

**Fedora Core 4
Desktop Installation Notes
for the New Linux User
Version 1.1 7/05/2005
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Practical Hardware Requirements

Note – Fedora Core is intended to be ‘bleeding edge’ Linux; it gets a major update every six months or so, plus almost daily updates. As such, it’s not quite as polished as some of the end-user Linuces (e.g., kubuntu and Mepis Linux). Fedora Core also assumes a bit of familiarity with Linux (but not a lot).

To do an installation of Fedora Core 4 plus the graphical user interfaces and get reasonable performance, it should be installed on a PC with a minimum of a 800 MHz CPU, 256 Megs of RAM, and 3-4 Gigs of disk space. More is better, of course. Anything faster than about 1 GHz will be very snappy. 512 Megs of RAM is better if you intend on having more than about two (large) applications open at the same time. (You never want to short ANY operating system of RAM).

(Note: there are “lighter-weight” user Interfaces for Linux that don't require so much RAM. Their installation and use are beyond the scope of this document)

Linux can be installed alongside another OS (typically MS Windows) on the same PC. That's known as 'dual-boot'. If you want to go the dual-boot route, make sure that Windows is installed first, and there are at least 5-6 Gigs of disk space available in an unused, unformatted partition.

Linux can also be installed on a separate disk drive. It can be any of the 4 IDE drives allowed in a standard PC, or on any SCSI drive. Linux isn't fussy about which drive it's loaded on or where it's located on the drive.

INSTALLATION

Make sure all your peripherals (printer, scanner, mouse, whatever) are plugged in and turned on during installation. This will allow them to be detected during the installation, and the appropriate drivers installed.

Booting the installation CD

If your machine is capable of booting from a CD, nothing needs to be done; just ensure that the BIOS is configured that way, insert the first Fedora Core 4 CD and reboot.

If it won't boot off a CD, you have one alternative: If your computer's BIOS allows you to boot off of a USB "thumb drive", you can use that boot method. Put the file called diskboot.img (found on the first CD in the 'images' directory on a USB flash drive, insert it into a USB jack on your computer, and reboot.

Installation Steps (Not necessarily in the order you'll encounter them)

Media Check

When first booting, you're given the opportunity to check the CDs and ensure they were created properly. You can skip this check unless you're booting on newly-created CDs and want to verify their integrity.

Partitions

Fedora Core provides built-in manual or automatic partitioning as part of the installation. The default recommendations provided for an automatic installation are only a "/boot" partition, a "/" (root) partition, and a swap partition. These are okay for most systems. The default file system type is now ext3, which is a simple journaled file system. It is highly recommended that you take this default.

If there are existing partitions found on the system, you'll have the option to:

- Remove all Linux partitions
- Remove all partitions
- Keep all partitions and use existing free space.

If you're creating a Linux-only system, choose the second option. If it's going to be a dual-boot system, choose the last option.

Network

Choose a DHCP or static IP address as appropriate. I recommend static for a desktop, as it allows you to always be able to log in to that computer remotely.

If you choose to use a static address, pick an address that's appropriate for your home network and configure it with your default gateway and network mask. DHCP is usually more appropriate for a laptop.

Bootloader/OSes to boot.

If you're installing Linux in a partition on a machine with an other OS loaded in another partition, it will ask if you want them both included in the grub (bootloader) menu. (Default is yes; choose that if it applies.) You can also decide which will be the default OS to run at boot-time. Linux is the default OS to boot.

Firewall configuration

If the system being created is behind an existing firewall (e.g., DSL router) you can choose not to enable the provided firewall software.

Timezone

Select an appropriate timezone.

Root password

“Root” is the administrative account for a Linux machine. Pick a root password that's easy to remember but hard to guess.

Installation Types and Package Selection

There are a number of installation types to select from. I recommend Custom. Then: select both Gnome and KDE UI's. Feel free to add anything else you might want to experiment with.

INSTALLATION

Let it proceed with install. It will format the partitions, then commence installing packages. Depending on what packages you selected, the speed of the CPU, of the CD-ROM drive, and of the hard disk, it could take between 20 minutes and 2 hours. It will ask for CD 2, then 3, then possibly 4, depending on what you're installing.

Additional CDs

There aren't any.

Boot to first login

Reboot the machine. You'll be taken to through the 'first boot' , or post-install configuration menus.

POST INSTALL CONFIGURATION

License Agreement

This merely asks you to abide by the General Public License, under which Linux is released.

Date and Time

Verify the date and time are accurate. If the computer is always on the Internet (via a DSL or cable modem connection, or any other "always on network", it's recommended that you enable the Network Time Protocol and select one of the Red Hat time servers. This will keep the date and time of the computer from drifting.

• User accounts

Create at least one user account for yourself, to be used all the time except when you need to administer the system. **Don't use your root password on any other account than root.**

Linux is a true multi-user system; you can create as many user accounts as you like. Their configurations and data are all maintained separately.

IMPORTANT! Do not routinely log in as root; mistakes that are minor when logged in as a user can be disastrous when logged in as root. It also reduces your vulnerability to malicious programs.

The system will now boot to the login screen. This is where you'll be taken every time the system boots, or whenever you log out of your account without shutting the computer down.

OTHER CONFIGURATION ITEMS / SETUP HINTS

Default UI - Note that unless you select KDE from the Session icon, you'll default into GNOME. KDE is my recommendation for new Linux users, as it will be more familiar to Windows users. But feel free to try Gnome and see how you like it.

If you'd like your default desktop environment to be KDE, open a terminal, and run 'switchdesk'. Select KDE for a more Windows-like environment.

Default UI and Desktop Manager. The default UI can be changed for all new accounts from GNOME to KDE, by changing the contents of the file `/etc/sysconfig/desktop` from

```
DESKTOP="GNOME"
```

to

```
DESKTOP="KDE"
```

The “desktop manager”, or DM, is the login and logout screens. I prefer KDM, the KDE DM, over GDM, the GNOME desktop manager, because it allows you to shutdown your machine without having to logout first. The default DM for Fedora Core is GDM. To change it to KDM, add the following line to `etc/sysconfig/desktop`:

```
DISPLAYMANAGER="KDE"
```

Printing

There's a GUI configurator for your printer on the system menu (the 'K' menu, under System Settings). The printer can be physically attached or networked elsewhere. You'll be given the opportunity to print a test page. Ensure that it works and the printed results are as you expect.

Sound Card

On the K menu (if running KDE), under System Settings, you'll find a menu entry entitled Sound card Detection. Use it to ensure that sound plays properly on the machine.

If you don't hear any sound from the speakers, look for the sound mixer (“Kmix” on the Sound & Video submenu) and turn on unused inputs and outputs to the sound card until you hear the sound. (Typically it will be the PCM output setting that's off or turned all the way down).

If you hear noise from the speakers, look for the sound mixer (“Kmix” on the Sound & Video submenu) and turn off all unused inputs to the sound card.

(NOTE: if the machine has a sound card, but no speakers, go ahead and run the test. If you don't, you'll be bugged with complaints about sound driver modules).

Playing MP3s

Because of Red Hat's concern with licenses, the MP3 module is not included with Fedora Core. It can be installed easily on Fedora Core 4 with yum:

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

The above assumes you're going to play MP3s with the XMMS media player.

Access to files

If the machine is dual-boot, and you need access to files on another partition, that partition can be mounted for access from Linux, but that's beyond the scope of this document.

Email

There are several good email clients provided with Fedora Core. The one that will appear most familiar to Windows users is Evolution. In addition to a mail client and address book, Evolution contains a calendar very much like Microsoft Outlook's. An icon for it will be found on the KDE Kicker panel (the gray bar at the bottom). Upon starting it for the first time, the wizard will walk you through configuring it. You'll need your ISP login info, etc.

A lighter-weight alternative is KMail, which can be found on one of the KDE menus (but not if you're running GNOME as your UI).

Web Browsing

The default browser provided with Fedora Core 4 is Mozilla Firefox. It's on the taskbar, and also can be found on one of the menus. Note that the default install does not include Java or Flash. Instructions for installing both of them can be found at

`//www.yolinux.com/TUTORIALS/LinuxTutorialMozillaConfiguration.html#JAVA`

and here

<http://www.yolinux.com/TUTORIALS/LinuxTutorialMozillaConfiguration.html> respectively.

File Browsing

KDE file manager, Konqueror, is a very good file manager (and web browser) in its own right, and many people prefer it. On a fresh Linux install with KDE, it's the icon labeled "Home" on your desktop. It can be configured to show thumbnails of all files if you wish. Feel free to configure it as much as you wish.

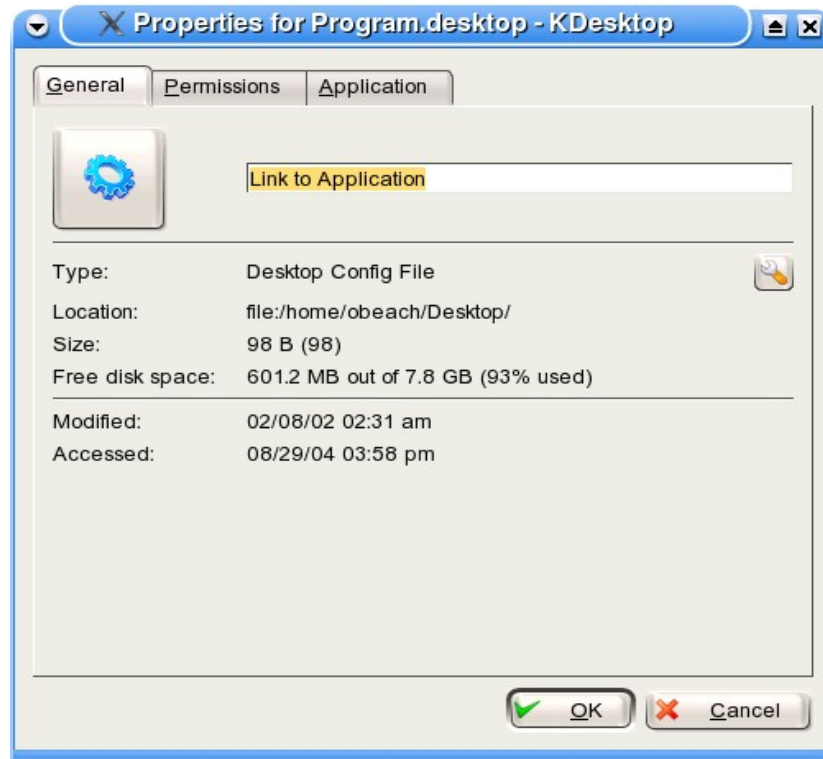
Setting up the desktop

(These instructions assume you're running KDE as your GUI.)

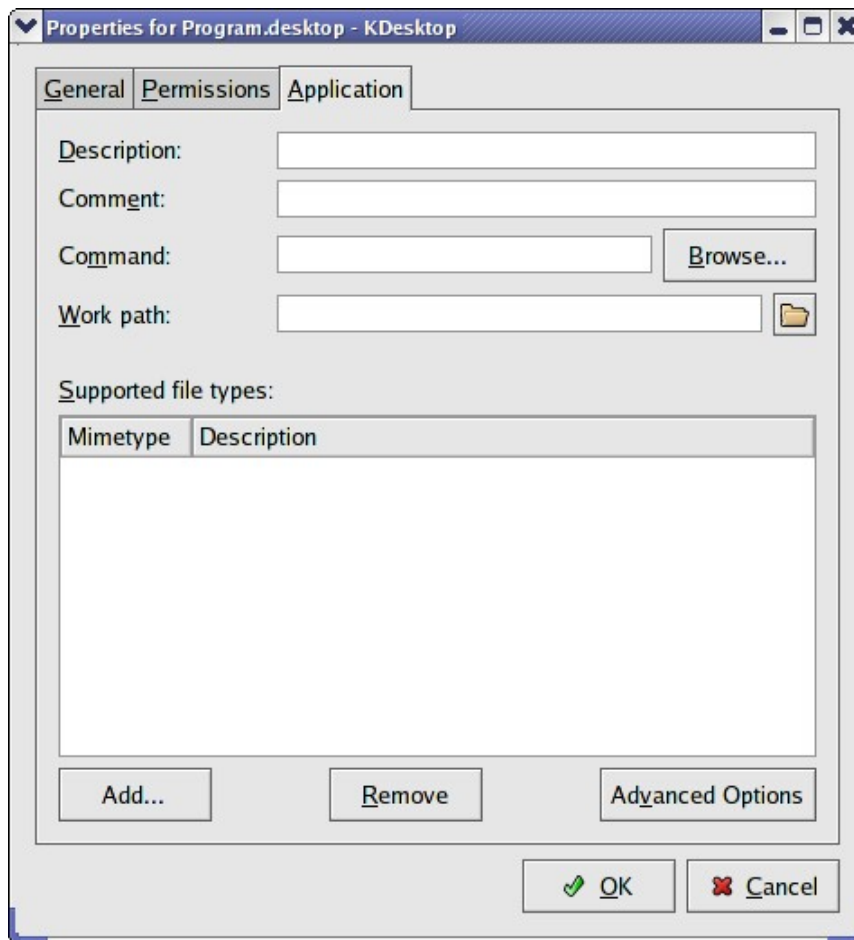
A right mouse click on the desktop brings up a configuration menu. Your desktop icons, wallpaper, screen saver and other items can be changed or created via this menu. Select "Configure Desktop" to find these items.

To add a new icon to the desktop, click on Create New, then Link to Application.

Replace the “Link to Application” text with whatever you want to call the icon. Then click on the gear and select an appropriate icon image.



Then click on the Application tab, and fill in the name of the program you want to run when you click on the icon in the Command field. (REMINDER: Unix and Linux are case-sensitive!)



Then click on OK and the icon will appear on your desktop. Drag it to wherever you'd like it. Alternatively, right-click on the desktop and select Icons from the menu to have KDE arrange them for you.

If you'd like the newly-created icon to reside on the Kicker panel (aka task bar), just drag it onto the panel.

Shortcuts for running programs.

You can launch a program without having a desktop icon for it, or without having to open a console window. Here's how: Type Alt-F2 to bring up a “mini-terminal”, and type in the name of the program in the window. That will start the program.



Keeping your Fedora Core system up to date.

The Fedora community is very proactive about releasing updates for the operating system and all of the applications. As a result, there will typically be a half-dozen updates issued each week. It's highly-recommended that you update your Linux system immediately after installation, and weekly thereafter.

An application called up2date was the traditional Red Hat tool. A faster alternative, and one is kept more up to date is yum (“Yellowdog Updater, Modified”)

To use yum, open a console window. (You can type Alt-F2, and type in konsole to do this) Switch to root by typing su - (note the dash), and entering your root password. To update your system with yum, type:

```
yum -y update
```

This will download all outstanding updates, and install them.

When it has completed its work, type exit to exit out of root. Type exit again to close the console window.

If you'd prefer a GUI interface to yum, type

```
yum -y install yumex
```

You can then create a desktop icon for yumex as shown above.

Some program equivalents

If you're wondering what the Linux program equivalent to your favorite Windows program is, the most comprehensive list is at <http://linuxshop.ru/linuxbegin/win-lin-soft-en/> (Yes, it's maintained by a Russian).

NOTE: You won't find any antivirus software for a Linux workstation. That's because it's not needed; Linux is considered to be highly-resistant to viruses, trojans and worms.

If you do search for Linux antivirus software, you will find a couple of programs. But don't be confused - they're intended for use on a Linux server that acts as a mail server for Windows PCs. They scan incoming email for Windows viruses.

Linux References

<http://yolinux.com/>

Linux metadirectory (web page pointing at Linux info web pages).

<http://www.linuxquestions.org> Get your Linux questions answered here.

<http://www.tldp.org/> Linux Documentation Project

<http://www.freshmeat.net> Linux software metadirectory

<http://linuxshop.ru/linuxbegin/win-lin-soft-en/>

Table of equivalent programs (Linux equivalents to Windows programs)

There are many web sites dedicated to Linux, and support of Linux. A search at Google (<http://www.google.com/linux>) on any particular issue will show sites with information.

IMPORTANT NOTE: As installed, neither mp3's nor videos will play. The decoders for them are not included due to licensing issues. However, you can download and install the drivers yourself. See <http://fedorafaq.org> for more info.

Fedora Core Help

<http://www.fedorafaq.org>

<http://www.fedoranews.org>

For near real-time help, find your local LUG (Linux Users Group) at <http://www.ssc.com:8080/glue/> and join their mailing list and their IRC (Internet Relay Chat) channel.