

Fedora Core 5 Linux Installation Notes

by Stanton Finley, revised August 19th, 2006

[Email](#)

It is no longer necessary to become an expert practitioner of the arcane dark arts of the Unix command line in order to get a complete Linux distribution working on your PC including all of the productivity, multimedia, and entertainment applications you will need on your desktop and a fully functional web server as well.

This web page began as some notes to myself as I installed Fedora Core and has evolved into a popular guide for the new Linux user.

Stan Finley

These instructions assume an i386 to i686 system (32 bit) with, an "always on" LAN or broadband connection configured "DHCP" and at least 10 GB of free disk space for the Fedora partition. Instructions for dual booting Windows and Fedora are included.

These instructions will not strictly apply for 64 bit computers using the 64 bit isos. 64 bit capable processors like Athlon 64, Opteron and Xeon are backwardly compatible with 32 bit instruction sets and are known to run 32 bit editions of Linux. The 32 bit i386 Fedora Core 5 isos do in fact work with these machines. Because of unresolved issues with 64 bit Fedora Core and because some plug-ins for Firefox only work with the 32 bit version of Firefox I recommend the installation of the 32 bit (i386) isos on 64 bit machines. Your mileage may vary. (Having said this if you prefer to install x86_64 64 bit Fedora Core it is possible to download and install the 32 bit version of Firefox for Linux from <http://www.mozilla.com/firefox/>, extract it into your home directory (or elsewhere), install the 32 bit Sun Java as described below and symlink the java plugin to /home/your_user_name/firefox/plugins/libjavaplugin_oji.so, install the 32 bit versions of Flash, RealPlayer, Mplayerplug-in and Adobe Reader also described below and copy their plugins from /usr/lib/mozilla/plugins to /home/your_user_name/firefox/plugins, and then right click on the browser link in the panel and change its properties from "htmlview %u" to "/home/your_user_name/firefox/firefox".)

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"The Red Hat" by [Madalina Iordache](#)
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Installation:

The following guide outlines the author's personal installation preferences including instructions for installing third party software that is not available from the Fedora Project. Formal Fedora Core documentation is available at <http://fedora.redhat.com/docs/> and should be consulted for detailed explanations of all formally supported installation options including the rationale behind each.

[Download](#) and [burn](#) the six [Fedora Core 5](#) CDs from iso images or the DVD iso image from your nearest [mirror site](#). (You should get [FC-5-i386-disc1.iso](#), [FC-5-i386-disc2.iso](#), [FC-5-i386-disc3.iso](#), [FC-5-i386-disc4.iso](#), [FC-5-i386-disc5.iso](#) and [FC-5-i386-rescuecd.iso](#).) The CD iso images or the DVD iso image are also available using [bittorrent](#).

Partition your hard disk with something like one of the disk partition creation/editing tools on the System Rescue CD available at <http://www.sysresccd.org/>. You could also use a commercial product such as [PartitionMagic](#). You may leave the partition that you wish to use for Fedora as unformatted space. The installation program will format this partition, create swap space within it, and make a directory structure.

Configure your bios settings to boot first from the CD drive.

Insert the first Fedora Core 5 CD or the DVD and reboot your machine.

At the "boot" prompt hit enter. (Alternatively, depending on your computer and bios you may have to enter special boot arguments at the "boot:" prompt. For example on my laptop I have to enter "linux vga=792" at the "boot:" prompt to get my screen to work properly when installing Fedora Core 5. There is a list of boot options at <http://stanton-finley.net/kernel-parameters.txt>.)

Hit enter for "ok" and enter again for "Test" to test your CD or DVD media or the right arrow key to select the "Skip" box and hit enter to skip this test. (I recommend testing your media to determine if your CDs or DVDs are properly burned.) If your media passes you will be given an opportunity to check additional CDs or DVDs. When you are finished testing hit enter for "ok", right arrow to the "Continue" box and hit enter to continue.

When Anaconda, the Fedora Core installer loads click "Next" at the Fedora splash page.

Click "Next" at the language selection page for default English or select your language.

Click "Next" at the keyboard selection page for default U. S. English or select your language.

On the partitions and drive selection page click the check box for the drive onto which you wish to install Fedora Core (unless it is already selected for you as it will be if you have only one drive on your machine). Then on the drop down menu and select "Use free space on selected drives and create default layout" if you are going to dual boot Windows with Fedora and you already have Windows installed and you have created unpartitioned free space on your drive dedicated to your new Fedora Core installation. Otherwise select "Remove all partitions on selected drives and create default layout" to use all of your hard disk for Fedora or choose "Remove all Linux partitions on selected drives and create default layout" for a fresh install over any existing Linux partitions. Click "Next". You could also select "Create custom layout." if you wish to manually create your mount point and edit your dedicated Linux partition. If you elect to manually edit your partition double click on the partition, select the "swap" file type from the "File System Type" drop down menu, and configure your swap space size to equal about twice your computer's physical memory size. Double click on the remainder of the partition and configure it as a Linux ext3 file system with the "File System Type" drop down menu. At minimum you must designate this remaining space (probably /dev/hda2 or /dev/sda2) as the root "/" partition mount point. Tick the check box for "Review and modify partitioning layout. Click "Next". Review your partition layout taking care to note if your Windows partition (ntfs) is listed if you have elected to dual boot. Click "Next".

If you are dual booting Windows and Fedora select the "other" check box on the boot loader configuration page. Click "Edit". Type "Windows" in the "Label" box and uncheck the "Default

Boot Target" check box if it is already checked. Similarly select "Fedora Core", click "Edit" and tick the check box for "Default Boot Target". Click "ok".

Tick the "Default" check box next to "Fedora Core" to make it your default boot operating system if it is not already ticked. You may also tick the check box for "Configure advanced boot loader options" on this page to enable an option on the next page for entering special boot options if your system requires them. Click "Next".

If you have elected to enter these special kernel boot arguments you will be presented with a page into which you can enter "General kernel parameters". For example on my laptop I have to enter "vga=792" to get my screen to work properly. There is a list of boot options at <http://stanton-finley.net/kernel-parameters.txt>. Click "Next".

Leave "eth0" and hostname "automatically via DHCP" on the network configuration page. Click "Next".

Click on the map for your location on the "time zone selection page. Click "Next".

Enter your preferred root password on the set root password page. Click "Next". You will see a message "Retrieving installation information...".

On the package installation defaults page select the general groups of software you would like to install by ticking their respective check boxes. You will have an opportunity (now or later) for further customization of the software packages to be installed by selecting the radio button for "Customize later" or "Customize now". If you choose "Customize later" you will have an opportunity to customize your software package selections after your initial installation. Click "Next".

If you selected "Customize now" in the previous step you will be presented with a dialog page in which you may select software groups, sub-groups, and individual packages by ticking the appropriate check boxes. Be sure to click the "Optional packages" button for each group to view the individual package selection detail pages. You may now select all the software for your installation. (Tip: You can select all packages in any group by right clicking on that group and selecting "Select all optional packages".) Click "Next".

You will see a message "Checking dependencies in packages selected for installation...". After this message disappears click "Next". You will see messages "Formatting / file system...", "Formatting /boot file system...", "Transferring install image to hard drive...", "Starting install process. This may take several minutes...", and "Preparing transaction with installation source". The initial install process will now begin, and you will see a progress bar fill in as the installation progresses.

When the installation is complete remove the last CD or the DVD and click "reboot" for the first boot screen.

After Fedora reboots click "Forward" on the "Welcome" page.

Click the appropriate radio button to agree to the license agreement and Click "Forward".

On the "Firewall" page select the appropriate options for you system. You should always enable the firewall for security reasons. You can open appropriate ports depending upon your

plans for your installation. For example, if you plan to set up a web server tick the check box for "WWW (HTTP)". (You will be able to change these setting later after your initial installation with the "system-config-securitylevel" command.) Click "Forward". Click "Yes".

On the "SELinux" page leave the default as "Enforcing" for security reasons. You will be able to modify your SELinux policy later after your initial installation if you wish. Click "Forward".

If you are already connected to an "always on" LAN or broadband connection click on the "Network Time Protocol" tab on the "Date and Time" page and tick the "Enable Network Time Protocol" check box. Click "Forward". You will see a message "Contacting NTP Server. Please wait...".

On the "Display" page select your preferred screen resolution and color depth based upon the capabilities of your monitor. If your monitor's screen resolution is not available in the dialog box or if Fedora did not recognize your monitor or graphics card you will have an opportunity to configure them later. Click "Forward".

On the "System User" page choose a user name (in lower case, not "root"), a full name (any case), and a password for that default user. Click "Forward".

Click the arrow button icon ("play test sound") on the "Sound Card" page to test your sound system. You should hear three chords in sequence. If you don't you can try to configure your sound card later. Click "No" or "Yes" in the "Did you hear the sample sound?" dialog box. Click "Finish".

Log in with user name and password you selected earlier. (Type your user name in the box, hit enter, type your password, hit enter.)

When Fedora finishes booting to the graphical interface you have the option of moving the panels. To try it click on the top panel, hold your left mouse button down, drag the top panel to the bottom of the screen, and release the mouse button. This is my personal preference.

Click "Applications" > "Accessories". Right click on "Terminal" and select "Add this launcher to panel".

Right click on the terminal icon on the bottom panel and select "move". Move the icon to the left near the other icons and click to position it there.

Fedora Core includes a "hidden menu" which opens up only if the user hits enter during the initial stage of the boot process and which presents a dialog in which the user can select from multiple operating systems if he has for example opted to dual boot his computer with Fedora Core and Windows. It also allows the operator to select from multiple kernels if they are available. The hidden menu exists to prevent confusion since normally the novice user will want to automatically boot into his default selection choice made during the installation process. The author prefers to disable this feature as well as the graphical boot screens so that the boot sequence which normally happens "behind the scenes" becomes visible and so that the alternate operating system(s) and kernel choices become immediately available. In order to do this click on the terminal icon. This will open the terminal.

Type:

```
su -
```

Hit enter. Type your root password and hit enter. This will give you root privileges and put you in root's environment.

Type:

```
gedit /boot/grub/grub.conf
```

Hit enter and gedit will open. Revise the "hiddenmenu" and "kernel" lines in grub.conf so that your file looks like this:

```
# grub.conf generated by anaconda
#
# Note that you do not have to rerun grub after making changes to this file
# NOTICE: You have a /boot partition. This means that
#         all kernel and initrd paths are relative to /boot/, eg.
#         root (hd0,1)
#         kernel /vmlinuz-version ro root=/dev/VolGroup00/LogVol100
#         initrd /initrd-version.img
#boot=/dev/hda
default=0
timeout=5
splashimage=(hd0,1)/grub/splash.xpm.gz
#hiddenmenu
title Fedora Core 5 (2.6.15-1.2054_FC5)
    root (hd0,1)
    kernel /vmlinuz-2.6.15-1.2054_FC5 ro root=/dev/VolGroup00/LogVol100
    initrd /initrd-2.6.15-1.2054_FC5.img
title Windows XP
    rootnoverify (hd0,0)
    chainloader +1
```

Disabling the "hiddenmenu" with the "#" comment and removing "rhgb quiet" from the kernel line will cause the operating system selection menu to display immediately upon boot and will also disable the graphical boot screens so that you will see the boot sequence scroll by in text. You may also add any special boot option arguments to the "kernel" line here. For example I have to add "vga=792" on the kernel line in order for my laptop screen to work properly. Click on the "save" icon in gedit and close it. Close the terminal.

Click on "System" > "Administration" > "Server Settings" > "Services", enter your root password and deselect system services on the "Background Services" tab that you will not immediately use. When you click on each of them you will see a description as to what they are for. If you're not sure, leave them in there. (I deselected "anacron", "apmd", "atd", "avahi-daemon" "bluetooth", "cpuspeed", "cups", "cups-config-daemon", "mdmmonitor",

"nfslock", "rpcgssd", "rpcidmapd", and "sendmail".) Click the "save" icon. You should also select "Edit Runlevel" on the menu, select "Runlevel 3", deselect the same system services as you just did for run level 5, and save them as well by clicking the "save" icon. Then close the service configuration screen. (Run level 3 is for text mode only without X windows and we will use this run level later when configuring the third party 3D drivers.)

Fedora Core 5 has an "automatic" log in feature. You should seriously consider whether or not to enable this feature for security reasons. If you would like to enable it click on "System" > "Administration" > "Login Screen". Enter your root password. Then on the "Users" tab enter your non-root user name in the "Include" box by clicking on the "Add" button, typing your user name and clicking the "Add" button in the dialog box. Click the "Apply User Changes" button. Then on the "Security" tab tick the check box for "Enable Timed Login". Select your user name in the "User:" box and type "5" in the "Pause before login:" box . Click "close".

Click "System" > "Shut Down...", and select "Restart". (Wait a few moments for this to happen.)

After your computer reboots log in as your default user with the user name and password you selected at installation time. (If you elected the timed automatic login described above you will already be logged in as your normal user.) Open the terminal.

Type:

```
su -
```

Hit enter. Type your root password and hit enter.

Type:

```
yum -y update
```

Hit enter and wait for your system to be updated. This may take a while depending upon the bandwidth of your connection and the number of applications you have installed.

Click "System" > "Shutdown", and click "Restart" to boot into your new kernel. After you reboot you should go to "Applications" > "Add/Remove Software" and select any additional packages that you may wish to install on your system which were not available before your initial yum update. (Tip: You can select all packages in any group by right clicking on that group and selecting "Select all optional packages".)

Configuring your monitor:

If Fedora did not recognize your monitor during installation open a terminal and log in as root ("su -" as described above).

Type:

```
gedit /etc/X11/xorg.conf
```

Hit enter and gedit will open. Scroll down to the "Monitor" section. Find the "HorizSync" line and enter your monitor's supported horizontal frequency range. The line should look something like "HorizSync 30.0 - 70.0". Enter your monitor's supported vertical frequency range opposite "VertRefresh". The line should look something like "VertRefresh 50.0 - 160.0". Scroll down to the "Screen" section and opposite each instance of "modes" enter you monitor's supported pixel resolution, starting with the highest. The line should look something like "Modes "1024x768" "800x600" "640x480"". You should be able to get these values from your monitor's manual or from a search for your monitor by manufacturer and model number on the Internet. Use caution when entering these values and be sure that they conform to your monitor's published specifications or you could be left with a non-working graphical environment. Hit the "save" button in gedit and exit gedit. Log out and log back in.

Click "System" > "Administration" > "Display". Type your root password in the dialog box presented and hit enter. Click the down arrow on the right of the "Resolution:" box and select your preferred pixel resolution. Click the down arrow on the right of the "Color Depth:" box and select your preferred color depth. Log out and log back in.

Click "System" > "Preferences" > "Screen Resolution". Click the down arrow on the right of the "Resolution:" box and select your preferred pixel resolution. Click the down arrow on the right of the "Refresh rate:" box and select the highest refresh rate available. A refresh rate of 85 Hz or more will decrease noticeable flicker significantly and may eliminate it completely. Click "Apply".

Special warning regarding mixing incompatible repositories for software installation and updates:

We will be using the program applications Yum and Yumex described below as methods to obtain software and to update your Fedora Core installation. You will be configuring these programs by adding repositories which are groups of software created by third party packagers that we use in addition to original Fedora Core and Fedora Extras repositories that come standard with your new installation.

As you continue please keep the following in mind: You should not use the livna.org repository in conjunction with the dag/freshrpms/dries/newrpms (RPMforge) collection of rpms in your configuration files for automatic updates. Use one group or the other but not both. These two groups are mutually incompatible and can cause errors in your installation if used together for automatic updates. Regardless of which group you choose you should also avoid using the ATrpms repository in your yum or apt configuration files for [these reasons](#). Some additional information can be found [here](#).

With this being said please note that it is nonetheless possible to obtain single RPM packaged applications from incompatible third party repositories in cases where such packages do not create errors when installed with yum. More specifically it is possible to configure other repositories with their enable flags set to "0" (off) so that the yum "--enablerepo" command must be used when one of those packages is desired.

I myself subscribe to the RPMforge collection as you can see in my repository selection instructions below. The dag/freshrpms/dries/newrpms/PlanetCCRMA (RPMforge) repositories have provided me with all of the programs I have needed as additions to the Fedora base.

To configure your Fedora Core 5 yum application to use the RPMForge repositories proceed as follows:

Yum:

Open the terminal. Type:

```
su -
```

Hit enter. Type your root password. Hit enter.

Type:

```
rpm -ivh http://ftp.freshrpms.net/pub/freshrpms/fedora/linux/5/freshrpms-release/f
```

Hit enter and wait for the installation to complete.

Type:

```
gedit /etc/yum.repos.d/macromedia.repo
```

Hit enter and gedit will open.

Type or copy and paste the following in gedit:

```
[macromedia]
name=Macromedia for i386 Linux
baseurl=http://macromedia.rediris.es/rpm/
#baseurl=http://macromedia.mplug.org/rpm/
#baseurl=http://sluglug.ucsc.edu/macromedia/rpm/
enabled=1
gpgcheck=1
gpgkey=http://macromedia.rediris.es/FEDORA-GPG-KEY
```

Be sure there is a carriage return (blank line) at the bottom of the file. Click the "save" icon in gedit and then close gedit.

Type:

```
gedit /etc/yum.repos.d/dries.repo
```

Hit enter and gedit will open.

Type or copy and paste the following in gedit:

```
[dries]
name=Extra Fedora rpms dries - $releasever - $basearch
baseurl=http://ftp.belnet.be/packages/dries.ulyssis.org/fedora/linux/$releasever/$
enabled=1
gpgcheck=1
```

Be sure there is a carriage return (blank line) at the bottom of the file. Click the "save" icon in gedit and then close gedit.

While still in the root terminal type:

```
rpm --import http://freshrpms.net/packages/RPM-GPG-KEY.txt
```

Hit enter. You have just imported the GPG key for the freshrpms repository.

Also type:

```
rpm --import http://apt.sw.be/dries/RPM-GPG-KEY.dries.txt
```

Hit enter. You have just imported the GPG key for the dries repository.

Type:

```
yum -y update
```

Hit enter. Your system will be updated. Reboot your machine.

Note: You can temporarily disable a troublesome repository with a command such as, for example "yum -y --disablerepo updates update" as root. This is especially useful if you get the message "No more mirrors to try..." which occurs occasionally when the mirrors are very busy or down. To clean your repository data and get a fresh list of updates do a "yum clean all" followed by a "yum -y update" as root. Please see the official Fedora Core Yum guide at <http://fedora.redhat.com/docs/yum/> for more details about Yum and its configuration. (Tip: Some users have reported better success with yum updates if they edit the repository files in the /etc/yum.repos.d directory and remove the comment mark ("#") from the beginning of

the "baseurl=" lines, especially if they are getting "Error: Cannot find a valid baseurl for repo:" errors.)

Firefox and Thunderbird:

[Firefox](#) is now the default web browser in Fedora Core Linux and Thunderbird is included as an email client. (If you don't already have Thunderbird open a terminal and do a "yum -y install thunderbird" as root.) For Thunderbird go to "Applications" > "Internet" > "Thunderbird Email". You can choose Thunderbird as your default email client by going to "System" > "Preferences" > "More Preferences" > "Preferred Applications" and selecting "Thunderbird Mail" in the drop-down menu under "Mail Reader" on the "Internet" tab.

nVidia and ATI graphics acceleration:

Please read this important post regarding third party graphics acceleration drivers: <https://www.redhat.com/archives/fedora-test-list/2006-February/msg01565.html>. The kernel that ships with the Fedora Core 5 release iso images is not compatible with third party 3D graphics acceleration drivers. You should immediately update your kernel upon installation to get a newer kernel that is compatible. ("yum -y update" as root.)

Open a terminal. Type:

```
su -
```

Hit enter, type your root password and hit enter.

Type:

```
gedit /etc/yum.repos.d/livna.repo
```

Hit enter.

In gedit type or copy and paste these lines:

```
[livna]
name=Livna for Fedora Core $releasever - $basearch - Base
baseurl=
    http://rpm.livna.org/fedora/$releasever/$basearch/
    http://livna.cat.pdx.edu/fedora/$releasever/$basearch/
    http://wftp.tu-chemnitz.de/pub/linux/livna/fedora/$releasever/$basearch/
    http://ftp-stud.fht-esslingen.de/pub/Mirrors/rpm.livna.org/fedora/$release
failovermethod=priority
#mirrorlist=http://rpm.livna.org/mirrorlist-5
enabled=0
gpgcheck=1
```

(Note that we have the "enabled" bit set to "0" (off) in this file so that the livna-stable repository will not conflict with our RPMForge repositories for automatic updates.) Be sure there is a carriage return (blank line) at the bottom of the file. Click the "save" icon in gedit and then close gedit.

Type the following in the root terminal:

```
rpm --import http://rpm.livna.org/RPM-LIVNA-GPG-KEY
```

Hit enter.

If you are using an ATI video card or chipset type the following in the root terminal:

```
yum -y --enablerepo livna install kmod-fglrx
```

Hit enter. Wait for the installation to complete. (If you have an smp kernel use "yum -y --enablerepo livna install kmod-fglrx-smp" instead.) If you get an error with this procedure it probably means that your kernel is more recent than the kernels for which Livna has built ATI kernel modules. If this is the case switch to an older kernel (if you have one) on your Fedora boot menu or wait a few days until Livna gets the graphics acceleration module rpms built for the most recent kernel. When you update your kernel you will have to update your ATI driver as well. Do this with a "yum -y --enablerepo livna update kmod-fglrx" as root after you have booted into the new kernel. (Do not proceed until you have executed the two SELinux commands in the paragraph at the bottom of this section.)

If you got a message "FATAL: Could not rename /lib/modules/2.6.16-1.2111_FC5/modules.dep.temp into /lib/modules/2.6.16-1.2111_FC5/modules.dep: Permission denied" during installation type the following at the root prompt:

```
mv /lib/modules/2.6.16-1.2111_FC5/modules.dep.temp /lib/modules/2.6.16-1.2111_FC5/:
```

Hit enter. When you see "overwrite `/lib/modules/2.6.16-1.2111_FC5/modules.dep'?" type "y" and hit enter.

If you are using an nVidia video card or chipset type the following in the root terminal:

```
yum -y --enablerepo livna install kmod-nvidia
```

Hit enter. Wait for the installation to complete. (If you have an smp kernel use "yum -y --enablerepo livna install kmod-nvidia-smp" instead.) If you get an error with this procedure it probably means that your kernel is more recent than the kernels for which Livna has built nVidia kernel modules. If this is the case switch to an older kernel (if you have one) on your Fedora boot menu or wait a few days until Livna gets the graphics acceleration module rpms built for the most recent kernel. When you update your kernel you will have to update your nVidia driver as well. Do this with a "yum -y --enablerepo livna update kmod-nvidia" as root after you have booted into the new kernel. (Do not proceed until you have executed the two SELinux commands in the paragraph at the bottom of this section.)

To prevent SELinux problems with the ATI fglrx or nVidia modules type the following in the root terminal:

```
setsebool -P allow_execstack=1
```

Hit enter. Also type:

```
setsebool -P allow_execmod=1
```

Hit enter. Reboot your machine. Your ATI fglrx or nVidia drivers should be enabled after you reboot.

True Type fonts:

Open Firefox. Go to <http://www.mjmwired.net/resources/mjm-fedora-fc5.html#ttf> and download (save to disk)

<http://www.mjmwired.net/resources/files/msttcorefonts-2.0-1.noarch.rpm>. This should save the file to your home folder. If it saves the file to your desktop instead go to your desktop and drag the file into your "Home" folder. (Left mouse click on the file and drag it on top of your "Home" folder while holding the left mouse button down. Then release the mouse button.)

Click on the terminal icon. This will open the terminal. Type:

```
su
```

Hit enter, type your root password and hit enter. (This gives you root privileges in the terminal even though you are still in the default user's home directory.)

Type:

```
ls
```

Hit enter. This will list the contents of your home directory so you can see if the file you just saved is there.

Type:

```
rpm -ivh *.rpm
```

Hit enter. Wait for the installation to complete.

Type:

```
rm *.rpm
```

Hit enter. Type "y" and hit enter. (This deletes the downloaded RPM file in your home directory, however the program is already installed into your system.) Close the terminal. Log out and log back in.

Fedora Extras:

Many of the packages which were once maintained in the "Core" of the Fedora Core distribution have been moved to the "Extras" repository in FC5. It is trivially easy to install these programs because the Fedora Extras repository is enabled by default in yum. See <http://fedoraproject.org/wiki/Extras> for the list. In the following example we install "Grip", the CD ripper, "gtk-gnutella", the P2P client, and "NumLockX", a program that turns NumLock on automatically after starting X windows, all from the Extras repository. We also install the screensavers (if you don't already have them) with this command.

Click on the terminal icon. This will open the terminal. Type:

```
su -
```

Hit enter, type your root password and hit enter.

Type:

```
yum -y install grip gtk-gnutella numlockx xscreensaver-extras xscreensaver-gl-extr
```

Hit enter. Wait for the installation to complete. Grip will now appear in "Applications" > "Sound & Video" as "Grip" and gtk-gnutella will be in "Applications" > "Internet" as "Gtk-Gnutella".

Yum Extender:

[Yum Extender](#) (yumex) is a new GUI front end for managing your updates and package installations via yum. Yum Extender is to yum as Synaptic is to apt. It is now included in Fedora Extras. To install yumex:

Click on the terminal icon. This will open the terminal. Type:

```
su -
```

Hit enter, type your root password and hit enter.

Type:

```
yum -y install yumex
```

Hit enter. Wait for the installation to complete. Yum Extender will now appear in "Applications" > "System Tools".

Java:

Fedora Core provides an open source implementation of Java. See <http://fedora.redhat.com/docs/release-notes/fc5/test3-latest-en/#sn-Java> for information about this. However many users, myself included, prefer Sun Java for their purposes. To install Sun Java open Firefox, go to <http://java.sun.com/j2se/1.5.0/download.jsp>, click on Download JRE 5.0 Update 8, click the radio button to accept the license agreement, under "Linux Platform - J2SE(TM) Runtime Environment 5.0 Update 8" click on "Linux self-extracting file", to download jre-1_5_0_08-linux-i586.bin (save to disk). This should save the file to your home folder. If it saves the file to your desktop instead go to your desktop and drag the file into your "Home" folder. (Left mouse click on the file and drag it on top of your "Home" folder while holding the left mouse button down. Then release the mouse button.)

If you have not already done so go to "System" > "Administration" > "Security Level and Firewall". Enter your root password and click "ok". On the "SELinux" tab click on "Modify SELinux Policy", click on "Compatibility" to open it and tick the check box next to "Allow the use of shared libraries with Text Relocation". Click "ok". Reboot your machine to implement

the new SELinux policy.

Open a terminal. Type:

```
su
```

Hit enter. Type your root password. Hit enter.

Type:

```
mv *.bin /opt
```

Hit enter.

Type:

```
cd /opt
```

Hit enter.

Type:

```
chmod +x *-linux-i586.bin
```

Hit enter.

Type:

```
./*.bin
```

Hit enter. Hold the enter key down until the yes/no line appears to allow you to agree to the license agreement. Type "yes" and hit enter. Wait for the installation to complete.

Type:

```
rm *.bin
```

Hit enter. Type "y" and hit enter.

Type:


```
su -
```

Hit enter. This gives you root privileges and also puts you in the /root directory.

Type:

```
ln -s /opt/jre1.5.0_08/plugin/i386/ns7/libjavaplugin_oji.so /usr/lib/mozilla/plugi
```

(Note that by default Firefox looks in /usr/lib/mozilla/plugins for its plugins. If you have trouble with your plugins in Firefox you could substitute "firefox-1.5.0.1" or your most recent firefox directory name in place of "mozilla" in the above command.) Hit enter. Close the terminal. Restart Firefox to enable the java plugin. You could go to <http://www.java.com/en/download/help/testvm.xml> to test your java plugin installation.

(If you wish to install the JDK which includes the Java development environment rather than the JRE download the JDK .bin file from Sun instead of the JRE .bin file, substitute "jdk1.5.0_08" for "jre1.5.0_08" in the commands above and below and use "ln -s /opt/jdk1.5.0_08/jre/plugin/i386/ns7/libjavaplugin_oji.so /usr/lib/mozilla/plugins/libjavaplugin_oji.so" rather than "ln -s /opt/jre1.5.0_08/plugin/i386/ns7/libjavaplugin_oji.so /usr/lib/mozilla/plugins/libjavaplugin_oji.so" to create the browser plugin.)

We are not done with Java quite yet, even though your browser plugin is working. Please proceed to the next step.

If you wish to run Java applications such as [LimeWire](#), [JAlbum](#) or [Azureus](#) and you have installed the Sun J2SE JRE into /opt as described above, open a terminal and type:

```
su -
```

Hit enter. Type your root password. Hit enter.

Type:

```
gedit /etc/profile.d/java.sh
```

Hit enter.

In gedit type or copy and paste these lines:

```
export J2RE_HOME=/opt/jre1.5.0_08
export PATH=$J2RE_HOME/bin:$PATH
```

Be sure to enter a carriage return after these lines. Click on the "save" icon in gedit and exit gedit.

In the terminal (which should still be open) type:

```
source /etc/profile.d/java.sh
```

Hit enter.

Type:

```
which java
```

Hit enter.

You should see:

```
/opt/jre1.5.0_08/bin/java
```

Type:

```
/usr/sbin/alternatives --install /usr/bin/java java /opt/jre1.5.0_08/bin/java 2
```

Hit enter.

Type:

```
/usr/sbin/alternatives --config java
```

Hit enter.

You should see:

There are 2 programs which provide 'java'.

```
      Selection      Command
-----
*  1                /usr/lib/jvm/jre-1.4.2-gcj/bin/java
+  2                /opt/jre1.5.0_08/bin/java
```

Enter to keep the current selection[+], or type selection number:

Type:

2

Hit enter.

Type:

```
/usr/sbin/alternatives --display java
```

Hit enter.

You should see:

```
java - status is manual.
link currently points to /opt/jre1.5.0_08/bin/java
/usr/lib/jvm/jre-1.4.2-gcj/bin/java - priority 1420
slave rmiregistry: /usr/lib/jvm/jre-1.4.2-gcj/bin/rmiregistry
slave jre_exports: /usr/lib/jvm-exports/jre-1.4.2-gcj
slave jre: /usr/lib/jvm/jre-1.4.2-gcj
/opt/jre1.5.0_08/bin/java - priority 2
slave rmiregistry: (null)
slave jre_exports: (null)
slave jre: (null)
Current `best' version is /usr/lib/jvm/jre-1.4.2-gcj/bin/java.
```

You should now be able to install and run Java applications.

Flash:

Be sure you have configured the Macromedia repository as described in the Yum section above.

If you have not already done so go to "System" > "Administration" > "Security Level and Firewall". Enter your root password and click "ok". On the "SELinux" tab click on "Modify

SELinux Policy", click on "Compatibility" to open it and tick the check box next to "Allow the use of shared libraries with Text Relocation". Click "ok". Reboot your machine to implement the new SELinux policy.

Open the terminal. Type:

```
su -
```

Hit enter. Type your root password. Hit enter.

Type:

```
yum -y install flash-plugin
```

Hit enter. Click "accept" in the license agreement windows that appears. Wait for the installation to complete. (Note: If the Macromedia license agreement does not appear you may have to type "/usr/lib/flash-plugin/setup install" at the root prompt and hit enter.)

At the moment there is a bug in Flash that prevents it from displaying normal text in FC5. To resolve this enter the following command as root: "mkdir -p /usr/X11R6/lib/X11/fs/", hit enter and then enter the following command also as root: "ln -s /etc/X11/fs/config /usr/X11R6/lib/X11/fs/config", hit enter and then log out and back in.

Restart Firefox to enable the flash plugin. You could go to <http://www.studiocleo.com/> to test your flash plugin installation.

RealPlayer:

Open Firefox. Go to <http://www.real.com/linux/> and download (save to disk) the [RealPlayer10GOLD.rpm](#) package. This should save the file to your home folder. If it saves the file to your desktop instead go to your desktop and drag the file into your "Home" folder. (Left mouse click on the file and drag it on top of your "Home" folder while holding the left mouse button down. Then release the mouse button.)

If you have not already done so go to "System" > "Administration" > "Security Level and Firewall". Enter your root password and click "ok". On the "SELinux" tab click on "Modify SELinux Policy", click on "Compatibility" to open it and tick the check box next to "Allow the use of shared libraries with Text Relocation". Click "ok". Reboot your machine to implement the new SELinux policy.

Open the terminal. Type:

```
su
```

Hit enter. Type your root password. Hit enter.

If you have not already done so type:

```
yum -y install compat-libstdc++-33
```

Hit enter. Wait for compat-libstdc++-33 to be installed.

Type:

```
rpm -ivh *.rpm
```

Hit enter. Wait for the installation to complete.

Type:

```
rm *.rpm
```

Hit enter. Type "y" and hit enter.

Close the terminal. Close and restart Firefox to enable the RealPlayer plugin, go to <http://www.npr.org/>, click on "Hourly Newscast", click the radio button in the dialog box "Open with" and tick the check box "Do this automatically for files like this form now on". Click the selection box opposite the "Open with" radio button, select "Other..." and then click on "File System", browse to /usr/bin/realplay and select "realplay". Click "Open". Click "OK" and complete the RealPlayer Setup Assistant to test your RealPlayer plugin installation.

Rhythmbox:

Rhythmbox Music Player is the default music player in FC5 but does not come with MP3 support out of the box because of patent issues. It is found in "Applications" > "Sound & Video". To enable MP3 support for Music Player be sure you have configured the dries repository as described in the yum section above, then open the terminal.

Type:

```
su -
```

Hit enter. Type your root password. Hit enter.

Type:

```
yum -y install gstreamer-plugins-ugly
```

Hit enter. Wait for the installation to complete. You should now have MP3 support in Rhythmbox Music Player. (Note: if you don't have any sound output you may have to run "gststreamer-properties" in a terminal and select an alternate default output plugin. For example you may have to change from the ALSA plugin to the OSS plugin in order for your sound to work.)

Adobe Reader:

The Adobe Acrobat Reader is available in the dries repository. To install Adobe Reader be sure you have configured the dries repository as described in the yum section above. Then open the terminal. Type:

```
su -
```

Hit enter. Type your root password. Hit enter.

If you have not already done so type:

```
yum -y install compat-libstdc++-33
```

Hit enter. Wait for compat-libstdc++-33 to be installed.

Type:

```
yum -y install acroread openldap openldap-devel
```

Hit enter. Wait for the installation to complete. Close the terminal. (Note: If you have the 64 bit version of Fedora Core and wish to install the 32 bit version of acroread you can download it from <http://ftp.belnet.be/packages/dries.ulyssis.org/fedora/linux/5/i386/dries/RPMS/>, instal it with a "rpm -ivh *.rpm" as root as we have been doing and open it with "/usr/bin/acroread".)

If you have not already done so go to "System" > "Administration" > "Security Level and Firewall". Enter your root password and click "ok". On the "SELinux" tab click on "Modify SELinux Policy", click on "Compatibility" to open it and tick the check box next to "Allow the use of shared libraries with Text Relocation". Click "ok".

Adobe Reader is installed. You could go to http://stanton-finley.net/fedora_core_5_installation_notes.pdf to test your Adobe Reader installation. When the "Open with" dialog box appears click the selection box opposite the "Open with" radio button, select "Other..." and then click on "File System" and browse to and select /usr/bin/acroread. Click "Open". Click "OK" If you wish to open Adobe Reader outside of Firefox the command is "/usr/bin/acroread".

Xine - a DVD and multimedia player:

To install Xine, a DVD and multimedia player, configure yum as described above, then open a terminal. Type:

```
su -
```

Hit enter. Type your root password. Hit enter.

Type:

```
yum -y install xine xine-lib xine-skins
```

Hit enter. Wait for the installation to complete. Close the terminal. Xine should now be available in "Applications" > "Sound & Video". You should now install the codecs as described below. If you wish to use Xine to play your DVD movies go to "System" > "Preferences" > "Removable Drives and Media", click on the "Multimedia" tab, tick the check box next to "Play video DVD disks when inserted", enter in the "Command:" box "xine --auto-play --auto-scan dvd" and click "Close". If you get a message from Xine to the effect that it "...cannot open MRL [dvd:\
)" you may have to create a symbolic link for the drive from which you wish to play DVDs. Open a terminal and as root ("su -") enter the command "ln -sf /dev/cdrom /dev/dvd" or "ln -sf /dev/cdwriter /dev/dvd".

Multimedia Codecs:

To get the most out of Xine and other media players such as MPlayer you will need to install additional codecs. In order to do this open Firefox, go to <http://www4.mplayerhq.hu/MPlayer/releases/codecs/all-20060611.tar.bz2> and download (save to disk) [all-20060611.tar.bz2](http://www4.mplayerhq.hu/MPlayer/releases/codecs/all-20060611.tar.bz2). This should save the file to your home folder. If it saves the file to your desktop instead go to your desktop and drag the file into your "Home" folder. (Left mouse click on the file and drag it on top of your "Home" folder while holding the left mouse button down. Then release the mouse button.)

Open the terminal. Type:

```
su
```

Hit enter. Type your root password. Hit enter.

Type:

```
mkdir /usr/local/lib/codecs/
```

Hit enter.

Type:

```
mkdir /usr/lib/win32
```

Hit enter.

Type:

```
tar xvfj *.tar.bz2
```

Hit enter.

Type:

```
rm *.tar.bz2
```

Hit enter. Type "y" and hit enter.

Type:

```
cp ./all-20060611/* /usr/local/lib/codecs/
```

Hit enter.

Type:

```
chmod 755 /usr/local/lib/codecs/*
```

Hit enter.

Type:

```
cp /usr/local/lib/codecs/* /usr/lib/win32/
```

Hit enter.

Type:

```
rm -rf ./all-20060611
```

Hit enter. Close the terminal. The additional codecs are now installed.

Totem-xine - the Totem front end for Xine:

Totem-xine is a GTK2 front-end for xine-lib. Totem is a simple DVD and movie player. It features a simple play list, a full-screen mode, seek and volume controls, as well as a pretty complete keyboard navigation system. Totem-xine is linked against xine-lib unlike the default Fedora Core Totem package, which is linked against Gstreamer. Many users prefer it over the default Totem player as it can take advantage of all the codecs available to Xine. To obtain Totem-xine we will do a one-time only invocation of the livna.org stable repository to download and install the RPM. First install and configure Xine and obtain the extra codecs as described in the Xine section above. If you have not already configured the livna repository as described above we will do so now.

Open a terminal. Type:

```
su -
```

Hit enter, type your root password and hit enter.

Type:

```
gedit /etc/yum.repos.d/livna.repo
```

Hit enter.

In gedit type or copy and paste these lines:

```
[livna]
name=Livna for Fedora Core $releasever - $basearch - Base
baseurl=
    http://rpm.livna.org/fedora/$releasever/$basearch/
    http://livna.cat.pdx.edu/fedora/$releasever/$basearch/
    http://wftp.tu-chemnitz.de/pub/linux/livna/fedora/$releasever/$basearch/
    http://ftp-stud.fht-esslingen.de/pub/Mirrors/rpm.livna.org/fedora/$release
failovermethod=priority
#mirrorlist=http://rpm.livna.org/mirrorlist-5
enabled=0
gpgcheck=1
```

(Note that we have the "enabled" bit set to "0" (off) in this file so that the livna-stable repository will not conflict with our RPMForge repositories for automatic updates.) Be sure there is a carriage return (blank line) at the bottom of the file. Click the "save" icon in gedit and then close gedit.

Type the following in the root terminal:

```
rpm --import http://rpm.livna.org/RPM-LIVNA-GPG-KEY
```

Hit enter.

Because Totem-xine conflicts with Totem we will remove Totem and because Rhythmbox is a dependency of Totem the following step will also remove Rhythmbox. However we will reinstall Rhythmbox in the subsequent step and your current Rhythmbox configuration will be retained. Type the following in the root terminal:

```
yum -y remove totem
```

Hit enter. Wait for the removal to complete.

Type the following in the root terminal:

```
yum -y --enablerepo livna install totem-xine rhythmbox
```

Hit enter. Wait for the installation to complete. Totem-xine will now be available in "Applications" > "Sound & Video" as "Movie Player" If you wish to play DVD movies automatically with Totem-xine go to "System" > "Preferences" > "Removable Drives and Media", click on the "Multimedia" tab, tick the check box next to "Play video DVD disks when inserted", enter in the "Command:" box "totem dvd:///" and click "Close".

MPlayer - another multimedia player:

To obtain MPlayer configure yum as described in the yum section above and install the extra codecs as described in the Xine section above, then open the terminal. Type:

```
su -
```

Hit enter. Type your root password. Hit enter.

Type:

```
yum -y install mplayer mplayer-skins mplayer-fonts
```

Hit enter and wait for the installation to complete.

Type:

```
gmplayer
```

Hit enter. Mplayer will open. Close it. Close the Terminal.

Open a terminal as your regular user (not root). Type:

```
gmplayer
```

Hit enter. Mplayer will open. Click on the tool icon. (It looks like a small wrench.) Configure your preferred options. Close the terminal. MPlayer should now be available in "Applications" > "Sound & Video".

Thomas Chung of FedoraNEWS.org has kindly made an Mplayer plugin rpm build available for Fedora Core 5 which is "RealMedia disabled" (including the SMIL and OGG Mime Types) so that it will not conflict with your RealPlayer installation. To obtain this Mplayer plug-in for playing web-embedded movies and multimedia in your web browser install Mplayer as described above and make sure your sound card is configured properly for it, then open Firefox, go to <http://fedoranews.org/tchung/mplayerplug-in/3.25/> and download (save to disk) [mplayerplug-in-3.25-1.fc5.i386.rpm](http://fedoranews.org/tchung/mplayerplug-in/3.25-1.fc5.i386.rpm). This should save the file to your home folder. If it saves the file to your desktop instead go to your desktop and drag the file into your "Home" folder. (Left mouse click on the file and drag it on top of your "Home" folder while holding the left mouse button down. Then release the mouse button.) Then open the terminal.

Type:

```
su
```

Hit enter. Type your root password. Hit enter.

Type:

```
rpm -Uvh *.rpm
```

Hit enter. Wait for the installation to complete.

Type:

```
rm *.rpm
```

Hit enter. Type "y" and hit enter. Close the terminal.

Close and restart Firefox to enable the plugin. (Note that by default the mplayerplug-in files are installed in /usr/lib/mozilla/plugins. Normally Firefox looks in /usr/lib/mozilla/plugins for its plugins by default. If you have trouble with the mplayerplug-in in Firefox log in as root and do a "cd /usr/lib/mozilla/plugins", hit enter, then do a "cp mplayerplug-in* /usr/lib/firefox-1.5.0.1/plugins" and hit enter. This will copy the appropriate mplayerplug-in files into your current Firefox installation's plugin directory. If your current Firefox installation directory is not /usr/lib/firefox-1.5.0.1 substitute the correct directory name in the above command.) In order to keep yum from overwriting this special version of mplayerplug-in after you install it you should do a "yum --exclude mplayerplug-in update" when you do your updates with yum. (Or for a permanent fix add the line "exclude=mplayerplug-in" to your /etc/yum.conf file. Be sure there is a new line/carriage return at the end of the file.) You could go to <http://www.apple.com/trailers/> to test your MPlayer plugin installation. (Note: In some cases an embedded video will appear to load to 99 percent and then stop. If this occurs just hit the play button on the bottom left hand side of the mplayerplug-in window and playback will begin. You can maximize the window with the bottom right hand button in the mplayerplug-in window.)

XMMS - a music and MP3 player:

The popular XMMS media player (also called "Audio Player" in the Gnome menu) is available for FC5 in Fedora Extras. The freshrpms repository has an MP3 plugin for XMMS. To install XMMS along with its MP3 support make sure that the freshrpms repository is configured in yum as described above. Open a terminal.

Type:

```
su -
```

Hit enter. Type your root password. Hit enter.

Type:

```
yum -y install xmms xmms-mp3
```

Hit enter. Wait for the installation to complete. Close the terminal. XMMS will be available in "Applications" > "Sound & Video" as "Audio Player". (Note: You may have to click the upper left hand corner of XMMS, select "Options" > "Preferences" and select an alternate sound output plugin in order to get XMMS to work on your system.)

Beep - another media player:

Beep is a GTK2 based port of the XMMS media player and is available for FC5 in Fedora Extras. The freshrpms repository has an MP3 plugin for Beep. To install Beep make sure that the freshrpms repository is configured in yum as described above. Open a terminal.

Type:

```
su -
```

Hit enter. Type your root password. Hit enter.

Type:

```
yum -y install bmp bmp-mp3
```

Hit enter. Wait for the installation to complete. Close the terminal. Beep will be available in "Applications" > "Sound & Video". (Note: You may have to click the upper left hand corner of Beep, select "Preferences" > "Plugins" and on the "Output" tab select an alternate sound output plugin in order to get Beep to work on your system.)

Streamtuner - a music stream directory browser:

First install RealPlayer and Beep with MP3 support as described above. Streamtuner will use these applications to play the music streams you select. Open Firefox. Go to <http://www.bennewitz.com/rpms/streamtuner/fc5/> and download (save to disk) [streamtuner-0.99.99-12.fc5.i386.rpm](#). This should save the file to your home folder. If it saves the file to your desktop instead go to your desktop and drag the file into your "Home"

folder. (Left mouse click on the file and drag it on top of your "Home" folder while holding the left mouse button down. Then release the mouse button.)

Click on the terminal icon. This will open the terminal. Type:

```
su
```

Hit enter, type your root password and hit enter.

Type:

```
ls
```

Hit enter. This will list the contents of your home directory so you can see if the file you just saved is there.

Type:

```
rpm -ivh *.rpm
```

Hit enter. Wait for the installation to complete.

Type:

```
rm *.rpm
```

Hit enter. Type "y" and hit enter. Close the terminal. Streamtuner should now be available in "Applications" > "Sound & Video".

VLC - the Videolan stand-alone media player:

The VideoLAN Client (VLC) is a highly portable multimedia player for various audio and video formats (MPEG-1, MPEG-2, MPEG-4, DivX, mp3, ogg, ...) as well as DVDs, VCDs, and various streaming protocols. The freshrpms repository has a VLC rpm for FC4. To install VLC make sure that the freshrpms repository is configured in yum as described above. Open a terminal.

Type:

```
su -
```

Hit enter. Type your root password. Hit enter.

Type:

```
yum -y install videolan-client
```

Hit enter. Wait for the installation to complete. Close the terminal. VLC will be available in "Applications" > "Sound & Video" as "VideoLAN Client". (You will probably have to configure VLC for your sound card. Open VLC. Select "Settings" > "Preferences". Tick the "Advanced options" check box in the lower right hand corner. Maximize the GUI window. Under "Audio" > "Output modules" select "ALSA". Click on the "Refresh list" button. Select your ALSA device name from the drop down menu. Alternatively you may have to select "OSS" rather than "ALSA" depending on your sound system. Be sure to click the "Save" button in the lower left corner when you are finished.)

Amarok - a KDE multimedia player:

Amarok is a KDE multimedia player (also works in Gnome) which is compatible with the .m3u and .pls formats for playlists. The Fedora Extras repository contains Amarok. To install Amarok and configure it to use the RealPlayer Helix engine for MP3 support first install RealPlayer as described in the RealPlayer section above, then open a terminal.

Type:

```
su -
```

Hit enter. Type your root password. Hit enter.

Type:

```
yum -y install amarok
```

Hit enter. Wait for the installation to complete. Close the terminal. Amarok will be available in "Applications" > "Sound & Video" as "amaroK". When you first open Amarok go to "Settings" > "Configure amaroK" > "Engine" and on the "Output plugin:" pull down menu select "alsa". Tick the check box next to "Device" and make sure "default" is selected. (If you don't see these options you may have to do a "yum -y update" as root to get the most recent version 1.4.0 of Amarok. If you get an older version it will use the GStreamer engine in which case you will need to install gstreamer-plugins-ugly as described in the Rhythmbox section above for MP3 support in Amarok.) Then in the "Helix/RealPlay core directory:" box enter "/usr/local/RealPlayer/common", in the "Helix/Realplay plugins directory:" box enter "/usr/local/RealPlayer/plugins" and in the "Helix/RealPlay codecs directory:" box enter "/usr/local/RealPlayer/codecs". Click the "Apply" button. Click the "OK" button. Close Amarok. Log out and back in. Open Amarok and on the "Collection" side tab enter your music directory, expand the plus boxes and drag your songs out onto the "playlist" panel. You should now be able to play your MP3 and other format music playlists with Amarok.

Bittorrent and bittorrent-gui:

Open the terminal. Type:

```
su -
```

Hit enter. Type your root password. Hit enter.

Type:

```
yum -y install bittorrent
```

Hit enter. Wait for the installation to complete.

Type:

```
yum -y install bittorrent-gui
```

Hit enter. Wait for the installation to complete.

Type:

```
/sbin/iptables -I INPUT -p tcp --destination-port 6881:6999 -j ACCEPT
```

Hit enter. This adds a rule to open TCP ports 6881 through 6999 in your firewall. These ports are required by Bittorrent.

Type:

```
/sbin/iptables-save > /etc/sysconfig/iptables
```

Hit enter. This saves the rule.

Type:

```
/sbin/iptables -L
```

Hit enter. This will output your iptables file so you can see if the rule was saved.

Now you can download ".torrent" files from within Firefox.

Azureus for bittorrent:

FC5 provides a version of Azureus that uses the open source gcj Java clone which also ships with FC5. However the author prefers to install Azureus in the home directory and link it with Sun Java selected as the default Java implementation using the alternatives method. In this way Java applications which do not function using the gcj Java implementation will also work. In order to install Azureus in this way you must have previously installed Java and configured it to run Java applications. (See above.) Open Firefox. Go to http://sourceforge.net/project/showfiles.php?group_id=84122 and download (save to disk) [Azureus_2.4.0.2_linux.tar.bz2](#). This should save the file to your home folder. If it saves the file to your desktop instead go to your desktop and drag the file into your "Home" folder. (Left mouse click on the file and drag it on top of your "Home" folder while holding the left mouse button down. Then release the mouse button.)

If you have not already opened tcp ports 6881 through 6999 in your Fedora firewall for another bittorrent application such as the one described above open the terminal. Type:

```
su -
```

Hit enter. Type your root password. Hit enter.

Type:

```
/sbin/iptables -I INPUT -p tcp --destination-port 6881:6999 -j ACCEPT
```

Hit enter. This adds a rule to open TCP ports 6881 through 6999 in your firewall. These ports are required by bittorrent and/or Azureus.

Type:

```
/sbin/iptables-save > /etc/sysconfig/iptables
```

Hit enter. This saves the rule. You must also open a udp port for Azureus. Select a random port between 6882 and 6999. This is the port we will set up for Azureus as follows:

Type:

```
/sbin/iptables -I INPUT -p udp --destination-port 6972:6972 -j ACCEPT
```

Hit enter. This adds a rule to open UDP port 6972 in your firewall. (This is only an example. Use the random port you selected above.)

Type:

```
/sbin/iptables-save > /etc/sysconfig/iptables
```

Hit enter. This saves the rule.

Type:

```
/sbin/iptables -L
```

Hit enter. This will output your iptables file so you can see if the rule was saved. Close the terminal.

Open a terminal as your regular user (not root).

Type:

```
tar xvfj *.tar.bz2
```

Hit enter.

Type:

```
rm *.bz2
```

Hit enter. Type "y" and hit enter.

Type:

```
cd azureus
```

Hit enter.

Type:

```
./azureus
```

Hit enter. The Azureus Configuration Wizard will open. Click "Next" for default English or select your language and click "Next". Select the "Advanced" radio button and click "Next". If another message window or update window pops up over this selection move it out of the way with your mouse for now or click the window you were working with to put it on top again and continue. Select your line speed and click "Next". Select an incoming TPC listen port between 6882 and 6999 that corresponds to the number of the port you selected for the udp iptables

firewall port above. Click the test button. If your iptables firewall and external router firewall are configured properly and have these ports open you should see "Testing port whatever ... OK!". Click "Next". Browse to the folder into which you wish to save your torrent files. The default is /home/your_user_name/.azureus/torrents. Click "Finish" Click "Close". If an update window had also opened previously click the appropriate button on it and allow it to update Azureus. Note: If you elect to restart Azureus it may open up somewhere on your screen in a tiny window. Just click and drag a corner of it to resize it to a reasonable size and then maximize it. Close the terminal. Now when you click on a ".torrent" file in Firefox you will be presented with a dialog box. Do not select the default "Azureus" or "Bittorrent". Click the radio button "open with" and optionally click the check box "Do this automatically for files like this form now on", then click the "browse" button in the dialog box (or the down arrow on the left side of the text window and select "other") and browse to "home" > "your_user_name" > "azureus", double click on "azureus" and select "azureus". Click "open". Click "OK". Click the "Browse" button and browse to your save directory. Close the "Welcome to Azureus" box. Click "OK". If your ISP blocks torrent traffic go to "Tools" > "Options", click the arrow to the left of "Connection" to open it, select "Transport Encryption" and tick all the check boxes. Then click "Save" on the lower left. (Not all clients support Transport Encryption but this technique many help in certain situations.) Note: If you choose to download your files into a hidden directory such as the /home/your_user_name/.azureus/torrents folder you will have to click on "View" > "Show hidden files" in "Places" > "Home Folder" to get to them in the file browser. Be sure that the tcp and udp port ranges that you open with iptables are also openec in your router if you have one.

LimeWire:

In order to install the LimeWire 4.12.6 basic (free) version you must have previously installed Java and configured it to run Java applications. (See above.) Open Firefox. Go to <http://www.limewire.com/english/content/downloadfree2.shtml> and in the "LIMEWIRE BASIC v 4.12.6" paragraph under the title "Other" download [LimeWireOther.zip](#). This should save the file to your home folder. If it saves the file to your desktop instead go to your desktop and drag the file into your "Home" folder. (Left mouse click on the file and drag it on top of your "Home" folder while holding the left mouse button down. Then release the mouse button.) Open a terminal. Type:

```
su
```

Hit enter. Type your root password. Hit enter.

Type:

```
unzip -u LimeWireOther.zip -d /opt/
```

Hit enter.

Type:

```
rm LimeWireOther.zip
```

Hit enter.

Type:

```
chown -R root:root /opt/LimeWire/
```

Hit enter.

Type:

```
su -
```

Hit enter.

Type:

```
gedit /usr/bin/limewire.sh
```

Hit enter.

In gedit type these lines:

```
cd /opt/LimeWire/  
./runLime.sh
```

Be sure to enter a carriage return after these lines. Click on the "save" icon in gedit and exit gedit.

In the terminal (which should still be open) type:

```
chmod +x /usr/bin/limewire.sh
```

Hit enter.

Type:

```
gedit /usr/share/applications/LimeWire.desktop
```

Hit enter.

In gedit type these lines:

```
[Desktop Entry]
Name=LimeWire
Comment=LimeWire
Exec=limewire.sh
Icon=/opt/LimeWire/LimeWire.ico
Terminal=false
Type=Application
Categories=Application;Network;
```

Be sure to enter a carriage return after these lines. Click on the "save" icon in gedit and exit gedit. Log out and back in again. Limewire should now be available in "Applications" > "Internet" as "LimeWire".

NTFS support (for mounting your Windows partition):

Open the terminal. Type:

```
su
```

Hit enter. Type your root password. Hit enter.

Type:

```
uname -rm
```

Hit enter. This will output your kernel version and processor type.

Open Firefox. Go to <http://www.linux-ntfs.org/content/view/187/> and download (save to disk) the appropriate NTFS RPM for your kernel version and processor type. This should save the file to your home folder. If it saves the file to your desktop instead go to your desktop and drag the file into your "Home" folder. (Left mouse click on the file and drag it on top of your "Home" folder while holding the left mouse button down. Then release the mouse button.)

With the root terminal still open type:

```
rpm -Uvh *.rpm
```

Hit enter. Wait for the installation to complete.

Type:

```
rm *.rpm
```

Hit enter. Type "y" and hit enter.

Type:

```
su -
```

Hit enter.

Type:

```
mkdir /mnt/windows
```

Hit enter.

Type:

```
/sbin/fdisk -l
```

Hit enter. This will output your HPFS/NTFS partition identifier.

Type:

```
gedit /etc/fstab
```

Hit enter and gedit will open.

In gedit add the following line to /etc/fstab:

```
/dev/hda1          /mnt/windows      ntfs      ro,defaults,umask=0222  0 0
```

Be sure to enter a blank new line at the end of the file. If your partition identifier is not

"/dev/hda1" substitute the correct characters. (For example it might be "/dev/sda1" if you have a SATA drive.)

Click the "save" icon in gedit and exit gedit. Close the terminal. Reboot your machine. Your Windows partition should now be available in the file browser under "/mnt/windows". (Note that you will have to uninstall the old kernel module with the "yum remove kernel-module-ntfs" command as root and then install a new NTFS kernel module as described above to match your new kernel each time you update it.)

Web Server:

The Apache web server is available for Fedora Core 5. If you have not already done so go to "Applications" > "Add/Remove Software", enter your root password, then under "Servers" tick the check box for "Web Server", click "Optional Packages" and tick all the check boxes, click "Close", click "Apply" and "Continue". Go to "System" > "Administration" > "Security Level and Firewall". Provide your root password, click "ok" and on the "Firewall Options" tab make sure the check boxes next to "WWW (HTTP)" and "Secure WWW (HTTPS)" are ticked. On the "SELinux" tab click the arrow on the left of "Modify SELinux Policy" and under (expanded) "HTTPD Service" make sure all the checkboxes are ticked except "Disable SELinux protection for httpd daemon" and "Disable SELinux protection for http suexec". (Please see <http://fedora.redhat.com/docs/selinux-faq-fc5/> for important SELinux considerations.) Click "ok". Reboot your machine to enable the new SELinux settings.

Subscribe to a service such as <https://www.dyndns.org/> or <http://www.easydns.com/> to register a new domain name (such as your-name.org) and to have their DNS service map your computer's IP address to your new registered domain name. (The command "ifconfig" at the root prompt will output your IP address.) If you have a "dynamic" (changeable) IP address you can use their dynamic DNS service.

If you are using a router you may have to forward ports 80, 8080, and 443 in order for your web server to work through your router's firewall. See <http://www.portforward.com/routers.htm> for instructions.

Open the terminal. Type:

```
su -
```

Hit enter. Type your root password. Hit enter. Type "ifconfig". Hit enter. This will output the IP address of your machine (the numbers after "inet addr:") or if you are behind a router or gateway go to <http://checkip.dyndns.org/> or <http://myipaddress.com/> to determine the IP address that the outside world sees for your machine and use that as your IP address in the following.

Type:

```
gedit /etc/hosts
```

Hit enter.

In gedit edit your `/etc/hosts` file to include a line containing your IP address, your domain name, and your short domain name (the characters before the dot). Be sure to include a carriage return after this line. When you are finished your hosts file should look something like this:

```
# Do not remove the following line, or various programs
# that require network functionality will fail.
127.0.0.1          localhost.localdomain localhost
67.172.236.37     stantonfinley.org stantonfinley
```

Be sure there is a blank line at the end of the file. Click on the "save" icon in gedit and exit gedit.

Type:

```
gedit /etc/sysconfig/network
```

Hit enter.

In gedit edit your `/etc/sysconfig/network` file and replace "localhost.localdomain" with your domain name. When you are finished your network file should look something like this:

```
NETWORKING=yes
HOSTNAME=stantonfinley.org
```

Click on the "save" icon in gedit and exit gedit.

Type:

```
gedit /etc/httpd/conf/httpd.conf
```

Hit enter. Go to "File" > "Save As...", type "httpd.conf.original" in the "Save As..." box and click "Save". This creates a backup of your httpd.conf file.

Type:

```
gedit /etc/httpd/conf/httpd.conf
```

Hit enter. (You are about to edit your Apache web server configuration file. Please see <http://httpd.apache.org/docs/2.0/> for important information about what the configuration

lines we are about to edit do.)

In gedit scroll down to the "ServerAdmin" section and enter your email address instead of "root@localhost".

Scroll down to the "#ServerName" section and uncomment it (take out the "#"). Then enter the registered DNS name of your web site ("whatever.com") or your server's IP address instead of "www.example.com". (If you don't know your IP address type "ifconfig" at the root prompt.)

Scroll down and change "UseCanonicalName Off" to "UseCanonicalName On".

Scroll down to the "Options" line and change "Options Indexes FollowSymLinks" to "Options Indexes Includes FollowSymLinks SymLinksifOwnerMatch ExecCGI MultiViews".

Change "AllowOverride None" to "AllowOverride Options FileInfo AuthConfig Limit" in case you want to use .htaccess files in any of your web subdirectories.

Change "DirectoryIndex index.html index.html.var" to "DirectoryIndex index.html index.html.var index.shtml index.cgi index.php index.phtml index.php3 index.htm home.html welcome.html".

Under the "AddType application/x-compress .Z" and "AddType application/x-gzip .gz .tgz" lines add the line: "AddType application/x-httpd-php .php .phps .php3 .phtml .html .htm .shtml .fds".

Uncomment the line "#AddHandler cgi-script .cgi" and add ".pl" so that it reads "AddHandler cgi-script .cgi .pl".

If you wish to enable support to serve web pages from user's home directories as well comment (add a "#" in front of) "UserDir disable" so that it reads "#UserDir disable" and uncomment "#UserDir public_html" so that it reads "UserDir public_html". Then uncomment and edit the control access stanza for user directories below it so that it looks something like this:

```
<Directory /home/*/public_html>
    AllowOverride Options FileInfo AuthConfig Limit
    Options Indexes Includes FollowSymLinks SymLinksifOwnerMatch ExecCGI MultiView
    <Limit GET POST OPTIONS>
        Order allow,deny
        Allow from all
    </Limit>
    <LimitExcept GET POST OPTIONS>
        Order deny,allow
        Allow from all
    </LimitExcept>
</Directory>
```

Click on the "save" icon in gedit to save your httpd.conf file and exit gedit. Close the terminal.

Open a terminal as your regular user (not root). Type:

```
mkdir public_html
```

Hit enter.

Type:

```
chmod -R 755 public_html
```

Hit enter. Close the terminal.

Open the terminal. Type:

```
su -
```

Hit enter. Type your root password. Hit enter.

Type:

```
cd /home
```

Hit enter.

Type:

```
chmod 711 your_user_name
```

Hit enter.

Type:

```
chcon -R -t httpd_user_content_t /home/your_user_name/public_html/
```

(Use the name of the user's home directory you are working with in place of "your_user_name".) Hit enter. Close the terminal.

If you have a favicon.ico copy it to /var/www/html while still logged in as root (cp favicon.ico /var/www/html).

Go to "System" > "Administration" > "Server Settings" > "Services". Type in your root

password in the dialog box that appears and click on "OK". Scroll down the list and tick the check box for "httpd". Also untick the check box for "thttpd" if it is ticked. Click on the "save" icon in the Service Configuration window and then close the window. Do this for runlevel 3 as well as for runlevel 5. Reboot your machine or issue the command "service httpd start" as root to start the Apache web server.

Open Firefox and type your server's IP address in the URL window and hit enter. You should see the default Apache/Fedora Core test page. Type the registered DNS name of your web site ("whatever.com") in the URL window and hit enter. You should see the test page again.

While still logged in as root copy or move your web site index.html and any other HTTP content you may have to /var/www/html and/or to /home/your_user_name/public_html. Change permissions on these files to be viewable and executable as appropriate on the web (usually "chmod 755 *"). You are now serving web pages from your Fedora Core web server. You will find your server log files in /etc/httpd/logs and you will be able to view them while logged in as root.

FTP Server:

The secure FTP server vsftpd is available in Fedora Core. If you have not already done so go to Applications > "Add/Remove Software", enter your root password, then under "Servers" tick the check box for "FTP Server", click "Close", click "Apply" and "Continue". Go to "System" > "Administration" > "Security Level and Firewall". Provide your root password, click "ok" and on the "Firewall Options" tab make sure the check boxes next to "FTP" is ticked. On the "SELinux" tab click the arrow on the left of "Modify SELinux Policy" and under (expanded) "FTP" make sure all the checkboxes are ticked except "Disable SELinux protection for ftpd daemon". Click "ok". Reboot your machine to enable the new SELinux settings.

If you are using a router you may have to forward ports 20 and 21 in order for your FTP server to work through your router's firewall. See <http://www.portforward.com/routers.htm> for instructions.

Register a new domain name for your Fedora box, have it mapped to your IP address, and configure your /etc/hosts and /etc/sysconfig/network files as described in the web server section above.

Open the terminal. Type:

```
su -
```

Hit enter.

Type:

```
gedit /etc/vsftpd/vsftpd.conf
```

Hit enter.

In gedit change "anonymous_enable=YES" to "anonymous_enable=NO".

Also add a line that reads "chroot_local_user=YES" just under the line that reads "#chroot_list_file=/etc/vsftpd/chroot_list".

Also uncomment (remove the "#" from) the ascii_lines so that they read "ascii_upload_enable=YES" and "ascii_download_enable=YES".

Click on the "save" icon in gedit to save your vsftpd.conf file and exit gedit. Close the terminal.

Go to "System" > "Administration" > "Server Settings" > "Services". Type in your root password in the dialog box that appears and click on "OK". Scroll down the list and check the check box for "vsftpd". Click on the "save" icon in the Service Configuration window and then close the window. Do this for runlevel 3 as well as for runlevel 5. Reboot your machine. You should now be able to access your home user's directory with an FTP client. The host name on your client will be your registered domain name or the IP address of your Fedora Core box. The user ID will be your Fedora Core non-root user name. The password will be your Fedora Core non-root user's password. (I recommend turning off passive mode on the client to speed up transfers. If you use gftp as a client you should edit /etc/sysconfig/iptables-config on the server and add "ip_nat_ftp" into the "IPTABLES_MODULES="" directive so that it reads IPTABLES_MODULES="ip_conntrack_netbios_ns ip_conntrack_ftp ip_nat_ftp". Then reboot your machine.)

PHP and Perl:

PHP and Perl are available in Fedora Core 5 when we install the web server as described above. If you have enabled the Apache web server (see above) you can test your PHP and Perl installations by doing the following: Open the terminal. Type:

```
su -
```

Hit enter. Type your root password. Hit enter.

Type:

```
gedit /var/www/html/phpinfo.php
```

Hit enter and gedit will open.

In gedit type:

```
<?php phpinfo();?>
```

Click the "save" icon in gedit and close gedit.

While still in the root terminal type:

```
gedit /var/www/html/printenv.pl
```

Hit enter and gedit will open.

In gedit type:

```
#!/usr/bin/perl
##
## printenv -- demo CGI program which just prints its environment
##

print "Content-type: text/plain\n\n";
foreach $var (sort(keys(%ENV))) {
    $val = $ENV{$var};
    $val =~ s|\n|\\n|g;
    $val =~ s|"|\\\\"|g;
    print "${var}=\\"${val}\\\"\n";
}

```

Be sure there is a blank line at the end of the file. Click the "save" icon in gedit and close gedit.

Type:

```
chmod 755 /var/www/html/printenv.pl
```

Hit enter.

Type:

```
chmod 755 /var/www/html/phpinfo.php
```

Hit enter.

Now when you open these files from your web server (<http://whatever.com/phpinfo.php> and <http://whatever.com/printenv.pl>) you will be able to prove the functionality of your PHP and Perl installations. (In order to allow cgi scripts to execute outside of the cgi-bin directory configure your httpd.conf as described in the web server section above.)

Special note on configuring sendmail for PHP using your email provider's SMTP (simple mail transport protocol):

Your `/etc/php.ini` file uses sendmail as the default transport agent for sending email from PHP applications (`"sendmail_path = /usr/sbin/sendmail -t -i"`).

If you have not already done so edit (with gedit as we have been doing) `/etc/hosts` as root (type `"su -"` in a terminal, hit enter, type your root password, hit enter) and add the line `"your.ip.address whatever.org whatever"` where `"your.ip.address"` is the IP address of your web server, `"whatever.org"` is the registered DNS name of your web site (your canonical domain name), and `"whatever"` is your short domain name (the characters before the dot). Separate the IP address from the domain name with a couple of tabs.

Edit `/etc/sysconfig/network` and change `"localhost.localdomain"` to `"whatever.org"` where `"whatever.org"` is the registered DNS name of your web site (your canonical domain name). Reboot.

Edit `/etc/mail/local-host-names` and include your domain name.

Edit `/etc/mail/sendmail.mc` and change `"dnl define(`SMART_HOST', `smtp.your.provider')dnl"` to `"define(`SMART_HOST', `smtp.your.provider')dnl"` where `"smtp.your.provider"` is the smtp host that you use to send mail from your email client.

Also change `"DAEMON_OPTIONS(`Port=smtp,Addr=127.0.0.1, Name=MTA')dnl"` to `"dnl DAEMON_OPTIONS(`Port=smtp,Addr=127.0.0.1, Name=MTA')dnl"`.

Also change `"dnl MASQUERADE_AS(`mydomain.com')dnl"` to `"MASQUERADE_AS(`your.provider.com')dnl"` where `"your.provider.com"` is the host that you use to send mail from your email client (the characters after the `"@"`).

Add these lines (near the bottom of `/etc/mail/sendmail.mc` but above `"MAILER"`): `"FEATURE(`genericstable', `hash -o /etc/mail/genericstable.db')dnl"` and `"GENERIC_DOMAIN_FILE(`/etc/mail/generics-domains')dnl"`.

Edit or create if required: `/etc/mail/generics-domains`. Include in `/etc/mail/generics-domains` your canonical domain name. (Be sure to add a carriage return.)

Edit or create if required: `/etc/mail/genericstable`. Include in `/etc/mail/genericstable` the line: `"username mailusername@your.provider.com"` where `"username"` is your non-root Fedora user name and `"mailusername@your.provider.com"` is your email address that you use with your email client. (Be sure to add a carriage return.)

As root execute the command: `"make -C /etc/mail"`. This will regenerate `/etc/mail/sendmail.cf`.

As root do a `"yum -y install sendmail-cf"`.

Reboot or start (or restart) sendmail from `"System" > "Administration" > "Server Settings" > "Services"`.

(See <http://www.linuxhomenetworking.com/linux-hn/sendmail.htm>.)

MySQL:

MySQL is available in Fedora Core 5. If you have not already done so go to Applications" > "Add/Remove Software", enter your root password, then under "Servers" tick the check box for "MySQL Database" and under "Optional Packages" make sure all the check boxes are ticked. Click "Close", click "Apply" and "Continue". Go to "System" > "Administration" > "Server Settings" > "Services". Type in your root password in the dialog box that appears and click on "OK". Scroll down the list and check the check box for "mysqld". Click on the "save" icon in the Service Configuration window and then close the window. Do this for runlevel 3 as well as for runlevel 5. Reboot your machine to start the MySQL service or enter the command `"/sbin/service mysqld start"` as root.

Open the terminal. Type:

```
su -
```

Hit enter. Type your root password. Hit enter.

Type:

```
gedit /etc/my.cnf
```

Hit enter.

In the `mysqld` section of `my.cnf` add the line:

```
skip-innodb
```

Your `my.cnf` should now look something like this:

```
[mysqld]
datadir=/var/lib/mysql
socket=/var/lib/mysql/mysql.sock
# Default to using old password format for compatibility with mysql 3.x
# clients (those using the mysqlclient10 compatibility package).
old_passwords=1
skip-innodb

[mysql.server]
user=mysql
basedir=/var/lib

[mysqld_safe]
err-log=/var/log/mysql.log
pid-file=/var/run/mysqld/mysqld.pid
```

Click the "save" icon in `gedit` and close `gedit`.

While still in the root terminal type:

```
mysql -u root
```

Hit enter. You will see the `mysql>` query prompt.

Type:

```
select user, host, password, select_priv, update_priv, delete_priv, insert_priv fr
```

Hit enter. You will see something like this:


```

+-----+-----+-----+-----+-----+
| user | host                | password | select_priv | update_priv | delete_pr
+-----+-----+-----+-----+-----+
| root | localhost           |          | Y           | Y           | Y
| root | stantonfinley.org   |          | Y           | Y           | Y
|      | localhost           |          | N           | N           | N
|      | stantonfinley.org   |          | N           | N           | N
+-----+-----+-----+-----+-----+
4 rows in set (0.17 sec)

mysql>

```

Type:

```
set password for 'root'@'localhost' = password ('newpassword');
```

where "newpassword" is the password that you want to use for the root MySQL super user. Hit enter.

Type:

```
set password for 'root'@'host' = password ('newpassword');
```

where "host" is the name of your host as reported in the "host" column above and "newpassword" is the password that you want to use for the root MySQL super user. Hit enter.

Type:

```
select user, host, password, select_priv, update_priv, delete_priv, insert_priv fr
```

Hit enter. You will see something like this with your password hash-encrypted in the "password" column:

```
+-----+-----+-----+-----+-----+
| user | host                | password          | select_priv | update_priv | d
+-----+-----+-----+-----+-----+
| root | localhost           | 1e36745e3c0f99b0 | Y           | Y           | Y
| root | stantonfinley.org   | 1e36745e3c0f99b0 | Y           | Y           | Y
|      | localhost           |                   | N           | N           | N
|      | stantonfinley.org   |                   | N           | N           | N
+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql>
```

Type:

```
exit
```

Close the terminal. Reboot your machine. Open a terminal.

Type:

```
su -
```

Hit enter. Type your root password. Hit enter.

Type:

```
mysql -u root -p
```

Hit enter. MySQL should ask for your MySQL super user password. Type it in. Hit enter.

Type:

```
exit
```

You have successfully set up MySQL.

phpMyAdmin:

Configure and enable your web server, PHP, and MySQL as described above. Open Firefox. Go to <http://www.phpmyadmin.net/> and download (save to disk) the latest stable version in bzip2 format ([phpMyAdmin-2.8.2.2.tar.bz2](#)). This should save the file to your home folder. If it saves the file to your desktop instead go to your desktop and drag the file into your "Home"

folder. (Left mouse click on the file and drag it on top of your "Home" folder while holding the left mouse button down. Then release the mouse button.)

Open a terminal. Type:

```
su
```

Hit enter. Type your root password. Hit enter.

Type:

```
mv *.tar.bz2 /var/www/html
```

Hit enter.

Type:

```
cd /var/www/html
```

Hit enter.

Type:

```
bzip2 -dc *.tar.bz2 | tar -xvf -
```

Hit enter.

Type:

```
rm *.tar.bz2
```

Hit enter. Type "y" and hit enter.

Type:

```
mv phpMyAdmin-2.8.2.2 phpmyadmin
```

Hit enter. Close the terminal. Open the terminal again.

Type:

```
su -
```

Hit enter.

Type:

```
gedit /var/www/html/phpmyadmin/libraries/config.default.php
```

Hit enter and gedit will open.

In `/var/www/html/phpmyadmin/libraries/config.default.php` change `"$cfg['PmaAbsoluteUri'] = ";` to `"$cfg['PmaAbsoluteUri'] = ' http://whatever.com/phpmyadmin/';"` (where "whatever.com" is your web site).

Change `"$cfg['blowfish_secret'] = ";` to `"$cfg['blowfish_secret'] = 'passphrase';"` where "passphrase" is some arbitrary string of characters that the blowfish algorithm will use to encrypt your password when using cookie type authentication.

Under "Server(s) configuration" change `"$cfg['Servers'][$i]['auth_type'] = 'config';"` to `"$cfg['Servers'][$i]['auth_type'] = 'cookie';"`.

In gedit click on "File" > "Save as.." and in the "Name" box change the name of the file from "config.default.php" to "../config.inc.php". Then hit the "save" button and close gedit.

As root do a "yum -y install php-mbstring". Close the terminal. Reboot your machine.

Open `http://whatever.com/phpmyadmin/` in Firefox (where "whatever.com" is your web site). Type "root" in the "Username:" box and your MySQL super user password in the "Password:" box. Click the "Go" button. You should see the " Welcome to phpMyAdmin" web page. Open a terminal.

Type:

```
su -
```

Hit enter. Type your root password. Hit enter.

Type:

```
mysql -u root -p
```

Type in your MySQL super user password. Hit enter.

For MySQL versions 4.0.2 and above (FC5) type:

```
GRANT USAGE ON mysql.* TO 'pma'@'localhost' IDENTIFIED BY 'pmapassword';
GRANT SELECT (
    Host, User, Select_priv, Insert_priv, Update_priv, Delete_priv,
    Create_priv, Drop_priv, Reload_priv, Shutdown_priv, Process_priv,
    File_priv, Grant_priv, References_priv, Index_priv, Alter_priv,
    Show_db_priv, Super_priv, Create_tmp_table_priv, Lock_tables_priv,
    Execute_priv, Repl_slave_priv, Repl_client_priv
) ON mysql.user TO 'pma'@'localhost';
GRANT SELECT ON mysql.db TO 'pma'@'localhost';
GRANT SELECT ON mysql.host TO 'pma'@'localhost';
GRANT SELECT (Host, Db, User, Table_name, Table_priv, Column_priv)
    ON mysql.tables_priv TO 'pma'@'localhost';
GRANT SELECT, INSERT, UPDATE, DELETE ON phpmyadmin.* TO 'pma'@'localhost';
```

where "pmapassword" is the password for the pma user that you select for the special "controluser" that has only the SELECT privilege on the mysql.user (all columns except "Password"), mysql.db (all columns), mysql.host (all columns) and mysql.tables_priv (all columns except "Grantor" & "Timestamp") tables. Hit enter. Hit enter.

For MySQL versions 4.1.2 or later (FC5) open Firefox, go to http://whatever.org/phpmyadmin/scripts/create_tables_mysql_4_1_2+.sql. (Substitute your web site's registered DNS name or IP address for "whatever.org".) Click "edit" > "select all", click "edit" > "copy", go back to the terminal and click "edit" > "paste". Hit enter. The entire query should be executed at the "mysql>" prompt. If the entire query did not execute and put you back at the "mysql>" prompt carefully examine where it stopped compared to the text in "create_tables_mysql_4_1_2+.sql" and then copy the exact characters to the end of the file that need to be finished, paste them in the terminal at the location where the query stopped and hit enter again. Alternatively you could use the key combination ctrl + shift + v to paste the entire query again, overwriting the original. After you have executed this query successfully you should also copy, paste in and execute http://whatever.org/phpmyadmin/scripts/upgrade_tables_mysql_4_1_2+.sql in the same way. (Substitute your web site's registered DNS name or IP address for "whatever.org".) When the query finishes type "exit" at the mysql> prompt.

Type:

```
gedit /var/www/html/phpmyadmin/config.inc.php
```

Hit enter and gedit will open.

In /var/www/html/phpmyadmin/config.inc.php change "\$cfg['Servers'][\$i]['controluser'] = ";" to "\$cfg['Servers'][\$i]['controluser'] = 'pma';".

Change "\$cfg['Servers'][\$i]['controlpass'] = ";" to "\$cfg['Servers'][\$i]['controlpass'] = 'pmapassword';" where "pmapassword" is the password for the pma user that you selected earlier.

Change "\$cfg['Servers'][\$i]['pmadb'] = ";" to "\$cfg['Servers'][\$i]['pmadb'] = 'phpmyadmin';".

Change "\$cfg['Servers'][\$i]['bookmarktable'] = ";" to "\$cfg['Servers'][\$i]['bookmarktable'] = 'pma_bookmark';".

Change "\$cfg['Servers'][\$i]['relation'] = ";" to "\$cfg['Servers'][\$i]['relation'] = 'pma_relation';".

Change "\$cfg['Servers'][\$i]['table_info'] = ";" to "\$cfg['Servers'][\$i]['table_info'] = 'pma_table_info';".

Change "\$cfg['Servers'][\$i]['table_coords'] = ";" to "\$cfg['Servers'][\$i]['table_coords'] = 'pma_table_coords';".

Change "\$cfg['Servers'][\$i]['pdf_pages'] = ";" to "\$cfg['Servers'][\$i]['pdf_pages'] = 'pma_pdf_pages';".

Change "\$cfg['Servers'][\$i]['column_info'] = ";" to "\$cfg['Servers'][\$i]['column_info'] = 'pma_column_info';".

Change "\$cfg['Servers'][\$i]['history'] = ";" to "\$cfg['Servers'][\$i]['history'] = 'pma_history';".

Click on the "save" icon in gedit and close gedit. Close the terminal. Open Firefox and go to <http://whatever.com/phpmyadmin/> where "whatever.com" is your web site registered DNS name or IP address. Log into phpMyAdmin as root. Click on the down arrow in the "Database:" selection dialog box in the left column. You should see the "mysql", "phpmyadmin", and "test" databases listed. You may delete ("drop") the "test" database if you wish. You have now successfully configured phpMyAdmin.

Resources:

[Fedora Core 4 Linux Installation Notes](#)

[The Fedora Project](#)

[FedoraNEWS.ORG](#)

[Personal Fedora Core 5 Installation Guide by Mauriat Miranda](#)

[Fedora Forum](#)

[Working with Compressed Files](#)

[Fedora Core 5 Tips and Tricks](#)

[Spellchecker for Firefox](#)

[Fedora Core 4 Linux on an HP Pavilion ZE2108WM Notebook](#)

[Fedora Multimedia Installation HOWTO](#)

[Optimal Use of Fonts on Linux](#)

[Wireless: How to use native bcm43xx support for Broadcom BCM4318 \(AirForce One 54g\) in FC5](#)

[A desktop entry for automating yum update](#)

[Fedora Frog - A GUI script that automates the installation of third party applications for Fedora Core](#)

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