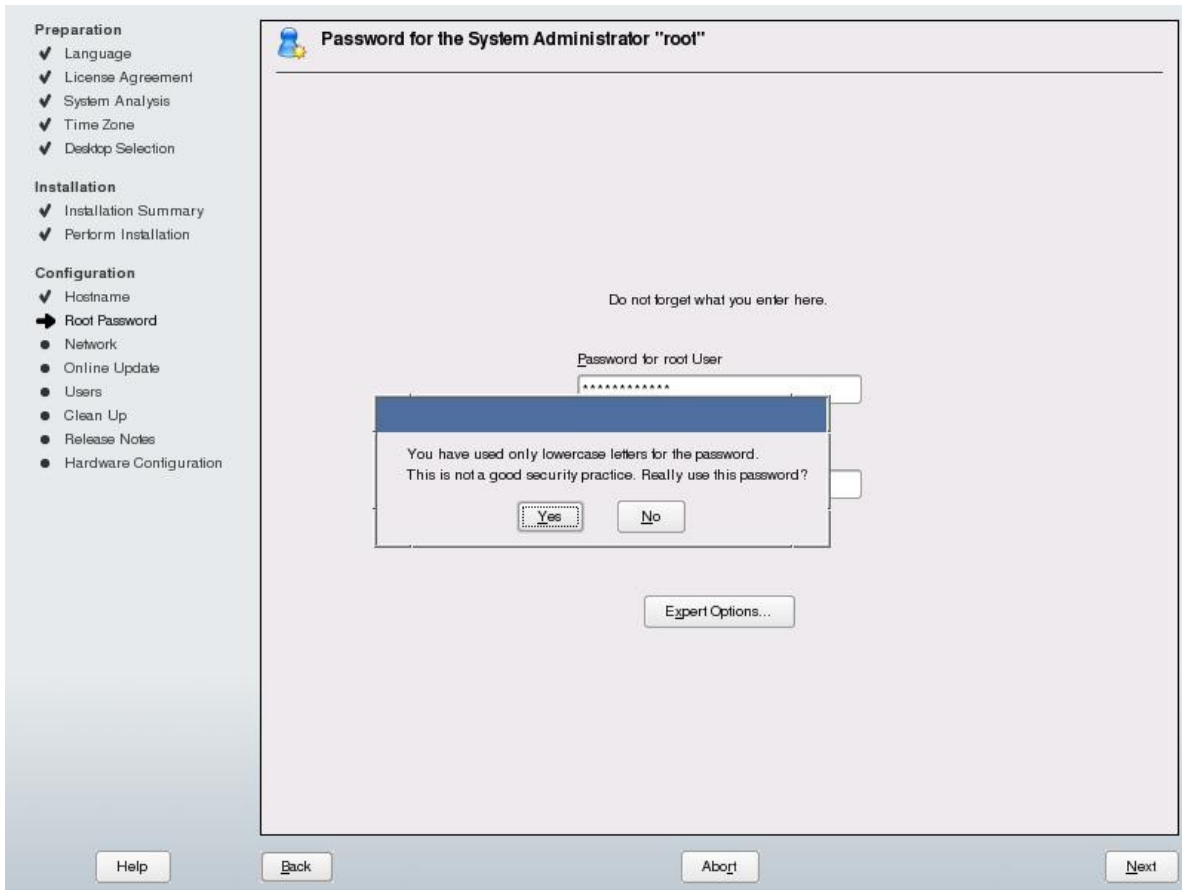
Password for root User

Confirm Password

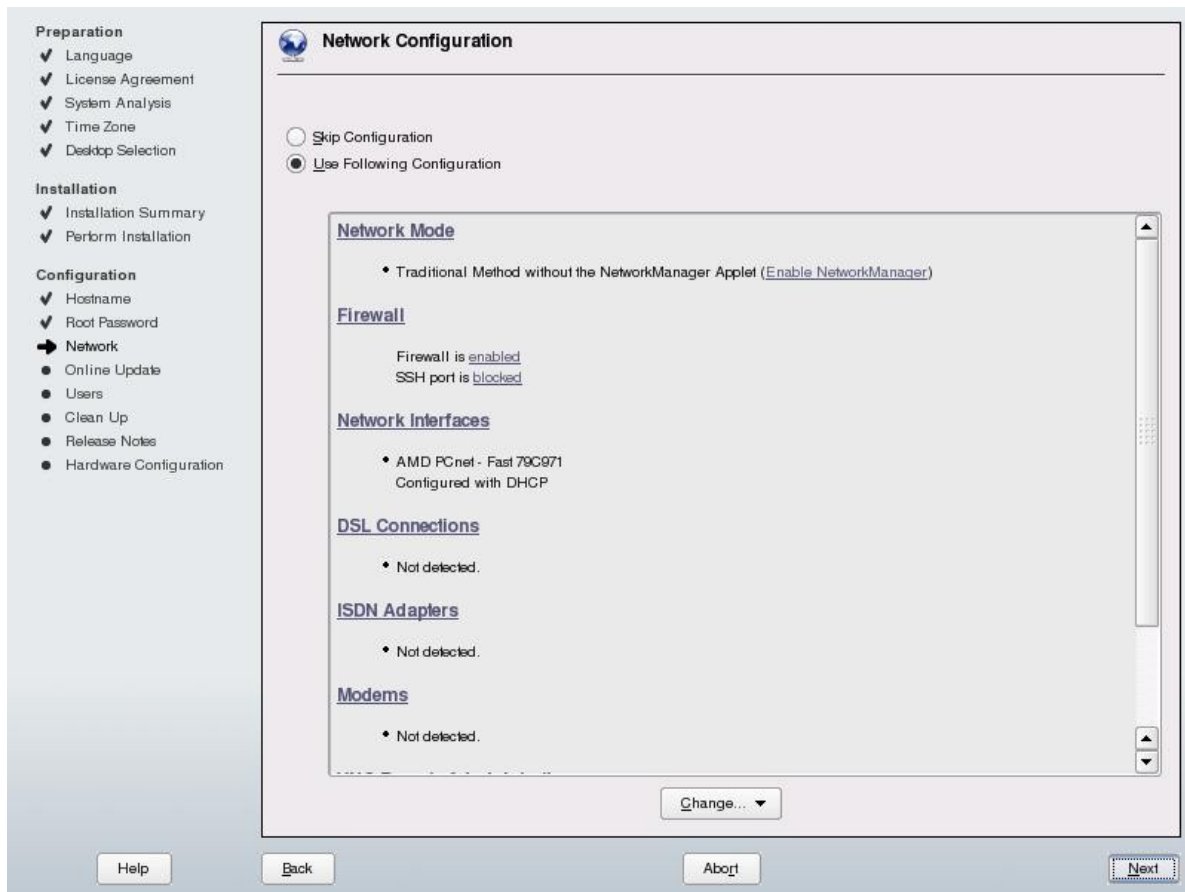
Expert Options...

At the bottom of the window are four buttons: Help, Back, Abort, and Next.

You may see a little box appear warning you about the password you have selected. If you wish to change it, you may do so. If not, click YES:



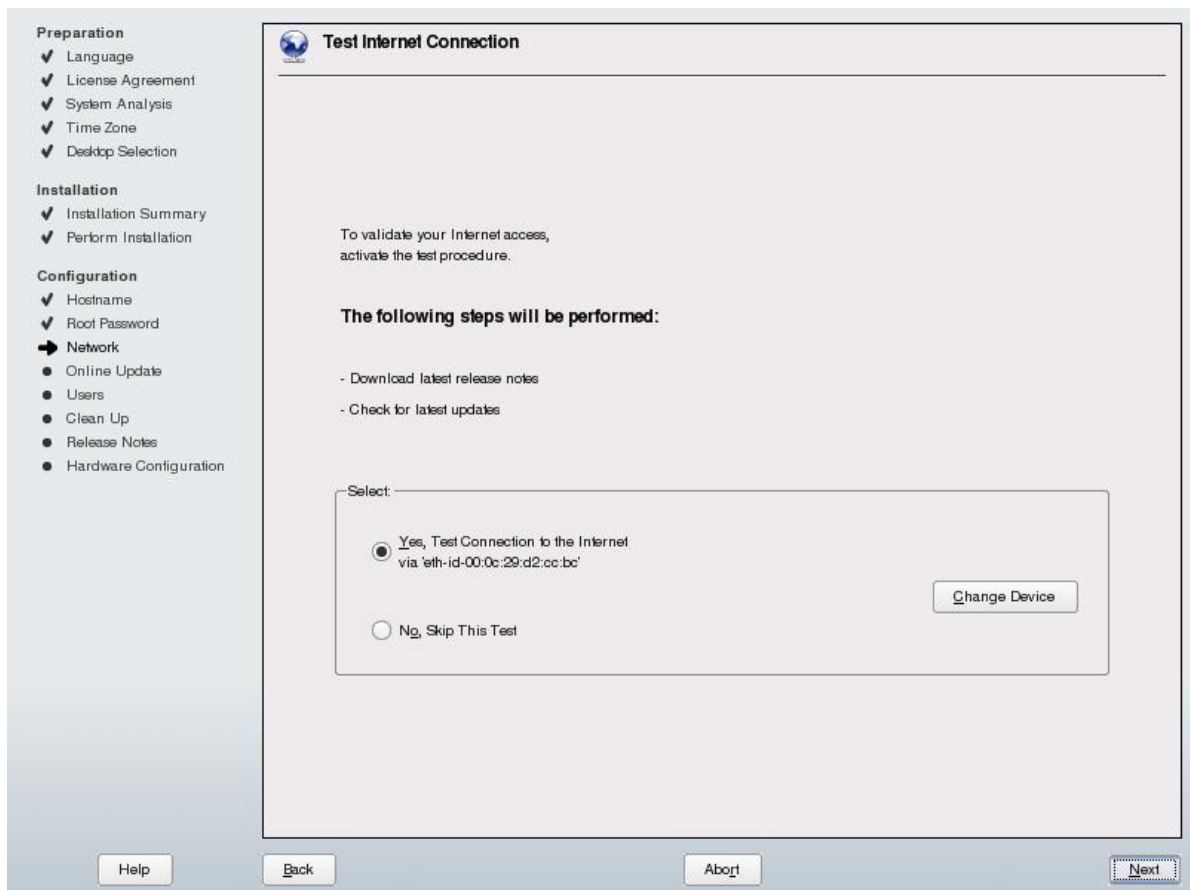
You are then taken to the "Network Configuration" screen. Just like with most other screens in the installation process, you can just click NEXT:



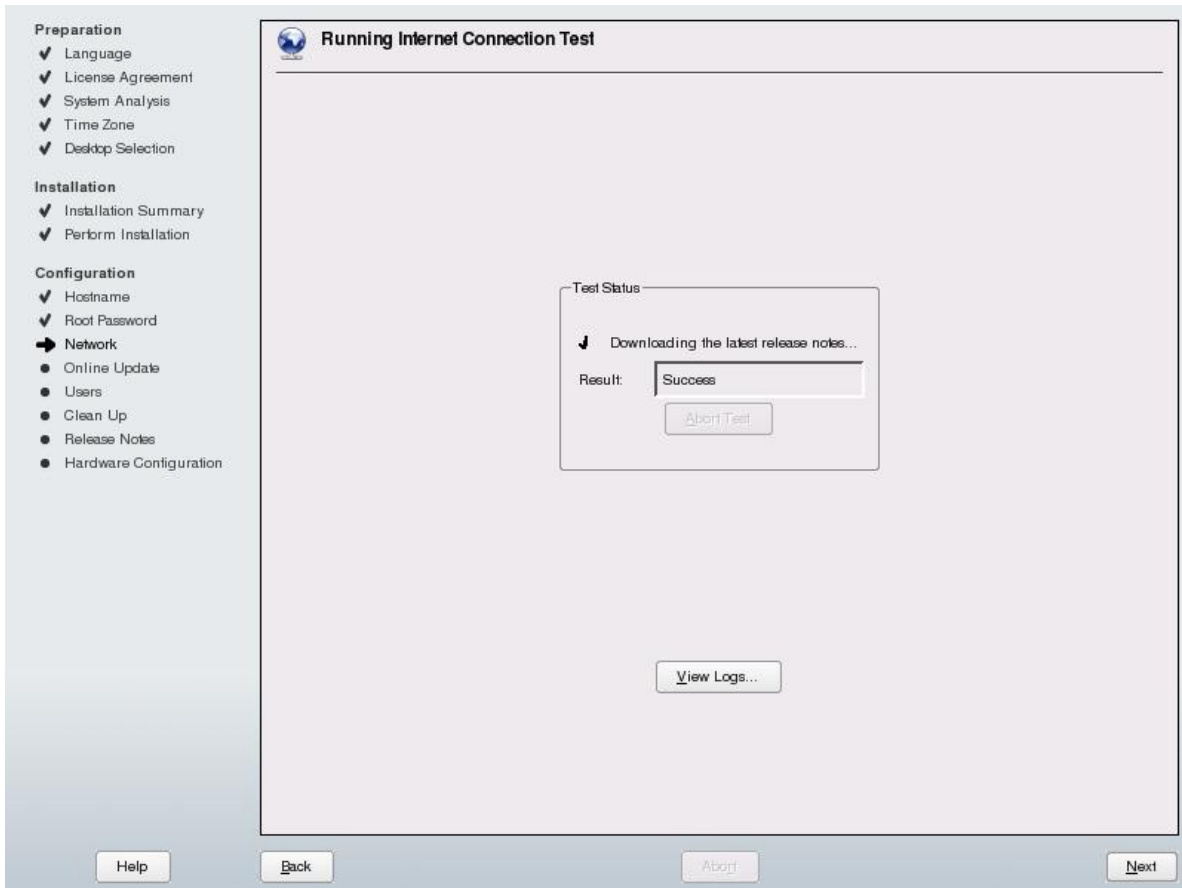
The installer saves your network configuration. It then takes you to the next screen, called "Test Internet Connection." This step will make sure you have a working Internet connection. If you are connected to the Internet, you might as well verify that the connection is working. If you don't want to do this or do not have an Internet connection, you can skip the test. If you wish to skip the test, select "No, Skip This Test," and click the NEXT button. It will take you to the "User Authentication Method" screen, further below.

That all said, I would like to show you what the test looks like.

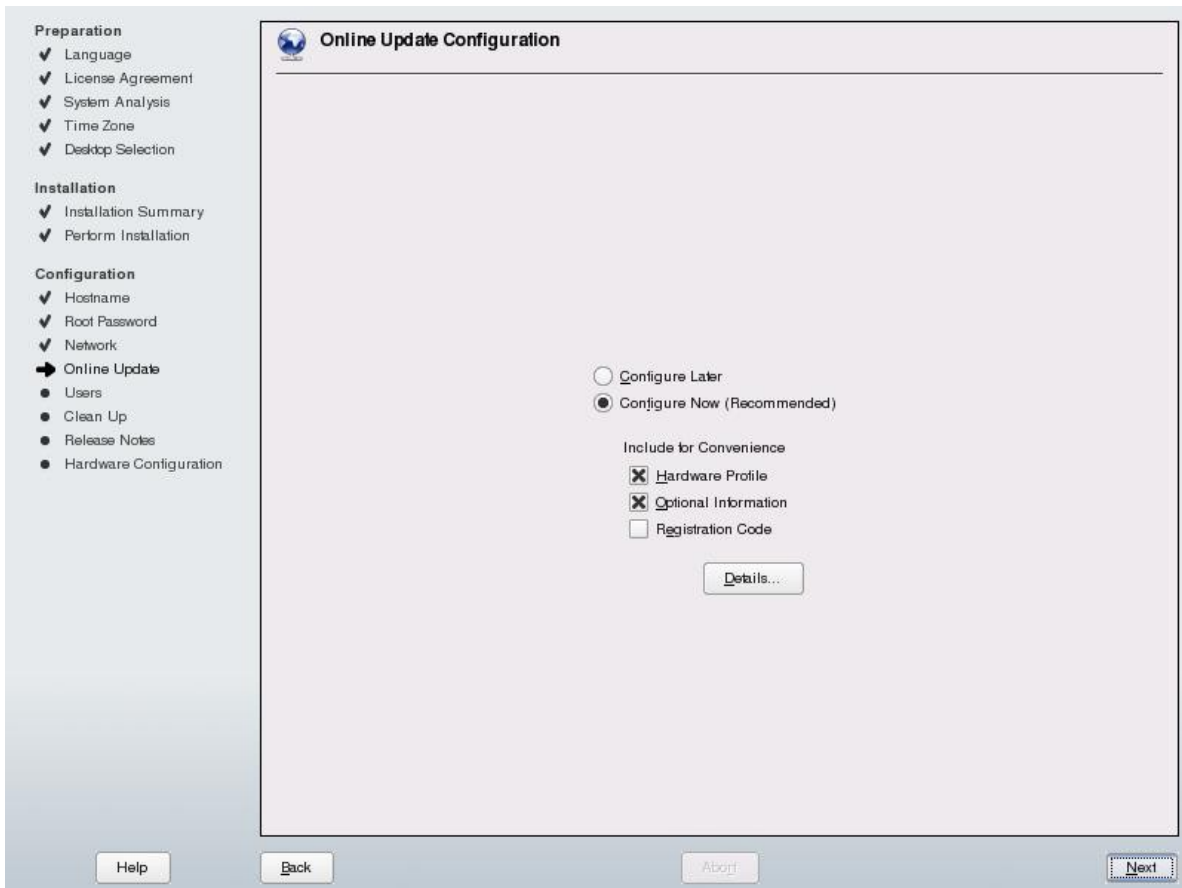
Make sure the "Yes, Test Connection to the Internet" radio button is selected. Then we are going to select NEXT:



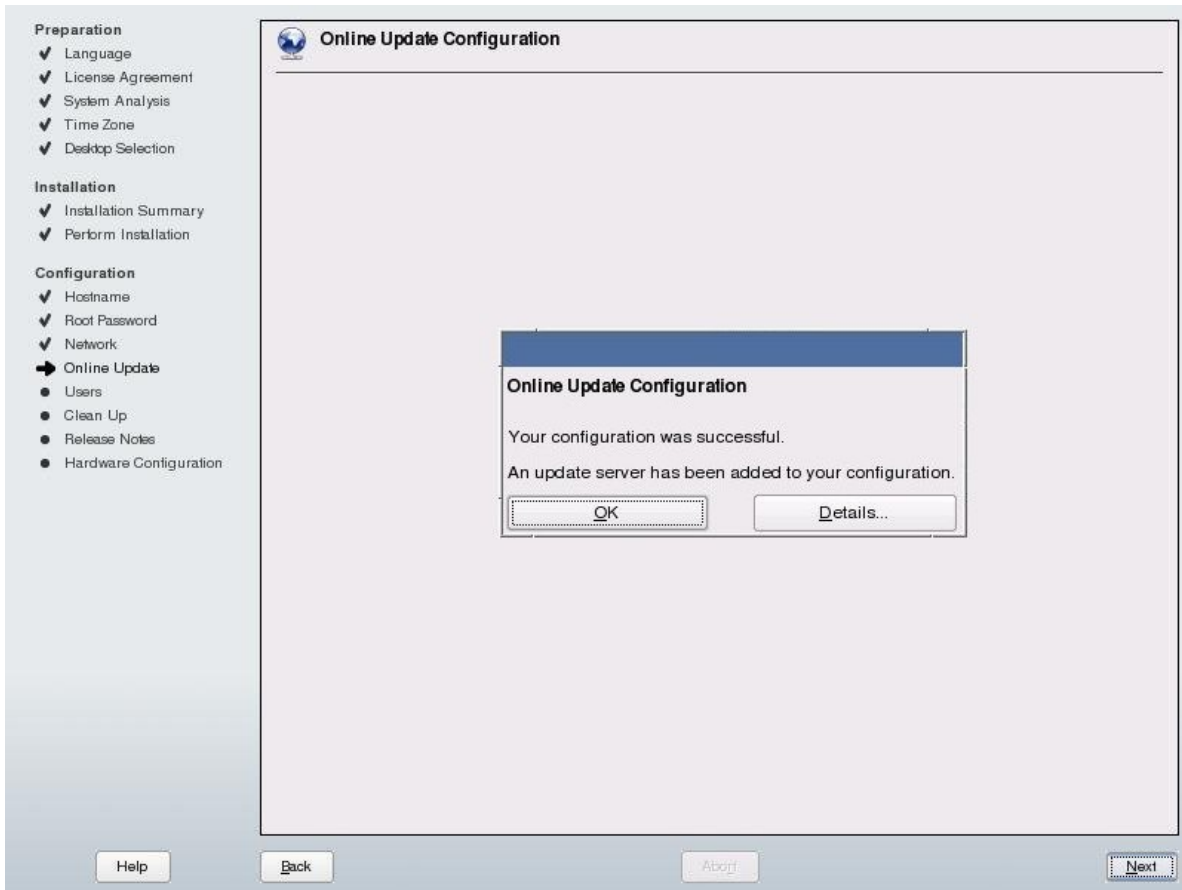
You are taken to the next screen, called "Running Internet Connection Test." In the middle of this screen, there is a TEST STATUS box. In this box, there is a RESULT box. After the test has completed, this box will either tell you that the test was successful, or that it was not successful. Our test passed, so we are going to click NEXT:



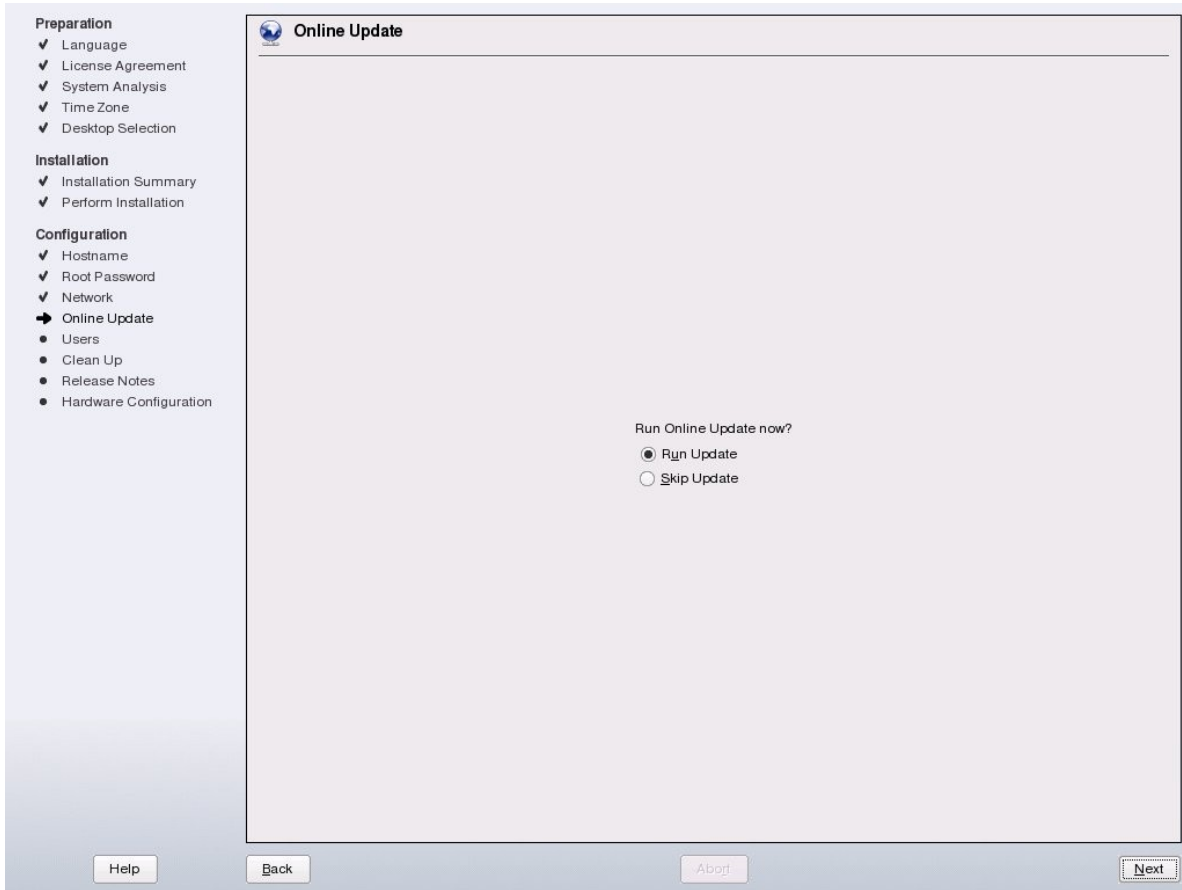
The next screen is called "Online Update Configuration." This is where we tell the system that we want to make sure we get security patches when they are available. We are going to select the "Configure Now (Recommended)" option. Click NEXT:



The system checks for available update servers. If such a server is found, it will be added to the configuration. Click OK:



You will then be asked if you want to run an online update. Select “Run Update” and click NEXT:



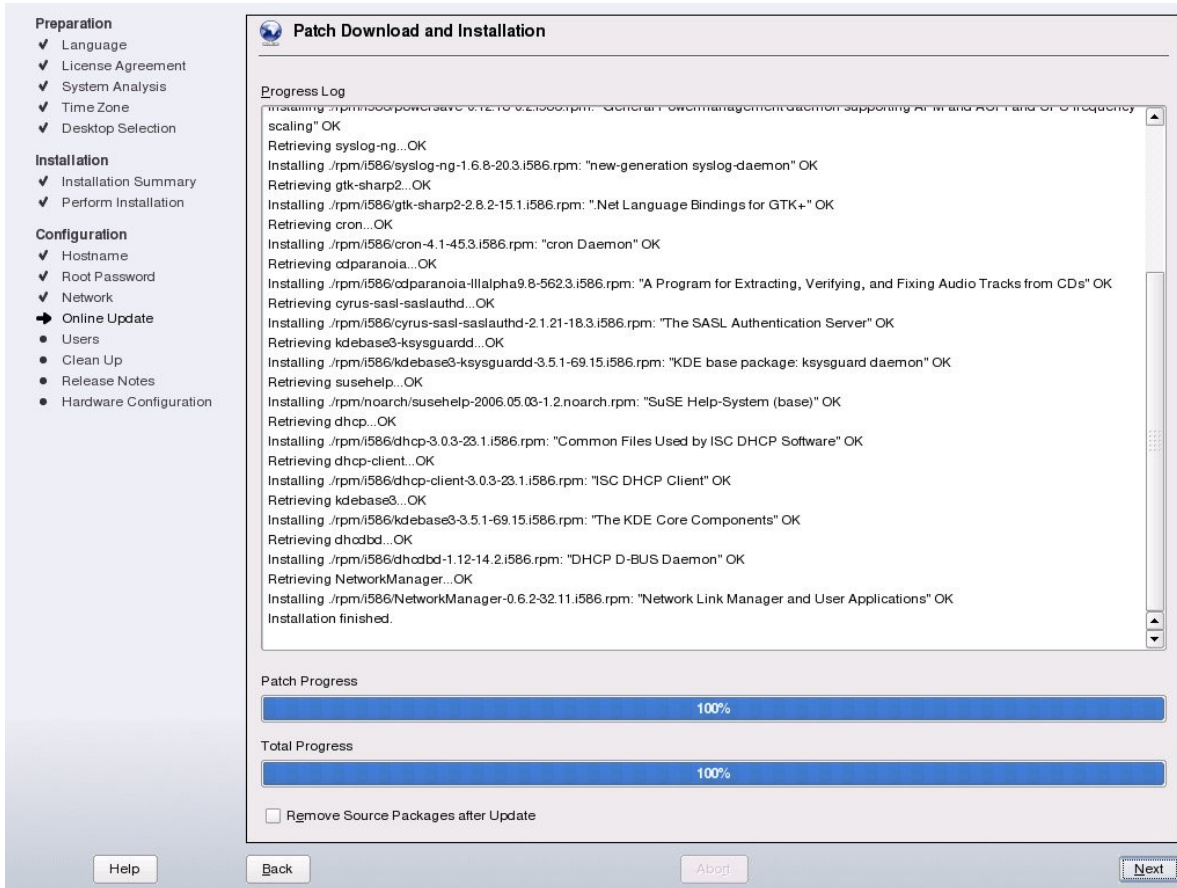
You are taken to the update screen. Once you get here, just click ACCEPT:

The screenshot shows a software update manager interface. On the left, a list of patches is displayed with checkboxes. Several patches are checked, including 'Command injection into foomatic-filters', 'Local privilege escalation in Cron.', 'NetworkManager security update', 'Add support for all IDE major numbers', and 'BASH can do a segmentation fault'. Below the list is a 'Patch Description' field which is currently empty. At the bottom left, a disk usage table is visible:

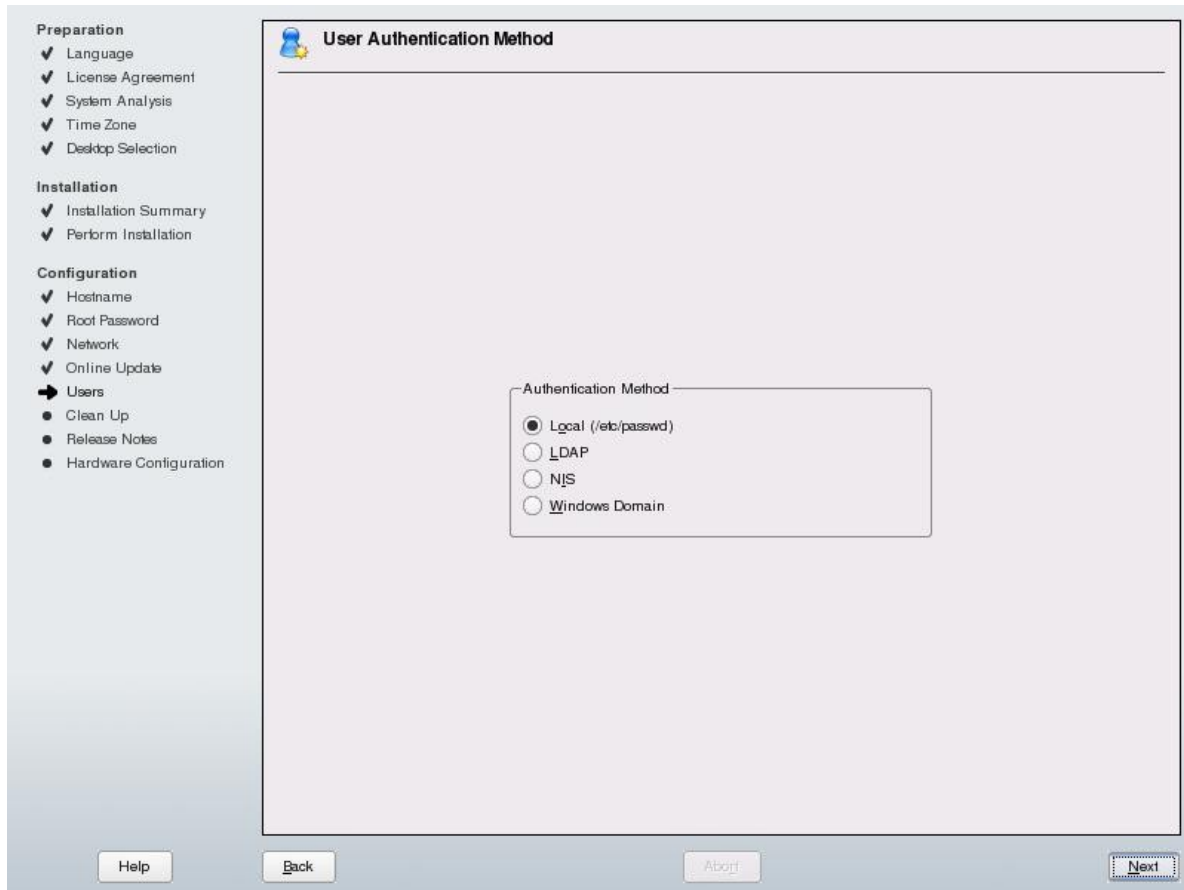
Name	Disk Usage	Used	Free	Total
/	<div style="width: 10%;"></div> 10%	9623 MB	8.3 GB	9.2 GB
/home	<div style="width: 0%;"></div> 0%	32.1 MB	13.7 GB	13.7 GB

On the right side, a package summary for 'foomatic-filters' is shown. The package is 'Filter Scripts Used by Printer Spoolers', version 3.0.2-20.3. The summary text reads: 'Filter scripts used by the printer spoolers to convert the incoming PostScript data into the printer's native format using a printer and driver-specific, but spooler-independent PPD file.' The authors listed are Till Kamppeter and Grant Taylor. At the bottom right, there are buttons for 'Check', 'Autocheck', 'Cancel', and 'Accept'.

You system then retrieves the available patches and installs them. When it is finished, just click NEXT:



The next screen is called "User Authentication Method." We are not going to fiddle with anything on this screen. You know what to do. Click NEXT:



This next screen that you see is called "New Local User." This is where you will add your own user account. For normal usage, you should never log in with the root system administrator account. It is highly recommended that you log in with your own personal account. The personal account belongs to you. This is the account that we are defining here. Fill out the page. Then click NEXT:

Preparation

- ✓ Language
- ✓ License Agreement
- ✓ System Analysis
- ✓ Time Zone
- ✓ Desktop Selection

Installation

- ✓ Installation Summary
- ✓ Perform Installation

Configuration

- ✓ Hostname
- ✓ Root Password
- ✓ Network
- ✓ Online Update
- ➔ **Users**
- Clean Up
- Release Notes
- Hardware Configuration

New Local User

User's Full Name
Scott Morris

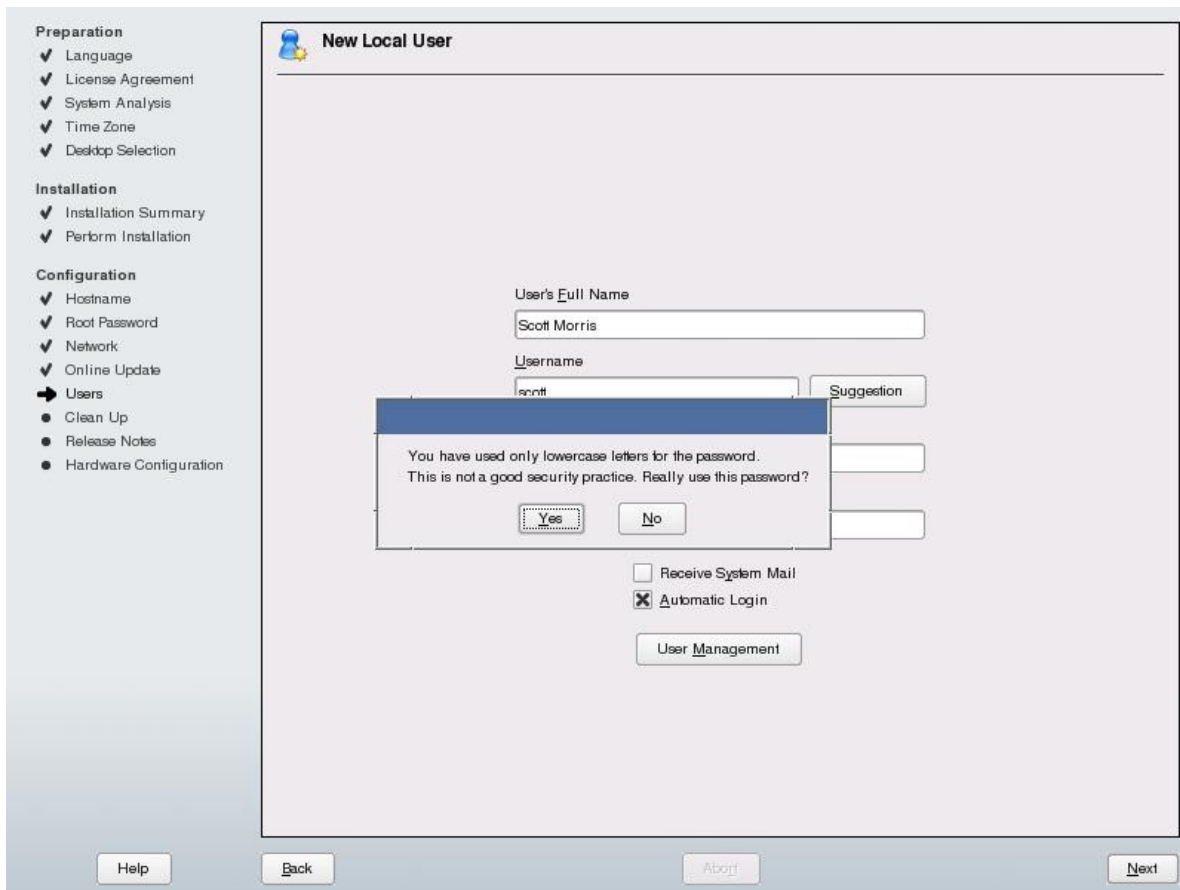
Username
scott

Password

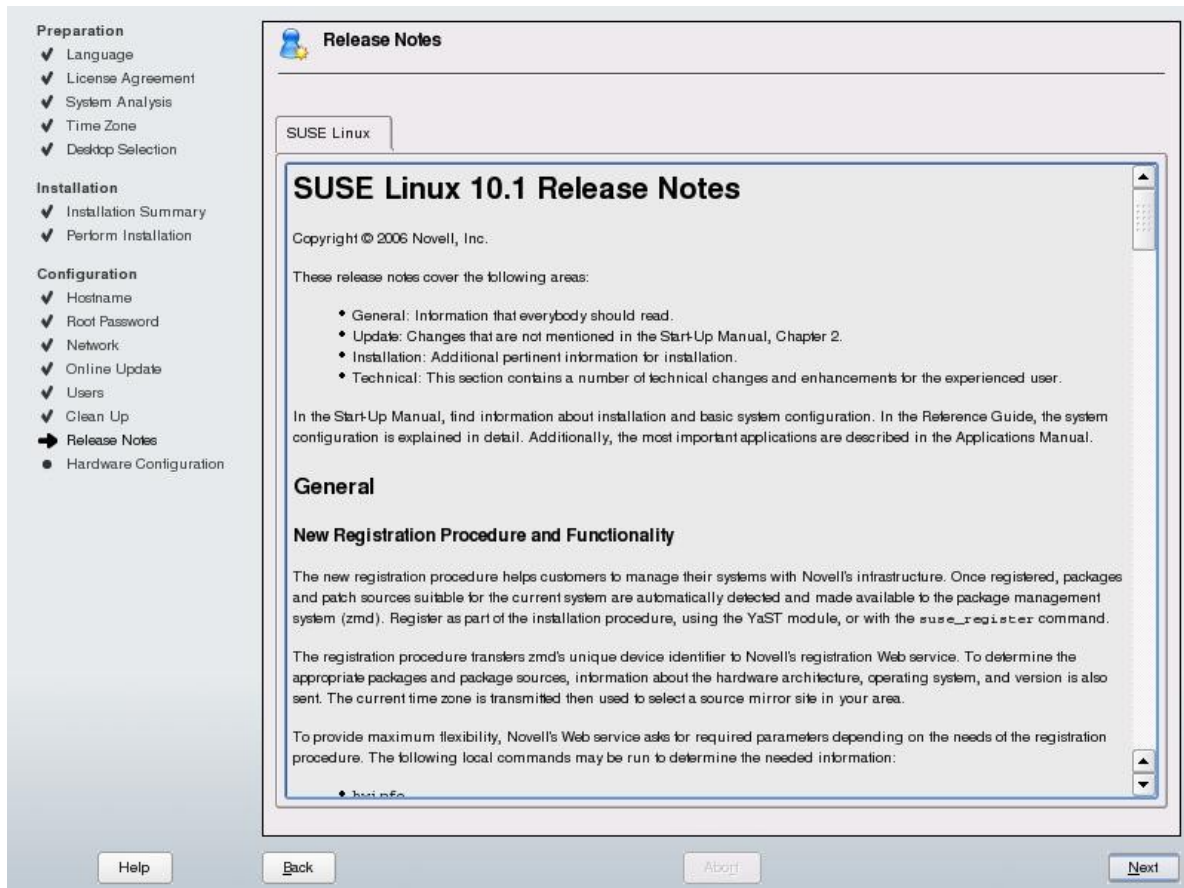
Confirm Password

Receive System Mail
 Automatic Login

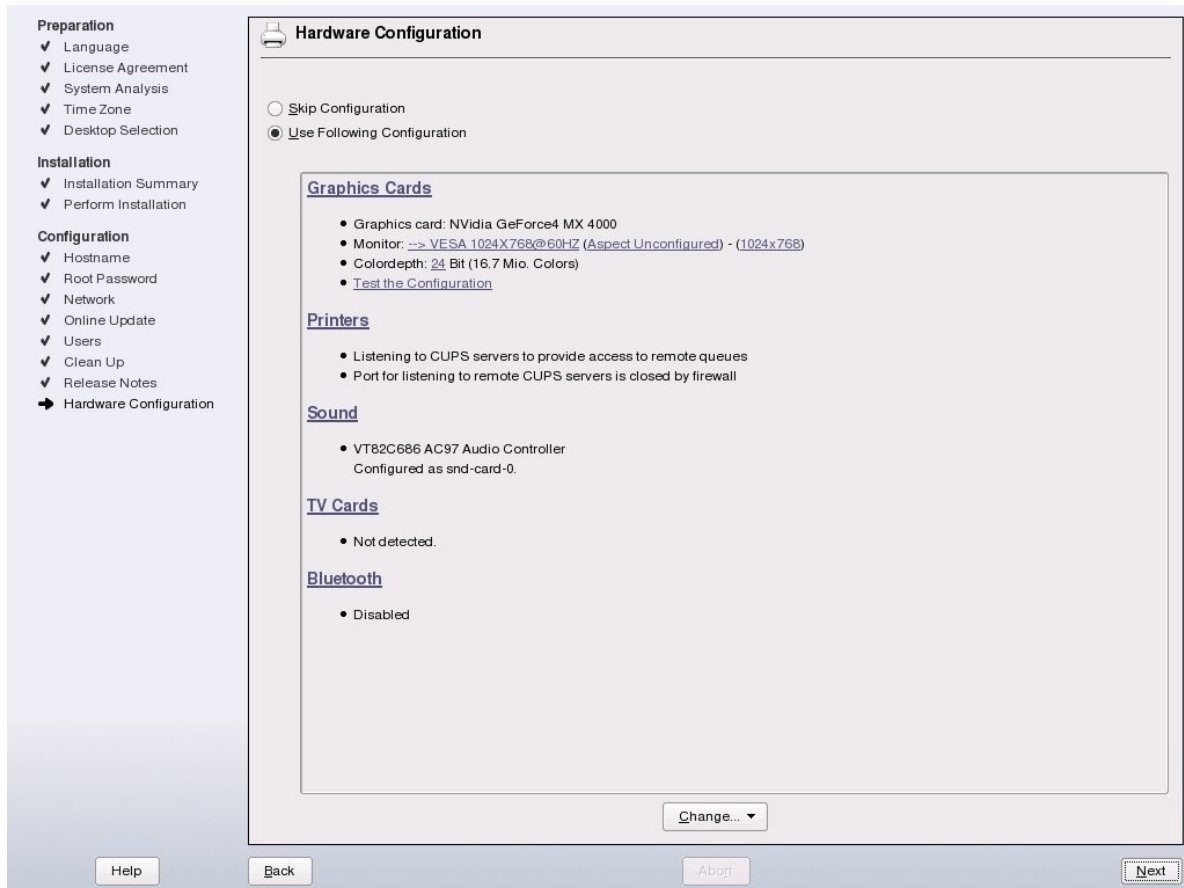
You may see a little box appear warning you about the password you have selected. If you wish to change it, you may do so. If not, click YES:



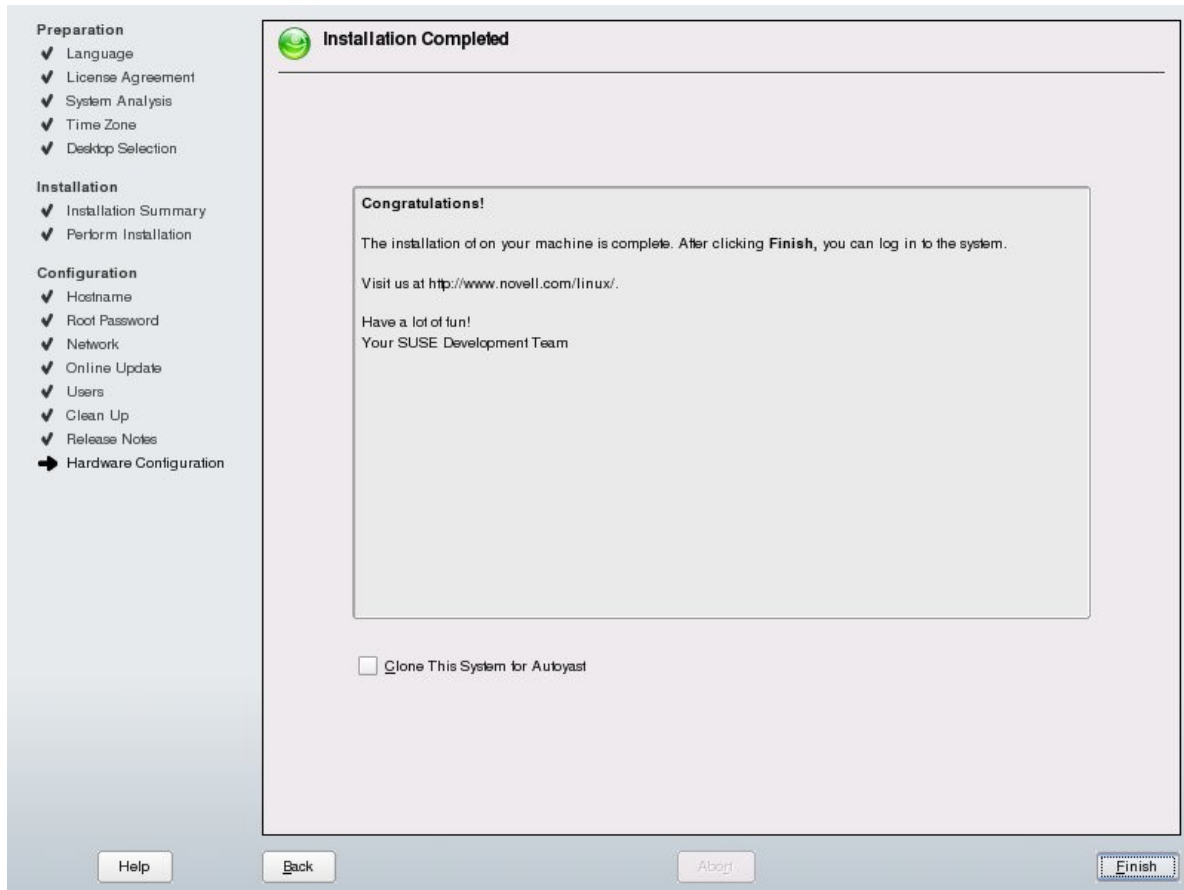
You are taken to another screen, called "Writing the system configuration." You don't need to do anything here. Just watch as it goes through, updating the system configuration for each thing. When it is finished, it will go to the next screen, called "Release Notes" appears. Again, click NEXT:



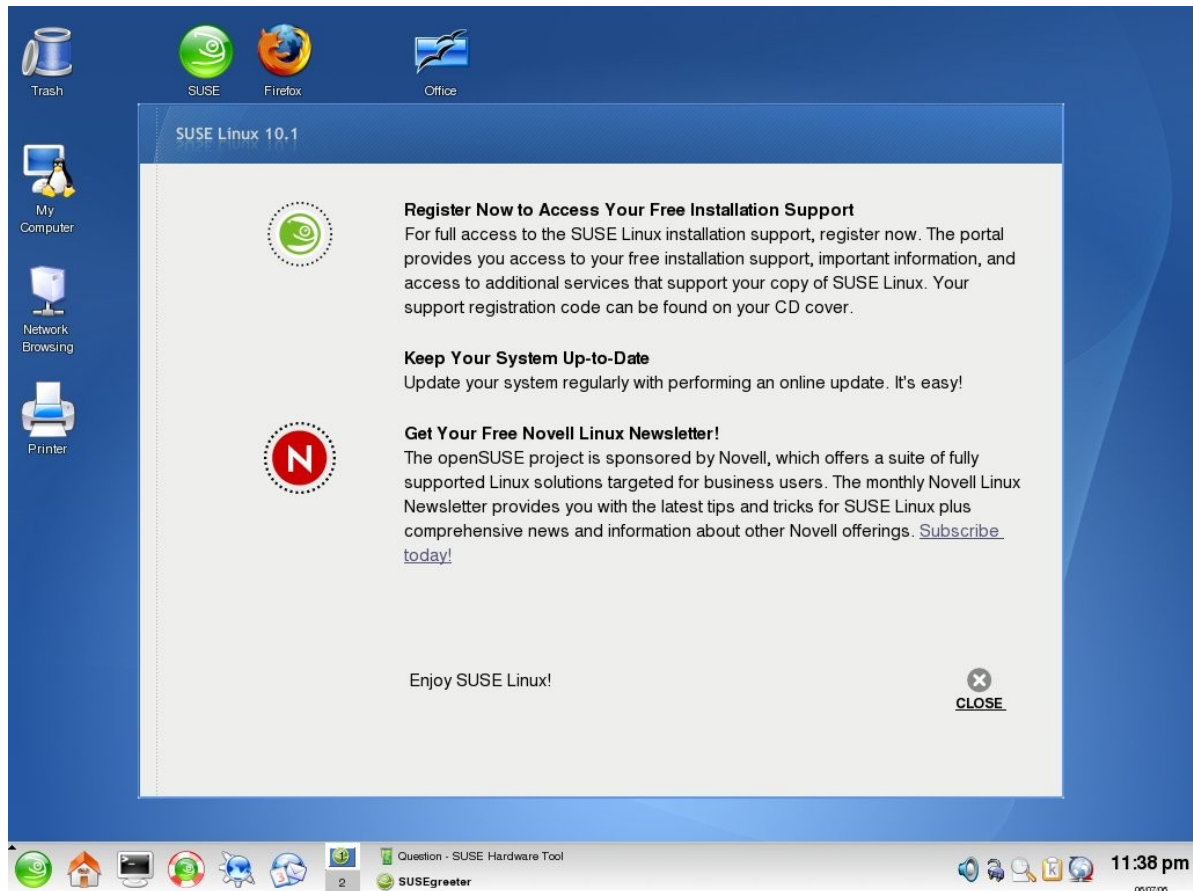
The final step is that the system detects some of the hardware in your computer. The hardware that it is detecting are things like your graphics card, any printers that you have connected to the computer, your sound, TV cards, and bluetooth devices. Again, for the most part, you don't need to worry about changing anything on this screen. Most of the time, you will just be able to click NEXT:



After a moment, you get to the final screen of the installation, called "Installation Completed." On this screen, click FINISH:



After a minute or so, you may see some text scrolling up the screen. This is followed by a blue screen with the icon of a lizard. This has a ball rotating around it. A few seconds later, you are logged into your desktop:



There will be a screen open when you log in. It will have a section called "Get Your Free Novell Linux Newsletter!" I recommend signing up for the newsletters relating to Linux. They contain insider tips and tricks written by other Linux users. This is high-quality information, and is totally free. There is a link in the window on your screen that takes you to Novell's website.

In the page that comes up, find the "Cool Solutions" section. Click on the subscription link. I highly suggest signing up for this. These newsletters give you tips, tricks, and other great content that will teach you how to better use your new SUSE Linux operating system.

Once you have signed up for these newsletters, you can close all open windows on your desktop.

Introduction to Users and Groups

Perhaps the biggest reason that Linux is so secure is because of the way it controls access to parts of the system. This is done through a system of users and groups. A user is simply someone who logs into the system. Groups are just that: groups of users. Linux can allow access to things in the system according what user account you are logged in with. Also, it can allow groups of users access to other things.

For example, let's say I have a file called `schedule.txt` that I keep an employee schedule in. This file can be opened and changed only by me. This is true because my account owns the file. Linux knows that I am the owner and gives me access to both open and change the file.

However, I am also in a group called `users`. Anyone else who is in this group can read the file, but they cannot change it. This means that all of the other employees can see when their schedule is, but they cannot change it. They can ask me to change it.

In this way, Linux keeps a very close eye on who has access to what. Most users have their own files and can manage them with ease.

Most importantly, there is one user account that has access to everything in the system. This is your root user. We set up a password for this account when we were installing the operating system. This user account can install programs, change system settings, and can do other administrative tasks. Because of the access level of this user, it is important to use this account as sparingly as possible.

In other words, whenever possible, use your regular user account. Far too many people just log in as their root account and use that for day-to-day use. This is

dangerous for the security of your system, not recommended, and very highly frowned upon. Just use your regular user account for normal system usage.

Get to Know Your Desktop

When you boot into Linux the first time, you are greeted by a nice, clean desktop environment with a neat chameleon lizard set as your wallpaper. It feels pretty great to have reached this milestone. You have your own copy of Linux, and you have installed it successfully. But now what do you do? As nice as it looks, its greatness does not lie in its appearance. How do we become productive in this new environment as quickly as possible? Let's take a look around and see what KDE is and what it does.

What is KDE?

The K Desktop Environment, or KDE, is an environment for your desktop. Its main responsibility is to manage what your windows do and what they look like. It provides you with a shortcut bar called the Kicker panel. It gives you several different desktops to work on. It makes sure your fonts look right. It provides you with a menu that you can use to run applications. This menu is like the system menu on Windows. KDE gives you applications like Konqueror, a feature-rich yet simple way to browse around your system and manage files. Konqueror also acts as a web browser.

We will look at more of KDE in a bit.

Right now, let's take a minute to outline the different parts of your desktop:

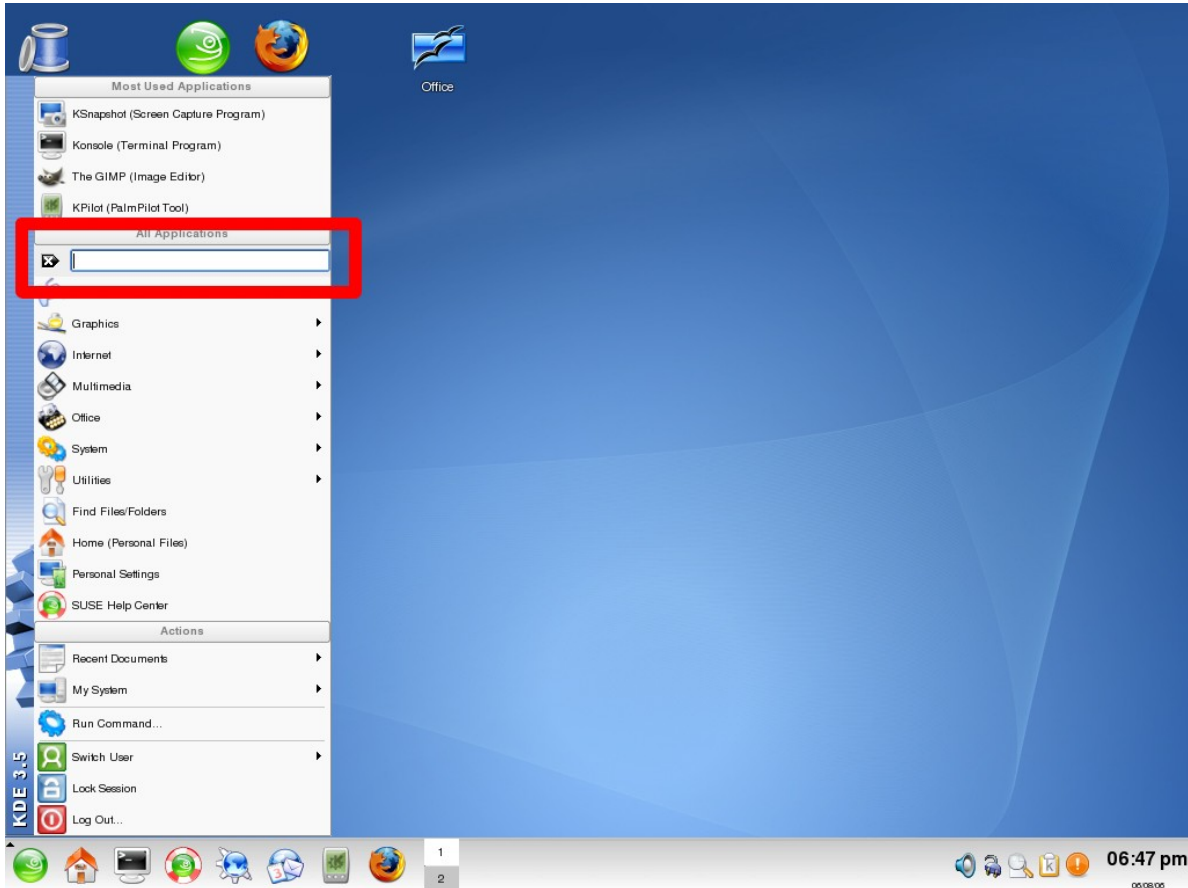


Let's take a look at each part of the desktop.

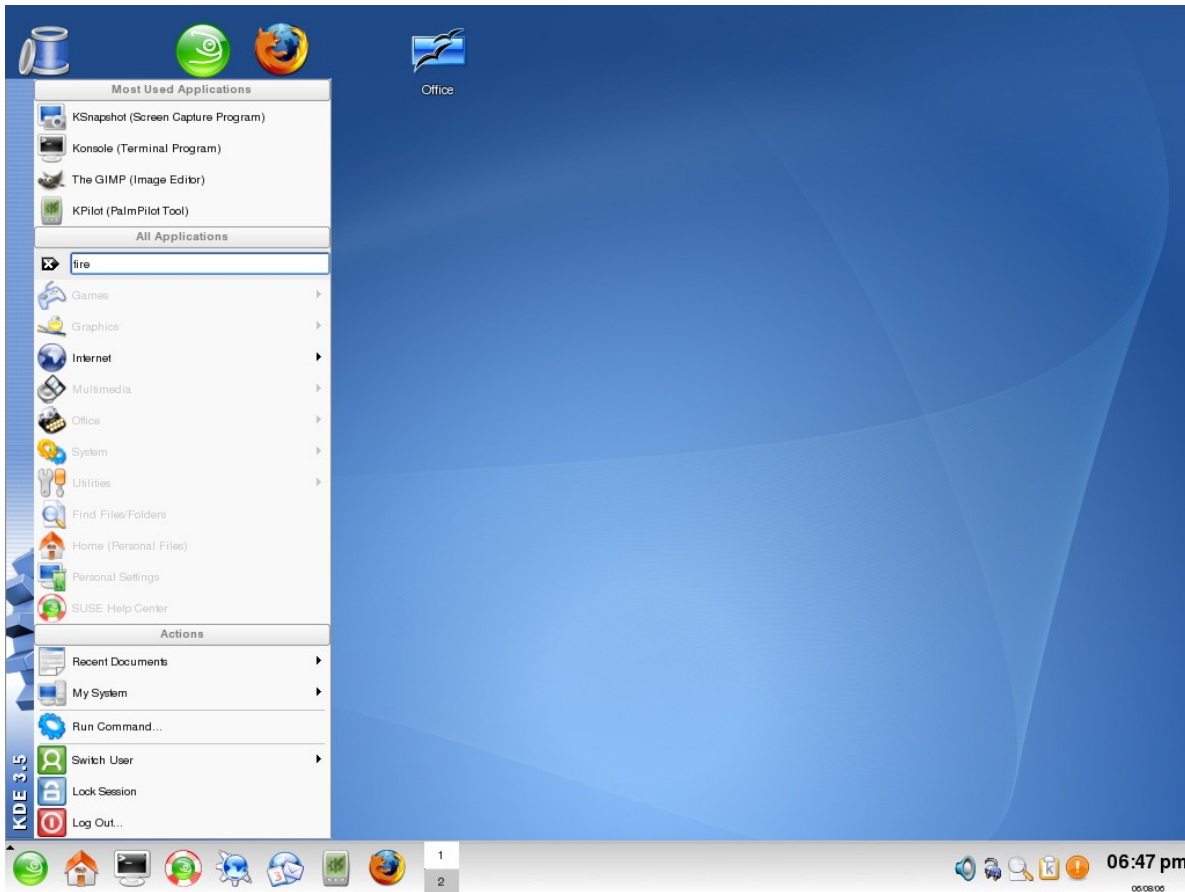
The K Menu

The K Menu is where most applications can be found. This menu is divided up into different sections. This is so you will have an idea of where an application can be found. For example, if you wanted to run your OpenOffice word processor, you probably would not look in the GAMES menu. The applications are organized into these sections so you can find and run your programs quickly. The concept of the K Menu should be quite familiar to you. Browse through the various submenus and get a feel for what applications there are and where they can be found. That will be the best way to learn what program is where.

I mentioned earlier that this menu has a search feature. Let's check this out really quickly. Click on your K Menu. Then press the '/' (forward slash) key. It's the one that also has the question mark on it. You see that the search box now has a flashing cursor in it:



We will search for the Firefox web browser. In this box, type the first four letters of Firefox:



You see that as you type, many of the menu options start to become inactive. This just means that there are items found in the active ones that match what you are typing. When you have typed in “fire,” you will see that everything has become grayed out except for the INTERNET option.

Go ahead and click on the INTERNET option. You will see that another sub menu pops out, showing active and inactive options. One of the active ones should be Firefox.

After using this search mechanism a couple of times, it will become second nature to you. Using this search tool, you can very quickly determine where a menu option is if you remember what it is called. This is one of the things that greatly simplifies learning Linux.

The Kicker Panel

You will see at the bottom of your screen a panel that will look familiar. It is a place where your running tasks appear. This panel can be used for placing application launchers. These are buttons or shortcuts that reside in the Kicker Panel and will generally run a program when you click on them.

You will also see the system tray and system clock in this panel. Once you become accustomed to its capabilities, the Kicker Panel is quite a powerful tool. Later in this book, we will look more at how to use the Kicker Panel.

The KDE Control Center

Wouldn't it be nice if KDE had some central location where you could set all of your personal preferences? It just so happens that there is such a place. You can set preferences for how your desktop looks, how your windows look, and how the buttons on the windows look. You can tell KDE what icon sets you want, what cursor theme to use, how you want your keyboard to act, and how you want your mouse to behave, to name a few. There are many additional settings that you can adjust to your liking.

This is another way Linux is very diverse. If you are overwhelmed at so many options, don't bother with them. Most things are already set to act the way most users would probably like them. No need to mess around with any of the KDE Control Center if you don't want to.

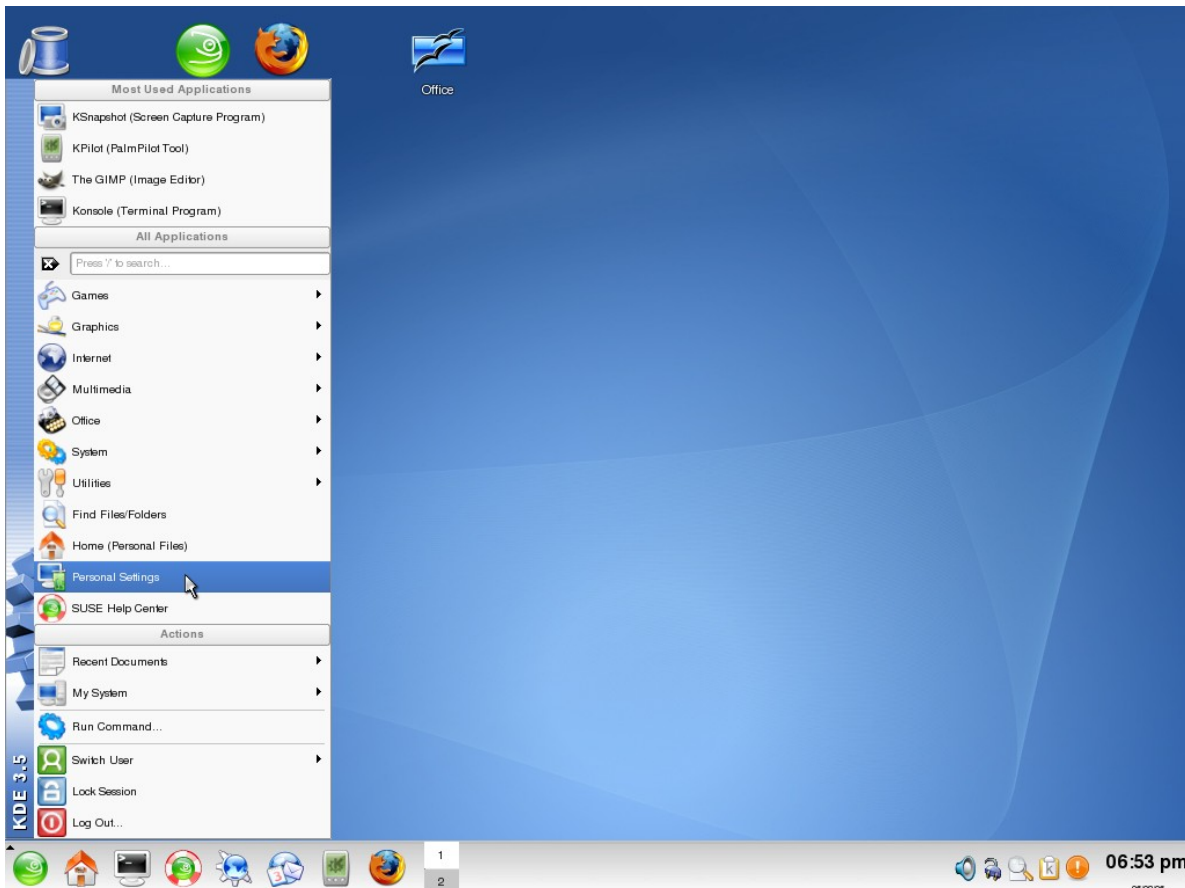
As a matter of fact, if you want to skip the entire next section about the Control Center, feel free. I go over it here because it is one of the fundamental parts of the KDE Desktop Environment. That, and it is one of the easiest parts of Linux to learn how to use. Also, don't worry about messing something up in the KDE Control Center. It is hard to cause a major system malfunction by setting something wrong there.

As an introduction to the KDE Control Center, I would like to show you how to do a few things with it. None of them will be that hard to do. All of them can be done in a few clicks.

Changing Mouse Behavior

One of the first things that I like to do right after I have installed Linux is change the mouse behavior. By default, KDE will open or execute an icon when you click on it one time. I prefer to double-click to activate the icons. Changing the behavior of single-click to double-click is quite simple. It can be done very easily in the KDE Control Center.

To make this change, open your K Menu, and click on PERSONAL SETTINGS:



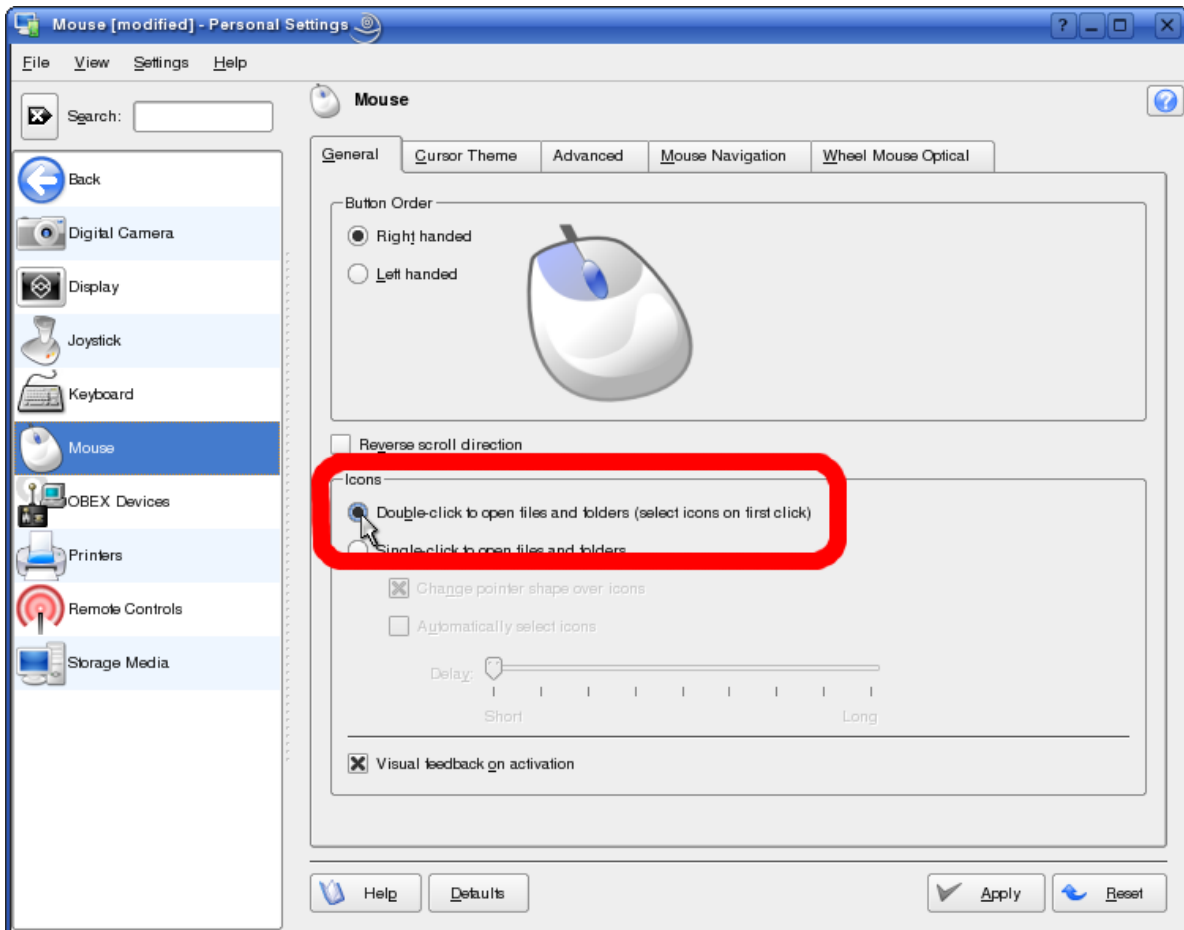
The KDE Control Center appears. On the left, there will be a pane containing several items. Click on the PERIPHERALS item in this list:



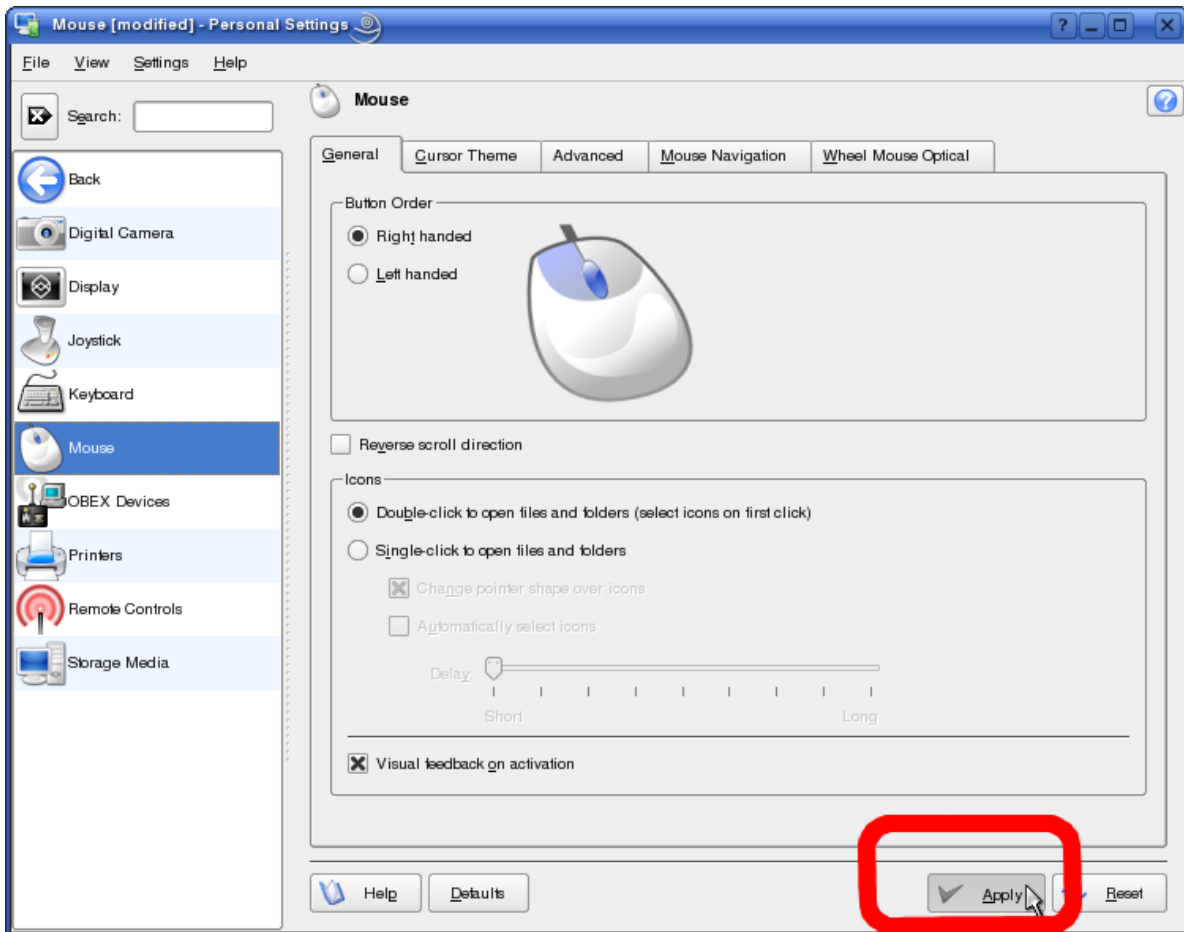
Another list appears. Click on MOUSE:



On the right side, you will see two boxes. The one on the top is called BUTTON ORDER. The one on the bottom is called ICONS. Look in the ICONS box. You are looking for a radio button that says, "Double-click to open files and folders (select icons on first click)." Select that radio button:



Click APPLY in the lower-right corner of this window to apply your changes:

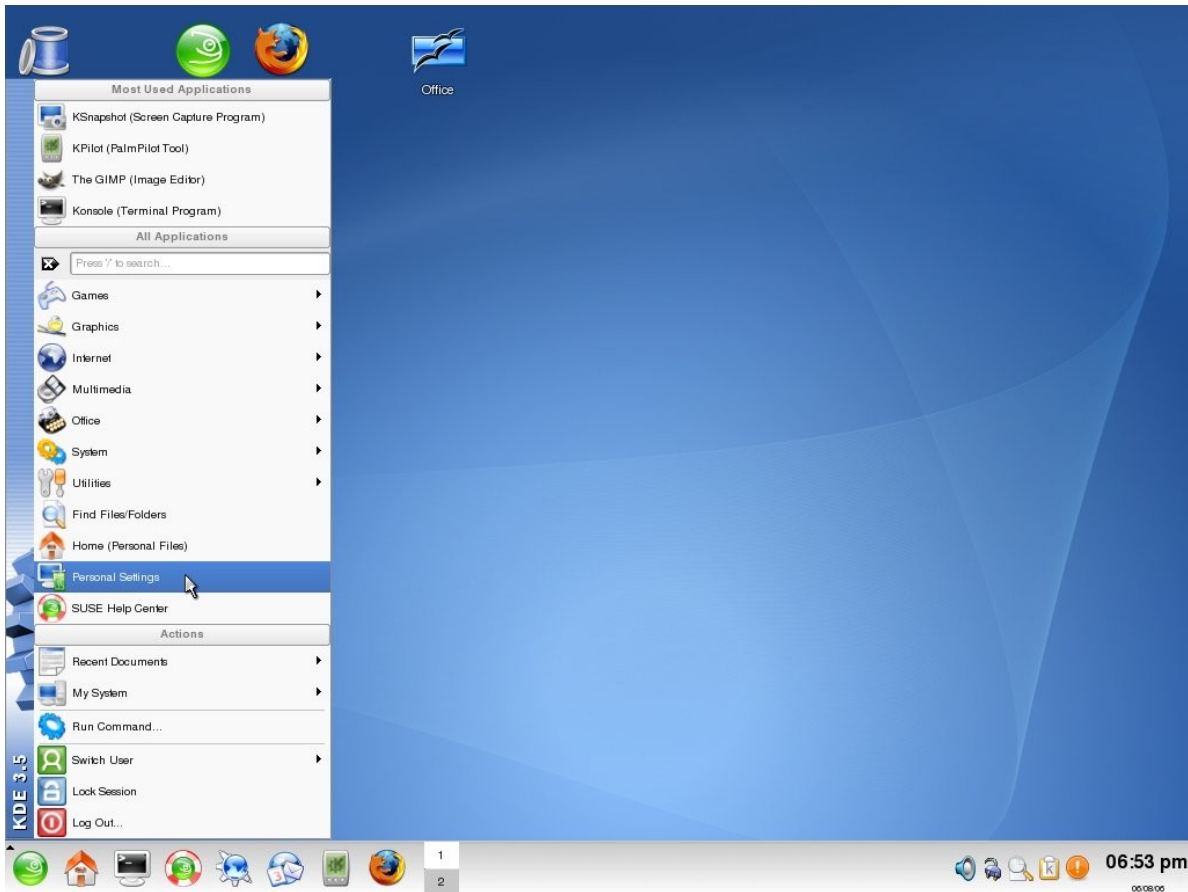


Now, you can close your window. The mouse preference has now changed. Experiment with your desktop icons to see the new behavior.

Changing Time and Date Display Format

Another thing that I like to customize is how the date and time is displayed on my desktop. In different parts of the world, this information is displayed differently. KDE allows you to modify the layout according to your taste.

To see how this is done, open your K Menu, and click on **PERSONAL SETTINGS**:



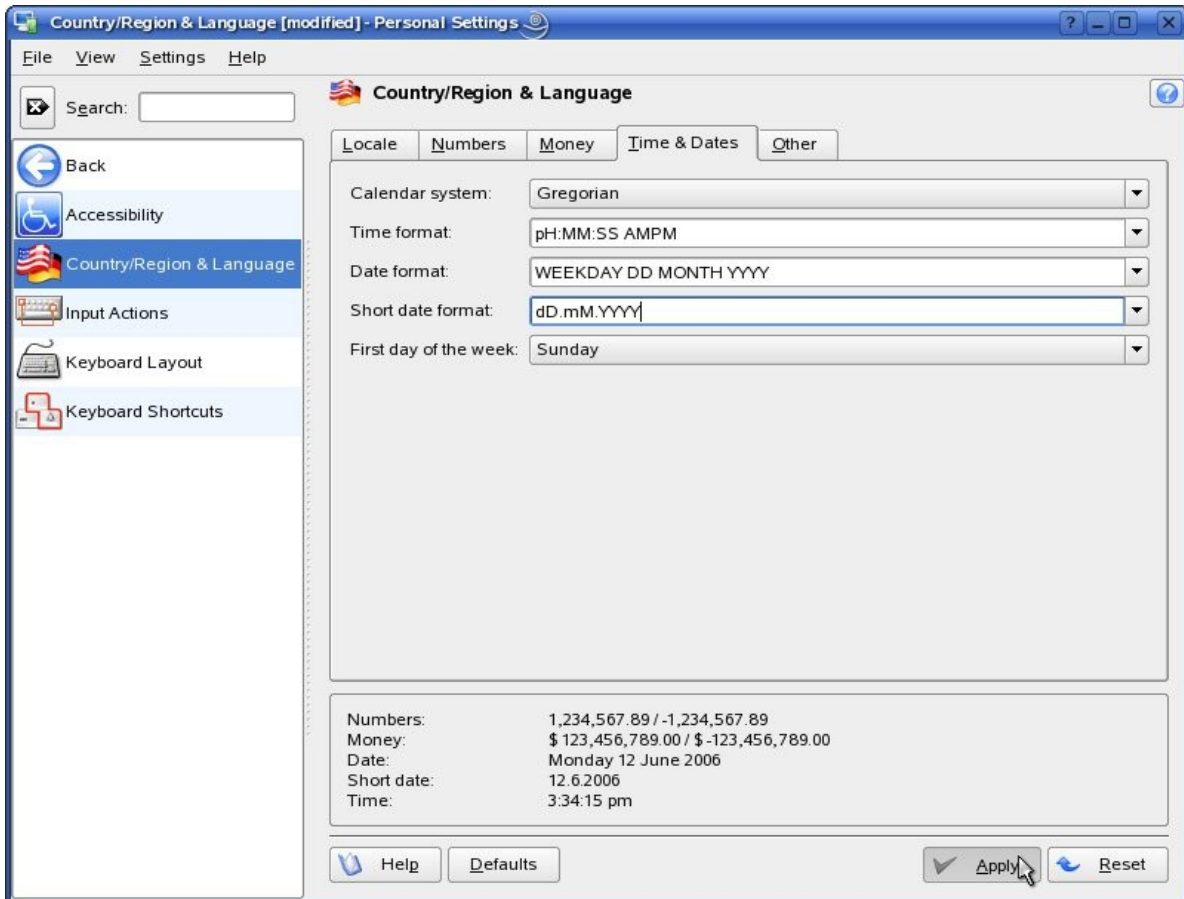
The KDE Control Center appears. On the left, there is a list of items. You are looking for the one called REGIONAL & ACCESSIBILITY. Click on it:



Another list appears. From this list, select COUNTRY/REGION & LANGUAGE:



Then, on the right side at the top, you will see a bunch of tabs. Click on the TIME & DATES tab:



From this location, you can select the time, date, and first day of the week as you want. When finished, be sure to click on APPLY at the bottom to make so your changes take effect.

You will see a window that basically says that you need to log out of KDE and log back in for the changes to take effect. It is fine to click OK on this window:

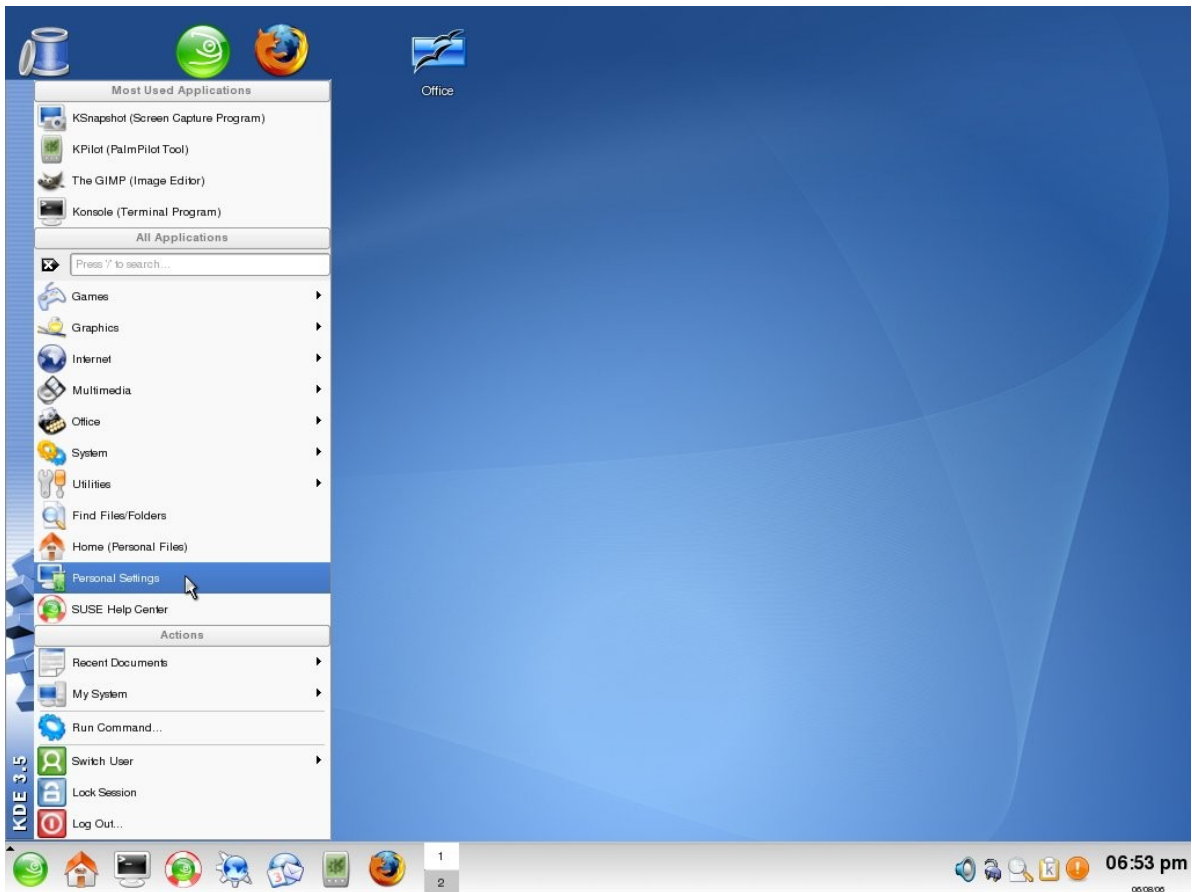


Then, close the KDE Control Panel. Log out of KDE and then log back in. You should see that your clock now displays things according to your settings.

Window Themes

People like to make things look different and fun. Changing the wallpaper is one way to do this. Another way is to change how the windows look. We can even customize the buttons, drop-down boxes, and similar things that are inside the windows. All of this is very simple to do in the KDE Control Center. I would like to demonstrate how to change the appearance of the windows.

Open your K Menu, and click on PERSONAL SETTINGS:



The KDE Control Center appears. On the left, there is a list of items. This time, you are looking for the APPEARANCE & THEMES option:



After selecting this option, you will see another list appear in the same pane. Look for the option called STYLE:

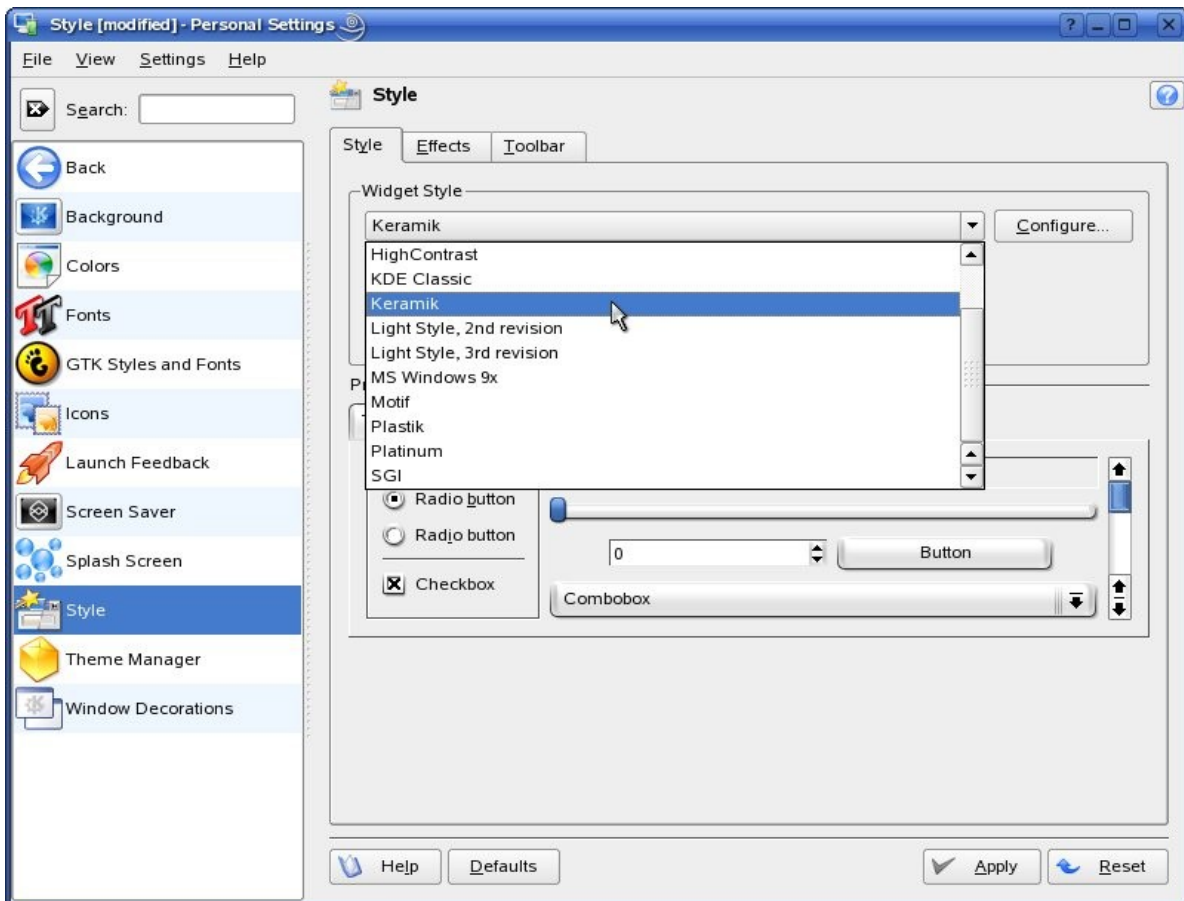


Before continuing, I think it would be helpful to go over some more terminology. On your windows, you have a variety of buttons, drop-down boxes, lists, menus, tabs, check-boxes, progress bars, and things of this nature. In Linux, when referring to these things, they are most commonly referred to as "widgets."

Thus, in this window, you will see a box called WIDGET STYLE. This is a short way of saying, "What do you want your drop-down boxes, lists, menus, tabs, check-boxes, progress bars, etc., to look like?" We are going to take a look at some choices here.

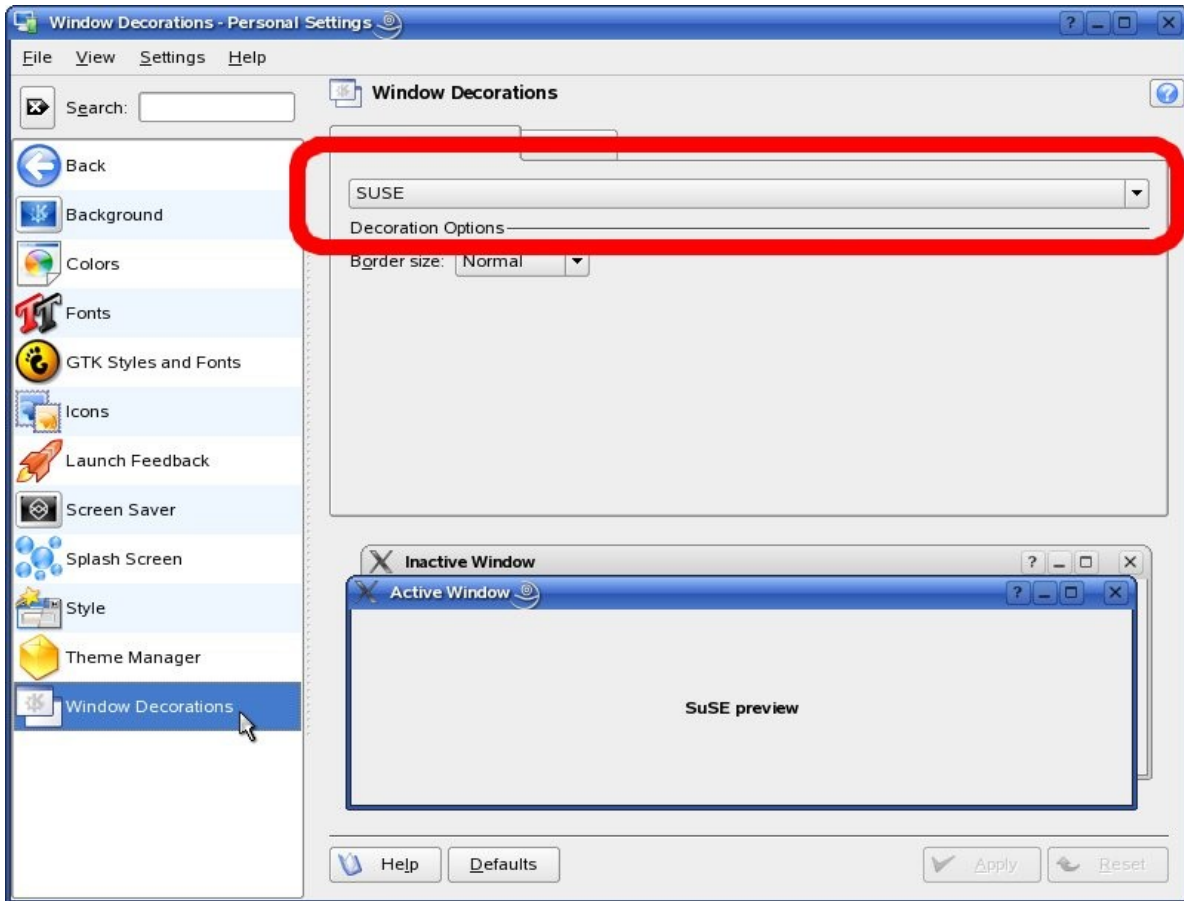
The 'widgets' displayed in the PREVIEW box are fake. When you click on them they don't do anything. They are merely here so that you can see what the different widget styles look like.

Directly under the WIDGET STYLE title, there is a drop-down box. This is where you will pick the different styles. Go through this list, picking each of the styles, and watch the widgets on this screen change to preview each style:

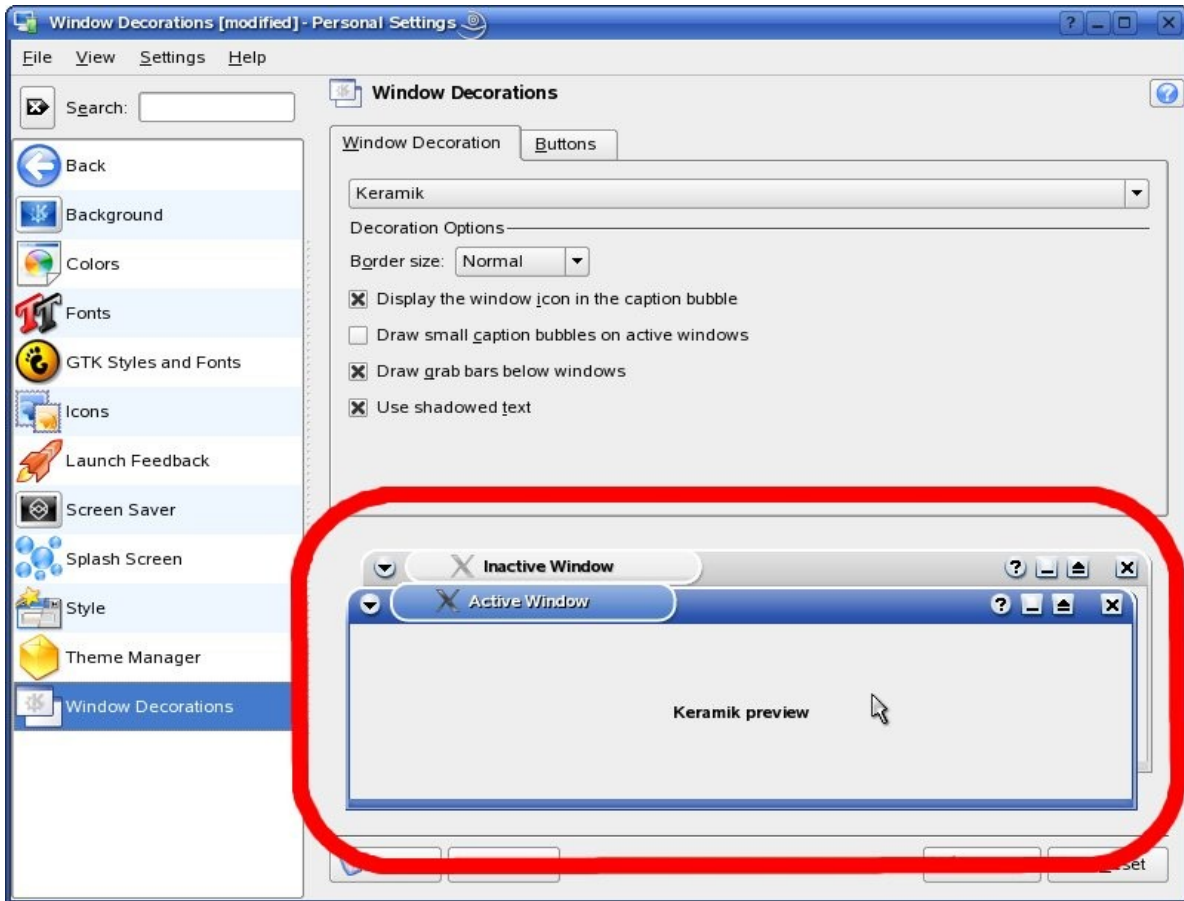


Find a widget style that you like (I personally use PLASTIK). To save and apply your settings, click the APPLY button in the lower right corner of your window, but do not close it. We still need to change the window border style.

In the left pane of this window, click WINDOW DECORATIONS. At the top, on the right side, you will see a drop-down box:



'Use this to check out the different window styles. The fake windows in the bottom of this screen will show you how the window borders look with each theme:



When you find one you like, click APPLY in the lower right to save your settings.

There are a whole bunch of fun and helpful settings like this in the KDE Control Center that allow you to fine-tune your preferences. This is one of the reasons that I prefer KDE. If you want to change things, you are free to do so. It really is a very nice, well-developed desktop environment. I suggest looking through each of the components and preferences of the KDE Control Center to help familiarize yourself with where things are located.

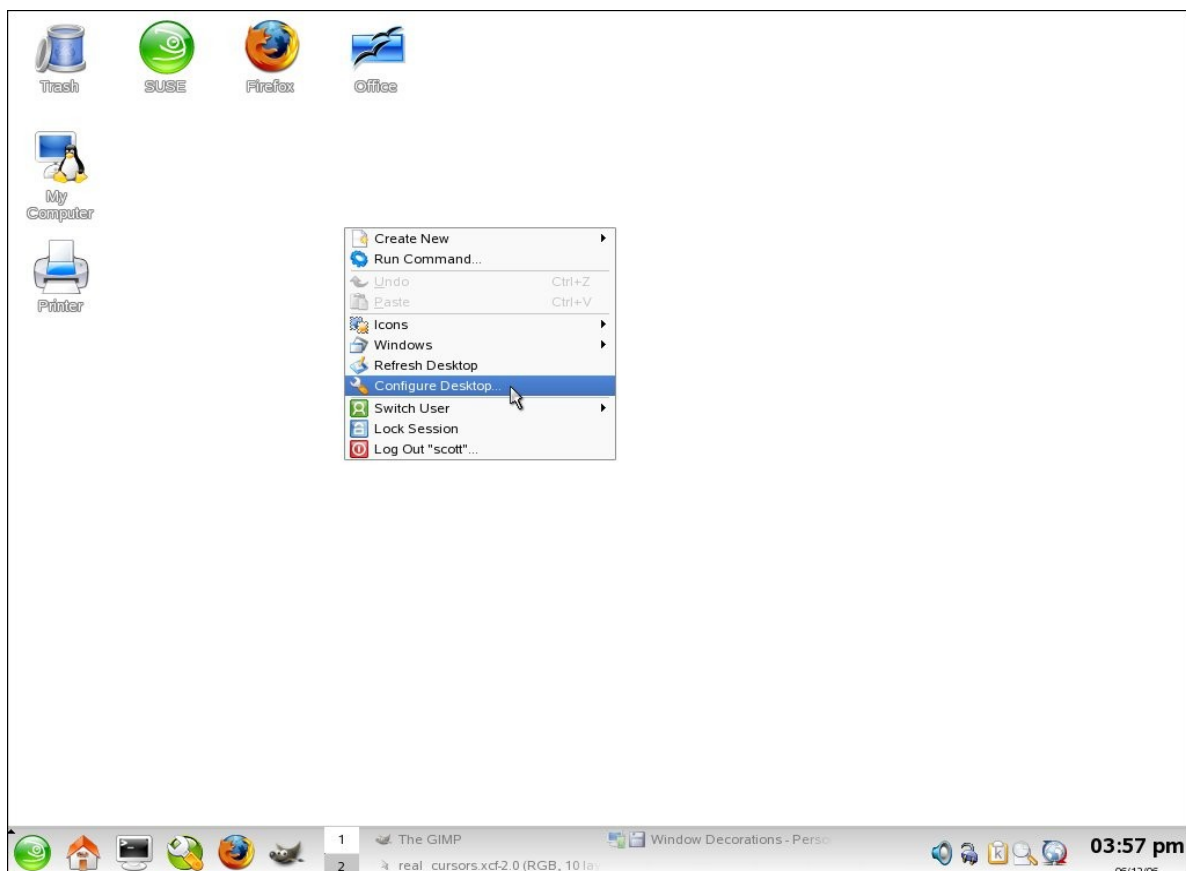
Desktop Preferences

Another aspect of KDE that many people like to customize is the desktop itself. First and foremost, people generally like to set the wallpaper to show their favorite picture. Let's take a minute and see how to do this in KDE.

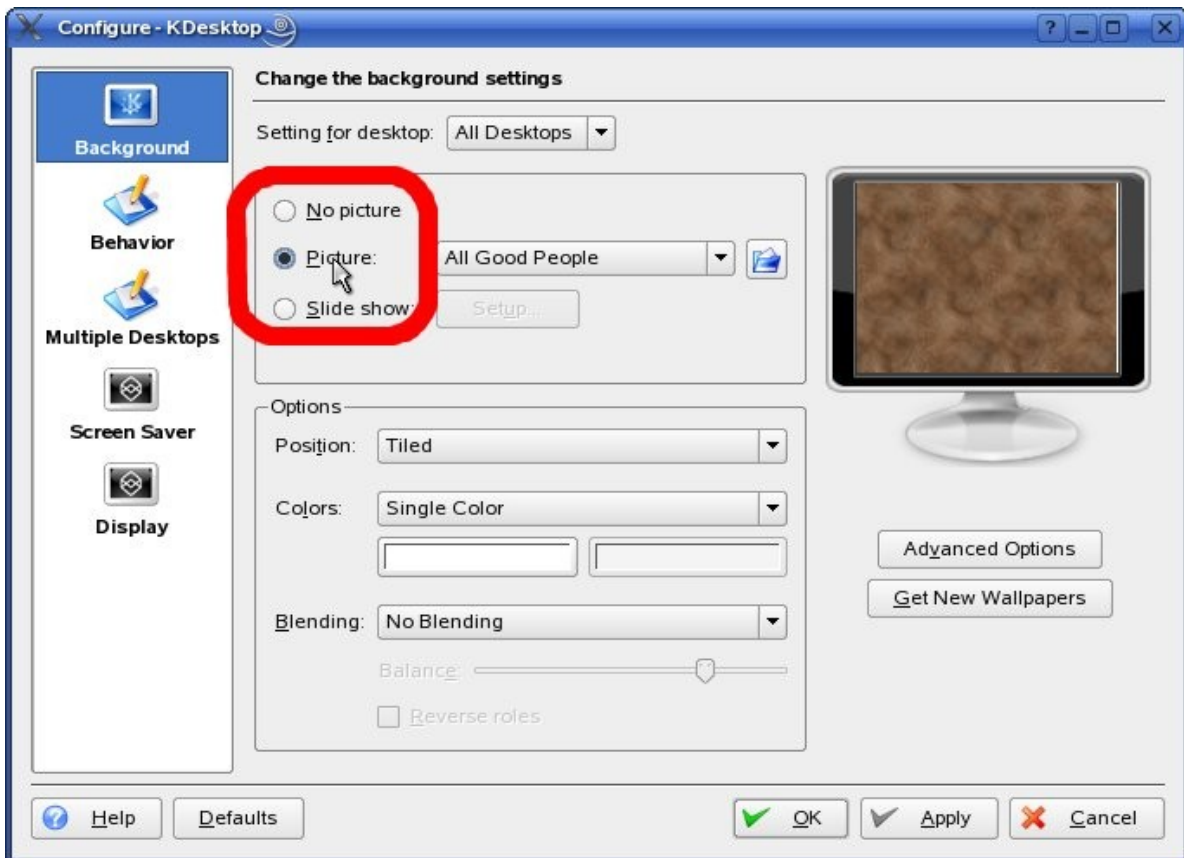
First of all, you will want to have a graphic to set as your wallpaper. There are many web sites that you can go to for that perfect picture for your wallpaper. Browse around and find one that you like. Download it to a location that you will remember later.

Now, let's set that picture as the KDE wallpaper.

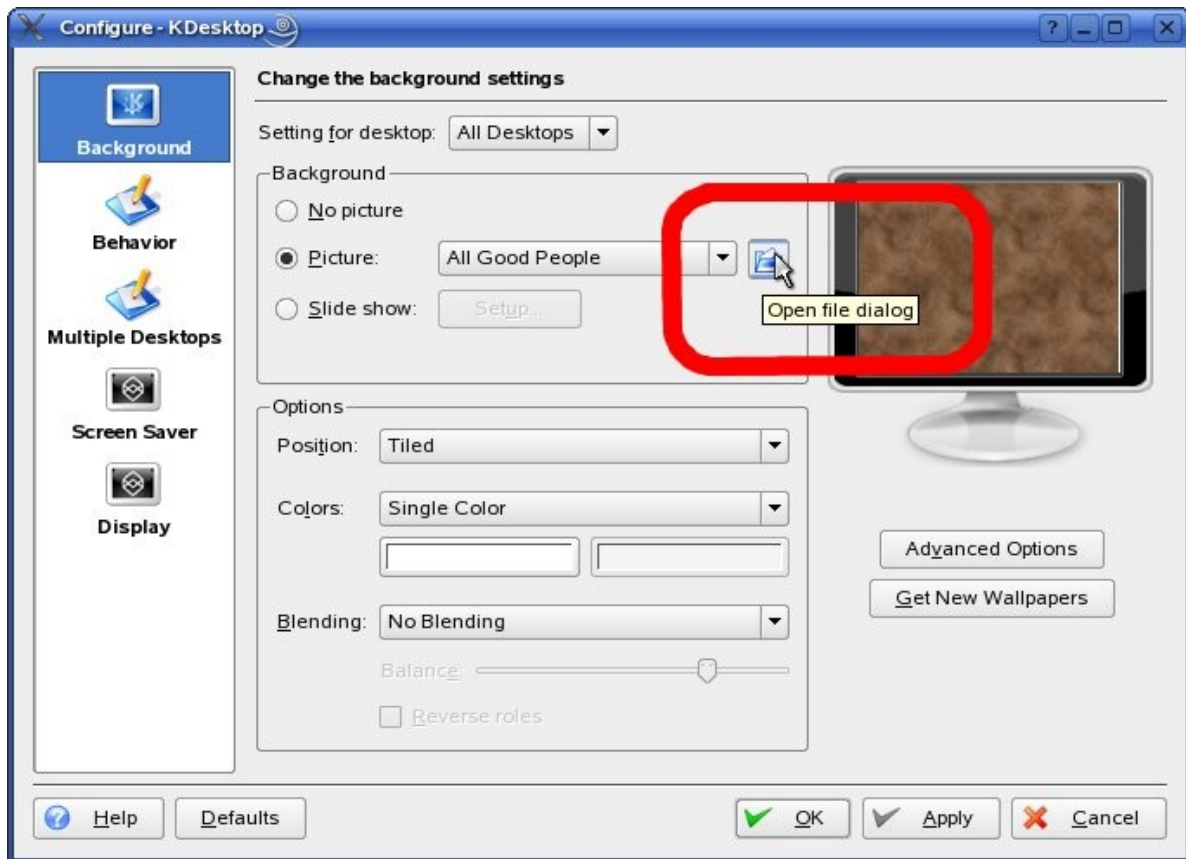
Find an empty space on your desktop and right-click. A small menu will appear. Click on CONFIGURE DESKTOP:



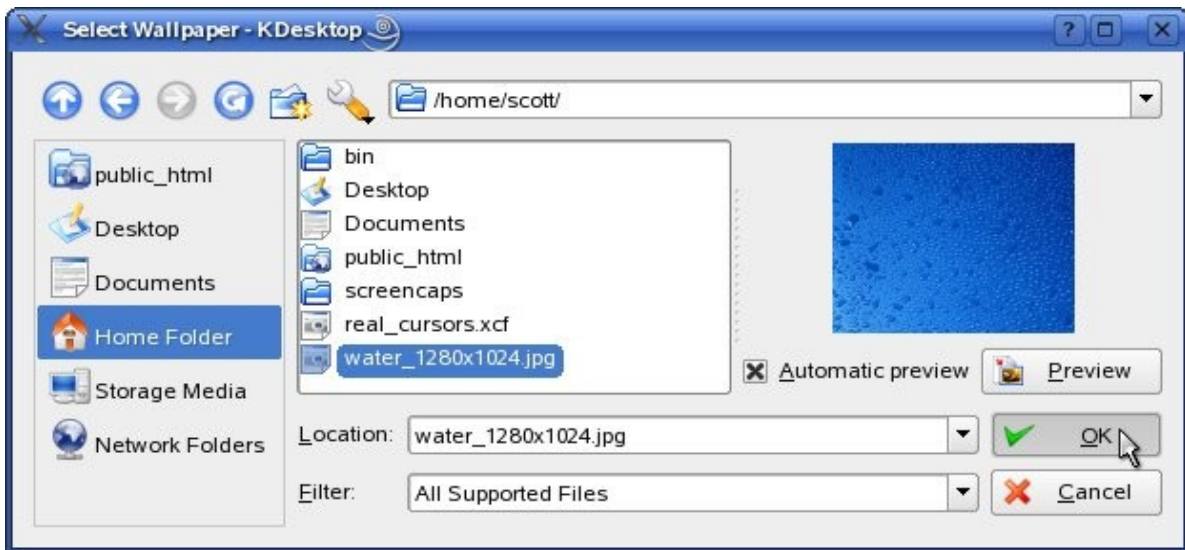
In the window that comes up, pick BACKGROUND from the options on the left. On the right side, there is a box labeled BACKGROUND. Inside that box, there is a radio button called PICTURE. Make sure this radio button is selected:



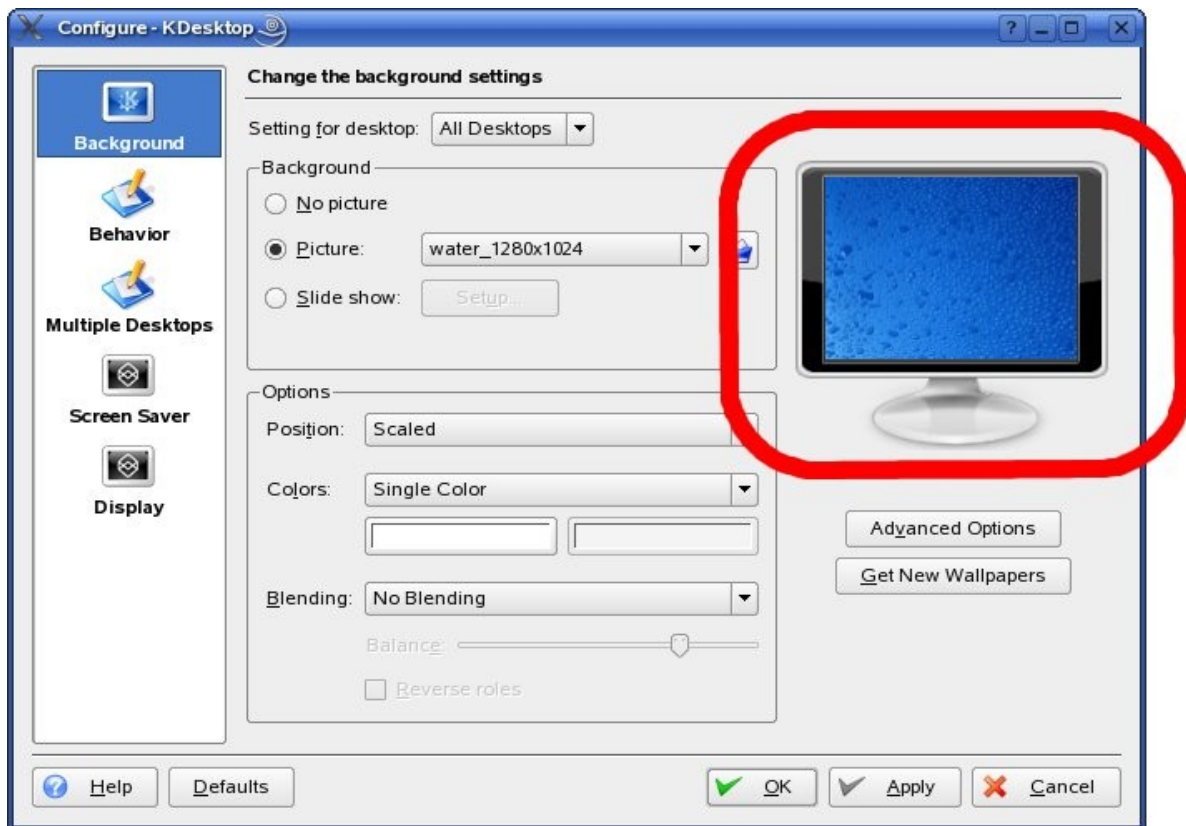
To the right of the radio button, there is a drop-down box. To the right of that, there is a BROWSE button with a folder icon in it. Click on that button:



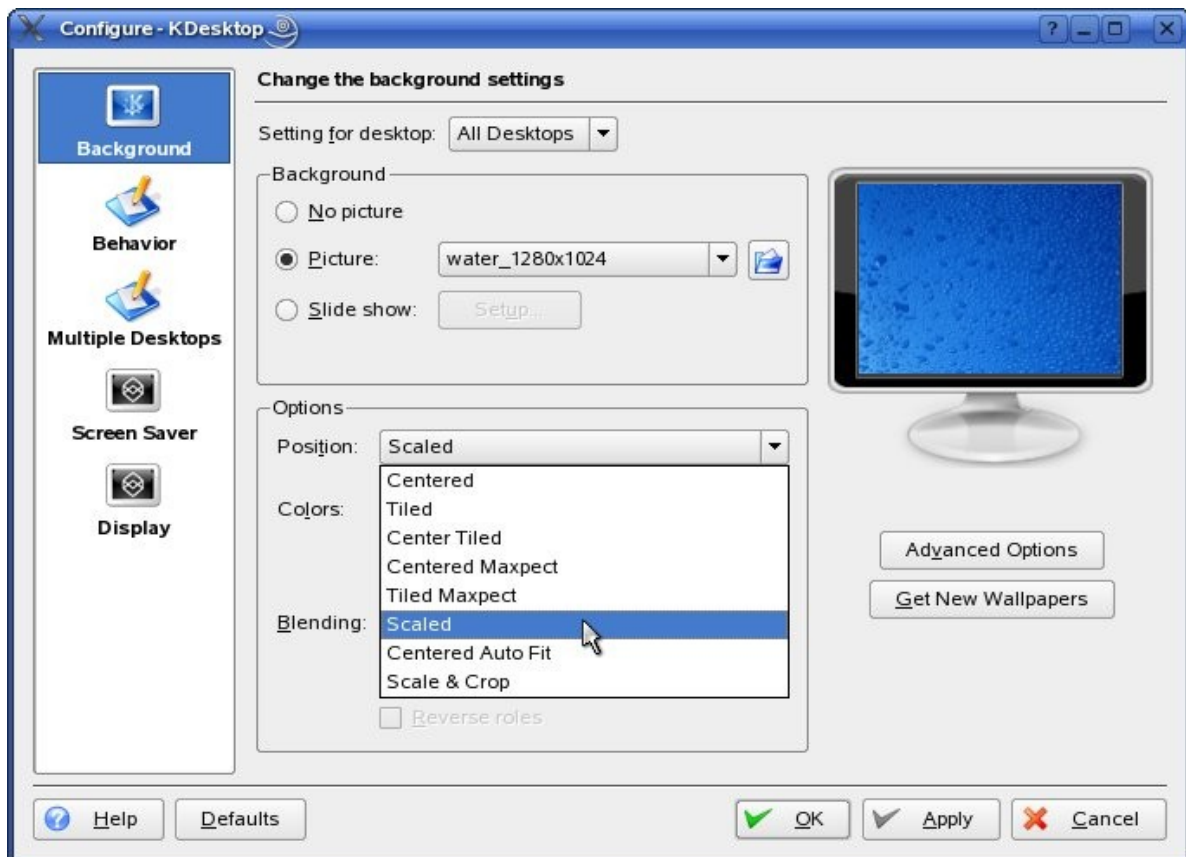
A new window appears asking you to find the graphic file you want to set as your wallpaper. Browse to the folder containing your image. Select the image and click OK:



Back at your desktop preferences window, you will see a preview of the image:



About halfway down the window, you will see an OPTIONS box. In this section of the window, you will see a drop-down box called POSITION. In this drop-down box, most of the time you will select SCALED:



This just means that KDE will resize the image to fit on your desktop. Feel free to experiment and set the preferences according to what you like.

When you are satisfied with the settings, click OK to apply them. Your desktop will update to reflect the changes you have just made.

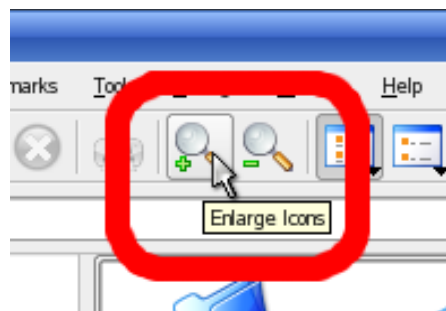
Konqueror: filesystem and web browser

One of the most important aspects of an operating system is being able to browse through the files and directories in your system. Another necessary feature of an operating system is being able to browse the Internet. As it would turn out, KDE offers something that does both of these. This magnificent tool is called Konqueror. Here is a quick tip that will make your Linux experience a tad nicer: familiarize yourself with Konqueror. In this section, we will attempt to help you get started doing just that.

Browsing through your files

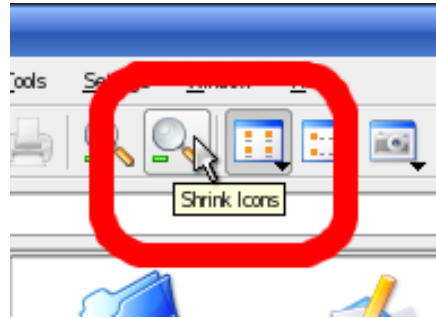
Look down in your Kicker Panel (the bar across the bottom of the screen). You should see an icon of a house. Click on this icon once. It will open a Konqueror window. This window will be displaying your personal files. Using this filesystem browser should be a fairly simple task. Konqueror is quite intuitive. Some of the most useful buttons on the toolbar and descriptions of what they do are as follows:

Enlarge icons:



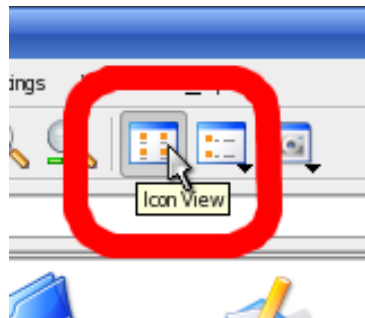
This button will make the icons bigger.

Shrink icons:



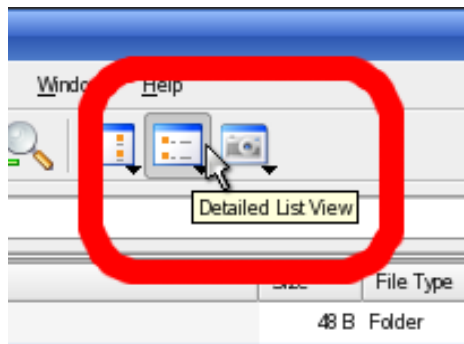
This button will make the icons smaller.

To the right of these two buttons are two more. One is the 'Icon View' button:



You can see that it has a small black triangle in the lower right corner. If you click and hold the mouse button down on this little triangle, a menu appears. This menu gives you a few more ways that you can display your icons.

Next to the 'Icon View' button is the 'Detailed List View' button:



It also has a small black triangle in the lower right corner. Again, click and hold the mouse button to see a small menu appear. This menu also gives you additional ways to display your icons.

Above these toolbar buttons are several menus. I highly recommend looking through each of these menus. There are some very nice features in them, such as the ability to search for a file. To perform this search, click on the TOOLS menu, and then FIND FILE. Right in the Konqueror window, a search box appears. Fill out the options of your search. Click FIND in the upper-right corner to execute the search. I have located many files by using this tool that I thought were lost.

Another really nice feature of Konqueror is its ability to split the display into multiple panes. To do this, click on the WINDOW menu. Then, select SPLIT VIEW TOP/BOTTOM (or LEFT/RIGHT). Your window will split. You can browse to completely different places in each window.

This is particularly useful when you want to copy files from one place to another. You simply browse to where the files are located in the one pane. In the other pane, you browse to where you want them to be. Then, you drag the files from the one pane to the other. Simple as that. What's more, you can split the window into as many panes as you need. I have used six at a time, before!

As a web browser

Konqueror, with all the amazing things it does, also works very well as a web browser. Up in the LOCATION bar, you put in the address of the website you wish

to go to. It should be fairly intuitive to use Konqueror's web browsing capabilities. It will have FORWARD and BACK buttons, a HOME button. You can add, remove, and edit your bookmarks, as well.

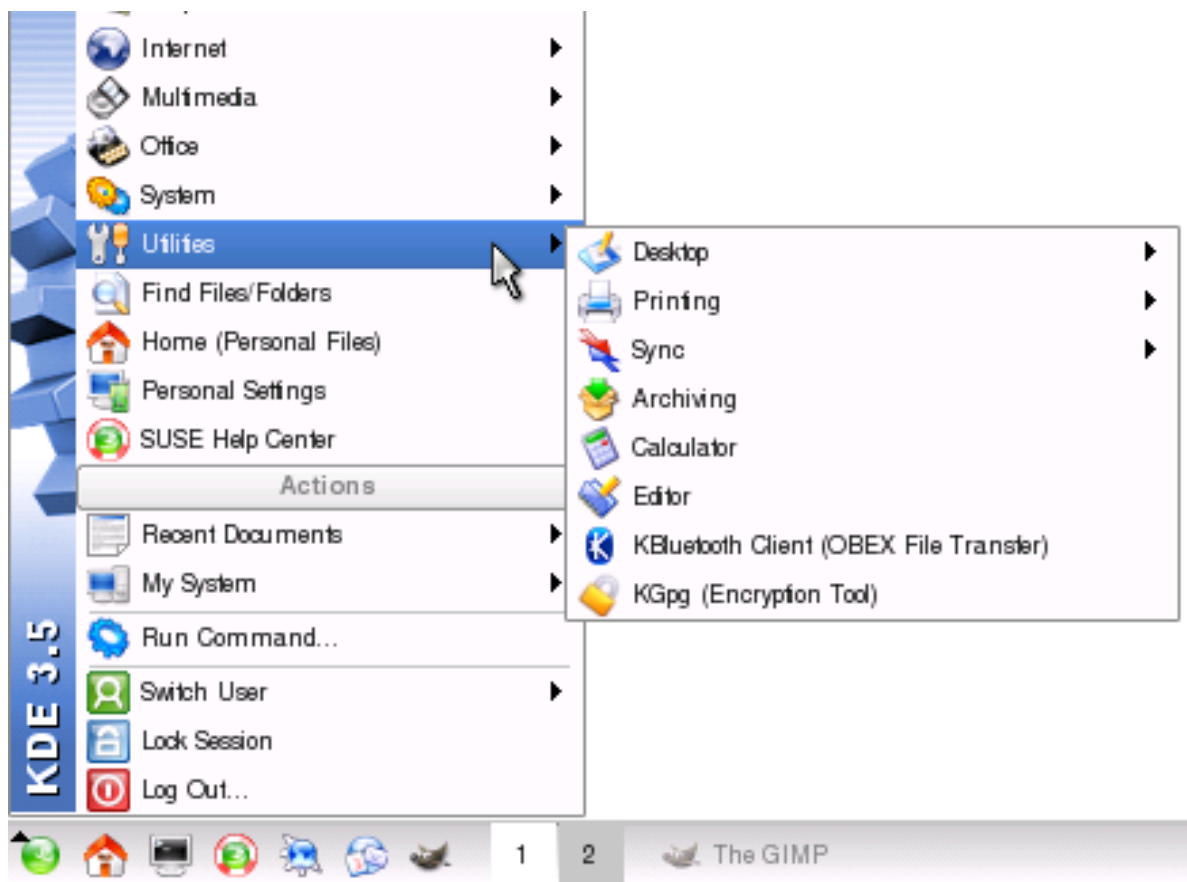
Periodically, you may get a notification from Konqueror about whatever page you are viewing. Just read the notification carefully and answer the question. Cookie notifications are the most common at first. Cookies are files that websites leave on your computer that keep track of small bits of information. Thus, I would only allow cookies on sites that I trust.

Konqueror performs very well as a web browser. If you would like to adjust your preferences, you can go into the SETTINGS menu, and select CONFIGURE KONQUEROR. You are probably safe leaving everything how it is, but if you want to learn about how Konqueror works, go in and look at the menus. See what things do.

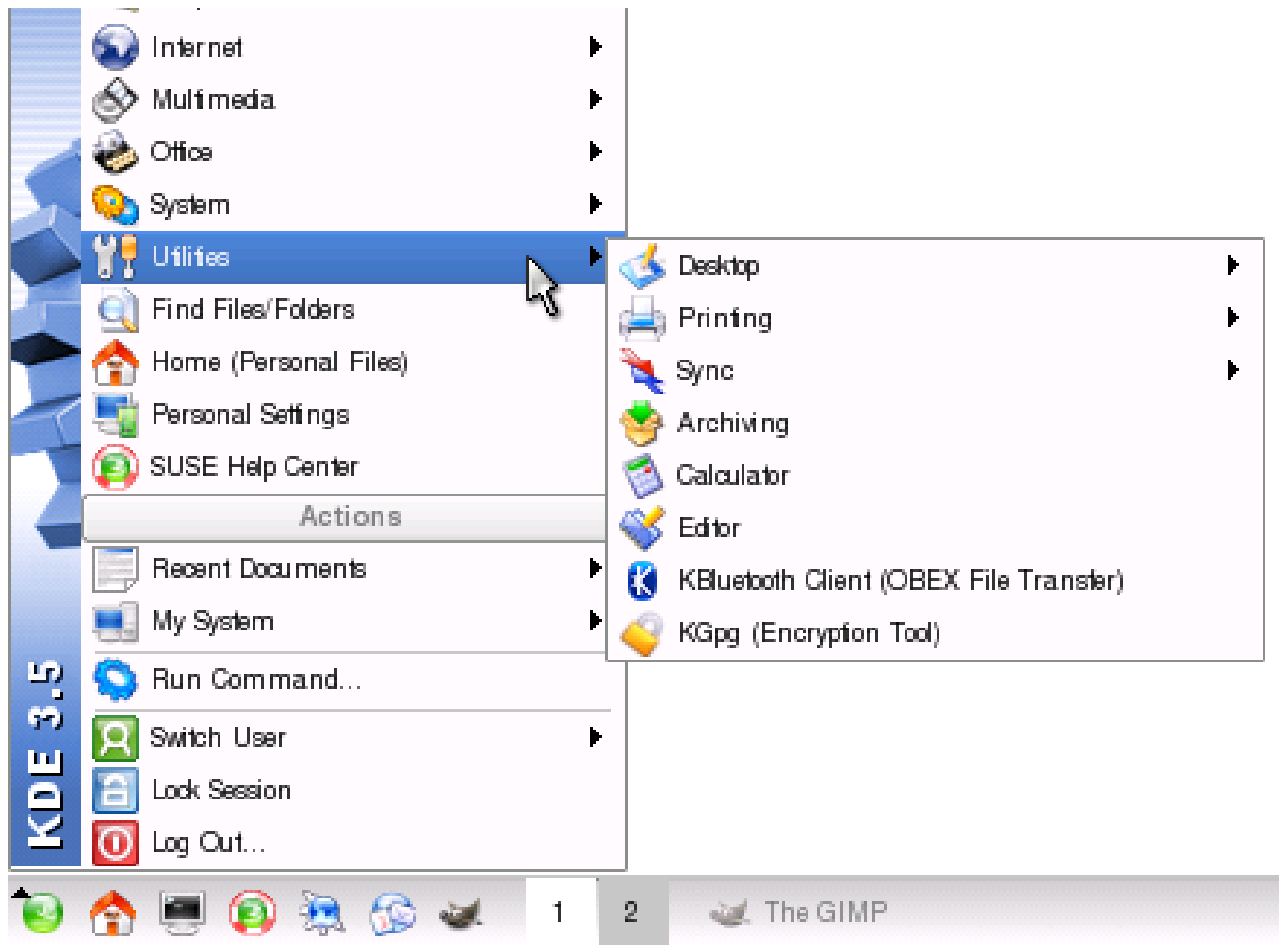
Kicker Panel

The Kicker Panel is the bar that goes across the bottom of your screen. To its far left, there is the K Menu. To the right of the K Menu, there are other launcher buttons for running assorted programs. This is an ideal location to put launcher buttons for the programs that you use most frequently. Doing this is a snap.

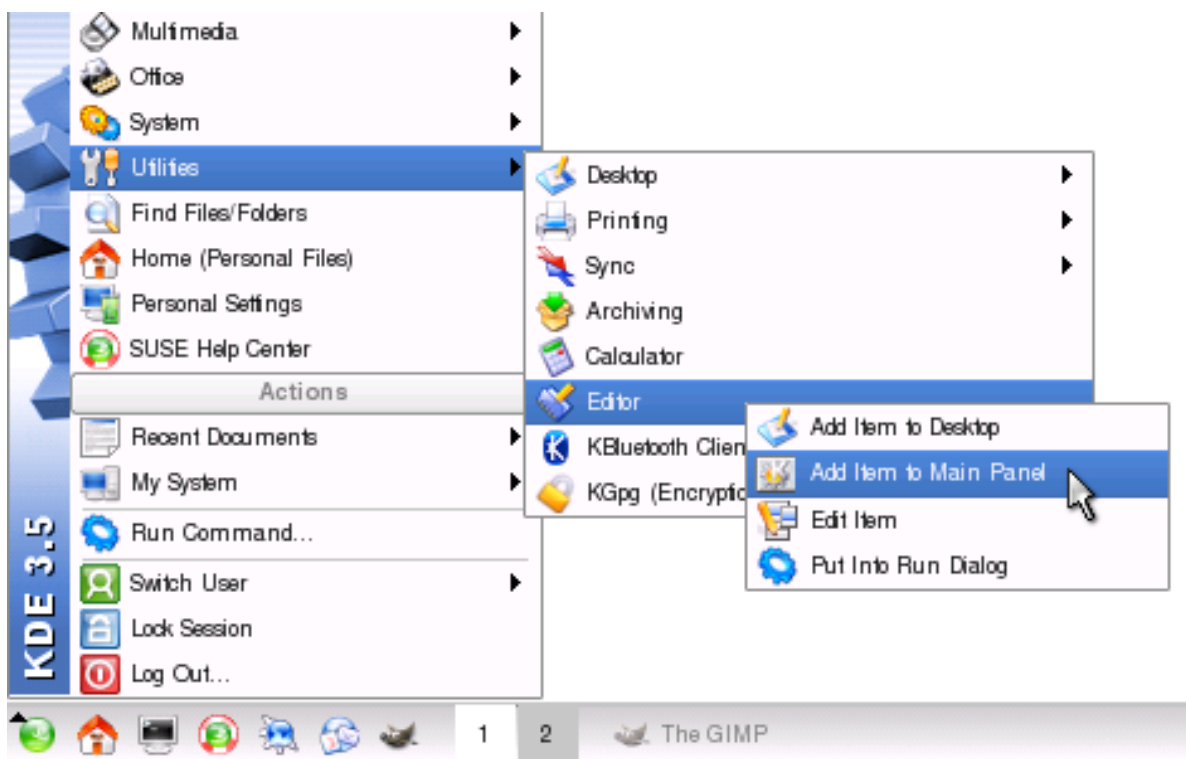
Let's look at a demonstration of how to do this. There is a great text editor program called Kate. You will find it to be feature-rich and very useful. Let's add the Kate application launcher to the Kicker Panel.



Open up the K Menu. Select the UTILITIES submenu:



Right-click on EDITOR (this is Kate), and you will see another little menu appear. Just click on ADD ITEM TO MAIN PANEL:



You will see the KATE icon appear in your Kicker Panel:



Initially, it appears over on the right side. However, if you like, you can middle-click and drag it to another location on the Kicker Panel.

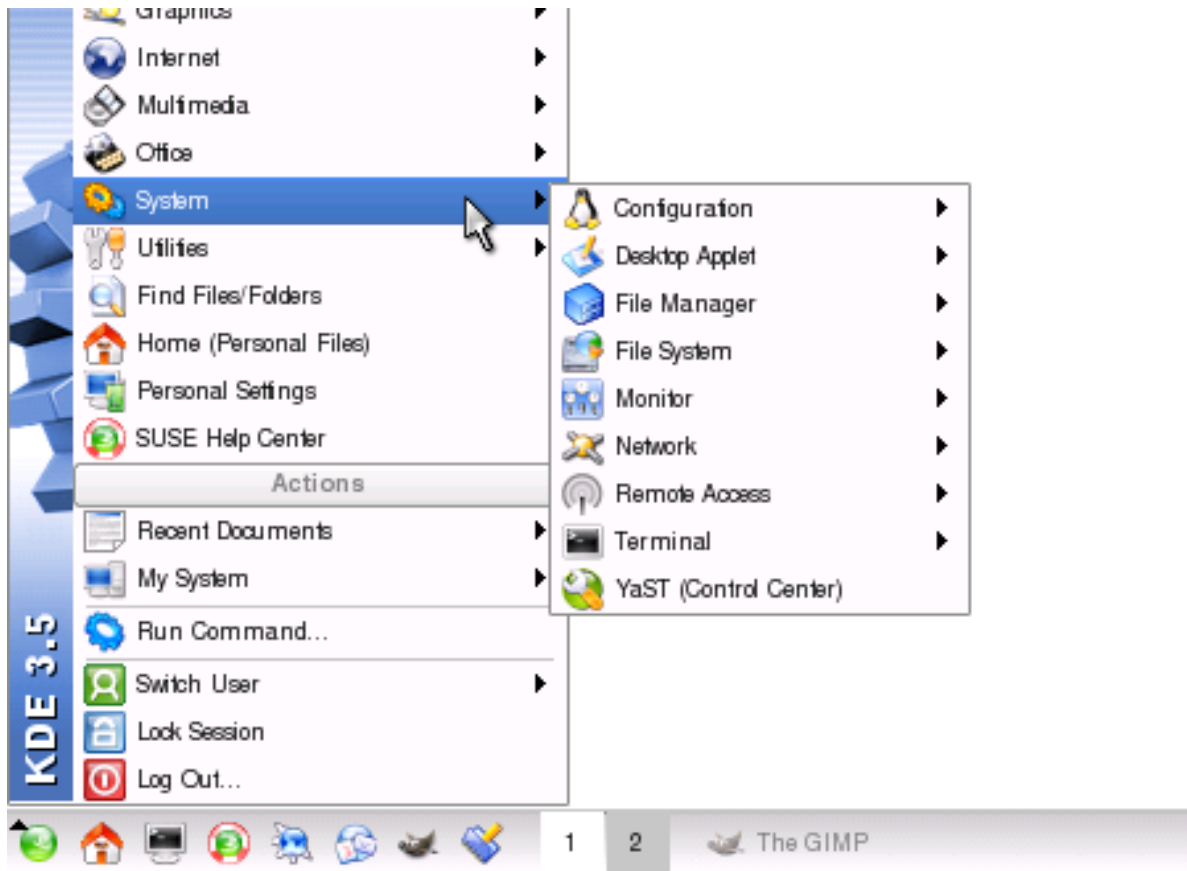
In this way, you can very easily put launcher buttons on your Kicker Panel for all of the applications that you most frequently use.

Installing Applications

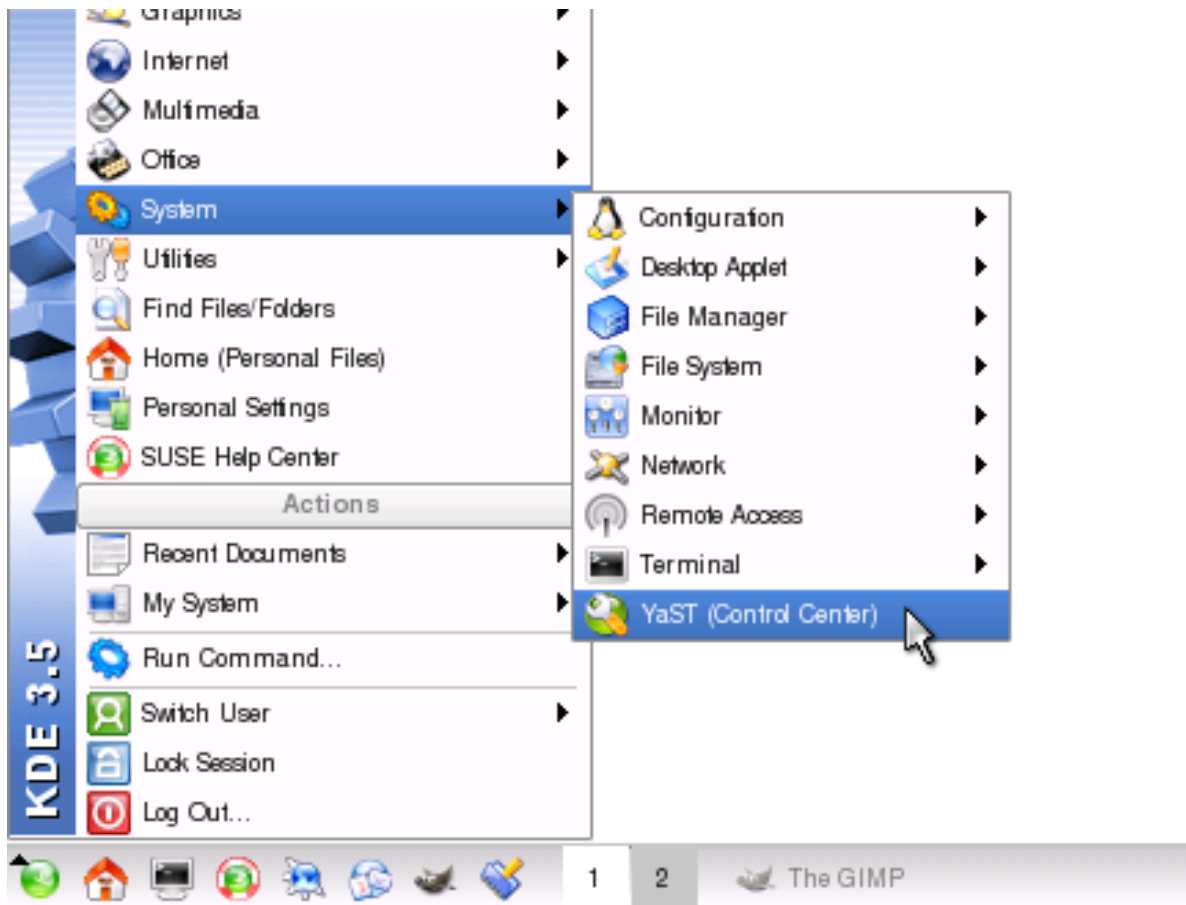
Now that we have taken a few moments to get used to the K Desktop Environment, let's run through how to install software. With Windows, you usually have some kind of installer. This can be something that you have downloaded. It can also be something that you bought on a CD-ROM or a DVD. Generally, you click on the installer to begin installation of the software. This often takes you through some kind of installation wizard to finish installing the software.

As I mentioned before, installing software on Linux is quite different than installing software on Windows. In SUSE Linux, you have a convenient tool called YAST. This tool is what you use to install your software. Let's take a look at how to use this tool to install software in SUSE Linux.

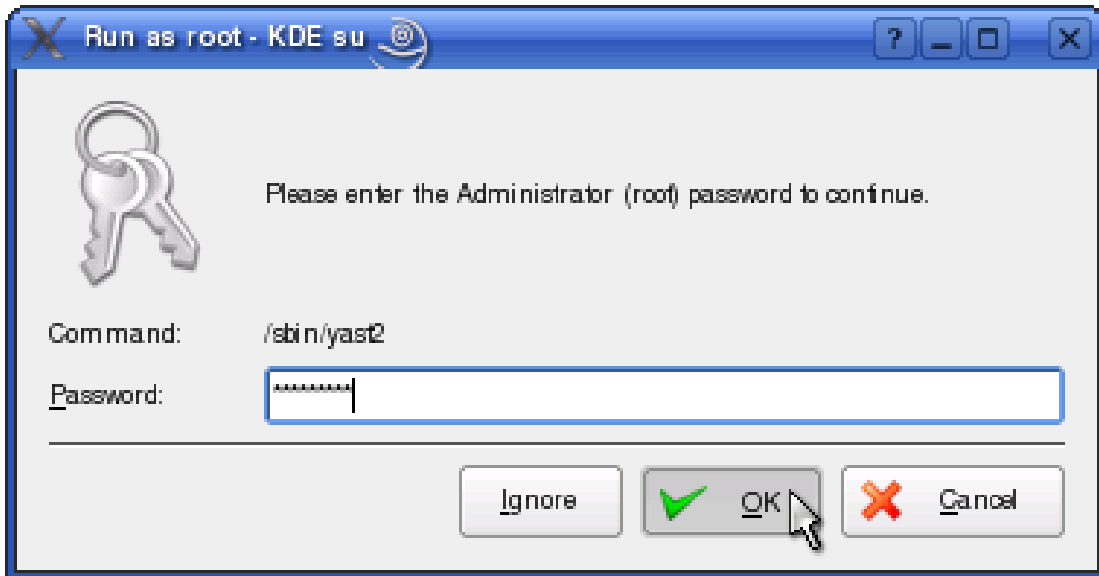
First, let's open the K Menu. Click on the SYSTEM submenu:



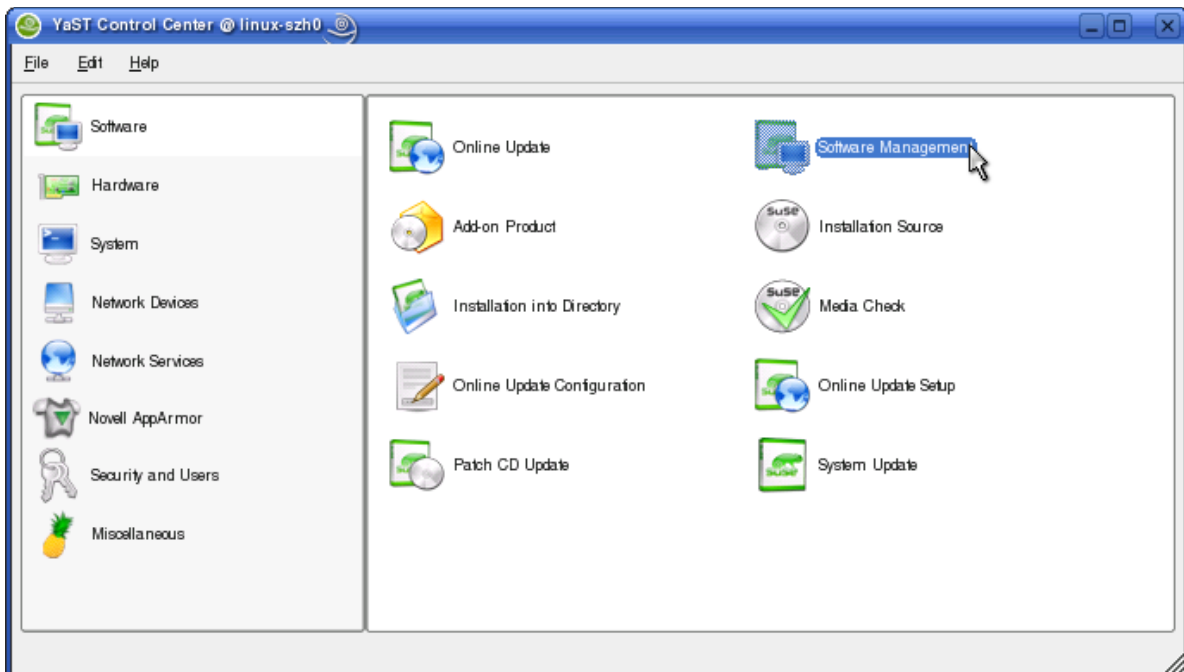
To launch YAST, we will click on the icon that looks like a green ball with a picture of a wrench in front of it:



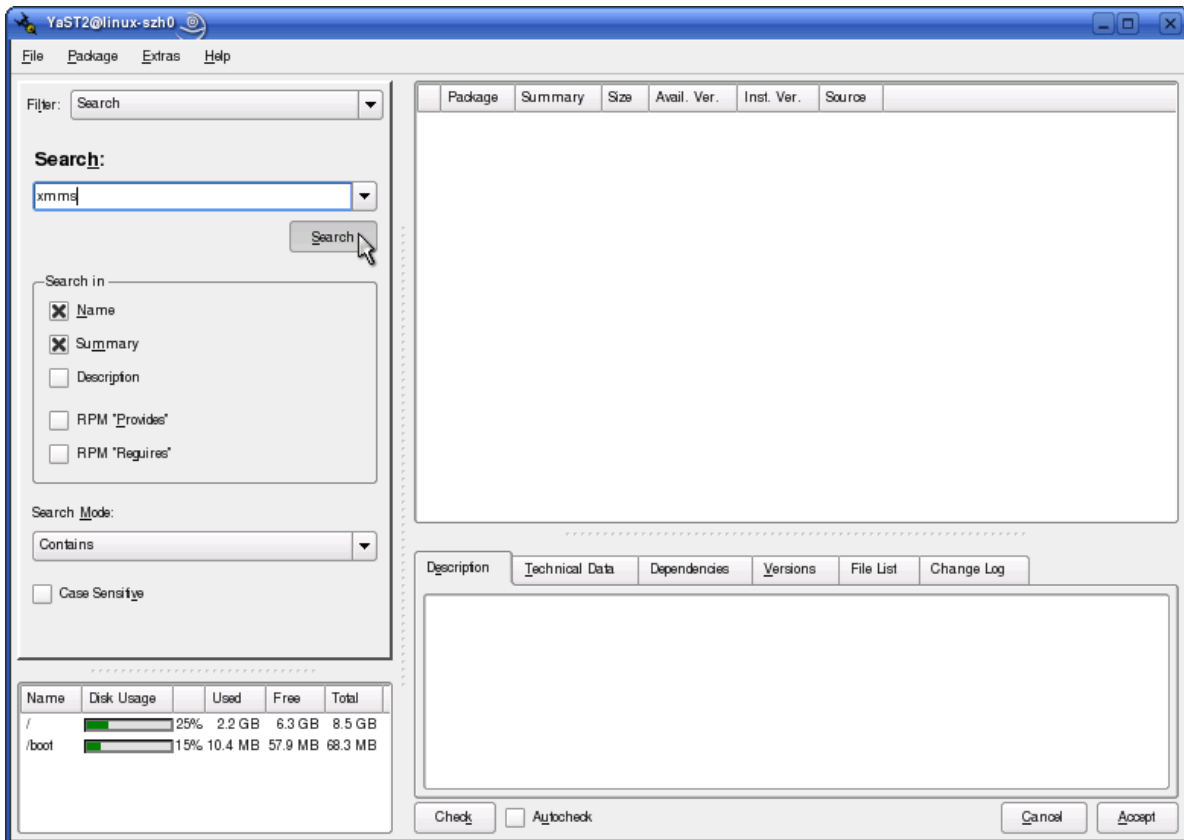
After clicking on this icon, a window will appear, asking for your root password. This is the important system administrator password. Go ahead and type this in. When you are done, click OK:



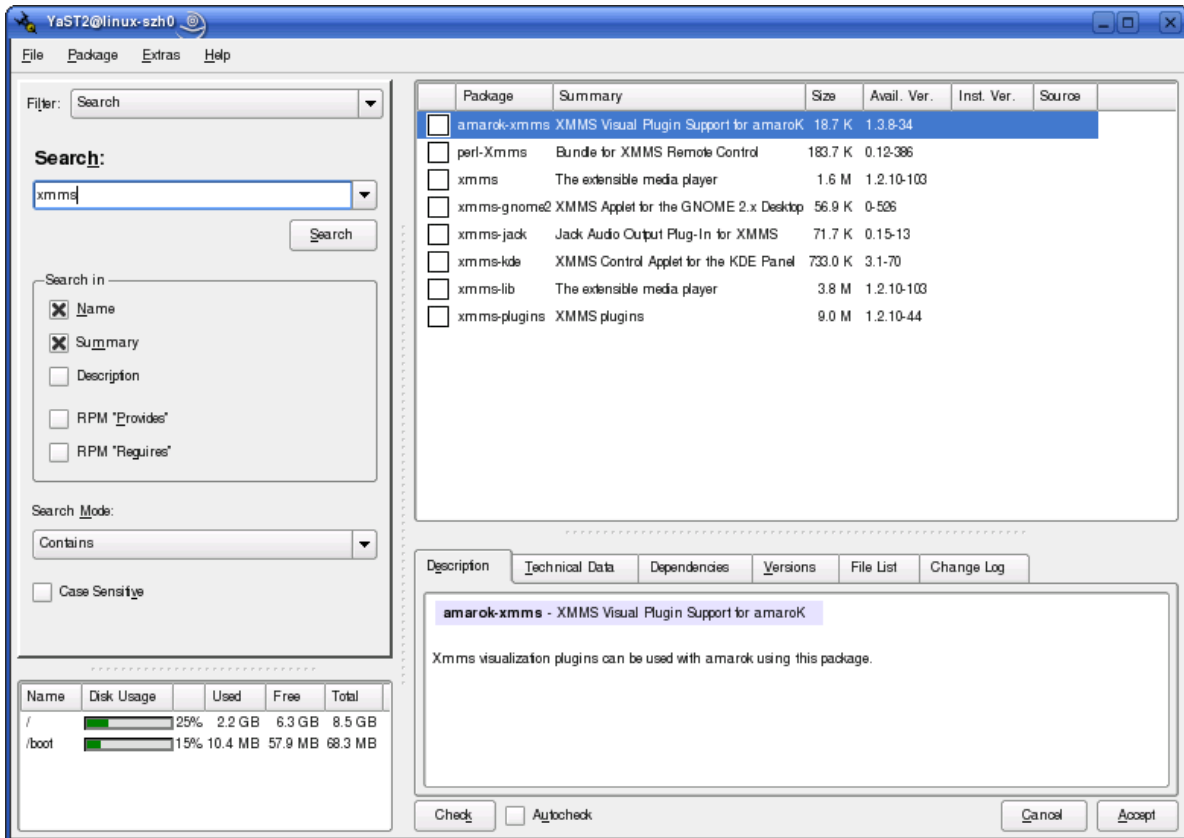
Another window should appear. Click on SOFTWARE in the left pane, and SOFTWARE MANAGEMENT in the right pane:



After a few moments, another window will appear. This is where you will install and uninstall software. Let's install a program that you can play your MP3s with. This program is called 'xmms'. So, in the search box in the upper-left corner of the window, type in 'xmms' and click SEARCH:



After a second or two, a list of search results appear in the pane over at the right side of the window:



These search results are the different software applications you can install. In the Linux world, these applications are more commonly referred to as 'packages.' When we did our search for 'xmms', a list of packages appeared in the right side of your window.

Let's look at the pane over on the right for a minute. I would like to explain some of the important parts of it. In that window, there are several columns, most of which have names, except for the first one. That column doesn't have a name. This column usually has some kind of visual icon that tells you whether the package is installed or not. It can also tell you whether you have marked it for removal or installation.

If it is not installed, it will look like a little empty square box:



If it is already installed, it will be the same box with a blue checkmark in it:



If it is going to be removed, it will look like a little garbage can:



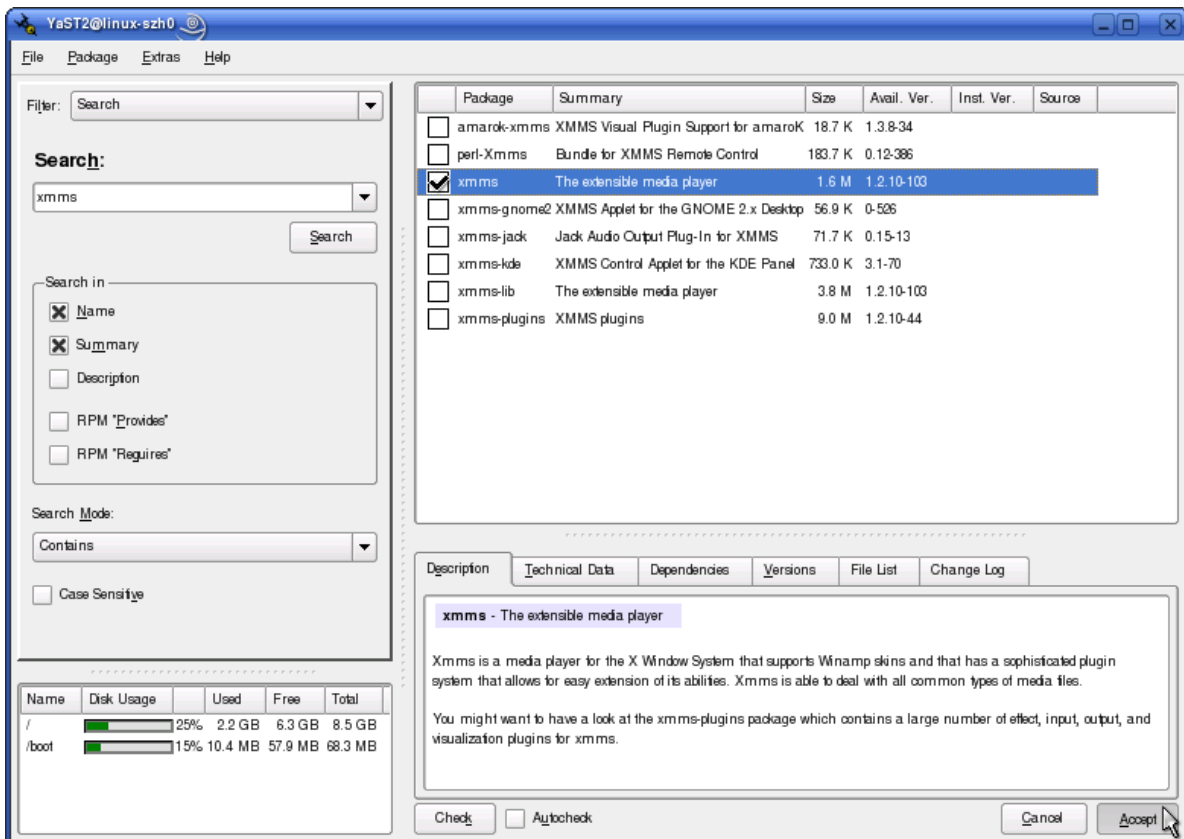
If you are going to install it, it will look like the box with a black checkmark in it:



If it is locked, it will have a little picture of a lock next to it:



At this point, the 'xmms' package in the right pane should have either a blue or a black checkmark next to it. To install the 'xmms' package, just click on ACCEPT in the lower-right corner of the window:



YAST may pop up another window with some other things it needs to install before it can install xmms. If it does, it is ok to click on CONTINUE. YAST will

then begin installing the packages. As it does this, it may ask you to insert various CDs. Insert the CDs it asks for. When it is all done, it will ask you if you need to install any other software. Usually, you will just click NO, here. When you do, the YAST window disappears.

That is how you install software in SUSE Linux. After you do it a few times, it will become second nature to you. Until then, just pop open this book and follow these steps for whatever packages you need to install.

Applications

At this point, we have explored KDE, our desktop environment. We have also gone through the process of installing software. Next, let's go through some of the best software available for the most common tasks. We will look at word processing and spreadsheet software. I will also show you some of the most common software for checking email and browsing the Internet.

OpenOffice

Many people have become accustomed to Microsoft Office. This is a collection of applications that provide users with tools like word processing, spreadsheets, databases, and email. This software is very expensive, costing several hundred dollars per license. On Linux, there is an equivalent suite of applications called OpenOffice. It is very comparable to Office in what it offers. Many people even say that once they get used to OpenOffice, they prefer it to Microsoft Office.

It is my purpose to give a brief introduction to OpenOffice here. Due to the depth of the subject, it would be impossible for me to cover everything about this application suite in this book. That said, I will provide you with plenty of resources that you can use to learn more about OpenOffice.

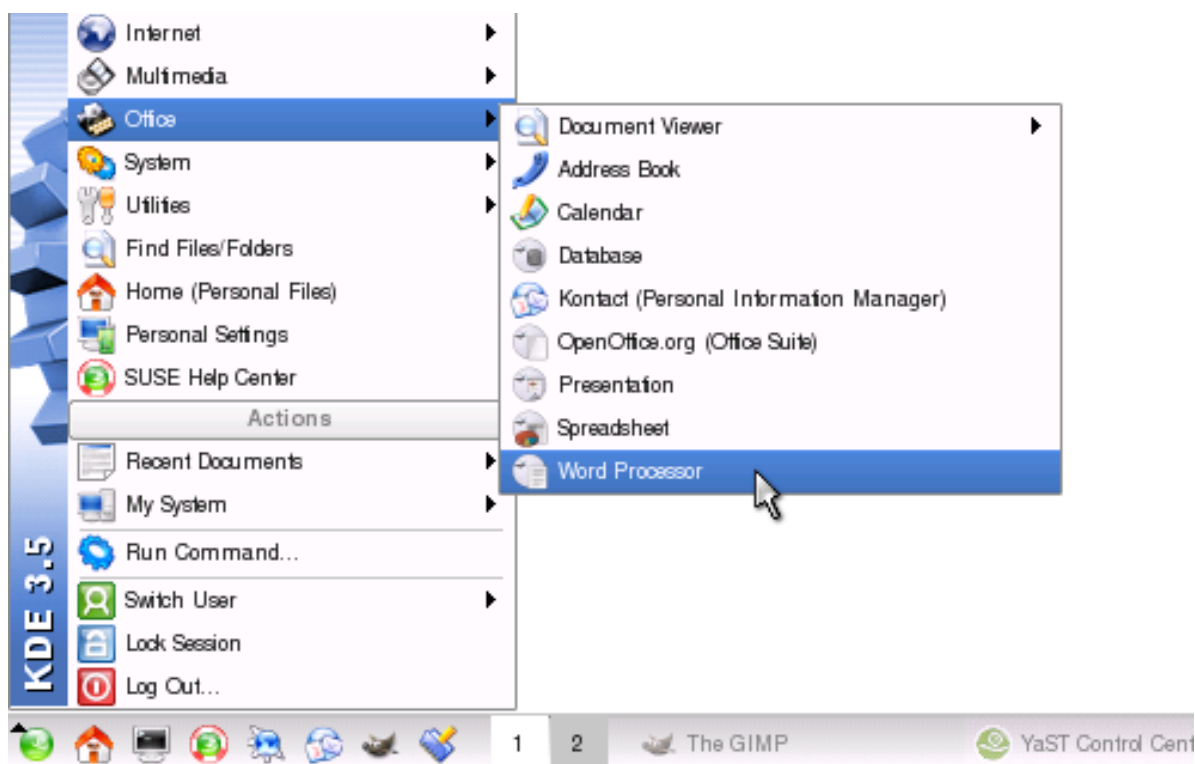
As an exercise, let's make sure that we have OpenOffice installed. Using the instructions provided in the previous section, 'Installing Applications', search for the

'openoffice' package. If it has a blue checkmark next to it, your system already has OpenOffice installed. You can close this window. However, if it just has a blank box next to it, click on that box to put a black checkmark in it. You have now marked that package for installation. To complete the installation, click ACCEPT in the lower right corner of this window.

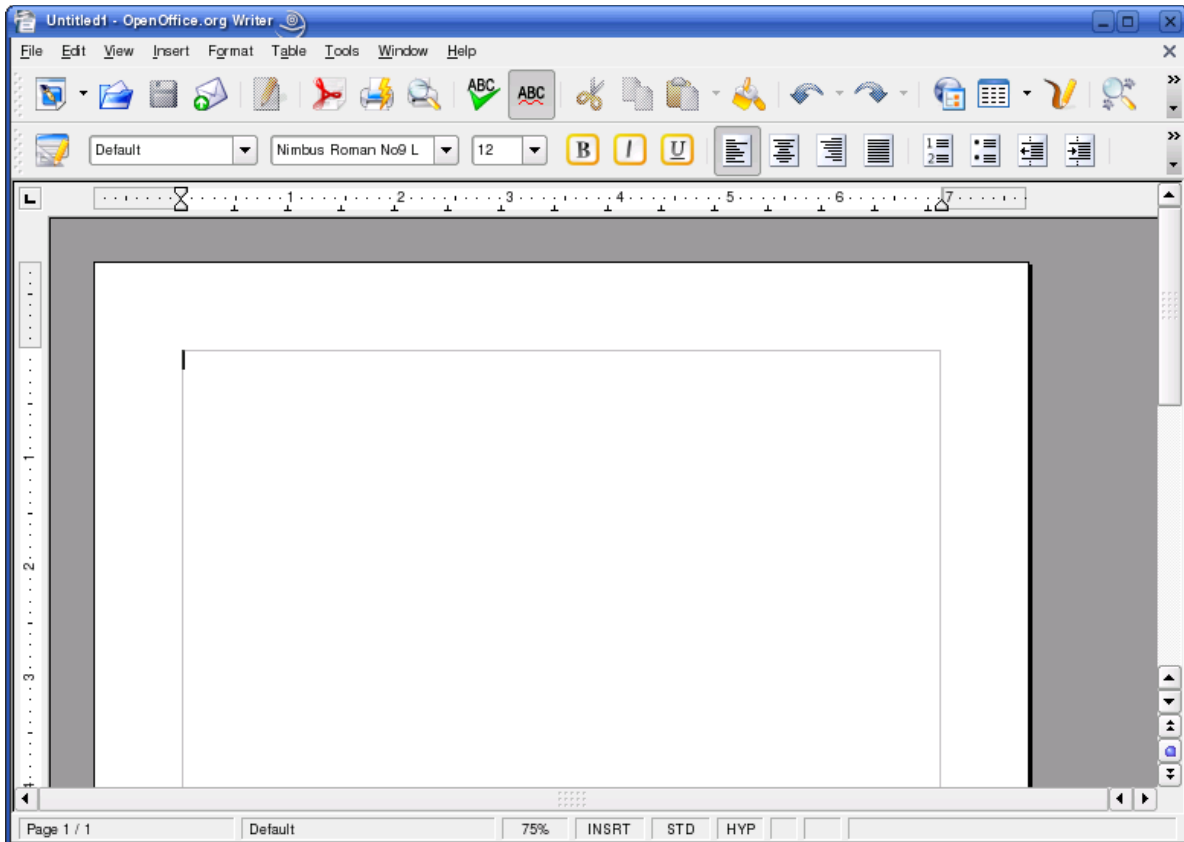
Next, let's run OpenOffice and learn a little bit of how to use it. First, let's open Writer, the word processing part of OpenOffice.

OpenOffice Writer

To start this application, open the K Menu, and select the OFFICE submenu. Then, click on the WORD PROCESSOR icon to open WRITER:



You will see OpenOffice start up, and then you will be taken to Writer, with a blank word processing document open:



You will see that there are many formatting tools in the toolbar that should seem very familiar. Some of these include the ability to pick a font and font size, and make your words bold, underlined, or italics. You will see buttons for left, middle, and right alignment. There are also tools for creating bulleted lists and numbered lists. Next to these are buttons for managing the indentation of your text. All of this will feel very familiar to you if you come from using MS Office.

Above these buttons, there are others which will also be intuitively easy for you to use. Starting at the left, you have buttons for starting a new document, opening a document, and even sending the current document as an email. Next to these, you see a button for exporting the current document as a PDF file. Were you using Windows, you would pay lots of money for the ability to do this. PDF files are great for packaging large documents for ease of transport. This very book which you are

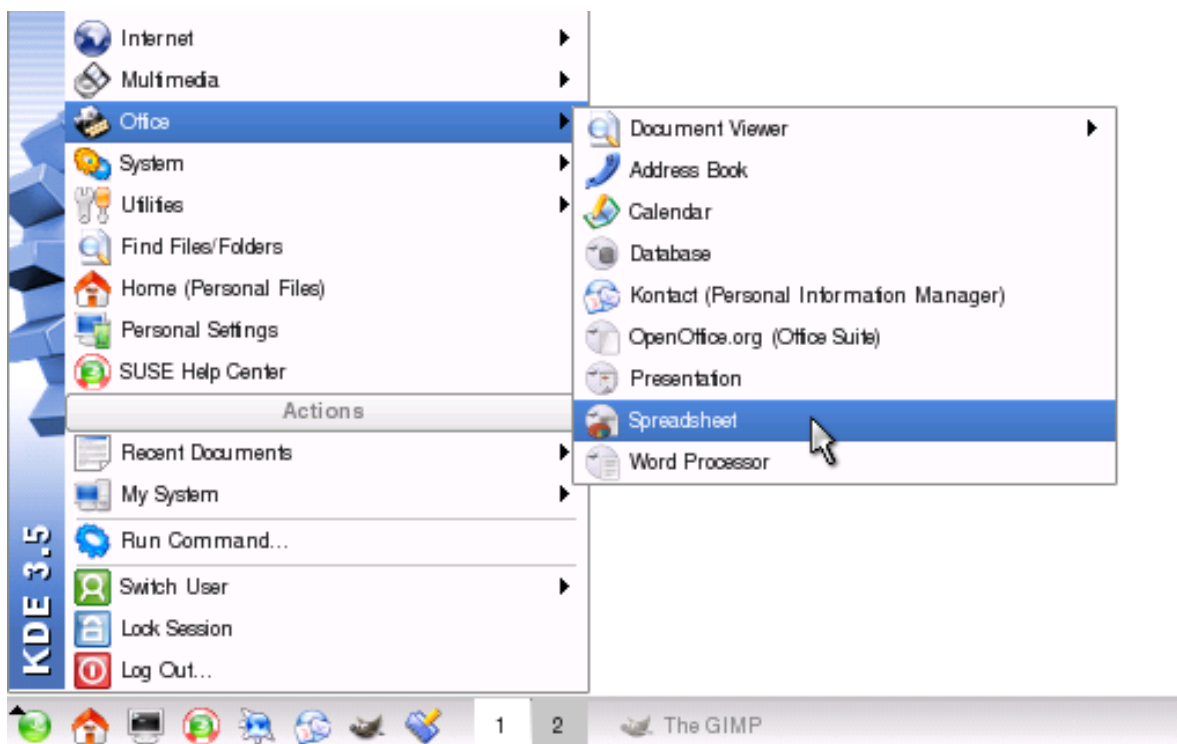
reading is a PDF, and was written entirely in OpenOffice. You don't have to pay a dime for the ability to make PDF files. Not only that, it comes built right into OpenOffice!

Continuing across the toolbar, you will see printing and print preview buttons, spellcheck buttons, and cut/copy/paste buttons. There are also some undo/redo buttons for when you need them. All of this will probably seem familiar to you.

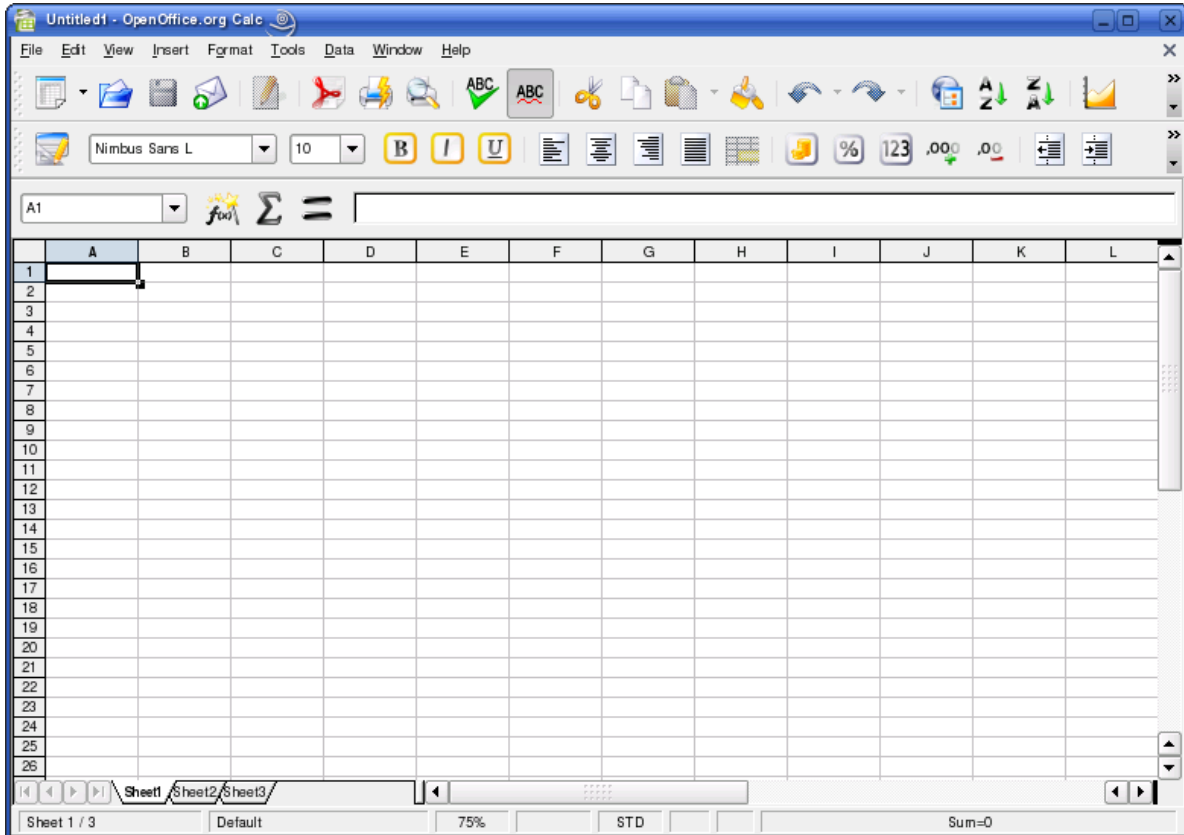
To learn more about OpenOffice, I would recommend going through the menus. Look at each of the options. See what things do. Read about them. If you would like to view the manual for OpenOffice, press F1. The manual is well-written, clear, and easy to follow. Spend a while learning about the many excellent features of OpenOffice Writer.

OpenOffice Calc

The next bit of the OpenOffice suite I would like to take you through is called Calc. This is the spreadsheet application. Let's start it up. Open the K Menu, and select the OFFICE submenu. Then, click on the SPREADSHEET icon to open CALC:



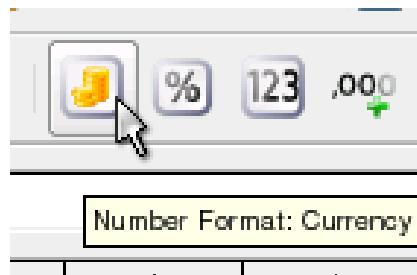
OpenOffice will start up, and you will be taken to Calc, with a blank spreadsheet open:



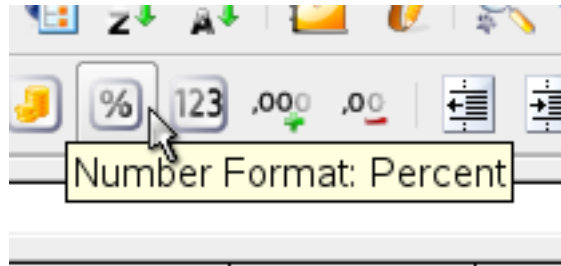
You will see all of the familiar formatting buttons on the toolbar. Most all of the ones we saw in Writer are also here in Calc.

In many of your spreadsheets, you will probably be using numbers. There are different ways to display numbers in OpenOffice Calc. For example, we have currency, percentages, and decimal point values. In the toolbar, there are buttons that allow you to apply the different number formats to the selected cell.

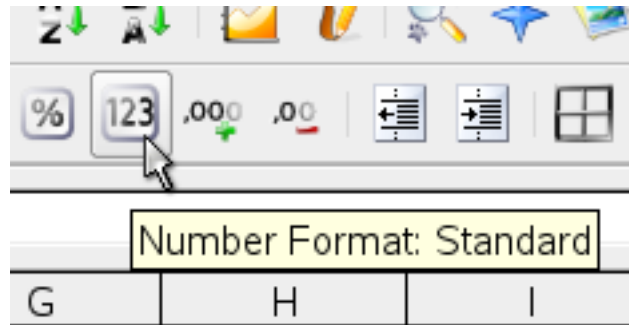
Type a number into a cell. Then click on the CURRENCY icon:



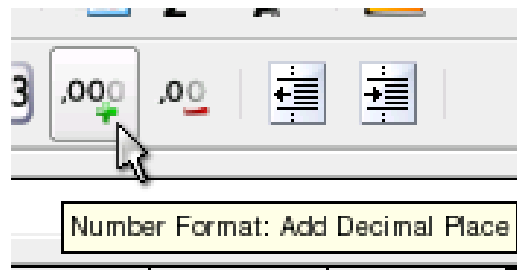
Now, click on the PERCENT icon:



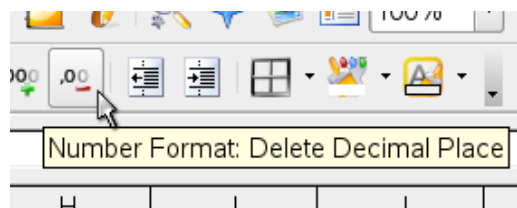
Then the STANDARD icon:



And the ADD DECIMAL icon:



And finally, the DELETE DECIMAL icon:



Notice how the number changes for each format that is selected.

OpenOffice Calc also has the ability to handle complex formulas. Here, I would like to demonstrate how a simple formula may be used. In cell A1, put in the number 8. In A2, put 3. In A3, type in 9. In A4 put '=SUM(A1:A3)' without the

quotes. This is a simple formula that adds up the amount represented in a range of cells. You will see that the total is then displayed in cell A4.

If you want to learn more about OpenOffice Calc, you can bring up the manual by pressing F1. It is clear, concise, and easy to follow. Study it. You will gradually learn everything you need as you take it a step at a time.

Thunderbird

One of the most common things people do on their computer is check their email. Fortunately, there are a lot of email software applications available for Linux. For the sake of simplicity, I will only discuss Thunderbird.

This program is one of the most widely-used email applications on the Linux platform. It has been my experience that Thunderbird will do everything that you will likely need out of an email program.

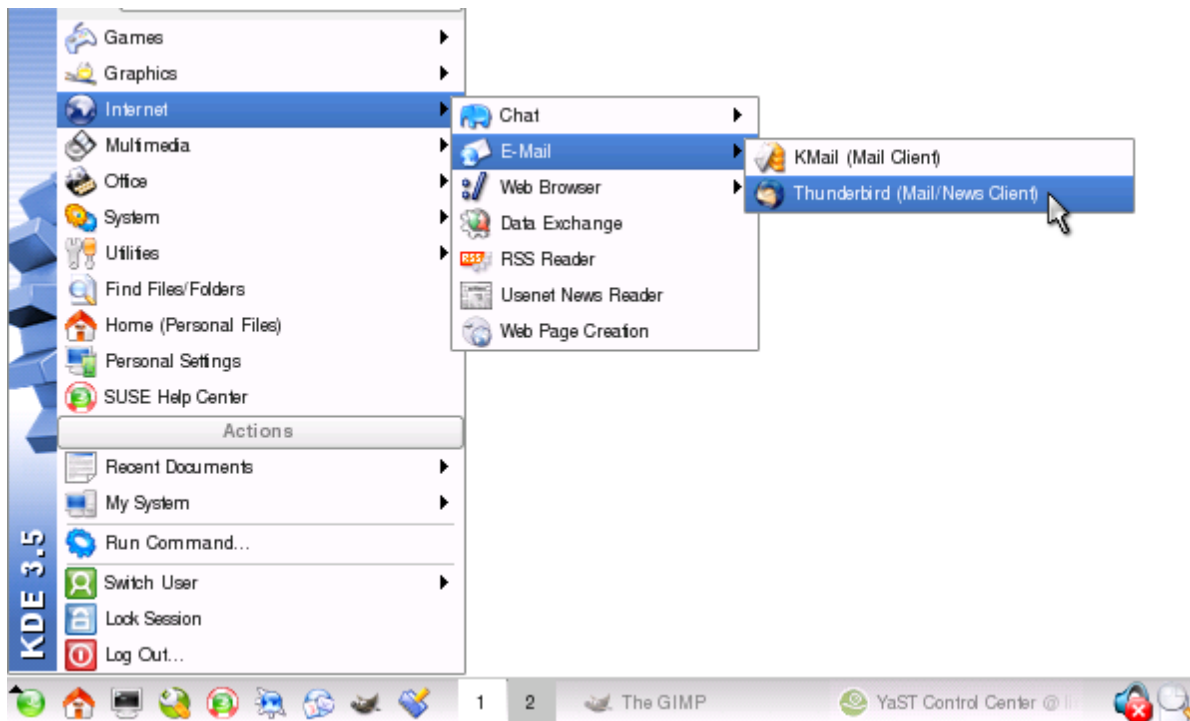
Let's make sure it is installed on your computer. To do this, there are only two hints that I will give you here. The first one is that I have already explained how to install software. You may wish to consult those instructions. Secondly, the name of the package you will be installing is called "MozillaThunderbird." Let's use this opportunity as an exercise on installing software in SUSE. Once you have the package installed, please continue below.

There are thousands of different types of email servers and account configurations. Because of this, it would be difficult for me to explain how to set up every one of them. Thus, if you need help setting up your email account in Thunderbird, I would suggest contacting your ISP. Just ask them for instructions for setting up your email account in the Thunderbird email application. They will very likely know exactly what you need and can refer you to some instructions specific to their email service.

Setting up your email account

That in mind, I will show the most common way to set up an email account in Thunderbird.

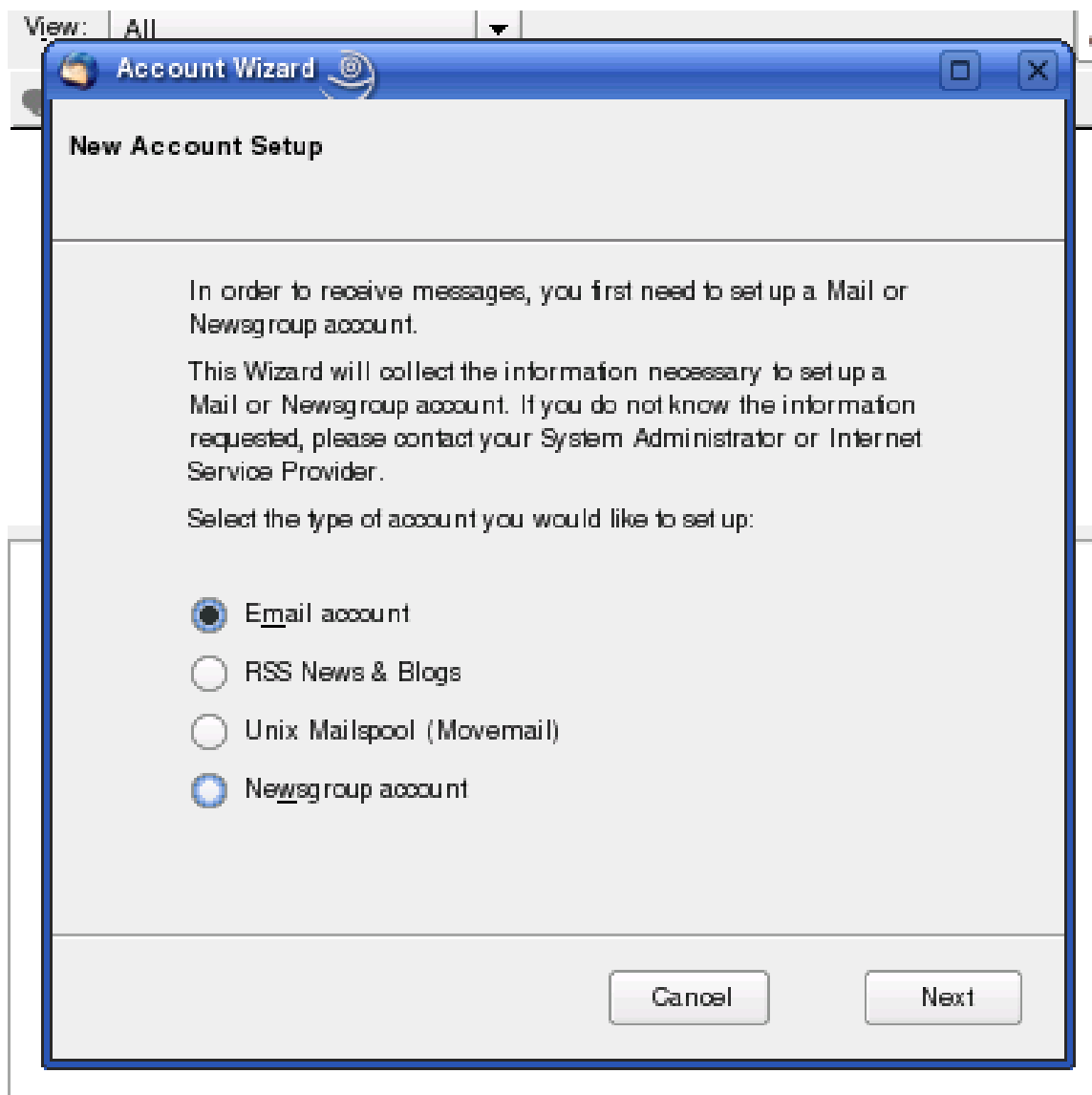
First, let's run Thunderbird. Open your K Menu, and click on the INTERNET submenu. Then click on the EMAIL submenu. Finally, run THUNDERBIRD:



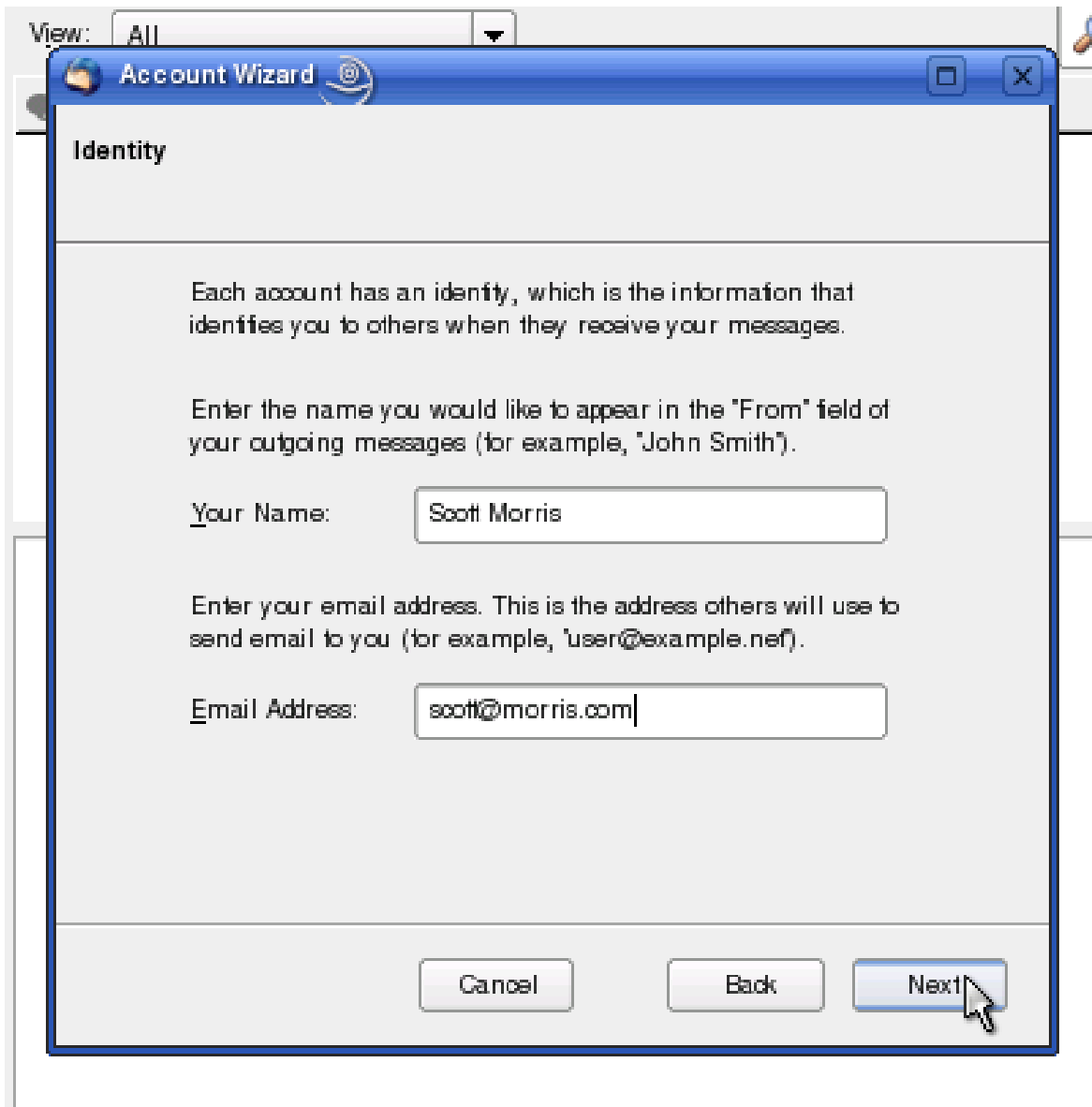
If this is the first time you are running Thunderbird, you may see a window asking you if you want to import various things. Just select the "Don't import anything" radio button, and click NEXT:



Thunderbird then takes you to the main window, and presents you with the Account Wizard. This is to help you set up your email account. Make sure the "Email account" radio button is selected here, then click NEXT:



You are then taken to a window where you are asked for your name and email address. Go ahead and type these in, then click NEXT:

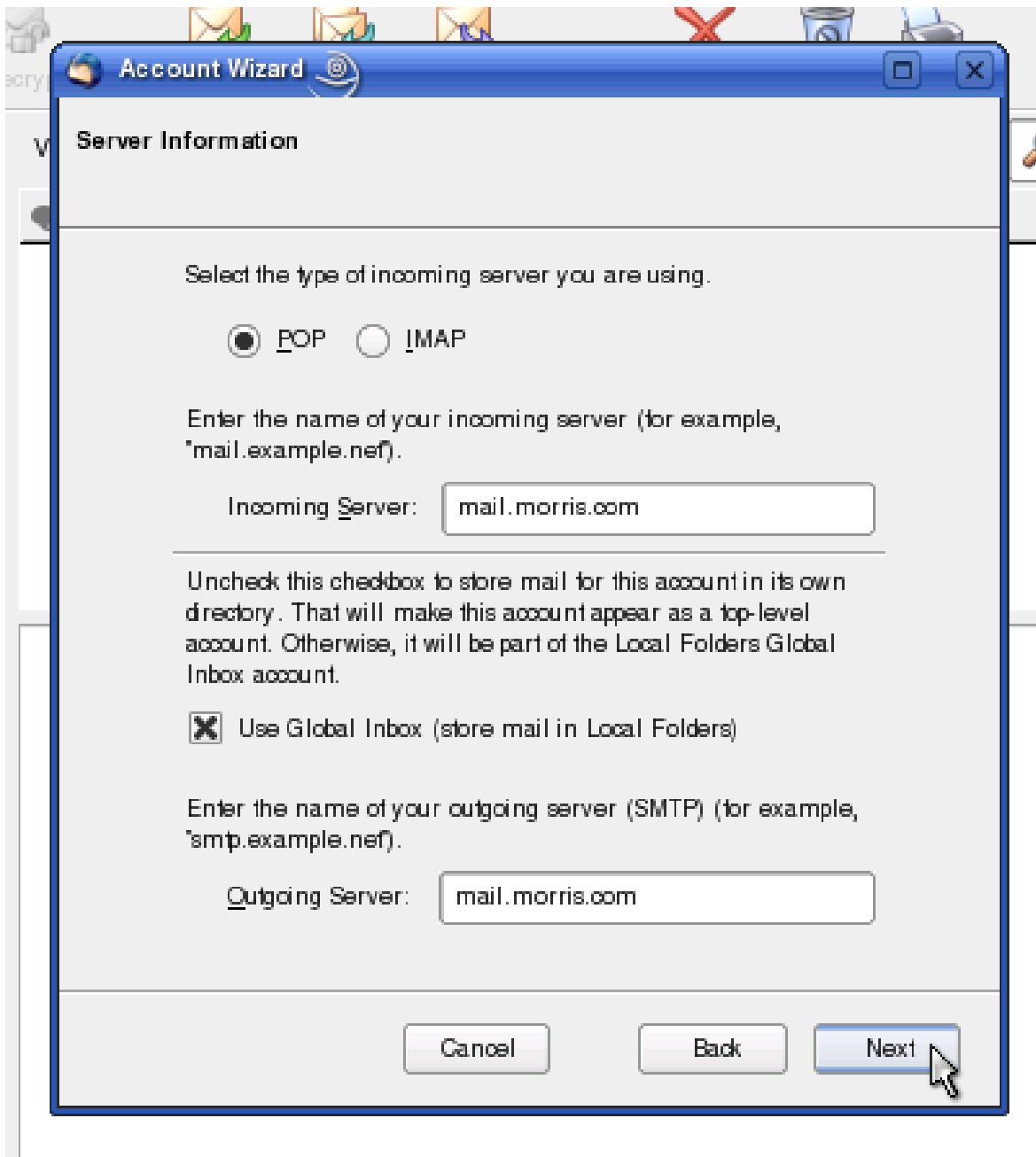


You are then asked what kind of incoming email server you have. This is where you may need specific instructions from your email service provider. For our purposes, we are going to say that we have a POP server.

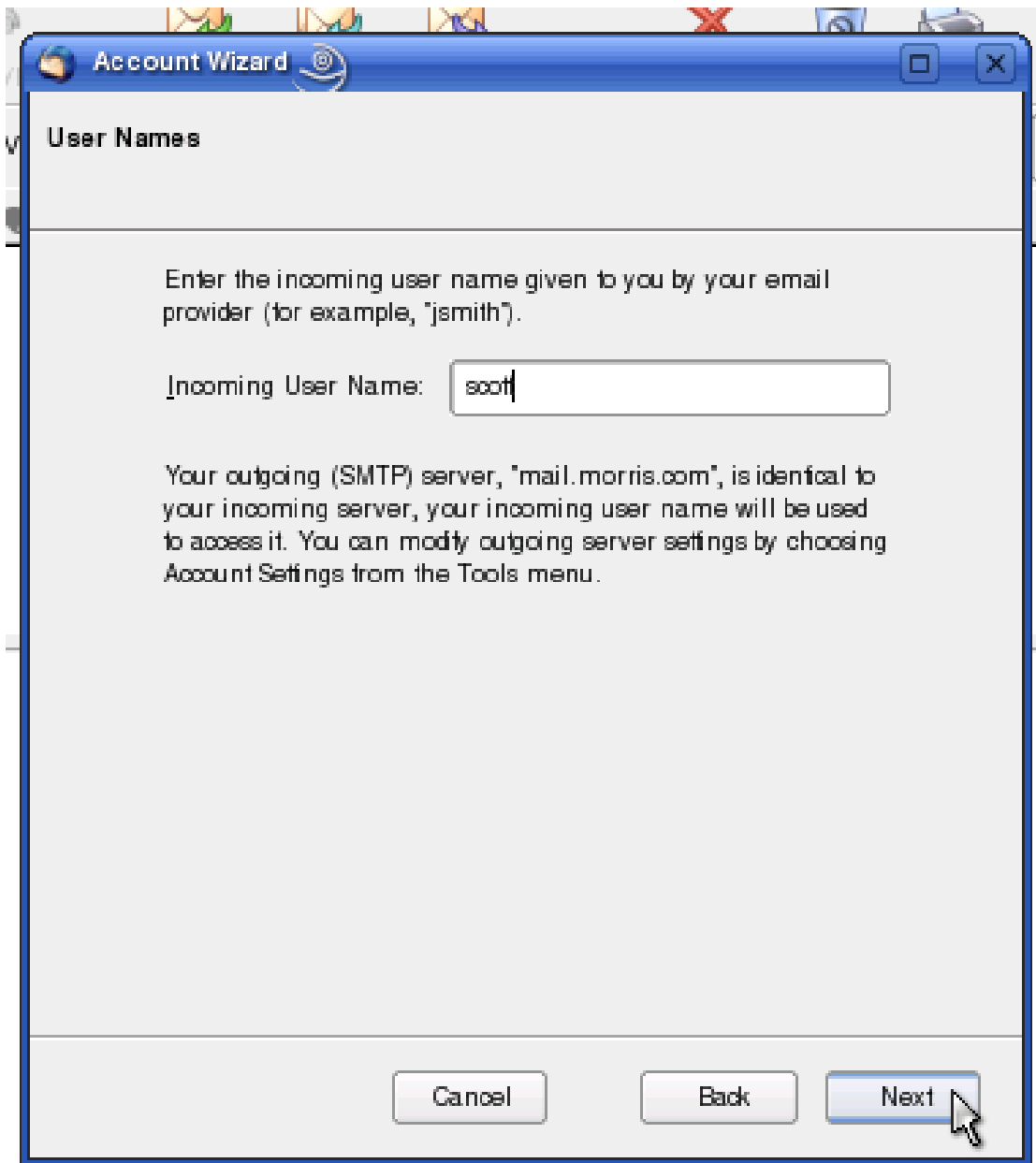
Leave the "Use Global Inbox (store mail in Local Folders)" box checked.

We are also going to put in the name of the outgoing mail server.

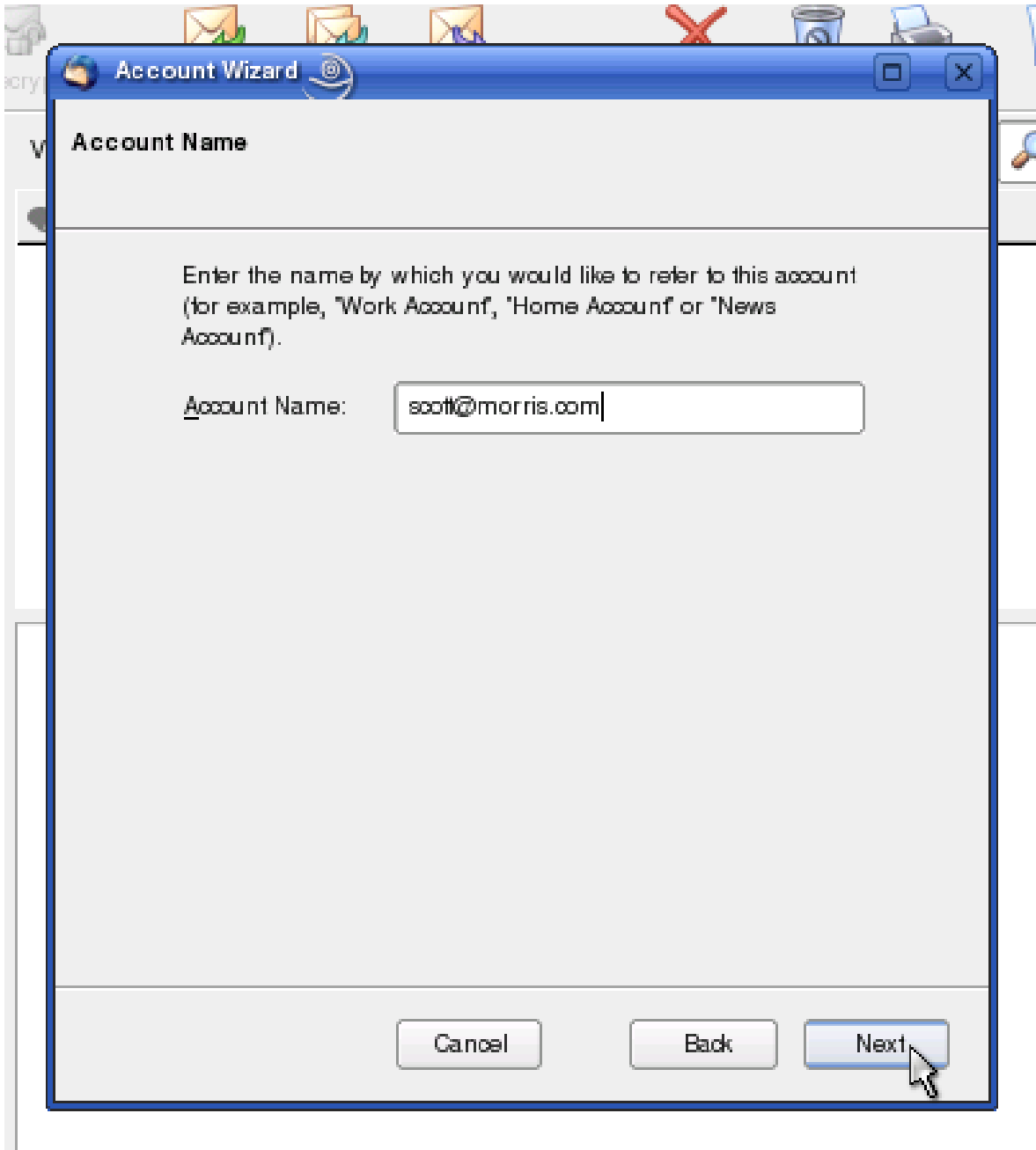
When you are done with all of these steps, click NEXT:



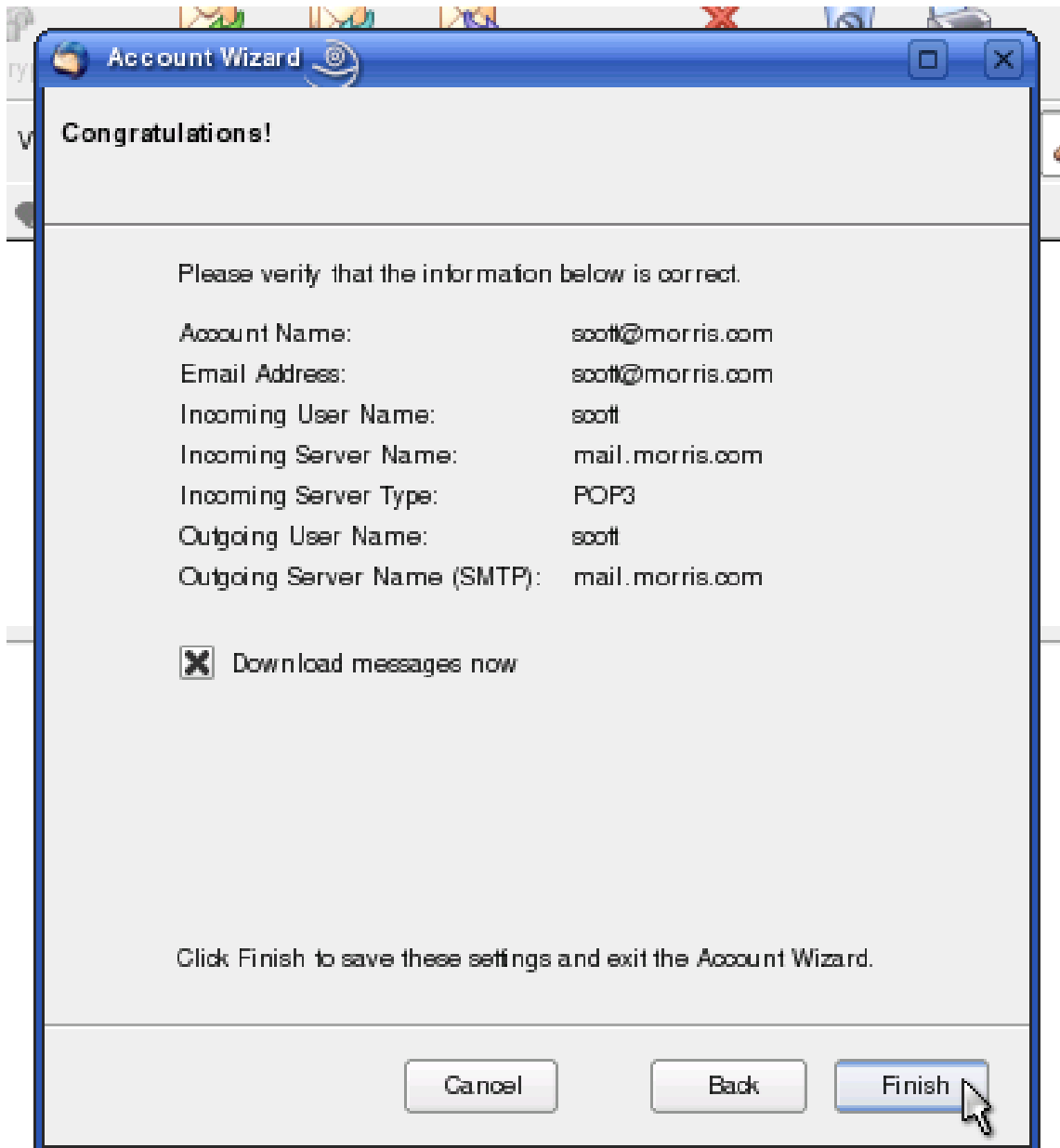
On the next screen, type in your email username, and click NEXT:



The next screen just asks you what you want to call this account. It does not matter what you put here, it is for your reference only. When finished, click NEXT:



The final screen allows you to verify all of your settings. It also has a checkbox labeled "Download messages now." If you wish to do this, leave it checked. When you are done, click FINISH:



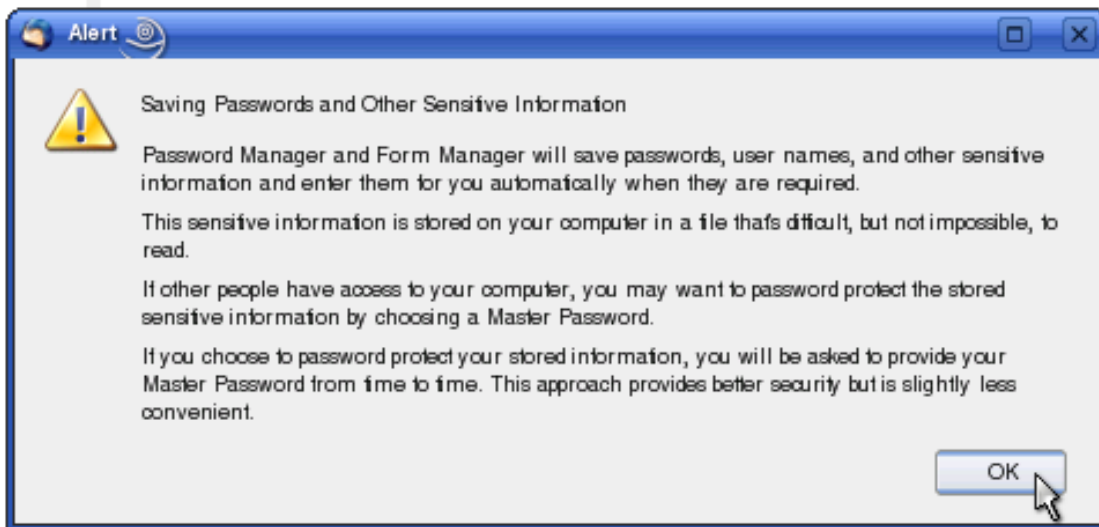
You may then see a small box that says, "Do you want to use Thunderbird as the default mail application?" Check the box that says "Do not display this dialog again". Then, click YES.

Thunderbird then begins downloading the email from your mail server.

The first time it does this, it will prompt you for your email password. Type it in. Check the box that says, "Use Password Manager to remember this password," and then click OK:



Another alert may appear, just click OK:



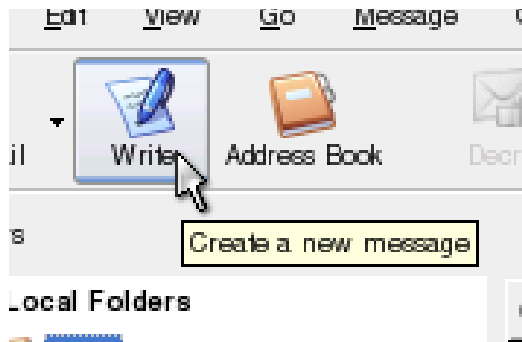
Thunderbird will then download all of the email messages available on the server. Again, because of the many ways there are to set up email accounts, these instructions may not work for you. If they don't, that is perfectly ok. Don't worry a bit. All you need to do is give your Internet Service Provider a call and ask them

how to set up your email to work with Thunderbird. In most cases, they will be able to help you.

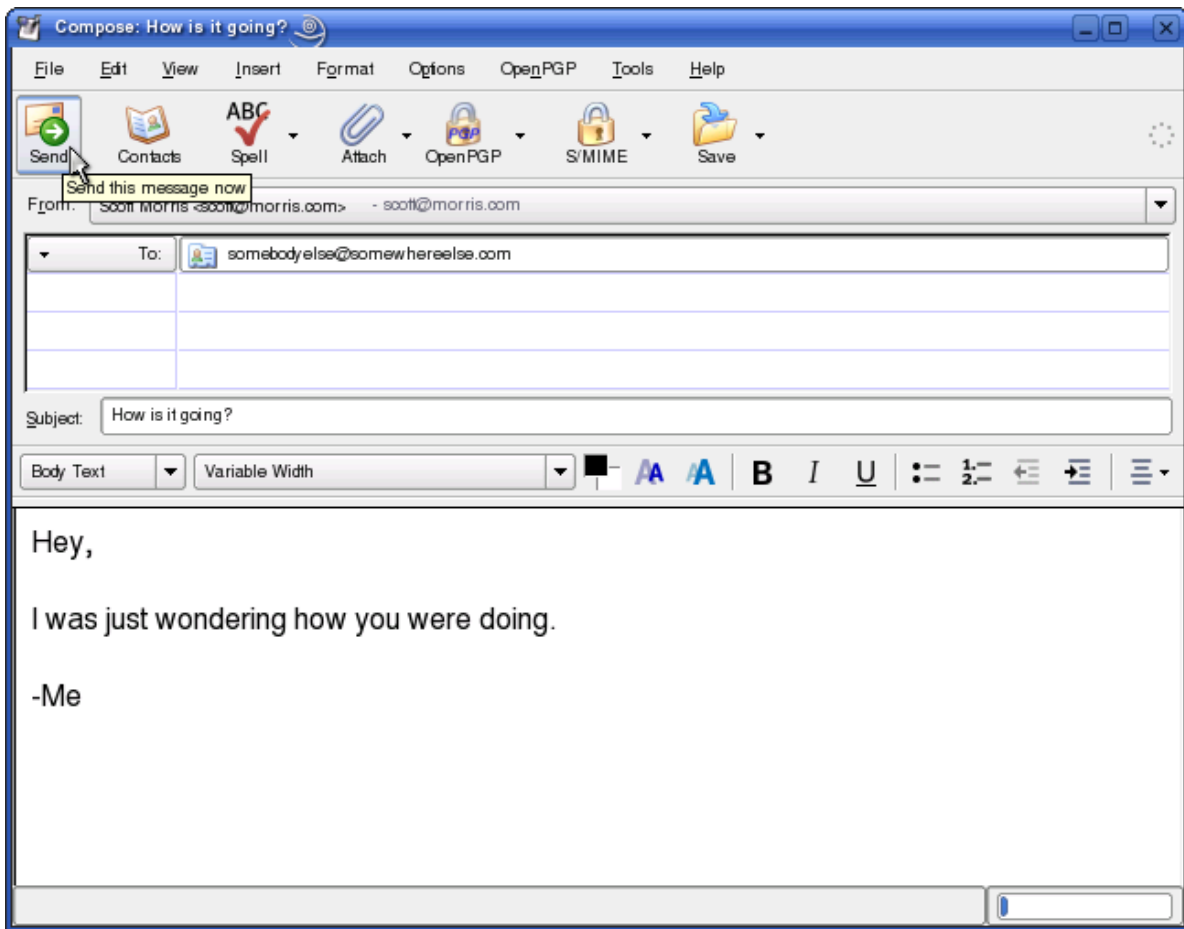
Sending and receiving email

We now have Thunderbird installed. The email is also set up. Next, let's look at how to send and receive email. These two things are so simple I am combining them into one section.

To send an email, click on the WRITE button in the toolbar:

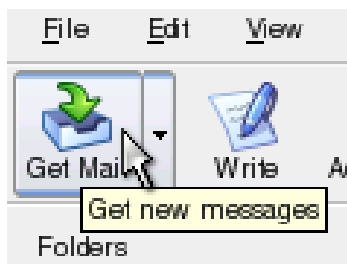


A new window appears where you will edit your email message. Fill in who the email is addressed to, give it a subject, and type your message. When you are done, click SEND:



That is all there is to it!

Receiving email is even simpler. In the main Thunderbird window, just click GET MAIL:



And that is it. Very easy, if you ask me!

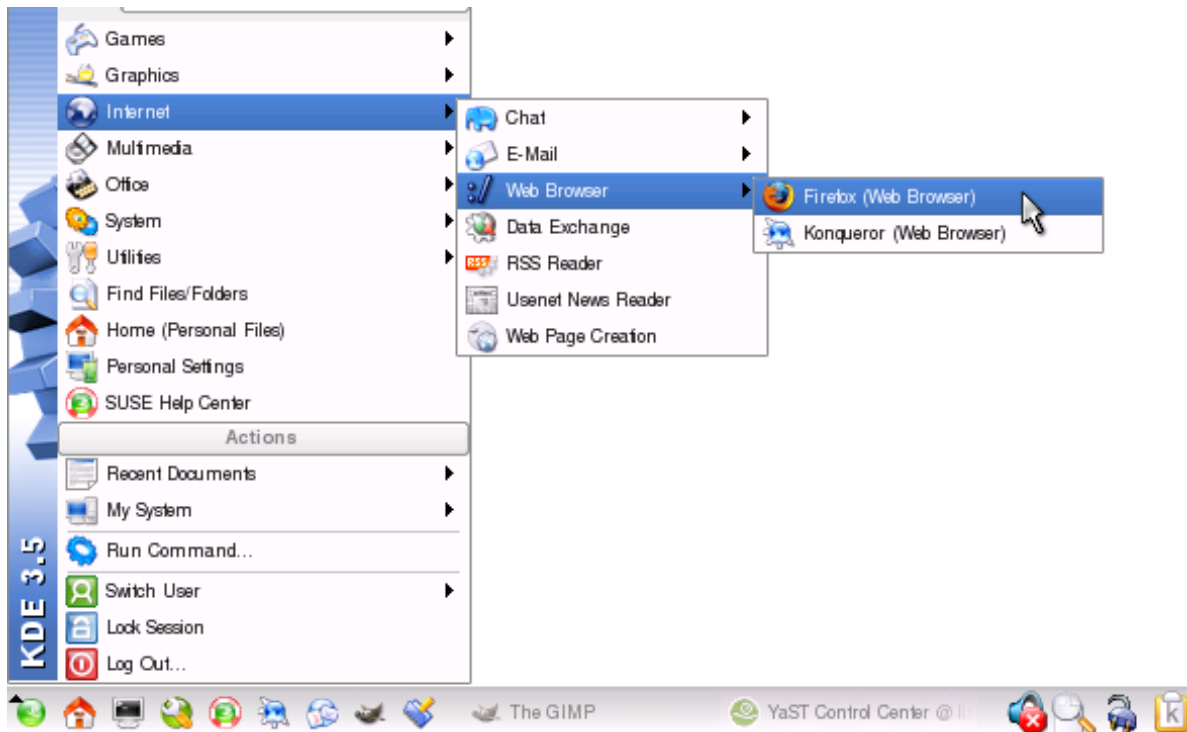
Firefox

In this chapter, we have covered word processing, spreadsheets, and email. To round out the list, let's look at an industry-standard web browser, Firefox. Second

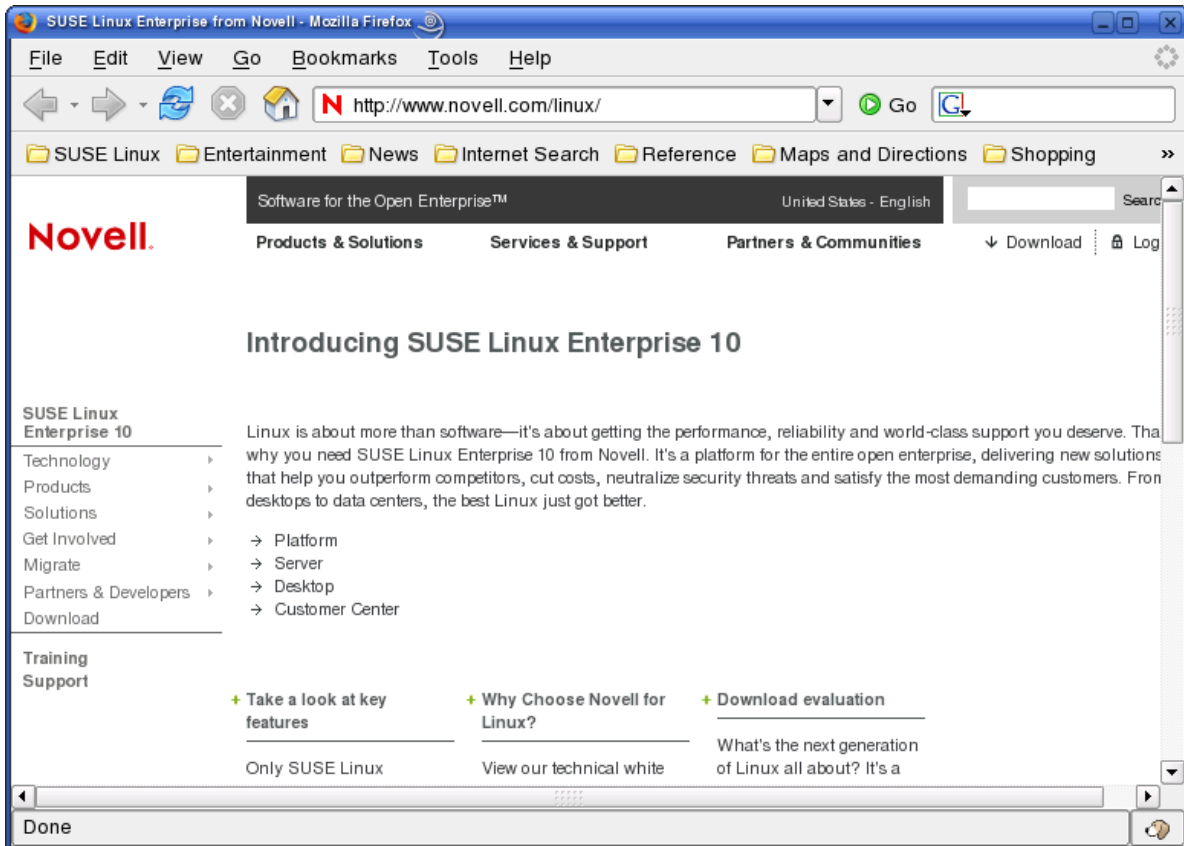
only to Microsoft's Internet Explorer, Firefox boasts a huge number of users. This is perhaps due to the incredible security it offers its users. Internet Explorer has become known for its security problems. It allows spyware, adware, and other unwanted applications to install themselves without any help from the user! Firefox does not do this. This is one of the reasons that I would like to recommend it here.

The first thing to do is make sure that it is installed using the same method we have before using the instructions I provided earlier in this book. The package you need to have installed is called "MozillaFirefox." You may find that it is already installed.

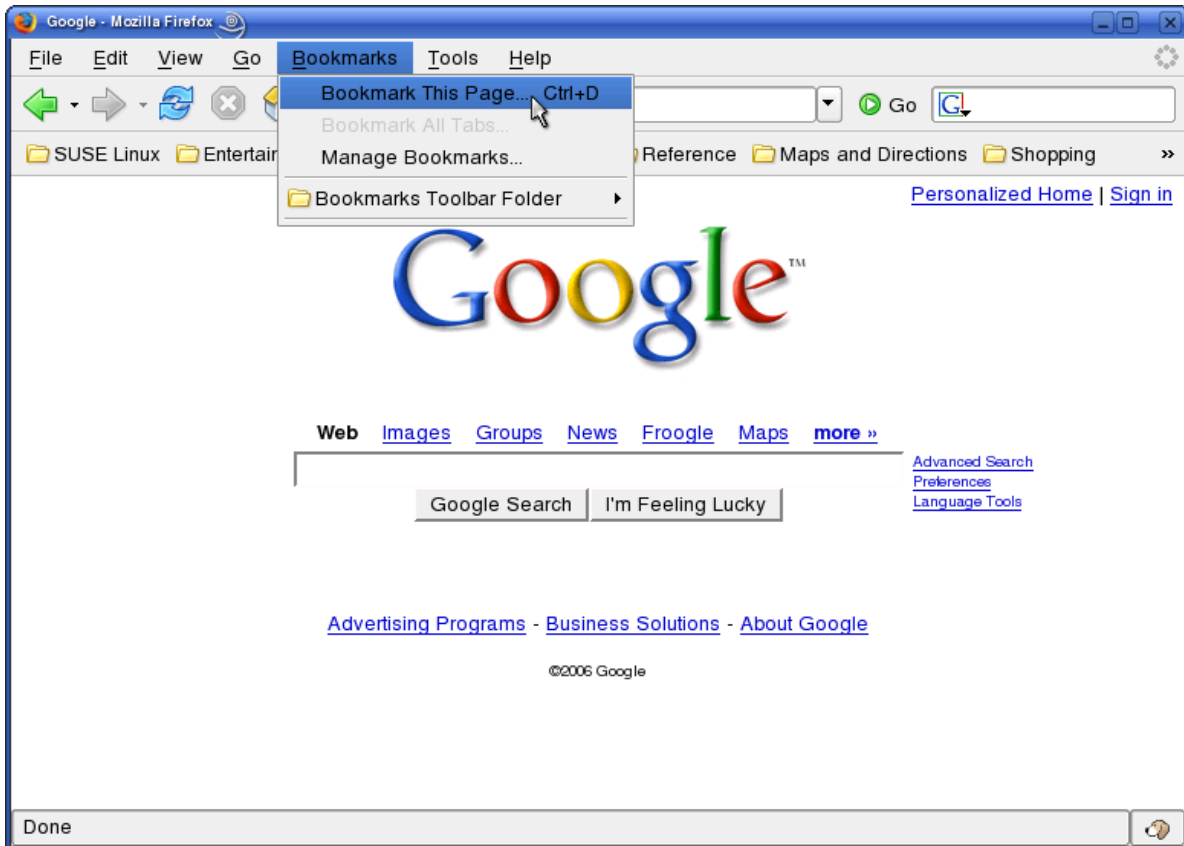
Once you have it installed, go ahead and run it. Open the K Menu, and click on the INTERNET submenu. Then click on the WEB BROWSER submenu, and click on FIREFOX to run it:



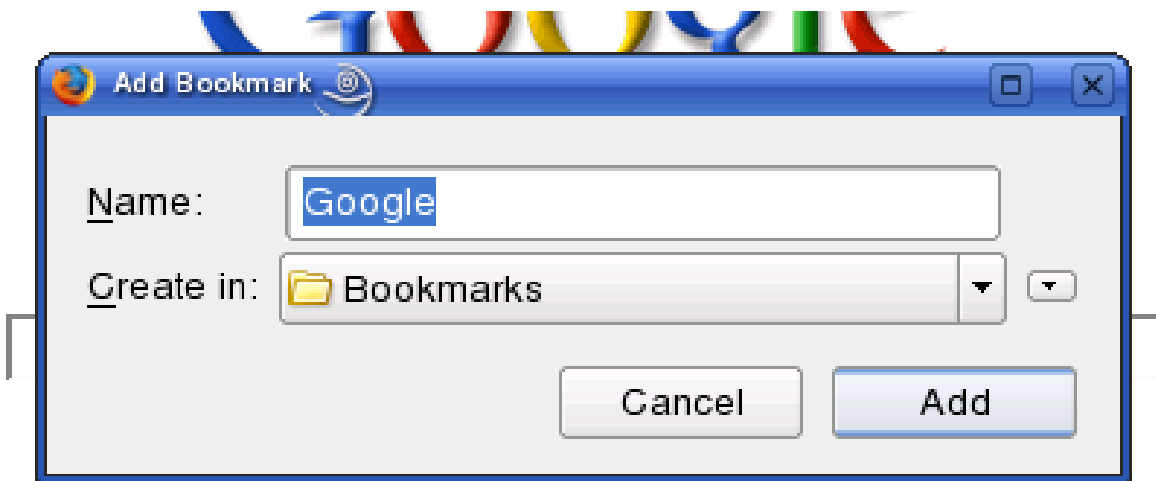
When Firefox runs, the main window will appear. You will see the address bar at the top. This is where you type in the addresses of the websites you want to go to:



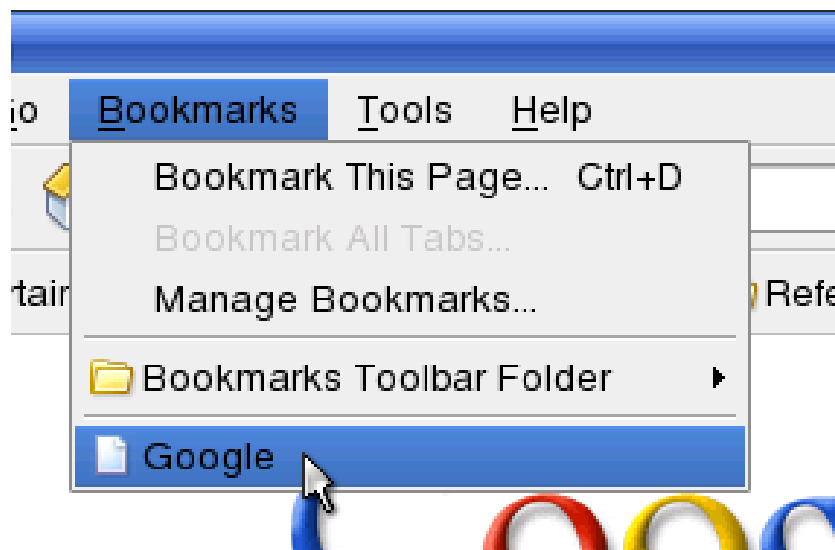
Additionally, you can add a website to your bookmarks. To do this, click the BOOKMARKS menu at the top of the window. From the menu that appears, select BOOKMARK THIS PAGE:



A small window will appear asking what you want to call it and where it should be placed. Most of the time, it is safe to just click ADD:



Then, at any time, you can retrieve your bookmarks by clicking on the BOOKMARKS menu at the top of the window. Your bookmarks will then appear:



If you need additional help with Firefox, you can press F1 at any time. This brings up the help manual for Firefox. As you read through the manual, you will learn more about how to use the full potential of the Firefox web browser.

Remember that you have many places that you can go to online for help, as we discussed earlier.

In this chapter, we have discussed a few of the many great applications offered by SUSE Linux. If you want a more comprehensive guide to what software applications are available, I wrote an article for Novell that you may find interesting.

It shows the Linux equivalents of the different types of software that you might find in a Windows environment. Take a moment and review this list, located at:

<http://www.novell.com/cool solutions/feature/11684.html>

As you read, you will notice that the article was written for Novell Linux Desktop 9. However, the main difference is that instead of the “N Menu” as discussed throughout the article, you are looking for the “K Menu,” denoted by a green marble icon with a white chameleon head in it:



Click on this icon in the lower-left corner of your screen to see your “K Menu.” Other than that, just about everything in that article is very similar.

So you want to use the command line?

One of the things that many new Linux users fear is the command line. It is true that, if using SUSE Linux as a regular desktop computer, you will never need to worry about using the command line. This chapter is to demonstrate that there is nothing to be afraid of. The command line is just a different way of going about doing things. I will not lie, it is not quite as easy as the point-and-click windows that we are used to. That said, there is no mystery or magic behind it.

I would like to take the opportunity here to provide an introduction for those who wish to familiarize themselves with this very powerful tool. It is definitely not as hard as most people think. Take a deep breath, relax, and let's take a look at some of the most common commands. We will look at how and why we would consider using each one.

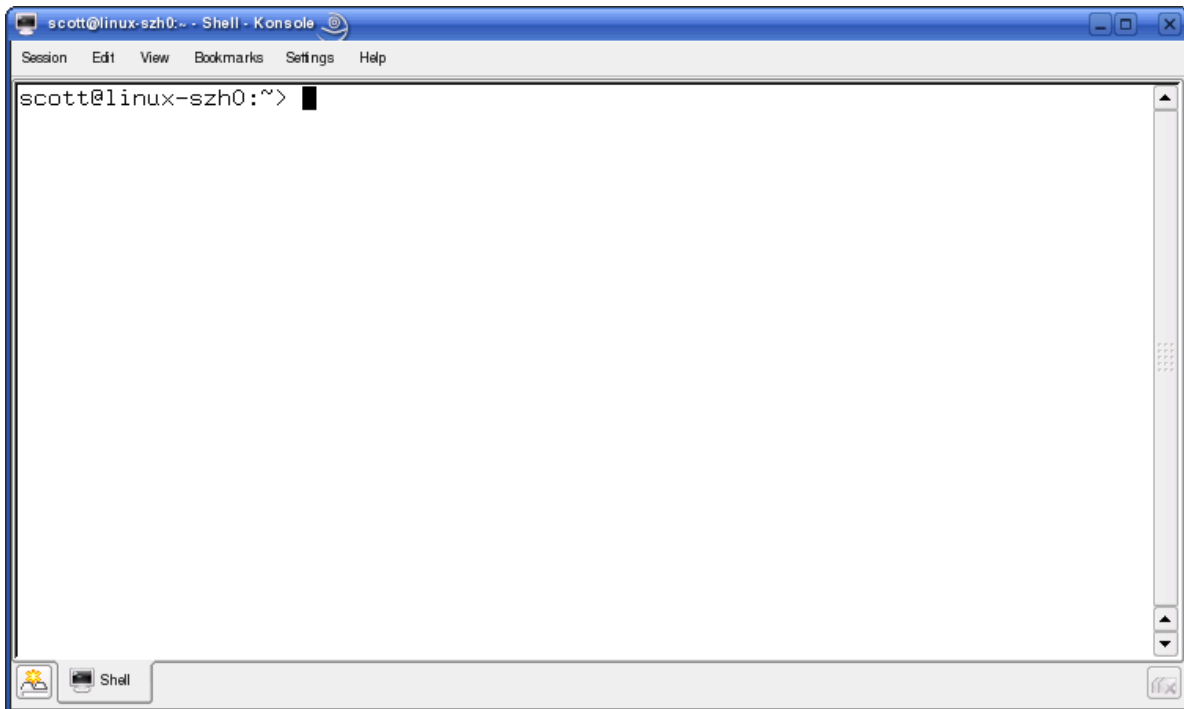
At this point, I would like to run through some more terminology. The command line is also known as the terminal or the shell. People also call it a terminal window,

or a shell prompt, or a command prompt. These pretty much all refer to the same thing as the command line. It is all really just different ways to say, "The place where you type in commands." Any time you hear any of these, just think of that.

The first thing we will do is show how to open a terminal window. There should be a little icon down in your Kicker Panel that looks something like this:



Click on it. You will see a window appear looking something like this:



This is your terminal window, command prompt, shell, etc. When we say any of those things, this is what we are referring to.

Now that we have it open, what do we do with it? To begin with, when I refer to 'running' a command, this means that we will be typing something at the command prompt. You then press the ENTER key to execute the command. This will be the case with all of the commands that I discuss here. Let's take a look at some of the basic commands that are the most useful.

View directory contents with 'ls'

Let's start out by taking a look at the 'ls' command. The purpose of this command is to list the files that are in the current directory. At the command prompt, type in 'ls' without the quotes. Then press the ENTER key. You will see a list of files that are in the current directory. Let's look at an example of how to use this command:

```
user@linux:~> ls
```

```
bin Desktop Documents myfile.txt public_html
user@linux:~>
```

You see that there are a handful of files in this directory.

Make a directory with 'mkdir'

How can we create a directory? There is a command called 'mkdir' that is used for this. You use this command using this as a pattern:

```
mkdir [insert directory name here]
```

You just replace the "[insert directory name here]" with the actual name of the directory you are trying to create. Here is an example of how to use this command:

```
user@linux:~> mkdir myfiles
user@linux:~>
```

This will make a directory called 'myfiles'. To see the new directory, you can use the 'ls' command.

Remove a directory with 'rmdir'

Once we have made a directory, can we remove it? Yes. We use the 'rmdir' command. This command is similar to the 'mkdir' command in regards to how to use it:

```
rmdir [directory you want to remove]
```

You just replace the "[directory you want to remove]" with the actual name of the directory you want to remove. For example:

```
user@linux:~> rmdir myfiles
user@linux:~>
```

This removes the directory called 'myfiles'. Note, however, that this command only works with empty directories. You cannot remove a directory that has files in it with the 'rmdir' command.

Change to a directory with 'cd'

Let's say that we have just created a directory called 'myfiles'. How do we then go into that directory? This is what the 'cd' command is for. It is used to "change" directories. This is how we will use this command:

```
cd [directory name]
```

If we were moving into the 'myfiles' directory, we would type in:

```
user@linux:~> cd myfiles
user@linux:~/myfiles>
```

How do we get back out of the directory? Instead of providing a directory name, we just put in two dots for the name. This just means, "I want to leave the directory that I am currently in." This is what using the command looks like:

```
user@linux:~/myfiles> cd ..
user@linux:~>
```

You can see that when you run that command, it takes you right back out of the 'myfiles' directory.

What directory am I in? Using 'pwd'

How do we know what directory we are in? There is a very simple command for this. It is called 'pwd'. That just means "p"resent "w"orking "d"irectory. You use it like this:

```
pwd
```

And it tells you what directory you are in. Using this command will help you know if you are in the right place. Example output:

```
user@linux:~> pwd
/home/user
user@linux:~>
```

Copying files with 'cp'

Now that we know some commands for working with directories, let's look at some ways to work with files. To begin with, we will look at copying a file. The command 'cp' will do this for us. Its usage is thus:

```
cp [source file] [destination file]
```

You just replace "[source file]" with the file you want to copy. You replace the "[destination file]" with the place you want that file copied to. For example, if I had a file called 'mybooks.txt' and I wanted to make a copy of it called 'somebooks.txt', I could run this command:

```
user@linux:~> cp mybooks.txt somebooks.txt
user@linux:~>
```

Now, there will be two copies of the file. The original, called 'mybooks.txt', and the new one, called 'somebooks.txt'. To see these files, run the 'ls' command, just as we have done before.

Moving files with 'mv'

If you want to move a file instead of copy it, you can use 'mv'. The syntax of how to use this command is very similar to the 'cp' command:

```
mv [source file] [destination file]
```

Replace "[source file]" with the name of the file you want moved. Replace "[destination file]" with the filename you want it moved to. You may notice that you can also use this command to rename a file, "moving" it from one filename to another. Example:

```
user@linux:~> mv myfile.txt yourfile.txt
user@linux:~>
```

Deleting files with 'rm'

What about if we want to delete a file? This is the purpose of 'rm'. This command will permanently remove a file, so be careful with it. The way you use this is as follows:

```
rm [file to delete]
```

Again, use caution with this command. Its effects are permanent. Here is an example:

```
user@linux:~> rm myfile.txt
user@linux:~>
```

Viewing text files with 'cat'

Many files in Linux are text files. How do we view the contents of such text files? If the file is relatively small (its contents won't fill up more than one screen), we can use the 'cat' command. This command will just output the contents of the file straight to the screen. Its usage is as follows:

```
cat [filename to display]
```

Just put in the name of the file you want to view. Example:

```
user@linux:~> cat myfile.txt
Here are the contents of a very short file.
It is only two lines long.
user@linux:~>
```

Viewing text files with 'less'

What if the file is too long to fit on one page? If it is a really big file, it may just dump large amounts of text to your screen. This will make it scroll up way faster than you can read it. Is there a solution to this problem? You bet. It is the 'less' command. This is how you use it:

```
less [filename to display]
```

This will open the file, and only display one full page of the contents at a time. You just use the up and down arrows on your keyboard to scroll through the file. When you want to exit out of the file, press "q". The 'less' command is a good method of viewing large files.

What time is it? What is the date? Using 'date'

One very easy command is called 'date'. This displays the current date and time. Use this command as follows:

```
date
```

It will then output the current date and time. Very simple, but it can be useful.

Example:

```
user@linux:~> date
Thu May 18 13:27:09 MDT 2006
user@linux:~>
```


Using 'man' to find help

In addition to these commands, I would like to share another way to learn about them. There is one last command I want to share with you. Sometimes, you will run into a situation where you may need some help learning how to use a particular command. Fortunately, there is a help system built into Linux which can assist you with this. It is the 'man' command, which displays help on using other commands. To use 'man', the following is the syntax:

```
man [command]
```

If I wanted help with the 'date' command, I might run:

```
man date
```

A bunch of information then appears on the screen. Like the 'less' command, you can use the up and down arrows on your keyboard to scroll through the page. Press 'q' when you want to quit.

The 'man' command can be used to display help on almost all commands that you will ever use. As a side-note, when you ask other, more seasoned Linux users for help, they will almost always ask you if you read the "man page." This is the 'man' command that I have just shown you. It is a good idea to make a habit of using 'man' to learn about new commands. In the beginning, they will feel a little cryptic to you. Don't let that deter you. You will get more used to them as time goes on.

The command line can be a very powerful tool. There are thousands of incredible commands available for use in the terminal window. As you get more familiar with Linux, you may wish to learn more about this amazing tool. If not, don't worry. Mastery of the command line is no longer a requirement for using Linux. Learn it at your leisure.

Conclusion

There is quite a new world available to you when you decide to try out Linux. Gone are the days where you have to obsess about viruses, spyware, and all the definition updates that go with them. It will require a bit of time and a little patience. With a little effort, you will be cruising through your new operating system with ease. You should now be familiar with how to get Linux, how to install it, how to install software, and what software to use for your basic needs.

The purpose of this book has been to introduce a somewhat adept Windows user into the world of Linux. Many of the concepts of how to use an operating system carry over to Linux.

If you have found this book to be helpful, come by and visit. If there's something that I can improve, please provide feedback so that I can make it better. My Linux blog, also the home of this book, is located at: <http://www.suseblog.com/> .

Come on by, visit me, leave comments or flame me. I'd like to have your feedback, which you can leave at <http://www.suseblog.com/ph33db4ck.php> . As always, good luck with your Linux endeavors.