PCLOS

>digital magazine_

throwing Windows OUT the window

Squeeze your data • Parted Magic • KDEinit repair

Editor's Desk

A New And Exciting Year!

Welcome to a new and exciting year! This past year has given us the opportunity to bring you many articles that hopefully enhanced your PCLOS and Linux experiences. The Staff and myself are looking forward to another year of bringing you many more such experiences this year. This issue will be the first with our new and much improved layout theme (we hope you enjoy it!.)

This issue has more interesting articles including one which will teach you the basic commands used to find out information about your system, hardware, etc.

We also have articles on how to repair kdeinit problems, a new script to compress directories and still have easy access to them, and a review of the new Parted Magic CD. We have links to great tutorials on using both The Gimp and Inkscape.

You will also find a short plea for helping both the Mag Staff and the Documentation Team in transferring as many articles from previous issues of the Mag to the Wiki as possible. I proposed this idea to the Documentation Team but they are understaffed, as are we here at the Mag. If you are interested in helping out the entire PCLOS community by donating a little time and effort, then please follow the instructions you will find in the article.

Enough of the ramblings of your old Chief Editor so read on and give us some feedback. Articles, Tips, and Tricks are also welcome! :)

Papawoob

Testimonials

I am new to Linux so I have tried several Linux distros. Linspire and Freespire were the most unstable I have used. They froze with great regularity and the only way out was to reboot. Open SuSe had nothing to offer. Ubuntu worked, but barely and I was never able to install a program no matter what I tried. I discovered PCLinuxOS by accident and was blown away at what an absolutely awesome product it is. Everything worked. It just worked. I believe this distro is ready for prime time and it is the only distro in Linux out there that is. I really put it through the grind but could not get it to freeze once. The look rivals Windows Vista and the best part about it is its free!!!. I have already introduced it to others who are thrilled with it. As soon as folks find out about PCLinuxOS, it will soar to number one in Linux distros and begin to really compete with Windows. If I were Bill Gates, I would definately be concerned.

Oscar Easler

THROWING WINDOWS OUT THE WINDOW

PeeBee

Hello friends,

When I introduced myself to this forum here, I stated that I was throwing windows out of the window. CO suggested to write about this experience thus, here we go...

So please keep in mind that I'm a computer power user, but I am also a fast learning Linux newbie.

Let's hope this write up can help Linux new-comers. All geeks please forgive me if I won't be always 100% technically or terminologically correct.

■ A choice to make.

In my organization I'm the principal, but also the most knowledgeable about IT. Since we are too small to have our own IT department, I have taken on this task. So last spring I had a look at the cost to upgrade our IT. I calculated the cost of a possible upgrade to Vista, plus Office 2007, plus all the rest which would demand a hardware upgrade for most our machines even though they were relatively new machines. Spending tens of thousands of Euros didn't appeal to us at all for obvious reasons, but a further look at Vista and Office 2007 gave us a clear urge to stay away from those "great" products.

Not knowing much at all about Linux aside from a few occasional glances, I proposed to move to Linux. Not only is there a lot of free software out there, but it could give new life to our aging boxes. Little did I know back then what I was getting myself into. Well, we decided to spend some of the money we would have used on IT upgrades to hire a specialist to assist us on this transition. The guy we got to do the job was a bad choice, but that's another story, and we're now talking to another company to assist me with the server, and groupware, and so on, which is a little too complex for a newbie like me.

The good part about that bad choice of consultant was that I spent a lot more time than initially anticipated on learning about Linux and I still do every day. If you intend to change an existing system to another set-up it always involves some initial, intensive labor. This is no different when switching to Linux, thus, one needs to take the time and get well informed about what to get into. Some people might prefer to purchase some books and start reading, for me, "Google is my friend", and so I read from the net.

When you come from the world of Windows or Macintosh you arrive from a place of little choice, thus, you are unused to, and sometimes unaware of, the large choice of software performing essentially the same task. In Linux this starts with the OS. The first thing I discovered was that there is no such thing as "a Linux", but an abundant number of variants. When I stumbled across distrowatch.com I learned that there are hundreds of distros (distributions of Linux) of which some are closely related, but

others are very different. To make matters even more confusing to the newbie there are numerous desktop environments with Gnome and KDE being the most used.

The forums are full of posts from confused newbie Windows converts asking which distro will be the best choice and the standard answer is to take the one that suits you best. While this is actually the real answer to the question in this world of freedom of choice, it is rather useless to the newbie. [If one asks how far it is to XYZ and the answer is "til the end of the road", then it is only a useful answer if one knows the length of the road.] The resulting action will be that either the newbie returns frustrated to Windows or he/she starts distro hopping (changing from one distribution to another at a frequent rate). What I have learned so far from the various forums is that distro hopping seems to be fashionable amongst the geeks. Neither is a solution for someone who wants a good, stable, and secure computer to do productive work on.

Thus, I went out distro shopping which involves a lot of distro hopping. I think I looked at most of the top 20 distros at Distrowatch and came very quickly to the conclusion that the Gnome desktop and I were not made for each other, thus, I concluded for myself and recommend to windows converts to use KDE as their desktop environment, even though Gnome is more widespread in the Linux world. However, I can't be that wrong in
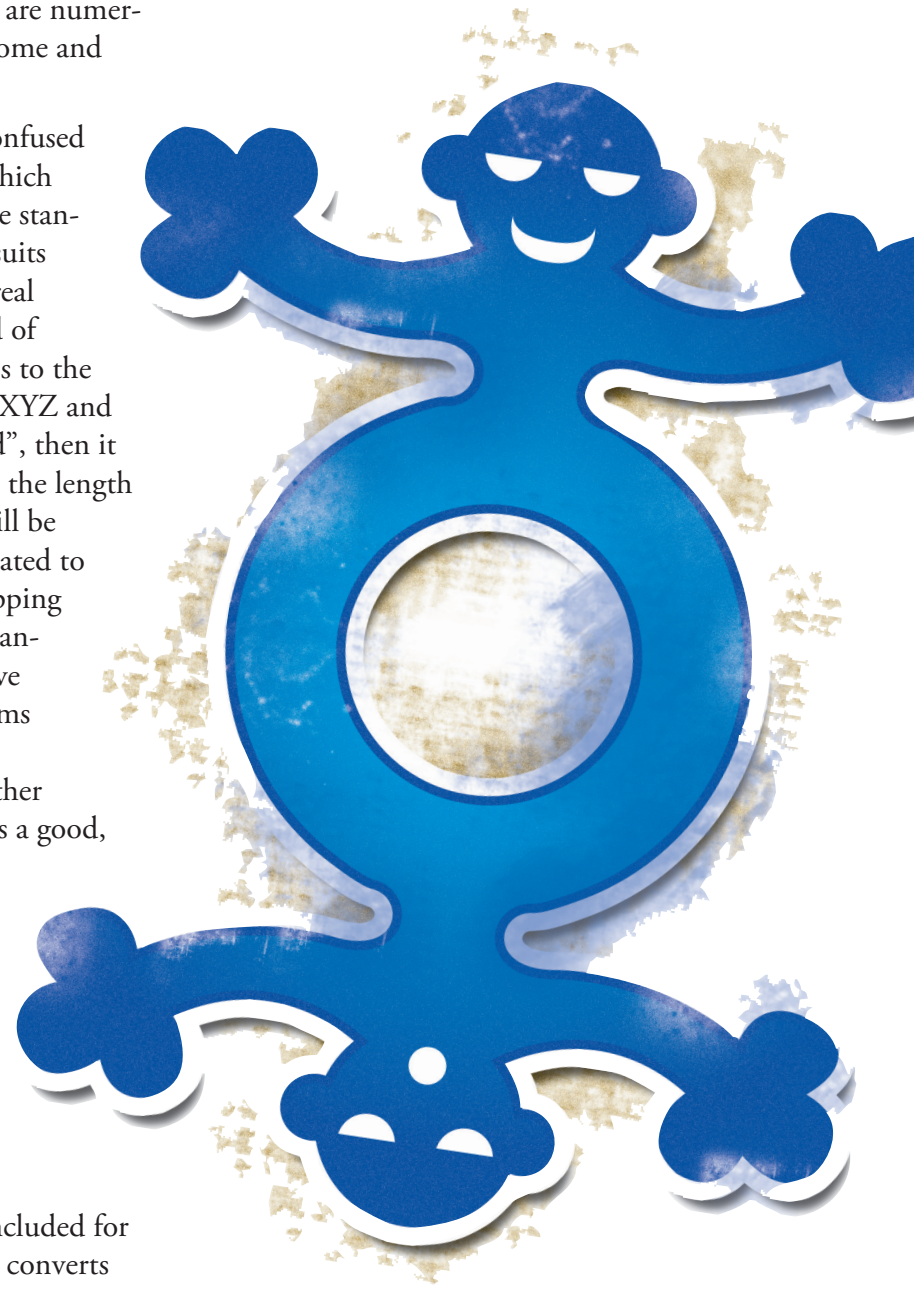
my conclusion since Linus Torvalds, the initial author of the Linux kernel, prefers KDE over Gnome as well.

The next conclusion was to concentrate my research on distros which come with KDE by default – remember, I'm a newbie not yet ready to experiment. I had the luxury of an old spare computer, but would recommend to concentrate on distros which provide so called "Live CDs" for testing. Another important aspect of distro hopping/shopping is to "ignore" the desktop looks and feel. What I mean by that is that desktop colours, background pictures, start menus/panels can be customized and you are likely going to do so anyhow. Thus, it is much more important to see what is under the hood of your distro.

As a newbie you want a distro that installs easily, is as plug and play as possible, best supports your hardware, provides GUI (graphical user Interface) tools to set-up things, etc. While there are many wonderful distributions out there, some with flashing new functionality, there is only one that I would recommend to Window convertees and newbies: PCLinuxOS (dot com). Yes, you're reading right. I recommend PC-LinuxOS as the distro of choice that best suits a Windows convert. PCLinuxOS made me stop dead in my distro shopping process. I did try it out on various desktop and laptop computers, just dropped the live CD in and booted up. Even though the live CD is by now somewhat outdated, it played well with ALL those machines and recognizing more hardware out of the box than any other distro I tried.

With all the available upgrades installed it

contains in a perfectly stable environment, all the bells and whistles available in Linux. Try PCLinuxOS and once you become familiar with Linux, if you not 100% satisfied, then you can still start distro hopping.

Still not convinced about Linux? You might want to have a read here: http://www.tomshardware.com/2004/03/29/migrating_from_windows_to_linux/index.html

It is a little outdated by now but still some good reading.

■ What about my programs?

To the software you'll need to fulfill the required tasks with your computer running; from now on a Linux OS is yet another choice to make.

Have a look here: http://www.linuxrsp.ru/win-lin-soft/table-eng.html. It is a list of equivalent software between windows and Linux. It gives you a good indication of what the programs familiar to you will be called under Linux.

Please note that unlike Windows good distros come with most of the common programs preinstalled; PCLinuxOS certainly is one of those. Additionally, most distros come with a packaging system that makes installing software fast and easy. Over are the days where you had to search the net for an application (or purchase one) and run a separate installer for each piece of software.

PCLinuxOS has a powerful GUI packaging system, Synaptic, which contains over 7,000 packages, thus, there are plenty of programs to choose from. Plus this process is ever so simple: Open Synaptic and look through the list of

available software, double-click those packages you wish to install, and when you are finished making choices, click apply – that's all. Synaptic automatically downloads and installs your software.

Synaptic can do a lot more. With Synaptic you can download and install all of your system upgrades – one process to update your entire system, not just your OS, like Windows. Synaptic has a powerful filtering and search capability to find the packages to install plus a listing by category (sections) so you can browse through to get inspired by which software could suit you. Synaptic also resolves dependencies, it automatically installs other packages which are required to make the packages you selected run. Contrary to Windows, with Synaptic you can uninstall packages equally as easily; just choose the package you no longer need and Synaptic properly uninstalls the package and it's dependencies.

Another goody within Synaptic is the way to save the list of your installed packages [File menu > Save Markings As… > type in a name > tick "Save full state, not only changes > hit Save]. The resulting text file can be backed up for the time of a re-install and/or taken to another computer. Then you just go File menu > Read Markings… > browse to and select the file > hit Open, and all of your preferred set-up can be reestablished by just hitting apply. Installing on multiple computers made easy! [Ok, the geek would rather remaster and install from the remaster CD/DVD, but let's learn to walk before we start the running, shall we?]

First you need to install the OS which is very easy. Boot from the live CD, login as root, hit the Install icon on your desktop and follow the instructions. You can also set-up a dual boot system which will allow you to either boot into Windows or Linux, just as you like. The howtos for this are well explained on your distros home page (Wiki and/or forum). Next, fire up Synaptic and click "Reload", then "Mark All Upgrades" and then "Apply" and let the system update itself.

Drivers: PCLinuxOS will, for most hardware combinations, recognize and install drivers for most/all of your components, thus, most users won't have to bother about drivers. If something doesn't work right, your first stop will be Synaptic. Make a search for the name of your component and there is a good chance to find the right driver. If this still doesn't help, have a look in the forum, there will most likely be an explanation of what to do, otherwise, don't hesitate to ask.

Now that the base system works, let's look at the applications:

Since you are most likely used to Word, Excel and Powerpoint, you'll find that Openoffice (Writer, Calc, Impress and Draw) will suit your needs well. It even opens and saves in MS-Office formats, thus, you can share your work with Windows people.

Gimp is like Photoshop but I didn't have time yet work much with it.

Kontact: is a kind of an "Outlook" replacement but you can also use Thunderbird as a powerful email program.

Konqueror is not only your file browser, but also a web browser. However, you're likely to prefer Firefox for the web. A good hint here: Konqueror can directly import IE bookmarks [Bookmarks menu > Edit Bookmarks > In the new window > File menu > Import > Import IE Bookmarks > browse to your Windows Favorites folder > click OK] and then export them again [Export to Mozilla] to import those into Firefox [in Firefox it's Bookmarks menu > Organize Bookmarks > In the new window > File menu > Import > follow instructions].

Kopete is just great, it runs all your messengers in one single program!

Amarok plays your music, mp3 and the lot. I have essentially all day long played my favorite web radio. There are many more players around, but you'll most likely use Kaffeine for your DVDs and the MPlayer plug-in for on-line video.

You can install Skype and Google Earth with Synaptic and you'll find what you've been used to.

There are many CD/DVD ripping and burning applications around but far and away the best way to go is to use K3b with its easy-to-use, intuitive user interface.

You won't see many tools to secure and/or tweak your system, simply because it is either built in or simply not required. But back to that in another part.

Virtualbox: You'll definitely need this great software: with Virtualbox you can emulate entire computers: you can create one virtual machine that runs Windows so you can run under Linux the few Windows applications you might be missing. On top of that, you can create a virtual Linux machine in case you want to test another distro or you can mirror your set-up and use this to test and play with things without the danger of messing up your computer.

As you can see from these few examples there is ample software under Linux to cater to the average users needs. I found that many more things are actually plug-and-play with PCLinuxOS than with Windows.

■ But under Windows...

One thing to learn quickly here is not to compare processes with Windows, "but under Windows..." doesn't count here. When you change from one system to another you will have to make the effort of relearning many processes that you have been used to under your previous set-up. This is no different when migrating from Windows to Macintosh, or even from Windows XP to Vista. Actually, you might find it easier in the end to migrate from XP to PCLinuxOS, than to Vista.

Don't complicate your life by trying to look back at where you came from, rather, learn and absorb the new way things are done with this new OS and you'll quickly learn that the new ways of doing things can bring you new features you never even dreamed about before. While playing around with the tweaks I actually found out intuitively new ways that I then easily implemented in Windows; for example, a Quicklaunch menu with sub-menus. It's trivial to do under Linux and Windows but it never occurred to me as to how handy this can be until I played around with "Edit Menu". More about this in another part.

The big differences between Linux and Windows are actually not very visible to the newbie. No details here since there are many write-ups all over the net. Important to know is that Linux

has many security philosophies built in, one of which is a true multi-user environment. This means if it is not for you, it is really not for you; access to files and application is strictly regulated and controlled for each user of a system.

The master user in Linux is called "root". Root is the only user that has global access to everything and you won't need to login as root during normal work. In fact, for your daily work you'll login under your own user name and you can do all the tasks like working with your favorite application, print documents, connect to the web, etc. However, as soon as you need to change something important in your system settings, such as installing new software, you'll need the power of root. Thus, viruses and other malware have a real hard time attacking a Linux system. Whilst this is not totally impossible, it is so unlikely that you won't have to worry about installing additional protective software on top of what has been built in.

So this "root" thing sounds complicated? Well, don't worry about it too much. Just always login with your normal user account. Whenever you call up an application that alters something important it will pop up a little window where you just have to enter your root password. This gives full access control to that one application so you can alter what you need to do. For example, install a piece of software with Synaptic and you close that application once the job is done. This way your overall security is well maintained.

So it is very annoying having to type this root password all the time? Well, think about it this way: how annoying is it to have a bazillion of anti-everything software taking 80% of your computing power away from you without really guaranteeing security? Besides, typing the root password becomes second nature after a few weeks, plus once your system is well up and running there won't be much need to alter anything any more.

Under Windows you are used to having to run a shear, endless number of tweaks and repair utilities to defragment your hard drives, to repair your system registry, to backup the registry, to compact this, to optimize this, etc. Guess what: under Linux you'll need NONE of this. You read this right! None, nada, not even a hard disk defragmenter!

to be continued...
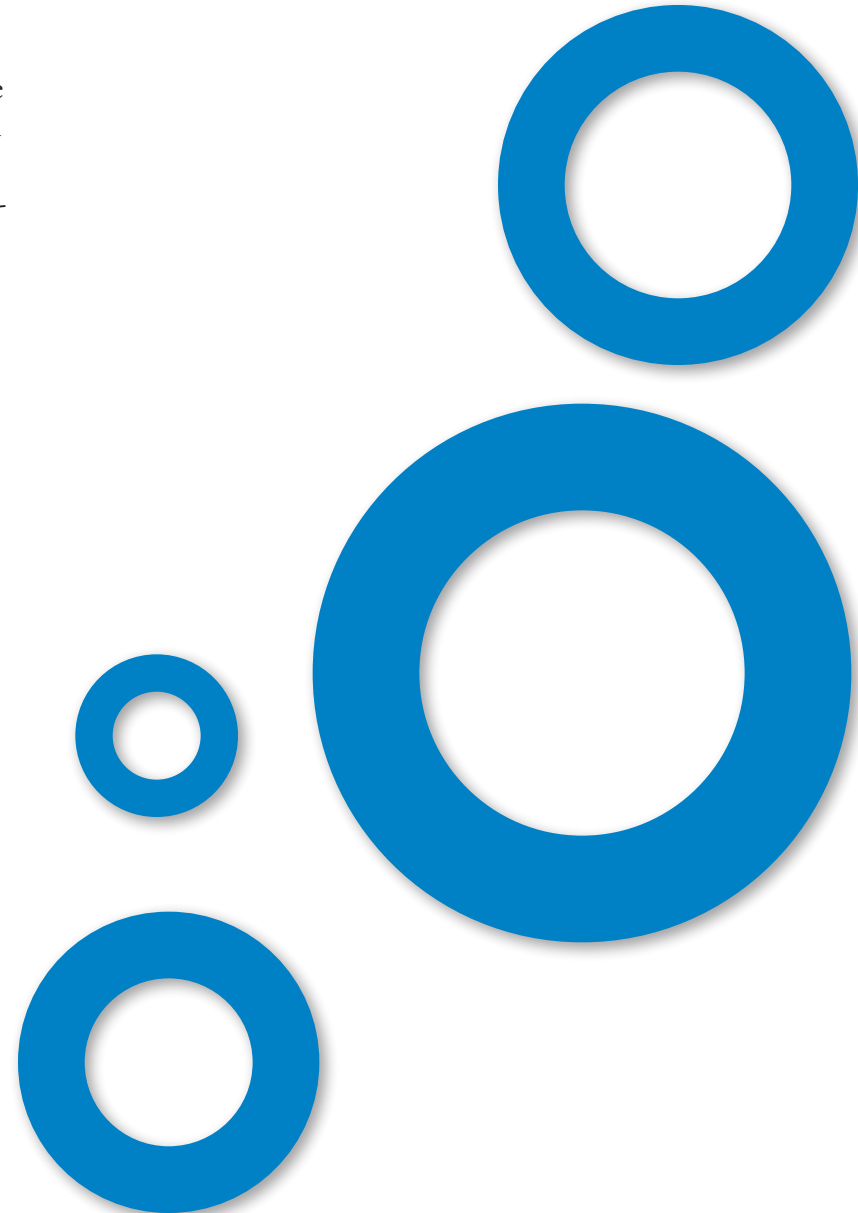
>common information commands

Papawoob

Below you will find a list of common commands used to find information about your computer hardware, processes, files, etc... Each of these can be run in a Konsole or terminal. If you are having a problem and want to post a question on the forum, you are likely to be asked to post the output of one or more of these commands. You can open Konsole by going to:

Main Menu ➡ System ➡ Terminals ➡ Konsole

Simply enter a command and press enter. When you are finished type exit and then press enter.

>df_

The df command will display disk usage on mounted partitions(displays mounted partition names, sizes and usage.)

>dmesg_

This command helps users to print out (display on the screen) their bootup messages. These are what you see if you press the Esc key while the computer is booting up to your login screen.

>Hostname_

This is the command that is used to either set or display the current host, domain or node name of the system. These names are used by many of the networking programs to identify each particular machine in a network.

>free_

This command shows the amount of free memory that is available.

>lspci_

lspci is a command that prints detailed information about all PCI buses and devices in the system.

>netstat_

Displays information about network status. The information displayed by this command will likely be quite long.

>uname_

If you type uname and press enter you should see: Linux

To get the type of processor; type uname -m

Konsole should display: i686, i586, etc... depending on the type of processor you have.

>top_

top provides an ongoing look at processor activity in real time. It displays a listing of the most CPU-intensive tasks on the system, and can provide an interactive interface for manipulating processes. It can sort the tasks by CPU usage, memory usage, and runtime.

>man_

To see the manual or information for a command or application (type the command listed below then the specific subject or command for which you want info. You must have documentation installed on your system for this to work.)

[man] example: [man vim] displays the manual for the vim (vi improved) editor.

Find or locate a file

There are a number of ways to locate a file. To find a command's binary and other info type: whereis followed by the name of the command you are looking for and you will get a detailed listing.

You can also type: locate followed by the file you are looking for and if it has been added to the database you will get its location.

Also, you can type: find followed by the path and expression or file/files you are looking for. For example if you want to know how many html files

there are in directory stuff, do this (in the stuff directory): find *.html you will get a list of all the .html files in the stuff directory.

The next couple of commands require you to become root (administrator) to be able to run these commands. You can become root temporarily by typing: su and then press enter. You will now be asked to enter your root password (note: the cursor will Not move as you type.) Type your root password and press enter. The color of your prompt should change to red.

`>lshw_`

This command is very useful for creating a list of all your hardware and other useful information about all of the hardware on your system.

`>su_`

This command lets you become root or "Super User" after you type it and hit enter you will be prompted for the root password, enter the correct password and you are root. Be careful you now have the power to destroy your system. To get back to your own user account type: exit and press enter.

`>ifconfig_`

If no arguments are given, ifconfig displays the status of the currently active networking interfaces. If a single interface argument is given, it displays the status of the given interface only; if a single -a argument is given, it displays the status of all interfaces, even those that are down.

`>lsmod_`

lsmod shows information about all loaded modules. The format is name, size, use count, list of referring modules. The information displayed is identical to that available from the file: /proc/modules.

I hope these few commands can be useful in finding out a few things about your computer. It will also help you begin to see the power and usefulness of the Linux command line. If you know some more commands that might be useful, please contact me at: papawoob@pclosmag.com and I will append this list accordingly.

HELP the documentation project

Another good source of information for anyone new to PCLinuxOS is the Wiki. If you have any howtos, tips, or tricks, you can send them on to me at: papawoob@pclosmag.com and then go to the Wiki and post them there also. This will benefit our readers and by posting them in the Wiki it will benefit everyone who uses **PCLinuxOS**. Below you will find several links to places where you can lend a hand in many different ways.

Sign up here: sign up to these forums for a login to the forums and this wiki and then you can:

Make changes to this Wiki. =)

The main Wiki page is located here

If you want to participate more heavily, post a note in 'add me to a project' to request documentation channel access and let us know your interests.

Subscribe to the documentation mailing list

sign up to the main pclinuxos.com forums (if you have not already) since this Wiki will be moved over there soon.

Help with to do items

Discuss or help with the todo list. It's very helpful to hear your opinions, because it lets us know what's important to you.

Edit and discuss pages

Just check out a page or two, edit it and contribute a little. Even a spelling correction is a big boost. At the top of every page is a 'discussion' tab. Click it to visit that page's "talk page" and add your comments. Sign your comments with four tilde characters: ~~~~ and your signature will be automatically added.

■ Be a Gnome

Wiki gnomes are always around without being underfoot. They fix typos, answer questions, and are the magical element which makes a Wiki work well. These are the things you can do to be the best gnome you can be:

We are also trying to move as many of the articles that have been published in this magazine that are howtos, tips, tricks, etc to the Wiki so that both the Wiki and the Magazine will get more exposure and provide more useful information to more **PCLinuxOS** users. If you are interested in helping with this project please contact me at:

papawoob@pclosmag.com

To volunteer "create account" at the Wiki, then login and start at the "PclosMag2wiki" page. It is as simple as that.

Doing any of these things listed above will be a service to everyone who uses **PCLinuxOS** and make it that much easier for anyone who wants to convert from Windows or even another **Linux or BSD distro**. This is an opportunity to contribute to the community and to those who are where you were once. I hope to see some of you there soon!

This week, after installing several DVD editing programs, my **PCLOS 2007** system failed to start. I was able to login as usual but the next screen (blueish orbs at the bottom) stopped after lighting up the first orb. At the top of the screen a white area eventually presented the message: "Could not open kdeinit, check your installation."

After searching the **PCLOS forums** for "kdeinit", I found several posts which led to repair and recovery. It appears that in installing several **KDE** type programs I altered the library dependencies in my system. Thus, I had some older **KDE** libraries that would not play well with the newer libraries that I inadvertently installed with my DVD editing programs.

The solution – update and upgrade my **KDE** system so all the libraries would be "in sync." One post suggested only to update "**libart_lgpl2**" but, most other posts suggested to update and upgrade everything – the whole system. Naturally I took the latter suggestion – more posts.

Navigation is some what limited as I could not get to my

how to repair
KDEinit
problems
Vince Laporte

desktop and my favorite software install program – **Synaptic**. To get a command line prompt from my stuck blue screen, I pressed **Ctrl+Alt+F1**. This will open a terminal, or Konsole window. Next, type su, then press enter. You will now be asked to enter your root password. (Note: Your cursor will not move while typing your password. This is a security feature.)

Now I have root access, but, text only (command line.) Recalling that Synaptic is only a GUI for the apt-get command, I typed apt-get clean <enter> , apt-get update <enter>, apt-get dist-upgrade <enter>.

Plan on having a cup or two of coffee while the update and upgrade processes complete. Then I shutdown with shutdown -h now. When I restarted, my system was happy.

Lesson – be careful if you install lots of **KDE** software. Look at the "additional required changes" in Synaptic as you are selecting new programs to install. If there are many "additional required packages" that will be installed keep this howto handy.
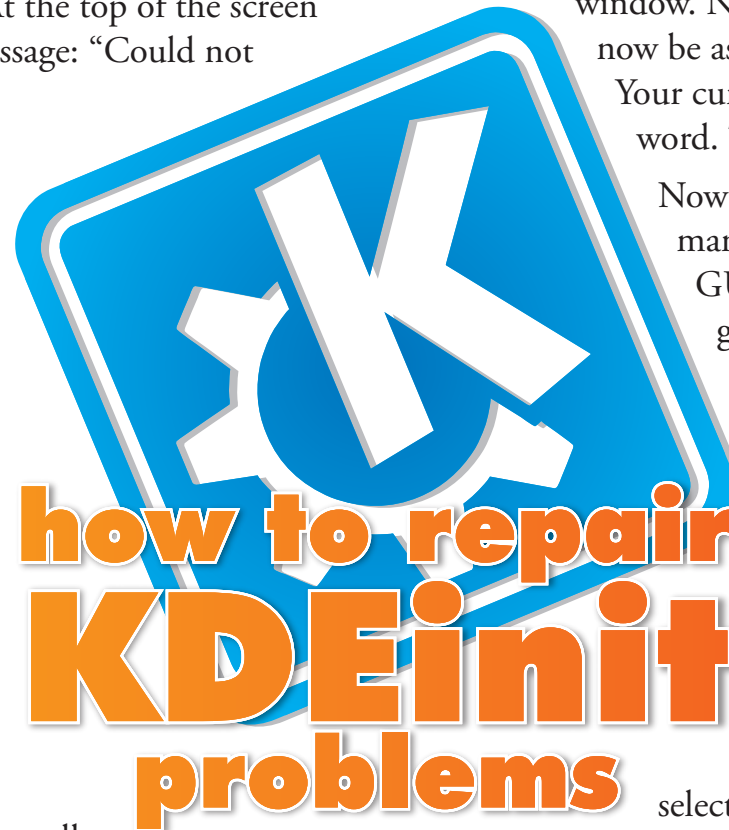
it's magic...

Gary L. Ratcliff Sr.

PARTEDMAGIC

If you have not yet marked your browser for the site: Distrowatch.com, the following article will explain why you should. It will also cover in detail a special distribution which was recently highlighted on this site.

Distrowatch serves up a veritable cornucopia of Linux delights. The main feature is the most recent Linux distributions. There are also links to sites which allow the purchase of the distributions on CD or DVD for nominal fees. There are reviews of the most recent distros and there are links to the most recent Linux and other open source podcasts. Also, there are highlights of Linux news in the press. All this will keep the Linux aficionado current on the very latest happenings of interest to him.

Any of the desired features are as near as a mouse click away, but the Linux world changes rapidly and the newest distro will rarely be featured beyond a two week period. I examine this site a few times per week and download and burn to CD the iso images I find of interest

Most of the distros will be normal releases of full production distributions such as **Ubuntu, Red Hat, or Suse**. Some will be very specialized distri-

butions such as Musix for musicians or the distribution recently featured whose purpose was to drill oneself to prepare for the Linux Professional Exam.

■ Parted Magic 1.8 – An Introduction

This was featured some time ago, so it will not be found on the home page at this time. Readers who wish to download and burn a copy will find this at: http://partedmagic.com/

This is a 30 mb download, so it should be finished within a short period of time, even with a 56k modem connection to the Internet. The distribution is dedicated to supplying all the tools one would want to enable them to partition their hard drives to aid them in installing Linux while keeping their Windows distribution, which comes with virtually any new PC purchase. (Dell and HP currently are offering Linux pre-installed and we hope many more mainstay OEM's will join this effort to bring a superior operating system to the market.)

It also features a rich set of tools and utilities to supplement this effort. There is full help and man pages to cover every feature used in this distribution. Great care is shown from the initial splash screen. Here the user is presented with options to enable them to boot with the default settings, use older VESA video, or even a special set of scripts for those who have less than 128 megs of memory on an older computer.

Next, the application is loaded and the user should be ready to select which item he wishes to use. These are opened by clicking on one of the icons which will appear at the bottom of the screen. From left to right these items will control: Gparted the Gnome Partition Editor, Thunar File Manager, Terminal Command Line Interface, Screen Shots, Utilities, Help and Information, Quit Parted Magic. When an icon presents a menu of other selections, one is to click the arrow to the left of the icon instead of clicking the icon. This will open a new menu.

Everything is well thought out, including allowing the user to determine which method they would like to use to quit the application.

■ Help, Mr. Wizard Help

The first time user will most likely desire to learn to use the features of this system. Partitioning one's hard drive to create a dual boot system is one of the tasks which the new user approaches with some trepidation. This task is covered in a fully illustrated tutorial which steps the user through the task. The only item not mentioned in this section was the need to first defragment the hard drive of the Windows operating system before starting the partitioning of the drive.

The help section contains man pages for the items in the distribution as well as FAQ sheets for the use of Parted Magic and other major tools of the distro such as the testdisk partition recovery tool. The purpose of this item is to recover lost partitions or to restore or recover the boot sector when your hard drive will no longer boot.

Just in time management is a method which was taught in the business schools   when I was earning my MBA in the early 70's. True to form, while preparing this article, the boot sector for the Windows ME system suddenly failed to function. However, examining the system from my **PCLINUXOS** system revealed the data to be intact.

My solution was to purchase a new 160 gig PATA drive and replace the older system. In my opinion, the Windows ME portion was constantly crashing and any use of Internet Explorer resulted in constant intrusions from pop-up ads which only disturbed my intended use of the system. Using Firefox did not seem to remedy the situation as IE just stuck its pop-ups on that too.

Now I have a fresh install of Windows XP Professional and the hard drive boots as well as the new 160 gig hard drive which I am partitioning to use with the system. My old Dell 8100 machine has close to 500 gigs with the new hard drive and the 360 gigs from the E-book mentioned in my multi-booting article.

■ Utilities: A tool for every purpose

One icon which produces a menu is the Utilities icon. Again, to open the menu just click on the arrow to the left side of the icon. Here you will learn how the pictures used in the tutorial mentioned earlier were captured. If you wish to create your own tutorial of an illustrated journal of your explorations of the system, this will capture your screen for you as you perform various tasks.

Another tool will allow you to re-master the CD to make your own customized version of Pmagic, so if you feel there is an application which you must have for your partitioning tool, this will do it for you.

There is a tool to allow burning another copy of the CD and another which will allow you to create a self booting flash drive. As the entire system is just over 30 megs even the smallest flash drive can be used for this.

To create this, click the USB icon and it will search your system for USB devices currently attached to your system. If you do not have any, the utility will inform you of this fact and quit. Slide a flash drive into a USB port and it will discover this; from here you are given the option to create the full self-booting PMagic system or just install the syslinux boot program.

Other tools allow mounting the system and examining any of the files found there with the file manager. Each step you perform in your session is saved for you and will be moved to one of the partitions on your system with the Session File Saver. This file will be saved as a zip archive.

There is no printer install feature so if you want hard copies of any of the

reports which you created the save session would move a zipped record to your root partition and you could then use your installed printer to print out your report.

The commands to accomplish this task would be:

```
su
<enter the root password>
cd /root
gunzip filename.txt.zip
kwrite filename.txt
<click the File and Print options>
```

However, PCLinuxOS makes this operation easier for you. There is no need to use any of the command line features to perform this task. Just finding the file and clicking on it will open the archiver and this will produce a list of the files in the archive. Select the file you desire to print, then right-click and select the 'open with' item and type kwrite in the box provided. From here, print out the desired file.

One caveat of the PMagic system is that all your actions are performed as root. A message reminds you of this before any task is undertaken. Because you are logged in as root without any password you can do some serious damage to the system if you don't take the time to study the help sections and become familiar with the operations of this very powerful tool.

This is just one example of the many gems which you are likely to discover from examining the site Distrowatch. With the cost of burnable CDs in the $10.00 per fifty range and the easy tools provided for burning CDs in the k3b tool provided in PCLinuxOS, you too will be able to discover and make use of them.

 If you find an interesting tool please share it with your fellow PCLinuxOS users. That is the spirit which is causing the growth of Linux.
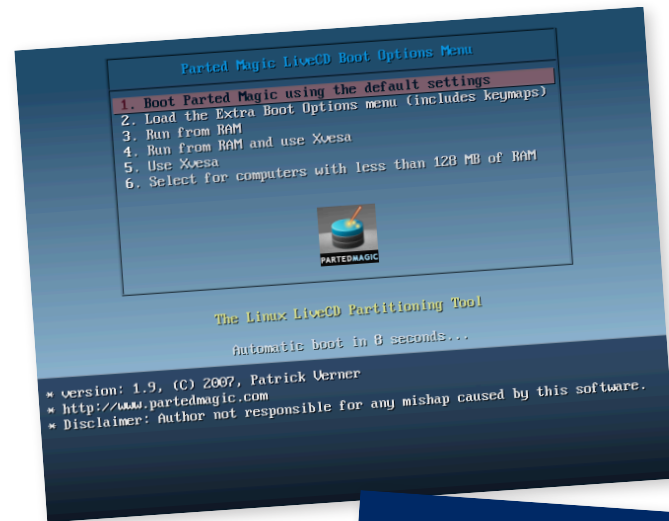
■This picture shows the many options available from the very first moment the system is turned on with the PMagic CD in the drive.

■Here is the screen found on boot up. Getting the system to function is accomplished by clicking one of the icons as mentioned in the article text. Some of the icons open a menu of related items.

■Here is the utilities menu expanded. If you don't find a particular item you desire there is even a tool for re-mastering the CD to include any application you might care to add.

Just thought I would try and bring everyone a list of currently active PCLinuxOS based distros. If I have missed any, I apologize. If anyone knows of any others that are being actively developed please drop me a note at the Magazine website or at Papawoob@pclosmag.com.

AmaroK Live

amaroK Live is a stripped-down live CD of the GNU/Linux operating system, based on PC-LinuxOS, with a fully functional amaroK music player. It is meant to display the features and power of amaroK. The goals of this project are: create something cool to promote amaroK, offer an easy way to introduce people to amaroK, provide a way to demonstrate the new features of amaroK when a suitable Linux installation is not available, and make it easy to remaster the live CD.

ArcheOS

ArcheOS is an acronym for Archaeological Operating System. It is a GNU/Linux live DVD distribution, based on PCLinuxOS, with specialist software for archaeological purposes.

PCLOS Papawoob
Based Distros

CAElinux

CAElinux is based on PCLinuxOS and is designed for computer aided engineering. Based on the open-source CAE softwares Salomé & Code_Aster, you can load STEP / IGES geometry in Salomé and start partitionning and meshing your problem in just 5 minutes.

Granular Linux

Granular Linux is an easy-to-use, desktop Linux distribution based on PCLinuxOS. Its main features are a carefully selected set of applications for common tasks, the ability to customize the distribution, and the inclusion of two popular desktop environments - the flexible KDE and the lightweight Xfce.

Karoshi

Karoshi is a free and open source school server operating system based on PCLinuxOS. Karoshi provides a simple graphical interface that allows for quick installation, setup and maintenance of a network.

Ruby on Rails

Rails Live CD is a specialist distribution providing a pre-configured and fully operating Ruby on Rails development environment on a bootable CD. The distribution is derived from PC-LinuxOS.

SAM Linux Desktop

SAM Linux Desktop, a live and installation CD based on PCLinuxOS, is an easy-to-use, fast and clean XFce Linux desktop for home users. The distribution is enhanced by several popular

non-free applications, such as Macromedia Flash plugin, Java and RealPlayer.

VideoLinux

VideoLinux is a PCLinuxOS-based distribution with focus on DVD backups, video encoding and transcoding, DVD authoring, format conversion and pretty much anything else you want to do with video.

TinyMe

TinyMe is a scaled down version of PCLinuxOS 2007. The latest version is delivered as a 177 MB liveCD and features the Lightweight X11 Desktop Environment, Synaptic, and the PCLinuxOS Control Center. It comes with a few applications, so it could be a really light version of PCLOS for older computers or a foundation on which to build your own system as you choose.

PCFluxboxOS

PCFluxboxOS is a series of remasters of PCLinuxOS catering for different end-user needs. All the following remasters are installable live-CDs and all come with the i586 'Legacy' Kernel 2.6.18.8 for increased compatibility with older hardware. Newer kernels can be installed via Synaptic.

TinyFlux

Version 0.5b out now for testing (released 15 August 2007)

A minimal desktop experience within a tiny ISO of 225MB.

Main applications: Opera (inc Flash 9); Syl-

pheed (e-mail); Thunar (file manager); Audacious (XMMS/WinAmp clone); mtPaint (image manipulation); Grafburn for CD/DVD burning; Synaptic (package manager); PCLOS Control Centre; guided installer.

See TinyFlux downloads page for full details

MidiFlux

release expected September 2007

A large selection of applications in a relatively small ISO expected to be about 350MB in size

FullFlux

release expected September 2007

A huge selection of apps in a whopping 700MB full live CD

NanoFlux

release expected October 2007

A miniscule distribution stripped down to Fluxbox and Synaptic. Add your own apps to build your perfect system!

RescueFlux

release expected November 2007

A small ISO containing all the apps you might need to prepare for, or rescue an installation.

Squeeze Your Data: A New Compression Strategy

rm

Computer hard drives have certainly grown in size tremendously in the last few years. I mean, I now have a 500 GB external hard drive that I use for backing up my data. I remember how excited we were at the office when we received a computer that could hold 1 GB of data! Of course, with all the room we now have available, we tend to save a lot more stuff than we used to. However, I still don't like to waste room on my disk.

One way that is frequently used to recover some disk space is to compress the data using some form of compression software. There are several different ways to do this, each of them with its own advantages and disadvantages. Lets say, for example that you have, as I do, a large directory tree that you want to compress containing data that you hardly ever use, but that you want to have easy access to from time to time. In my case, that directory tree contains the RAW image files that come from my DSLR camera. Each of those files is about 10 MB. The total size of that directory tree is about 45 GB, and it is constantly growing. (Note: I store my finished, "processed", images on a different directory tree. They are stored as JPEG files, so they are already compressed.) How would you go about using compression to retake some disk space on a situation like this one?

There are some tools that would allow me to compress the whole directory into one huge compressed file, but that is not practical for several reasons. For example, adding new directories to the archive is slow and complicated. What if I wanted to uncompress all the RAW files from a certain shooting session to apply a new post processing technique I just learned? Again, doing so would be slow and complicated. And lets not say anything about the memory requirements for such operations. Even backing up such a huge archive can present some challenges since certain file systems can't deal with files that large. So, is there another way?

Well, one way I came up with was to write my own tool to do this job. I created a program called 7sqz (7Squeeze) that can take care of this task with ease. It is a Python script that navigates through a directory tree compressing its contents only, not the actual directories. As it enters each directory on the tree it saves all the files on that directory on an archive on that same direc-tory giving it the name of the directory itself. If it finds that the directory already has an archive file with the correct name it leaves it alone and goes to the next directory, unless it also finds an uncompressed file in it. When that happens it simply moves it into the existing archive file, updating it inside the archive if it was already there.

I also created 7usqz which is the opposite counterpart of 7sqz. It will simply go through a specified directory tree looking for archive files named as the holding directory and will uncompress them, essentially leaving the directory as it was before being squeezed. Both 7sqz and 7usqz use p7zip for the actual compression, so you need to have p7zip already installed.

You can obtain 7sqz from here:

http://rmcorrespond.googlepages.com/7sqz

And you can get 7usqz from here:

http://rmcorrespond.googlepages.com/7usqz

After downloading them, save them in a place like /usr/bin and make sure they are executable. To make them executable you will need to right click on each file, choose Properties from the drop down menu, then check the box next to "is Executable." Click OK and you are now ready to use them.

To use 7sqz you will need to open a terminal:

Main Menu ➡ System ➡ Terminals ➡ Konsole

Next, you could just give it a target directory as a parameter, like this:

```
7sqz /home/some_directory
```

By default it will use the 7z format (which gives better compression than zip), but you can use the zip format if you prefer by using the -m option like this:

```
7sqz -m zip /home/some_directory
```

By default it will use Normal as the level of compression, but you can use EXTRA or MAX if you prefer by using the -l option like this:

```
7sqz -l Extra /home/some_directory
```

By default it will just skip any file if it found an error during compression and will log the error, but you can tell it to "Halt on Error" with the -e option like this:

```
7sqz -e /home/some_directory
```

And of course, you can combine options as you please like this:
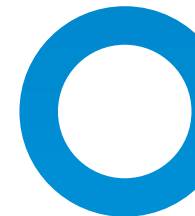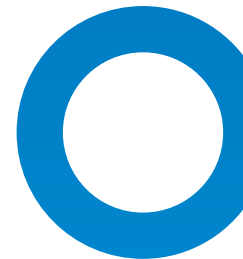
```
7sqz -m zip -l Max -e /home/some_directory
```

As I said, 7usqz is the opposite counterpart of 7sqz. To use it you could just give it a target directory as a parameter, like this:

```
7usqz /home/some_directory
```

By default it will just skip any file if it found an error during decompression and will log the error, but you can tell it to "Halt on Error" with the -e option like this:

```
7usqz -e /home/some_directory
```

Please do a few, or better yet a lot of tests, before using it on a directory that you cannot afford to loose. I believe it has all the necessary safety precautions to protect your data, but I can't guaranty it. All I can say is that I have never lost any data with it and that it works great for me. But of course, let me know if you have any trouble with it. I know it is hard to really grasp what it does from this description. But, I think that if you give it a try you will see that squeezing you data is a great way to retake some disk space and to save quite a bit of time doing so.

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