

# The PCLinuxOS magazine

Volume 63

April, 2012



**Gnome 2.32: Say Cheese!**

**Gnome 2.32: Graphics Extras**

**Some PCLinuxOS Gnome  
Post Install Tips**

**Linux Hardware In  
A Windows Landscape**

**Linux Financial Apps:  
iFreeBudget**

**2011 LinuxQuestions.org  
Members Choice Awards**

**Alternate OS: PC-BSD, Part 1**

**A Really Large Monitor**

**Linux File System  
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The **PCLinuxOS** magazine

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The PCLinuxOS Magazine is a monthly online publication containing PCLinuxOS-related materials. It is published primarily for members of the PCLinuxOS community. The magazine staff is comprised of volunteers from the PCLinuxOS community.

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# Welcome From The Chief Editor

Surprise! Welcome to the unveiling of the magazine's new layout. It is, after all, Spring in the Northern Hemisphere, and a time of rebirth and renewal. It seemed only fitting to reveal the new layout with an edition of the magazine appearing in the Spring.

To be perfectly honest, it's something that I've been toying with for the past six months or so. I'd work on it a bit, then step away, then come back to it, then step away, then come back to it ... until it was finally finished. At various stages, I'd run ideas and proposals past Meemaw, for her input. We'd discuss each item, making sure I hadn't forgotten anything along the various steps of creating the templates that her and I use to layout the magazine.

The result is a layout that maximizes the amount of space we can utilize on the page, while still appearing stylish and attractive. One key theme in my thought process throughout making this new layout was to eliminate any unnecessary use of large blocks of color, to help those who may print pages from the magazine from having to bleed their color inkjet cartridges dry. Another idea in creating the layout templates was to streamline the magazine layout process as much as possible. I can tell you that after laying out articles this month, and putting everything together into the final copy of the PDF for the April, 2012 issue, that I think I've managed to achieve that latter goal.

On another note, I recently had to accompany one of my patients at the hospital to the MRI (Magnetic Resonance Imaging) scanner in a different part of the building. While I was waiting for my patient's



*My father-in-law shot this picture of me working on the magazine, March 10, 2012, during a visit to my in-laws house.*

scan to be completed, I was looking over the shoulder of the MRI technician who was administering the scan. Lo and behold, if that screen didn't look familiar. Yep! That's it! The MRI scanner was being controlled by software ... ran on Linux! The screen was neatly laid out, using the Motif Window Manager. This MRI scanner – and the software to run it – are just slightly over one year old. So no, this isn't any old setup. Rather, this scanner and the special building built to hold it, was a multi-million dollar expenditure by the hospital I work for. I guess when you have mission-critical data, Linux is what you turn to, huh? Of course, all of

us using PCLinuxOS already knew that.

This month's cover was created by one of Timeth's students in Japan. Due to laws and customs over there, I do not know the identity of the young lady who created the wonderful anime drawing we are using for our cover this month. So I'd like to express my sincere thanks to her, whomever she may be. I hope Timeth will convey my gratitude to her.

Until next month, I wish each and every one of you peace, happiness, prosperity and serenity.



# Keep Your System Up-To-Date With Update-Notifier

by Darrel Johnston (djohnston)

According to the About Update-Notifier window, it was created by maik3531 and has been updated by travisn000, rogaven and leiche. I believe leiche is the current maintainer. The program has undergone extensive modifications since it was first written.



This program is designed to check for available updates on a time interval selected by the user, and to notify the user of updates status via screen and system tray icon notifications. To install the program, open Synaptic and mark the update-notifier package for installation. Once the program has been installed, you will find it in the main menu in the Software Center section.

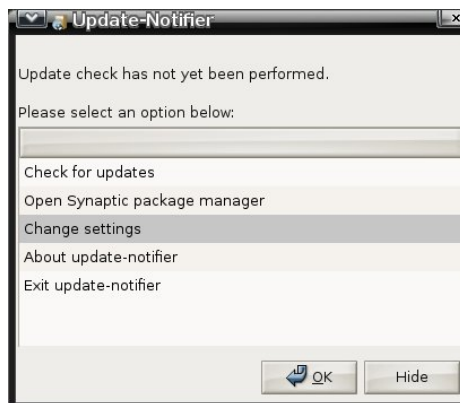
Before starting the program, be sure that Synaptic has been configured to connect to your selected repository and that your network connection is working. When the program is first launched, you will see a status window pop up on your desktop.

 waiting to connect repositories

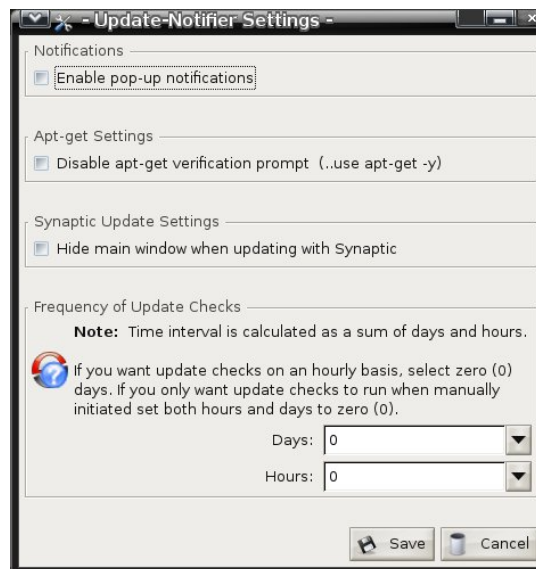
Shortly thereafter, the following icon will appear in your system tray.



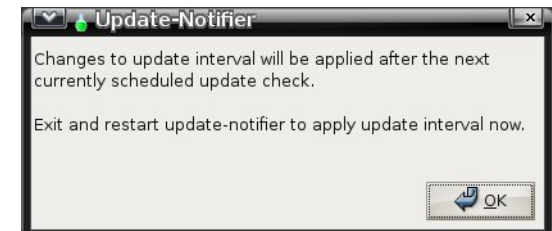
The blue question mark is an indication that Update-Notifier is not configured. Left-click the icon to see the following configuration window.



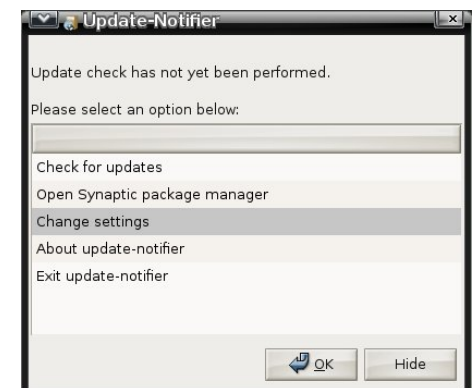
Check for updates is highlighted by default. But, selecting that option will put the program in the same loop we just encountered. Highlight Change settings and click OK, or simply double-click Change settings. This will bring up the configuration window.



To show on screen notifications when Update-Notifier is checking for updates, check the Enable pop-up notifications box. If you don't want apt-get to prompt for installation verification when updates are available, check the Disable apt-get verification prompt box. You can hide Synaptic's main window when installing updates by checking the box for that option. All the previous choices are optional. The one thing you must do at this stage is select the update check frequency. The interval can be either days (1 through 40) or hours (1 through 18). This is the amount of time to go between checks for software updates. Once you are satisfied with your choices, click the Save button. The next window will pop up.

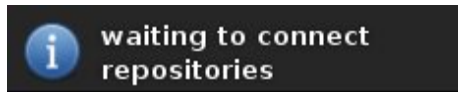


We are instructed to exit and restart Update-Notifier in order to begin the software update checks. Click OK. Select Exit Update-Notifier and click OK in the next window.

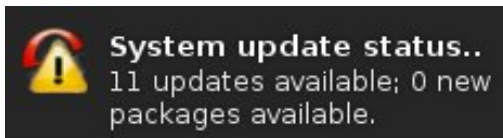


# Keep Your System Up-To-Date With Update-Notifier

At this point, Update-Notifier should no longer be running. Start it from the main menu in the Software Center section. You may receive an on screen message that Update-Notifier is already running. In that case, wait a couple of minutes and start it again. If you receive the same error message again, either find and terminate the Update-Notifier task or close all programs and reboot. The Update-Notifier will start automatically at each login. If you enabled popup notifications, the following on screen window will appear right after login.



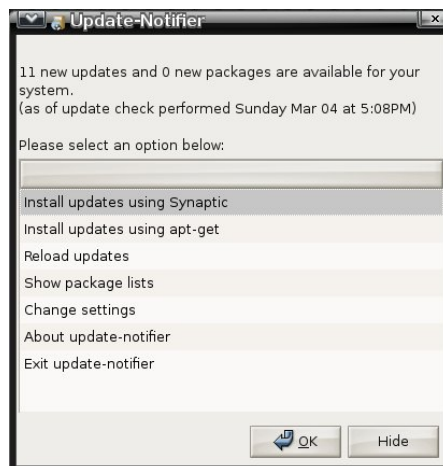
After the check, if there updates available and you enabled popup notifications, you will see something similar to the following on screen message.



In addition, the Update-Notifier status icon in the system tray will look like this.



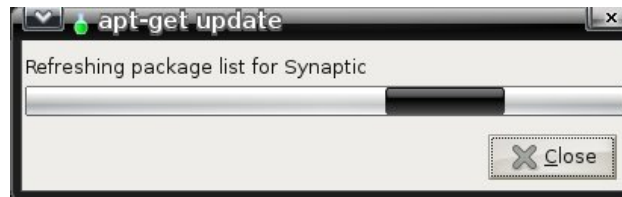
At this point, you should click the icon in the system tray, opening the Update-Notifier status window as shown below.



Select one of the two Install updates choices. Personally, I prefer using Synaptic for its visual indications. Either selection will bring up a prompt to enter user root's password.



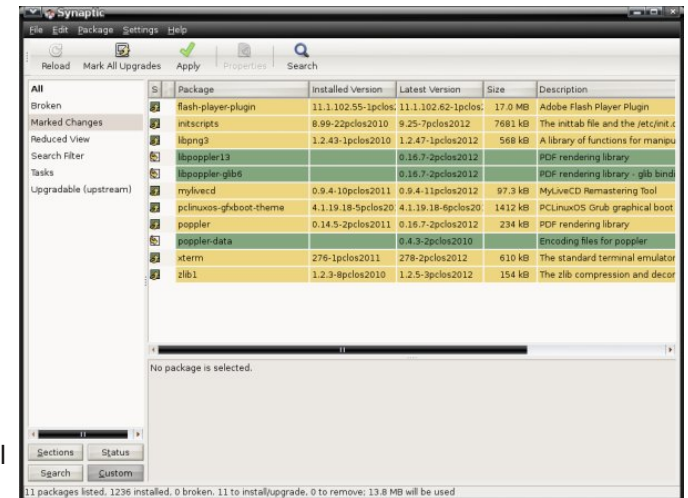
After entering the password, the package list will again be refreshed, with a visual indicator.



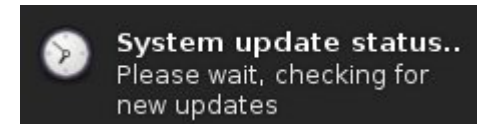
Depending on whether you chose to use apt-get or Synaptic, either a terminal window or the Synaptic main window will appear. If you chose Synaptic, a sub window will indicate the packages to be updated or installed.



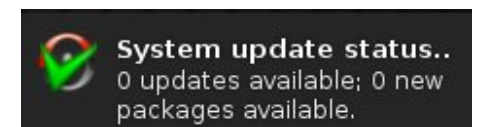
Mark the changes to be made and Synaptic will display the marked changes in the main window, unless you chose to hide it.



Click the Apply button in the Synaptic window to install the updates. After closing Synaptic, update-notifier will again check for new updates.



If there are no more updates, the on screen status window will show none and the icon in the system tray will look like this.



Update-Notifier will tell you, according to the schedule you set, when software updates are available. It will not automatically install the updates for you.

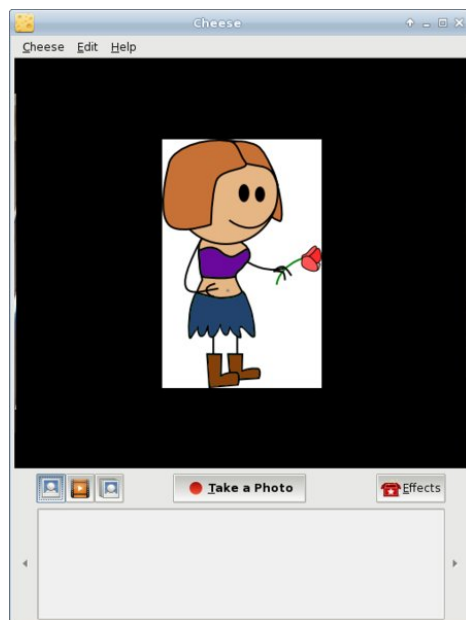
# Gnome 2.32: Say Cheese!

by Meemaw

As technology advances and we communicate with each other more and more, we don't just want to text back and forth with old friends across the country, we actually want to see them as well. So we get a web camera to use on our computer, or have one already on our laptop. Now we need a program that will run our webcam. In PCLinuxOS, we can use Cheese.

The website is <http://projects.gnome.org/cheese/>. If you click on the tour links, you can learn all about it:

*"Cheese is a program for the GNOME Desktop which allows you to take photos, videos, and anything else you can think of with your webcam. Just start it up and shoot! Gather all of your friends around, have some fun! When you're done, share your photos and videos with 'em!"*



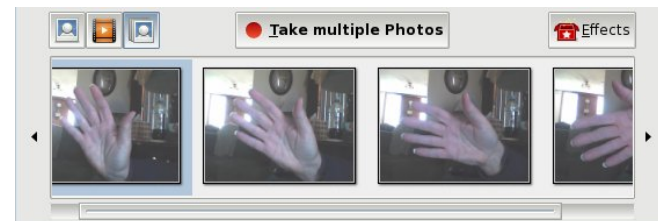
After installing from the PCLinuxOS repo, Cheese is in the Video section of the menu. When you start it up, your camera may already be recognized and is showing you a view of wherever the camera is pointing. This is the main Cheese window (below left).

You can take a single photo, a video or a burst (series of photos) with this program. The icons at left below the image screen let you choose which you want. Since the photo icon was clicked, the button in the center is what you would click on to take a photo. If you choose video, the button will say 'Start Recording'. If you want a burst, click the burst icon, and the center button will now say 'Take Multiple Photos'.

The first thing you should do after you open the program is go to Edit > Preferences. You can set your image resolution and image properties (brightness, contrast, saturation and hue), and configure your burst properties - how many photos you want in your series, and how long the program should wait in-between shots.

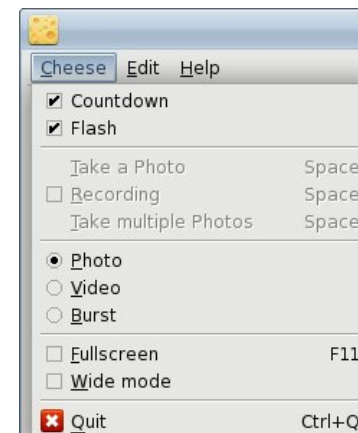
You can take up to 100 photos in your burst, and can set a delay of up to 100 seconds. When you take a burst, the series will be shown at the bottom

of the main window. I was practicing with the image properties settings in my living room:



I made it too light! Fortunately, Edit > Preferences is just a mouse click away.

There are only three menus in Cheese: Cheese, Edit and Help. The "Cheese" menu has the majority of the items, while the "Edit" menu just has a few.



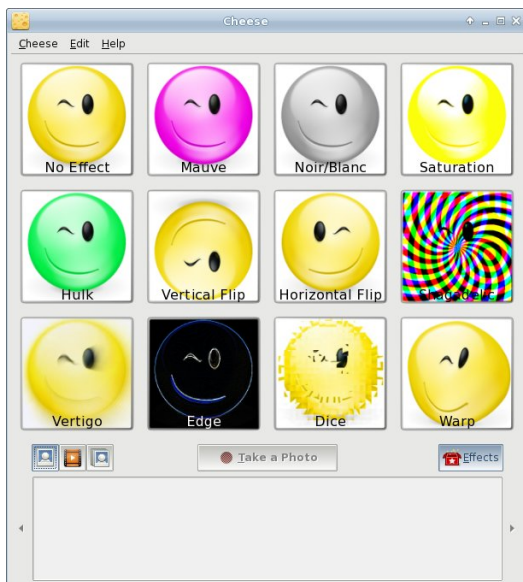
In the "Cheese" menu, you have the check boxes for Countdown and Flash. When you want to take a picture, you can do a 3-second countdown before the photo is actually taken, and when the photo is being taken, Flash makes your whole screen turn grey for a second or two.

In that menu are radio buttons for choosing whether you want a single photo, video or burst (or you can choose from the buttons in the main screen). You can also choose whether you want the program to be visible in full screen, or just wide mode.



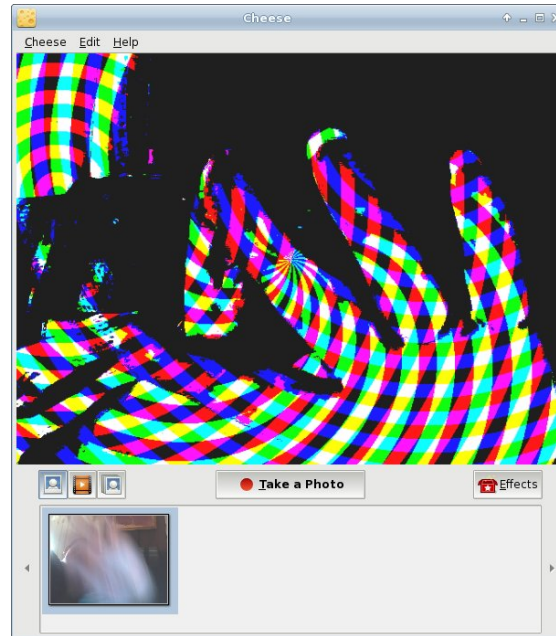
Preferences is in the "Edit" menu so you can configure your program. Notice that you have the two choices "Move to Trash" and "Move All to Trash." When you have taken a photo or a burst, these won't be greyed out. You can choose a photo you don't want and click 'Move to Trash', or just select "Move All to Trash" and the program will delete them all.

Also in the "Edit" menu is another box to select or deselect the effects screen:



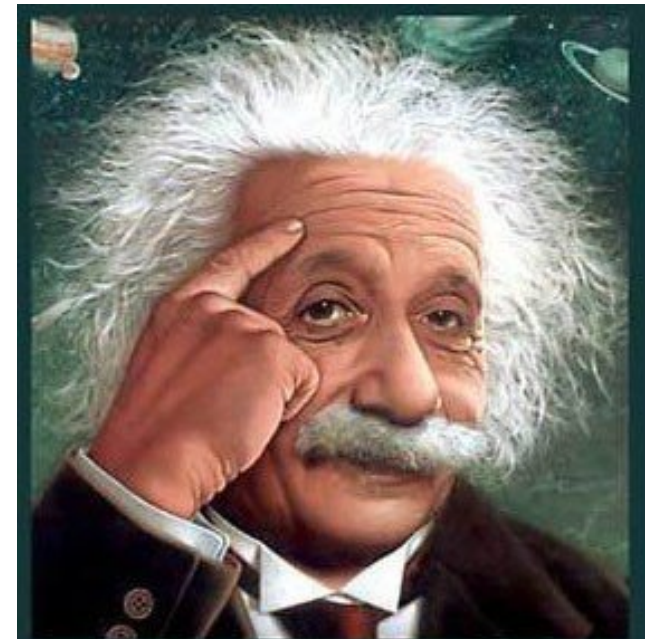
The effects are shown above. This screen shows up when you choose effects from the menu or click on the effects button towards the bottom right of the screen. You can choose one or multiple effects simply by clicking on them. Clicking the effects button again takes you back to your visible image in the main screen with the effects applied. That way you can see how each effect looks, but you don't have to take multiple photos to see them. Take your photo, video or burst when you have the effect you

want enabled. You see below a webcam photo with the effect "Shagadelic" enabled.



When this program is installed, a folder called Webcam will be created in your /home. Any photos or video you take will be saved here.

You can have loads of fun with Cheese!



**It's easier than  $E=mc^2$**   
**It's elemental**  
**It's light years ahead**  
**It's a wise choice**  
**It's Radically Simple**  
**It's ...**




**ONE CLICK LINUX**  
 A place for Linux beginners!  
George © and © 2008 Mark Szorady



Hardware for your Linux PC.

Powered by  
**PCLinuxOS**  
 radically simple.

LinPC.us

LinuxQuestions.org

Looking for an old article?  
 Can't find what you want? Try the

**PCLinuxOS Magazine's  
 searchable index!**

The **PCLinuxOS** magazine



**Lightweight X11**  
 desktop environment

# Screenshot Showcase



08:22:45 AM  
 Fri, 2 Mar

- Home
- Firefox
- Trash
- KPatience
- KCalc

PC

08:22 AM  
 Fri, 2 Mar  
 5°

Weather: Marshfield, WI  
 29°  
 H: 38° L: 23°  
 0 mph N 65% 30 inHg →  
 Sat Sun Mon Tue

Posted by gandy, March 2, 2012, running KDE 4.





# Forum Foibles: Crumbs Between The Keys

My Space Bar isn't working I can't go to and fro  
And when I hit Enter there's no place to go  
No matter how hard I try I can't press Tab  
This constant lack of movement is making me a crab  
Would someone help me - pretty pretty please  
The answer is very simple

*You've got crumbs between the keys*

The Caps Lock is being stubborn seems it is stuck  
The Num Lock is the same I'm truly out of luck  
I really do give up with Ctrl Alt Delete  
Back to my old typewriter I'm about to retreat  
Would someone help me - pretty pretty please  
The answer is very simple

*You've got crumbs between the keys*

Page Up Page Down Insert End and Home  
Nary a one of these am I allowed to roam  
The F keys won't function I even tried Escape  
And without the Delete key I'm really in bad shape  
Would someone help me - pretty pretty please  
The answer is very simple

*You've got crumbs between the keys*

ms\_meme

## Onion Sandwich



On each slice of bread you spread your favorite mustard or spread ( mine is southwest mustard or Kraft horseradish sauce ). You then take a nice slice of red or white onion and place it between those slices of bread. Sometimes wash it down with a nice icy cold beer. I usually have a slice of onion on just about every sandwich I have. **Smileeb**

## Cheese & Apple Sandwich

(sometimes with a drop of lemon on the apple to stop it oxidizing)  
**7272Andy**

Half apple, half pear, with a cup of white wine on the side for me, thank you. **Crow**



## Nachos **gseaman**

Yum, set them on the PC to keep them warm. **Rudge**



I have "Planters Dry Roasted peanuts", "Lays Sour Cream and Onion Flavored chips" and "Unique Splits" pretzels.

I could turn my keyboard over and shake it right now and have a snack. **Rudge**

## My Food Rule: YA GOTTA EAT

### Neal

Coffee pot, refrigerator and stove should be close to the computer - as close as is reasonably possible. Preparing, cooking/brewing and eating/drinking can then more easily become part of your workflow.

Put pan on stove. Low to medium heat. When pan is warmed up, add 2 or 3 tablespoons oil - cover the bottom of the pan. Toss in sliced potatoes - french or cottage fry cut, your choice.

- Back to computer - do some work and/or read forum posts.

- To stove - turn potatoes.

- Back to computer - do some work and/or read forum posts.

- Back to stove - check/turn potatoes.

When potatoes are done, put on plate (on a paper towel, if you are concerned about the oil), salt and pepper to taste and take to computer. Use computer with one hand and eat with the other. Uninterrupted workflow. You just added prep and cook into it.

Ya gotta eat.



## Crumbs Between The Keys

### Hay there ms\_meme

I don't eat sammichs at the 'puter, just the occasional milk dud or similar candy, and not too many of them.

But when I do eat a sammich, one of my favorites.

Toasted bread (oat)

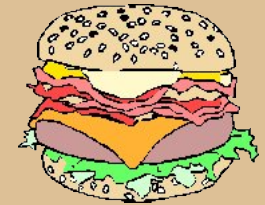
Baloney

Lettuce

Cheese (Swiss is best)

And peanut butter

+Bacon and cucumber if handy



### weirdwolf

An **Old Fashioned Fluffernutter** for me with my own little extras

2 slices of soft white bread

My extras are:

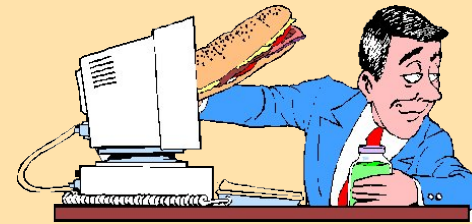
I coat 1 slice of bread with a good helping of butter. Then the peanut butter and marshmallow on the other slice. Mash them together and mmmmmm good eats. Now the other extra special extra is if you have some nice crisp bacon around add a few slices in the middle.

### joechimp

**I am trying not to snack.**

My hubby has this snack nearly every night... one bagel, lightly toasted, with a thin coating of peanut butter accompanied by a small glass of milk. (sometimes he only has 1/2 a bagel) - **Meemaw**

*First you get your coffee set it to the right  
Take a little sip keep your screen in sight  
Grab a donut hold it nice and tight  
Dig into those chips oh what a delight*



*Move those disks make a little more space  
For that Chinese take out well just in case  
And before you have a hunger attack  
Tell your mate to bring another snack*

*Big slice of cake as you find your site  
Dish of nachos take another bite  
Pizza's in the oven so just sit tight  
With goodies at your side you can surf all night*

*Now don't forget that BLT  
Have a little swig of your favorite whoopee  
And before you have a hunger attack  
Tell your mate to bring another snack*

*A swig of beer get a little bit tight  
Handful of peanuts will make it all right  
Cheese and crackers you better not slight  
Wipe your chin now be polite*

*Log into the Forum your friends to greet  
Without the Sandbox you're incomplete  
And before you have a hunger attack  
Tell your mate to bring another snack*



MP3

OGG

# Mark's Quick Gimp Tip & Double Take

## Mark's Quick Gimp Tip

When doing digital photo editing, you probably do a lot of cutting, copying and pasting of images and sections of images. These copied pieces then get pasted into the existing image or moved over to a new image you might be creating. If you sometimes want to use the same copied clip over and over again. It'd be nice to have these little "clippings" in a place where you could call them up for use a little later on during the digital photo editing process. Well, that's where **Gimp's** buffer utility comes in. When you use the image buffer, you can copy or cut an image to the buffer clipboard, label it, and store it for later use. (Note the Buffer is a temporary repository. It remains as long as the **Gimp**

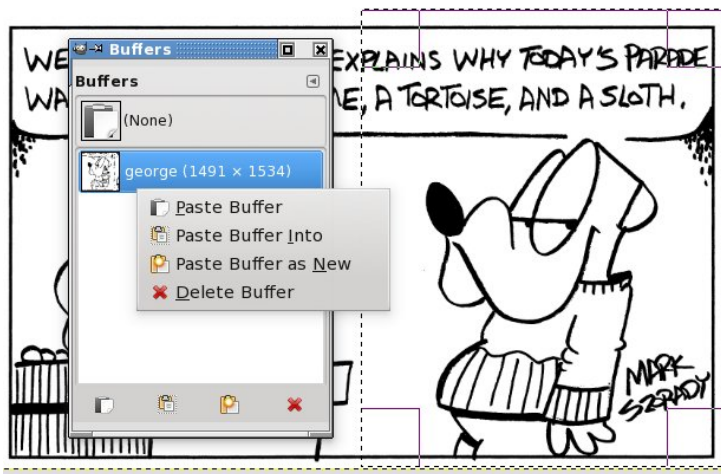


open. Once you close **Gimp**, the buffer resets.) You can get to the buffer in a couple of ways. Select **Edit > Buffer > Cut Named (or Copy named.)** A dialog box comes up allowing you to store the image information by giving it a name. Once you have this in place, you can then open the buffer, select the image listed and paste it into the image you're working on. The buffer can be opened as a free floating dock by going to **Windows > Dockable Dialogs > Buffers**. You can also add the buffer dialog to the right hand tool panel by selecting **Add Tabs > Buffers**.

[Answers on Page 37](#)

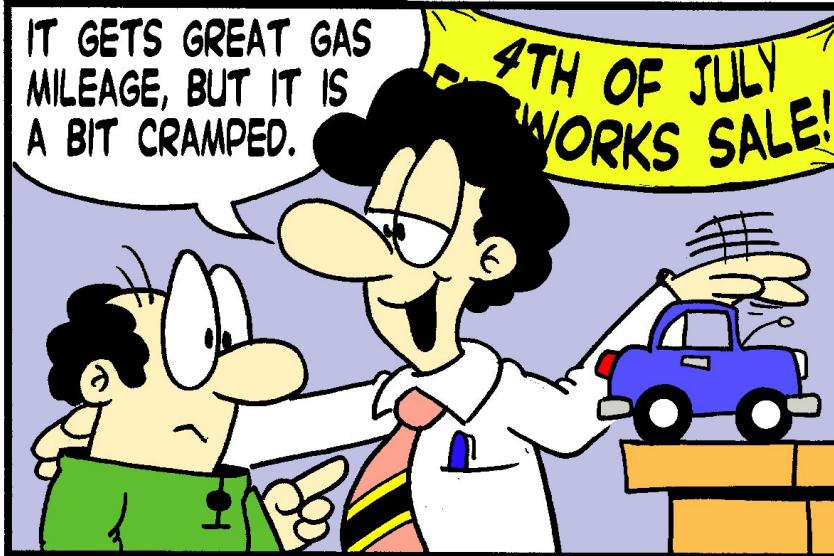
At left is the Buffer clipboard in action. I selected part of my George comic strip, and copied it into the Buffer. Here I'm selecting the named buffer. Then, from the context menu, I can paste it, paste it into the existing selection, or paste as a new image.

-Mark Szorady is a nationally syndicated cartoonist with [georgetoon.com](http://georgetoon.com). He blogs at [georgetoon.com/blog](http://georgetoon.com/blog). Email Mark at [georgetoon@gmail.com](mailto:georgetoon@gmail.com).

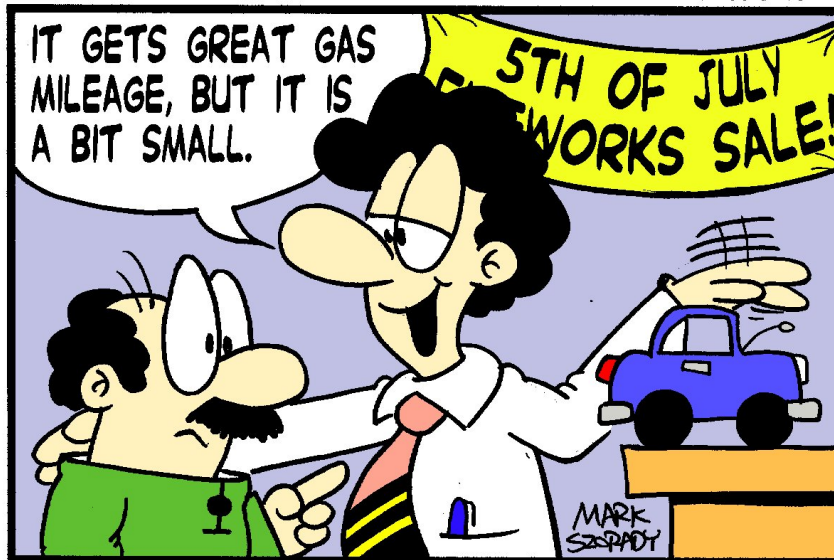


## DOUBLE TAKE

By Mark Szorady



Find at Least Seven Differences Between Cartoons!



# Linux Hardware In A Windows Landscape

by Paul Arnote (parnote)

You're walking through your favorite electronics retailer, and out of the corner of your eye, you spy the latest, greatest, fastest, coolest, hippest, most fantastic widge-a-woo for your computer. You pick up the package. In the view of your mind's eye, a Kirilian glow surrounds the package nestled in your hands. You marvel at the uber-cool graphics on the package. After all, it has been sold out everywhere, and here you are, holding it in your very hands. Won't the crowd on the forum be envious of you?! As your eyes pierce through the bright glow surrounding this prize, they stumble across the specification list. Windows! The manufacturer only supports Windows? That's OK, you tell yourself in your mind. Even though it has only been out for less than a month, you are certain that with your Linux knowledge and your prowess around the command line that you can get it running.

If the above scenario sounds familiar, never fear. You have LOTS of company. Your sentiments are felt and shared by every Linux user that has ever lived. Those who can't figure out how to deal with the hardware situation under Linux, tuck their tail between their legs and run back to the virus-riddled Windows world. Those who choose to "stay and fight" meet with mixed results. Sometimes the persistent user gets the TKO over the hardware, and other times the hardware records a TKO over the user. No Linux user will escape without experiencing battle scars and bruises from fighting this gallant and noble fight.

Throughout its entire history, Linux has had to battle a near complete lack of support by hardware manufacturers. Linux users, much like navigating a dense minefield, have to seek hardware solutions in



The "System Requirements" portion of a Lexmark printer box.

a Windows landscape. Granted, the Linux of today has far better support for a far wider range of hardware than the Linux of even four or five years ago.

Slowly – ever so very slowly – hardware manufacturers are finally starting to support Linux. Thanks to a tough and stagnant economy, in part, a few are beginning to see an untapped market. Unfortunately, that hardware support is spotty at best. The appearance of Tux on the packaging of hardware components is finally starting to appear, to indicate Linux support. Still, Linux users are often stranded like E.T. in a strange and foreign world, and sometimes, we can't even find the equipment to phone home.

## Somebody, anybody got a map?

So how did we arrive to this point? Well, the blame, for sake of a better term, rests mostly on the shoulders of the hardware manufacturers. Just take a look at the simple economics. Linux, until quite recently, had managed to capture only less than 1 percent of the home desktop market. Today, some estimates place Linux adoption on home desktop computers to be as high as 10 percent, rivaling Apple's OS-X on the desktop. Prior to Steve Jobs return to Apple, even their adoption rate on home

desktop computers had dipped to less than 5 percent, by some estimates.

Microsoft's Windows operating system, whether you like it or not, had captured as much as 95 percent of the desktop market at one point. Today, some estimates have Microsoft's market share dipping as low as 80 percent. Even with the decline of Microsoft's market share, an 80 percent market share is nothing to sneeze at. That means that no fewer than eight out of every ten desktop computers in use in the home are running one version or another of Microsoft Windows.

Now imagine that you are a manufacturer of a computer hardware component. YOU are in business to make a profit and to keep the shareholders of your company's stock happy. To do that, you target your hardware component – and all of your support energies – to capture as much of the predominant market as you can. Meanwhile, it's not in the best interest of your "bottom line" to expend energy and man hours supporting "fringe" platforms that represent a very, very minuscule share of the market. Why have a cadre of programmers (or even one) working on writing device drivers for very few users of an operating system that is traditionally given away for free?

This type of thinking used to be prevalent and common during the days when computers were not quite so common in the home. Manufacturers were safe following that line of thinking, since not that many people were “left behind.” But things today have changed. Given the gross penetration of personal computers into daily family life and homes around the world, even an operating system with a mere 10 percent market share represents a very large number of users.

Unfortunately, the larger a company is, the slower it is adapts to changes in the market. Those who are too slow to adapt risk perishing, or having their business wither away to a fraction of its previous success. A great example here is Eastman Kodak. They didn’t respond quickly or decisively enough when the consumer photo market shifted from film to digital. Their computer peripherals were only “officially” supported on Windows, leaving users of alternative operating systems to fend for themselves and spin the roulette wheel on whether or not a particular model worked outside of Windows. Eastman Kodak filed for Chapter 13 bankruptcy on January 19, 2012.

Another factor that’s often cited by hardware manufacturers is the open source nature of Linux. They fear making their device drivers open source. They are afraid that it will reveal “trade secrets” of special features of their hardware, eliminating a marketing advantage over their competitors.

### Who has found their way?

Among these changing times and demographics, a few companies have started to openly [gasp!] support Linux. Manufacturers of hardware components are starting to realize that 10 percent of a billion-plus users represents a WHOLE lot more money in their corporate coffers than 10 percent of a million-plus users. The increased proliferation of home computers has definitely had an impact.

Below is a list of a handful of manufacturers who have instituted “official” Linux support, in one way or another, for the products in their product line, along with a “grade” for their level of support. There are other companies, but these are the ones that come to mind immediately.



i n v e n t

*Click on the company logos throughout this article to visit the site's Linux support section.*

**HP, a.k.a Hewlett Packard:** of all the “large” companies out there, HP probably has one of the longest track records of supporting Linux users by providing drivers for their printers and scanners. As a result, HP printers and scanners are often the first choice among Linux users, proving that those companies who support Linux users will reap the support and loyalty of Linux users. Grade: A.



**Lexmark:** in 2010, Lexmark reversed a long-standing policy of not supporting Linux by announcing official support for their printers and scanners, with the inclusion of dedicated Linux drivers for their current line of products. That decision alone has caused Lexmark to leap toward the front of the pack among hardware component manufacturers. At one time, their printers and scanners extruded excruciating pain from Linux users, as they struggled to get Lexmark printers and scanners working. Today, with official Linux support, Lexmark printers and scanners are among some of the easiest to set up and run. Grade: B+.



**Brother:** like HP, Brother has a significant history of supporting Linux users by providing drivers for their printers, scanners and other devices. They list 40 different Linux device drivers on their web site. They also have a reputation of having some of the least expensive toner cartridges for their line of laser printers. This makes Brother a good choice if you are looking for a printer that, in the long run, is going to provide cost effective printing. Grade: B+.



**Samsung:** one of the many things that made me choose my current printer was whether or not the manufacturer supported Linux with drivers. Yes, I own and use a Samsung ML-2525W wifi enabled network printer. In recent years, Samsung has started to offer support for Linux by providing drivers for their printers. My Samsung printer utilizes the Samsung Unified Linux Driver, which essentially is one driver to manage the current crop of printers offered by Samsung. Grade B+.



**Dell:** it's no secret that Dell, one of the largest retailers of personal computers, has flirted more than

once with Linux. In the past, they've offered select models in their computer line with Ubuntu Linux pre-installed. Don't go looking for them now, because it looks like they are no longer offering an option to purchase computers with any version of Linux pre-installed. If they are, they are not making it very easy for users to find them. Meanwhile, Dell does offer Linux drivers for many of their printers. It's also quite easy, via an Internet search, to find links to Dell offering servers loaded with RedHat Enterprise Linux (RHEL). Because of their choice to not offer a desktop solution for Linux users (or their choice to make it extremely difficult to find), Dell's overall grade for Linux support suffers. Grade: C.

# Hauppauge!<sup>®</sup>

**Hauppauge:** the manufacturer of a popular line of TV tuner cards, Hauppauge has, at best, very spotty support for Linux. Most of their tuner cards are still made to work exclusively under Windows. Hauppauge offers Linux support for only one or two models in their product line. Using any of their other tuner cards is definitely nothing short of a crapshoot, and the odds are undeniably tilted against Linux users. It really shouldn't be that difficult to make tuner cards that work on all platforms. The only reason they aren't graded lower is that they have at least some level of Linux support, as minimal as it is. Grade: D-.

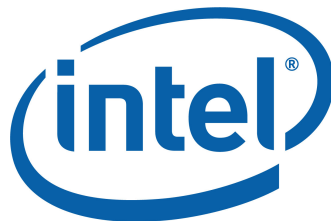


**nVIDIA:** having a long history of supporting Linux by providing drivers for their line of video cards, nVIDIA

has managed to position itself as the go-to video card for many Linux users. The nVIDIA web site has access to drivers for not only their entire line of current video cards, but also many of their legacy video cards. Grade: A-.



**AMD/ATI:** having a significant history of supporting Linux, AMD purchased ATI in 2006. As a result, AMD's support of Linux spread over to include ATI's video cards. The line of ATI graphics and video cards experienced Linux support before AMD's purchase of the company, but took off and blossomed after AMD's takeover. As a result, the nVIDIA vs. ATI "wars" among Linux users are legendary, with ATI being the preferred graphics card for many Linux users. Meanwhile, AMD processors are the first choice for many Linux users. Grade: B+.



**Intel:** Intel has provided quite a mixed message when it comes to Linux support. On one hand, they are major contributors to the Linux kernel. They created Meego, a Linux-based, open-sourced merge of Intel's Moblin project and Nokia's Maemo projects. They have been instrumental in helping set standards for wifi and sound. No one reading this now would be able to do so without their contributions to microprocessor technology.

There is no way to deny Intel's contribution to the computing industry. Yet, Intel's video and wifi drivers are often problematic and offer lackluster performance, especially when compared with the performance of the same video card on Windows, and when compared with the performance of many of their competitor's offerings. It's almost as if the Linux drivers are an afterthought, without any real work in them to allow Linux users to exploit the full capabilities of their hardware. It's as though they produce minimal video drivers just so they can say "see, it works." When it comes to graphics drivers, they have traditionally offered very low performance on graphic chipsets that are capable of much more.

With all of Intel's other contributions to Linux, it's odd that they seem to put so little effort into their video drivers – and that they don't really seem to care about correcting that perception. As a result, many Linux users shun Intel graphics whenever they can. Unfortunately, it's not always possible since many laptops come with Intel graphics chipsets. Grade: C.

### Remedies?

There have been several attempts at providing a clearinghouse, of sorts, for Linux users to discover which hardware components work well with Linux and which ones do not. Unfortunately, many of those attempts have failed miserably. It's almost as if the more hardware that works "out of the box" with Linux, the more users seem less and less interested in making additions to hardware compatibility lists.



One site that is a miserable failure is [Linux-Tested.com](http://Linux-Tested.com). Judging by the copyright range on their home page, it was started in 1999. Unfortunately, it appears to have been abandoned, since it hasn't been "updated" since 2009, the last copyright year on the page. Maintained (and I use that term

loosely) by [AppLabs](#), the idea was ambitious: have hardware manufacturers pay to have their hardware components certified as working with Linux. But looking at it from a hardware manufacturer's potential point of view, why pay for hardware certification for an operating system that is available for free? There are so few entries in their "database" that it makes one think that perhaps the site was merely a "proof of concept" idea. I suspect that AppLabs is holding the site in stewardship, just in case Linux ever takes off or reaches an unspecified market penetration.



Ubuntu maintains two lists of information about hardware that is compatible with Linux. First, they have a list of hardware that has been "certified" to work with Ubuntu. They also have a much larger list of hardware that has been labeled as "friendly" to Ubuntu, compiled by Ubuntu community members. The Ubuntu lists are a success, and definitely a place for Linux users to go when checking to see if a hardware component is Linux-compatible.



PCLinuxOS also maintains a hardware compatibility database. Formerly a standalone site, the current version of the PCLinuxOS hardware compatibility database is undergoing a re-genesis as a section of the [PCLinuxOS Knowledge Base](#). You are encouraged to help it grow by signing up for an account and entering information about the functionality of your various hardware components.

It's just as useful to enter data on hardware components that don't work under PCLinuxOS, as much as it is to enter data on the items that do work. It's also helpful to list any special steps you had to take to get a particular piece of hardware working on PCLinuxOS.



The [linux-drivers.org](#) site is also a great place for Linux users to seek information on hardware components that are known to work on Linux. Think of it as a central list of other lists. While some of those other lists exist in varying states of maintenance, the central list is actively maintained. Currently, linux-drivers.org lists 46 other hardware compatibility list resources. You will find lists specializing in finding drivers and compatibility for just printers, wifi and networking, video, sound, scanners and just about every other kind of hardware component you can imagine. There are also some decent general lists mixed in.

With a simple Internet search, you can find many more Linux hardware compatibility lists. Many of them are specific to various distros. Nonetheless, a lot more information exists today than what existed even three years ago.

### How you can help

It's no secret that I just finished building my new desktop computer. In fact, I detailed that endeavor right here in the pages of this magazine, in the February, 2012 issue. Besides consulting the various hardware compatibility lists, I also scoured the product reviews for each of the hardware

components I was thinking of buying. I bought most of my components from Newegg.com, and they have a fairly extensive user-based review and feedback system. Particularly, I looked for reports that the component worked with Linux. After I completed building my new desktop system, I went back to each component I purchased and added my own review. In my review, I specifically listed each component as working with PCLinuxOS. This way, other Linux users (and especially PCLinuxOS users) would have no doubts about whether any of those hardware components would work properly under Linux.

### Summary

As more and more device drivers get rolled into the main Linux kernel, the compatibility of hardware components should only improve. Along the same vein, the higher Linux's market share goes, the more difficult it will be for hardware manufacturers to ignore Linux users. To continue ignoring Linux users will definitely affect the company's "bottom line" profits.

Even today, Linux users can have a say. You can vote with the money in your pocket. Avoid purchasing hardware from vendors who make it a habit to ignore Linux users by not providing support or drivers for their products. When you do find an item that lacks Linux support, send a letter to the company's CEO and board of directors, letting them know that they have lost a potential customer, and hence, untold future profits. In today's profit-driven corporate world, it shouldn't take too many of those letters to make an impact.

The message has already been heard by many other companies. Slowly, hardware manufacturers are coming around. They are beginning to realize the potential market of Linux users – and extra profits – that they have been missing out on with their old marketing strategies. It's only a matter of time.



# Gnome 2.32: Graphics Extras

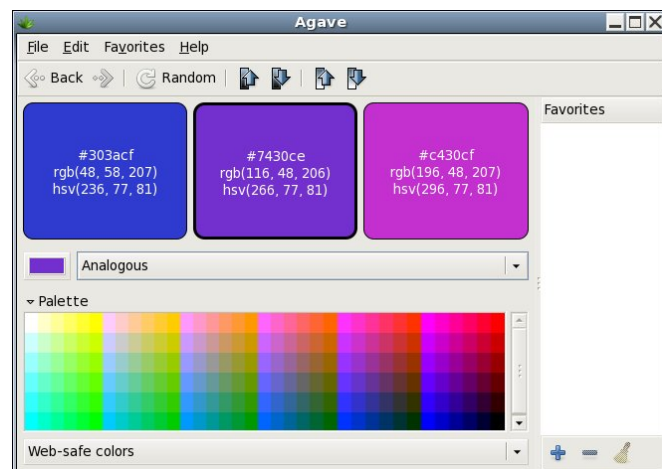
by Meemaw

While looking at some of the programs in Gnome, I came across three graphics programs that we haven't mentioned before.

**Agave** is a program which can help you plan a color scheme for a graphic creation. The Help file gives the following introduction:

*Agave is an application for the GNOME desktop that allows you to select an initial color and generate a variety of different color schemes from that color. The primary audience of this application is graphic designers (and particularly web designers) though it can be used for anything where you might need to pick several colors that go well together, such as painting rooms in your house.*

When you open agave, you will get the main window:

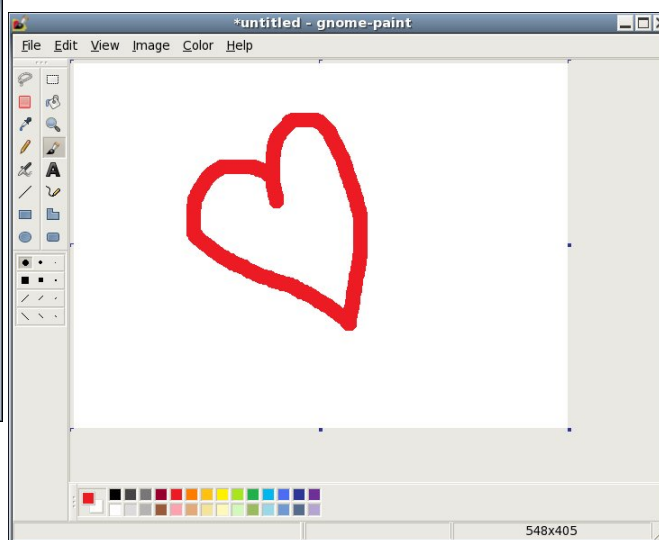


Using the color choice button on the left side of the window (above the Palette) you choose your

preferred color from the color wheel window that appears. As you can see above, I'm a fan of blue and purple. Then you must decide what kind of color scheme you want. You have six choices: Complements, Split-Complements, Triads, Tetrads, Analogous and Monochromatic. You can also use the Palette at the bottom of the window to choose your colors. Notice on each color chip are the color name (303acf on the blue above at left), along with the hue, saturation and value numbers (236, 77, 81) and the red, green and blue values (48, 58, 207). Using those, you can recreate any color correctly no matter what program you are using.

Also in the toolbar there are two pairs of arrows. the left ones increase or decrease the brightness of your colors, and the right ones increase and decrease the saturation of your colors so you can get them just right. When you have them right, you can choose to add that color scheme to your favorites.

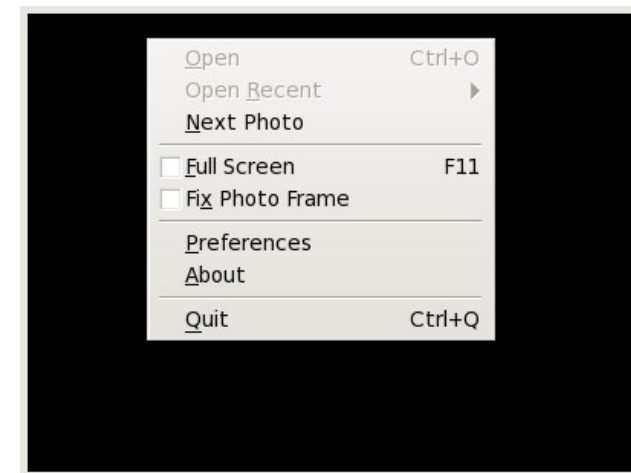
**Gnome Paint** is a simple paint program, reminiscent of MS Paint or the older Paintbrush.



Actually, it looks exactly like MS Paint to me. However, upon use, I have found this program barely works at all. I did manage to draw the heart with the paintbrush, but no matter which size brush I chose, I only got the biggest size round brush. If I choose the selection box (at the top of the right-hand column of tools), I could draw a box around anything I wanted, and drag the box all around the canvas, but I couldn't cut, copy, move or delete anything that I had drawn. Maybe it's me. However, clicking on the eraser tool (second from the top in the left-hand column), I could drag it over my whole drawing and couldn't erase anything.

The view, image and color menus have no items, either. With all the other drawing programs I can use, I'm going to uninstall Gnome Paint.

**GPhotoFrame** is a program which allows you to put a frame on your desktop and run a slideshow of your favorite photos. In your graphics menu, it is called Photo Frame. When you first open it, you will see a black screen with a plain frame around it. Right-clicking the black screen will give you a menu.



You should configure your Preferences first.

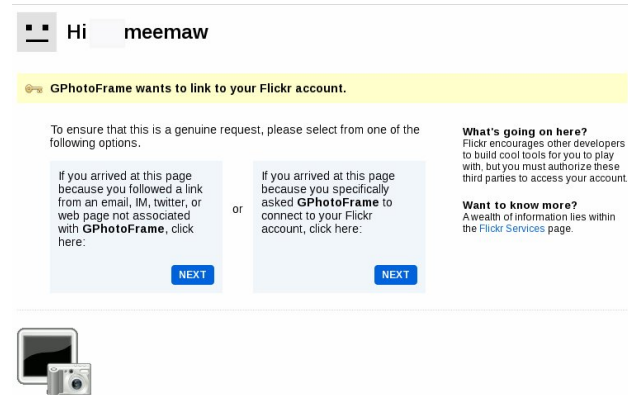


The general tab lets you configure the time between photo changes. Window mode and full screen mode can have different intervals. You can also set the maximum size for the frame, have it start when you start your computer, and have it show on whatever workspace is visible at the time.



The plugins tab shows you the sources you can access for your files. If configuring it to use Flickr,

Picasa Web or Tumblr, you should highlight your preferred site and click on the Preferences button below. You will be asked for your user name and password so the program can access your account on the site. Flickr asks permission to access the site, then takes you to a Flickr sign-on screen. When you sign on, the following window appears:



If you want GPhotoFrame to access Flickr, you should click the blue box in the center of the window that says “You arrived at this page because you specifically asked GPhotoFrame to connect to your Flickr account...”. From here you complete the authorization on Flickr, then go back to the Preferences window in GPhotoFrame and finish the process.



The third tab of Preferences is Photos. Here is where you actually tell GPhotoFrame where your photos are located. If you only want to access a certain folder in your system, or if you want to get them from Flickr, you need to add the location by clicking new. Another window will appear asking you to designate the location of your photos. I chose my wallpaper folder.



To do a fullscreen slideshow, simply right-click the frame and choose Full Screen. To go back to the frame, right-click the slideshow and your menu will appear again and you can uncheck the Full Screen checkbox.

You can move the frame anywhere on your screen, unless you right-click and choose “Fix Photo Frame”. This choice will ‘stickie’ your frame to your desktop wherever it happens to be located. I have noticed however, that even when ‘stickied’, the frame moves on the desktop. It resizes itself every time the image size is different, and instead of fixing a certain corner to a specific spot (for example, the top left corner of the frame could be fixed to the screen wherever you stickied it), it just keeps resizing and ‘crawling’ until the frame is somewhere else. Other than that, it’s a very nice program, and very easy to use.

As with any program, or any desktop for that matter, you should pick the ones that are easiest for you to use, and work best for you.

# Alternate OS: PC-BSD, Part 1

by Darrel Johnston (djohnston)

PC-BSD is a variant of FreeBSD, intended for use on the desktop. PC-BSD was originally founded by FreeBSD professional Kris Moore in early 2005. The first Beta only had a GUI installer to get the user up and running with a FreeBSD 6 system which contained a pre-configured KDE3. This was a major innovation for the time. FreeBSD is designed as a server operating system, and anyone who wished to install FreeBSD to a desktop or workstation would have to manually tweak and run through a text installer. Kris Moore's goal was to make FreeBSD easy for everyone to use on the desktop. It has since diverged even more in the direction of usability by including additional GUI administration tools and PBI packages.

Since October 2006, PC-BSD has been supported by the enterprise-class hardware solution provider iXsystems, which now employs Mr. Moore as a full time developer. In November 2007, iXsystems entered into a nationwide distribution agreement with Fry's Electronics stores to carry boxed copies of PC-BSD in their stores. In January 2008, iXsystems entered into a similar agreement with Micro Center.

In June 2010, Dru Lavigne became the PC-BSD Director of Community Development. Dru pretty much wrote the book on FreeBSD. She is a network and systems administrator, IT instructor, technical writer and former director of the FreeBSD Foundation. She has been using FreeBSD since 1996, has authored several BSD books, and spent over 10 years developing training materials and providing training on the administration of FreeBSD systems. Dru is the author of *BSD Hacks*, *The Best of FreeBSD Basics* and *The Definitive Guide to PC-BSD*. She has well over a decade of experience

administering and teaching Netware, Microsoft, Cisco, Checkpoint, SCO, Solaris, Linux and BSD systems. She is also the founder and Managing Editor of the Open Source Business Resource, a free monthly publication covering open source and the commercialization of open source assets, as well as being the founder and current Chair of the BSD Certification Group Inc., a non-profit organization with a mission to create the standard for certifying BSD system administrators. As I said, Dru pretty much wrote the book.

PC-BSD used KDE exclusively until version 9.0, which has been customized to support tighter application integration. While manual installation of other desktops was technically possible before version 9.0, none of them were supported, and major functionality was lost when not using PC-BSD's special build of KDE. GNOME is now offered as an alternate desktop, along with Xfce, LXDE and other desktop environments. PC-BSD supports x86 and x86-64 architectures.

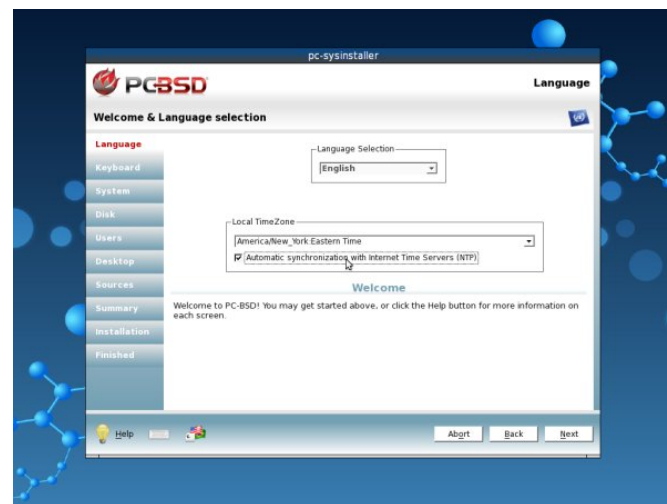
PC-BSD 9.0 Isotope Edition is the current version and the one we will be looking at. There are several versions that can be downloaded from [PC-BSD's Isotope download page](#). There is a DVD with all desktops and optional components, or a CD with the LXDE desktop and no optional components. There are several USB versions, as well as VMware and VirtualBox images. Torrents are also available, and all versions are available in either 32 or 64 bit designations. We will be using the 32 bit DVD.

Booting from the DVD, we see the screen at top right.

Option number one is the default, and the boot menu has a ten second countdown timer. The installer will be launched after boot, instead of a live



desktop session. In the first welcome screen, we are asked to choose our language, local time zone, and whether or not to synchronize our system time with an internet time server.

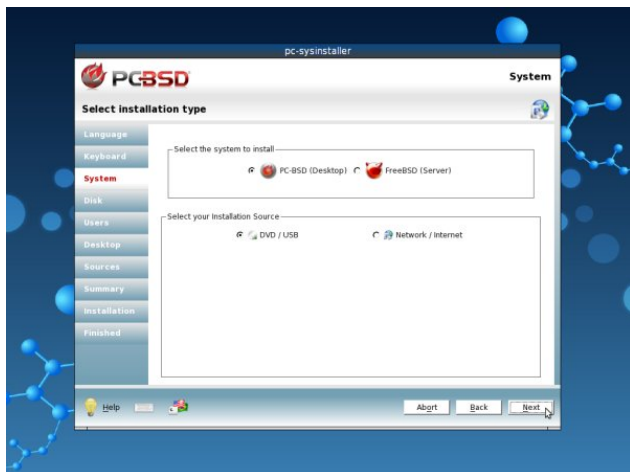


Next, we are asked to choose our keyboard type and any variant of it (next page, top left).

In the system installer step (next page, lower left), we have a choice of installing either a PC-BSD desktop or a FreeBSD server. We also have a

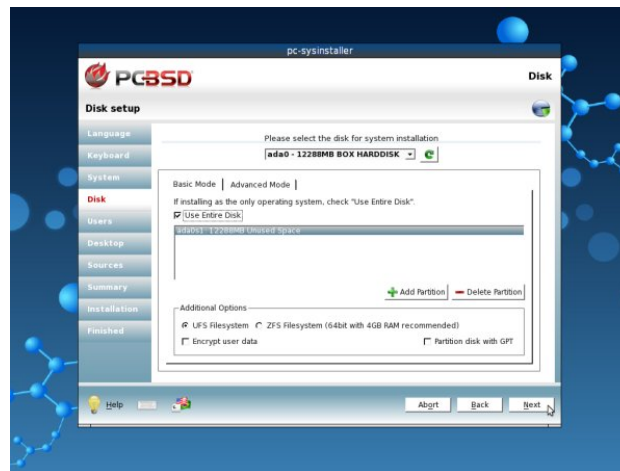


choice of installing either from a local DVD or USB or from a network or internet location. Here, we'll choose the PC-BSD desktop and install from DVD.



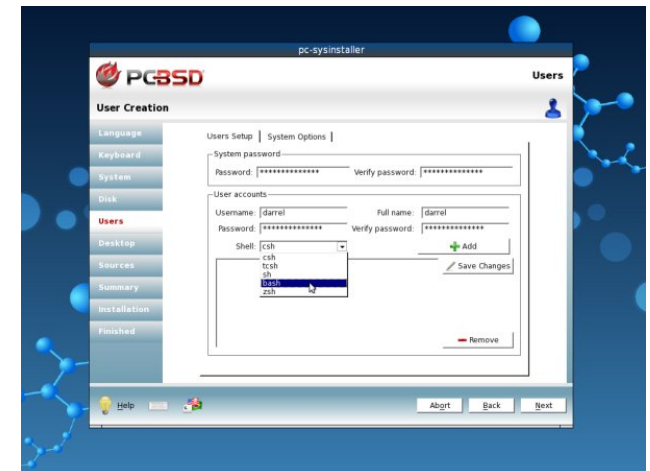
In the disk setup section, there are tabs for basic mode or advanced mode. We will stick with the default basic mode. I created a 12 GB hard drive for use with the VirtualBox installation. The installer selected that disk by default as the medium to install to. I have chosen to use the entire disk. Note that if you are going to be sharing your PC-BSD installation with other operating systems on the same drive, PC-BSD must be installed to a primary

partition. It cannot be installed to an extended partition. In BSD terms, a primary partition is called a “slice”. The slice is then further subdivided into BSD partitions. PC-BSD does not include a partition manager. You are expected to have a primary partition, or BSD slice, already prepared for installation. If you are sharing the installation with other operating systems, there are some additional steps to be performed which will not be shown here. Please consult the [PC-BSD Users Handbook](#) or [Wiki](#) for further information. The add and delete partition buttons are to be used for BSD partitions and are best left to the advanced BSD user. We have a choice of using the traditional BSD UFS filesystem or using the newer Solaris ZFS filesystem. It is the same ZFS filesystem previously covered in the OpenIndiana articles. However, PC-BSD recommends using the 64 bit OS, as well as having a minimum of 4 GB of system RAM for ZFS. We'll choose the UFS filesystem. We can also choose to encrypt our user's data. The “Partition disk with GPT” option is for use with ZFS.

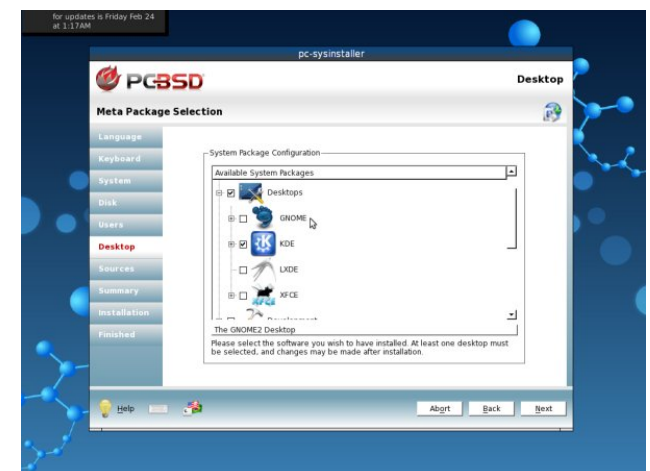


In the users section, there are two tabs. One is for users setup and the other is for system options. Advanced users may elect to change some of the system options. Here we are asked to create a system password for the superuser account, as well as a user account and a password for that user. We

also have a choice of default shells. We can choose from csh, tcsh, sh, bash and zsh. I chose the more familiar bash shell for my user. Click the save changes button before proceeding to the next step.



The desktop section has a lot of choices. The first is our desktop environment. KDE is selected by default, but I chose to use XFCE instead. The other choices are Gnome and LXDE.



In the hardware drivers section of the desktop screen, we can choose to install HP line printer drivers, handheld device drivers, such as

smartphones, tablets and MP3 players, and nVidia video drivers.

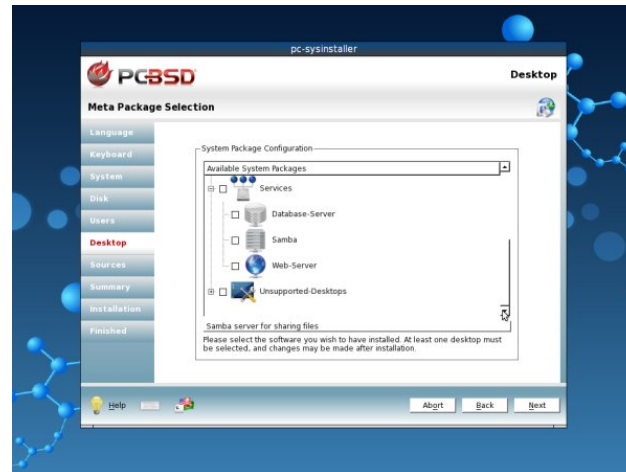


In the miscellaneous section of the desktop screen, we can choose from Compiz, MythTV, VMwareGuest, VirtualBoxGuest and XBMC device drivers. I chose to install VirtualBoxGuest drivers.



In the services section of the desktop screen, we can choose to install support for a database server, Samba (Windows ServerMessageBlock protocol) and a web server. So, one could install a FreeBSD

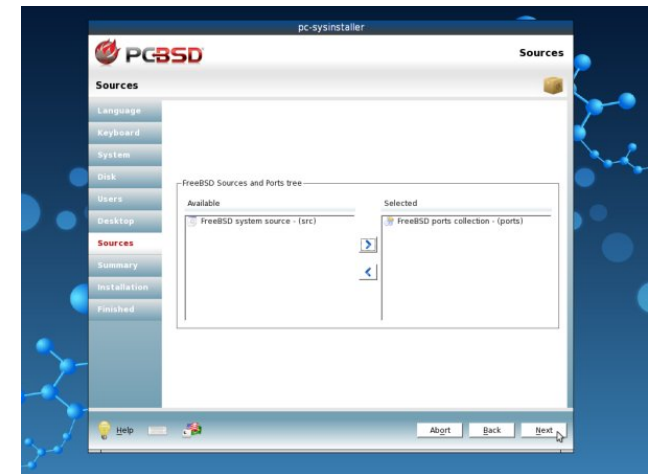
server setup with ZFS filesystem and web services from the PC-BSD installation DVD.



The last section of the desktop screen is for unsupported desktop environments. Only experienced FreeBSD users need apply. The desktops offered are Awesome, FVWM, IceWM, Openbox, ScrotWM and WindowMaker. Hootiegibbon would be proud. Note that although Fluxbox is not presented as an option, it is installed by default in PC-BSD. It is always available as a second desktop environment.

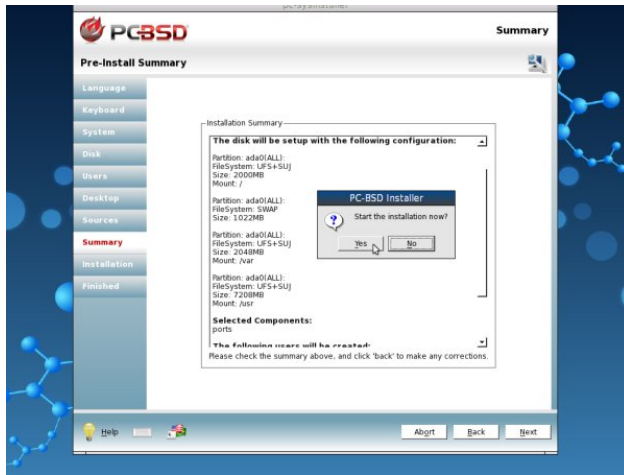


There are two possible choices in the sources portion of the installer. They are FreeBSD system source and FreeBSD ports collection. If you choose either one of them, it is best to choose only one. Both can be used, but must be carefully managed by an experienced user. FreeBSD system source is the choice for those who wish to compile packages so that applications will be optimized for their specific hardware and needs. The ports collection option is for those who wish to install pre-compiled binary packages. On a PC-BSD desktop, neither option is necessary. One can use the applications that exist on the system after installation, as well as adding self-contained PBI packages which are unique to PC-BSD. We'll look at the ports collection and PBI packages in detail in the next article. I recommend you choose to install the ports collection in this installation step.

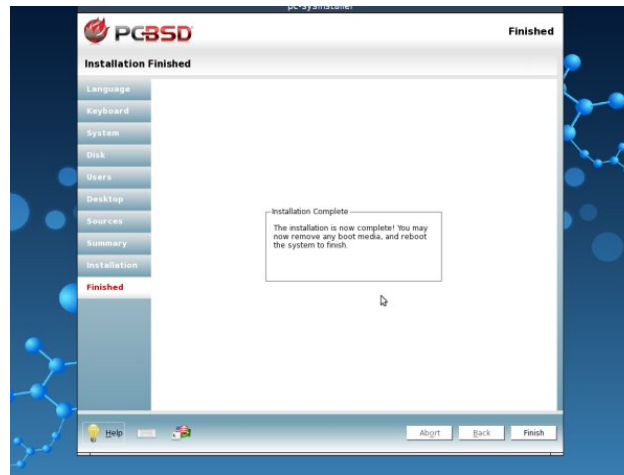


In the pre-installation summary screen, we are shown all of our previously selected installation options. We can click the back button to step backwards through the installation process and make any changes. Once we click the next button, one last dialog window pops up asking whether to continue the installation (next page, top left).

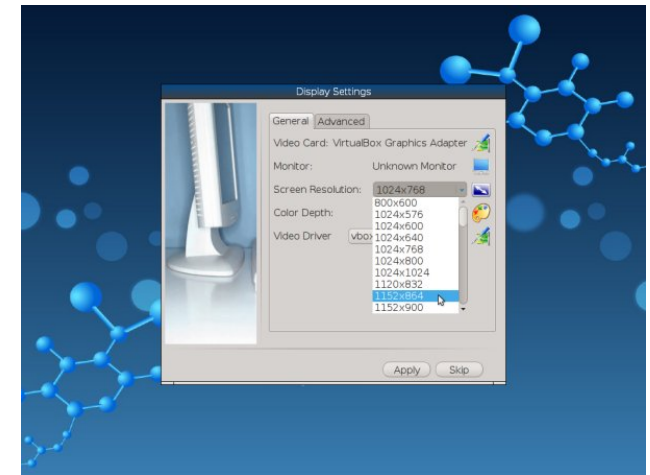
The installation screen gives us a progress bar and shows what packages are being installed. As the



message in the window says, depending on your system's speed and the options chosen, the installation may take a while.



actions which can be selected. I chose boot option number six, Run the Display Wizard.

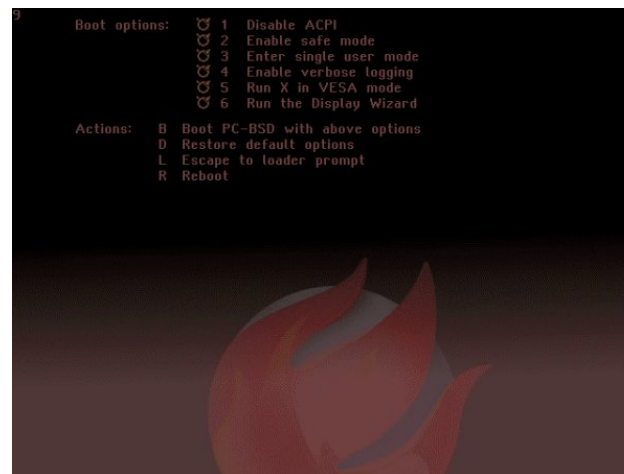


After clicking the apply button, I was presented with the user login screen.

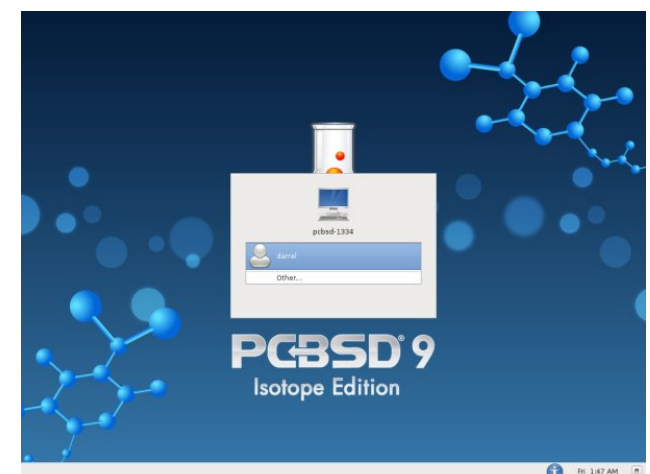


Once all files have been copied from the DVD to the hard disk, the last screen is displayed showing that the installation has completed. At this point, remove the installation DVD and reboot the computer or virtual machine to complete the installation (center, top).

First boot from the hard drive shows a different boot screen. There are six boot options and four boot

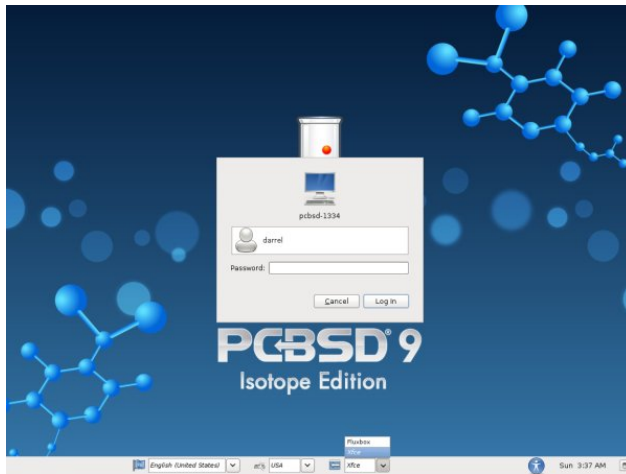


In the display settings setup window, there are two tabs, general and advanced. I was only interested in changing the screen resolution available under the general tab. I changed it from the default 1024x768 24 bit color depth to 1152x864 and the same color depth. The other option, other than screen resolution and color depth, is the video driver to use. Because I had installed the VirtualBoxGuest drivers, the vbox video driver was chosen by default (top right).



I clicked on my user name, then entered the password in the next dialog window. The desktop environment to be used for the session can be chosen from this screen. There are also language, keyboard and shutdown options (next page, top left).

After a few seconds, I was presented with PC-BSD's default XFCE desktop (next page, lower left).



In the next article, we will examine the installed package managers and applications, as well as customizing the desktop and adding more applications.

Shown at right is the always present optional Fluxbox desktop.

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The advertisement features a man in a grey jacket sitting on the grass, looking at a laptop. The background is a green field.

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The logo features the text 'THE LINUX FOUNDATION' in white on a blue background. To the left of the text is a stylized white square logo. In the background, there are silhouettes of several people.

**DISTROWATCH.COM**  
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The logo features the text 'DISTROWATCH.COM' in a large, stylized font. Below it is the tagline 'Put the fun back into computing. Use Linux, BSD.' The background is a light orange color.



## Reach Us On The Web

**PCLinuxOS Magazine Mailing List:**  
<http://groups.google.com/group/pclinuxos-magazine>

**PCLinuxOS Magazine Web Site:**  
<http://pclosmag.com/>

**PCLinuxOS Magazine Forums:**

**PCLinuxOS Magazine Forum:**  
<http://pclosmag.com/forum/index.php>

**Main PCLinuxOS Forum:**  
<http://www.pclinuxos.com/forum/index.php?board=34.0>



# Screenshot Showcase

Posted by LKJ, March 3, 2012, running Gnome.



# Searching For Answers On The PCLinuxOS Forum

by Chuck Rice (Ramchu)

I recently installed a financial program, called **Kraft**, which is geared toward running a small business.

When I would start the **Kraft** program, it would open with a box stating that it was starting the Akonadi server and then would do nothing further. I couldn't even close the program without logging off and back on.



I looked in Synaptic Package Manager and could see that Akonadi server was indeed installed, and this left me scratching my head wondering what I would have to do to get Kraft working.

So off to the PCLinuxOS forum I went to post my question, and then I remembered the forum search function, as I am sure that my question has already been asked and possibly answered before.

First, where do I search? Do I search from the software section, or the networking section since it is a server that is unable to start? I finally decided to search from the home section of the forum, as when you search from home the search function searches the entire forum for answers.

Next, what do I search for? Do I search for Akonadi server or Kraft or Program won't start?

I decided to search for Kraft as a start, expecting to get eight or 10 pages of search results to sort through. To my surprise there was only one page with nine results, and the second result was the answer to my problem. I didn't have kaddressbook and its dependencies installed, so after pulling these in from Synaptic and doing a restart of my computer, Kraft now opens and operates as expected.

The forum search is your friend and should be the first line of defense for solving PCLinuxOS problems. One may have to search several times to get the search parameters correct in order to get the results that are needed for your particular problem, but it's definitely worth the effort.

Just remember that your problem most likely isn't unique, and it has more than likely been asked already.

A collection of PCLinuxOS merchandise displayed in a grid. The items include: a white polo shirt with a small logo; a black t-shirt with the PCLinuxOS logo; a white mug with the PCLinuxOS logo and the text 'radically simple'; a yellow baseball cap with the PCLinuxOS logo; a circular logo with the PCLinuxOS logo and 'radically simple' text; white shorts with a small PCLinuxOS logo; a square logo with the PCLinuxOS logo and 'radically simple' text; and another white t-shirt with the PCLinuxOS logo.

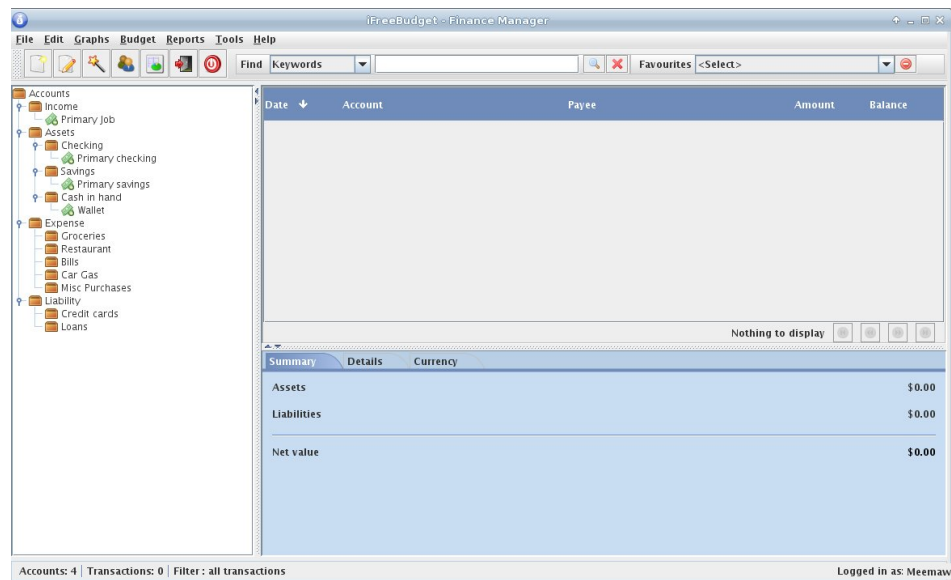
Support PCLinuxOS! Get Your Official  
**PCLinuxOS**  
Merchandise Today!

# Linux Financial Apps: iFreeBudget

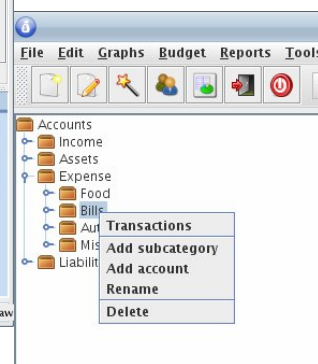
by Meemaw

Continuing our coverage of Linux financial apps that we started last month, we will explore **iFreeBudget** this month. The homepage is <http://sourceforge.net/projects/ifreebudget/>, and since this program is written in Java, it runs on any OS with Java installed. I couldn't find a users manual, but an FAQ page resides at <http://www.ifreebudget.com/>. iFreeBudget is also in the PCLinuxOS repos.

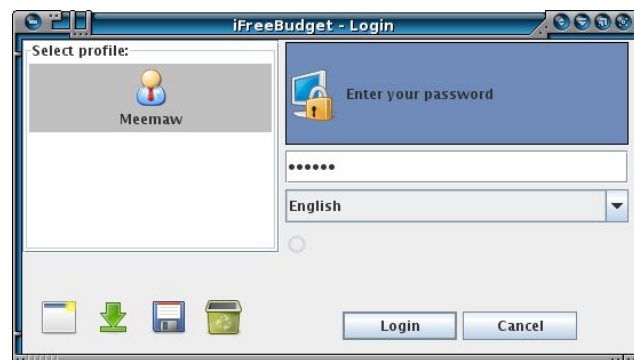
When you open iFreeBudget for the first time, you are required to establish a user name and password. After that, you will have to login with your password. This keeps your financial data more secure, just in case someone had access to your computer while you happened to be signed on.



You may edit the “Assets” section by right clicking on the checking account entry and changing it as you desire. I changed mine to “Meemaws Checking.” You can then customize the Expense part of the the list by putting in your own categories and adding accounts to those categories. Right click a category, such as Bills, and choose “Add account.”



You'll be presented with a window where you can add an account to the category of your choice.

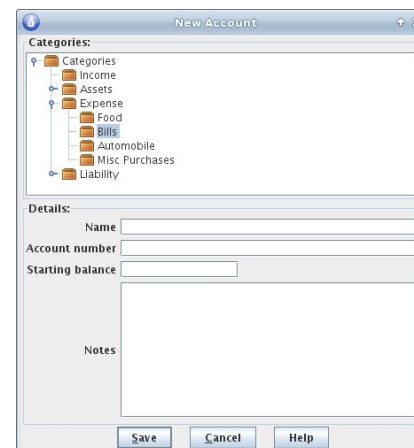


The window you see now is already set up somewhat, with some accounts already entered (checking, savings, income). This program uses **double-entry bookkeeping**, which simply means that every entry is an account. Money goes out of an

asset account into an expense account. Your checkbook is an account and each category that gets money is an account. When you enter a transaction in iFreeBudget, you assign a ‘from’ account (generally your checkbook) and a ‘to’ account (the person or company the check is paying).

Income is under the “Income” category, with “Primary Job” being the default account. The “Assets” section contains “Checking,” “Savings” and “Cash in Hand” categories, with default accounts defined as “Primary Checking,” “Primary Savings” and “Wallet.” The “Expense” category lists some common expenses, such as Groceries, Restaurant, Bills, Car Gas and Misc Purchases, but with no predefined accounts. The “Liability” section is where you'll find the “Credit Cards” and “Loans” categories. You can create the appropriate accounts for these, as well.

Continue adding categories and accounts until you have what you need. I eventually renamed the category “Car Gas” to “Automobile,” then added the accounts “Fuel,” “Auto Payments” and “Insurance.”

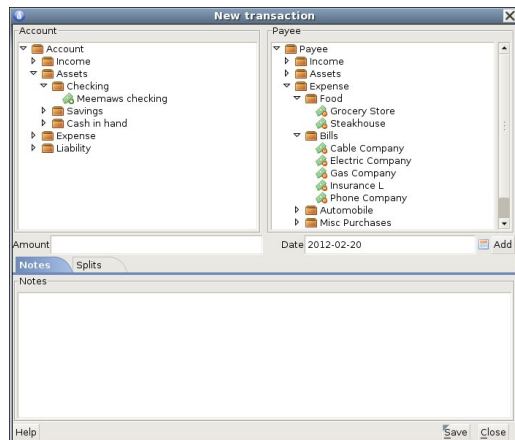


The toolbar contains the following buttons: New Account, New Transaction, New Transaction Wizard, Address Book, Portfolio Manager, Logout and Exit. You can always click on the New Account button in the toolbar, but you

will get an extra window asking in what category you are placing it. Either way, whether you're using the toolbar button or right-clicking the category, you will be able to easily add an account.

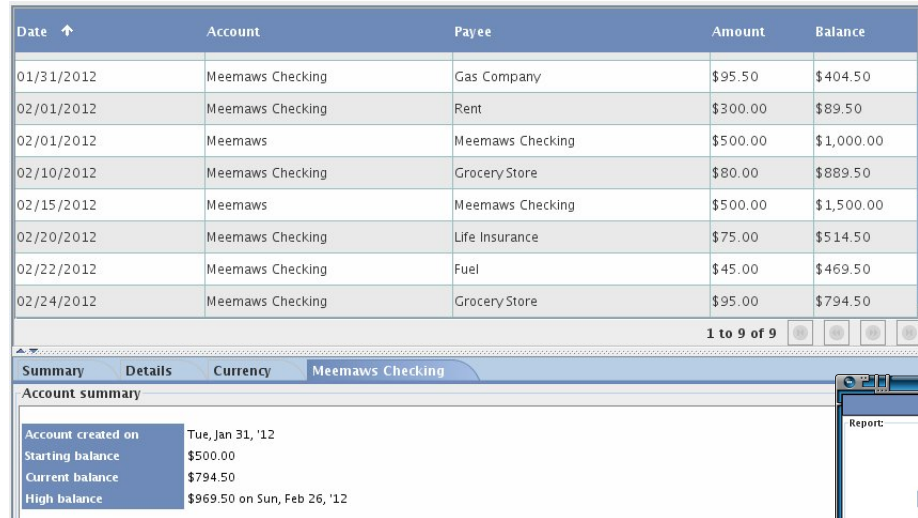
The New Transaction button is for adding transactions to your account. The New Transaction Wizard takes you through adding a transaction a step at a time, but takes it a little further. The Address Book button is just what you think it is: you can import your address book into the program. The Portfolio Manager lets you enter your stock portfolio information and track its value. Logout will save and close your account window but will keep the sign-on screen available in case you want to add more later. This is more secure than leaving the account file open if there are others in the house. There is also an Exit button, which closes the program completely.

Let's add some transactions. Click on the New Transactions button. You will get the following window:



On the left and right you have the same tree. On the left you need to choose the account that is paying the bill (Meemaws checking), and on the right the

payee account that is getting the money (Grocery Store). In the center you enter the amount and date of payment (\$95.00 on 2/18/12). Clicking Save, you'll see the window close and your transaction in the list.

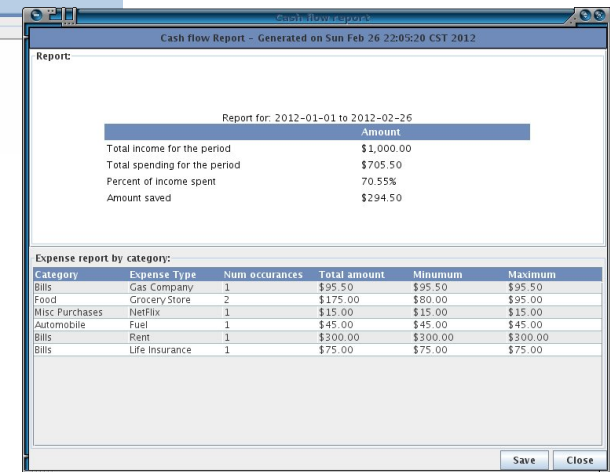


From the screenshot above, you can probably see the same thing I can: the balance column seems to be in error. I have no explanation for this, other than the program may be balancing each account, rather than showing the checking account balance as we are used to seeing it. I started the checking account with \$500 and have added \$500 twice since, and now that line does say \$1,500. However, the other lines don't do the same thing, so it confused me. The most reliable place to see the checking account balance is the lower half of the window, where in the third line it says "Current Balance". Actually, the best way to see how much you have paid into any particular payee account is to choose that one in your tree at

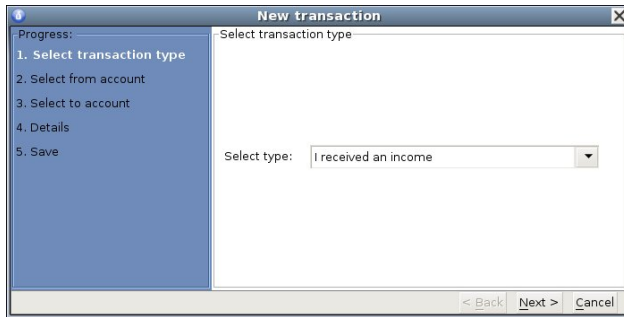


the left. I chose Grocery Store in the image below and it has the balance I have paid (two checks, one for \$80 and one for \$95).

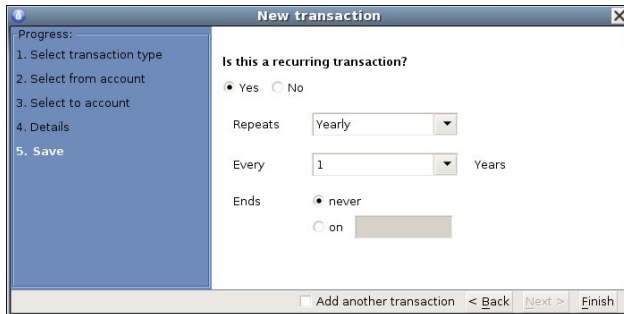
Of course, after you get all your expense accounts listed, and need amounts for tax purposes, it would be silly to look them up one-at-a-time. iFreeBudget has a Reports feature. From the Reports Menu, you can pull up a Cash Flow report or an Earnings report. Each can be customized to include the last week, the last month or the range of your choice. The Cash Flow report for the range 1/1/12 to 2/26/12 is shown below. You could make your range 1/1/12 to 12/31/12 at the end of the year to do your taxes.



iFreeBudget also does scheduled (or recurring) transactions. You can set up a transaction for once per month, or whatever other interval you need. If you pay your car payment every month, you can set up your checkbook to do that. You will need to use the Transactions Wizard (the magic wand in the toolbar). When you click it, you will get the following window (next page):



The choices are “I received an income,” “I paid for an expense using my checking/savings account,” “I paid for an expense using my credit card” and “I paid for an expense using my checking/savings account” and click next. Just as with any transaction, you will be asked to designate the “From” account (checking), the “To” account (car payment) and the Details (amount and date of payment). When you get to the Save screen, you will be asked if this is a recurring transaction. If you click Yes, you can then designate how often the payment occurs and when it should end, if known, and then click Finish.



This program has a couple of features I hadn't seen in very many other programs. One is an address book feature. Any address book that you can export as a csv file can be imported into iFreeBudget. From the Tools menu, choose Address Book. You will get a blank address book with several buttons at the top: Add (to add a single contact), Edit (if the name, phone or email changes), Delete (delete a contact), Import (to import your list), and Close. Clicking the

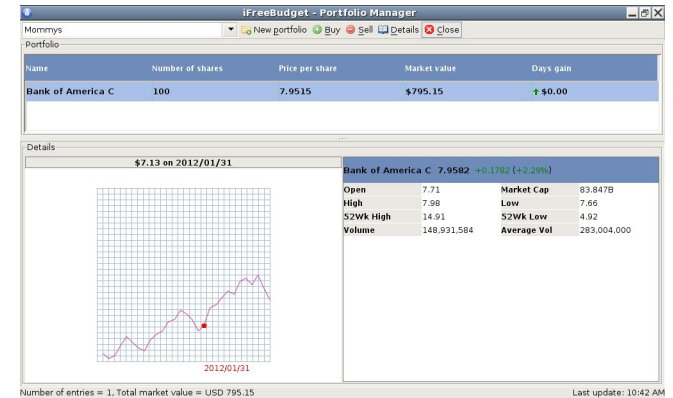
“Add” button allows you to add all information to the contact screen, but all that will show up in the main address book screen will be name, phone number and email address. Double clicking a name will bring up the contact screen with all information.

Another feature in iFreeBudget is a Stock Quote and Portfolio. From the Tools menu, first choose Get quotes. If you know the symbol of the stock you are interested in, put it into the symbol box and click Get quote. You should get a window like the one below.

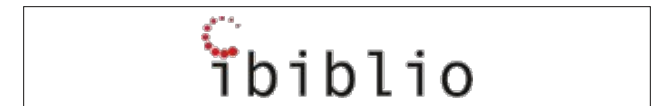


You will see a great range of information, plus a graph of prices for the last three weeks. It is just as easy to add items to your portfolio. From the Tools menu, choose Portfolio (top right). Click Buy to add in the items that are included in your own portfolio. This screen will show a list of items you've added, today's price, value of your shares and whether they have increased or decreased today. If you click on one stock and click on Details, you will get the information from the quote screen as well. If you sell part of all of a stock, click on Sell and complete the window that pops up.

Just like last month's program, iFreeBudget also has a couple of oddities. One of them, of course, is the balance column in the register. Another one is that I like my transactions to be sorted from oldest at top



to newest at bottom. I can change it, but it doesn't stay. Finally, there are so many things that could be configured, and the only thing in Edit > Preferences is how the date is displayed. Other than that, it's not a bad program.





A magazine just isn't a magazine without articles to fill the pages.

If you have article ideas, or if you would like to contribute articles to the PCLinuxOS Magazine, send an email to:

[pclinuxos.mag@gmail.com](mailto:pclinuxos.mag@gmail.com)

We are interested in general articles about Linux, and (of course), articles specific to PCLinuxOS.

# Some PCLinuxOS Gnome Post Installation Tips

by **sarcastic\_bastard (David Lally)**

The following is a list of common tasks I find necessary to do after install and rebooting, as well as a few extras that have been worked out over time to fix a few annoyances. I thought by putting all of this in the one spot, it might be of help to someone, and can look thru and see what steps you may have left out that you might think are useful to you.

Ok, downloaded and installed Gnome on my main desktop, dual-booting with Win7 (which I need for certain work requirements). I give 12 GB to /, 4 GB to swap, and the rest (180 GB or so) to /home.

I have another box with Mint 9 that i use as a central repository for all my files, acting as a file-server (via NFS and Samba), torrent box (Transmission), and as a BOINC client. Since it's free most of the time, it may as well be doing something useful.

After installing and rebooting, setup with root and user credentials, then log in. For myself, I setup as root, then logged into it, since I needed to change a couple things for the user ID, due to the Mint 9 user ID. Went into Control Center and created user and group "david," and manually set the user ID to 1000 instead of 500 (which is the default). A user ID of 1000 is what Mint/Ubuntu uses as default, and I was having share issues (with earlier installs) until I clued on to why. Set that up, log out of root, and then log in as user.

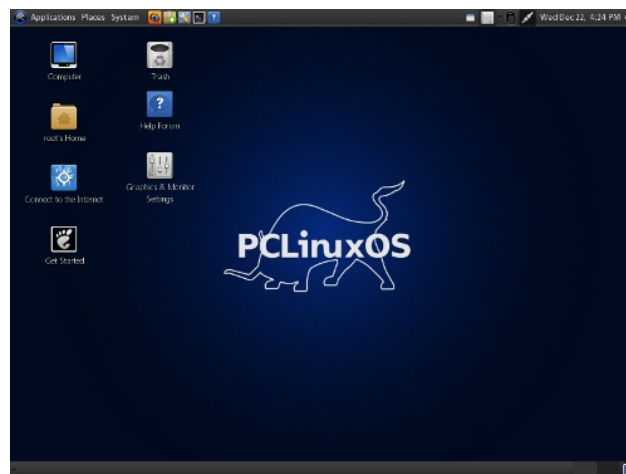
Open terminal, "su" to switch to root, and run

```
"echo -e "MDV_MENU_STYLE=upstream" >> /etc/sysconfig/menustyle"
```

to change the PCLinuxOS Gnome menu back to the standard Gnome menu, as I much prefer its categories and layout. I personally find the standard Gnome menu much easier to work with, but you may be happier with it as it is.

Move the Show Desktop applet from bottom-right to bottom-left. Right-click on it and untick "Lock to panel", then do same to the little "Window List" icon at bottom right. Then right click on the Show Desktop icon again, and select "Move", dragging it all the way to far left, leaving Window List icon (the little upright rectangle with a dot at the center) just to the right of it. Then right click on both and lock them in place again.

Add the Trash applet next to the Workplace switcher at the bottom-right. Right click on the bottom panel, and select Add to Panel. Select the Trash applet from the list available, dragging it down to the bottom right. I stick it just to left of Workplace Switcher icon, but you may prefer the right, or somewhere else altogether. I definitely find it useful having it just a click away.



Open Control Center > System > Manage Date and Time. Set to my/your country and locale. Enable Time Network protocol, and select server nearest my/your location

In Control Center, go to Network and Internet > Set up new network interface. Choose wireless/ethernet/however you connect, then your network interface (eg. eth0) , then for "Please select your connection protocol" I recommend leaving as the default "Automatic IP", then for IP settings, leave at "Get DNS servers from DHCP" checked (this ensures your IP is set by your router's DHCP server), while making sure to set your hostname below (whatever name you want your PC called on the network). Complete the setup with defaults, and finish. If you are already connected, it will momentarily close the connection and recreate it, with the added details now. Wireless connection will ask for your wireless password during setup. Be sure to enter it correctly, as it is easy to fail to connect if you get it wrong. Your connection sets up, and your PC now has a properly set hostname. Even if you run thru Ethernet, and are already connected, I still suggest doing this. It will at least provide the PC with a proper hostname.

Open Synaptic, and select the repo to one nearest me/you. Then, click on Reload so it has the most up to date list of packages on the repo. I choose Internode, since it is close, well maintained and regularly updated. Check to see if your ISP mirrors the repo. If so, it should be faster for you. If you are an Internode customer, you'll be able to download from it quota-free. I used this a lot when I was using them at one house I was at.

Right-click on the clock at the top right, select Preferences, and make sure details are correct (Location, Weather details, etc). Set up properly, you

should get your local weather shown beside the clock, which is quite handy.

Ensure all drives are mounted correctly in the PCLinuxOS Control Center. They should be, but often your Windows drives/NTFS are not, and that is up to you whether to leave them unmounted or not.

Set up Video card in PCC. I like to do this to make sure it is using the Proprietary driver for my Nvidia card, as I want/need hardware acceleration.

Use the `chown` command (as "root") in a Terminal to reclaim ownership of the files on my storage drives

(eg. "`chown -R david:david /media/MY_STUFF /media/STORAGE-1TB /media/Hitachi-1TB`").

Open Nautilus, go to Edit > Preferences > Display. Set the top option to size, the second option to type, then Ok and close. Feel free to experiment and see which settings suit you best. I find this works for me. Also, make sure to untick "Show hidden files and folders." Otherwise, you'll have the view of all your "hidden" folders clogging up your view.

In Nautilus, I also drag all my commonly accessed folders to the left pane as shortcuts. This saves me a lot of time chasing them down, and makes them easily accessible.

I installed Guake, a drop-down terminal, as I like having a terminal at hand, without getting in the way, or needing to be launched separately all the time. Once installed, run it, then it will be sitting in your tray ready to be used. By default, F12 will activate it, dropping it into your view, and F12 again will make it retract. To ensure it starts automatically when you login, go to System > Preferences > Startup Applications, and look for Guake. It will be there, but not ticked/activated by default. Enable, and enjoy. You'll find it very handy if you use command-line/Terminal at all.

Install Comix as a reader for my digital comics (.cbr and .cbz files). Make sure it is set as the default viewer. Otherwise, it attempts to open them with the Archive Manager, which is no good for viewing them.

Install Dropbox and set it up. I find it handy to keep a copy of certain files and documents at all times at hand, and when moving around from the desktop to the netbook, to the notebook, and other desktops in the house, it's much simpler to keep them all synchronised and at hand. I used to copy them around, but those changes weren't always copied if I was forgetful. Dropbox fixes this.

I install and use Kompozer for simple web-page creation. I came up with the idea a while ago, as I tend to forget to save my bookmarks and assorted fave sites, so I created a simple Home-page and added all the sites I commonly visit (here included), as well as add anywhere new I find of interest and want to make sure I can find again (my memory is pitiful). Simple page, add the links, then names/descriptions. I save this in my Dropbox folder, so any changes/additions I make are reflected across all copies, and it's always up to date with my wanderings.

Next, I install privoxy (<http://www.privoxy.org/>) from the repos. I use it to filter out a lot of adverts and assorted cr\*p on the web. Since I tend to use and install multiple web-browsers (Firefox, Chromium, Opera, etc) it's simple to install, then make sure that browser is set to point at it as a proxy. In Firefox, go to Edit > Preference > Advanced > Network > Settings, set to Manual Proxy Configuration, then set HTTP Proxy and SSL proxy to 127.0.0.1 and the ports to 8118 for both. Now, all your web-traffic is filtered thru Privoxy, and a lot of junk is never loaded.

For a lot of good Firefox extensions, I go here <http://www.gnu.org/software/gnuzilla/addons.html>. These are all Free, and released under Free Software licences. I've discovered a few nifty ones

here that I had not even heard of before. There are far too many to wade through on the main extensions site. My main ones are **Scriptish** (Greasemonkey fork, seems to work better), **Greasefire** (when you are on a page/site, it can show you what scripts are available for the site, etc), **Secure Login** (operates like Opera's "Wand" and enables you to login to sites you visit with one click, after you've logged in then first time and it remembers your details) and **DownThemAll** (mass downloader). Aside from those, my faves are the **Evernote extensions** (only started using this a month or so ago, and it is sooooo useful), **Flagfox**, **Video Downloadhelper** (for ripping vids and picture galleries from sites, including Youtube, etc), **Ghostery** (<https://www.ghostery.com/>, very handy, since it blocks a lot of sites snooping on your browsing, also shows the surprising number of sites that follow you around the web), **HTTPS-Everywhere** (automatically makes sites use HTTPS for added security if available), and **Social Fixer** (previously BetterFacebook). There's plenty to choose from.

I also install the Netusage extension for Firefox also (<http://netusage.iau5.com/>). It's great for me, but could also be useful for others to keep track of their net usage, and how much quota is used/remains. It's a must. You install it, restart the browser, go to View > Toolbars > Customize, and drag it onto your browser bookmark where you like, then right-click on it, and choose Preferences, adding your details so that it can grab your stats from your ISP. I have mine set to update hourly. It's very useful, allowing me to keep good track of my usage.

Oh, and before I forget, install libdvdcss2 if you plan to be able to play/read/rip/backup encrypted (commercial) DVDs. I also install DVDDecryptor under WINE (after installing WINE, of course) to rip my DVDs to hard drive, where I usually then point Handbrake (which is also a strong recommendation to install) at them to rip the disc contents to a .MKV file (or, if you prefer, MP4) for local playback. This spares my discs from excessive

movement, scratching, fingerprints, etc, since I do most of my viewing at my PC anyway, and only dig them out if actually planning to use the (region unlocked) DVD player with the TV. Also, if using DVDDecryptor, when you first run it, it won't see the DVD drive on your machine. Go to Tools > Settings > I/O, and change it to ASPI, and OK. Also, by default it rips them to a folder inside the WINE folder, which means you have to burrow down after them. I change this by going to Tools > Settings > General, go to Default Destination, and switch from Choose Automatically to Semi Automatic, allowing you to designate a folder to save the unencrypted results to.

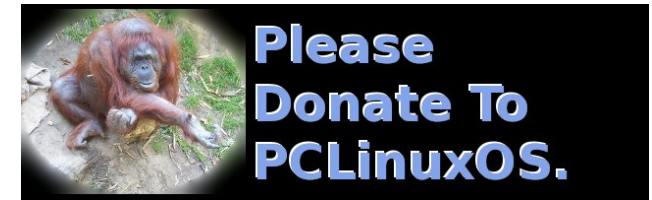
For excellent CD rips, I prefer Rubyripper-gui, and set it to rip them to both OGG and FLAC. The OGG's are for loading onto my Samsung Galaxy phone (saves room), and the FLAC's are for playing from PC, etc (better quality, lossless sound).

GPrename is an excellent bulk-renaming utility. I used to use Pyrenamer, and it's still good, but I find GPrename to have just that bit more options and features, so it wins.

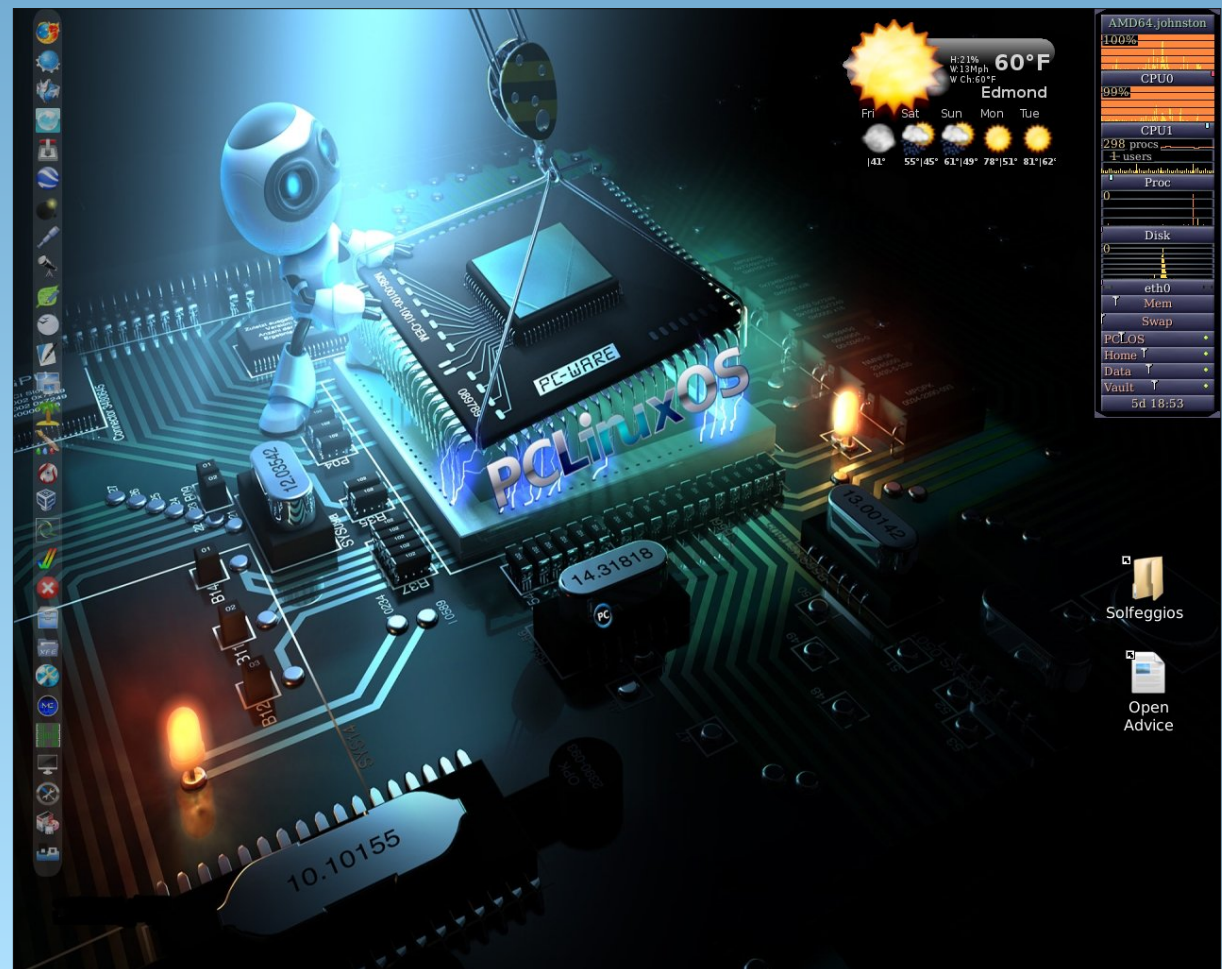
I sometimes download from certain sharing sites (Rapidshare, etc), and for that, jDownloader is excellent, and proven to be best of all the tools I've tested for this purpose, as well as being cross-platform (also available on Windows). It also can be used as a general download manager. It's not let me down yet.

VideoCut is an open source desktop application specialized for creating compositions of screenshots from video files. I use this to create a screenshots sample with each DVDrip. It's quick and simple.

If you haven't already done so, log out and back in to allow most changes to take effect. Now you should have a desktop that caters to virtually all your needs. If not, search and add more. Choice is a wonderful thing.



## Screenshot Showcase



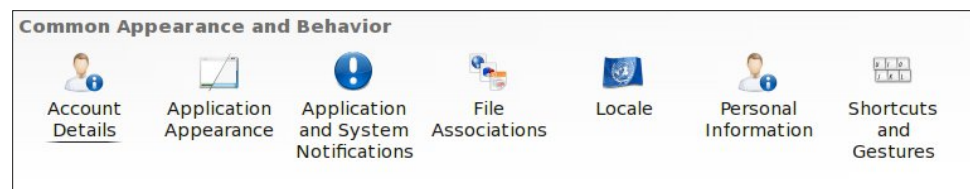
Posted by djohnston, March 9, 2012, running LXDE.

# KMix Keyboard Volume Controls

by Jim Wilkinson (jimwilk)

With KDE, I know there is a handy KMix display in the system tray. There are times when the volume is too high, too low, or muted, and it just seems to take too long to find the little symbol and change the setting. A few handy keyboard shortcuts might be faster.

First of all, go to Configure Your Desktop and select Shortcuts and Gestures from the top row:



Then choose Global Keyboard Shortcuts:



and, under KDE component, select KMix



Scroll down this list and change keyboard default from None to:

Decrease Volume Alt + , (ie < sign)  
Increase Volume Alt + . (ie > sign)  
Mute Alt + M

You can choose the specific key you want to use with Alt. When you are finished, click OK and you have yourself a handy set of keyboard volume controls. I use the Alt key to the right of the space bar because it is right near the required keys.



## Screenshot Showcase



Posted by aquila, March 9, 2012, running KDE 4.



# 2011 LinuxQuestions.org Members Choice Awards

by Paul Arnote (parnote)

The formal 12th annual poll of Linux users on the [LinuxQuestions.org](http://LinuxQuestions.org) forum started on December 28, 2011. Electrons swirled and whirled as users voted for their favorite applications in 31 different categories. Voting continued until February 5, 2012. As you might imagine, there were a few “surprises” in the voting results.

Only registered members could vote at the forum, and were limited to one vote per member per category. Members were not required to vote in every category. Rather, they could skip categories that they had no knowledge of, or that contained software that they didn't use.

In case you're not familiar with it, LinuxQuestions.org maintains a relatively distro-agnostic forum. There, a wide range of topics of interest to Linux users are discussed. Each of the “major” distros has their own sub-boards in the forum. There are also boards for new users, hardware, notebooks, desktops, networking, and several other boards that represent areas of interest for Linux users.

Here are the individual categories, along with the top five finishers in each category. The icon of the top vote recipient is shown above each category.



## Programming Language Of The Year

Python took the top honors, obtaining nearly 30 percent of the overall votes in this category. Second

place was swooped up by the C programming language, followed by C++, PHP and Perl.



## Text Editor Of The Year

Vim ran away with the top honors this year, obtaining over 31 percent of the votes in this category. Gedit took second place with just over 15 percent of the votes, with Emacs, Kate and Nano filling out the rest of the top five spots, respectively.



## Browser Of The Year

Firefox was the runaway favorite for browser of the year, garnering almost 57 percent of the votes. Chrome was a distant second place finisher, with nearly 18 percent of the votes. In order, Opera, Chromium and SeaMonkey rounded out the rest of the top five spots.



## Desktop Environment Of The Year

KDE took the top mark as users' favorite desktop environment, with a solid 33 percent of users selecting it as their favorite. Perhaps one of the

biggest upsets this year is how Xfce has overtaken Gnome for the second place spot. Xfce was selected as the favorite desktop environment for nearly 28 percent of users. With the move from the more traditional desktop of Gnome 2.3x to Gnome Shell in the past year, Gnome fell to a distant third place finish, with only 19 percent of the votes. LXDE took fourth place, while the Unity desktop took a very distant fifth place.



## Database Of The Year

MySQL was the runaway favorite database among Linux users, taking in 50 percent of the votes. PostgreSQL was the second place finisher, with 25 percent of the votes. SQLite, Firebird and MariaDB rounded out the top five finishers.



## Messaging Application Of The Year

Pidgin was, by a large margin, Linux users' favorite messaging application. It raked in over 53 percent of the final vote. Kopete took a distant second place, with just over eight percent of the vote. Irsi took the third spot, closely followed by Xchat and Empathy. The latter two ended up in a tie for fourth place.



## Network Monitoring Application Of The Year

Nagios ran away with the top spot in the category for network monitoring application of the year, with nearly 65 percent of the votes. Zabbix was a distant second place, followed by Icinga and Shinken tying for third place. Munin brought up the rear of the top five applications in this category.



## Media Center Of The Year

XBMC edged out MythTV as Linux users' favorite media center software, taking 48 percent of the final vote, compared to 33 percent of the vote for MythTV. Boxee and Google TV tied for a distant third place finish, while Elisa was a very distant fourth place finisher.



## Graphics Application Of The Year

It should be no real surprise that Gimp repeated its string of top honors in this category, getting just over 72 percent of the final vote. Inkscape took second place, with just over 10 percent of the votes, with Blender taking third place with just under eight percent of the final tally. Scribus and ImageMagick, respectively, filled out the fourth and fifth place finish.



## VoIP Application Of The Year

Skype was the "no-surprises-here" runaway favorite, obtaining nearly 60 percent of the final votes. Ekiga took a distant second place, getting just over 14 percent of the votes. Empathy and Mumble tied for third place, with just over four percent of the votes. Linphone and Twinkle tied for fourth place, with just under four percent of the votes.



## Audio Media Player Application Of The Year

Amarok, while once again capturing the top spot, did so this year without the runaway victory that it had experienced in years past. It's unclear if changes in Amarok over the past year are responsible, or if the other audio media players are getting that much better. Nonetheless, Amarok captured nearly 20 percent of the final votes. Audacious came in second place, with nearly 14 percent of the final votes. Rhythmbox posted a very close third place finish, while Clementine and Banshee were the fourth and fifth place finishers, respectively.



## Window Manager Of The Year

Openbox narrowly beat out Compiz by only one vote as the favorite window manager, with both obtaining just under 16 percent of the votes. Fluxbox came in third place, with just under 14 percent of the votes.

KWin and xfwm4 were the fourth and fifth place finishers.



## Open Source Game Of The Year

Battle For Wesnoth took the top honors in the open source game category, with just under 19 percent of the votes. Open Arena grabbed just under 10 percent of the votes, to lock up a second place finish. SuperTuxKart, Frozen Bubble and OpenTTD rounded out the rest of the top five vote getters.



## Open Source CMS/Blogging Platform Of The Year

WordPress won first place as a nearly 2:1 favorite over its closest rival, Drupal, capturing nearly 49 percent of the votes, compared to almost 25 percent of the votes captured by Drupal. Joomla! took in just under 14 percent of the votes to capture third place. Fourth place was taken by TYPO3, while Alfresco and XOOPS tied for a fifth place finish.



## Backup Application Of The Year

Rsync grabbed a first place finish with just over 37 percent of the votes. AMANDA came in second place, with right at 15 percent of the votes. Tar, Clonezilla and luckyBackup rounded out the top five vote recipients.



## Desktop Distribution Of The Year

This category came down to the wire, with a head-to-head battle for first place between Ubuntu and Slackware. Ubuntu edged out Slackware for the top spot by just two votes. Debian came in third place, while Linux Mint and Arch came in fourth and fifth. PCLinuxOS finished in eighth place, just behind Fedora and openSuse, and just ahead of CruchBang and Bodhi.



## File Manager Of The Year

Just as with the desktop distribution of the year category, this contest came down to a heated, down to the wire contest between Dolphin and Nautilus, with the former edging out the latter by only one vote. Thunar posted a solid third place win, while Midnight Commander came in fourth. PCManFM was the fifth place finisher.



## Server Distribution Of The Year

Debian and Slackware battled it out for the top spot, with Debian narrowly beating Slackware by only nine votes. CentOS came in third place, while Red Hat Enterprise Linux came in fourth. Ubuntu LTS won the fifth place slot.



## IDE/Web Development Editor Of The Year

Eclipse captured 22 percent of the vote in this category, making it the first place finisher for applications in this category. Geany, the multi-talented IDE and text editor, took second place honors in the IDE/Web development editor category, with almost 15 percent of the vote. Third place went to Bluefish, while fourth and fifth place went to Emacs and Netbeans, respectively.



## Configuration Management Tool Of The Year

Puppet brought home the first place trophy for configuration management tool, with nearly 55 percent of the vote. Second place went to Cfengine, with almost 14 percent of the vote. Third place went to Spacewalk with a little over 12 percent of the vote. Chef and Salt Stack brought up the last of the top five places, with a fourth and fifth place finish.



## Video Media Player Application Of The Year

VLC swept up more than twice the number of votes of its closest competitor, Mplayer, to capture 61 percent of the votes, compared to only 30 percent of the votes for Mplayer. Third place went to Totem, with just over three percent of the vote. Fourth place resulted in a tie between Xine and Dragon Player.



## Mobile Distribution Of The Year

It's probably no surprise to anyone with a pulse that this year's mobile distribution of the year is Android, capturing nearly 70 percent of the votes. Second place went to CyanogenMod, which curiously enough, is also related to installing and upgrading new versions of Android on Android devices, with just over 14 percent of the votes. Meego captured third place, with just under six percent of the votes. Curiously, Maemo is listed in fourth place, despite Maemo having been rolled into the Meego project. WebOS was the fifth place finisher.



## Virtualization Product Of The Year

VirtualBox coasted to an easy first place finish, getting over 61 percent of the vote. Second place went to VMware, with just under 15 percent of the vote. KVM, the KDE virtual machine manager, came in third, with just under 14 percent of the vote. Qemu was in fourth place, with Xen coming in fifth place.



## Open Source Web Framework Of The Year

Django edged out Ruby on Rails for the first place finish, with just over 32 percent of the vote, compared to almost 29% of the vote for Ruby on Rails. Zend Framework captured third place with almost nine percent of the vote. Codelgniter came in

fourth place, while CakePHP, Spring and Yii all tied for a fifth place finish.



## Office Suite Of The Year

Less than one year after its debut, LibreOffice has captured the top spot among office suites, capturing over 81 percent of the votes. OpenOffice, the former front runner in this category, took a distant second place with just over 14 percent of the votes. GNOME Office captured third place, with KOffice and Lotus Symphony bringing up the rear.



## Audio Authoring Application Of The Year

Audacity repeated its reign at the top of the heap, capturing another first place finish this year with nearly 78 percent of the votes. Ardour came in a distant second place, with less than eight percent of the votes. LAME took third place with seven percent of the vote, with Rosegarden and LMMS taking fourth and fifth places, respectively.



## Revision Control System Of The Year

Git captured more than twice as many votes as its closest competitor, Subversion, with nearly 59 percent of the votes, versus just under 25 percent of the vote for Subversion. Mercurial took a solid third

place finish, while CVS and Bazaar rounded out the top five spots.



## NoSQL Database Of The Year

Cassandra and MongoDB tied for a first place finish, both capturing just over 26 percent of the votes. CouchDB was a close second place finisher, with almost 23 percent of the votes. HBase and Redis took third and fourth places.



## Video Authoring Application Of The Year

FFmpeg ran away with the votes in this category, capturing just over 34 percent of the vote for a first place finish. Kdenlive captured second place with, getting just over 15 percent of the vote. Close on its heels was Avidemux, capturing just under 15 percent of the vote. Openshot and Blender brought up the rear for the top five spots.



## Host Security Application Of The Year

SELinux captured four times as many votes as its runner-up, capturing 51 percent of the votes to capture first place. Rootkit Hunter came in second, with under 13 percent of the vote. AppArmor took third place with just over eight percent of the vote. Samhain and Tripwire tied for fourth place, each with just under seven percent of the vote.

## Summary

There you have it: the top Linux applications in 31 separate categories, picked by Linux users themselves. If you want to participate in next year's poll, be sure to log in at the LinuxQuestions.org forum next January.



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Answers to Mark Szorady's Double Take:

- (1) Table different;
- (2) Pocket and pen lower;
- (3) Hubcaps missing;
- (4) Moustache added;
- (5) "4th" changed to "5th";
- (6) "Cramped" changed to "small";
- (7) Tie stripes different



Open Source Initiative



# Screenshot Showcase



Posted by ferry\_th, March 5, 2012, running Openbox.



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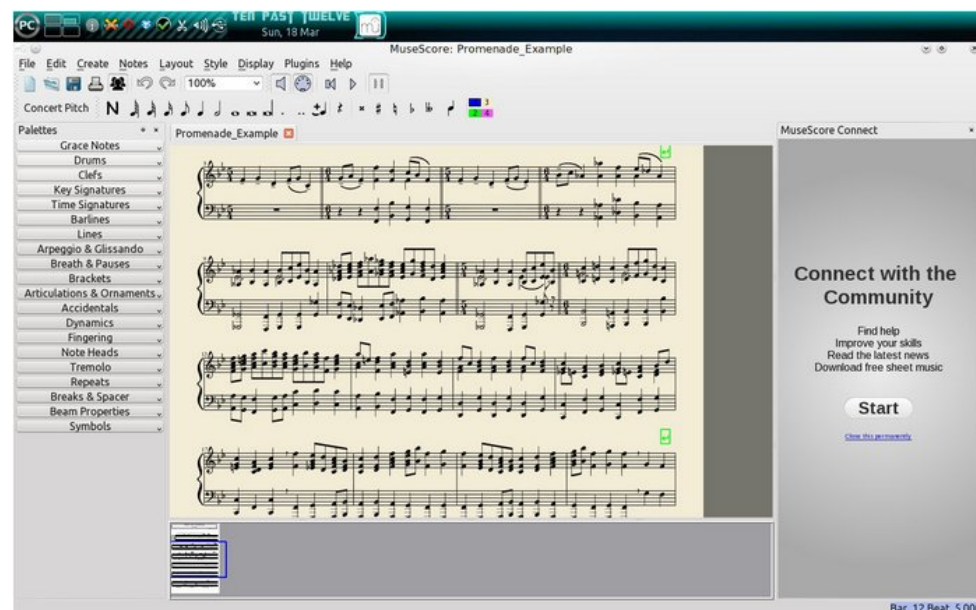
<http://twitter.com/iluvpclinuxos>



# A Short review: MuseScore

By longtomjr

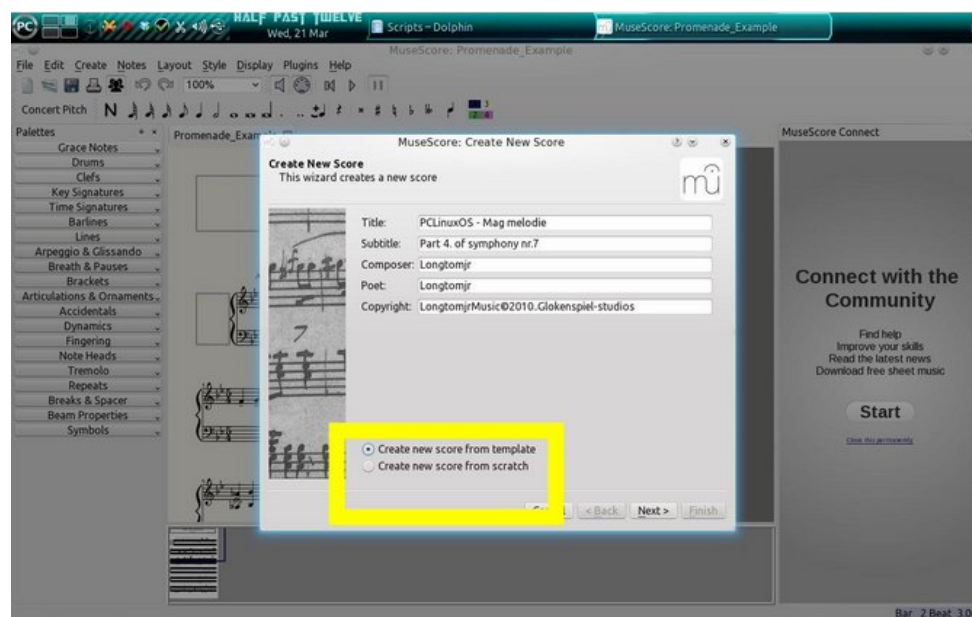
I asked my dad, longtom, to help find me an app that would play my sheet music and he stumbled upon MuseScore. This is great for musicians of any kind ... even drummers. It can display tabs and does have a LOT of instruments available.



The great thing about MuseScore is that it has a lot of [scores](http://musescore.com) available at the web site. You can also visit the official website at <http://musescore.com>. You can also “watch” video scores, where the score is displayed on the left side of the screen, and it follows along with the video that is displayed in the right side of the screen.

To make a new project, you can use the wizard. It is very user friendly.

So, here is a short look into it. At the start, you choose the composer and lyricist, which is a must when you want to post it on the .com website for other users. This will also make it a lot easier to find.



Here you can choose to start from scratch or use a template. We will use a template. When you use a template, you will choose from a couple of sheet-formats and then choose your sharps or flats.

This is a handy app. What makes it different from other score apps is that it plays every instrument.

Just one more thing. MuseScore can display tabs, drum-lines and LOTS of other instruments. Also, a lot of tutorials are available on [YouTube](https://www.youtube.com).



## Visit Us On IRC

- Launch your favorite IRC Chat Client software (xchat, pidgin, kopete, etc.)
- Go to [freenode.net](http://freenode.net)
- Type "/join #pclinuxos-mag" (without the quotes)

# Linux File System Heirarchy Explained

by Darrel Johnston (djohnston)

In Linux, everything is a file, or is associated with a file. There are filesystem types, such as ext3, xfs, ntfs and btrfs. But this article is not about the different filesystem types. It is about the structure of the PCLinuxOS filesystem.

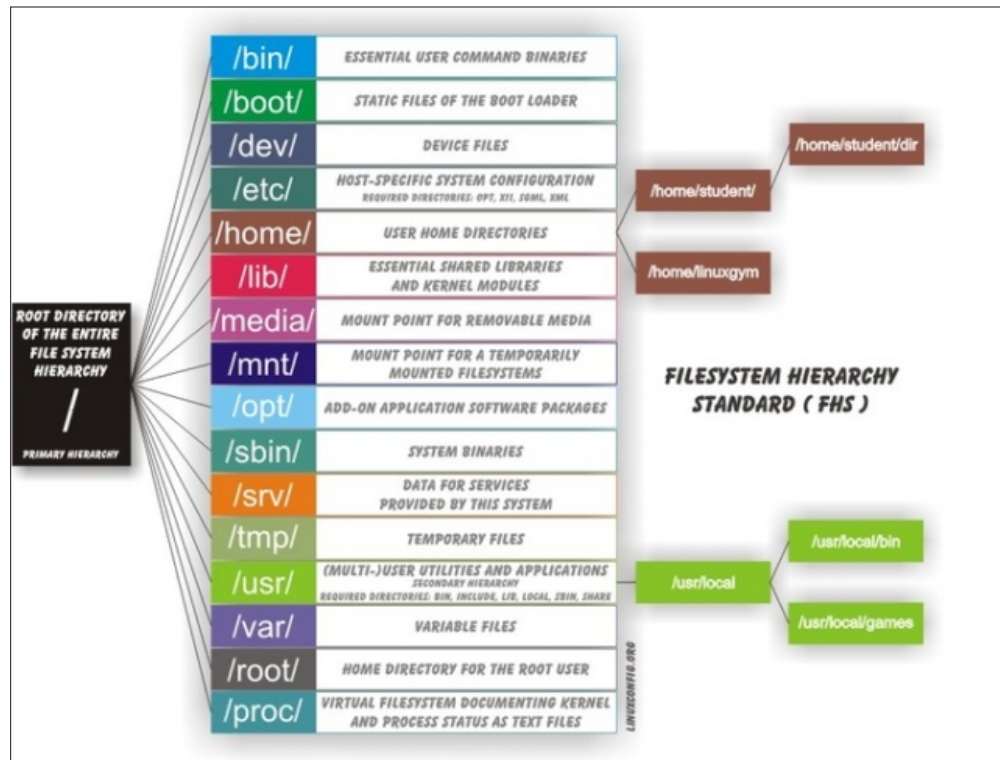


Image from [http://linuxconfig.org/Filesystem\\_Basics](http://linuxconfig.org/Filesystem_Basics)

It all begins with root. Not the superuser root's directory, which is /root, but the root of the filesystem, which is /. All directories start from the / (root) directory. Shown below is a graphic depiction of a typical layout.

If we do a root directory list on our PCLinuxOS installation, we'll see the following files and directories.

```
bin/  
boot/  
dead.letter  
dev/
```

```
etc/  
home/  
initrd/  
lib/  
lost+found/  
media/  
mnt/  
Module.symvers  
null  
opt/  
proc/  
root/  
sbin/  
srv/  
swap/  
sys/  
tmp/  
usr/  
var/
```

Each file and directory in the root directory is owned by the superuser, root. Only root has full read, write and modify access here. Let's begin with

the files. dead.letter is created or added to when a mail program cannot deliver the contents to the intended recipient. The one on my system is mostly the results of msec system security checks that could not be emailed. Module.symvers contains

information about the native kernel modules. A quick check of the file's date and time stamp shows it was copied from the /var/lib/dkms/nvidia-current/290.10-1pclos2011/build/ directory. The source file contains the line:

```
0xeb97fcd5 nv_linux_devices  
/var/lib/dkms/nvidia173/173.14.30-  
1pclos2011/build/nvidia EXPORT_SYMBOL
```

Whereas the line only appears once in the original file, the line appears three times in /Module.symvers. It obviously has to do with the dkms-nvidia-current package, but I'm not sure why the line appears three times.

The purpose of the file null in the root directory is unknown. This file is not to be confused with /dev/null. I do not know what process creates this file.

Some directories can be put onto separate partitions or systems for easier backups due to network topology or security concerns. Other directories have to be on the root partition, because they are vital for the boot process. 'Mountable' directories are: /home, /mnt, /tmp, /usr and /var. Essential for booting are: /bin, /boot, /dev, /etc, /lib, /proc and /sbin.

## /bin

The /bin directory contains useful commands that are of use to both a system administrator as well as non-privileged users. It usually contains shells, like bash, and commonly used commands like cp, mv, rm, cat, ls. The binaries in this directory are considered to be essential because the directory contains system programs that must be available

even if only the partition containing / is mounted. This situation may arise should you need to repair other partitions but have no access to shared directories. (For example, if you are in single user mode and have no network access). It also contains programs which boot scripts may depend on. The /bin directory contains no subdirectories.

## **/boot**

The /boot directory stores data that is used before the kernel begins executing user-mode programs. It contains everything required for the boot process, except for configuration files not needed at boot time, (those that belong to the GRUB boot-loader), and the map installer. This directory may include backup master boot records, sector/system map files, the kernel and other important boot files and data that is not directly edited by hand. Programs necessary for the boot loader to be able to boot a file are placed in /sbin. Configuration files for boot loaders are placed in /etc. The PCLinuxOS /boot directory has two subdirectories, grub and lost+found.

## **/dev**

The /dev directory is the location of special or device files. It highlights one important aspect of the Linux filesystem - everything is a file or a directory. Look through this directory and you should see sda1, sda2, etcetera, which represent the various partitions on the first master drive of the system. /dev/cdrom and /dev/fd0 represent your CD-ROM drive and your floppy drive. This may seem strange, but it will make sense if you compare the characteristics of files to that of your hardware. Both can be read from and written to. Take /dev/dsp, for example. This file represents your speaker device. Any data written to this file will be redirected to your speaker. If you try "cat /boot/vmlinuz > /dev/dsp" in a terminal on a system where the sound card has been configured, you should hear some sound.

(Turn your volume down before trying it!) That's the sound of your kernel.

The majority of devices are either block or character devices. However, other types of devices exist and can be created. In general, block devices are devices that store or hold data, and character devices can be thought of as devices that transmit or transfer data. Diskette drives, hard drives and CD-ROM drives are all block devices, and serial ports, mice and parallel printer ports are all character devices. The /dev directory contains no subdirectories.

## **/etc**

This directory contains all system related configuration files here or in its subdirectories. A configuration file is a local file used to control the operation of a program. For this reason, it's a good idea to backup this directory regularly. It will save you a lot of reconfiguration time later if you reinstall or lose your current installation. Normally, no binaries should be located here. There are quite a few subdirectories here, notably the X11 directory, which contains all the configuration files for the X Window System.

## **/home**

Linux is a multi-user environment, so each user is also assigned a specific directory that is accessible only to them and the system administrator. If your username is jane, your home directory will be /home/jane. You can write and delete files, as well as install programs within your home directory. It also contains your personal configuration files and folders, the so-called dot files. (The file name is preceded by a dot). Personal configuration files are usually hidden. If you want to see them, you either have to turn on the appropriate option in your file manager or use ls with the -a switch. The settings in

a personal configuration file will override system configurations while logged in as a user.

When a new user is created, their dotfiles will be taken from the /etc/skel directory. The dotfile most likely to be altered by a user is the .bashrc file. It contains aliases, user-specified commands and environment variables. Your home directory can become quite large when used for storing downloads, email, image and sound files, as well as other documents. Note that although the superuser root owns the /home directory, each user's individual home directory, for example, /home/jane, is owned by the user.

## **/initrd**

The /initrd directory provides the capability to load a RAM disk by the boot loader. The RAM disk can then be mounted as the root file system, and programs can be run from it. Afterwards, a new root file system is mounted from a different device. The previous root file system (from /boot/initrd.img) is then moved to a directory and can be subsequently unmounted. The /initrd directory is mainly designed to allow system startup to occur in two phases, where the kernel loads with a minimum set of compiled drivers, then additional modules are loaded from /boot/initrd.img. The PCLinuxOS /initrd directory contains a single file, README.WARNING. The contents of the file are:

(mkinitrd) Don't remove this directory, it's needed at boot time, in the initrd, to perform the pivot\_root.

## **/lib**

The /lib directory contains kernel modules and shared libraries needed to boot the system and run the commands in /bin and /sbin. Libraries are readily identifiable through their filename extension of \*.so. The Windows equivalent to a shared library would be a DLL (dynamically linked library) file. They are



essential for basic system functionality. Kernel modules (drivers) are in the subdirectory `/lib/modules/"kernel-version"`, where "kernel-version" is a kernel installed on your system. An example would be `/lib/modules/2.6.38.8-pclos1.bfs/`.

## **/lost+found**

Your Linux system should always be shut down properly. Sometimes your system might crash, or a power failure might take the machine down. Either way, at the next boot, a lengthy filesystem check using `fsck` will be done. `fsck` will go through the system and try to recover any corrupt files that it finds. The results of this recovery operation will be placed in the `/lost+found` directory. The files recovered are not likely to be complete or make much sense, but there is always a chance that something worthwhile is recovered. Each partition also has its own `lost+found` directory. If you find files in there, try to move them back to their original location. If you find something like a broken symbolic link to a file, you have to reinstall the file(s) from the corresponding RPM, since your file system was damaged so badly that the files were mutilated beyond recognition.

## **/media**

This directory contains subdirectories which are used as mount points for removable media such as floppy disks, cdroms and zip disks. Historically, there have been a number of other different places used to mount removable media such as `/cdrom`, `/mnt` or `/mnt/cdrom`. Placing the mount points for all removable media directly in the root directory would potentially result in a large number of extra directories in `/`.

## **/mnt**

This is a generic mount point under which you mount your filesystems or devices. Mounting is the process by which you make a filesystem available to the system. After mounting, your files will be accessible under the mount point. There is no limitation to creating a mount point anywhere on your system. But, by convention, and for practicality, do not litter your file system with mount points. Before one can use a filesystem, it has to be mounted. The operating system then does various bookkeeping chores to make sure that everything works. Since all files in Linux are in a single directory tree, the mount operation makes it look like the contents of the newly mounted filesystem are the contents of an existing subdirectory. An example of partitions and their related mount points can be seen by reading the `/etc/fstab` file.

## **/opt**

This directory is reserved for all the software and add-on packages that are not part of the default installation. For example, LibreOffice, Adobe and VirtualBox packages are found here. All third party applications should be installed in this directory. Any package to be installed here must locate its extra fonts, clipart, database files, etcetera, in a separate `/opt/"package"` or `/opt/"provider"` directory tree, where "package" is a name that describes the software package and "provider" is the provider's LANANA (Linux Assigned Names And Numbers Authority) registered name. The structure of the directories below `/opt/"provider"` is left up to the packager of the software, but are generally installed in `/opt/"provider"/"package"`.

## **/proc**

The `/proc` directory is very special in that it is also a virtual filesystem. It doesn't contain actual files, but runtime system information, such as system

memory, devices mounted, hardware configuration, etcetera. For this reason, it can be regarded as a control and information centre for the kernel. In fact, quite a few of the system utilities are simply calls to files in this directory. For example, "lsmod" is the same as "cat `/proc/modules`", while "lspci" is a synonym for "cat `/proc/pci`". By altering files located in the `/proc` directory, you can even read and change kernel parameters (`sysctl`) while the system is running. The most distinctive thing about files in this directory is the fact that all of them have a file size of 0, with the exception of `config.gz`, `kcore`, `mounts` and `self`.

## **/root**

This is the home directory of the superuser, root. In former days, `/` was root's home directory. To keep things tidier, root got his own home directory. But, why not in `/home`? Because `/home` is often located on a different partition, or even on another system, and would thus be inaccessible to superuser root when only `/` is mounted.

## **/sbin**

Linux discriminates between executables available to all users and those used for system maintenance or administrative tasks. The latter are in `/sbin`. This directory contains binaries that are essential to the working of the system. These include system administration, maintenance and hardware configuration programs. For example, you will find `lilo`, `fdisk`, `init`, `ifconfig` and others here.

Another directory that contains system executables is `/usr/sbin`. This is where you will find the network daemons for your system, along with other binaries that generally only the system administrator has access to, but which are not required for system maintenance and repair. Usually, these directories are not part of a normal user's search path, only of

Advertisement



root's. Programs executed after the /usr directory has been mounted are generally placed in /usr/sbin.

## /srv

The /srv directory contains website specific data which is served by the system. The main purpose is so that users may find the location of the data files for a particular service, and so that services which require a single tree for readonly data, writable data and scripts, such as cgi scripts, can be reasonably placed. If you have no web services installed on your system, the /srv directory will be empty.

## /swap

The purpose of the /swap directory is unknown. This directory is not to be confused with the swap partition. I do not know what process creates this directory.

## /sys

The /sys directory is actually a virtual filesystem which is a counterpart to /proc. It provides a lot of non-process related, detailed information about the in-kernel status to userspace. The subdirectories are block, bus, class, dev, devices, firmware, fs, kernel, module and power.

## /tmp

This directory contains mostly files that are required temporarily. Many programs use this to create lock files and for temporary storage of data. Do not remove files from this directory unless you know exactly what you are doing. Many of these files are important for currently running programs and deleting them may result in a system crash. The files usually won't contain more than a few KB anyway.

The directory can be cleared on reboot by setting the appropriate configuration, if so desired.

## /usr

Although the /home directory can potentially contain much more data, the /usr directory usually contains the largest share of data on a system. This is one of the most important directories in the system, as it contains subdirectories with user binary executables, their documentation, libraries and header files. X and its supporting libraries can be found here. In the original UNIX implementations, /usr was where the home directories of the users were created. In current UNIX flavors, /usr is where userland programs and data are. The name hasn't changed, but it's meaning has narrowed and lengthened from "everything user related" to "user programs and data".

## /var

The /var directory contains variable data such as system logging files, mail and printer spool directories, and transient and temporary files. Some portions of /var are not shareable between different systems. For instance, /var/log, /var/lock, and /var/run. Other portions may be shared, notably /var/mail, /var/cache/man, /var/cache/fonts, and /var/spool/news. Why not put it into /usr? Because there might be circumstances when you may want to mount /usr as read-only, for example, if it is on a CD or on another computer. /var contains variable data the system must be able to write to during operation, whereas /usr should only contain static data.



# ***ms\_meme's Nook: Linux River***



**MP3**

**OGG**

On the banks of the Linux River stood ms\_meme shy coquette  
She was looking for a penguin or anything else that she could get  
She put her mouse into the water and gave a little click  
I need a new operating system and I need it really quick

Little ms\_meme was using Windows hear those cries of distress  
Soon they'll be a happy ending when she finds PCLOS

On the other side of the river sat little Tux so innocent  
He didn't know that catching him was ms\_meme's intent  
He put a flipper into the river some fishing he would try  
He didn't see ms\_meme googling him with her eye

Poor little Tux knows how the Wind Blows he heard her SOS  
He pulled his line from the river and reeled in PCLOS

Now ms\_meme jumped in the river reached out for that life line  
She wrapped it tightly around her knew all would soon be fine  
What have I done said little Tux I must be a nitwit  
I've given PCLOS to a blooming idiot

Now ms\_meme loves little Tux gives him a fond caress  
As she sails along the internet in the USS PCLOS

# A Really Large Monitor

By Gary L. Ratliff Sr. (eronstuc)

Two very interesting things happened on March 8, 2012. First, I learned that the March issue of the magazine was out and I downloaded the PDF format version. Second, my new 1080p High Definition TV arrived. Unlike Walmart, which is providing a three month period to layaway items during the Christmas season, QVC provides the ability to pay for items over a period of months. The Roku I mentioned in the February issue was paid for in four easy payments. As I was jumping around on the tube, I stopped and learned that they had a high Definition TV available for five easy payments. When I ordered it, they told me that my TV would arrive on March 13th. Then they gave me a tracking number. And by checking my email, I learned that it would be coming in on the day's run. It arrived at 1:00 pm. After that, I was quite busy setting up all the items for the new system.

As I already had one computer which runs Windows 95 connected to my 720p HDTV, I decided to see what my best computer would look like at 1080p. On Tuesday, I had met an old former workmate from the MagneTek QC department. He mentioned that as we are either both over 70, or soon will be, our hearing and eyesight are not what they were when we were inspecting parts. Now my appraisal of the eMachine may have to be truthfully revised. We removed the USB devices and cables for the printer power supply, mouse and keyboard from their sockets, and moved the table into the front room, then re-attached these same items to the computer. Upon boot, only this error message appeared on the new HDTV screen:

```
error: df0 cannot get C/H/S values
grub rescue>
```

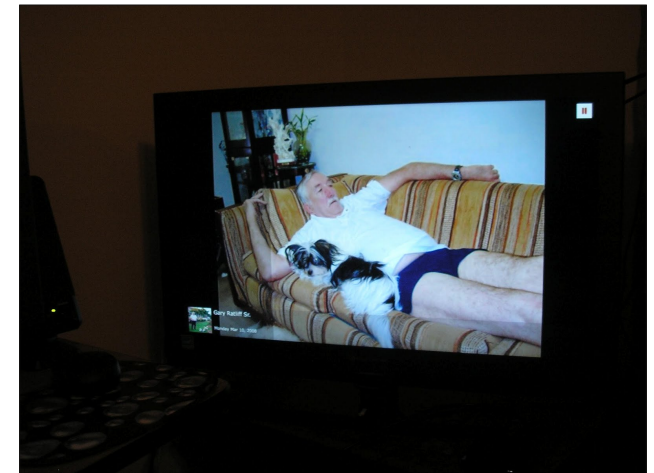
Well, what command do you try to make magic? Boot, reboot, go. The three-finger salute spelled out doesn't do anything either! The remedy was to place a Live DVD with The Full Monty in the drive, press F12 to get to the boot menu and tell the machine to boot from the DVD drive. Now I have a full set of tools to write this article and to see how the new HDTV performs as a monitor. In the March issue of the magazine, a window is mistaken as an HDTV!



Here you can see some of the items which have been attached to the various ports of the HDTV: To the right is a 27" standard TV. The 32" HDTV with the internet page from the Full Monty is shown in the middle and the Roku is shown under the HDTV. The 17" monitor and the speakers of the eMachine are shown on the left. On top of the 27" is a VCR and a DVD player. Attaching the VCR to the Roku allows you to make VCR copies of the movies. Where I live, Turner Classic Movies is good for movies without any commercials.

After I had downloaded the March issue, I was able to view it at a whopping 300% magnification which

just filled the screen comfortably. So with this, I don't have to spend time looking all over the place to see just where I have laid down my glasses.



In the midst of this, my daughter told me that my dog Liz had gotten lost while in her care. I called many animal shelters and vets in an attempt to locate her. I finally resolved that Liz was not going to be returned. If you found a dog this cute you most likely would keep it too. This is from Facebook which is provided by the Roku.

Now we returned to the problem of getting the eMachine to boot. Surely just moving the computer from one room to another should not be such a traumatic experience for a computer! As I had web access, I searched for eMachine support and entered into a chat with one of their technicians. I had encountered the tech named Andy who thought that because he was a computer engineer with eleven years experience he should ask me to part with \$38.00. HaHaHa! I've had near thirty five years working with computers and know how to look up data as well as this joker.

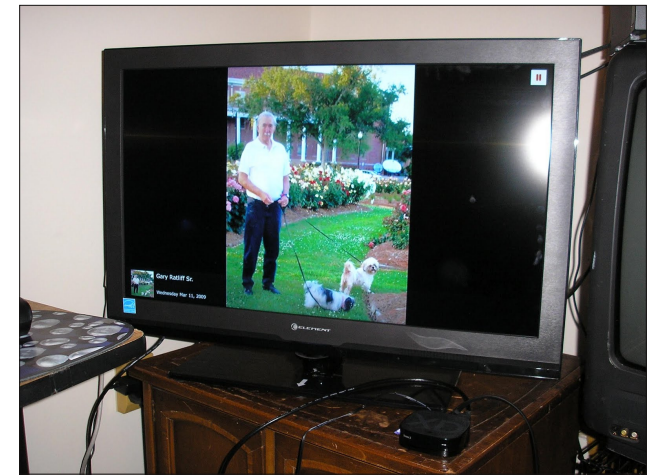
Anyway, the tech suggested that a system recovery be performed. So I performed a recovery first to preserve the files I had downloaded. I did a second one to produce a recovery to factory defaults. Both of these methods yielded the same error message that originally appeared. As you see, my pictures of the monitor taken with the camera have the flash showing, which hides the lower part of the text. Anyway, here is Windows showing just how well it is designed. I think I could have moved my HP out and it would have performed perfectly. My good rating for the eMachine may well have been unfounded. (Perhaps Tom Kent was right!)



One thing to be thankful for was that I have downloaded over 100 various distros of Linux live CDs or DVDs from DistroWatch. After reporting my experience at not being able to get Windows to boot, another tech said they would have a set of recovery DVDs sent to me.

I thank you all for inquiring about why you had not heard from me. When Trudy passed away, her last request was for me to take care of her little dog. Moving in to a No Pets Allowed apartment and placing the task of keeping Liz was perhaps an unfair burden on my daughter. In parting, I will say I miss Liz very much. There is a video of her and Toby on YouTube if you would like to see these

champs in action. There are also videos showing how to set up a multi-boot multi-tasking system, too. From my Facebook page, here is my profile picture and a final tribute to a very cute little dog.



## Screenshot Showcase



Posted by YouCanToo, March 1, 2012, running KDE 4.

# Linux Liaison In New Zealand High Schools

by Jim Wilkinson (jimwilk)

Readers of the January 2012 issue of The PCLinuxOS Magazine might recall an article that I wrote about using PCLinuxOS in a high school classroom.

At a recent meeting of the Palmerston North Linux Users' Group in my home city here in New Zealand, I suggested that I would like to make the same sort of Linux demonstration available in other local high schools. As a result of my suggestion, I have drafted a letter to the Head of Computing in the local schools. I hope to make contact with those people soon to work out how I can assist them.



March 2012

The HOD Computing

## Demonstration of Linux Operating System to Computer Classes

I am a member of the Palmerston North Linux Users' Group and, at the same time, a retired teacher of mathematics. My registration as a secondary teacher is still current although I have recently ceased working as a relief teacher at Feilding High School. Local schools where I taught over the years are Awatapu College, Feilding High School and, slightly further afield, Paraparaumu College.

Since retiring from the classroom in 2004, I have been learning to use a Linux Operating System as

an alternative to Microsoft's Windows ©. Last year, I was able to take my laptop along to Feilding High School and, show students the features of a particular distribution of Linux – PCLinuxOS. As you probably know, these operating systems are totally free. Therefore, I took along Live CD's of the system and gave them to students to try.

At a recent planning meeting of the executive of the above mentioned Palmerston North Linux Users' Group, I suggested that I would be interested in broadening my contacts with local high schools as a Linux liaison person.

If you were interested, I would be happy to bring along my laptop with its Linux OS to demonstrate it to some of your computing classes. I know that schools do study other operating systems than Microsoft Windows ©. Such a visit could be timed to fit in with your teaching programme. At the same time, I would be delighted to provide Live CD's of one or more of the most popular Linux systems for students to take home and try on their own machines. The Live CD doesn't install anything on the computer – unless the operator chooses to do so.

Initially, you might prefer that I visit the school, at a time suitable to your programme, and discuss my ideas with you. I have talked to my former colleague, Kerry Flavall at Awatapu College, and found him receptive to the suggested approach.

## Get 'em while they are young

Let's hope that my efforts to spread the word about Linux are warmly received. After all, imagine how far we can help Linux spread when we get the youngest users "hooked."

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# More Screenshot Showcase



Posted by coffeetime, March 11, 2012, running Openbox.



Posted by MtnMan, March 7, 2012, running e17.



Posted by DarkEra, March 1, 2012, running Xfce.



Posted by Crow, March 17, 2012, running KDE 4.

2012

April Fool

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