

The Perfect Desktop - Debian Lenny

Version 1.0

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This tutorial shows how you can set up a [Debian Lenny](#) desktop that is a full-fledged replacement for a Windows desktop, i.e. that has all the software that people need to do the things they do on their Windows desktops. The advantages are clear: you get a secure system without DRM restrictions that works even on old hardware, and the best thing is: all software comes free of charge.

I want to say first that this is not the only way of setting up such a system. There are many ways of achieving this goal but this is the way I take. I do not issue any guarantee that this will work for you!

1 Preliminary Note

To fully replace a Windows desktop, I want the Debian Lenny desktop to have the following software installed:

Graphics:

- The GIMP - *free software replacement for Adobe Photoshop*
- F-Spot - *full-featured personal photo management application for the GNOME desktop*
- Google Picasa - *application for organizing and editing digital photos*

Internet:

- Firefox/Iceweasel
- Opera
- Flash Player 10
- FileZilla - *multithreaded FTP client*
- Thunderbird/Icedove - *email and news client*
- Evolution - *combines e-mail, calendar, address book, and task list management functions*
- aMule - *P2P file sharing application*
- Transmission BitTorrent Client - *BitTorrent client*
- Azureus/Vuze - *Java Bittorrent client*
- Pidgin - *multi-platform instant messaging client*
- Skype
- Google Earth
- Xchat IRC - *IRC client*

Office:

- OpenOffice Writer - *replacement for Microsoft Word*
- OpenOffice Calc - *replacement for Microsoft Excel*
- Adobe Reader
- GnuCash - *double-entry book-keeping personal finance system, similar to Quicken*
- Scribus - *open source desktop publishing (DTP) application*

Sound & Video:

- Amarok - *audio player*
- Audacity - *free, open source, cross platform digital audio editor*
- Banshee - *audio player, can encode/decode various formats and synchronize music with Apple iPods*
- MPlayer - *media player (video/audio), supports WMA*
- Rhythmbox Music Player - *audio player, similar to Apple's iTunes, with support for iPods*
- gtkPod - *software similar to Apple's iTunes, supports iPod, iPod nano, iPod shuffle, iPod photo, and iPod mini*
- XMMS - *audio player similar to Winamp*
- dvd::rip - *full featured DVD copy program*
- Kino - *free digital video editor*
- Sound Juicer CD Extractor - *CD ripping tool, supports various audio codecs*
- VLC Media Player - *media player (video/audio)*
- Real Player
- Totem - *media player (video/audio)*
- Xine - *media player, supports various formats; can play DVDs*
- Brasero - *CD/DVD burning program*
- K3B - *CD/DVD burning program*
- Multimedia Codecs

Programming:

- KompoZer - *WYSIWYG HTML editor, similar to Macromedia Dreamweaver, but not as feature-rich (yet)*
- Bluefish - *text editor, suitable for many programming and markup languages*
- Quanta Plus - *web development environment, including a WYSIWYG editor*

Other:

- VMware Server - *lets you run your old Windows desktop as a virtual machine under your Linux desktop, so you don't have to entirely abandon Windows*
- TrueType fonts
- Java
- Read-/Write support for NTFS partitions

Lots of our desired applications are available in the Debian repositories.

As you might have noticed, a few applications are redundant, for example there are two CD/DVD burning applications in my list (Brasero, K3B). If you know which one you like best, you obviously don't need to install the other applications, however if you like choice, then of course you can install both. The same goes for music players like Amarok, Banshee, Rhythmbox, XMMS or browsers (Firefox/Iceweasel, Opera).

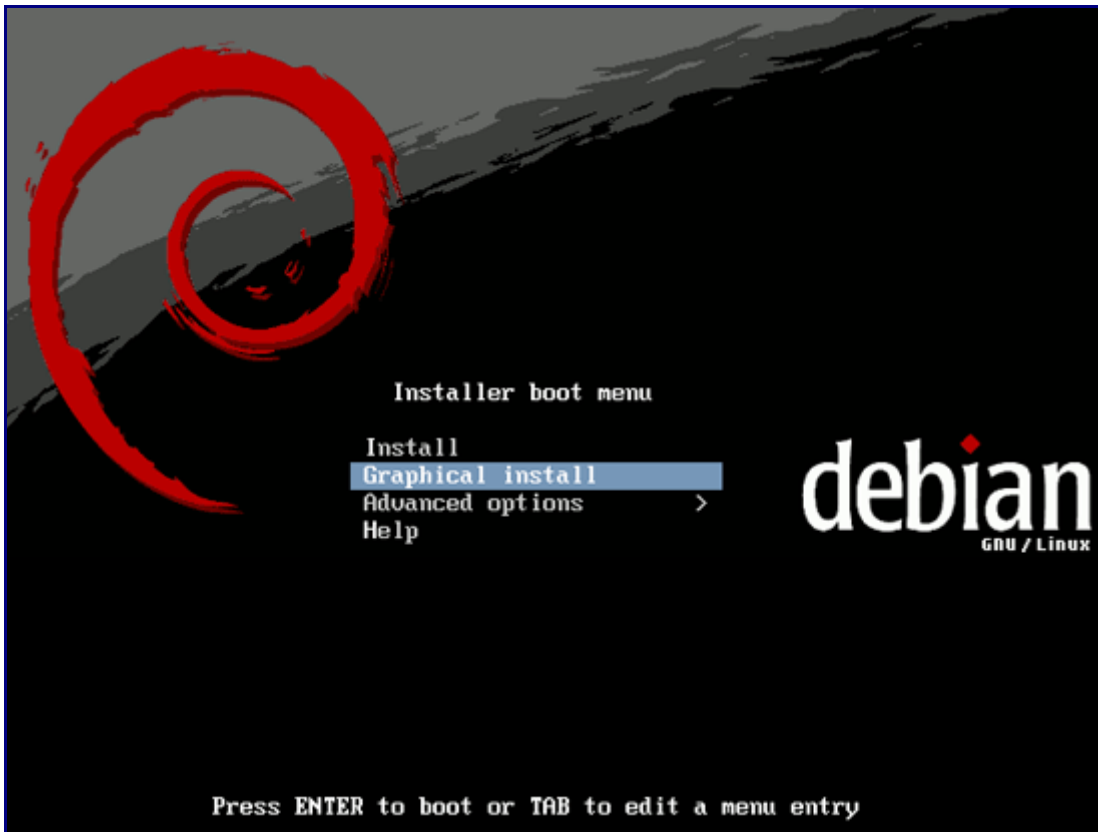
I will use the username falko in this tutorial, and I will download all necessary files to falko's desktop which is equivalent to the directory /home/falko/Desktop. If you use another username (which you most probably do ;-)), please replace falko with your own username. So when I use a command like

```
cd /home/falko/Desktop
```

you must replace falko.

2 Installing The Base System

Download the Debian Lenny netinstall iso image (available here: <http://cdimage.debian.org/debian-cd/5.0.0/i386/iso-cd/debian-500-i386-netinst.iso> (i386) or <http://cdimage.debian.org/debian-cd/5.0.0/amd64/iso-cd/debian-500-amd64-netinst.iso> (x86_64)) , burn it onto a CD, and boot your computer from it. Select Graphical install:

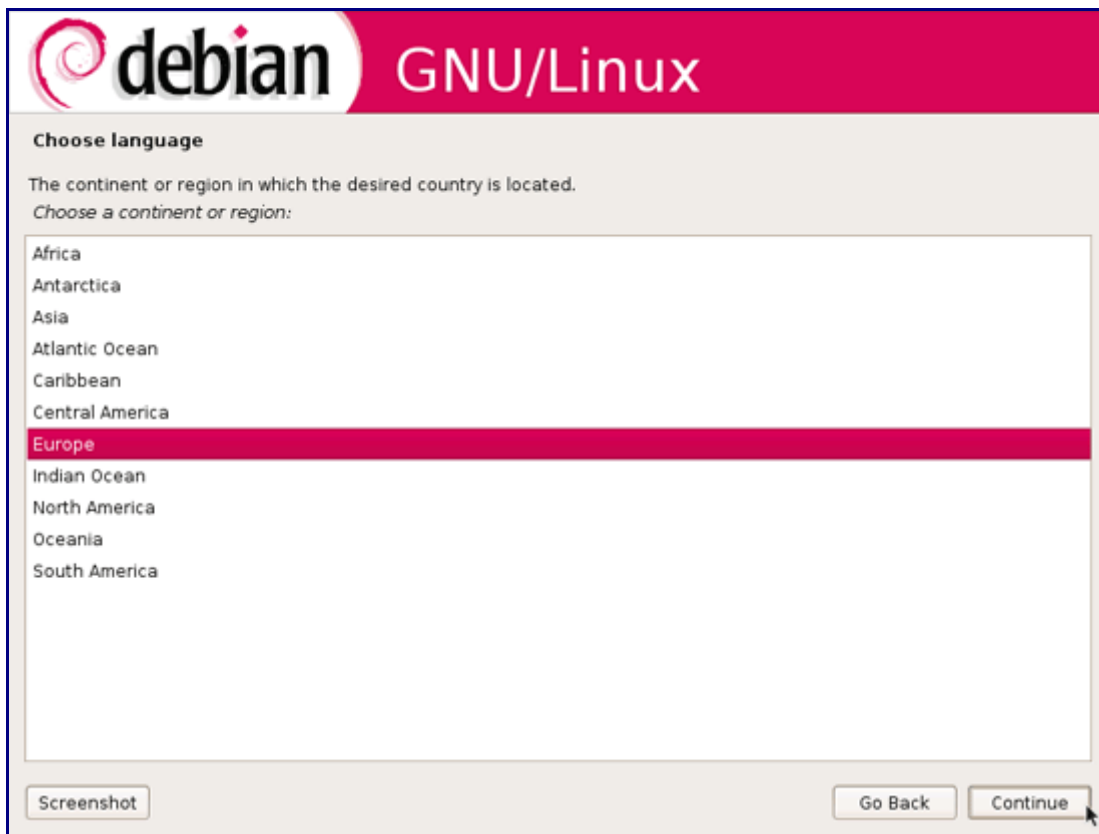


Choose your language:

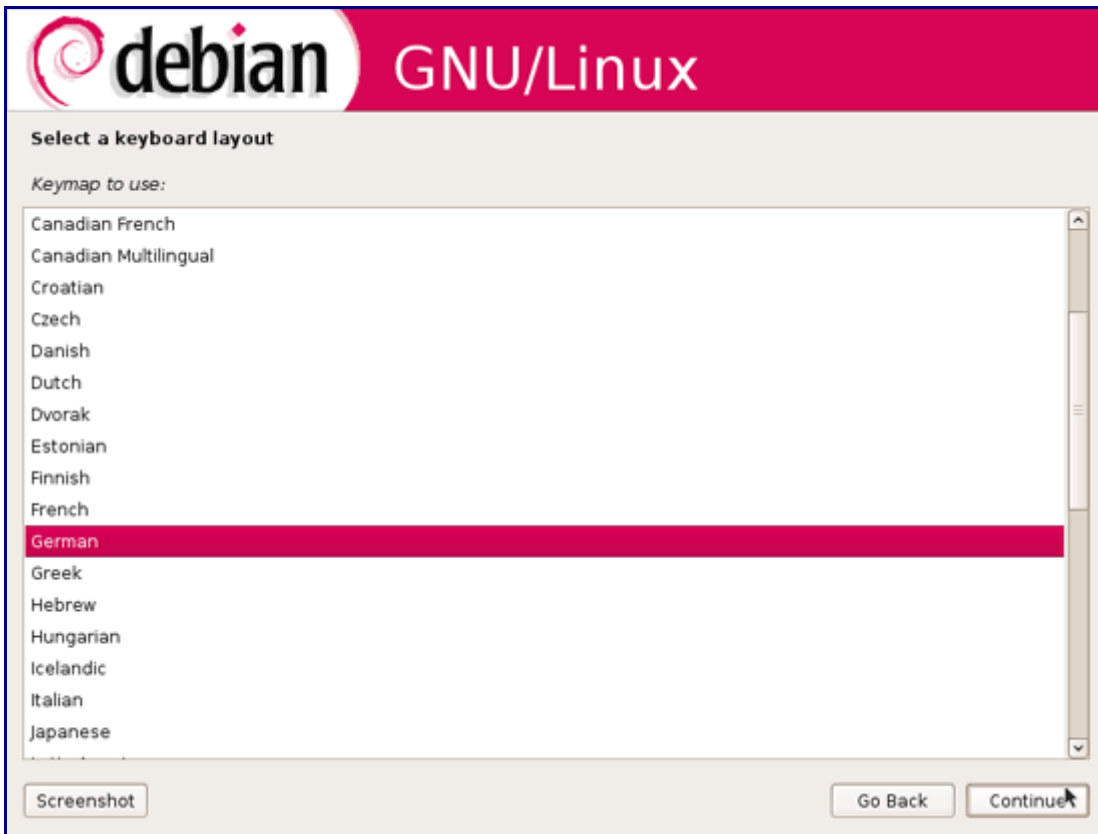


Then select your location:





Choose a keyboard layout:



The installer checks the installation CD, your hardware, and configures the network with DHCP if there is a DHCP server in the network:





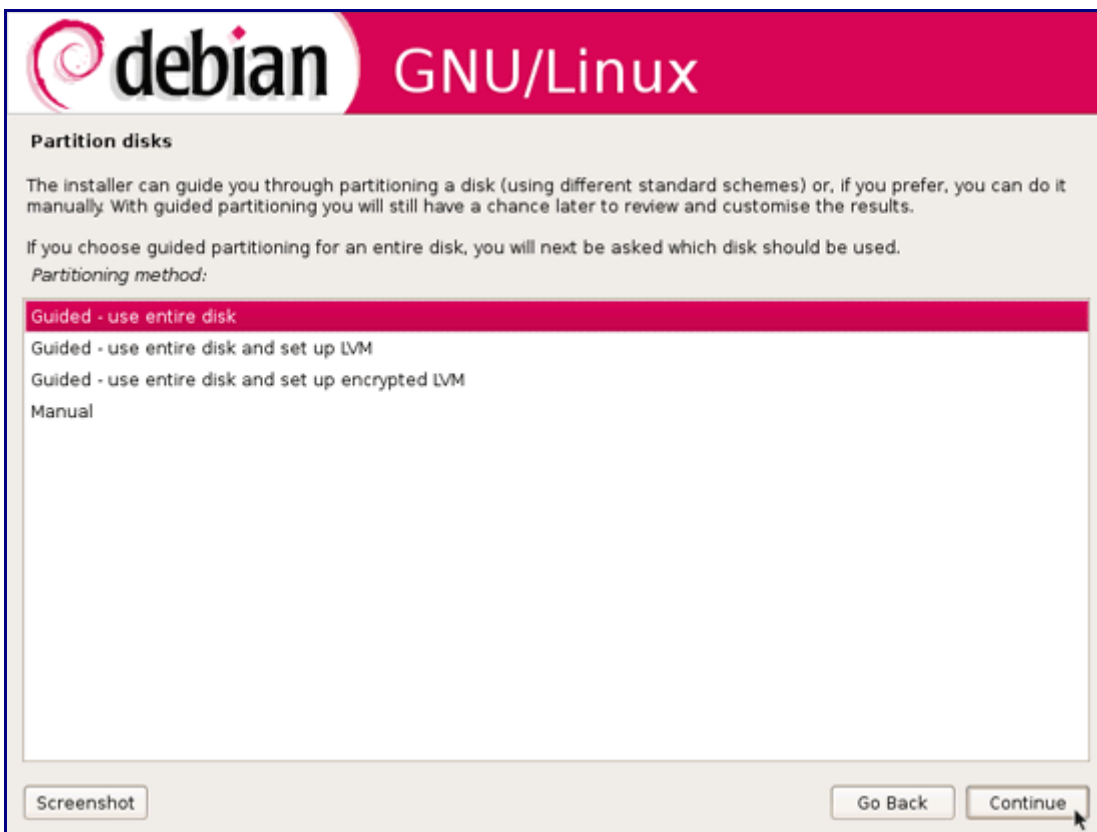
Since this is a desktop, you can accept the default hostname...



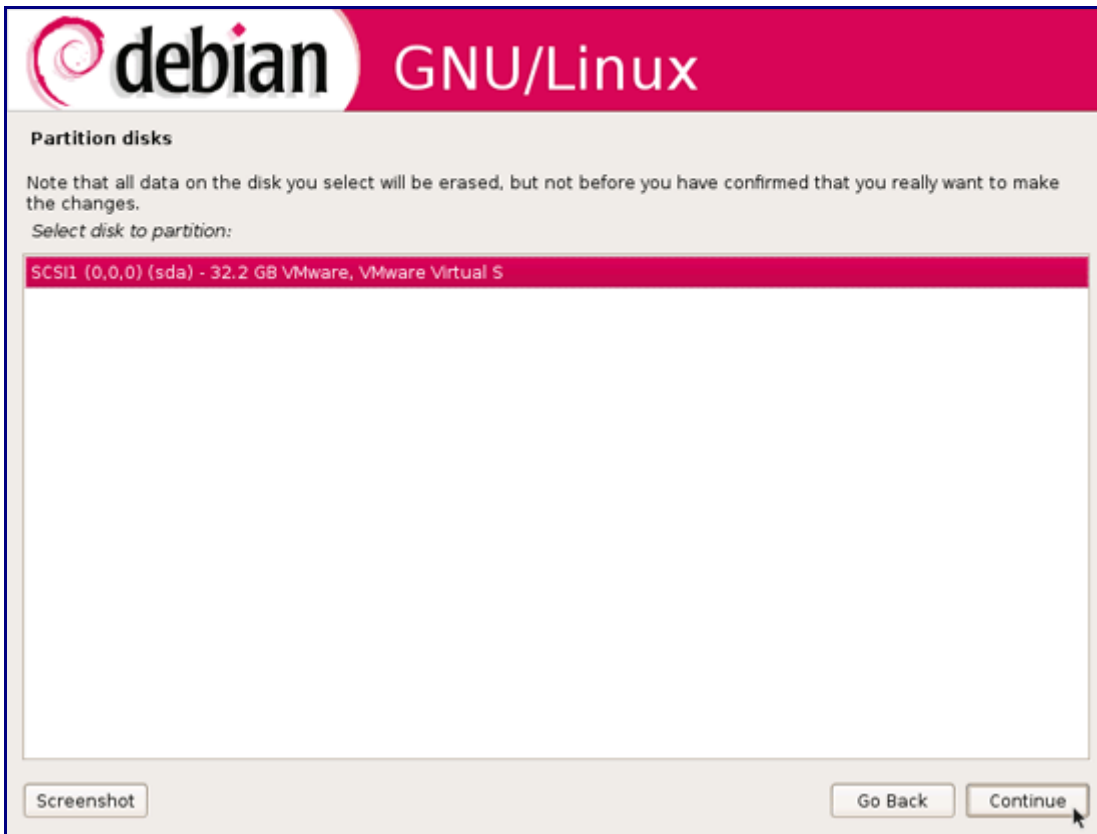
... and domain:



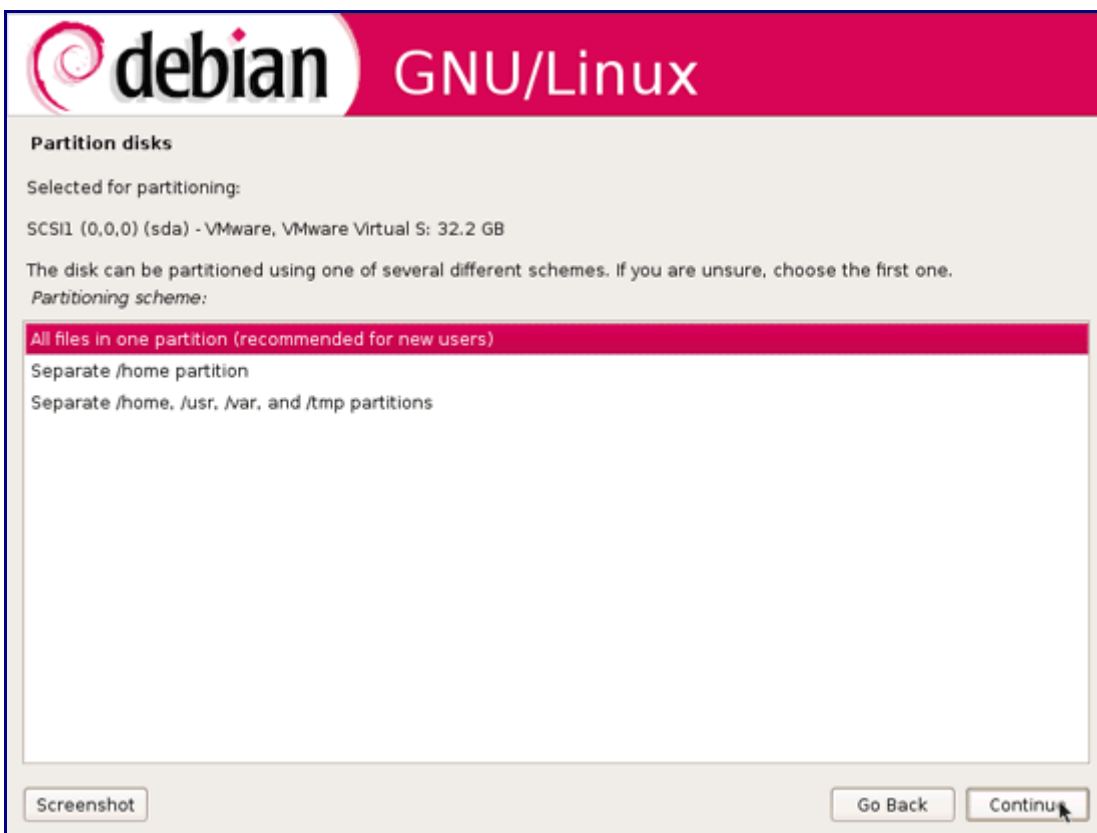
Now you have to partition your hard disk. For simplicity's sake I will create one big partition (with the mount point /) and a little swap partition so I select Guided - use entire disk (of course, the partitioning is totally up to you - if you like, you can create more than just one big partition, and you can also use LVM):



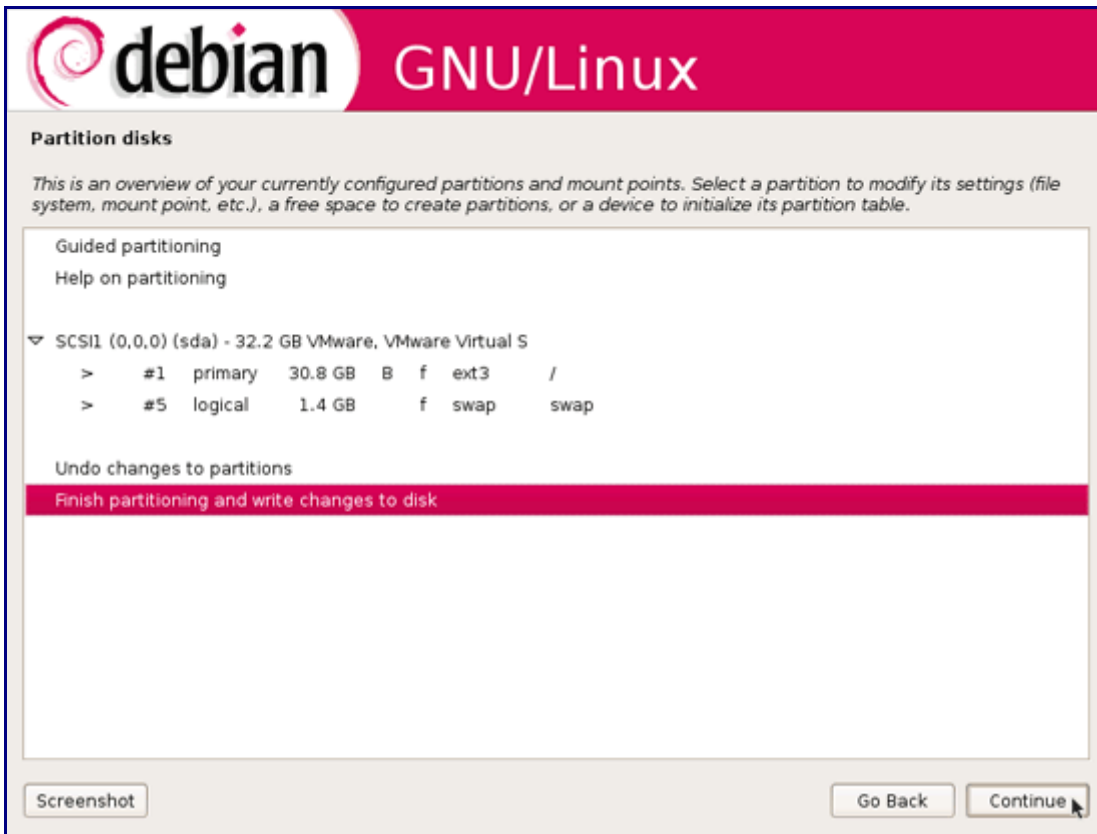
Select the disk that you want to partition:



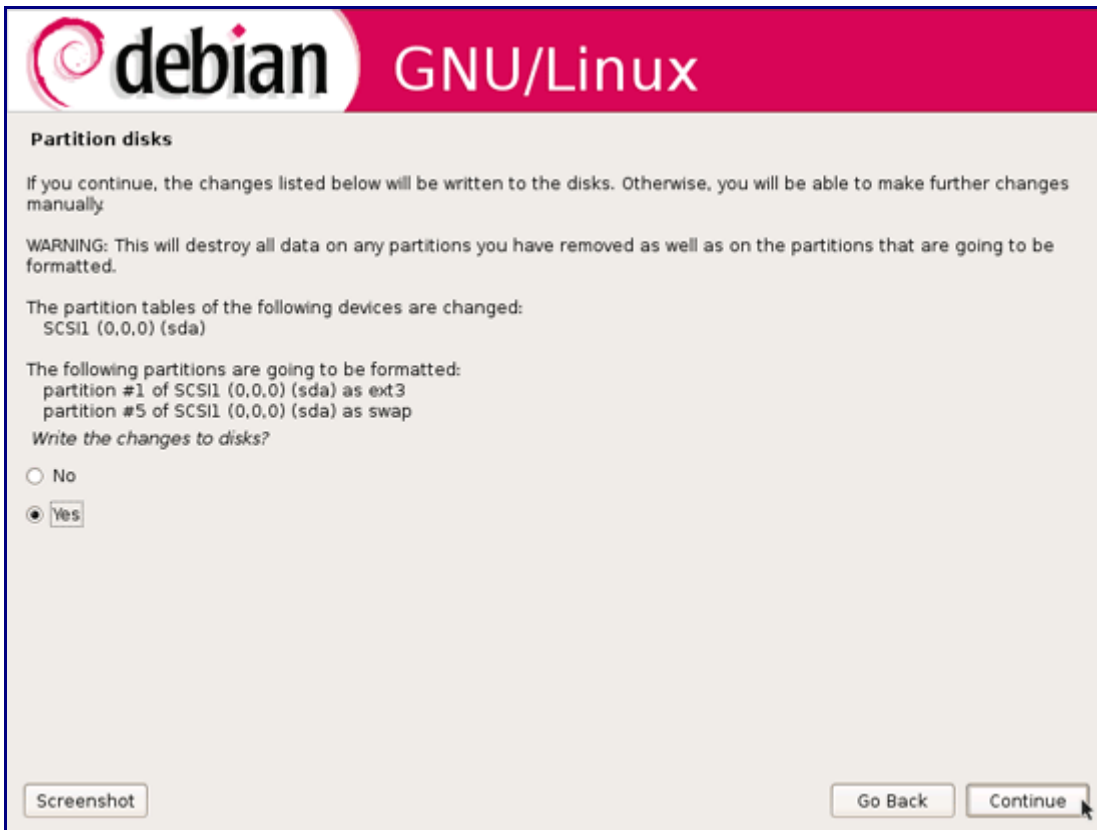
Then select the partitioning scheme. As mentioned before, I select All files in one partition (recommended for new users) for simplicity's sake - it's up to your likings what you choose here:



When you're finished, select Finish partitioning and write changes to disk:



Select Yes when you're asked Write changes to disks?:



Afterwards, your new partitions are created and formatted:



Now the base system is installed:



Afterwards, give the root user a password:



GNU/Linux

Set up users and passwords

You need to set a password for 'root', the system administrative account. A malicious or unqualified user with root access can have disastrous results, so you should take care to choose a root password that is not easy to guess. It should not be a word found in dictionaries, or a word that could be easily associated with you.

A good password will contain a mixture of letters, numbers and punctuation and should be changed at regular intervals.

Note that you will not be able to see the password as you type it.

Root password:

Please enter the same root password again to verify that you have typed it correctly.

Re-enter password to verify:

Screenshot Go Back Continue

Create a normal user account:



GNU/Linux

Set up users and passwords

A user account will be created for you to use instead of the root account for non-administrative activities.

Please enter the real name of this user. This information will be used for instance as default origin for emails sent by this user as well as any program which displays or uses the user's real name. Your full name is a reasonable choice.

Full name for the new user:

Screenshot Go Back Continue

debian GNU/Linux

Set up users and passwords

Select a username for the new account. Your first name is a reasonable choice. The username should start with a lower-case letter, which can be followed by any combination of numbers and more lower-case letters.
Username for your account:

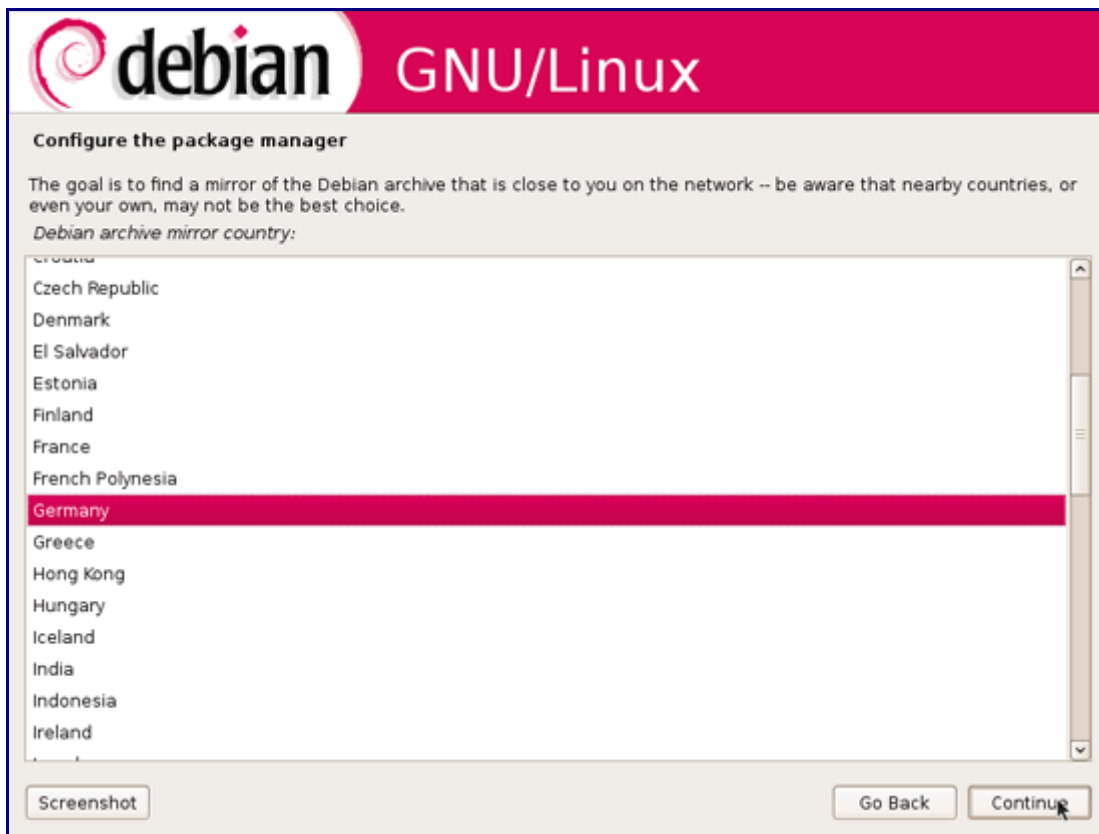
debian GNU/Linux

Set up users and passwords

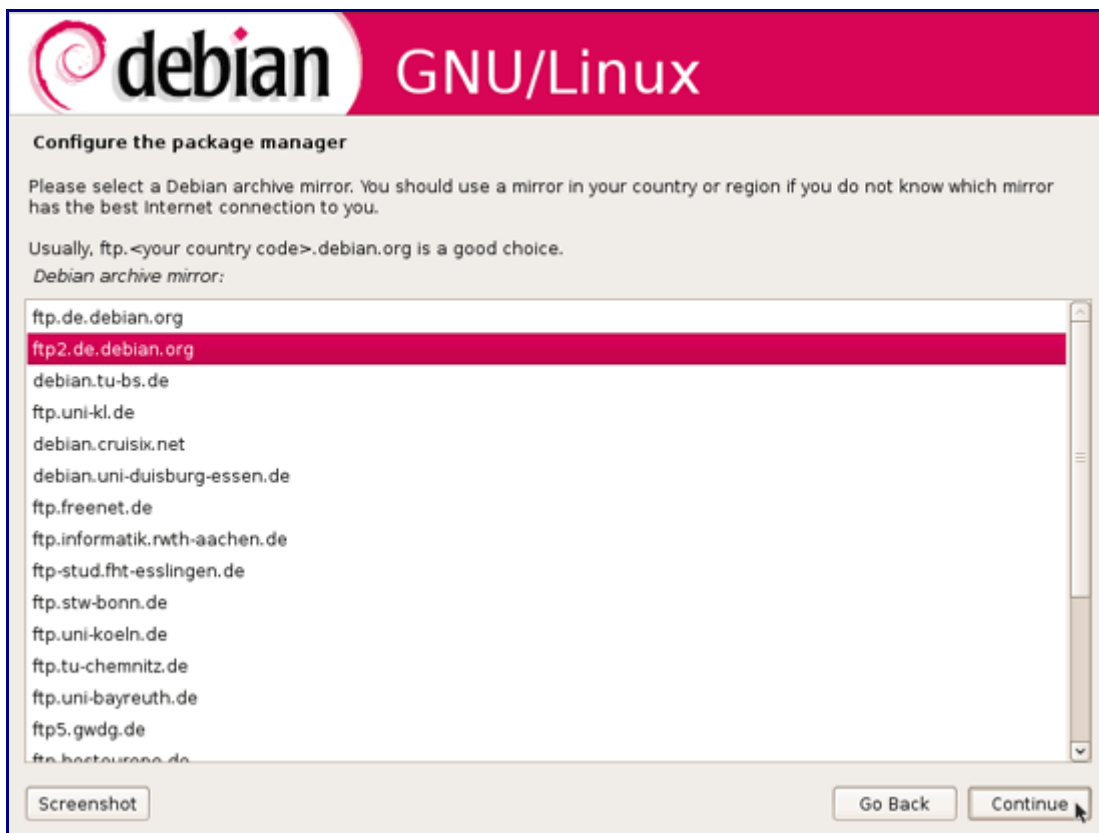
A good password will contain a mixture of letters, numbers and punctuation and should be changed at regular intervals.
Choose a password for the new user:

Please enter the same user password again to verify you have typed it correctly.
Re-enter password to verify:

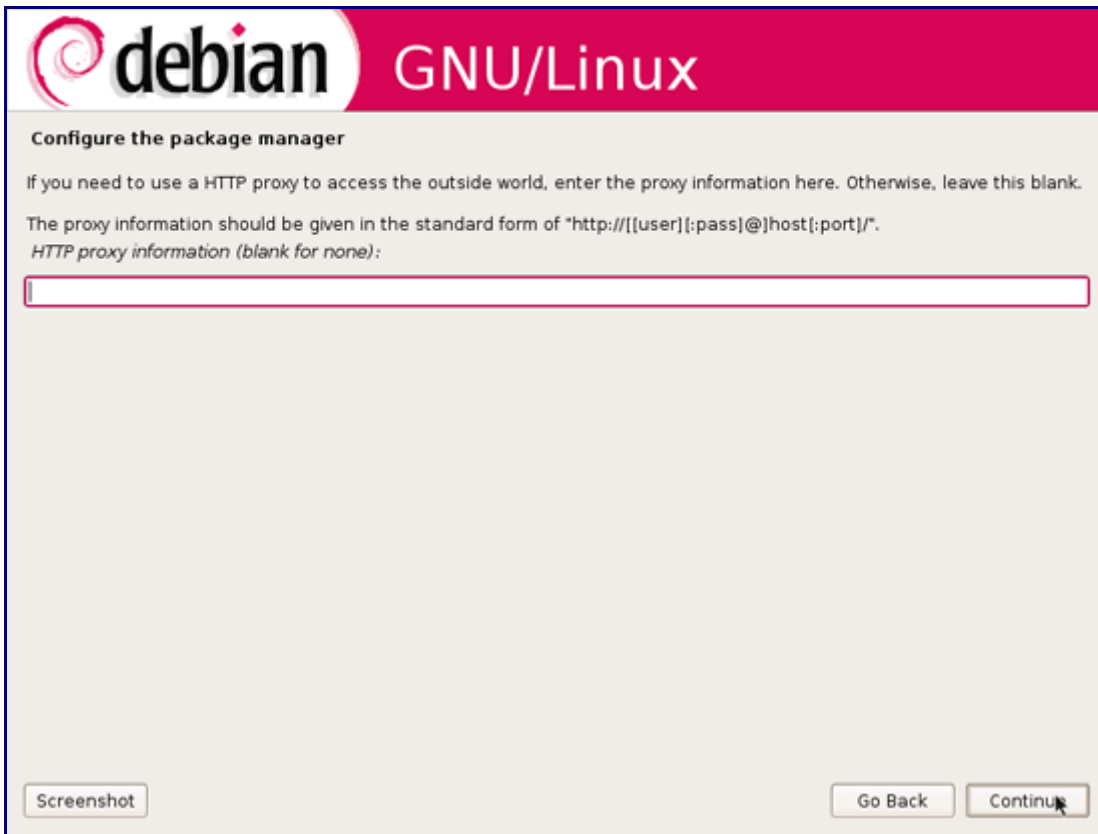
Next you must configure apt. Because you are using the Debian Lenny Netinstall CD which contains only a minimal set of packages, you must use a network mirror. Select the country where the network mirror that you want to use is located (usually this is the country where your Debian Lenny system is located):



Then select the mirror you want to use (e.g. ftp2.de.debian.org):



Unless you use an HTTP proxy, leave the following field empty and hit Continue:



Apt is now updating its packages database:



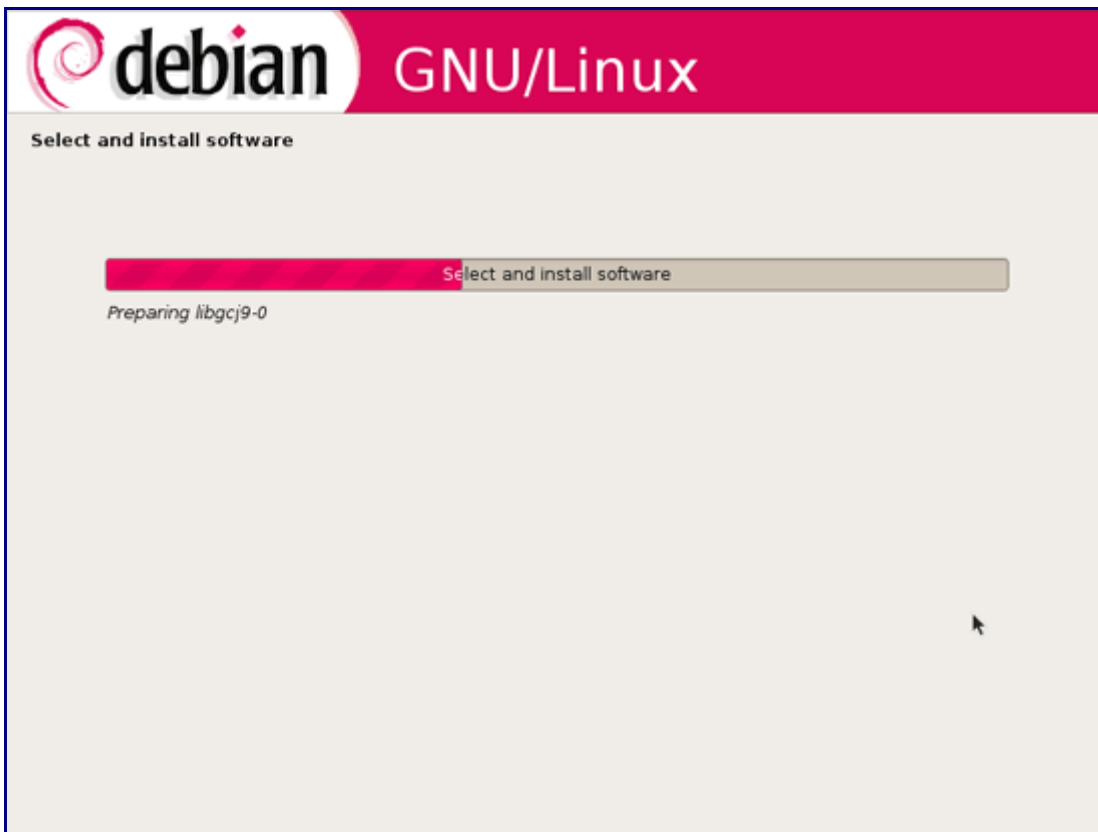
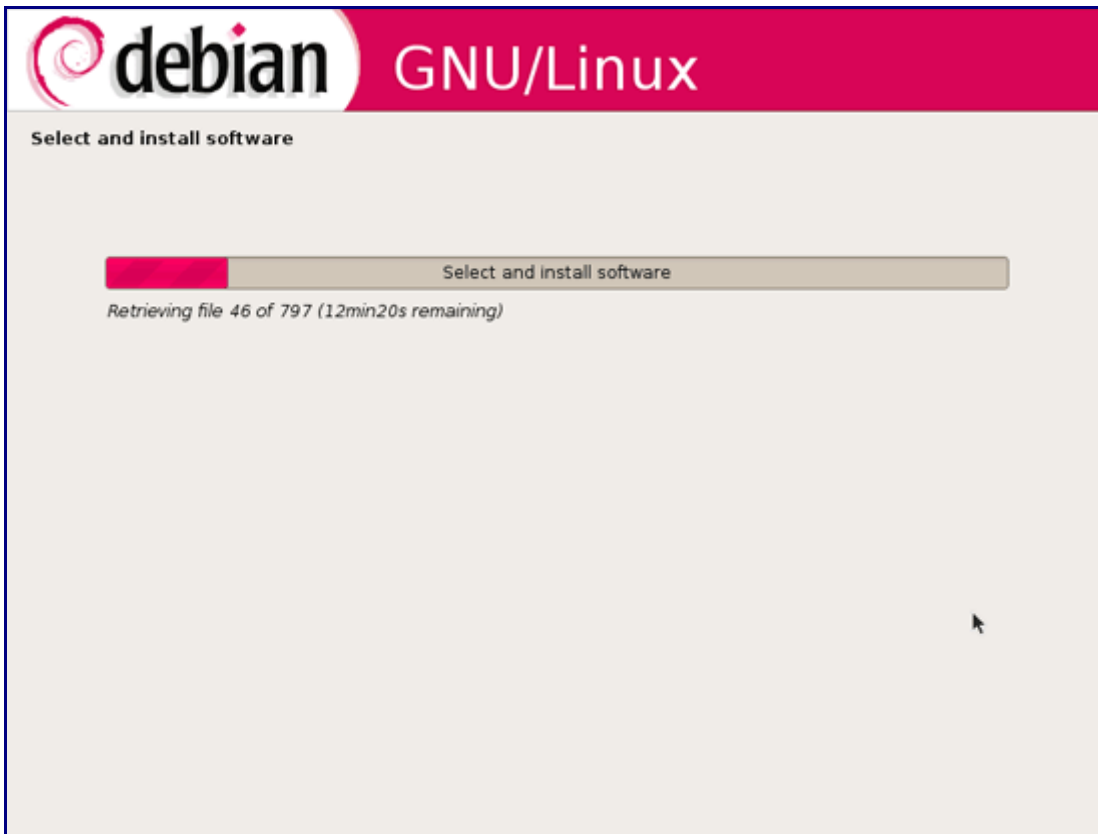
You can skip the package usage survey by selecting No:



Select Desktop environment and Standard system on the Software selection screen and hit Continue:



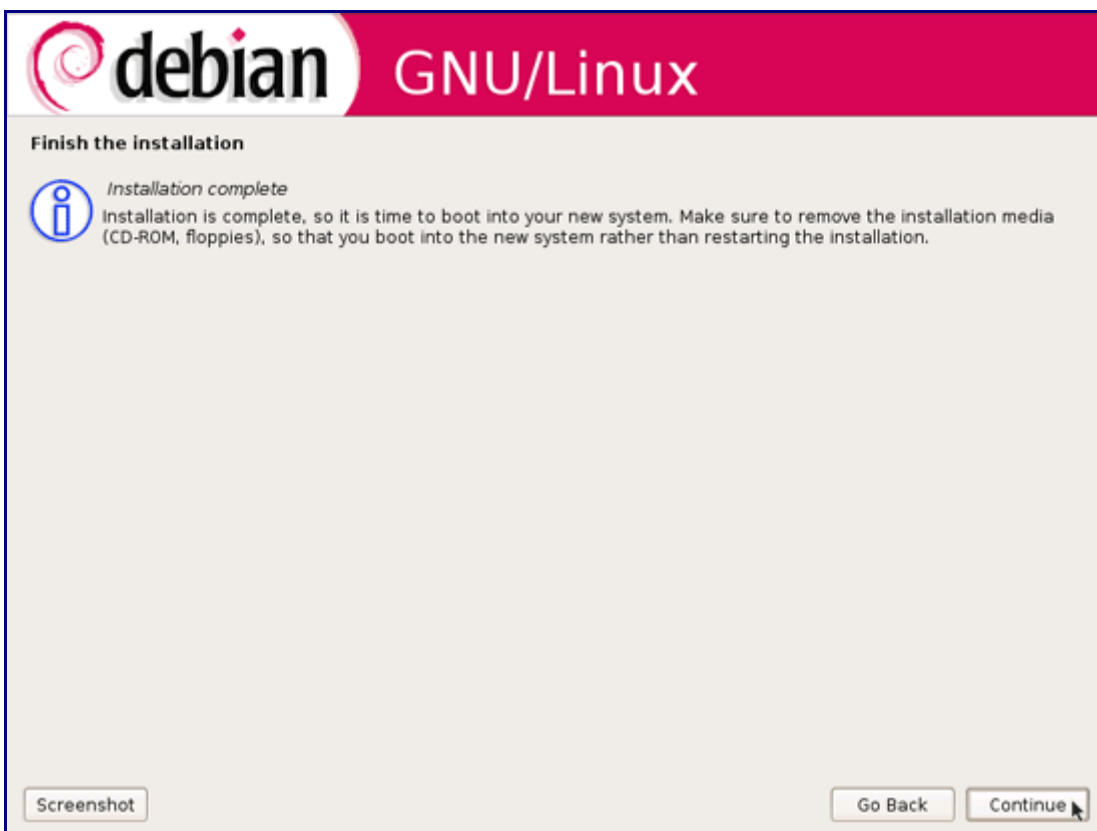
The required packages are downloaded and installed on the system:



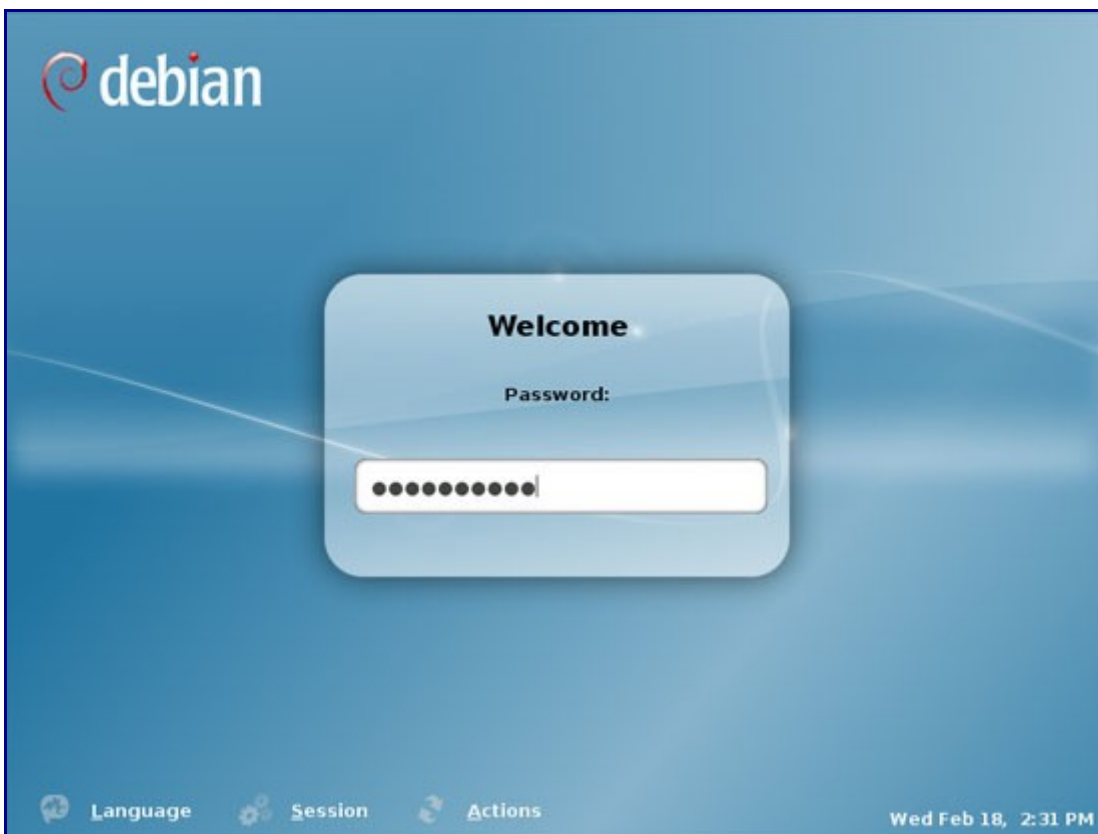
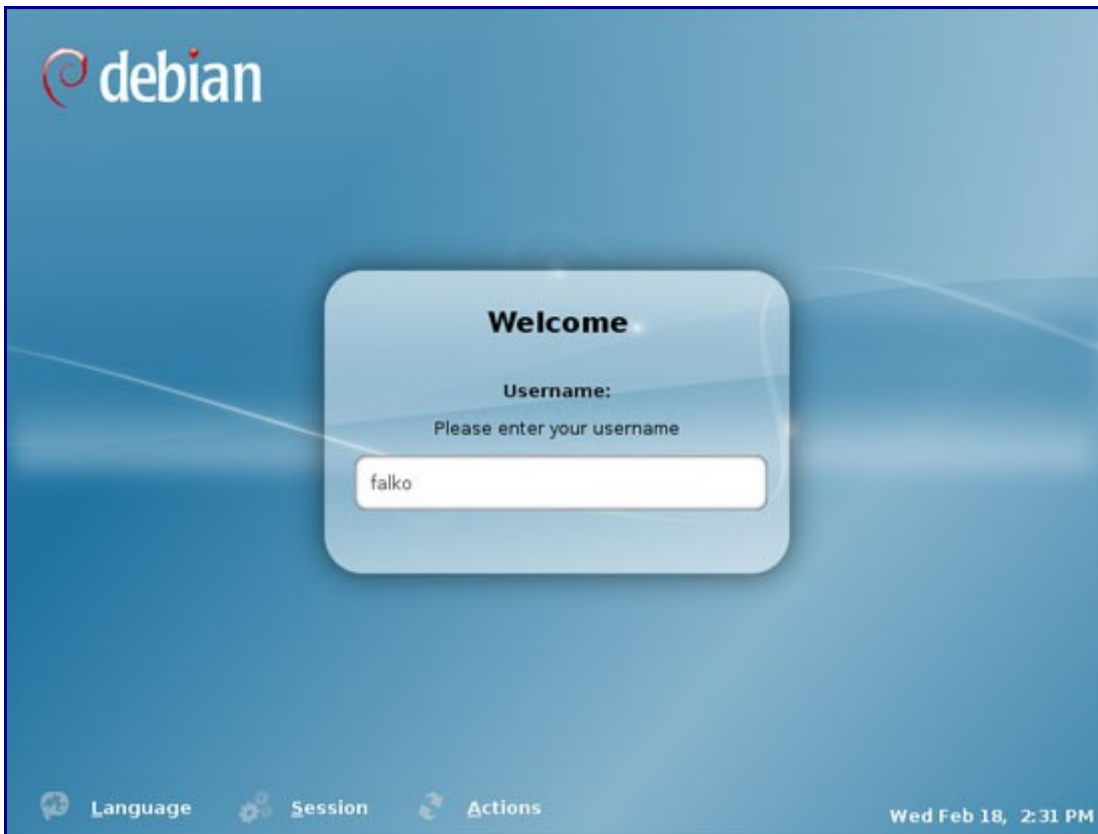
When you're asked Install the GRUB boot loader to the master boot record, select Yes:



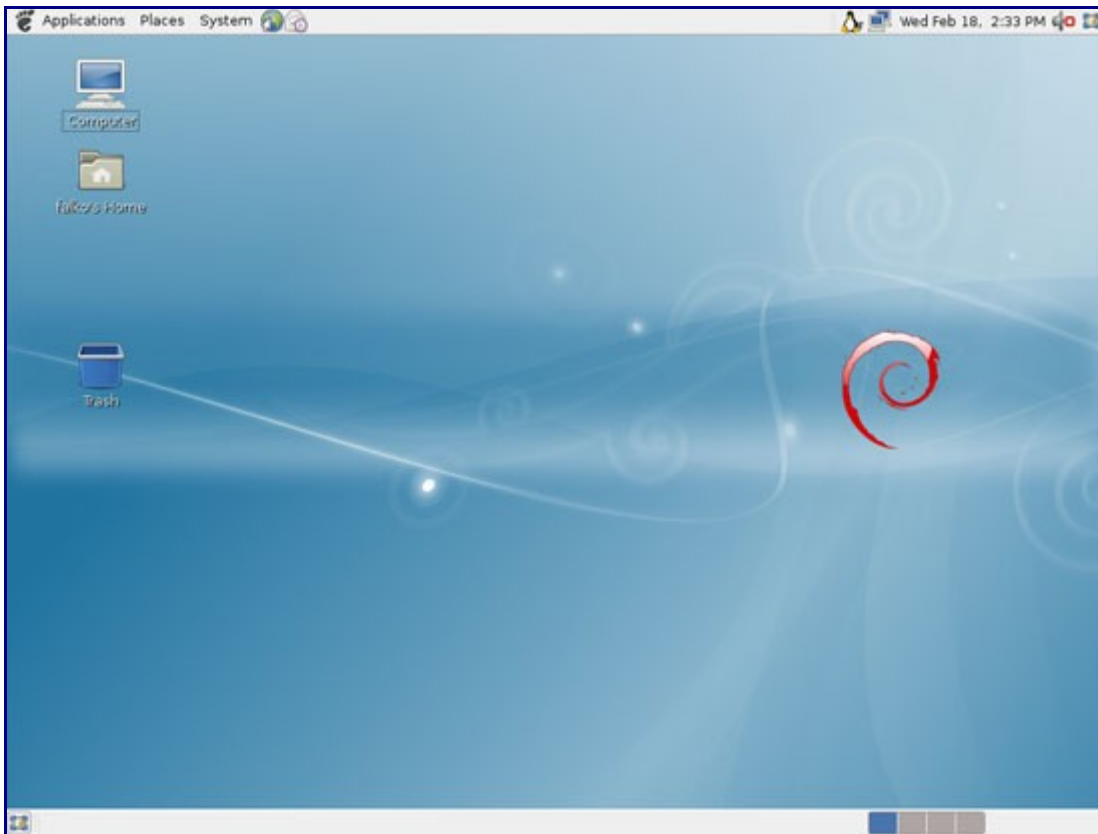
The base system installation is now finished. Remove the Debian Lenny Netinstall CD from the CD drive and hit Continue to reboot the system:



After the reboot, log in to the desktop with the username and password you provided during the installation:



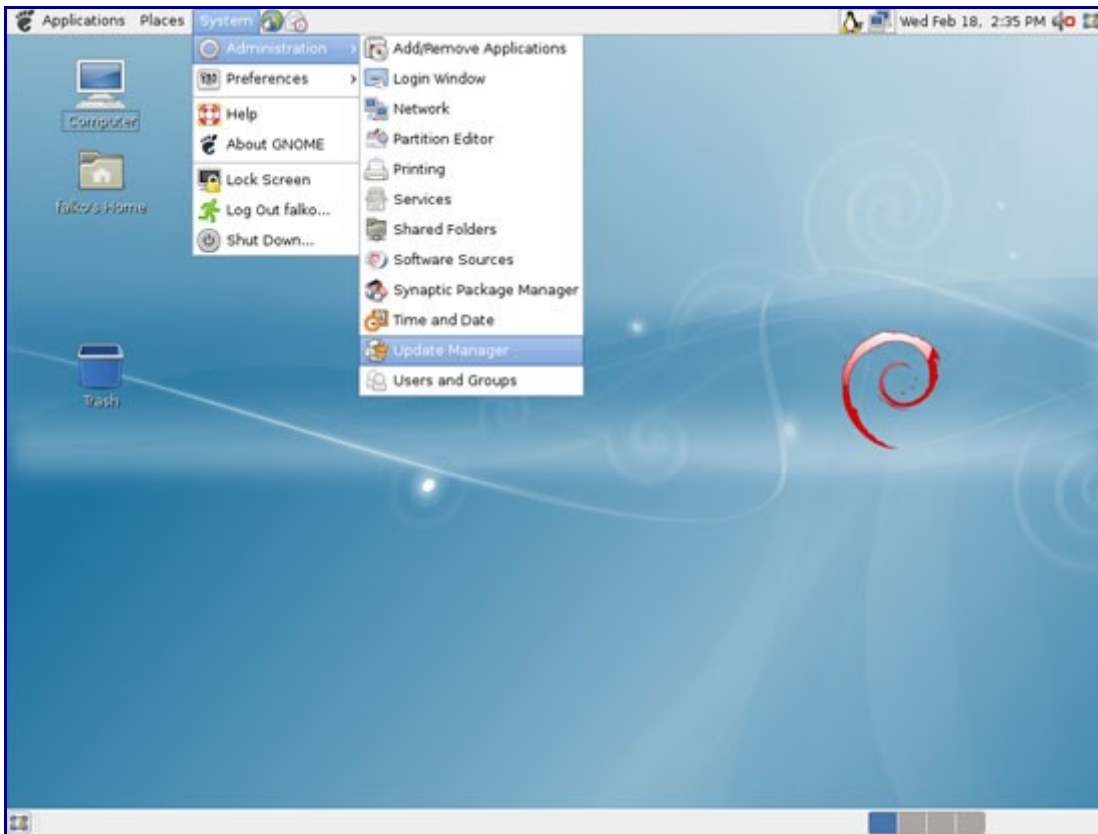
This is how your new desktop looks:



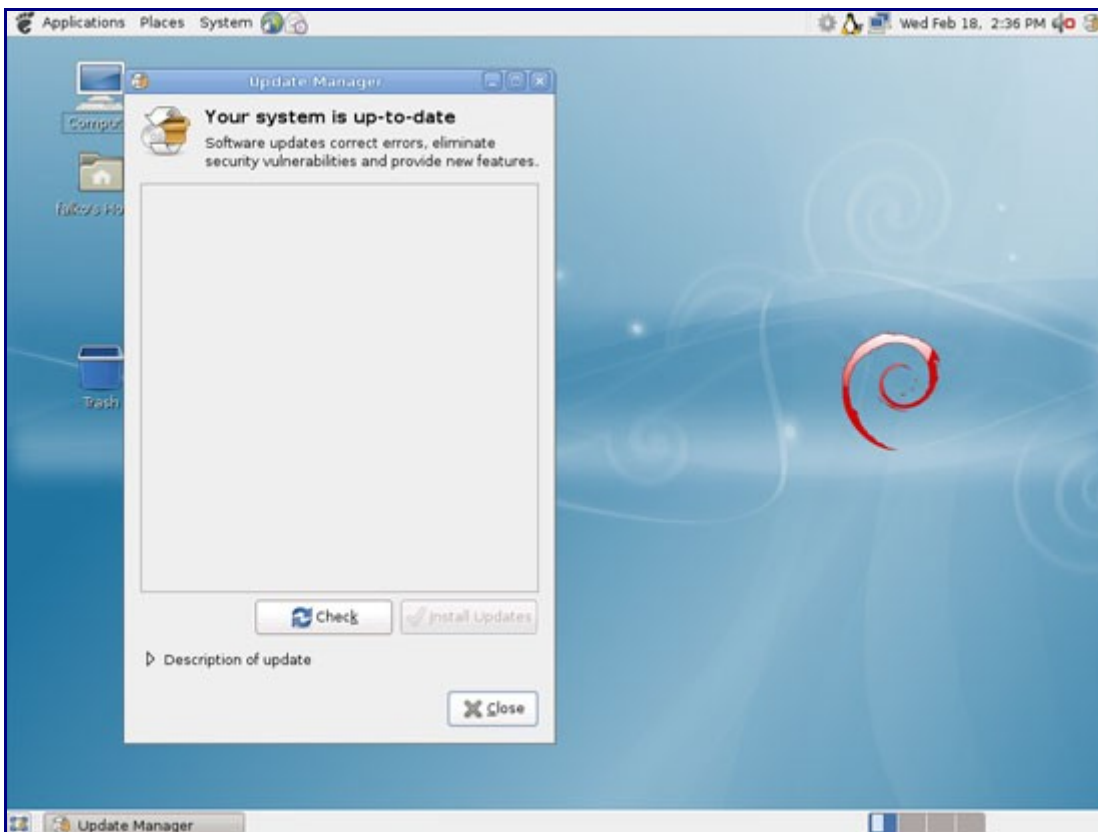
Now the base system is ready to be used.

3 Update The System

Now it's time to check for updates and install them. This is done using the Update Manager. If you see a notification in the taskbar that new updates are available, you can start the Update Manager by clicking on the update icon; otherwise you can start the Update Manager by going to System > Administration > Update Manager:

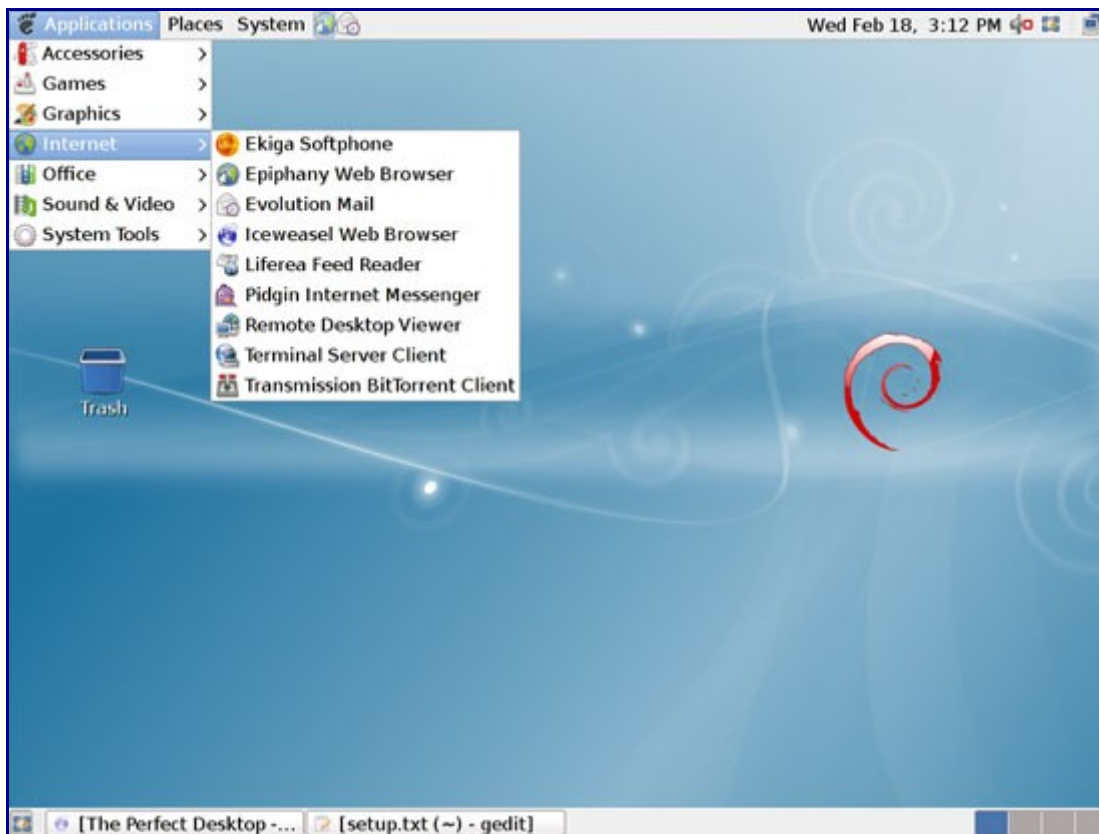


If new updates are available, the Update Manager will tell you so (you can click on the Check button to refresh the list), and you can click on the Install Updates button to install them. In my case, no updates were available:



4 Inventory Of What We Have So Far

Now let's browse all menus to see which of our needed applications are already installed:



You should find the following situation ([x] marks an application that is already installed, where [] is an application that is missing):

Graphics:

- [x] The GIMP
- [] F-Spot
- [] Picasa

Internet:

- [x] Firefox/Iceweasel
- [] Opera
- [] Flash Player
- [] FileZilla
- [] Thunderbird/Icedove
- [x] Evolution
- [] aMule
- [x] Transmission BitTorrent Client
- [] Azureus/Vuze
- [x] Pidgin
- [] Skype
- [] Google Earth
- [] Xchat IRC

Office:

- [x] OpenOffice Writer
- [x] OpenOffice Calc
- [] Adobe Reader

GnuCash

Scribus

Sound & Video:

Amarok

Audacity

Banshee

MPlayer

Rhythmbox Music Player

gtkPod

XMMS

dvd::rip

Kino

Sound Juicer CD Extractor

VLC Media Player

Real Player

Totem

Xine

Brasero

K3B

Multimedia-Codecs

Programming:

KompoZer

Bluefish

Quanta Plus

Other:

VMware Server

TrueType fonts

Java

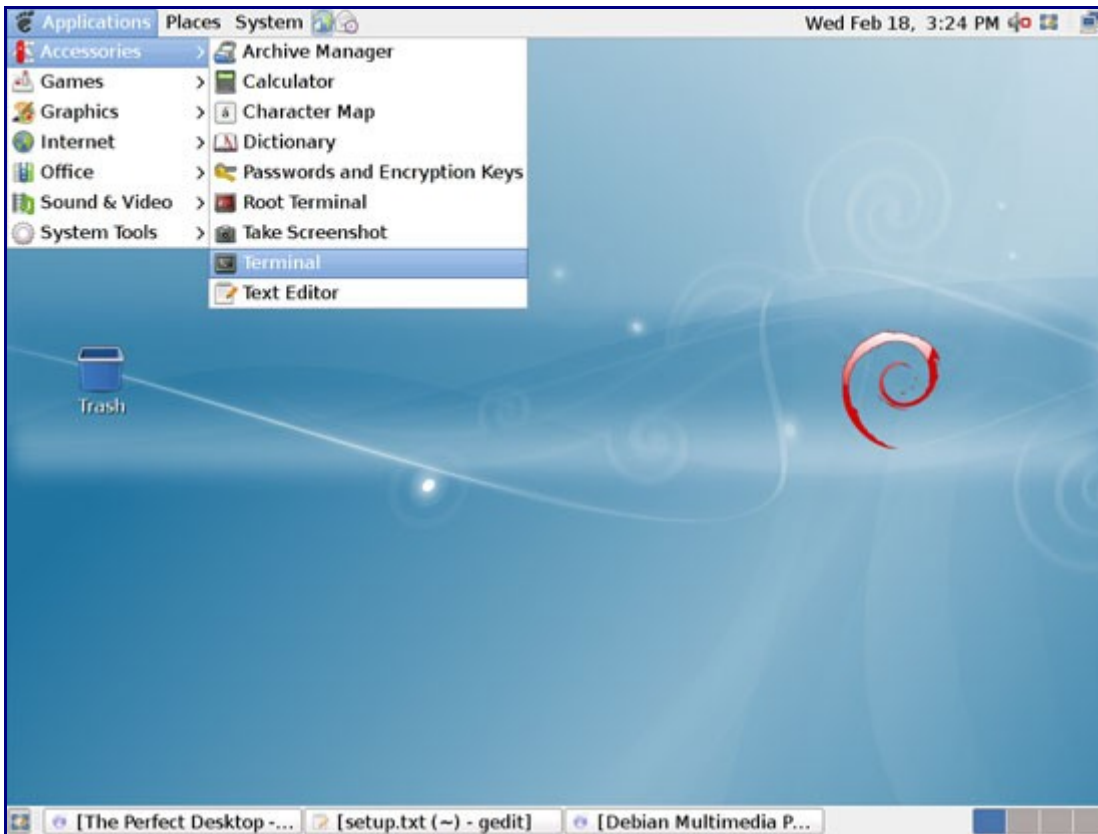
Read/Write support for NTFS partitions

So some applications are already on the system. NTFS read-/write support is enabled by default on Debian Lenny.

5 Configure Additional Repositories

Some packages like the Adobe Reader are not available in the standard Debian repositories. The easiest way to make such packages available to your system is to add the [Debian-Multimedia](#) repository.

First we open a terminal (Applications > Accessories > Terminal):



Become root...

```
su
```

... and edit /etc/apt/sources.list:

```
gedit /etc/apt/sources.list
```

Add contrib and non-free to the official Lenny repositories that are already in the file, e.g. as follows...

```
[...]
deb http://ftp2.de.debian.org/debian/ lenny main contrib non-free
deb-src http://ftp2.de.debian.org/debian/ lenny main contrib non-free

deb http://security.debian.org/ lenny/updates main contrib non-free
deb-src http://security.debian.org/ lenny/updates main contrib non-free
[...]
```

... and add the Debian-Multimedia repository (you can find a mirror close to you [here](#)), e.g. like this:

```
[...]
deb http://ftp-stud.hs-esslingen.de/pub/Mirrors/debian-multimedia/ stable main
deb-src http://ftp-stud.hs-esslingen.de/pub/Mirrors/debian-multimedia/ stable main
```

Then download the debian-multimedia-keyring package and install it:

```
wget http://www.debian-multimedia.org/pool/main/d/debian-multimedia-keyring/debian-
multimedia-keyring_2008.10.16_all.deb
dpkg -i debian-multimedia-keyring_2008.10.16_all.deb
```

Finally update your package-list:

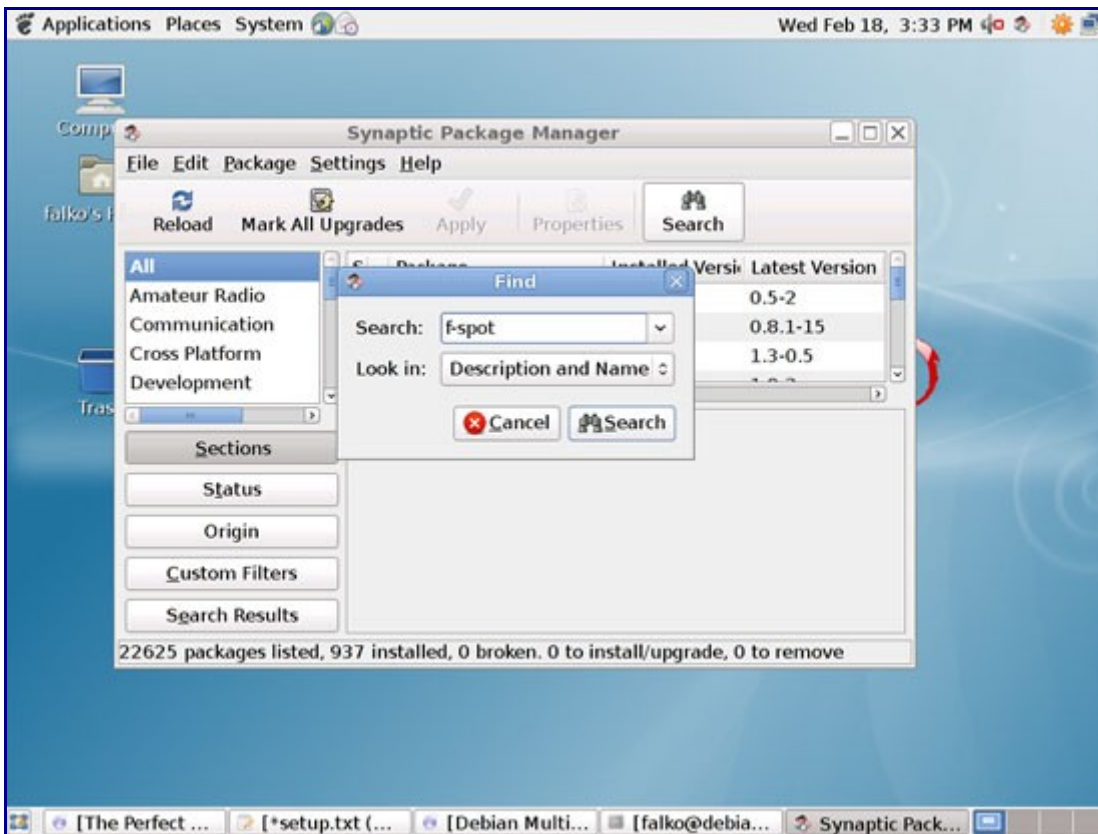
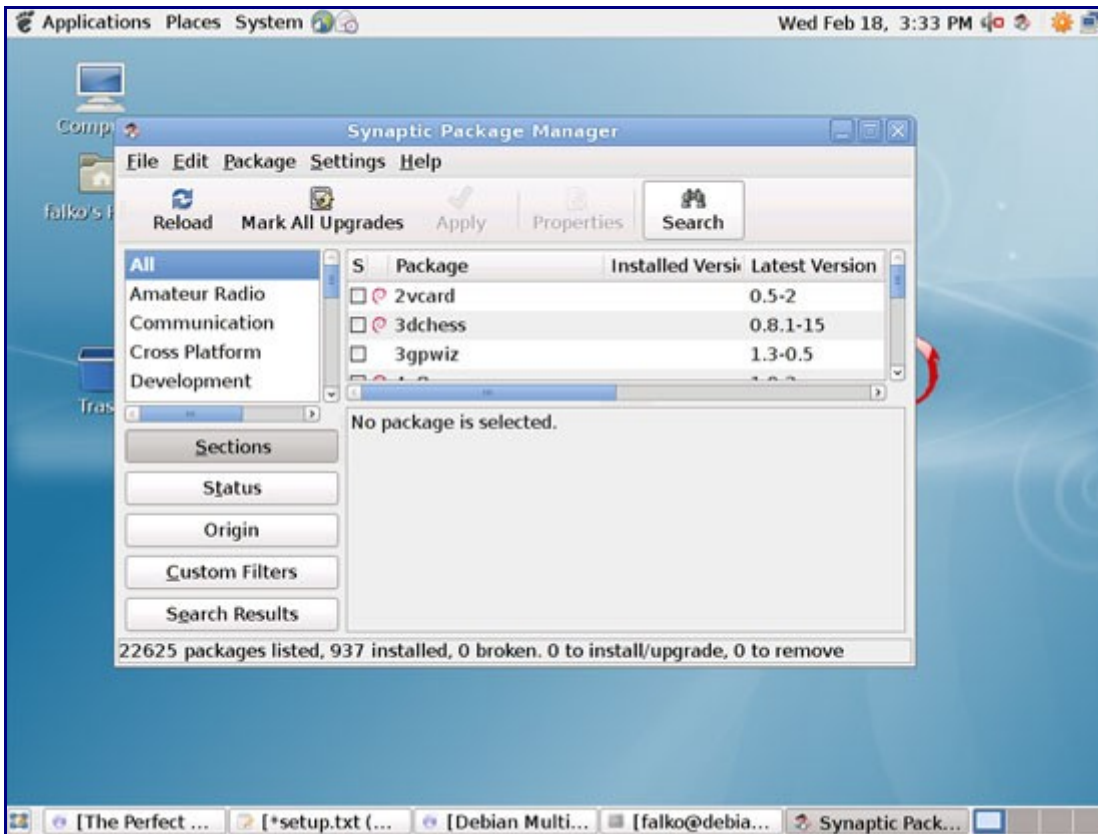
```
apt-get update
```


6 Install Additional Software

To install additional applications, open the Synaptic Package Manager (Applications > Administration > Synaptic Package Manager):



In the Synaptic Package Manager, we can install additional software. You can use the Search field to find packages:



Select the following packages for installation (* is a wildcard; e.g. gstreamer0.10* means all packages that start with gstreamer0.10):

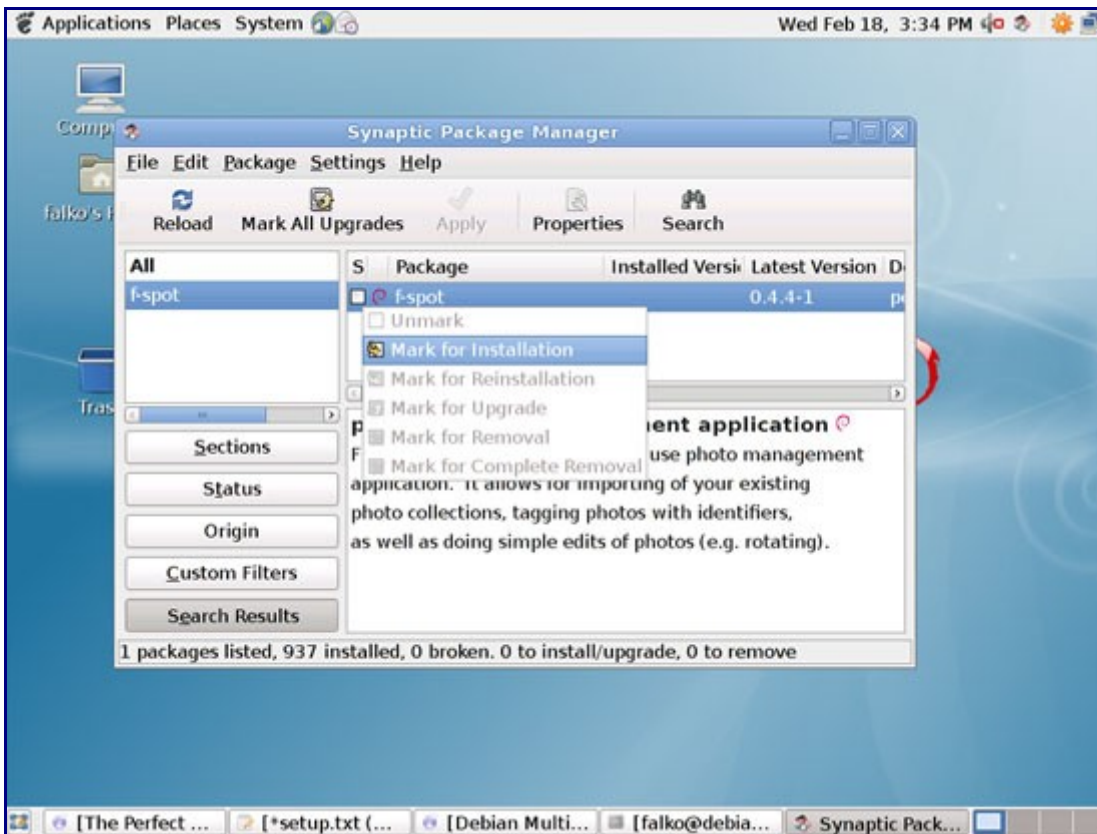
- f-spot
- flashplayer-mozilla

- filezilla
- icedove
- icedove-beagle
- icedove-gnome-support
- nautilus-sendto
- amule
- amule-utils-gui
- vuze
- xchat
- xchat-gnome
- acroread*
- mozilla-acroread
- gnucash
- scribus
- scribus-template
- amarok
- audacity
- banshee
- mplayer
- mozilla-mplayer
- w32codecs
- gtkpod-aac
- xmms2*
- dvdrip
- libdvdcss2
- kino
- mozilla-plugin-vlc
- vlc*
- realplayer
- gxine
- gxineplugin
- xineplugin
- brasero
- k3b
- gstreamer0.10*
- bluefish
- quanta
- msttcorefonts
- gdeb
- gdebi
- libasound2
- libc6
- libgcc1
- libqt4-core
- libqt4-gui
- libsigc++-2.0-0c2a
- libstdc++6 libx11-6
- libqtcore4

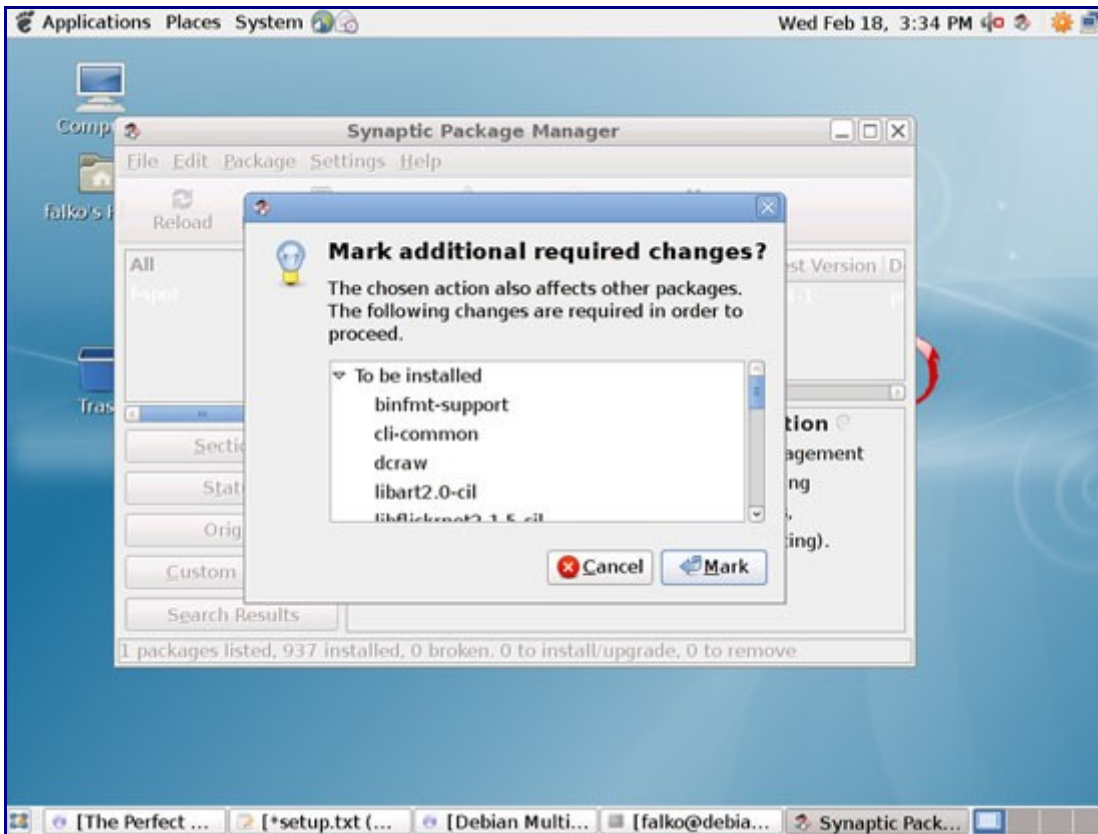
- libqt4-network
- libqt4-script
- libqt4-xml
- libqt4-dbus
- libqt4-test
- libqtgui4
- libqt4-svg
- libqt4-opengl
- libqt4-designer
- libqt4-assistant
- openjdk-6*
- icedtea-gcjwebplugin

There are also lots of other applications available that you can install as well if you like.

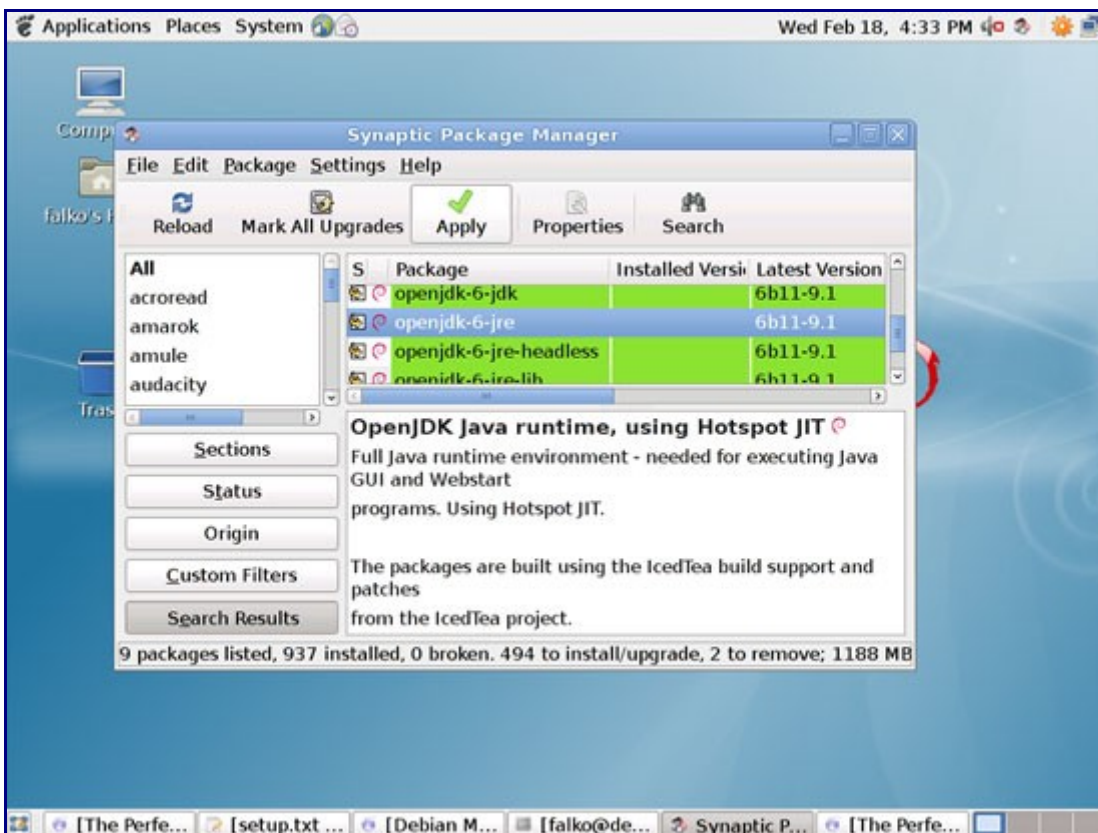
To select a package for installation, click on the checkbox in front of it and select Mark for Installation from the menu that comes up:



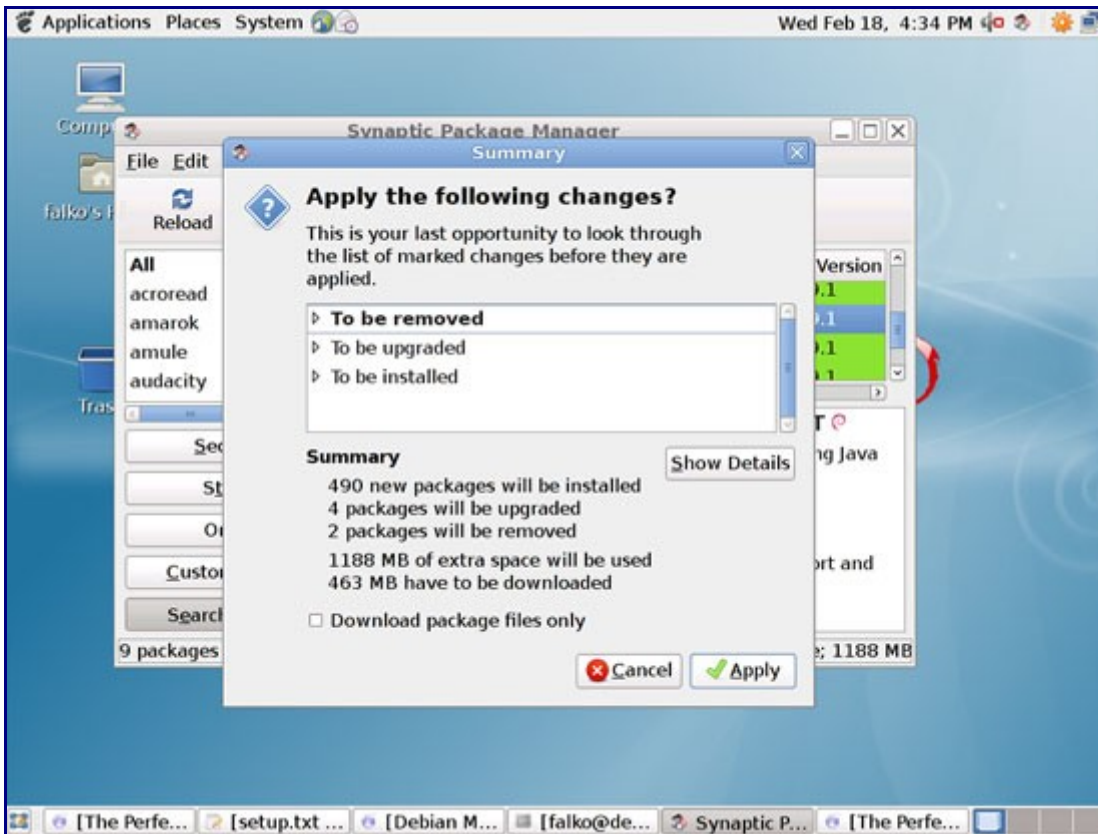
If a package has a dependency that needs to be satisfied, a window will pop up. Accept the dependencies by clicking on Mark:



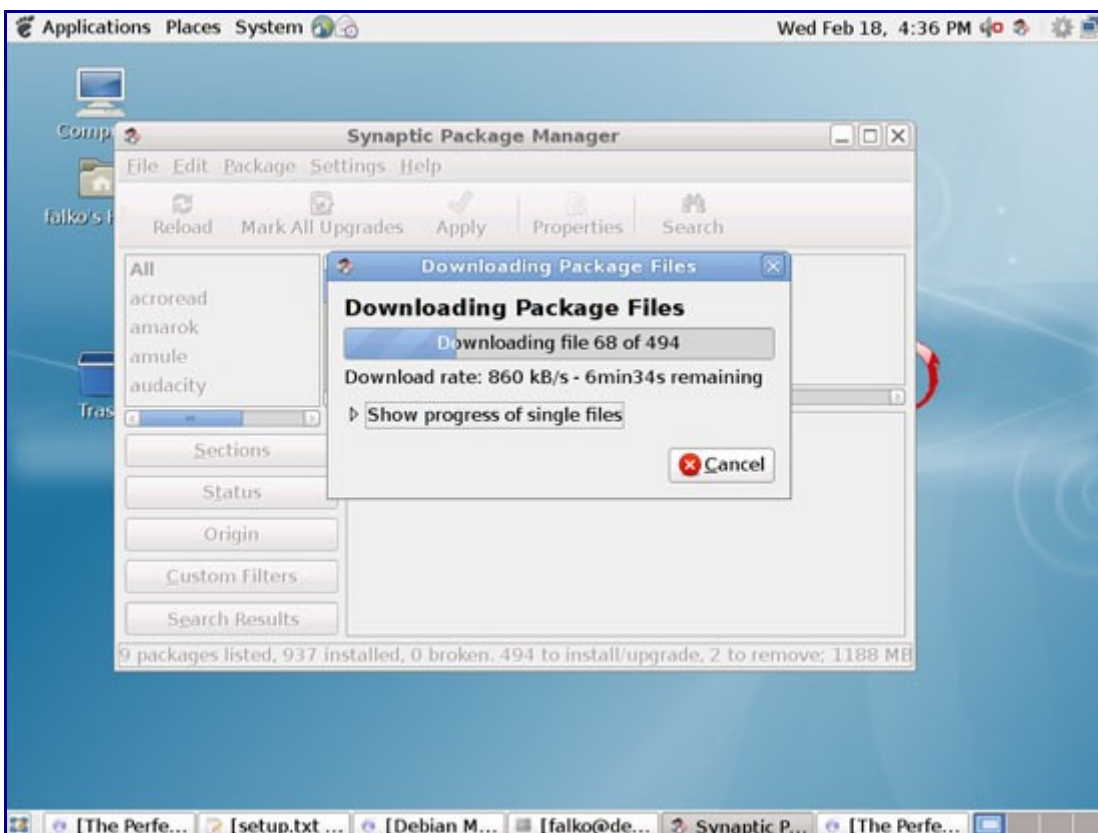
After you've selected the desired packages, click on the Apply button:

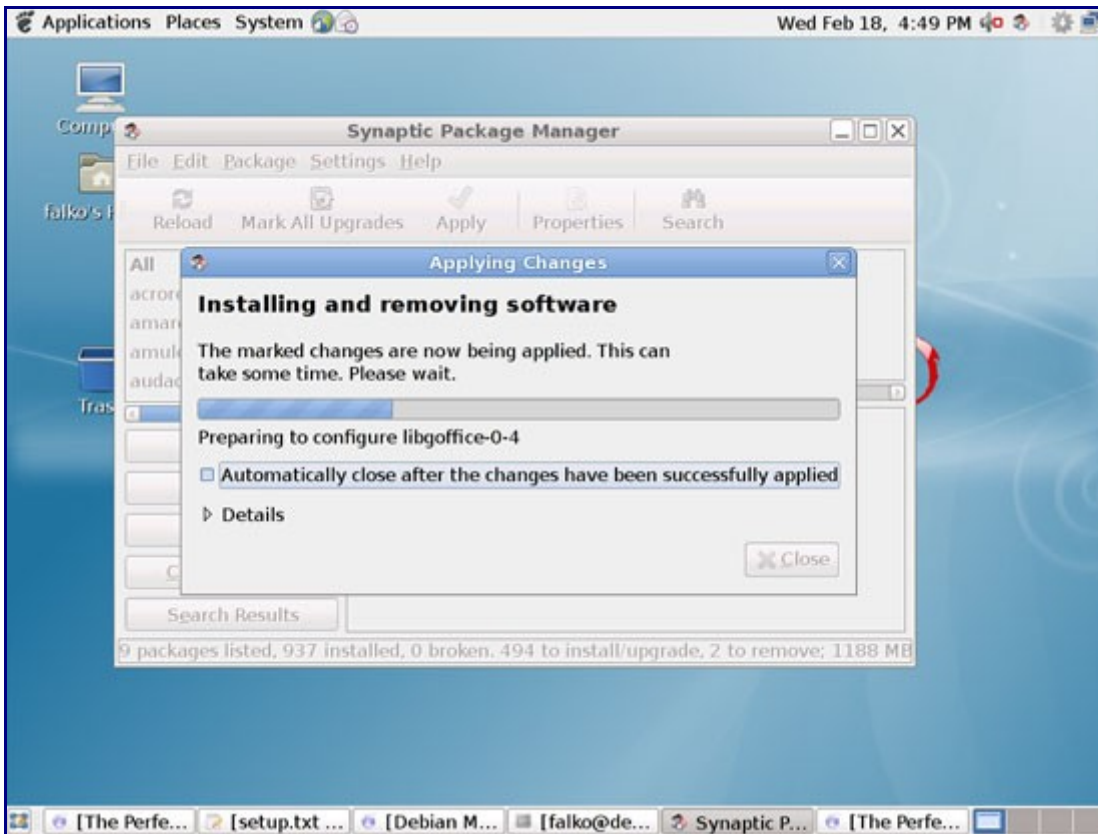


Confirm your selection by clicking on Apply:

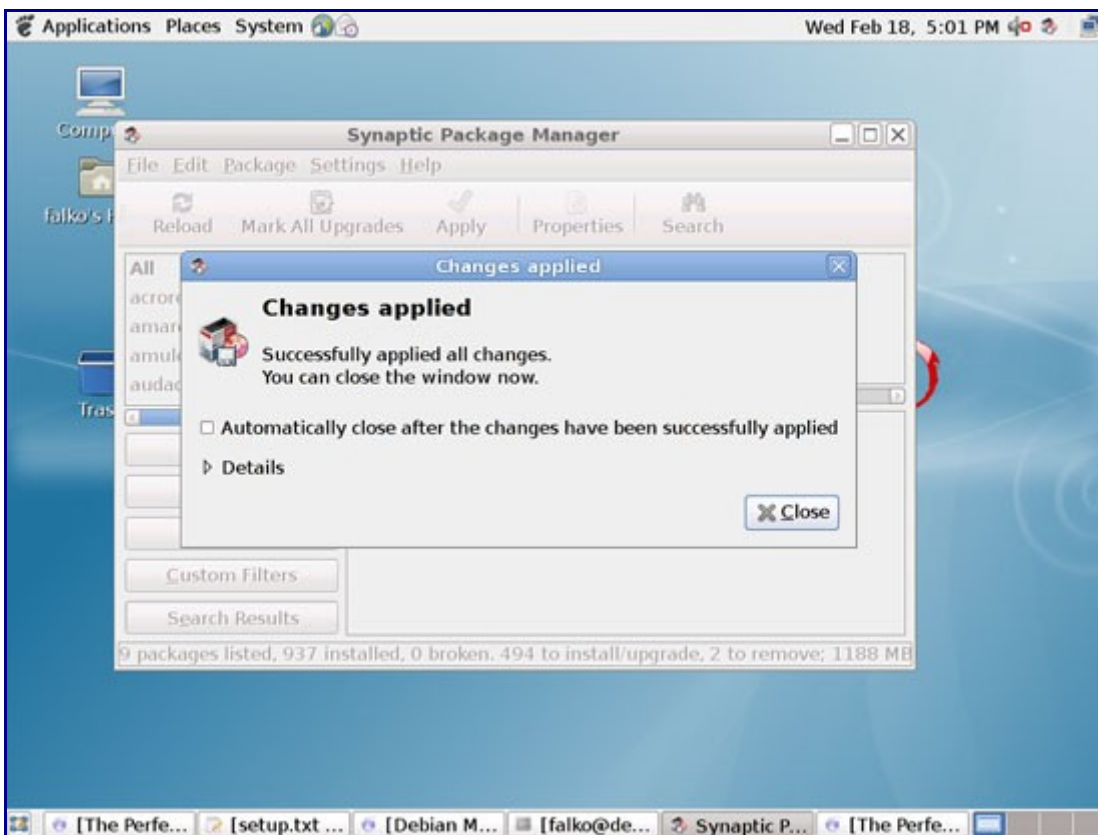


The packages are now being downloaded from the repositories and installed. This can take a few minutes, so please be patient:





After all packages have been installed, click on Close:

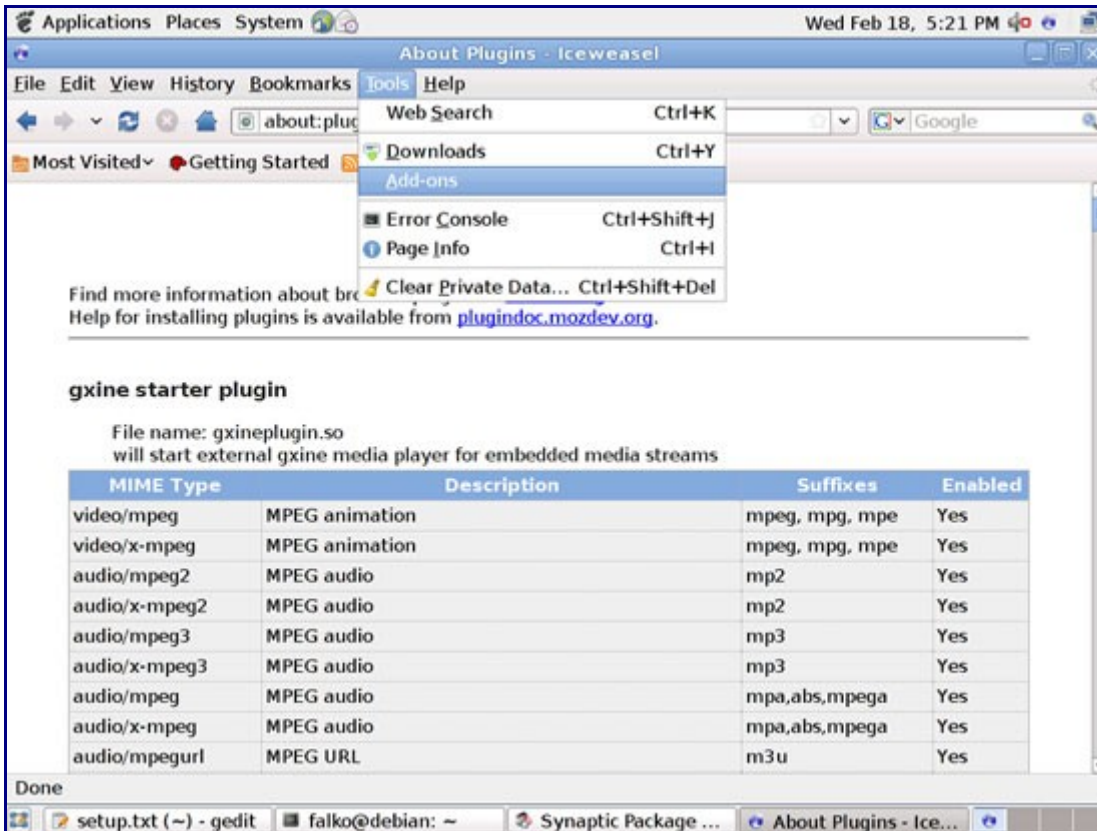


You can leave the Synaptic Package Manager afterwards.

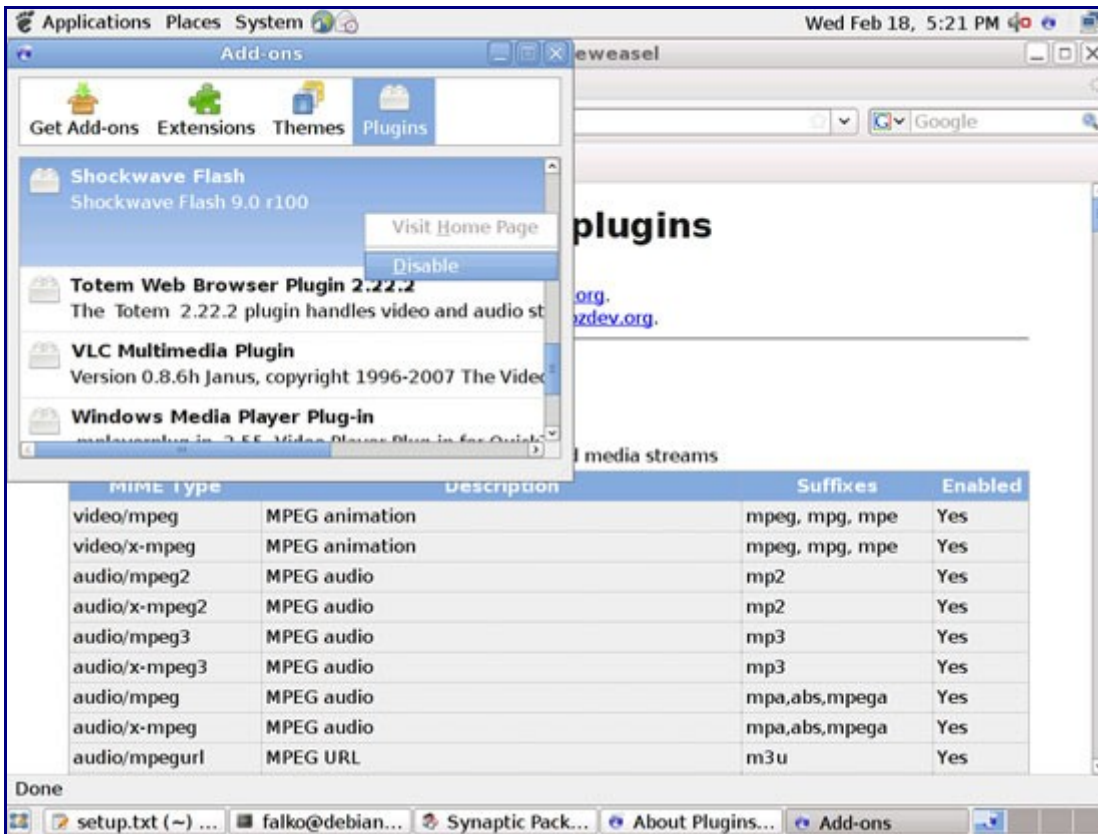
7 Flash Player

Debian Lenny comes with the Flash Player 9 installed by default, but we've just installed Flash Player 10 in the previous chapter (from Debian-Multimedia). Here's how we can disable Flash Player 9 and enable Flash Player 10 in Firefox/Iceweasel:

In Firefox/Iceweasel, go to Tools > Add-ons:



Go to Plugins, right-click on the Shockwave Flash plugin and select Disable:



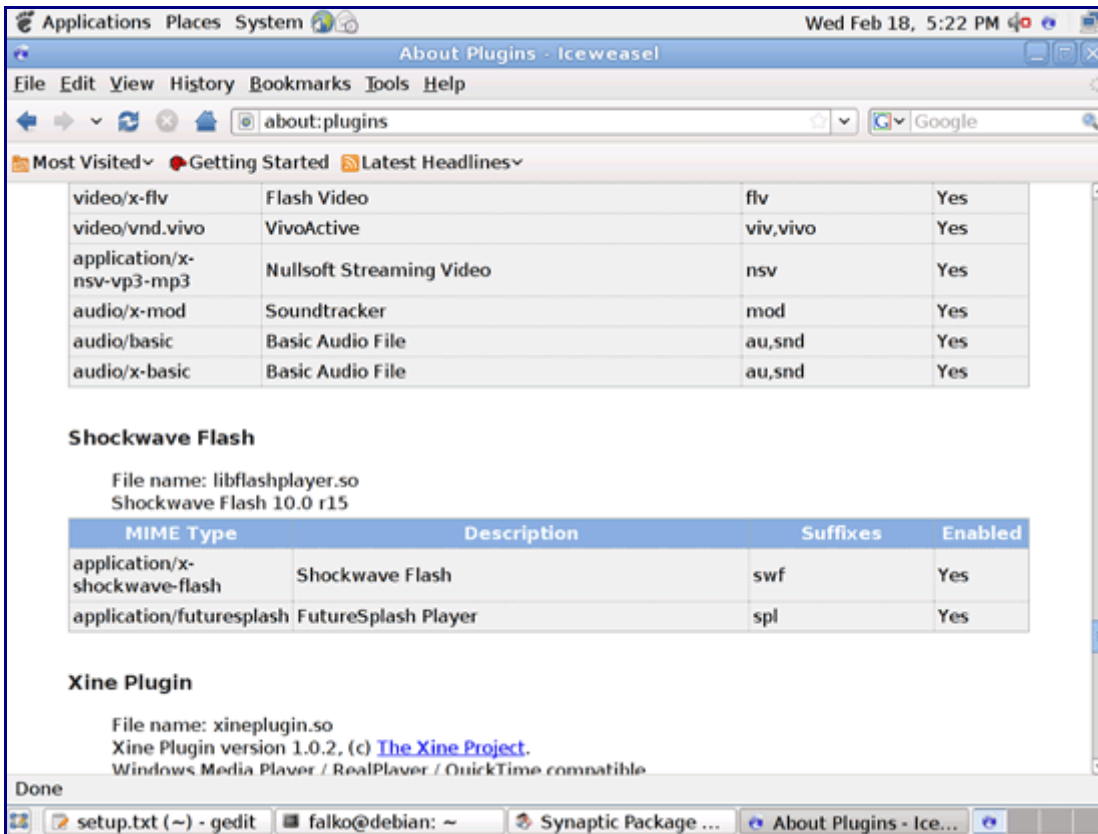
Afterwards, open a terminal, become root...

su

... and run the following command to copy Flash Player 10 to the Firefox/Iceweasel plugin directory:

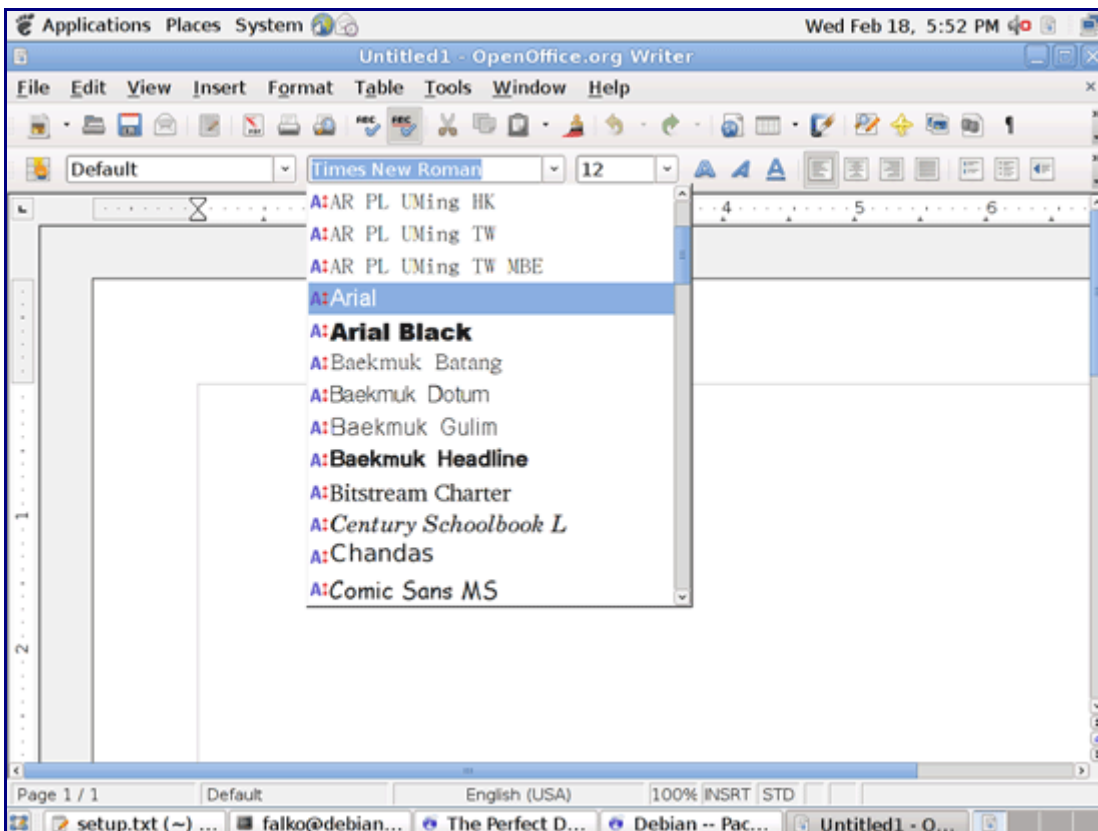
```
cp /usr/lib/flashplayer-mozilla/libflashplayer.so /usr/lib/mozilla/plugins/
```

In Firefox/Iceweasel, type about:plugins in the address bar. Firefox/Iceweasel will then list all installed plugins, and it should list the Flash Player (version 10.0r15) among them:



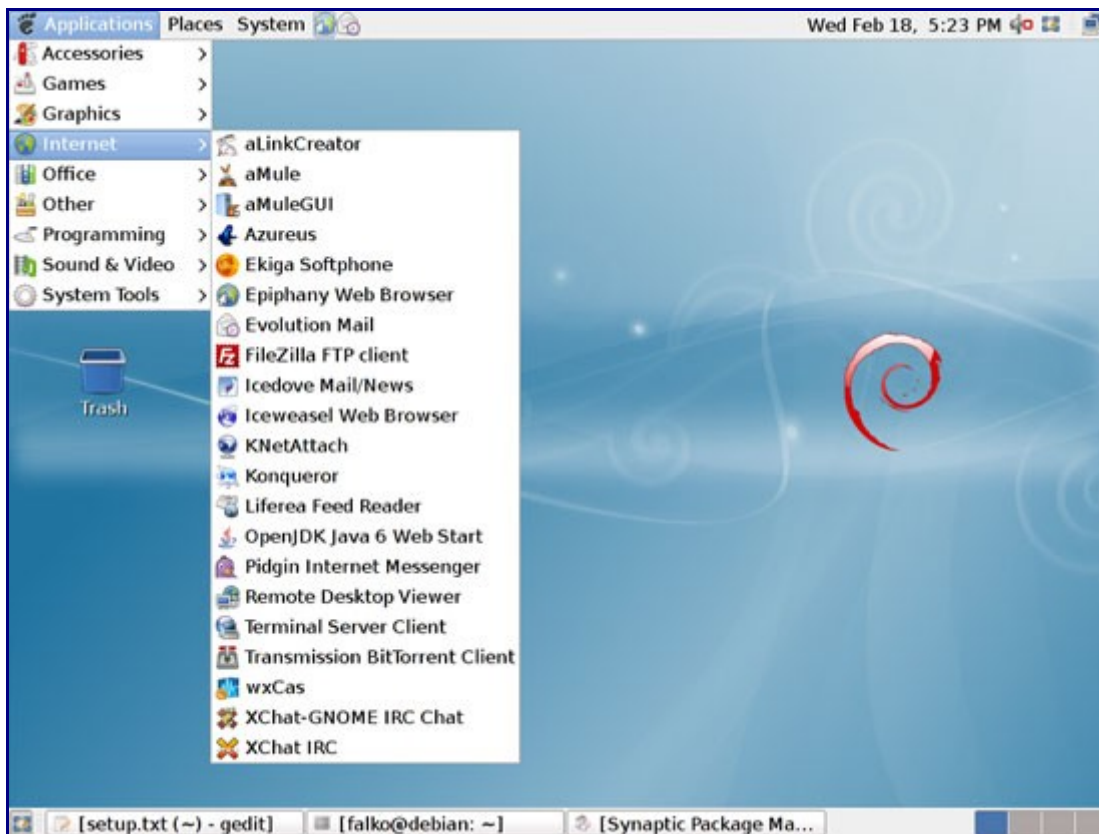
8 TrueType Fonts

To check if the TrueType fonts have been installed correctly, open a word processor like OpenOffice. You should now find your new Windows fonts there:



9 Inventory (II)

Now let's check again what we have so far by browsing the menus again:



Our inventory should now look like this:

Graphics:

- [x] The GIMP
- [x] F-Spot
- [] Picasa

Internet:

- [x] Firefox/Iceweasel
- [] Opera
- [x] Flash Player
- [x] FileZilla
- [x] Thunderbird/Icedove
- [x] Evolution
- [x] aMule
- [x] Transmission BitTorrent Client
- [x] Azureus/Vuze
- [x] Pidgin
- [] Skype
- [] Google Earth
- [x] Xchat IRC

Office:

- [x] OpenOffice Writer
- [x] OpenOffice Calc
- [x] Adobe Reader
- [x] GnuCash

Scribus

Sound & Video:

Amarok

Audacity

Banshee

MPlayer

Rhythmbox Music Player

gtkPod

XMMS

dvd::rip

Kino

Sound Juicer CD Extractor

VLC Media Player

Real Player

Totem

Xine

Brasero

K3B

Multimedia-Codecs

Programming:

KompoZer

Bluefish

Quanta Plus

Other:

VMware Server

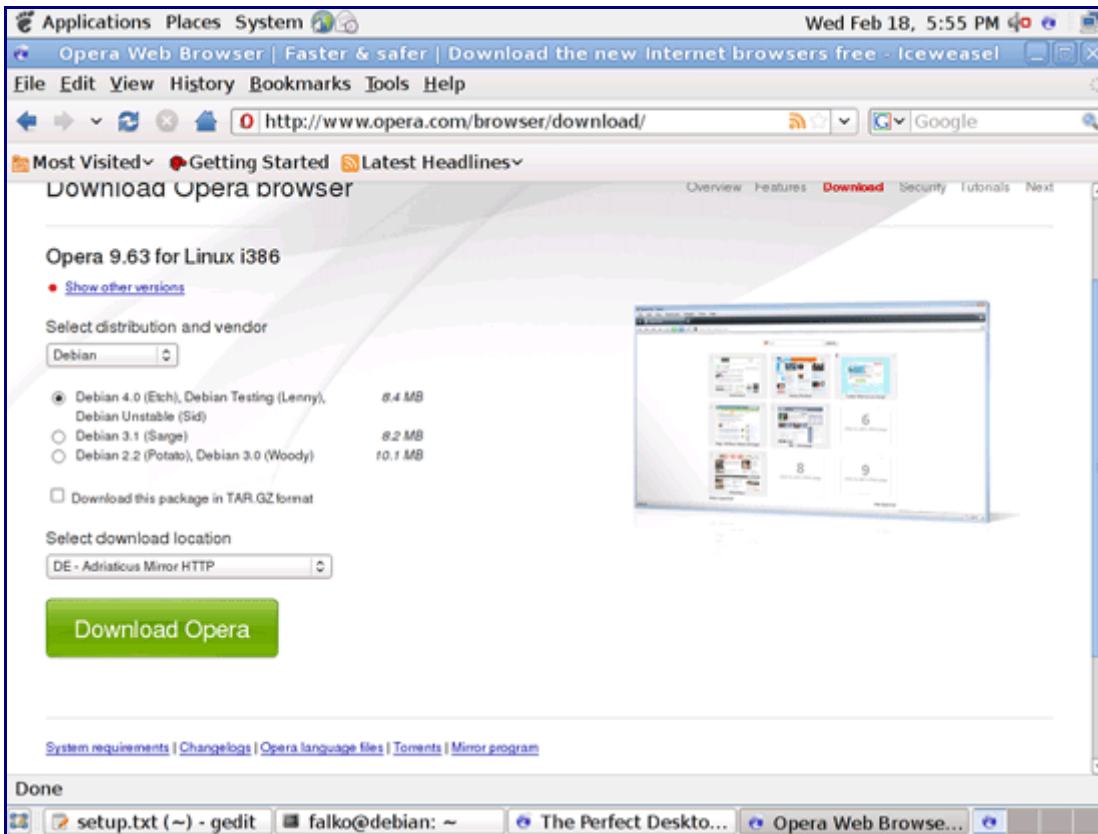
TrueType fonts

Java

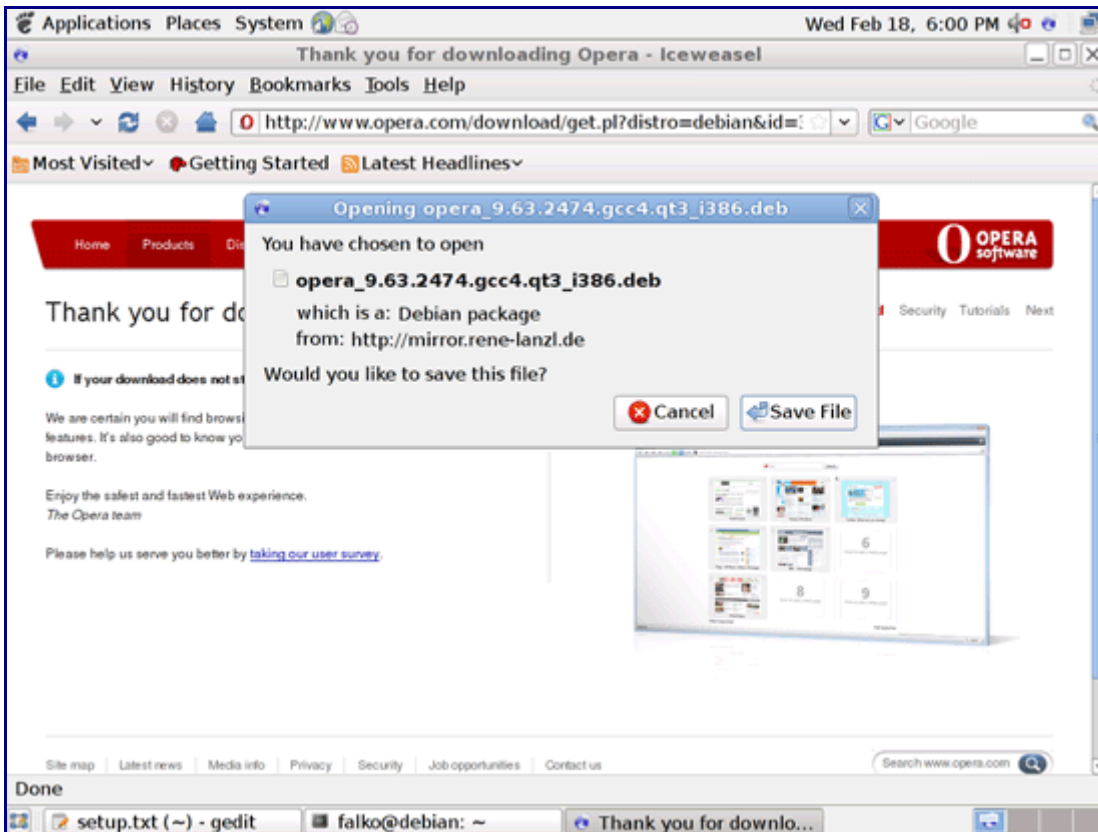
Read/Write support for NTFS partitions

10 Opera

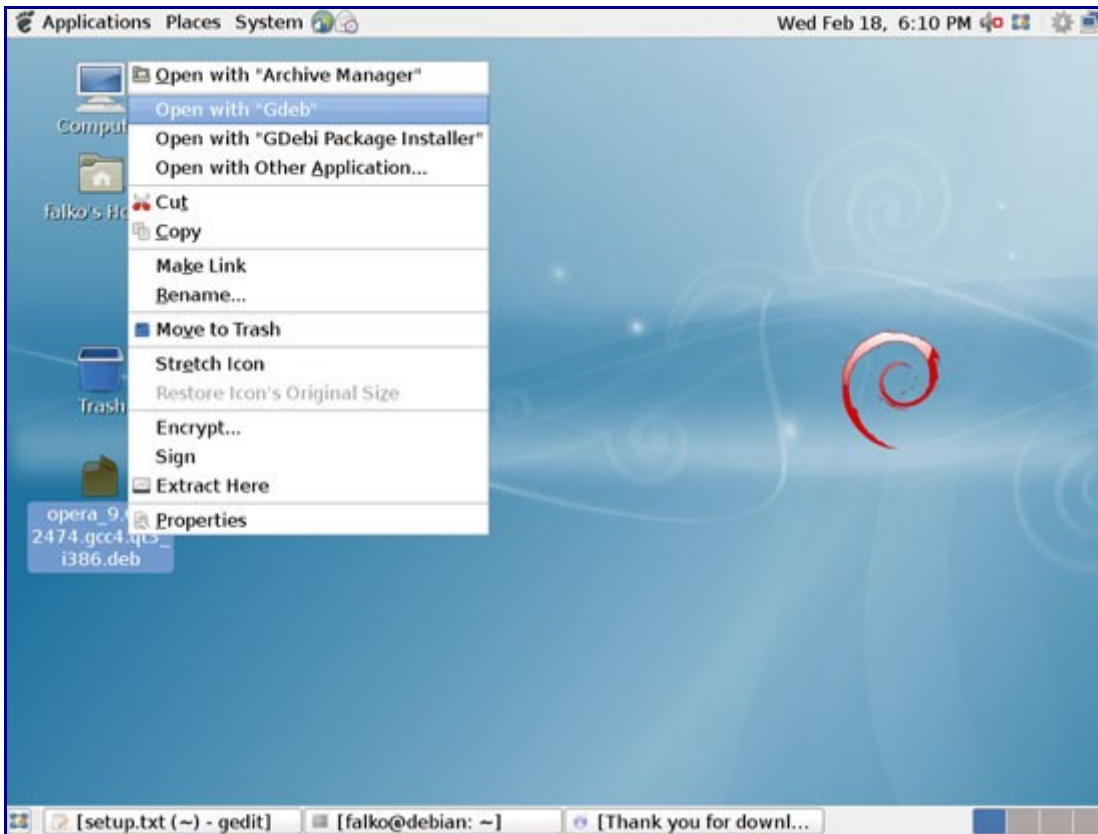
Open a browser and go to <http://www.opera.com/browser/download/>; select Debian as the distribution and then Debian 4.0 (Etch), Debian Testing (Lenny), Debian Unstable (Sid) and click on the Download Opera button:



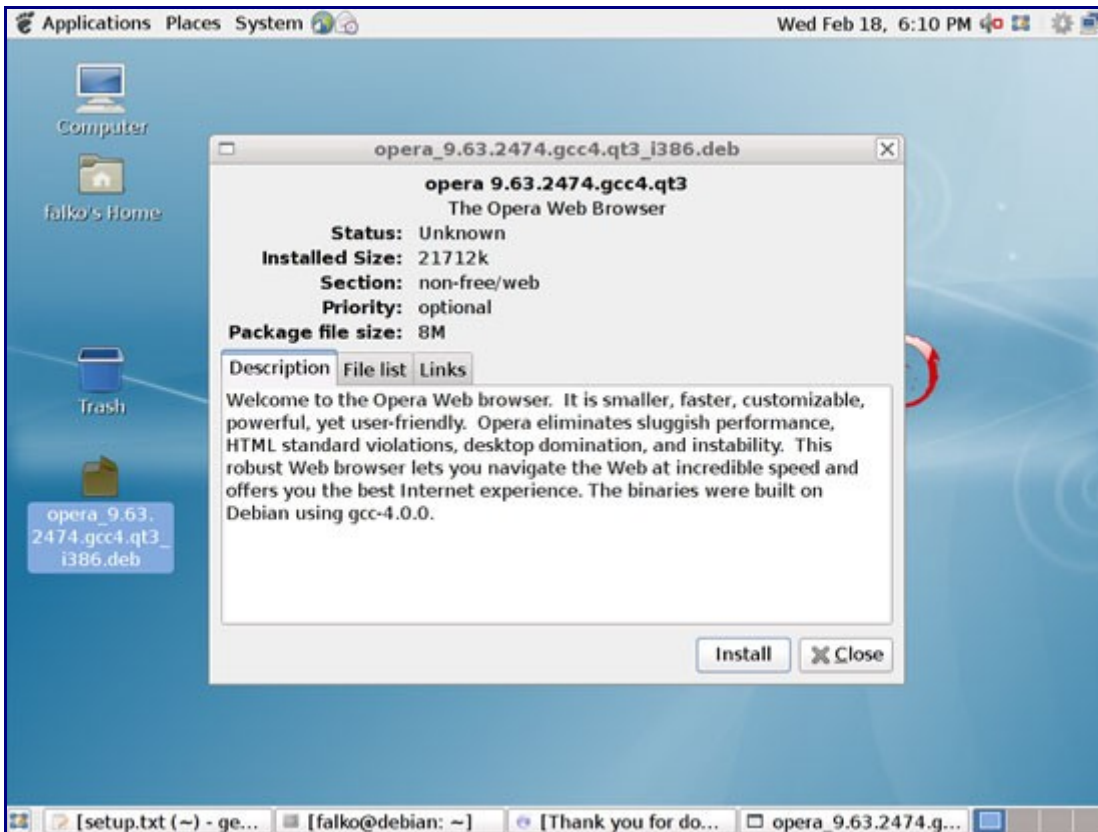
On the next page, a download dialogue should pop up; click on Save File:



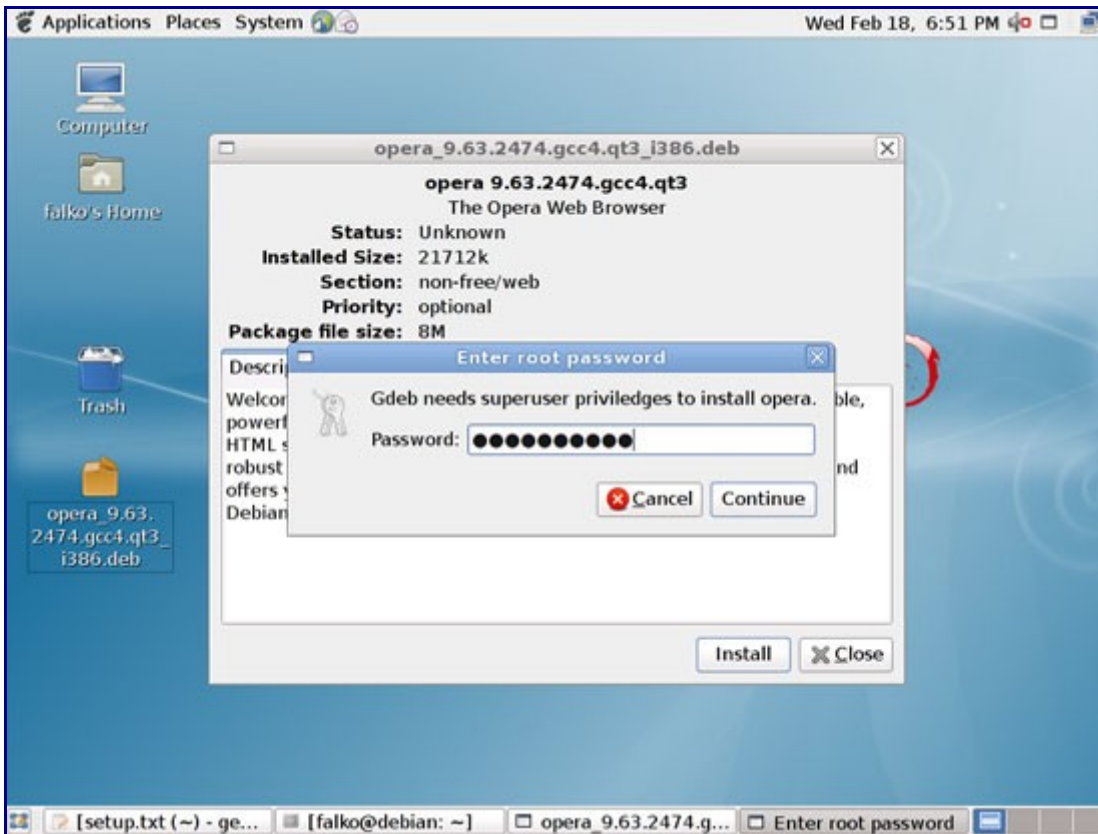
After the download has finished, right-click on the downloaded file and select Open with "Gdeb" from the menu:



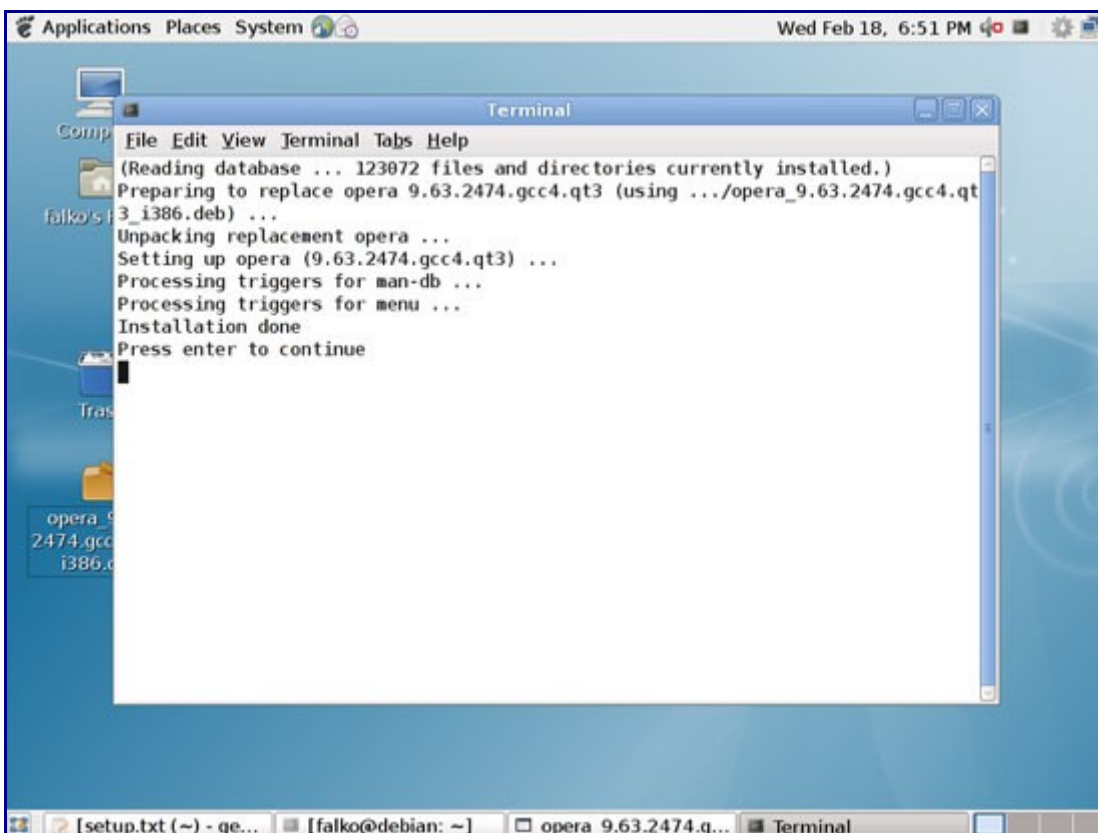
A new window opens - click in Install:



Type in the root password:



A terminal window opens where the package is installed. Press ENTER after the successful installation to close the terminal:



A second way to install Opera is to use gdebi as root from the command line. In contrast to Gdeb,

gdebi resolves all dependencies of a package, so you should use this if you are getting dependency problems with Gdeb.

Open a terminal and become root:

su

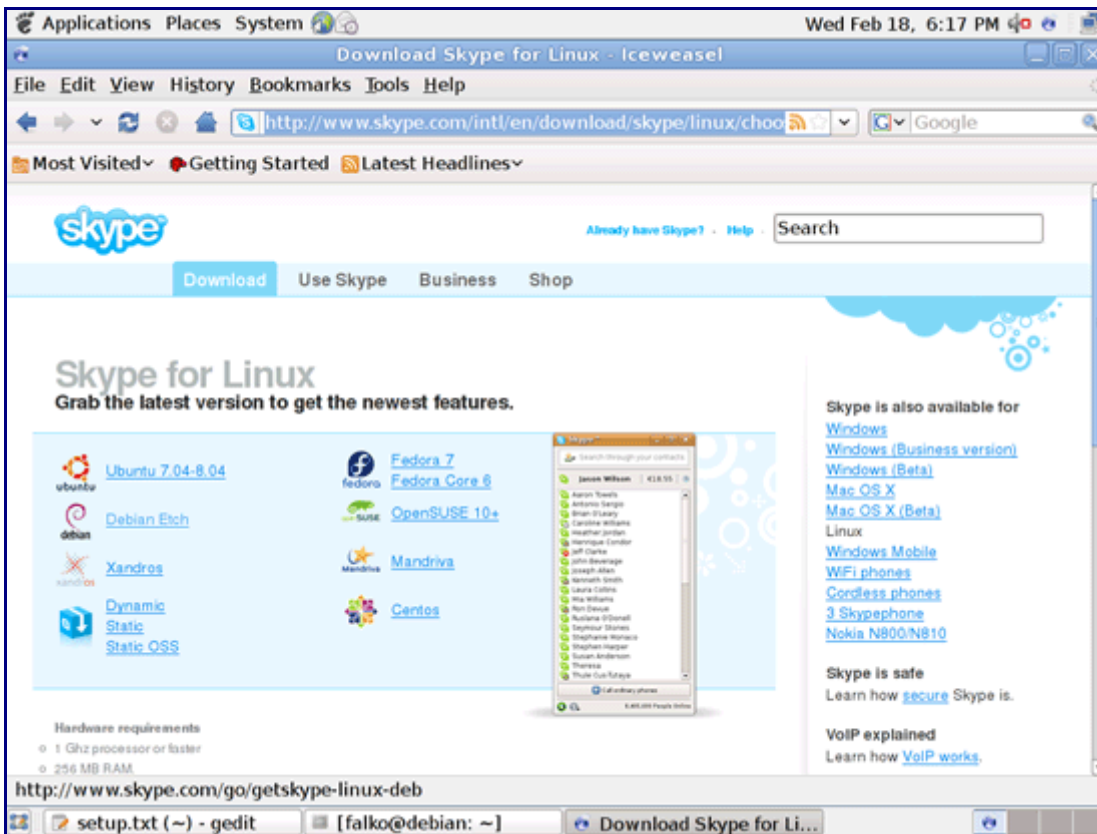
You can then install Opera as follows:

```
gdebi /home/falko/Desktop/opera_9.63.2474.gcc4.qt3_i386.deb
```

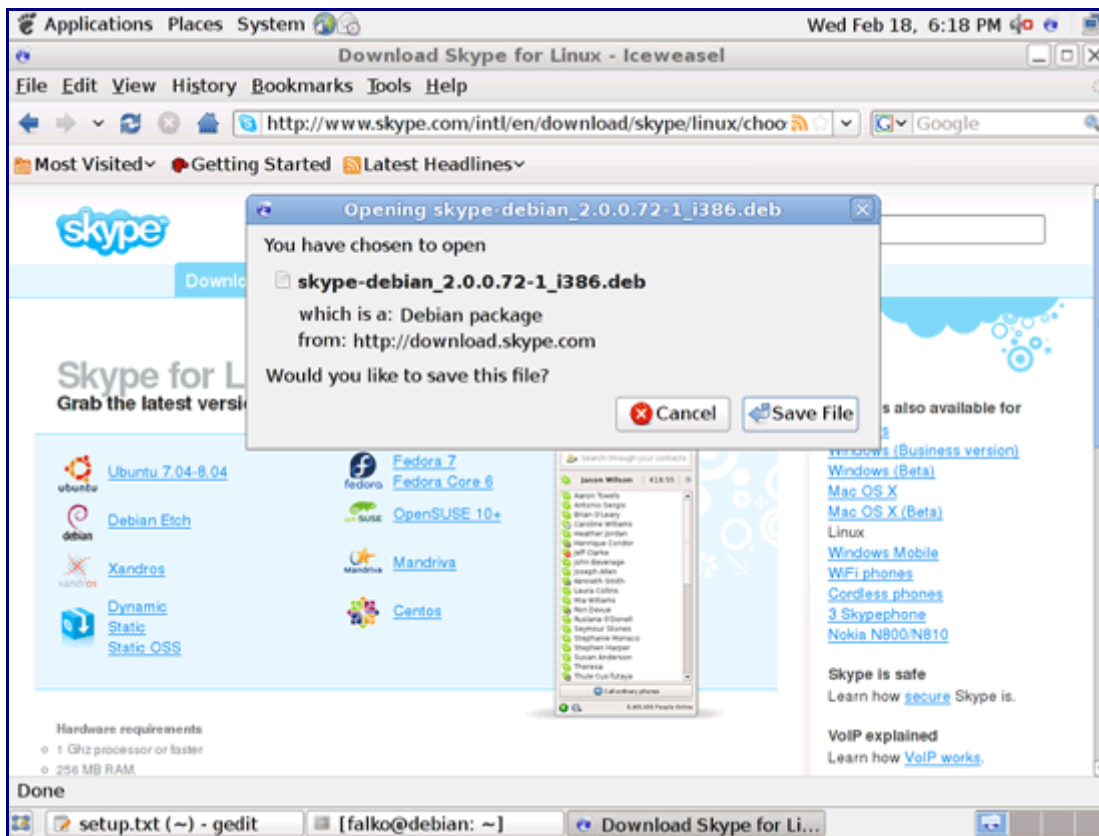
Make sure you use the correct path; also the package name can differ, for example if there is a newer version - use the TAB key to use autocompletion in the terminal

11 Skype

To download Skype, go to <http://www.skype.com/download/skype/linux/>, and click on the Download now button. On the next page, select Debian Etch:



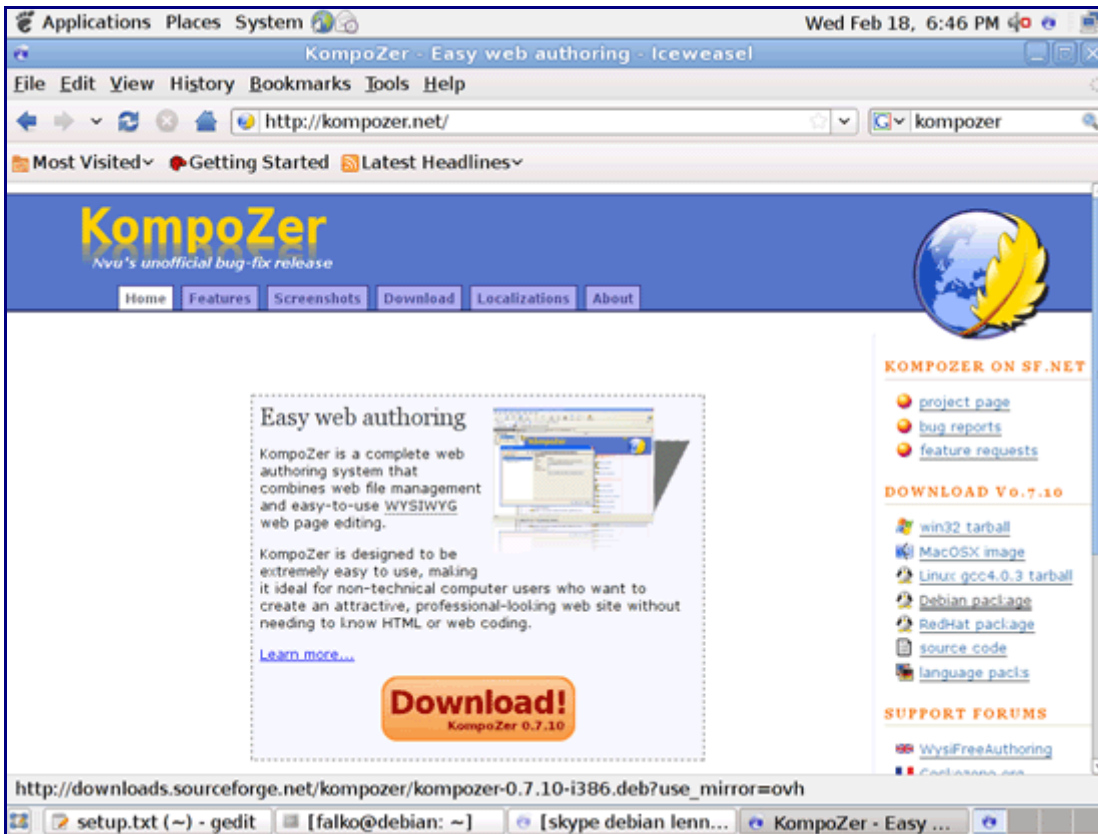
Download the file to your computer...



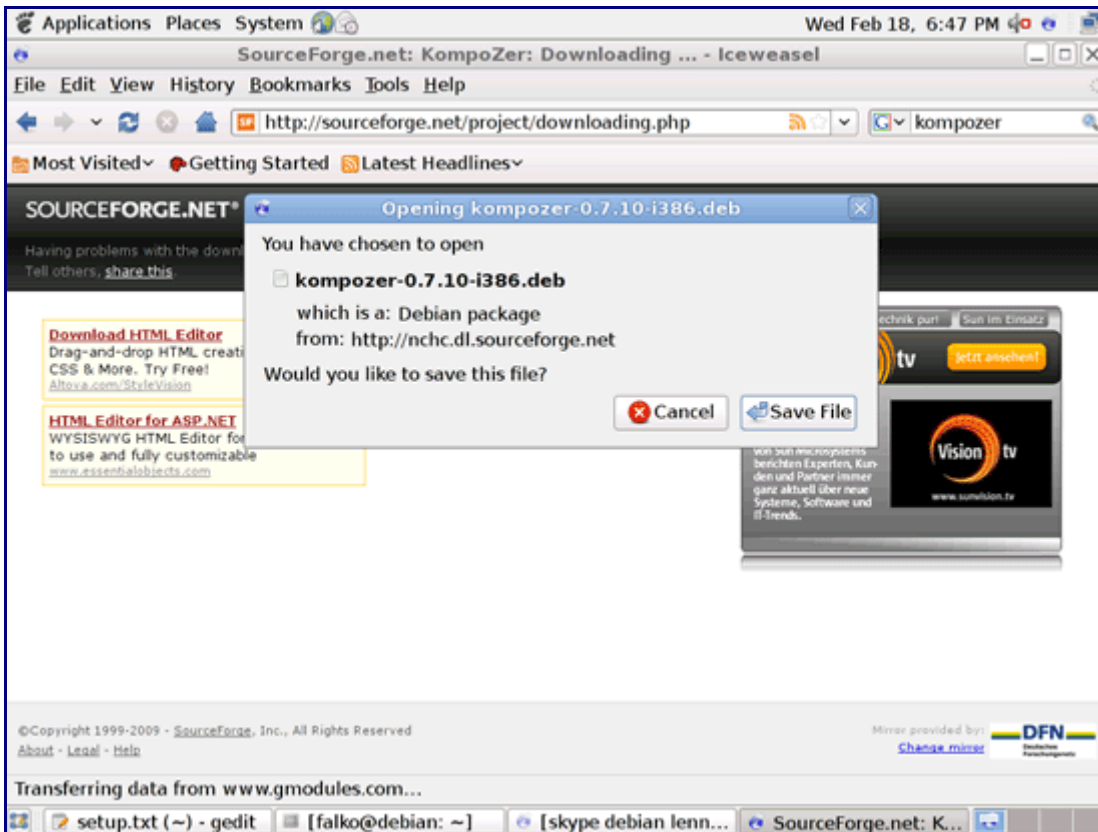
... and then install it exactly as shown for Opera in the previous chapter (either with Gdeb or with gdebi).

12 KompoZer

Go to <http://kompozer.net/> and click on the Debian package link in the right column:



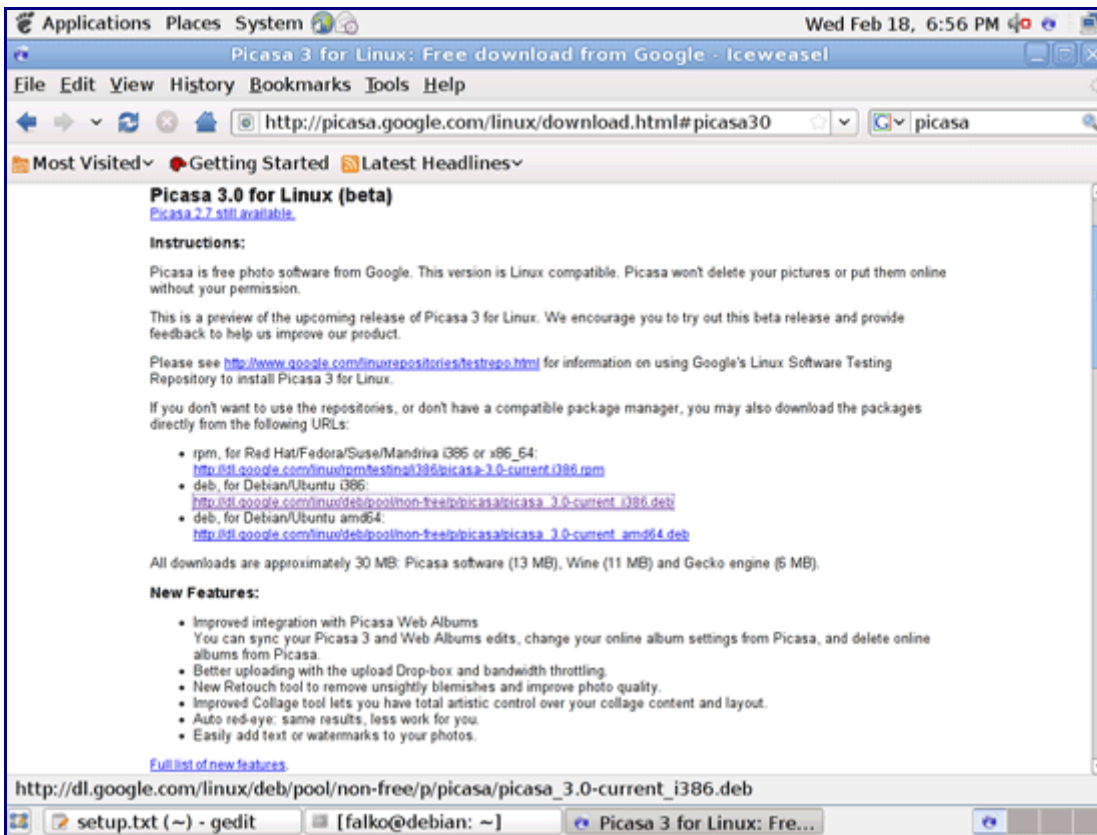
On the next page, a download dialogue should open. Download the file to your computer...



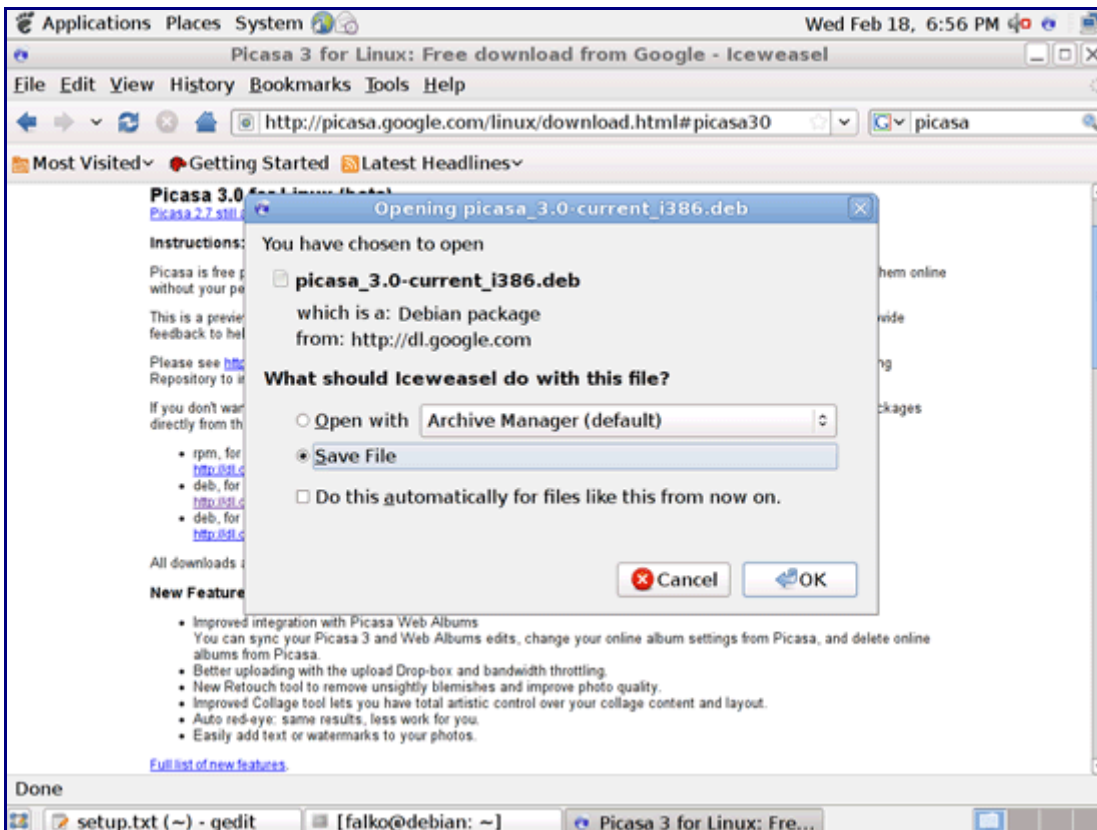
... and then install it exactly as shown for Opera (either with Gdeb or with gdebi).

13 Google Picasa

Go to <http://picasa.google.com/linux/download.html#picasa30> and select the right .deb package for your architecture (i386 or amd64):



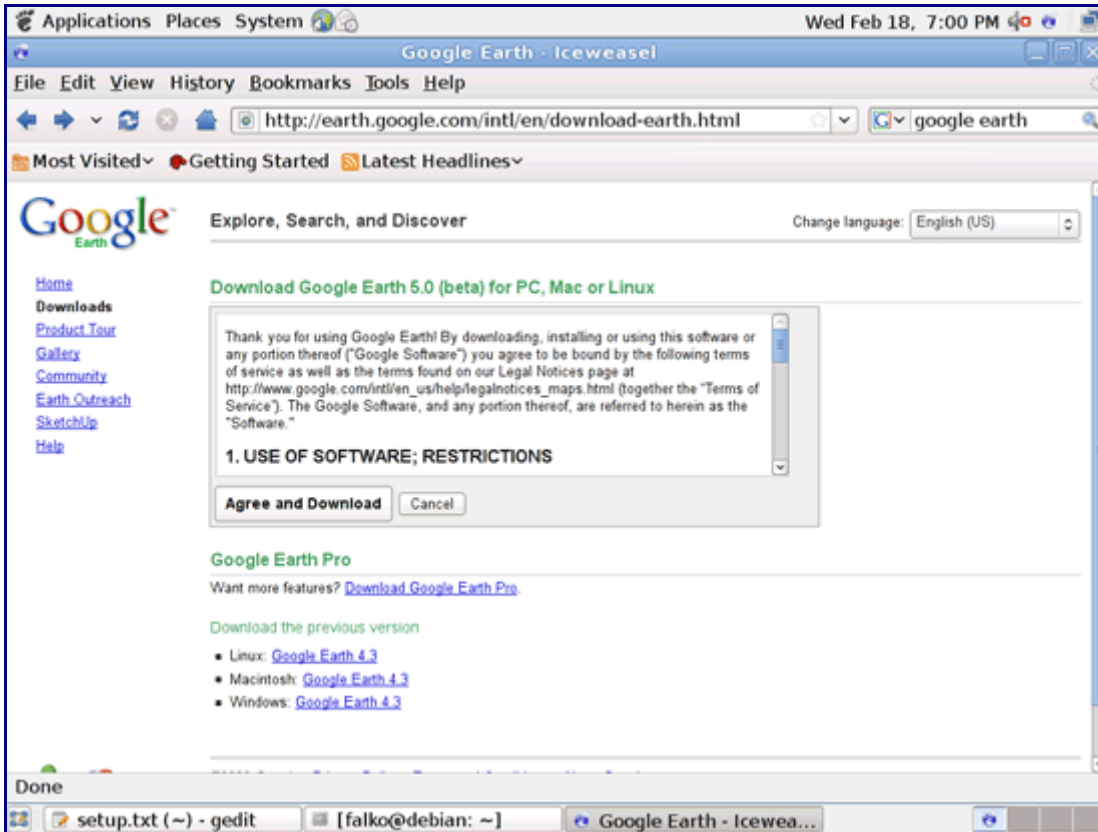
Save the file to your computer...



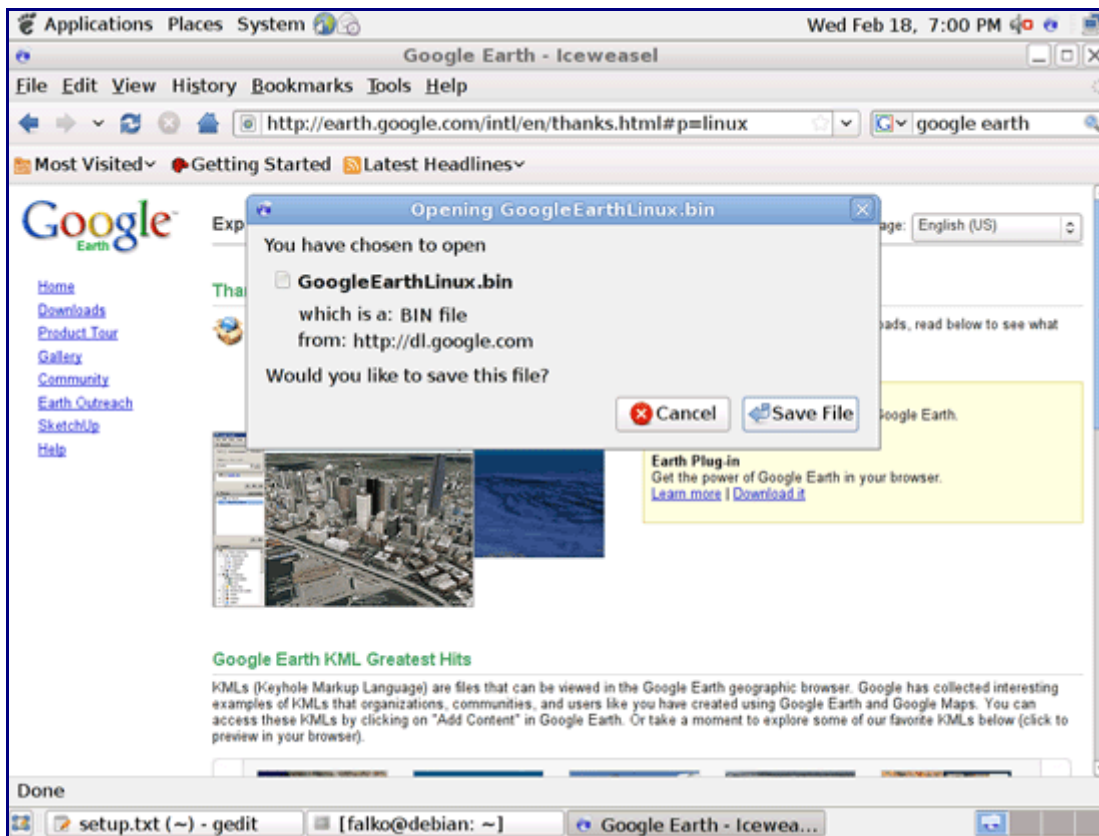
... and then install it exactly as shown for Opera (either with Gdeb or with gdebi).

14 Google Earth

Go to <http://earth.google.com/intl/en/download-earth.html> and click on the Agree and Download button:



On the next page, a download dialogue should pop up. Click on Save File and save the file to your computer, e.g. the desktop (/home/falko/Desktop in this example):



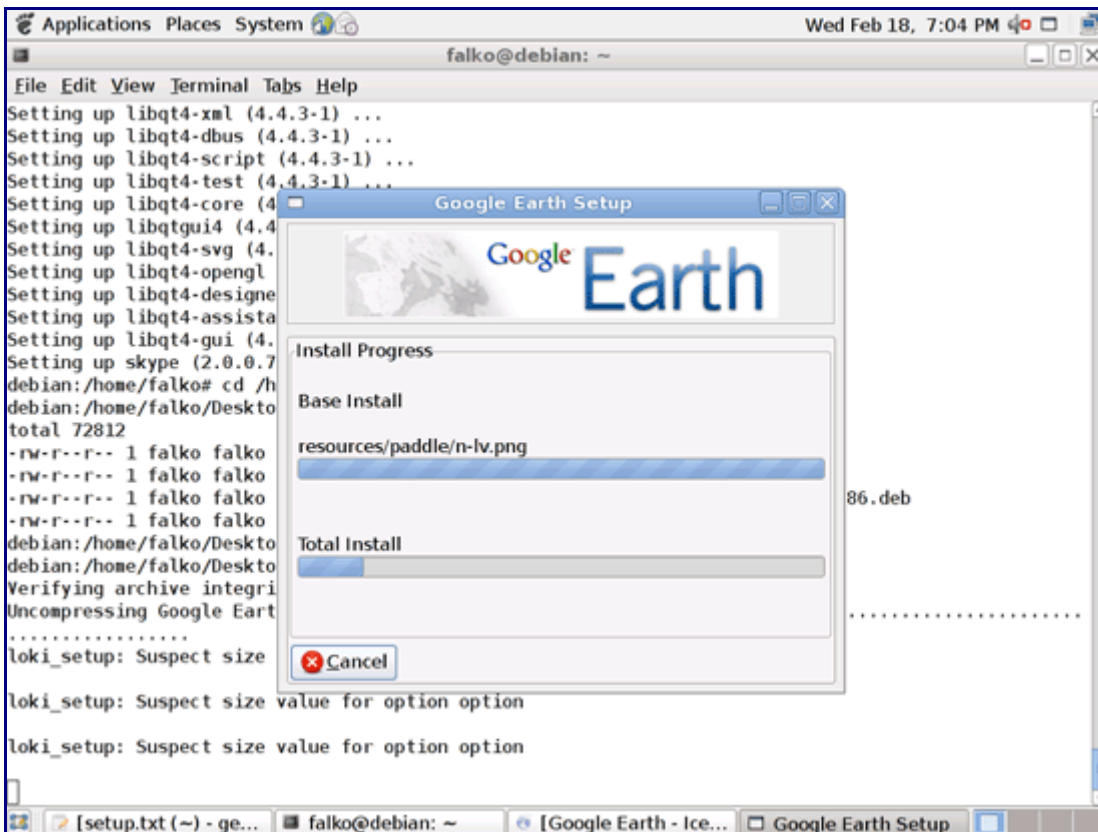
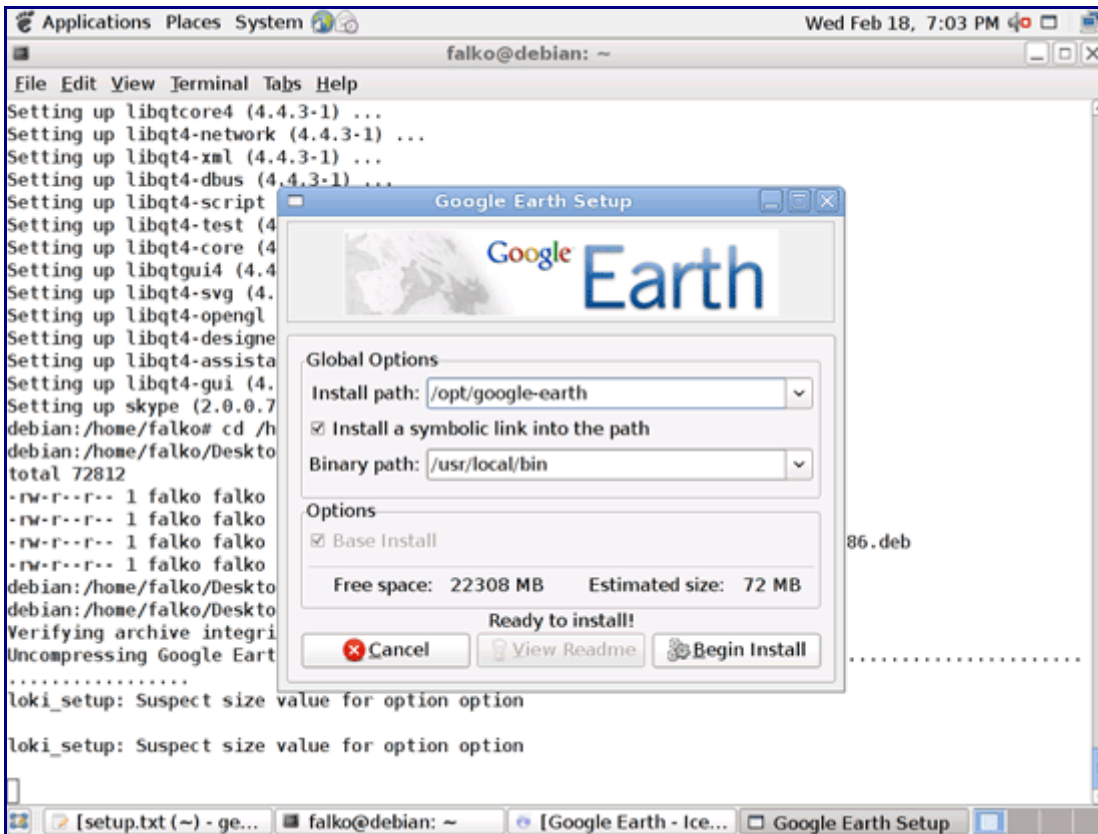
Then open a terminal and become root:

```
su
```

Make the downloaded file executable and run it:

```
cd /home/falko/Desktop/  
chmod 755 GoogleEarthLinux.bin  
./GoogleEarthLinux.bin
```

This will start the installation. A Google Earth Setup window opens. Accept all default settings and click on Begin Install:



After the installation, you can click on Quit or on Start, if you want to start Google Earth now:

- OpenOffice Calc
- Adobe Reader
- GnuCash
- Scribus

Sound & Video:

- Amarok
- Audacity
- Banshee
- MPlayer
- Rhythmbox Music Player
- gtkPod
- XMMS
- dvd::rip
- Kino
- Sound Juicer CD Extractor
- VLC Media Player
- Real Player
- Totem
- Xine
- Brasero
- K3B
- Multimedia-Codecs

Programming:

- KompoZer
- Bluefish
- Quanta Plus

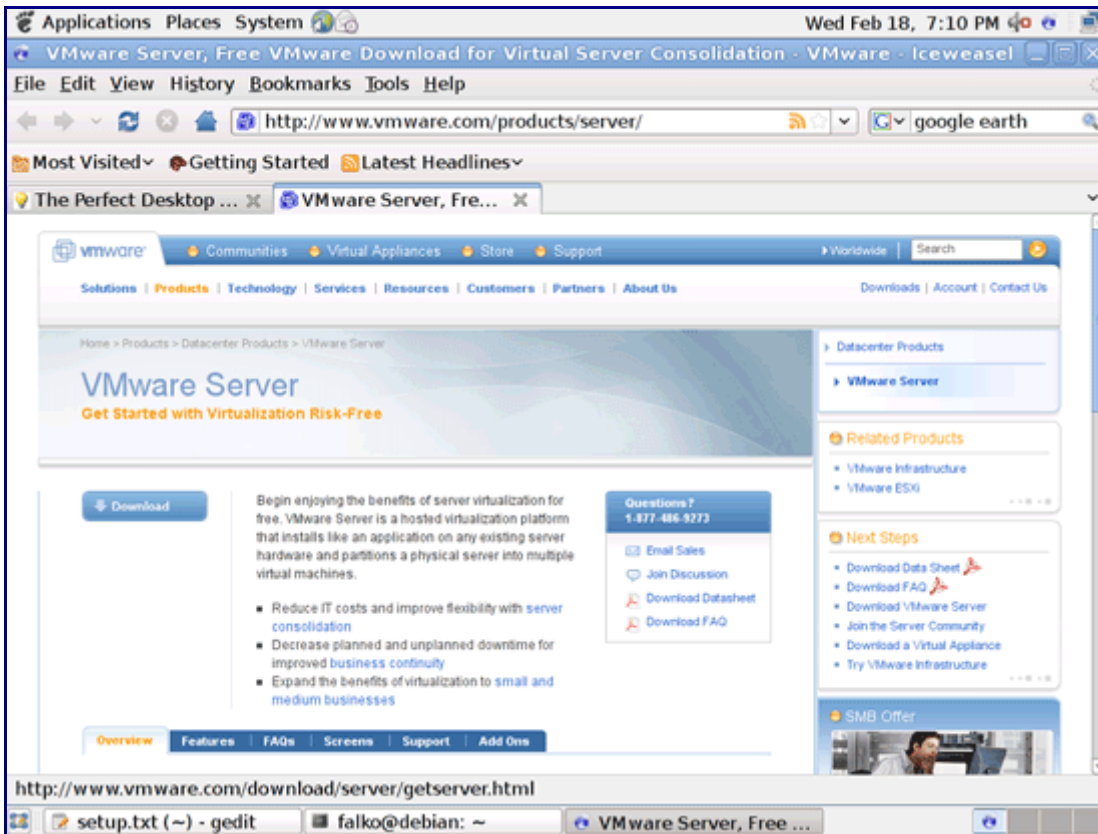
Other:

- VMware Server
- TrueType fonts
- Java
- Read/Write support for NTFS partitions

16 VMware Server

With [VMware Server](#) you can let your old Windows desktop (that you previously converted into a VMware virtual machine with [VMware Converter](#), as described in this tutorial: http://www.howtoforge.com/vmware_converter_windows_linux) run under your Debian Lenny desktop. This can be useful if you depend on some applications that exist for Windows only, or if you want to switch to Linux slowly.

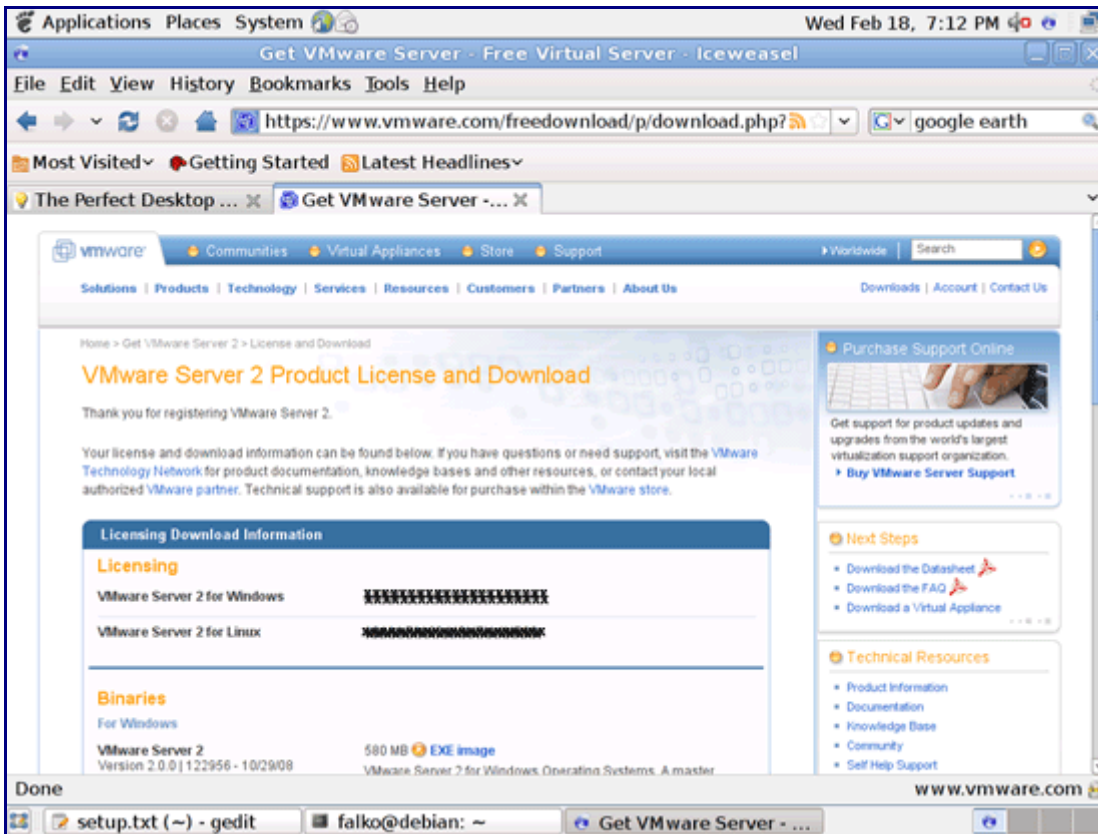
To download VMware Server, go to <http://www.vmware.com/products/server/> and click on Download:



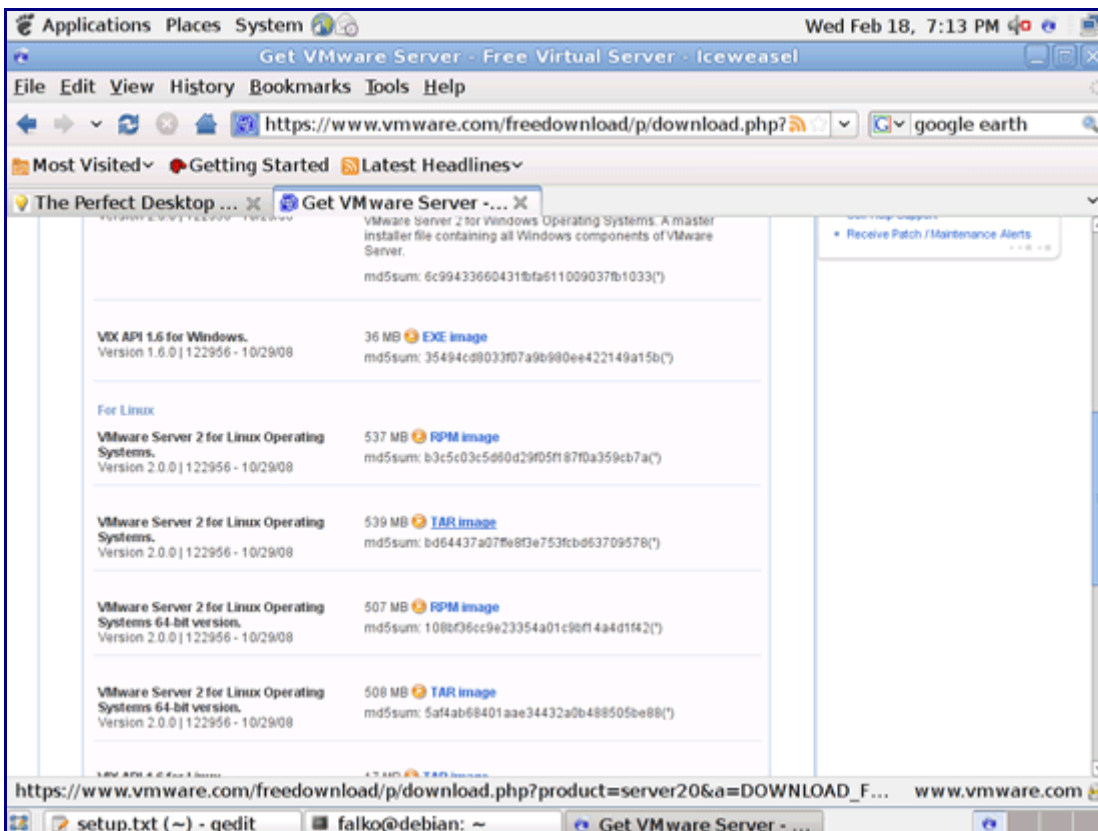
On the next page, log in with your existing VMware account or create a new one:

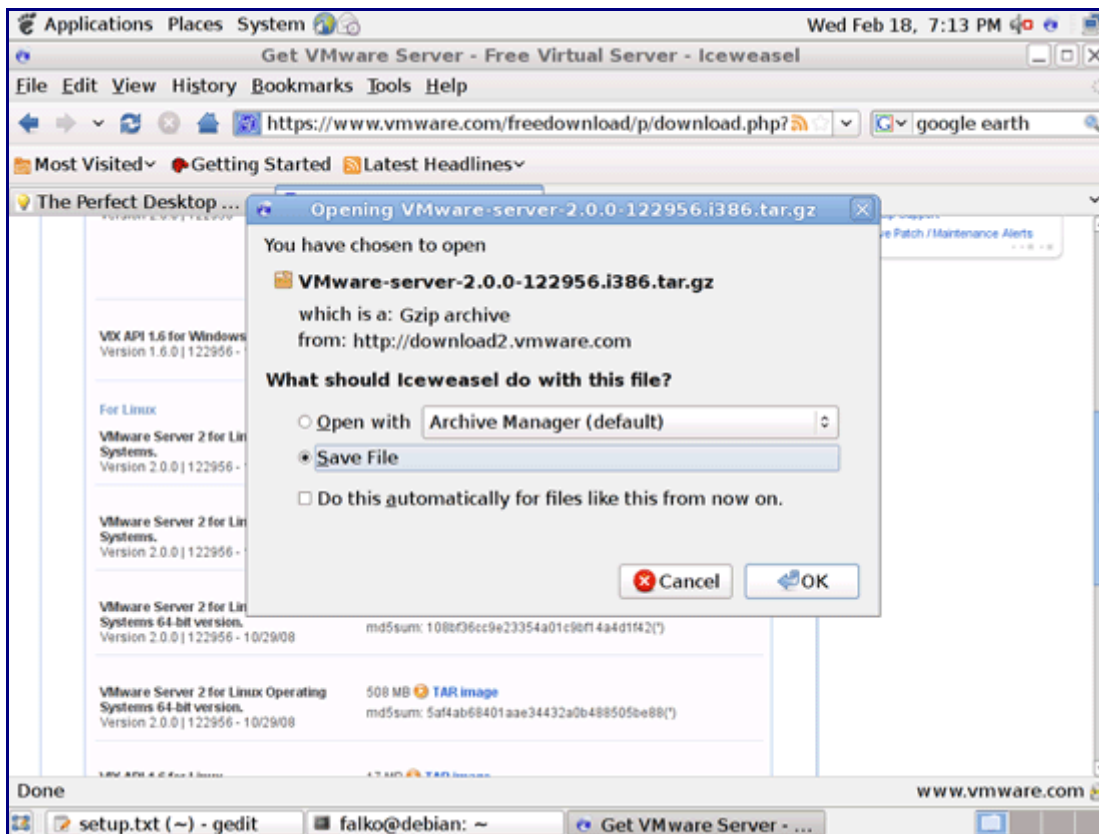


Follow the on-screen instructions. At the end, you should receive an email with a link to your download page. On the download page, you should see two license numbers, one for Windows and one for Linux. Write down or save the one for Linux and scroll down.



Then download the VMware Server for Linux TAR image (not the RPM image!) to your desktop (e.g. to /home/falko/Desktop):





Then open a terminal (Applications > Accessories > Terminal), become root...

su

... and run the following command to install some necessary packages:

```
apt-get install linux-headers-`uname -r` build-essential xinetd gcc-4.1
```

The Debian Lenny kernel was built using gcc 4.1, however we now have gcc 4.3 installed. The VMware installer will complain about this and fail, unless we make /usr/bin/gcc a symlink to /usr/bin/gcc-4.1:

```
ln -sf /usr/bin/gcc-4.1 /usr/bin/gcc
```

Then go to the location where you saved the VMware Server .tar.gz file, e.g. /home/falko/Desktop (replace falko with your own username!):

```
cd /home/falko/Desktop
```

Unpack the VMware Server .tar.gz file and run the installer:

```
tar xvfz VMware-server-*.tar.gz
cd vmware-server-distrib
./vmware-install.pl
```

The installer will ask you a lot of questions. You can always accept the default values simply by hitting <ENTER>.

When the installer asks you

In which directory do you want to keep your virtual machine files?

```
[/var/lib/vmware/Virtual Machines]
```

you can either accept the default value or specify a location that has enough free space to store your virtual machines.

At the end of the installation, you will be asked to enter a serial number:

Please enter your 20-character serial number.

Type XXXXX-XXXXX-XXXXX-XXXXX or 'Enter' to cancel:

Fill in your serial number for VMware Server.

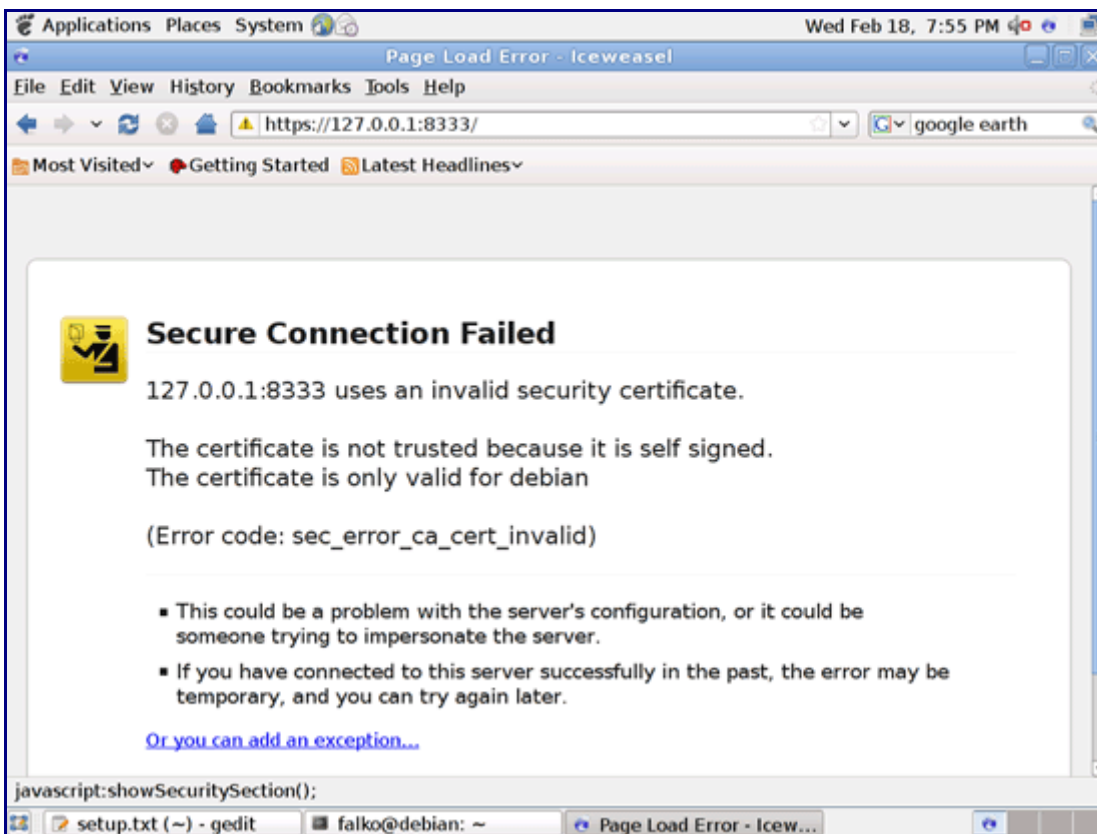
After the successful installation, you can delete the VMware Server download file and the installation directory:

```
cd /home/falko/Desktop
rm -f VMware-server*
rm -fr vmware-server-distrib/
```

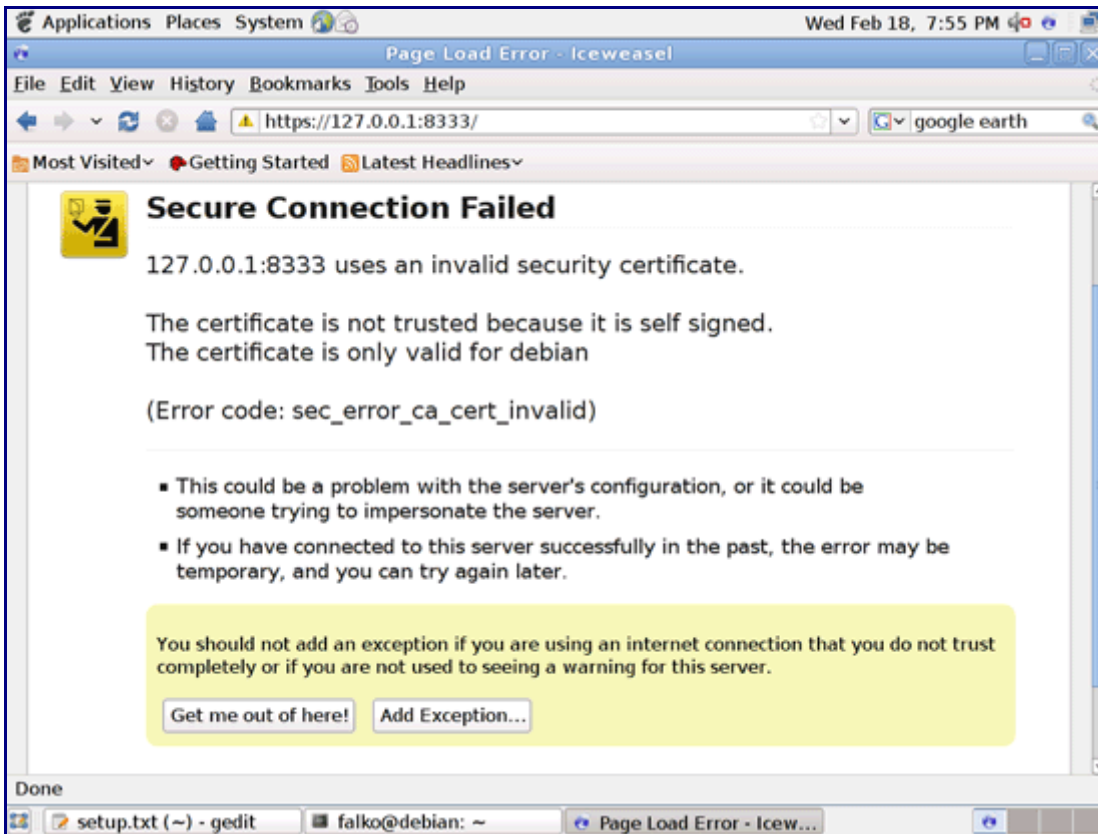
If you have accepted all default values during the installation, root is now the VMware Server login name.

VMware Server 2 does not have a desktop application for managing virtual machines - this is now done through a browser (e.g. Firefox/Iceweasel). You can access the management interface over HTTPS (<https://<IP ADDRESS>:8333>) or HTTP (<http://<IP ADDRESS>:8222>); the management interface can be accessed locally and also remotely. If you want to access it from the same machine, type <https://127.0.0.1:8333> or <http://127.0.0.1:8222> into the browser's address bar.

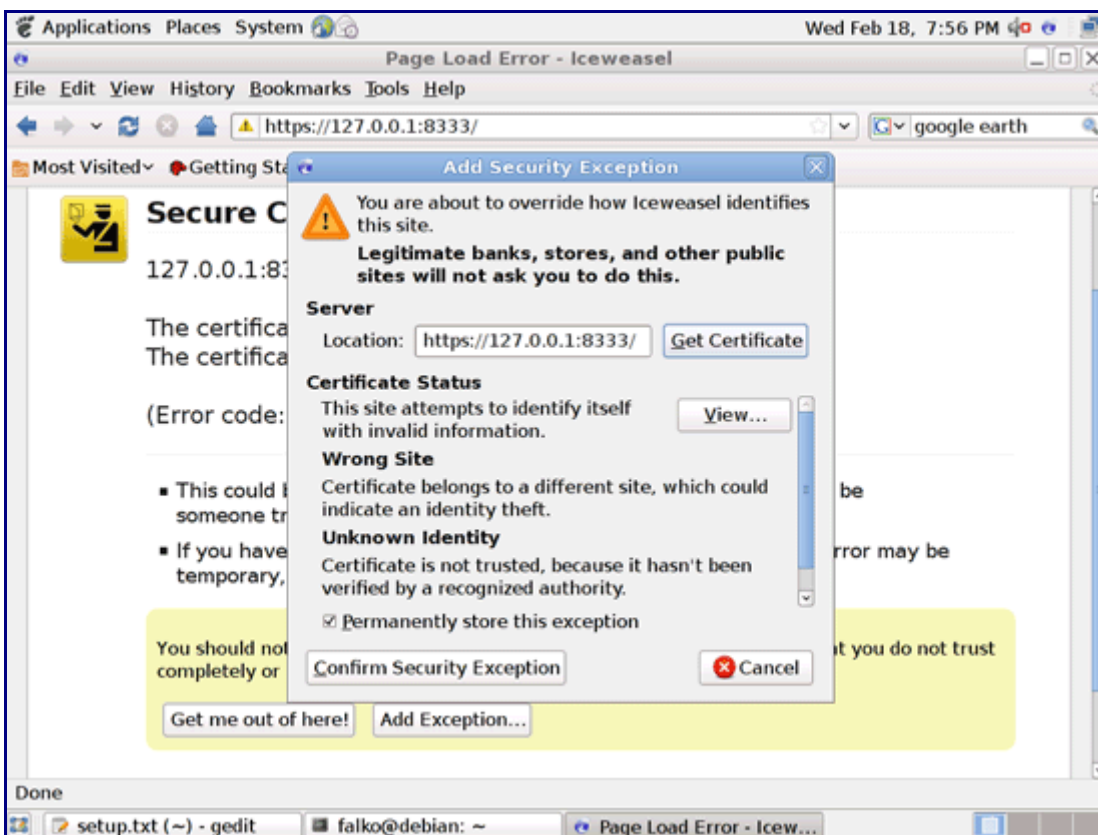
If you're using Firefox/Iceweasel 3 and use HTTPS, Firefox/Iceweasel will complain about the self-signed certificate, therefore you must tell Firefox/Iceweasel to accept the certificate - to do this, click on the [Or you can add an exception...](#) link:



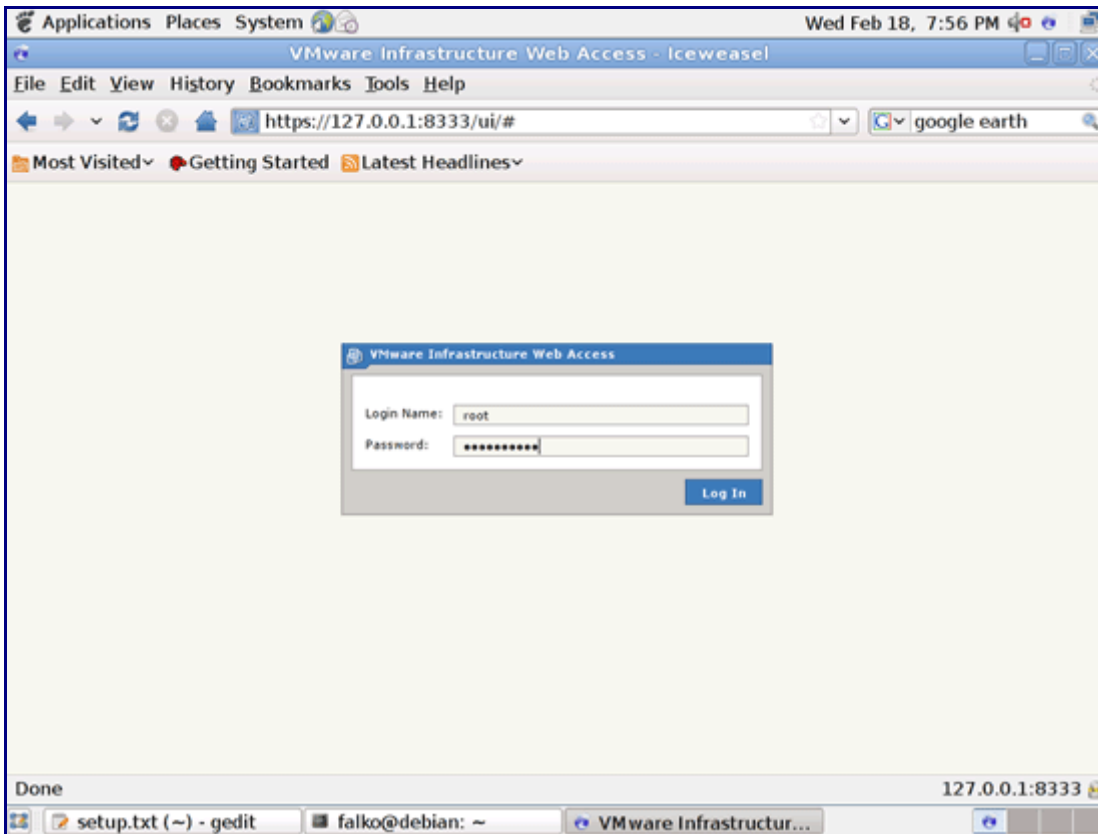
Click on [Add Exception...](#):



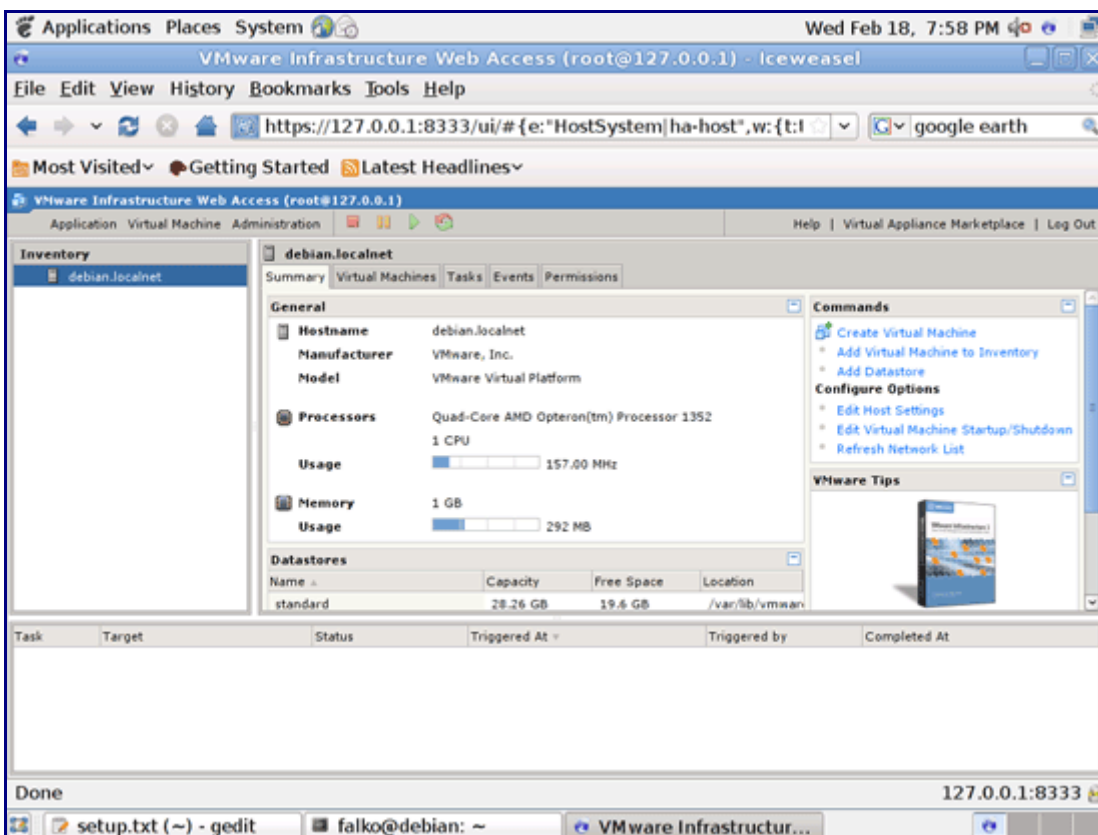
The Add Security Exception window opens. In that window, click on the Get Certificate button first and then on the Confirm Security Exception button:



Afterwards, you will see the VMware Server login form. Type in root and the root password:



This is how the VMware Server web interface looks. The structure is similar to the old VMware Server 1 desktop application, so the usage of the web interface is pretty straightforward.



17 Inventory (IV)

We have now all wanted applications installed:

Graphics:

- The GIMP
- F-Spot
- Picasa

Internet:

- Firefox/Iceweasel
- Opera
- Flash Player
- FileZilla
- Thunderbird/Icedove
- Evolution
- aMule
- Transmission BitTorrent Client
- Azureus/Vuze
- Pidgin
- Skype
- Google Earth
- Xchat IRC

Office:

- OpenOffice Writer
- OpenOffice Calc
- Adobe Reader
- GnuCash
- Scribus

Sound & Video:

- Amarok
- Audacity
- Banshee
- MPlayer
- Rhythmbox Music Player
- gtkPod
- XMMS
- dvd::rip
- Kino
- Sound Juicer CD Extractor
- VLC Media Player
- Real Player
- Totem
- Xine
- Brasero
- K3B
- Multimedia-Codecs

Programming:

- KompoZer
- Bluefish
- Quanta Plus

Other:

- [x] VMware Server
- [x] TrueType fonts
- [x] Java
- [x] Read/Write support for NTFS partitions

18 Links

- Debian: <http://www.debian.org/>