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I have been working on a document to provide to people I give a copy of Knoppix to. Here is the document. Please feel free to copy it, distribute it, modify it, put it on webpages, add to it, wrap your sandwich in it, whatever! (smile). Pertains to latest distro of Knoppix (v3.3). Second half of document is very general, pertains to linux, unix etc.

~Beowulf (Randall Oelerich)

Knoppix CD-ROM Usage

[freely distribute, modify, or add to this document]

What is Knoppix? <http://knoppix.org> or <http://knoppix.com> Knoppix is a "live" version of Linux in that you can boot and run it from your computer CDROM drive. You do not need to install it to your computer hard drive. Because it runs off your CDROM, realize it runs slower than if it were installed on your hard drive. Knoppix is a full, free, unrestrained version of the Linux operating system, complete with a graphical user interface (GUI) and lots of useful software. Linux is an alternative operating system to Microsoft Windows, and yet is able to access and use your data on your Microsoft Windows hard drive (word processor documents, Excel and other spreadsheet data files, image files, etc.).

Why use Knoppix? It comes with lots of free open source useful software (games, word processors, image editors, internet browsers, spreadsheets, mp3 music player, command line terminals, and lots more!). Check out the game Chromium – a great arcade action game. Check out OpenOffice— a clone of MS-Office with a full-featured word processor, spreadsheet, and clone of MS-Powerpoint. Check out the GIMP – a full-featured clone of Adobe Photoshop image editor. All this software would cost you thousands of dollars, but it is all on the Knoppix CD for free!

What's the Catch? None. This is what open source software and the free software movement is all about – free software and free operating systems for people.

To Run Knoppix: Insert the CDROM disk into your CD drive and then reboot your computer (or shutdown Windows and then turn your computer back on); if Knoppix loads, fine. If Knoppix does not load, then your computer is not configured to boot an operating system (like Knoppix/Linux) from a CD and you will need to reconfigure your computer BIOS (not as hard as it might seem).

If you insert the Knoppix CD into your drive while running Microsoft Windows and you may see a screen of instructions appear explaining what Knoppix is, how to run it, etc.

If you need to reconfigure your BIOS to boot a CD (hopefully you will not need to do this-- most computers are set up to boot a CD so you can rescue your computer if it crashes or if you need to reinstall MS-Windows, etc.)-- either get a geek friend to help you, or when you power up your computer look at the screen to see if it says something like "Press DEL to enter BIOS" (or maybe Press F1... etc). You need to find the key to hold down immediately upon turning on your computer that will let you get into your computer BIOS menu; usually the key is F1 or DEL or ESC or one of the other function keys (F5, F10, F11, etc.). Once you get into your BIOS menu, look for the option to specify the order of Booting (Hard Drive, Floppy, CDROM) and make sure that CDROM is first in the order for booting. Save your BIOS settings and reboot! That's all!

Advanced Knoppix usage: (ignore this if you wish!)

When you boot (run) Knoppix off the CD, you see "boot:" for a few seconds on the screen - this is a command prompt that gives you a chance to type some extra information to modify how Knoppix runs. Press the F2 key when you see "boot:" to see a list of options that you could type at the "boot:" prompt.

One of the options you might try typing is an option to change the default GUI that runs. By default, Knoppix boots and displays the KDE graphics user interface (GUI, 'desktop'). KDE resembles Microsoft Windows and you will likely be most comfortable with this.

Knoppix can run using any of several different GUI desktops - KDE, Fluxbox, Ice, Window Maker, and others. KDE (looks like MS Windows) loads by default. To load the Fluxbox desktop instead of KDE, when you see the "Boot:" prompt during booting of the CDROM, type `knoppix desktop=fluxbox` (and press the [Enter] key) and Knoppix will boot with the Fluxbox desktop graphical user interface.

At the "boot:" prompt, type `knoppix desktop=icewm` (and press the [Enter] key) and Knoppix will boot with the Ice desktop graphical user interface instead of the KDE gui.

You can specify a language other than English, for example to use Spanish, at the "boot:" prompt you would type `knoppix lang=es` (and press the [Enter] key)

You can specify a screen resolution. For example, at the “boot:” prompt type

```
knoppix screen=1280x1024
```

You can specify failsafe startup (almost no hardware detection attempted). At the “boot:” prompt type failsafe

You can specify text-only (like in the old days before MS-Windows or Mac!) mode. At the “boot:” prompt type knoppix 2

You can combine boot: options. For example, to boot Knoppix in the german language, using the Fluxbox desktop graphical user interface, with a screen resolution of 800x600 type

```
knoppix lang=ge desktop=fluxbox screen=800x600
```

Desktop Menus

Unlike Microsoft Windows, some Linux GUIs, like Fluxbox, allow you (and sometimes require you) to access the system menu by clicking the mouse anywhere on the screen. Generally in such cases you click the mouse's right mouse button. The KDE desktop, however, acts much more like Microsoft Windows, in that you utilize a “Start” menu button in the lower left (that should have a tiny vertical triangle on it).

Regardless of which GUI you use, experiment by clicking the right or left or even middle mouse buttons – different things will happen depending on the GUI you are using.

Virtual Desktops

Unlike Microsoft Windows, Linux desktops have several virtual desktops. Each virtual desktop can have application programs running on it. You can freely move between the virtual desktops in different ways depending on the GUI (KDE, Fluxbox, etc) you are using; with KDE, you will see on the taskbar along the bottom of the screen the numbers [1], [2], etc. -- clicking these numbers will take you to that virtual desktop.

MS-Windows Data

Even though you run Linux (Knoppix), you can access your data files on your MS-Windows hard drive or off a floppy or CDROM drive. Microsoft Windows refers to computer drives as “C:” (hard drive), “A:” (floppy), perhaps “D:” or “E:” for CD-ROM drives.

Linux does not name drives with letters; instead, your MS-Windows drives will be accessed as /mnt/floppy, /mnt/cdrom, /mnt/winxp, or perhaps /mnt/hda1 or /mnt/hdb4, etc. (hda refers to your primary hard drive”, hdb refers to your second hard drive if you have one) So if you want to see your drives, use one of the Linux file managers (like Knoppix or Nautilus) and look at “/mnt” to see your listed drives (that you can then click on to see files on). Or if you are using OpenOffice Writer (a clone of MS-Word) and want to load and edit an MS-Word file off your Windows hard drive, you will “open” a file and look for that file off

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a drive named perhaps /mnt/hda (or perhaps /mnt/winxp).

“Help!”: If you need help, you have several recourses:

--Find a geek friend and buy her a bag of Cheetos and a 2-Liter of caffeinated pop and have her come over and help you out.

--Post a help message on a linux newsgroup such as alt.os.linux (go to Google Groups and you can locate this group and read and post messages).

--Get thee to a local linux user's group (In Duluth, there is DSLUUG a local linux/unix user group-- see <http://dsluug.org> for more info or to sign up on the email discussion list where you can get help).

--Websites:

<http://knoppix.org>

<http://www.knoppix-std.org/forum/> (knoppix discussion board)

<http://linux.org>

<http://dsluug.org> (Duluth user group for open source / linux / unix)

<http://randalloelerich.net>

Linux and KDE Desktop (=window manager) Lessons:

1. KDE Desktop Window Manager

* Click lower left icon that looks like a big "K" or maybe an “up arrow” -- this is analogous to the Microsoft Windows 'start' menu button. Clicking the "K" will cause a popup menu to appear, so you can choose software applications by category much like you would after clicking the MS-Windows start button.

*Notice along the bottom of the screen the taskbar has a number of shortcut icons, AND notice also something very unique-- four tiny numbered panels numbered 1,2,3 and 4; these are the "virtual desktops" of linux. Each virtual desktop can contain running applications, have its separate color scheme and wallpaper, etc. Just click on a virtual desktop panel thumbnail (tiny icon) to go to that virtual desktop. You can configure each desktop's color scheme, wallpaper, etc.: Start Menu->Configuration->KDE->LookFeel->Background. (you can even configure multiple wallpapers that change every few minutes!)

You can also custom configure your desktop windows style, theme, etc. (e.g. make it look like a Mac or MS-Windows, or something more unusual): Start Menu->Configuration->KDE->LookFeel->ThemeManager (or Fonts, etc.)

*KDE also has a Trashcan, similar to the Trash/Garbage icon of Macintosh, or the Recycle bin of MS-Windows. Clicking on the Trash icon accesses files that you have "trashed" (but if you "delete" files, they are gone forever-- well pretty much-- there are sophisticated file recovery applications but do not count on them to recover deleted files).

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*At the lower right is a clock showing the time. Left click on it to bring up a calendar. Left click the clock again to make the calendar disappear.

*Just to the left of the clock in the lower right is a tiny icon that looks like a grid— left click it once and wait a few seconds— an application called kOrganizer will appear. This application ("app") can be used to plan your schedule, etc. To cause it or any other application to close, you can just as in MS-Windows use the titlebar buttons to close, minimize, maximize, or dock any application; or you can use options from the applications File menu (File->Close, etc.).

*On the lower taskbar look for an icon that has a tiny "house" or "home" as part of the icon. If you click the 'home' icon you will see files and folders that are part of your 'home' in linux. In linux, 'home' is a folder where all users' reside. If your linux username is 'geek' then your userspace and all your files and folders are on the linux hard disk in a folder called /home/geek but there is a quicker way to refer to /home/geek, that is your userspace, in other words your home directory, and that is with the keyboard symbol '~'

*Along the bottom taskbar, just to the left of the virtual desktop panel icons, is an icon of a piece of paper and a fountain pen. Click it to activate KWrite, a simple but good word processor ('text editor'). KWrite is somewhat like MS-Windows' MS-Word. However KWrite documents can only be saved as KWrite documents— but luckily other word processors of linux can open and edit KWrite documents and then save such documents in many popular file formats (MS-Word, etc.).

Type something, anything (if only a few random characters) using Kwrite, and save it under the filename 'mydoc' (omit the quote symbols of course). Do this, because you will need a sample document to work with later in this tutorial. Notice when you save your KWrite document (see top of KWrite) it is by default being saved to a folder in your home folder (directory) called Documents; you could override this, but let's not for now.

*Along the bottom taskbar look for an icon that looks like a globe with some spikes on it— this is the icon to activate Konqueror, a powerful internet browser as well as file manager. If you are connected to the internet you can use Konqueror to type in website addresses and surf the internet. Or, you can simply use Konqueror to browse files on the hard disk(s) of your computer (and cut, copy, paste, delete, trash, move, or rename files, and much more). [Remember though, linux is a multiuser operating system— so you can only damage files that are yours, that are in your home folder; you can perhaps read files that are not in your home folder, but you can not save any of your documents into folders outside of your home folder. You can not delete or trash files that are not in your home folder. This prevents you from harming important system files, or files of other users (and they from harming your files).]

*So what can linux do? Lots! Need a full-featured word processor on par and compatible with Microsoft Word? Then click the K icon, then Office, then Wordprocessors, then OpenOffice.org Writer. Need a full-featured spreadsheet on par and compatible with Microsoft Excel? Then click the K icon, then Office, then Spreadsheets, then OpenOffice.org Calc. Need a full-featured presentation application on par and compatible with Microsoft PowerPoint? Then click the K icon, then Office, then Presentations, then OpenOffice.org Impress. By now you should have figured out that linux has a powerful opensource (free) application suite called OpenOffice.org, on par and compatible with Microsoft Office. OpenOffice can read and write files from MS-Word, MS-Excel, and Powerpoint!

*Along the bottom taskbar look for an icon that looks like a TV monitor with a clamshell on it-- this is the shortcut icon for a 'terminal', also known as a 'console'. You can also access a variety of terminals by click the K button, then Terminals. All terminals have the same basic functionality, so choose whichever one you prefer. Once you have a terminal activated you will see screen showing your username, perhaps the date, and some sort of keyboard command prompt (like a \$ sign, or perhaps # sign). The terminal is keyboard driven, meaning you use the keyboard to type commands followed by pressing the [Enter] key.

*NOTE: CTRL+ALT+BACKSPACE key combination will exit you from the Desktop back to the login screen. This is useful if the Desktop graphical user interface ever freezes up, which is rare, very rare compared to Windows. And if an application every freezes up, you can 'kill it' by first double-clicking and running the Xkill application (see icon on desktop) and then clicking your mouse on the title bar of the frozen application you want to 'kill'.

TERMINAL COMMAND LINE FUN!

Let's do a few simple terminal commands so you can see an alternative way of working with linux other than using the mouse and graphical user interface. Click the left mouse button in the terminal window to be sure linux knows you want to use the terminal window. Then start typing the following commands (comments are in parentheses-- do not type them, nor the command prompt which we will symbolize here by the '#' symbol):

#ls (you will then see a list of files and folders in your home folder, that is your linux userspace; notice a folder called Documents/, which likely contains mydoc, the KWrite document you created earlier.

#cd Documents ('c'hanges to 'd'irectory called Documents)

#ls (do you see mydoc in the listing, you should)

#clear (cleans up the screen, clears the terminal display)

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#ls -l (shows 'long' listing, i.e. detailed listing, including file sizes, ownership of files, date of file creation, etc.)

#less mydoc (shows contents of mydoc; IMPORTANT: you will need to press the 'q' key to exit the display of the file contents and return to the command prompt. less is a very powerful and common terminal command)

#cp mydoc mydoc.backup (copies mydoc to a new file 'mydoc.backup')

#ls (do you see mydoc and mydoc.backup?)

#rm mydoc.backup (removes mydoc.backup, that is deletes it)

#mv mydoc somedoc (renames mydoc to somedoc, i.e. moves contents of mydoc to a new file called somedoc)

#ls (mydoc is gone! it is now called somedoc)

#cp somedoc anotherdoc (makes a copy of somedoc, called anotherdoc)

(Ok, you may be thinking "This terminal stuff is geeky, but is it useful? And it seems like you have to type a lot!" Linux has a very cool gizmo for eliminating lots of typing in the command mode-- it is the [TAB] key on your keyboard... try this:)

#cp an[TAB] mydoc (notice how linux figured out the rest of the filename once you type just 'an' and pressed the [TAB] key? Pretty cool!)

#cd ~ (changes directories to your home folder, your userspace)

#pwd (shows where you are, 'prints working director')

#ls (do you see the folder called Documents?)

#cd Docu[TAB] (use that cool [TAB] key shortcut!)

#ls *doc (wow! the power of the 'wildcard' feature! Using the '*' symbol is like a wildcard in a card game; here, we are telling linux to list all files in the current folder with a filename ending in doc, so we will see files listed such as somedoc, anotherdoc)

#mv *doc ~ (moves all files ending in doc to home space; this is a powerful command, the ability to mass move large numbers of files matching certain filename criteria!)

#cd ~

#ls (notice the new location of the files you moved?)

#mkdir mydocs (create a new directory folder called mydoc in the current directory which is currently home)

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```
#mv *doc mydocs (moves sampledoc and anotherdoc to mydocs folder)
```

```
#cd mydocs
```

```
#ls
```

```
#rm * (deletes all files in current directory! This is a very powerful but very dangerous command! Be careful! It permanently deletes all files in current folder. However, linux has a safeguard-- for each file you will be asked if you want to delete it-- this safeguard can be overridden easily, but for now it is best not to know how to do this. In fact, you might be better off answering 'n' when asked whether to delete these files, at least for now. Alternatively, try something new-- when you do the 'rm *' command, cancel it by pressing the key sequence [Ctrl][c]. Ctrl+c is the keyboard shortcut to cancel a linux command that is currently runnin-- very useful to know.)
```

(Whew! Give yourself a pat on the back if you made it this far-- you learned how to use quite a few of the most common linux terminal mode commands! You learned to use cd, ls, mv, cp, pwd, [TAB], rm, clear, and the powerful wildcard symbol '*').

ADVANCED (MORE) TERMINAL COMMAND LINE FUN!

```
#xmms & (runs application called xmms in background mode, that is multitasking mode, as a process; xmms is a common mp3 music player; notice you will need to click your mouse again in the terminal window because linux things you want to use xmms as your current application. This examples shows you how you can activate applications from the terminal command line in addition to using the graphical interface menu system!)
```

```
#mozilla & (runs application called mozilla; mozilla is basically Netscape, a powerful browser).
```