# The PCLinuxOS magazine

Volume 67

August, 2012



**Linux Financial Apps: KMyMoney** 

Download YouTube Videos The "Light" Way

**Toggle Your Keyboard Between Languages** 

KompoZer Part 2: Let's Get Started

**Embed PDFs In Firefox With Evince Via Mozplugger** 

**Customize Your Default Search Engine With Opera** 

**View Twitter Posts As RSS Feeds** 

Plus more inside!

### **Table Of Contents**

- 3 Welcome From The Chief Editor
- 4 Linux Financial Apps: KMyMoney
- 6 Screenshot Showcase
- 7 KompoZer, Part 2: Let's Get Started
- 11 Screenshot Showcase
- 12 ms\_meme's Nook Reprise: Over The Net & Through The Sandbox
- 13 Mark's Quick Gimp Tip & Double Take
- 14 View Twitter Posts As RSS Feeds
- 15 Rhythmbox: A Short Review
- 16 Screenshot Showcase
- 17 Toggle Your Keyboard Between Languages
- 18 Screenshot Showcase
- 19 Game Zone: Counter-Strike: Source (CS:S)
- 23 Create A Software RAID1
- 28 Graphics Tutorials: GIMP, Part 2
- 30 Networking on QEMU:

Setting Up The E1000 & Novell NE2000 ISA Evaluation

- **36 Screenshot Showcase**
- 37 Customize Your Default Search Engine In Opera
- 38 Download YouTube Videos The Light Way
- 40 Asunder: A Brief Review
- 41 ms\_meme's Nook Reprise: Vim Vimeny Vim Vimeny Vim Vimveroo
- 42 Screenshot Showcase
- 43 Embed PDFs In Firefox With Evince Via Mozplugger
- 45 Testimonials
- 46 More Screenshot Showcase

### The **PCLinuxOS** magazine

The PCLinuxOS name, logo and colors are the trademark of Texstar.

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.

Visit us online at http://www.pclosmag.com

This release was made possible by the following volunteers:

Chief Editor: Paul Arnote (parnote)
Assistant Editor: Meemaw

**Artwork:** Sproggy, Timeth, ms\_meme, Meemaw **Magazine Layout:** Paul Arnote, Meemaw, ms\_meme

HTML Layout: Rudge, Sproggy

Staff:

ms\_meme Mark Szorady
Patrick Horneker Darrel Johnston
Meemaw Gary L. Ratliff, Sr.
Pete Kelly Daniel Meiß-Wilhelm

Contributors:

longtomlongtomjrT6glamdring

AndrzejL

The PCLinuxOS Magazine is released under the Creative Commons Attribution-NonCommercial-Share-Alike 3.0 Unported license. Some rights are reserved. Copyright © 2012.



### Welcome From The Chief Editor

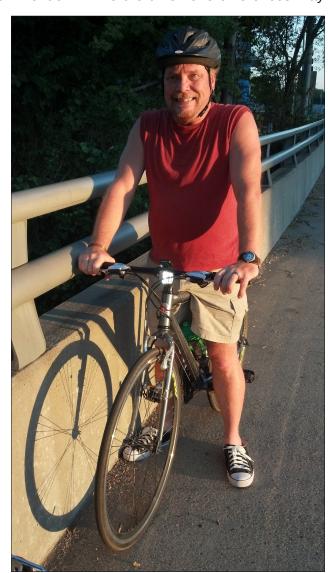
It doesn't get much better than laying out the monthly magazine while watching the many events of the 30th Summer Olympiad of the modern era from London. While the time zone differences may

force many to watch events on a tape delay (many events here in the U.S. are televised this way), there's little else that equals or approaches the splendor and the spirit of peaceful, albeit intense, competition of the quadrennial Summer Olympics.

Maybe that's what ms\_meme is doing this month – enjoying the Olympics – as she takes a month off to regroup and recoup. Ms\_meme hasn't missed a single month of regaling us with her musings and songs since the magazine's "reboot" in July 2009. But you won't have to go cold turkey from getting your "fix" of ms\_meme's musings. We're going to run a couple of ms\_meme's "classic" columns. She has informed us that she plans to return with the September issue.

Meanwhile the dog days of summer are definitely upon us. Much of the middle U.S. is embroiled – and boiled – in a drought and is enduring an oppressive heat wave. My wife and I have adapted to the harsh weather by transferring most of our daytime outdoor activities to night hours after the sun sets, or very early in the morning, before the sun rises high in sky. During the day (when we aren't working at the hospital), we are spending much of our time indoors, seeking relief from the heat by spending the hottest part of the day in the air conditioning. Ugh.

So, until next month, I wish each of you prosperity, happiness, serenity and peace. Stay cool – if you can.



### Disclaimer

- All the contents of The PCLinuxOS Magazine are only for general information and/or use. Such contents do not constitute advice and should not be relied upon in making (or refraining from making) any decision. Any specific advice or replies to queries in any part of the magazine is/are the person opinion of such experts/consultants/persons and are not subscribed to by The PCLinuxOS Magazine.
- The information in The PCLinuxOS Magazine is provided on an "AS IS" basis, and all warranties, expressed or implied of any kind, regarding any matter pertaining to any information, advice or replies are disclaimed and excluded.
- 3. The PCLinuxOS Magazine and its associates shall not be liable, at any time, for damages (including, but not limited to, without limitation, damages of any kind) arising in contract, rot or otherwise, from the use of or inability to use the magazine, or any of its contents, or from any action taken (or refrained from being taken) as a result of using the magazine or any such contents or for any failure of performance, error, omission, interruption, deletion, defect, delay in operation or transmission, computer virus, communications line failure, theft or destruction or unauthorized access to, alteration of, or use of information contained on the magazine.
- 4. No representations, warranties or guarantees whatsoever are made as to the accuracy, adequacy, reliability, completeness, suitability, or applicability of the information to a particular situation. All trademarks are the property of their respective owners.
- 5. Certain links on the magazine lead to resources located on servers maintained by third parties over whom The PCLinuxOS Magazine has no control or connection, business or otherwise. These sites are external to The PCLinuxOS Magazine and by visiting these, you are doing so of your own accord and assume all responsibility and liability for such action.

#### **Material Submitted by Users**

A majority of sections in the magazine contain materials submitted by users. The PCLinuxOS Magazine accepts no responsibility for the content, accuracy, conformity to applicable laws of such material.

#### **Entire Agreement**

These terms constitute the entire agreement between the parties with respect to the subject matter hereof and supersedes and replaces all prior or contemporaneous understandings or agreements, written or oral, regarding such subject matter.

# Linux Financial Apps: KMyMoney

#### by Meemaw

KMyMoney is our next program. The website is <a href="http://kmymoney2.sourceforge.net/index-home.html">http://kmymoney2.sourceforge.net/index-home.html</a> and it is available for Linux, Mac and Windows. The User Guide is at <a href="http://kmymoney2.sourceforge.net/online-manual/index.html">http://kmymoney2.sourceforge.net/online-manual/index.html</a>. This program is also in the PCLinuxOS Repository.

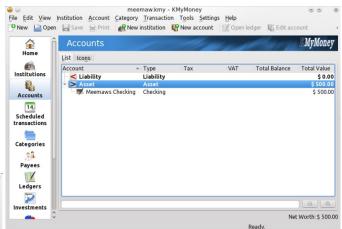
Opening it for the first time, we see this window:



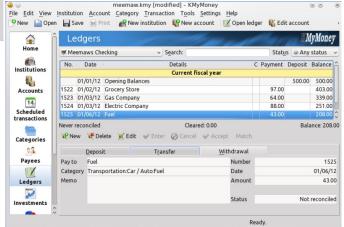
You can see, at the left side of the smaller window, the steps the program will take and what information you will need to set it up the first time. Notice that the setup program also takes you to your Preferences window, so you can set preferences at the beginning. As with previous programs, you can always change your preferences and add accounts, payees and categories later.

We will assume you have set up and named your working file. You will now see the KMyMoney

window as shown below:



Double-clicking on the account name, you will be taken to the ledger where you can now add transactions. At the beginning, you will be asked if you want to save every payee. If it is one you use frequently, you should save it. After you have entered many of your transactions, the window will look similar to the one below:



The ledger is at the top, showing your transactions, and the transaction editor is at the bottom. This is an easy form to use to enter each transaction. Make sure you choose the correct tab (Deposit, Transfer or Withdrawal). I wish I had more deposits and less withdrawals!

In the left-side panel are many of the tools that you can use to maintain your account correctly.

Home - You can configure KMyMoney to open a Home page when it first starts. This page can have as few or as many items as you wish. You can view the following items: Assets & Liabilities, Payments, Preferred Accounts, Payment Accounts, Favorite Reports, three different Forecasts (including Net Worth), Budget and Cash Flow.

**Institutions** - In this window you can see the institutions you have added (banks, credit unions, stockbrokers and so on) and can edit any one of them here.

**Accounts** - All the accounts you have listed (checking, savings, investment) are listed here and can be edited.

Categories - You have your whole list of categories here and can add, delete or edit them. You will start out with a basic list of categories, but I've never used any of these programs where I didn't have to add a few of my own. For example, KMyMoney has a category named Transportation which has as subcategories Car/Auto and Public Transportation. I would change that category so it was called Vehicle,

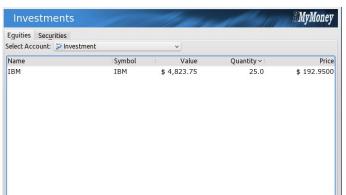
remove Public Transportation (because my town is too small to have taxis or buses), and change Car/Auto to the type of car I drive (could be Chevrolet Impala) and then add another subcategory called GMC Pickup for the truck we own. All the entries in those categories would be the same (Fuel, Repair, Insurance, Payments, Registration/Tags and Taxes). That way we have a separate record of expenses for each vehicle. You can also delete any categories that don't apply to you.

Payees - Every time you enter a check to a new payee, KMYMoney will ask you if you want to add the payee to your Payee list. You can click Yes during every transaction if you want. However, you can also go to this section and add them from here. If you have a dozen or so you pay on a regular basis (rent, groceries, fuel, insurance, utilities, internet), you can always just enter them all from here and when you enter your transactions, the process will go more quickly. When you start typing in a payee, the program will find the one that matches most closely, and if it is correct, you can simply tab over to the next field. If you decide to delete a payee, you have to re-assign each transaction using that payee to a new payee.

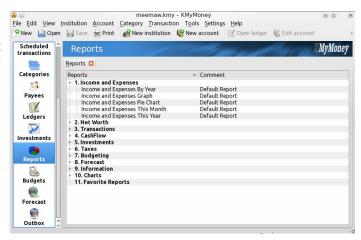
**Ledgers** - The is the window which shows the register for each of your accounts. You can continue to add transactions here. Make sure the appropriate account shows in the drop-down.

Investments - This section is where you see your investments. You can enter the investments from the ledger screen, bringing up your Investment account and adding transactions. If you bought stock for a certain price and the price has changed, you can see the present value in the Investments section. You first have to go to Tools and update the stock prices from your chosen source. As shown below, I had entered a stock purchase for \$185 per share a

couple of weeks ago, but when I updated prices today, the price per share has changed.



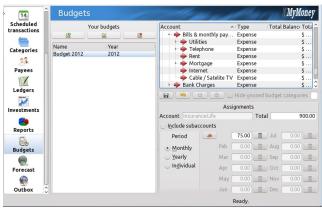
**Reports** - KMyMoney has many reports in this section. You can choose a pre-designed report and edit it to your liking, then save it in Favorite Reports.



**Budgets** - Budgets are useful as a financial roadmap. Here you can enter your income and expenses. Keeping an eye on it, and the report "Budget vs. Actual", will help you know if you have any potential problems. Create a new budget, then for each income and expense category, enter the amount you pay or an estimate of it for every month. For periodic payments, like my auto insurance which

#### **Linux Financial Apps: KMyMoney**

I pay every six months, click Individual in the Period section and enter the amount in the appropriate months. Make sure you enter your income too.



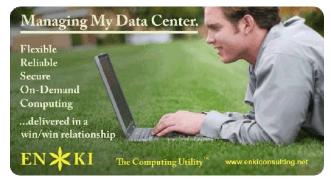
Forecast - A Forecast is a prediction of the balances of Accounts during a specified future period of time. You can predict balances using one of two methods, Scheduled and Future Transactions or History-based. For Scheduled and Future, KMyMoney uses a combination of future transactions already entered into the ledgers and the entries in the Schedule. For History-based, KMyMoney uses values from past transactions in the ledgers to predict future transactions. You have to set up the period you want to see.

**Outbox** - The User Guide says this is an add-on for online banking. Since I don't use KMyMoney, I didn't try to set it up.

#### **Summary**

KMyMoney is a good program, which is well organized. If you are a KDE user, or don't mind all the KDE packages that install with it, you will like KMyMoney. Next time, we will finish our series with Skrooge.















# Screenshot Showcase



# KompoZer, Part 2: Let's Get Started

#### by Paul Arnote (parnote)

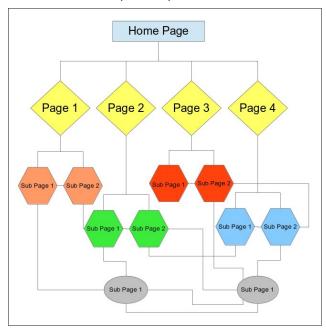
Last month, we took a "get acquainted" look at KompoZer. Now that we have the "tool," it's time to set up some kind of blueprint for our web site. In the same manner that you wouldn't expect a builder to build you a house without a set of blueprints, you also shouldn't expect to build your home on the web without a blueprint. Planning is key to a functional and well organized web site.

Before you start gathering your text and graphics, you need to have an idea of how you want to present your home on the web. Nothing has to be "set in stone," but you should at least have a vision of what you want things to look like when you're through. Often, your "plans" will have to be flexible and you may find yourself changing some details of your plan as you progress through the site planning and site preparation stages. Sometimes, you may find yourself scrapping your initial plan and replacing it with a different one.

I know I said in the first KompoZer article (June 2012 issue) that we'd start learning to create our first web page—and we will, later on in this article. However, there's a lot more to creating a website than just throwing a bunch of text and graphics together. If you just throw some text and graphics together, you will likely cause yourself more work in the long run. You will find yourself having to redo things you've already done if you proceed without some semblance of a plan. Plus, your website will likely look as if you just threw some text and graphics together. The planning stage is much too important to skip over.

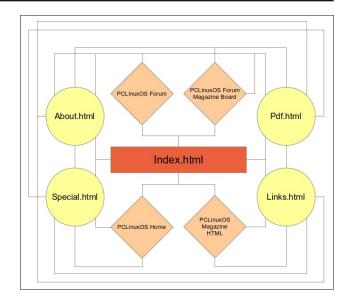
One good way to plan out your website is to make a representation of the site structure (site map) with a

diagram or flowchart. Similarly, you could use Post-It Notes plastered on a wall, with each Post-It Note representing one link. You could get fancy and represent links to external sites with one color of Post-It Notes and represent internal links to pages on your site with a different color of Post-It Note. Below is one example of a possible web site.



Here's another example (top of next column), using the website for The PCLinuxOS Magazine as an example (a couple of pages/links were omitted to help improve clarity).

As you can see, things can get fairly complex very quickly. You have to think out and plan the navigation for your site. It's best to do this from the perspective of a typical user. Try to anticipate how a user might want to navigate your website.



With the magazine website, I've made every attempt to prevent a visitor to the site from heading down a "dead end" link. That is, they can access every other part of the site from wherever they may happen to be, at least in regards to the local pages. Whenever I link to an off-site web page, I create the link to the off-site web page to open in a new window or tab. This allows my users to remain on my site, and to return to where they jumped off when they are finished with the off-site content.

You will notice that in the first example diagram, things link to the "Home Page" at the top. In the abbreviated site map for the magazine website, you notice that everything revolves around the "index.html" page. There is no one "right way" to organize your website.

Standard use of HTML has always dictated that your "Home Page" is named "index.html." This is so that if a user simply enters your web address into their

browser's address bar without a specific page, their browser will automatically look for and load the file named "index.html." As such, "index.html" should be the filename for the "Home Page" of your website.

Once you have your website structure planned, it's time to gather and organize the elements that will make up your website content, and make some decisions about its appearance. These include, but are not limited to:

- 1. the text for your site
- 2. images for your site
- 3. background for your site pages (solid color vs. background image)
- 4. the font for your page
- 5. the width of your pages
- 6. whether there will be files offered for download

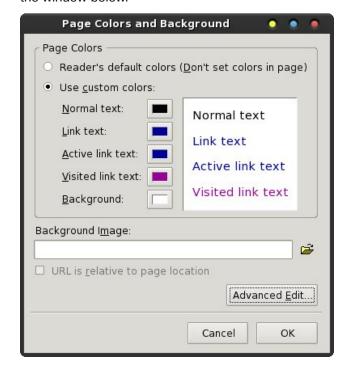
As you can see, creating an organizational plan is very important for your website. It's certainly worth the effort, since having a decent organizational plan can actually make it much easier to create your website.



Once you have your website structure set up, you will also need to set up the directory structure for storage of the files that make up your website. Above is a snippet from Thunar of our sample website. The "files" directory is where any files you might offer the user an opportunity to download are stored. The "images" directory is where the images that are displayed on the website are stored. I strongly suggest mirroring the directory structure of your website in a folder on your computer.

#### **Creating Our First Page**

Let's start off by first setting the background color for our web page. Select "Format > Page Colors And Background" from the KompoZer menu. You will see the window below.

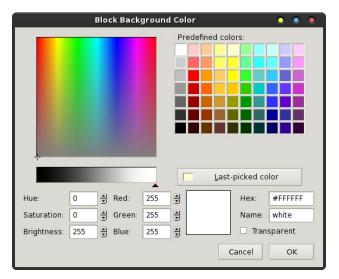


Select the "Use custom colors" option, then select the color swatch after "Background." You will be presented with the typical color selection dialog box (top of next column).

You can now select the color you want to use from the color swatches at the upper right corner of the dialog box. For my demonstration, I chose the blue color in the third column from the right, third down from the top. If the color you want to use isn't displayed in one of the default color swatches, you can specify the specific color.

The easiest way is to pick a "close" color, then adjust the Hex or Red, Green and Blue values until you get

#### KompoZer, Part 2: Let's Get Started



the precise color you want. The selected color is displayed in the color swatch (white in the image) that appears between the RGB settings and the Hex value for the color. Another easy way to fine tune your color selection is to adjust the black slider in the color bar just above the Hue, Saturation and Brightness values.

If you'd rather use a background image, you can specify the image location in the text entry box at the bottom of the first dialog box. So that the image can be found when needed, place the image in the location it will be in on the server – on the mirrored copy on your hard drive. Check the "Url is relative to page location" checkbox. Be careful using background images, as many images will render your web page difficult to read (like when you're attempting to display black text over the top of a dark area of the image) and may be a distraction.

Below (top of next page) is what my KompoZer window looks like after selecting the background color:

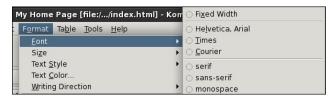
#### 

Next, select "Format > Page Title and Properties" from the KompoZer menu.

|                      | Page Properties  | • •                   |
|----------------------|--|-----------------------|
| General informa      | tion   |                       |
|                      | file:///home/parnote-phinx/Doci<br>06/29/2012 09:03:54 AM            | uments/HTML/index.htm |
| <u>T</u> itle:       | My Home Page   |                       |
| <u>A</u> uthor:      |  |                       |
| <u>D</u> escription: |  |                       |
| Templates —          |  |                       |
| ☐ This page is       | a template   |                       |
| Internationalizal    | tion —   | 1000 m                |
| Language:            |  | Choose a language     |
| Writing direction    | No direction specified 💠   | ]                     |
| Character set:       | ISO-8859-1   | Choose a charset      |
|                      | :<br>ntents of the <head> region, ι<br/>or Edit Mode Toolbar.</head> | use "HTML Source" in  |
|                      |  | Cancel OK             |
|                      |  |                       |

Enter the title for your new web page, and set the language and text direction. I've entered the page title as "My Home Page," but you should call it whatever you think is most appropriate.

Next, set the font information for your web page. The default value is "Variable," but I prefer to set a particular font. My personal preference is for "Helvetica, Arial." It's the font that has been rated as the easiest to read by various independent surveys.



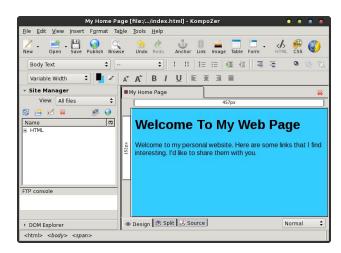
Select "Format > Font" from the KompoZer menu, then select the font you want to use. Although listed, it's probably best to not select the listed fonts that are installed on your computer. You cannot be sure that your website visitors will have that particular font installed on their system. As a result, your website may not appear as you intend it to. It's best to restrict your choices to only the first eight choices, since those will display as intended on most any web browser and platform.

Next, select the text formatting dropdown list that says "Body Text," and change it to "Heading 1." Now, place your cursor in the text editing portion of the KompoZer window, and type "Welcome To My Web Page" (without the quotes). Press <Enter> at the end of the line. Notice how the text formatting dropdown changes back to "Body Text." Also, if you notice that your text isn't formatted to use the font you previously selected, don't fret. Just select that text and reformat your text to use your preferred font.

Now enter some text into your web page. Just type in some brief, introductory text. Your KompoZer window should look something like the following (top of next column):

Now, type in the names of a few of your favorite web sites, one per line. Then, let's highlight each one of them, one at a time, then click on the "Link" icon on the KompoZer toolbar.

#### KompoZer, Part 2: Let's Get Started

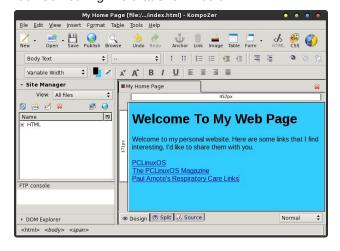




This brings up the "Link Properties" dialog box, as shown above. Since we're linking to external sites, enter the full URL of the website in the top text entry box. If we were linking to another page on our own site, we would enter only the filename of the page we're linking to (e.g., links.html).

In the "Target" section of the Link Properties dialog box, place a checkmark in the "Link is to be opened" check box, and make sure "in a new window" is selected. This will cause the external website to open in a new browser window, keeping your website visitor connected to your website.

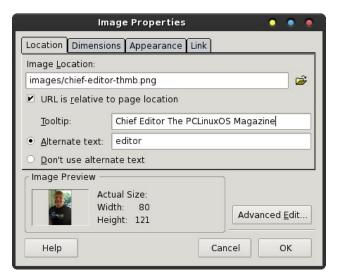
Repeat these tasks for each of the links you have inserted into your web page. Your window should look something like that shown below.



#### Let's Insert A Picture

Now, hit the <Enter> key twice. Hold down the Ctrl + B key to start boldface text, and type "About Me" (without the quotes). Depress the Ctrl + B key combination again to signify an end to the boldface text, then hit the <Enter> key.

I have already placed an image in the "images" folder, within my HTML directory structure. Select the "Image" icon on the KompoZer toolbar, and select an image in your "images" folder in your HTML directory structure. You'll notice after you add it that the "URL is relative to page location"



checkmark is activated, to indicate that the image is in the directory path where your HTML file is (will be?) stored. Enter the tooltip text you want to appear whenever a visitor hovers their mouse cursor over the image. Then, enter the alternate text to display while the visitor is waiting for your image(s) to load.



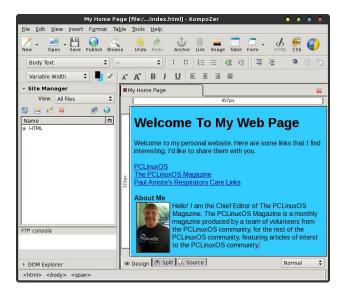
Next, under the "Appearance" tab of the Image Properties dialog box, select for your text to "Wrap to the right" from the dropdown list under "Align Text to Image." You might also want to insert the number of

#### KompoZer, Part 2: Let's Get Started

pixels to pad the image edges, so that the text doesn't butt right up against the image. I usually use a five (5) pixel padding. It's not too much and not too little, for my tastes. You can also place a solid pixel border around your image. I like to use a one (1) pixel border around my images. It helps to prevent the image from bleeding off into the background.

My image was already pre-sized to the size that I wanted, and I usually prefer to pre-size my images to the size I need. It helps prevent unnecessarily large downloads for my site visitors. However, another way to get smaller images is to use a larger image, and under the "Dimensions" tab of the Image Properties dialog box, enter the dimensions you want to display the image at. Keep the "Constrained" checkbox marked if you want the image to be resized proportionally (height and width are kept proportional to keep the image from appearing skewed).

Now, click your mouse cursor to the right of the image, and start typing a brief introduction to yourself. The text you type will now "wrap" around the right edge of the image you inserted. You should have something that looks somewhat like that below.

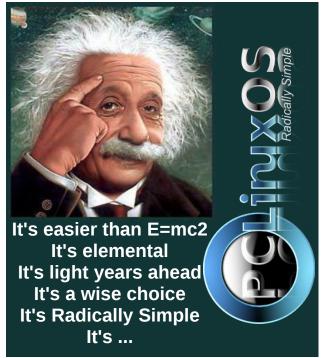


Save your file in your HTML directory as "index.html."

#### Summary

So far, we've learned about the features of KompoZer (in the first article in the July 2012 issue of The PCLinuxOS Magazine), and in this article, how to create a rudimentary web page. As you can see, KompoZer is a quite capable HTML editor. Next time, we'll learn a bit more about KompoZer's capabilities.





# TorrentFreak The place where breaking news, BitTorrent and copyright collide



## Screenshot Showcase



Posted by smudger, July 8, 2012, running KDE 4.

# ms\_meme's Nook Reprise: Over The Net & Through The Sandbox

Over the Net and through the Sandbox In the Neighborhood we'll meet

At ms\_meme's Inn where with a grin She's made lots of grub to eat

Over the Net and through the Sandbox Now step up to the bar

Have a drink with all your friends They come from near and far Over the Net and through the Sandbox At the table find your place

Have a chat with this and that Get away from life's rat race

Over the Net and through the Sandbox Enjoy the chips and dip

Then use Pay Pal to lift his morale Give Texstar a great big tip

MP3 OGG

Reprinted from November, 2011

# Mark's Quick Gimp Tip & Double Take

### Mark's Quick Gimp Tip

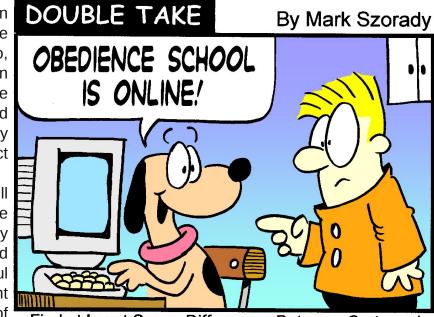
In the past, I've shown some of Gimp's automatic filters and other tools that work with just a couple of clicks. One other such automatic tool that I've found to be helpful at times is the autocrop

function. Using this tool, it can knock out excess white space around an image/photo, especially after it's been scanned in. Autocrop finds the borders of the image and crops as closely and cleanly as possible. Simply select

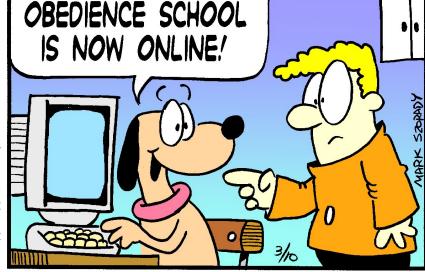
#### Image>Autocrop

Image and Gimp will automatically remove white space/empty borders from around the image. It's helpful when I need a tight crop around any of my comic strips and game panels. Autocrop can help you do the same with your own photos and other images.

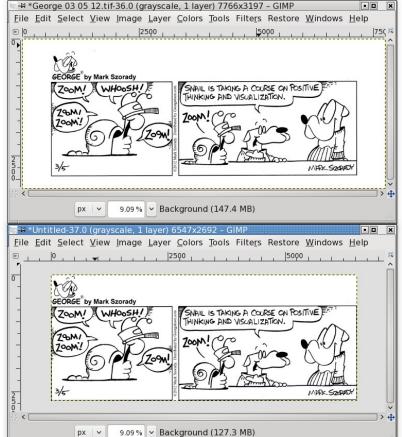
-Mark Szorady is a nationally syndicated cartoonist with georgetoon.com. He blogs at georgetoon.com/blog. Email Mark at georgetoon@gmail.com.



Find at Least Seven Differences Between Cartoons!



**Answers on Page 27** 



### View Twitter Posts As Rss Feeds

#### by AndrzejL

Even though Twitter no longer provides RSS as an alternative way of following someone's account if you are not registered with Twitter, (which is a shame, because I have just removed my Twitter account for a multitude of reasons), it's still possible to do so by crafting a proper URL:

http://api.twitter.com/1/statuses/user\_timeline.rs s?screen name=username

So if you want to follow Texstar's posts, add this to your RSS Feed reader:

http://api.twitter.com/1/statuses/user\_timeline.rs s?screen name=iluvpclinuxos

and enjoy the latest news from the world of PCLinuxOS.

If you are planning on following other PCLinuxOS developers, here are some addresses you may want to add to your rss reader:

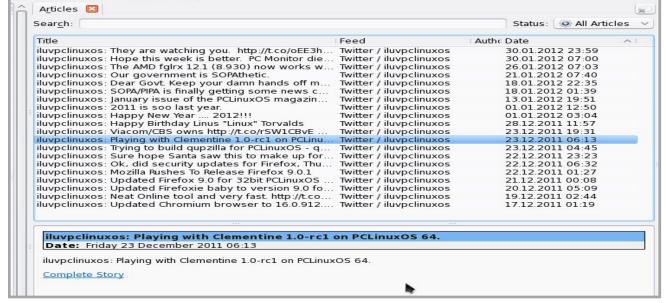
http://api.twitter.com/1/statuses/user\_timeline.rs s?screen name=nealbrks

http://api.twitter.com/1/statuses/user\_timeline.rs s?screen\_name=pcarchieos

http://api.twitter.com/1/statuses/user\_timeline.rs s?screen\_name=hootiegibbon

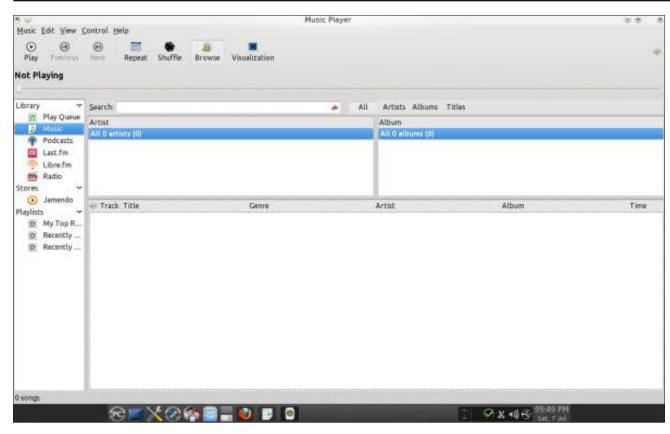
http://api.twitter.com/1/statuses/user\_timeline.rs s?screen\_name=iluvpclinuxos

The list of the links will be updated every now and then to make sure that I haven't skipped anyone.





# Rhythmbox: A Short Review



#### by longtomjr

"Rhythmbox is an integrated music management application, originally inspired by Apple's iTunes. It is free software, designed to work well under the GNOME Desktop, and based on the powerful GStreamer media framework." - Rhythmbox Site

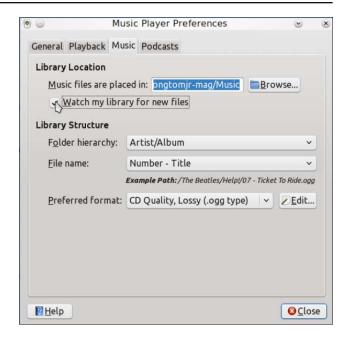
First let's get our music library up-to-date. Go to Edit > Preferences in the "Music" tab. Then, you select the folder where your music files are stored. Then tick "Watch My Library for new files."

Now you can close that window, and under music you will see all your Music.

Say you want to add a folder that is not in your "Music" folder. Go to Music > Import Folder and select the folder. Great, now our music library is up to date.

#### Create your own playlist of all your blues songs

First, you right click under the playlists and type in Blues. Now you just drag and drop all your Blues songs into your playlist you created.



#### **Enable Live streaming**

First, go to www.shoutcast.com. Type your genre in the search bar and choose one result. Right click on the radio station you want, and open it in a new tab. It is now going to ask for a download.

Save that \*.pls file just where you want. Now in Rythmbox, you go to "Music > Import File" and choose the \*.pls file you just downloaded. You will now see your station under Radio. Double click on the station and enjoy.

You can add links and \*.pls files from other sites. I just used Shoutcast as an example.

**Rhythmbox: A Short Review** 

#### **Additional Information**

Under "Edit > Preferences > General" you can choose your browser view. If you have a wide screen, I would recommend "Genres, Artists and Albums". If you have a last.fm account, you can use Rhythmbox to listen to your music on last.fm. You can add Podcast feeds by just adding the link to your podcast.





Does your computer run slow?

Are you tired of all the "Blue Screens of Death" computer crashes?



Are viruses, adware, malware & spyware slowing you down?

Get your PC back to good health TODAY!

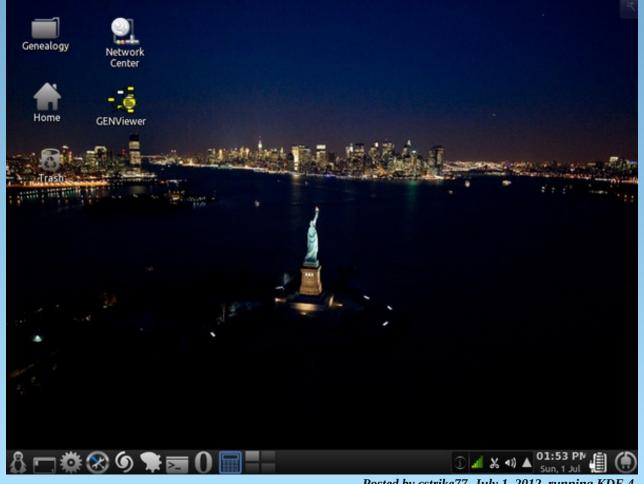
Get







## Screenshot Showcase



# Toggle Your Keyboard Between Languages

#### by Darrel Johnston (djohnston)

PCLinuxOS is primarily an English language distribution. There are French, Polish and Brazilian forums that I know of. But, PCLinuxOS users come from all over the world. Many prefer to use the system in their native language. And, some want to be able to switch between their native language and English or some other language. Occasionally, a new user posts on the main forum, wanting to know how to switch keyboard languages without logging out or reconfiguring the preferred language and keyboard. The answer is the subject of this article.

Although many Linux distributions offer this feature "out of the box", PCLinuxOS does not. It is, however, a relatively easy task to add this capability. First, one must set up the keyboard for their native language. In this example, I am using US English as the main language. Your choice may be different. Open the PCLinuxOS Control Center and click System in the left pane and Localization in the right pane. I chose American English as my language.



And I chose United States as my country.



After saving your settings, click Hardware in the left pane of PCLinuxOS Control Center and Setup the keyboard layout in the right pane. I chose US International keyboard for the keyboard layout and and 105-key (Intl) PC for the keyboard type.

Close the PCLinuxOS Control Center and open Synaptic. As a rule of thumb, always completely update your system before adding any new packages. Do a search in Synaptic for "locales" (without the quotation marks). There will be a main locales package already installed. There are many language localization packages listed. Choose the languages you wish to use and install the



corresponding locales packages. I chose Arabic and Russian. After the locales packages are installed, close Synaptic.

For the last step, open the text editor of your choice. Paste the following text into the editor's window.

[Desktop Entry]
Name=Keyboard-toggle
Comment=Toggle between keyboard layouts
with Alt-Shift
Encoding=UTF-8
Exec=setxkbmap -option
grp:switch,grp:alt\_shift\_toggle,grp\_led:scr
oll us,ar,ru

#### **Toggle Your Keyboard Between Languages**

Icon=/usr/share/icons/gnome/48x48/devices/k
eyboard.png
Terminal=false
Type=Application
Categories=GTK;System;Monitor;XMandrivaLinux-System-Monitoring
StartupNotify=false

Save the file as ~/.local/share/applications/ Keyboard-toggle.desktop. (The ~ symbol represents your home directory, and the system will treat it as such.) Notice the "us,ar,ru" portion at the end of the "Exec=" line. Change those entries to whatever languages you are using. You can use more than two languages. Saving the file in your home directory will ensure that no system updates will overwrite the desktop file. Once it is saved, you will have a new entry in the More Applications > Monitoring section of the main menu, named Keyboard-toggle. To enable the keyboard switcher, run Keyboard-toggle from the menu. The Alt-Shift key combination will switch between your choice of languages. Shown below are US English, Russian and Arabic entered in a text editor. The Arabic portion is on the right side of the window because Arabic is one of the languages that is written from right to left.

To automatically start the keyboard switcher every time you log in, add it to your desktop as a startup program.











### Screenshot Showcase



Posted by raed, July 6, 2012, running KDE 4.

# Game Zone: Counter-Strike: Source (CS:S)

#### by glamdring



#### About the game

"THE NEXT INSTALLMENT OF THE WORLD'S # 1 ONLINE ACTION GAME! Counter-Strike: Source blends Counter-Strike's award-winning teamplay action with the advanced technology of Source technology. Featuring state of the art graphics, all new sounds, and introducing physics, Counter-Strike: Source is a must-have for every action gamer." ~steampowered.com

According to Valve, the games user base just keeps growing.

"Right now, there are people all over the world playing Counter-Strike: Source. Odds are, there are more people playing today than there were playing yesterday. It, like its predecessor, is quite simply a global phenomenon, originally created by and now sustained by the gaming community.

Counter-Strike: Source is a remake of Counter-Strike, and consequently retains all of its team-based objective-oriented first-person-shooter style gameplay. CS:S is a must-have for every action gamer." ~valvesoftware.com

#### Installation

For setting up the game, I use PlayOnLinux. PCLinuxOS users can find this in Synaptic. Launch Play On Linux, click "Install" and search for "Counter-Strike: Source." When it is done installing Steam, it should automatically prompt you to install CS:S. If you already have Steam installed, you should be able to simply install CS:S. If you are missing some files, PlayOnLinux will allow you to install the CS:S packages inside the same bottle as your current Steam. If you do not own the game, you can buy it digitally in the Steam store.

#### **Game Information**

Release Date: Nov 1, 2004

Minimum Requirements Windows®: 1.7 GHz Processor, 512MB RAM, DirectX® 8.1 level Graphics Card (Requires support for SSE)

**Recommended Requirements Windows**®: Pentium 4 processor (3.0GHz, or better), 1GB RAM, DirectX®9eveGraphicsCard

**Minimum Requirements Mac**: 1GB RAM, NVIDIA GeForce 8 or higher, ATI X1600 or higher, or Intel HD 3000 or higher

Price: \$19.99 (Often on sale for \$5-\$10)

#### **Screen Shots**

Provided by steampowered.com







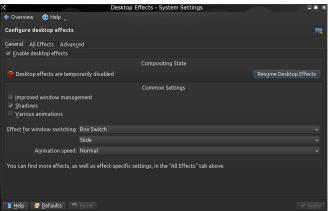
#### **Game Zone: Counter-Strike: Source (CS:S)**





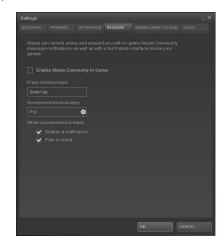
#### **Troubleshooting**

Some users, especially those with modern graphics cards, experience issues running CS:S, so I have included some of the popular fixes.

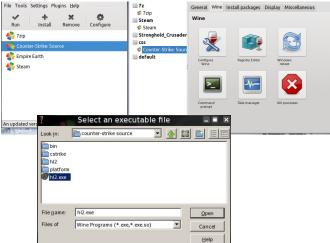


Disable/suspend your desktop effects, if you have them enabled (bottom, left). I would suggest doing this while playing any games in Wine.

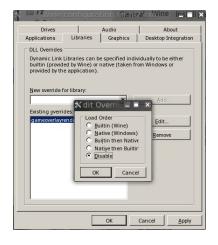
Make sure you have the Steam In-Game Community disabled. You can get to this in the settings menu of Steam.



Add "hl.exe" to your applications list in Wine configuration and set it to run as Windows 98. You can get to this menu by starting configuration in Wine, or if you used PlayOnLinux, you can simply select on the bottle/menu entry, click configure, and under Wine click Configure.



You can also add "GameOverlayRenderer.dll" to your Libraries, and disable it to ensure it does not run.



#### Gameplay

When you first launch the game, you will be given a list of options. I recommend you first go to your controls and make sure you are comfortable with the settings. I suggest you then go to the customize section and change your name from player to what ever you want. Most games use this to allow a user to enter their screen name and gamer tags. You should also spend some time exploring the options. You will find some useful things like mouse sensitivity, volume, and mic controls in the options.

When searching for a server, you can either use the simple search or the advanced version. I suggest you get used to the advanced version, because it allows you to see more servers and the ability to sort them easily. Some important things to look for in a server are the ping, VAC, and number of players. The ping measures the amount of time it takes for a packet to go from your computer to the host and back. The lower the value, the better. VAC stands for Valve Anti-Cheat, which attempts to detect modifications made to a game to help someone play a game better. VAC bans will completely remove your ability to play on VAC secure servers, rendering

#### Game Zone: Counter-Strike: Source (CS:S)

the game almost useless. One thing to keep in mind when looking at servers is not only how many players are playing, but also the maximum number of players. If you have a bad Internet connection, playing on a server with fewer players can help.

After connecting to a server, you will be prompted with a choice between two teams, Terrorist and Counter-Terrorist. Most of the time, it is best to hit auto team select. This will automatically put you on the team with fewer players or currently losing. When you select a team you will get the option to choose your skin, which simply changes the model of you that other players see. Depending on which team you are on, you will get a few team-exclusive guns, and also your skins will be team specific. All skins and models can be modded to look like anything you want. However, some servers force you to use the original ones.

Counter-Strike series is highly customized, so your starting money, guns, or custom changes may be different from server to server. Most servers will use the standard purchasing system to get guns, meaning you use your money earned in game to buy weapons at the beginning of each round. The amount of money awarded is affected by many factors. Some of the most notable ones are kills, objectives (bomb/hostage), team win/loss, and server configuration.

#### **Tips & Tricks**

Counter-Strike relies on you purchasing your guns, other than a default pistol, at the beginning of each round. The guns are broken down into simple categories, the most used guns are AK47 and M4 for Terrorists and Counter-Terrorists, aka T and CT, respectively. They also have a more powerful rifle, SG552 and AUG, which have scopes. Other than these rifles and the 3 snipers, no guns have scopes without a special mod. It is important to note there are no iron sites. You must rely on either the built in aiming system and or the scope. Snipers don't have

regular aimers. With this in mind, you will want to buy the correct weapons for the map, if you have sufficient funds. I would suggest starting out with the AK, M4, SG552, and AUG to get familiar with the game. (Some guns that don't have scopes can still do a special function, like burst fire or use a silencer.)

#### Equipment

The equipment section will become very important, especially as you learn how to use some things like grenades efficiently. The first item you should buy here is kevlar. If you don't have the money, you can skip on the helmet. However, you will run high risk of being "dinked" in the head by a bullet. If you are a Counter-Terrorist and it is a bomb map, aka de, you will have the option to buy a defusal kit. This lets you diffuse the bomb considerably faster.

#### **Grenades**

Grenades are very useful, but can be a bit tricky to learn to use efficiently. The most important thing to be aware of is if friendly fire is on or off, aka FF. If you are unsure, you can type FF into chat to check. If friendly fire is on, you have to be careful not to get a grenade too close to a teammate, or you might not have a happy teammate. Even worse, you could kill him, and many servers have team kill, aka TK, punishment systems. Even if friendly fire is on, be sure not to flash teammates or put smoke grenades in bad positions. Remember that this is a team game. Also, you can always hurt yourself, so be careful not to make that embarrassing accident.

#### Flash

The most useful and cheap grenades are the flashbang, which temporarily blinds/blurs the enemies screen and sound. Even if the enemy isn't affected, they most likely had to try and take cover.

This gives you the upper hand in attacking and retreating. One of the most popular tactics is to to stop before a corner or door and throw a flash grenade. This will catch the enemy by surprise and give you the best possible chance of winning any firefights.

#### **Smoke**

Many servers block smoke grenades, because it can cause servers and clients to lag so I won't spend too much time on them. The smoke grenade produces smoke in a small area, which can be useful to cover retreats or blind snipers. Smokes are very useful for blocking the vision of snipers through doors and windows. However, it only last a short period, so make sure you cross while you can. Smoke grenades have some very useful areas/maps, but in most cases, you are best off not buying one.

#### **High-explosive**

High-explosive grenades, aka HE and frag, explode a few seconds after being thrown. The damage dealt is dependent on radius to grenade, renowned for not doing much damage unless the grenade is very close to the enemy. However, the grenade has a relatively high low damage area, so you can easily inflict 10-20 damage on someone or an entire group/team with one HE. The most popular tactics are long range archs and bouncing off walls. This is one of those things you just get in game to get familiar with. Many people pick this up rather quickly, and it's pretty fun to practice throwing HE grenades if I do say so myself!

#### **Stance**

Your players stance has a lot to do with accuracy and speed movement. It's very easy to find yourself running around and spraying bullets rather than shooting with accuracy.

#### **Standing**

Standing is the default position. It allows for a guick movement and clear line of sight. Its greatest downfall is low accuracy. While standing, you have the option to either walk or run. In order to force walk, you will have to know the key binding to that command. Personally, I bind this to one of my side mouse buttons. That way, I don't have to be clicking/holding any other buttons on my keyboard. While running, you will have the worst accuracy. other than climbing/falling, which means you will only get your first few shots off on target. Walking gives you nearly the same accuracy as standing still. It also allows you to move without making any noise. Walking is great for sneaking around, or when you know someone is in the area. However, when rushing and using things like flashbang grenades, you can try rushing in close quarters, so accuracy doesn't matter as much.

#### Crouching

Crouching gives you the highest accuracy. However, you will have to sacrifice movement, speed and line of sight. Crouching is great for long range shots, strategic waiting, providing better cover and making you harder to see/notice. Crouching gives up the upper line of sight, but grants more lower line of sight, which allows you to see down through cracks or feet easier. This can sometimes be useful to get foot/knee shots, although some servers have rules against this.

#### Camping

The term camping refers to waiting/sitting still in one place waiting for the enemy, typically in a key area they must come through. This is an action of refusing to engage/fight, instead waiting at one point, like a bomb site, for the enemy to come. Typically, camping is frowned upon in some cases, like being strongly down/outgunned it is more

acceptable, but not all servers have direct rules against it. Some servers may have rules saying "heavy camp." This usually means it's okay to do short term or strategic waiting, but waiting long term is an offense. A good rule of thumb is to just play as fairly as you can, and how you would want them to play if the teams were switched.

#### **Identifying Teams**

There are two popular tricks to this. The easiest is recognizing what Counter-Terrorist and Terrorist skins/models look like. If you did not alter them by default, Counter-Terrorists will have helmets and more tactical looks uniforms, while terrorists don't have helmets and have unprofessional/terrorist looking uniforms. The second method is putting your aimer on them. A CT will have a blue name and a T will have a red name. You may notice throughout the game that this is the way the two teams are represented. Lastly, keeping track of where your team is and what they are doing helps a lot. This can sometimes be hard if you don't have team players or lack of voice communication. In some cases, a server has a public Ventrilo or TeamSpeak server listed, aka vent and TS. You can also use radar, as long as it's enabled, to track your team and enemies that are making noise/engaged.

#### **Shooting**

I covered some of the basic shooting styles/functions. However, there are many things you can do to improve your accuracy. You will need to learn what works best for you, but some of these basic tactics are great to know. Don't hold the fire button on automatic weapons. This is one of the natural responses to do, but will result in terrible accuracy. Rapid fire can give good results in close quarters, but if you want to shoot anyone who isn't a few feet away, you need to be aware of the gun kick/accuracy. You can easily gauge this by how much the aimer separates/moves and where your

bullets are hitting. To make guick adjustments, you can lower your aim. The down side to this tactic is that you will still have poor accuracy and are doing guesswork. Learning to control your gun can be difficult and annoying. I found the best tactic is to use bots on long range maps, or even just choose things to shoot at on long range maps. If you want to do this, you can create your own offline map, getting familiar with each gun or the gun you use most often. This is the only true way to learn how to control your gun. Typically, a burst fire method can be used, which you adjust by range. For example, with mid range shooting on the AK, I often shoot 3 shots and wait for about one shot between shooting again. You have to give your gun enough time to settle down. Some guns, however, have low kick and you can shoot much longer before accuracy goes down.

#### **Quick Movements**

You will learn many tricks while playing that allow you to do things guickly. I will share a few with you. My most used one is fast climbing ladders. This can be accomplished by climbing a ladder sideways. Instead of looking straight up jump onto the ladder facing an angle up, but looking sideways and hold down the up+strafe key. You should be strafing in the direction of the wall. This might sound very confusing, but you quickly understand what I mean when trying it in game. Another trick is to practice jump crouching into windows. If you run at a window and click and hold to jump crouch, jump+crouch, you can successfully pass right through the window instead of having to slowly crouch walk through the frame. I'm only giving you those two to get started. Jump into the game and you will have a lot of fun learning how to consistently improve your game play.



### Create A Software RAID1

#### by Darrel Johnston (djohnston)

Backup, backup, backup your personal files. Your vacation pictures, family tree history files, the movie of your daughter's graduation, financial spreadsheets and digital art you created cannot be replaced if they are lost. Unless, of course, you have backups. A backup program can be manually run by the user, but that requires the discipline of the user remembering to run the backup. A backup program can be scheduled to be run automatically. However, that means that any new files written after the last backup can potentially be lost before the next backup is scheduled to be run. Creating the backups takes extra disk space, even if the disk space is part of an internet storage service.

With a RAID1 array setup, there is very little chance that you will ever lose your data. That is because a RAID1 disk array is a mirrored setup. Anything written to one disk or set of disks is also written to the mirrored disk or set of disks. So, although you need at least one extra hard drive to set up the disk array, it is not much different from needing extra disk space to store your program-created backups. The advantage is that the backup files are created almost instantaneously. With a two disk RAID1 setup, if one drive fails, the other one keeps running. Once a replacement drive for the failed one is installed, the still running drive synchronizes all its data to the new blank drive. After synchronization is complete, the two drives begin reading and writing data in tandem again.

Many of today's motherboards come with RAID capabilities built into the board. And, add-on RAID controllers can be bought for reasonable prices. In reality, though, you do not need a hardware RAID controller in order to enjoy the benefits of a RAID1 setup. You can control the RAID1 entirely with software from the PCLinuxOS repositories. Although there may be a slight performance decrease in using a software driven setup rather than a hardware driven one, the performance loss won't be very much. All you need are two matched hard drives and the willingness to convert them into a RAID1 array.

What I mean by matched hard drives is that they should be close to equal in capability. They do not have to be exact twins. The potential storage capacity of the RAID1 array is only as large as the smallest drive in the array. And the potential read and write speeds in the array are only as fast as the slowest drive in the array. So, it is important to match the drives as closely as possible. You would not want to use a 300GB drive with a 500GB drive because the total

capacity of the RAID1 array would be 300GB. The extra 200GB space on the 500GB drive would not be used. The read and write speeds should be close to the same because the slower drive will cause unneeded wait times for the faster drive.

Before beginning, be sure you have the following packages installed on your system from Synaptic: dmraid, dmraid-events, libdmraid1 and mdadm. The setup in this tutorial assumes that the user will use the RAID1 array as a data storage device, and not as a home directory or root filesystem partition. I set up a software RAID1 using two 10GB hard drives and started by creating sdb1 and sdc1 partitions with fdisk.

#### **Creating the RAID1 array**

```
[root@localhost ~]# fdisk /dev/sdb
Command (m for help): n
Command action
       extended
       primary partition (1-4)
Partition number (1-4, default 1): 1
First sector (2048-20971519, default 2048):
Using default value 2048
Last sector, +sectors or +size{K,M,G} (2048-20971519, default
20971519):
Using default value 20971519
Command (m for help): t
Selected partition 1
Hex code (type L to list codes): fd
Changed system type of partition 1 to fd (Linux raid autodetect)
Command (m for help): w
The partition table has been altered!
Calling ioctl() to re-read partition table.
Svncina disks.
[root@localhost ~]#
```

```
[root@localhost ~]# fdisk /dev/sdc
                                                                       Then I checked the results by listing all drives with fdisk.
Command (m for help): n
                                                                       [root@localhost ~]# fdisk -1
Command action
  е
      extended
                                                                       Disk /dev/sda: 8589 MB, 8589934592 bytes
      primary partition (1-4)
                                                                       255 heads, 63 sectors/track, 1044 cylinders, total 16777216
                                                                       sectors
Partition number (1-4, default 1): 1
                                                                       Units = sectors of 1 * 512 = 512 bytes
First sector (2048-20971519, default 2048):
                                                                       Sector size (logical/physical): 512 bytes / 512 bytes
Using default value 2048
                                                                       I/O size (minimum/optimal): 512 bytes / 512 bytes
Last sector, +sectors or +size{K,M,G} (2048-20971519, default
                                                                       Disk identifier: 0x00000000
20971519):
Using default value 20971519
                                                                          Device Boot
                                                                                           Start
                                                                                                          End
                                                                                                                   Blocks
                                                                                                                            Id System
                                                                       /dev/sda1 *
                                                                                                                            82 Linux swap
                                                                                               63
                                                                                                      2088449
                                                                                                                  1044193+
Command (m for help): t
                                                                       / Solaris
Selected partition 1
                                                                       /dev/sda2
                                                                                          2088450
                                                                                                     16771859
                                                                                                                  7341705
                                                                                                                            83 Linux
Hex code (type L to list codes): fd
Changed system type of partition 1 to fd (Linux raid autodetect)
                                                                       Disk /dev/sdb: 10.7 GB, 10737418240 bytes
                                                                       107 heads, 17 sectors/track, 11529 cylinders, total 20971520
Command (m for help): w
                                                                       sectors
The partition table has been altered!
                                                                       Units = sectors of 1 * 512 = 512 bytes
                                                                       Sector size (logical/physical): 512 bytes / 512 bytes
                                                                       I/O size (minimum/optimal): 512 bytes / 512 bytes
Calling ioctl() to re-read partition table.
Syncing disks.
                                                                       Disk identifier: 0x00000000
[root@localhost ~]#
                                                                          Device Boot
                                                                                                                   Blocks
                                                                                            Start
                                                                                                          End
                                                                                                                            Id System
                                                                       /dev/sdb1
                                                                                                                            fd Linux raid
                                                                                             2048
                                                                                                     20971519
                                                                                                                 10484736
                                                                       autodetect
Next, I created the RAID1 array using mdadm, then formatted /dev/md0 with the
xfs filesystem.
                                                                       Disk /dev/sdc: 10.7 GB, 10737418240 bytes
                                                                       107 heads, 17 sectors/track, 11529 cylinders, total 20971520
[root@localhost ~]# mdadm --create /dev/md0 --level=1 --raid-
                                                                       sectors
devices=2 /dev/sdb1 /dev/sdc1
                                                                       Units = sectors of 1 * 512 = 512 bytes
mdadm: array /dev/md0 started.
                                                                       Sector size (logical/physical): 512 bytes / 512 bytes
[root@localhost ~]# mkfs.xfs /dev/md0
                                                                       I/O size (minimum/optimal): 512 bytes / 512 bytes
meta-data=/dev/md0
                                 isize=256
                                              agcount=4,
                                                                       Disk identifier: 0x00000000
agsize=655292 blks
                                 sectsz=512
                                              attr=2,
                                                                          Device Boot
                                                                                            Start
                                                                                                          End
                                                                                                                   Blocks
                                                                                                                            Id System
projid32bit=0
                                                                                             2048
                                                                                                                           fd Linux raid
                                                                       /dev/sdc1
                                                                                                     20971519
                                                                                                                 10484736
data
                                 bsize=4096
                                              blocks=2621168,
                                                                       autodetect
imaxpct=25
                                              swidth=0 blks
                                 sunit=0
                                              ascii-ci=0
                                                                       Disk /dev/md0: 10.7 GB, 10736304128 bytes
        =version 2
                                 bsize=4096
naming
                                                                       2 heads, 4 sectors/track, 2621168 cylinders, total 20969344
log
         =internal log
                                 bsize=4096
                                              blocks=2560,
                                                                       sectors
version=2
                                                                       Units = sectors of 1 * 512 = 512 bytes
                                 sectsz=512
                                              sunit=0 blks, lazy-
                                                                       Sector size (logical/physical): 512 bytes / 512 bytes
count=1
                                                                       I/O size (minimum/optimal): 512 bytes / 512 bytes
realtime =none
                                 extsz=4096
                                              blocks=0,
                                                                       Disk identifier: 0x00000000
rtextents=0
```

[root@localhost ~]#

#### **Create A Software RAID1**

### Disk /dev/md0 doesn't contain a valid partition table [root@localhost ~]#

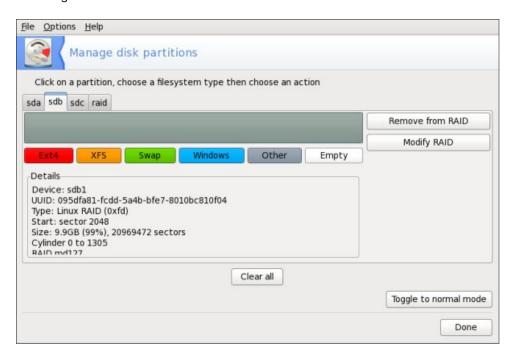
Notice the invalid partition table for /dev/md0. It doesn't mean the device is unusable. It simply means fdisk does not know how to deal with a RAID device. Next, I made a mount point for md0, mounted it, checked the space on the drives, then unmounted md0.

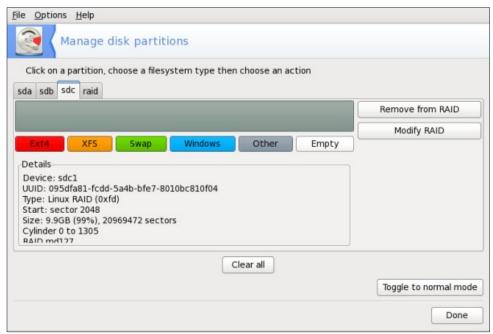
```
[root@localhost ~]# mkdir /mnt/raid1
[root@localhost ~]# mount /dev/md0 /mnt/raid1
[root@localhost ~]# df -H
Filesystem
                       Size
                              Used Avail Use% Mounted on
/dev/sda2
                                     5.0G 30% /
                       7.4G
                              2.1G
/dev/md0
                        11G
                               34M
                                      11G
                                            1% /mnt/raid1
[root@localhost ~]# umount /mnt/raid1
[root@localhost ~]#
```

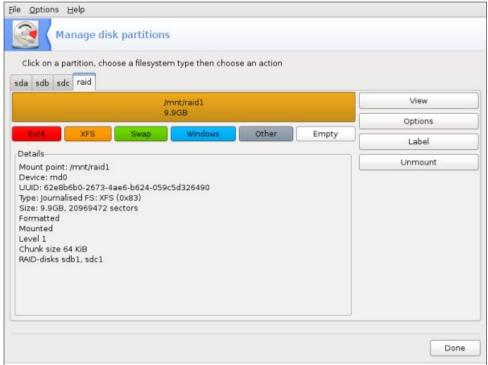
I added one line to my /etc/fstab file:

#### /dev/md0 /mnt/raid1 xfs defaults 1 2

The mount point for md0 is /mnt/raid1. And sdb1, sdc1 and md0 look like the following:







I changed permissions on /mnt/raid1 to give all users full access.

[root@localhost ~]# chmod 777 -R /mnt/raid1
[root@localhost ~]# ls -l /mnt | grep raid1
drwxrwxrwx 2 root root 4096 Jun 29 03:49 raid1/
[root@localhost ~]#

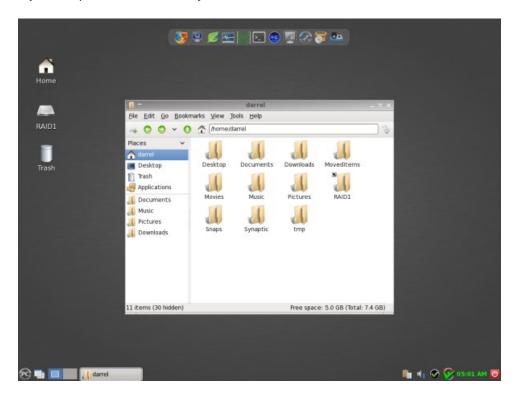
Just one more step to take. As root, edit the file /etc/mdadm.conf. The entire file is commented, so I just added the line below to the bottom of the file.

ARRAY /dev/md0 devices=/dev/sdb1,/dev/sdc1 level=1 num-devices=2 auto=yes

I created a desktop file on my LXDE desktop that I can click on to access the contents of the RAID1 array. I also created a shortcut to the mountpoint on my home directory by entering in a terminal:

[darrel@localhost ~]\$ ln -s /mnt/raid1 ~/RAID1

My desktop and home directory look like this:



The contents of the RAID1 desktop file are:

[Desktop Entry]
Type=Application
Icon=/usr/share/icons/gnome/48x48/devices/drive-harddisk.png
Name=RAID1
Exec=pcmanfm /mnt/raid1
StartupNotify=true
Terminal=false
MimeType=x-directory/normal;inode/directory;
Encoding=UTF-8
X-Desktop-File-Install-Version=0.11

So, we now have a RAID1 array set up. Whatever is written to /dev/sdb1 will also be written to /dev/sdc1. To the system, both drives appear to be one unit, /dev/md0. And /dev/md0 is mounted as /mnt/raid1 and has a volume label of RAID1. But how can we be sure that both drives in the array are working? In a terminal, run the command: cat /proc/mdstat

You will see something similar to the following:

Personalities : [raid1]

md0 : active raid1 sdb1[0] sdc1[1] 10484672 blocks [2/2] [UU]

unused devices: <none>

Replacing a failed drive and rebuilding the array

If you have a degraded RAID1 array, instead of the string [UU] you will see [U\_]. If a disk has failed, you will probably find a lot of error messages in the log files /var/log/messages and/or /var/log/syslog. Assuming that the log files show /dev/sdc1 has failed, we must remove and replace it. We will use the mdadm RAID management program for all steps. First, we have to mark /dev/sdc1 as failed.

[root@localhost ~]# mdadm --manage /dev/md0 --fail /dev/sdc1 [root@localhost ~]#

Then we check the RAID1 status. /dev/sdc1 should have an (F) designation.

[root@localhost ~]# cat /proc/mdstat
Personalities : [raid1]

md0 : active raid1 sdb1[0] sdc1[1](F) 10484672 blocks [2/1] [U ]

unused devices: <none>
[root@localhost ~]#

Next we need to remove /dev/sdc1 from /dev/md0:

[root@localhost ~]# mdadm --manage /dev/md0 --remove /dev/sdc1
mdadm: hot removed /dev/sdc1
[root@localhost ~]#

When we check the RAID1 status again, /dev/sdc1 should not be listed.

unused devices: <none>
[root@localhost ~]#

Once the failed drive has been logically removed from the software RAID controller, it is time to shut down the computer, physically remove the drive and replace it with another.

#### [root@localhost ~]# shutdown -h now

After you have replaced the failed hard drive and rebooted the computer, you can easily duplicate the partitioning scheme of the still running drive with just one command:

[root@localhost ~]# sfdisk -d /dev/sdb | sfdisk /dev/sdc

Run fdisk -l as root to check that both drives have the same partitioning. Next we need to add /dev/sdc1 to /dev/md0.

[root@localhost ~]# mdadm --manage /dev/md0 --add /dev/sdc1
mdadm: re-added /dev/sdc1
[root@localhost ~]#

Now the array /dev/md0 will be synchronized. Run cat /proc/mdstat to see when it's finished. During the synchronization the output will look like this:

Once the synchronization has completed, the RAID1 array will again look like the following.

[root@localhost ~] cat /proc/mdstat

Personalities : [raid1]

md0 : active raid1 sdb1[0] sdc1[1] 10484672 blocks [2/2] [UU]

unused devices: <none>
[root@localhost ~]

Answers to
Mark Szorady's
Double Take:

(1) Spot missing from dog's
back; (2) Man's hair different;
(3) Computer screen larger;
(4) Seat back lower; (5) Man's
arm different; (6) "Now" added
to word balloon; (7) Shirt
button missing





# **Graphics Tutorials: GIMP, Part 2**

#### by Meemaw

Last time we learned about the toolbox and the color chooser in Gimp, and started a drawing. Mine is shown below.



However, we never talked about the tools in the right-hand window. If you haven't closed that window, the first thing you will see is the **Layers** toolbox.



When I first started using the Gimp, I didn't use layers, but as I've learned more about Gimp, I have found that layers are very useful. You can use as many layers as you want to make your drawing, and reorder the layers any way you desire. Using different techniques on the layers can make your finished product look different than it would if it was all on one layer. Also, when one layer is finished the way you

want it, you can do whatever you want to another layer without disturbing anything else. The tools across the bottom of the window are, from left to

right, New Layer, Raise Selected Layer, Lower Selected Layer, Duplicate Layer, Anchor Layer and Delete Layer.

When you started your drawing, it had only one layer (called Background). In the layers window, click the **New Layer** button (the button at bottom left that looks like a piece of paper with the plus sign on one corner). A window will appear asking you to name your layer, designate how big you want it and whether you want it white, black or transparent (choose transparent because you want the face to show through). If you don't give it a new name, a new entry, called New Layer, will appear in the list above the Background. You'll notice now that many of the tools I just named are active.

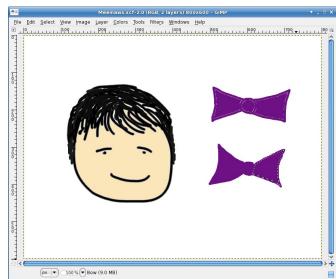


You may also notice that your drawing appears in the Background icon in the Layers window. This is done to help you stay organized, so you can choose the correct layer when you want to work on another one. If you didn't name your layer before you created it, you can right-click and choose "Edit Layer Attributes" from the menu, rename it with a more meaningful name. Let's name it "Bow".

Choose a color you like and draw a bow on this layer. If your "person" is a man, it can be a bow-tie, and if it's a girl, you could put it in her hair. It's your drawing, so do whatever you want. You can even put it out to one side of the face, as we can move it

around later.

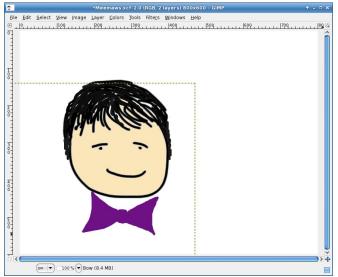
Now, instead of choosing the bucket fill, we're going to do something a little different. Bucket fill often leaves unfilled areas. Choose the Free Select tool (looks like a lasso) and trace around one part of your bow. Click inside the colored line you already made and make segments until you have closed your curve. Every place you click will leave a small circle. But when your curve is closed, it will look like a moving dotted line instead. Now choose your bucket fill and fill your bow. Click on the color you have already drawn and then click inside. It should fill properly. Looking at the shot below, you can see the difference. The top was bucket fill only - the bottom is bucket fill after the free select. After this, I will outline the top bow with the Rectangle Select tool and delete that one because I don't want it.



Since we have our bow on another layer, we can rotate it or move it anywhere we want. Using the **Move** tool (4-pointed arrow) and putting your cursor on the bow, you can move the layer around as you

**Graphics Tutorials: GIMP, Part 2** 

wish. I put mine below my face. You can see the layer boundary on the drawing.



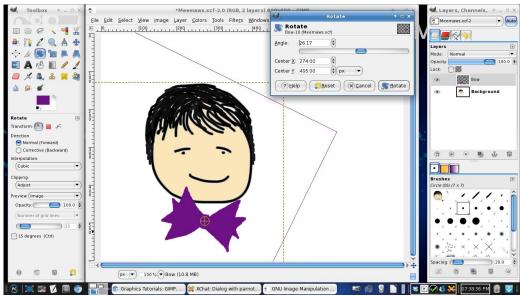
arrows around them). When you click on it and then on the bow, a window will pop up with the rotate tools. You will see a circle with a plus sign inside. That is the rotation axis, and you should click and drag it to wherever you want as the center of rotation. I dragged mine to the center of the bow, then in the rotation window, clicked the arrow next to the degrees to change the angle of the bows. As the degrees get larger your bow will rotate clockwise, and the larger *negative* degrees will rotate counterclockwise. Rotate it however you want it, then click "Rotate" in the tool window (below). Before and after views will show up, which is why my bow now looks like it has four points on each end.

When you get it the way you want it, choose another tool to keep the Rotate tool window from popping up again. Make sure you save your drawing when you have it as you want it.

I should note that this particular rotation method is different than the method you would use to rotate a

picture. It can be used, but the rotation commands under the "Transform" menu item are easier to rotate an entire image.

Next time, we'll add more to our drawing.



Sometimes you want things rotated. I want the bow in a different position, so I'm going to choose the **Rotate** tool (looks like 2 sheets of paper with curved





#### by Patrick G Horneker (phorneker)

As we saw in the last article on QEMU, we can run FreeDOS in QEMU and configure QEMU to emulate some hardware components when running FreeDOS. We already know how to transfer files between the QEMU disk image and PCLinuxOS by mounting the disk image.

We can already print from DOS applications by redirecting output to a disk file on PCLinuxOS. Finally, we have created a *shell script* to start QEMU without having to type a list of configuration options, namely:

#### #!/bin/bash

qemu -fda floppies/blankfloppy.img
-hda freedos.img -cdrom
iso/fdsrc11.iso -boot c -m 32 -soundhw
sb16 -serial /dev/ttyACM0 -parallel
file:printer0.ps

To get the most out of QEMU, we need to configure the networking capabilities of QEMU.

#### The -device Option

QEMU will give you a list of all emulated hardware by typing **qemu -device?** in a terminal window, and get the following:

[patrick@localhost ~]\$ qemu -device ?
Could not initialize KVM, will disable
KVM support

name "virtio-9p-pci", bus PCI
name "virtio-balloon-pci", bus PCI
name "virtio-serial-pci", bus PCI,
alias "virtio-serial"
name "virtio-net-pci", bus PCI
name "virtio-blk-pci", bus PCI, alias
"virtio-blk"
name "smbus-eeprom", bus I2C

"scsi-disk", bus SCSI, desc "virtual scsi disk or cdrom" name "scsi-generic", bus SCSI, "pass through generic scsi device (/dev/sa\*)" name "usb-hub", bus USB name "usb-host", bus USB name "usb-kbd", bus USB name "usb-mouse", bus USB name "usb-tablet", bus USB name "usb-storage", bus USB name "usb-wacom-tablet", bus USB, desc "OEMU PenPartner Tablet" name "usb-braille", bus USB name "usb-serial", bus USB name "usb-net", bus USB name "usb-bt-dongle", bus USB name "virtconsole", bus virtio-serialbus name "virtserialport", virtioserial-bus name "ioh3420", bus PCI, desc "Intel IOH device id 3420 PCIE Root Port" name "x3130-upstream", bus PCI, desc "TI X3130 Upstream Port of PCI Express Switch" name "xio3130-downstream", bus PCI, desc "TI X3130 Downstream Port of PCI Express Switch" name "isa-serial", bus ISA name "isa-parallel", bus ISA name "vt82c686b-usb-uhci", bus PCI name "piix4-usb-uhci", bus PCI name "piix3-usb-uhci", bus PCI name "sysbus-ohci", bus System, "OHCI USB Controller" name "pci-ohci", bus PCI, desc "Apple USB Controller" name "SUNW,fdtwo", bus System name "sysbus-fdc", bus System name "i6300esb", bus PCI

name "ne2k pci", bus PCI name "i82801", bus PCI, desc "Intel i82801 Ethernet" name "i82562", bus PCI, desc "Intel i82562 Ethernet" name "i82559er", bus PCI, desc "Intel i82559ER Ethernet" name "i82559c", bus PCI, desc "Intel i82559C Ethernet" name "i82559b", bus PCI, desc "Intel i82559B Ethernet" name "i82559a", bus PCI, desc i82559A Ethernet" name "i82558b", bus PCI, desc i82558B Ethernet" name "i82558a", bus PCI, desc i82558A Ethernet" name "i82557c", bus PCI, desc i82557C Ethernet" name "i82557b", bus PCI, desc i82557B Ethernet" name "i82557a", bus PCI, desc "Intel i82557A Ethernet" name "i82551", bus PCI, desc "Intel i82551 Ethernet" name "i82550", bus PCI, desc "Intel i82550 Ethernet" name "pcnet", bus PCI name "e1000", bus PCI, desc "Intel Gigabit Ethernet" name "rt18139", bus PCI name "ne2k isa", bus ISA name "ide-drive", bus IDE name "isa-ide", bus ISA "ich9-ahci", PCI, alias name "ahci" "lsi53c895a", alias name bus "lsi" name "VGA", bus PCI name "vmware-svga", bus PCI name "sb16", bus ISA, desc "Creative

Sound Blaster 16" name "ES1370", bus PCI, desc "ENSONIQ AudioPCI ES1370" name "AC97", bus PCI, desc "Intel 82801AA AC97 Audio" name "intel-hda", bus PCI, desc "Intel HD Audio Controller" name "hda-duplex", bus HDA, desc "HDA Audio Codec, duplex" name "hda-output", bus HDA, desc "HDA Audio Codec, output-only" "cirrus-vga", bus name PCI, desc "Cirrus CLGD 54xx VGA" name "isa-applesmc", bus ISA name "ib700", bus ISA name "isa-debugcon", bus ISA

As we can see here, QEMU provides a lot of hardware options, many of which we already discussed, and some of these are not relevant to FreeDOS (because some devices shown here were never supported by any version of DOS).

#### **Network Adapters Emulated by QEMU**

name "testdev", bus ISA

Let us open a terminal window. We can find out which network adapters QEMU can emulate when running as an x86 machine. We could type **qemu-net nic,model=?** and get a list of supported network adapters, but the developers of QEMU deprecated the **-net** option. We can use it now, but it may no longer work in a future version of QEMU.

As we saw in the above listing, QEMU supports the following network adapters, with the QEMU device name in bold:

Novell NE2000 PCI (ne2k\_pci) Novell NE2000 ISA (ne2k\_isa) Realtek 8139 (rtl8139) AMD PCFastIII (pcnet) Intel E-1000 (e1000, This is the QEMU default) Intel i82801 (i82801) Intel i82562 (i82562)
Intel i82559a (i82559a)
Intel i82559c (i82559b)
Intel i82559c (i82559c)
Intel i82559er (i82559er)
Intel i82558a (i82558a)
Intel i82557a (i82557a)
Intel i82557b (i82557b)
Intel i82557c (i82557c)
Intel i82550 (i82550)

Intel i82551 (**i82551**)

Only the **ne2k\_isa** is an emulated ISA adapter. All other adapters are for the emulated PCI bus, so we need to keep this in mind when finding DOS drivers for these adapters.

#### Where to get DOS drivers:

Crynwr Software (http://www.crynwr.com/drivers/) provides DOS drivers for some of these devices. The file 00index.html contains descriptions of each of the driver files available for download. A file called *many-other-drivers.zip* contains a driver for the NE2000 adapters.

In the last article, I showed you how to mount the QEMU disk image. After downloading the driver files, you will need to mount the disk image (to /mnt/freedos) and transfer the downloaded files so FreeDOS can use them.

Georg Potthast has a collection of packet drivers that can be used on FreeDOS. There are drivers for the Realtek 8139, the Novell NE2000 and the Intel e1000. It would also be a good idea to download NICSCAN.EXE so FreeDOS can detect the emulated network card.

Note: AMD's PCFastIII requires a driver for the AMD **79C973** chipset. This is not the same as the **79C970**, which is in the PCFastII, an ISA based network adapter.

Intel has a downloadable DOS driver for the E1000 on their website. On that page, you want to click on PRODOS.EXE, then click on Download from the next page that appears. Agree to the license, and then download the file. If you are using Firefox, be sure to choose *Save File* when the dialog box appears asking you what to do with the file.

#### Let's Get a TCP/IP Driver for FreeDOS

Besides the network driver, we will need to get a TCP/IP driver for FreeDOS. There is a 16-bit TCP/IP stack Novell developed for its Netware products that allows ODI drivers to use TCP/IP. It can be downloaded from bbs.actapricot.org.

#### Now Let's Get The Driver into FreeDOS

There are two ways to get the driver file into FreeDOS. If you have a floppy drive on your system, you may write that file to the floppy, then use that floppy when running FreeDOS.

If no floppy drive is present, we can mount the QEMU disk image to PCLinuxOS and transfer the network driver file to drive C: on the disk image.

For this disk image, we shall use the QEMU default, an emulated Intel Pro E1000 adapter. Open a terminal, login as **root**, and type in the following:

Of course, your home directory will differ from the example. Now, when we launch QEMU, the driver

umount /mnt/freedos

file will be in drive C:, which is where we will be after FreeDOS boots.

If you choose the many-other-drivers.zip then you would emulate a Novell NE2000 ISA adapter. In this case, we would type this:

mkdir -p /mnt/freedos
mount -o loop,offset=32256
/home/patrick/vm/freedos.img
/mnt/freedos
cp /home/patrick/Downloads/many-otherdrivers.zip /mnt/freedos
umount /mnt/freedos

#### Edit ~/bin/freedos

Let us now open the **freedos** file we created from the last article. We will need to add some parameters to add network support to our QEMU session.

#### #!/bin/bash

qemu -fda floppies/blankfloppy.img
-hda freedos.img -cdrom
iso/fdsrc11.iso -boot c -m 32 -soundhw
sb16 -serial /dev/ttyACMO -parallel
file:printer0.ps

For the emulated Intel E1000 adapter, we need to add the following:

-netdev user,id=usernet -device e1000,netdev=usernet

This is inserted into the file after the **-soundhw** and before the **-serial** and/or **-parallel** parameters. Hence, our file should read as follows:

#### #!/bin/bash

qemu -fda floppies/blankfloppy.img
-hda freedos.img -cdrom
iso/fdsrc11.iso -boot c -m 32 -soundhw
sb16 -netdev user,id=usernet -device
e1000,netdev=usernet -serial

/dev/ttyACM0 -parallel
file:printer0.ps

If you plan to emulate a Novell NE2000 ISA board, we need to add the following:

-netdev user,id=usernet -device ne2k isa,irq=5,netdev=usernet

Our file should then read as follows:

#### #!/bin/bash

qemu -fda floppies/blankfloppy.img
-hda freedos.img -cdrom
iso/fdsrc11.iso -boot c -m 32 -soundhw
sb16 -netdev user,id=usernet -device
ne2k\_isa,irq=5,netdev=usernet -serial
/dev/ttyACMO -parallel
file:printer0.ps

Save the file and run **freedos**. When FreeDOS starts up, type **dir** to verify that the driver has been transferred to the disk image.

```
(588K)
                                          601,984 (588K)
 Drives Assigned
       Driver Unit
FDCD0001 0
 drive(s) available.
one processing startup files C:\FDCONFIG.SYS and C:\AUTOEXEC.BAT ype HELP to get support on commands and navigation
 cloome to the FreeDOS 1.1 operating system (http://www.freedos.org)
:\>dir
Volume in drive C is FREEDOS2012
Volume Serial Number is 0D38-1CE3
 JTOEXEC BAT
                            1,235
                                     05-09-2012
                                    08-28-2006
05-09-2012
 IMMAND COM
                          66,945
 DOONFIG SYS
                              848
 ERNEL
                          45,344
                                   06-21-2011
07-15-2012
          EXE
6 file(s)
1 dir(s)
                            643,588 bytes
424,255,488 bytes free
```

Success. The file called **PRODOS.EXE** contains the driver files for the E1000 network card.

Now, let us create a directory to unpack the executable. For this article, let us call this directory **E1000** for the name of the emulated network card.

So, we type the following lines:

mkdir e1000 copy prodos.exe e1000 cd e1000

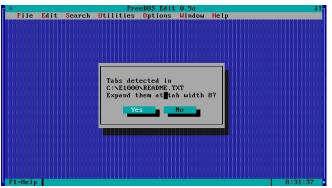
...and we should see the following:

```
drive(s) available.
 ne processing startup files C:\FDCONFIG.SYS and C:\AUTOEXEC.BAT
 pe HELP to get support on commands and navigation
 lcome to the FreeDOS 1.1 operating system (http://www.freedos.org)
Volume in drive C is FREEDOS2012
Volume Serial Number is 0D38-1CE3
Directory of C:\
                         DOS
UTOEXEC BAT
DOTSECT BIN
                        66,945 08-28-2006
848 05-09-2012
45,344 06-21-2011
DCONFIG SYS
ERNEL SYS
         EXE
6 file(s)
1 dir(s)
                      528,704 07-15-2012 2:53a
                          643,588 bytes
424,255,488 bytes free
 \>mkdir E1000
 :\>copy prodos.exe e1000
rodos.exe => e1000\prodos.exe
 \>cd e1000
\E1000>
```

Though **PRODOS.EXE** is a self extracting file, it cannot be extracted from within FreeDOS. This file was intended to be self extracted from *Windows*. Fortunately, this file will extract with **unzip**.

Hence, we will need to type in **unzip prodos.exe**. We get the following:

The file we want is called **e1000odi.com** and it is located in **C:\E1000\PRO1000\DOS**. Also, there is a file called **readme.txt**. Let us read this file using **EDIT** (next page).



Answer **Yes** to this question as it is typical in DOS text files for an indent to be equivalent to eight spaces.

This file is a set of release notes for the driver intended to be used on Windows and OS/2. Scrolling down this list reveals a list of supported network adapters.

```
FreeDOS Edit 0.9a

File Edit Search Utilities Options Window Help

README.TXT

Intel(R) PRO/1000 Gigabit Server Adapter
Intel(R) PRO/1000 PM Network Connection
Intel(R) 82562V 10/100 Network Connection
Intel(R) 82562V 110/100 Network Connection
Intel(R) 825660M Gigabit Network Connection
Intel(R) 825660C Gigabit Network Connection
Intel(R) 825660C-2 Gigabit Network Connection
Intel(R) 825660C-2 Gigabit Network Connection
Intel(R) 82562V-2 10/100 Network Connection
Intel(R) 82562C-2 10/100 Network Connection
Intel(R) 82567V-2 Gigabit Network Connection
Intel(R) 82567V-2 Gigabit Network Connection
Intel(R) 82567V-2 Gigabit Network Connection
Intel(R) 82567V-3 Gigabit Network Connection
Intel(R) 82577DC Gigabit Network Connection
Intel(R) 82577DC Gigabit Network Connection
Intel(R) 82567V-4 Gigabit Network Connection
Intel(R) 82567V-3 Gigabit Network Connection
Intel(R) 82567V-4 Gigabit Network Connection
Intel(R) 82567V-3 Gigabit Network Connection
Intel(R) 82567V-4 Gigabit Network Connection
Intel(R) 82567V-3 Gigabit Network Connection
Intel(R)
```

Notice that this driver set also supports the **i82562** device, not just the **e1000**, so we could substitute **i82562** for **e1000** in the QEMU parameters for networking.

...and here are the release notes for using the i82562 device with the **e1000** drivers (center top).

We can also use any of the **i82598** and **i82599** devices mentioned earlier as well. Here are the notes regarding the use of these devices.

```
FreeDUS Edit 9.9a

File Edit Search Utilities Options Window Help

README.TXT

Intel(R) 82562V and 82562GT 10×100 Network Connection Notes

The Intel(R) 82562V 10×100 Network Connection and Intel(R) 82562V 10×100

Network Connection are supported by the gigabit drivers.

Intel 106bE Network Adapter Notes

Attaching the cable to the Intel(R) 10 Gigabit AF DA Dual Port Server Adapte may require significant force. The cable must be latched in for proper operation.

When 82599-based SFF+ devices are connected back to back, they should be set the same Speed/Duplex setting. Results may vary if you mix speed settings.

Some Intel(R) 10 Gigabit Network Adapters and Connections support SFP+ pluggable optical modules.

File(p) Commands for manipulating files 8:41:39
```

```
File Edit Search Utilities Options Window Help

README.TXT

12

02599-Based adapters support all passive and active limiting direct attach cables that comply with SFF-8431 v4.1 and SFF-8472 v10.4 specifications.

82598-Based Adapters

NOTES:

* Intel(R) Network Adapters that support removable optical modules only support their original module type (i.e., the Intel(R) 10 Gigabit SR Dual Port Express Module only supports SR optical modules). If you plug in a different type of module, the driver will not load.

* Hot Swapping/hot plugging optical modules is not supported.

* Only single speed, 10 gigabit modules are supported.

* LAN on Motherboard (LOMs) may support DA, SR, or LR modules. Other module types are not supported. Please see your system documentation for details.

The following is a list of SFP+ modules and direct attach cables that have received some testing. Not all modules are applicable to all devices.

Filelip

Commands for manipulating files 8:44:80
```

Select **File**, then **Exit** to exit the editor. Now type **cd pro1000\dos** to get to the directory where the driver is located.

```
inflating: PR0100/DUS/comsetup.inf
inflating: PR0100/DUS/protocol.ini
creating: PR01000/DUS/protocol.ini
creating: PR01000/DUSS/
creating: PR01000/DUSS/DS-ODI/dostrb.htm
inflating: PR01000/DUSS/DDS-ODI/dostrb.htm
inflating: PR01000/DUSS/DDS-ODI/dostrb.htm
inflating: PR01000/DUSS/DDS-ODI/driv_dos.htm
inflating: PR01000/DUSS/DDS-ODI/rote.gif
inflating: PR01000/DUSS/DDS-ODI/rote.gif
inflating: PR01000/DDS-0DS-0DI/rote.gif
inflating: PR01000/DDS-0DS-0DI/rote.gif
inflating: PR01000/DDS-0DS-0DI/rote.gif
inflating: PR01000/DDS-0DS-0DI/rote.gif
inflating: PR01000/DDS-0DS-0DS-0DI/rote.gif
inflating: PR01000/DDS-0DS-0DS-0DI/rote.gif
inflating: PR01000/DDS-0DS-Net.cfg
inflating: PR01000/DDS-Net.cfg
inflating: PR01000/DDS-Net.exe
inflating: PR010
```

Type **e1000odi**, then type **Isl**. The network driver will load.

```
Inflating: PR01000-DDS/net.cfg
inflating: PR01000-DDS/netx.exe
inflating: PR01000-DDS/netx.exe
inflating: PR01000-DDS/netx.exe
inflating: PR01000-DDS/netxcol.ini
inflating: PR01000-DDS/netocol.ini
inflating: //readme.txt
extracting: //readme.txt
extracting: //readme.txt
FreeDOS EDIT 0.9a (0.91.0)
(based on FreeDOS DFlat* 1.0 application framework)
C:\E1000\cdot pr01000\cdot dos
C:\E1000\cdot PR01000\cdot DSS\close\cdot PR01000\cdot dos
C:\E1000\cdot PR01000\cdot DSS\close\cdot PR01000\cdot dos
C:\E1000\cdot PR01000\cdot DSS\close\cdot DSS\close\cdot DSS\close\cdot DSS\close\cdot DSS\close\cdot DSS\cdot DS\cdot DS\cdot DSS\cdot DS\cdot DS\cdot DS\cdot DS\cdot DSS\cdot DS\cdot DS
```

The second command (IsI) verifies that the driver has been loaded. Let us take a look at **net.cfg** in this directory.

We just got the emulated Intel E1000 working. Now, how do we get the driver to load when we start FreeDOS? By editing **C:\AUTOEXEC.BAT.** 

Type the following:

cd c:\
edit autoexec.bat

(Image top, next page)



Now we scroll through this file.

```
FreeDUS Edit 0.9a

File Edit Search Utilities Options Window Help

BUTOEXEC.BAT

REM MODE CON CP PREP=(0858) C:\FDOS\CPINEGA.CPX)

REM KEYB US.856,C:\FDOS\CPINEGA.CPX)

REM CHCP 858

REM LH PCNTPK INT=0x60

REM DHCF

MOUSE

DEULAND /H /Q xdosdirx/BIN\UIDE.SYS /H /D:FDCD0001 /S5

SHSUCDX /Q /~ /D:7SHSU-CDR,D /D:7SHSU-CDH,D /D:7FDCD0001,D /D:7FDCD0002,D /

MEM /C /N

IF NOT "xconfigx"=="4" SHSUCDX /D

GOTO EHD

:END

SET AUTOFILE=x0

SET CFGFILE=C:\FDCOHFIG.SYS

alias reset=fdisk /reboot

alias halt=fdapm poweroff

alias cfg=edit xcffilex

alias auto=edit x0

FI=Help Commands for manipulating files 9:08160
```

Scrolling to the end of the file shows the following:

```
FreeDUS Edit 0.9a

File Edit Search Utilities Options Window Help

AUTOEXEC.BAT

BRENDHCP
MOUSE

DEULAND /H /Q xdosdirx/BINVUIDE.SYS /H /D:FDCD0001 /S5
SHSUCDX /Q0 /~ /D:7SHSU-CDR,D /D:7SHSU-CDH,D /D:7FDCD0001,D /D:7FDCD0002,D /
MEM /C /N

IF NOT "xconfigx" == "4" SHSUCDX /D
GOTO END

:END

SET AUTOFILE=:0

SET CFGFILE=C:**FDCONFIG.SYS
alias reboot=fdapm warmboot
alias neset=fdisk /reboot
alias shalt=fdapm poweroff
alias squad-edit //0
echo Done processing startup files xcfgfilex and x0
echo Type HELP to get support on commands and navigation
echo.
echo Welcome to the FreeDUS 1.1 operating system (http://www.freedos.org)
echo Welcome to the FreeDUS 1.1 operating system (http://www.freedos.org)

FileHelp

Commands for manipulating files 9:69457
```

Now, we need to find a spot to insert the command to load the **e1000** driver. We scroll back to the

beginning of the file. A good place to insert the command is after the **LH DOSLFN** command as highlighted below:

```
File Edit Search Utilities Options Window Help

autoexec.bat

echo off
Set Lang-en
Set Mitter-Core
Set Mitter-
```

Place the cursor after the highlighted line, and press Return to insert a blank line below. Now type C:\E1000\PRO1000\DOS\E1000ODI and save the file. Select File, then select Save (or simply press Control-S) to save AUTOEXEC.BAT.

Now exit the editor. We now have the **E1000** driver configured for FreeDOS. Next, type **cp tcp16.exe c:\e1000** to get the TCP/IP driver into the directory where the E1000 driver has been installed.

Besides the Novell client, Microsoft has a DOS Client available for download that provides TCP/IP as well as the NetBEUI service.

#### If you choose to use many-other-drivers.zip

An alternate configuration for QEMU is to configure networking to emulate a Novell NE2000 (the **ne2k\_pci** and **ne2k\_isa** devices). If you do this, you will not need the Novell TCP/IP packet driver as *many-other-drivers.zip* contains TCP/IP built in to the driver.

```
Volume in drive C is FREEDOS2012
Volume Serial Number is 0D38-1CE3
  Directory of C:\
                                    <DIR> 07-15-2012 8:19a
                                    <DIR> 05-09-2012
 AUTOEXEC BAT
                                    1,270 07-15-2012
512 05-09-2012
COMMAND COM
FDCONFIG SYS
KERNEL SYS
MANY-0~1 ZIP
PRODOS EXE
TCP16 EXE
                                  66,945 08-28-2006
848 05-09-2012
45,344 06-21-2011
                                435,420 07-15-2012
528,704 07-15-2012
                                    339 07-15-2012 9:51a
1,079,382 bytes
422,256,640 bytes free
              8 file(s)
2 dir(s)
   :\>del prodos.exe
one file removed.
C:\>copy tcp16.exe c:\e1000
   cp16.exe => c:\e1000\tcp16.exe
:\>del tcp16.exe
   ne file removed
    >mkdir crynwr
```

The many-other-drivers.zip appears here as MANY-O~1.ZIP. This is due to the limitations of the FAT16 filesystem, which does not support long filenames when running DOS. Create a directory called CRYNWR to store the drivers for this file. Copy MANY-O~1.ZIP to CRYNWR. Then CD CRYNWR and then UNZIP MANY-O~1.ZIP to unpack the files.

To activate the TCP/IP Driver, type:

#### ne2000 0x60 0x05 0x300

and you should have a working TCP/IP connection with a MAC address. The first parameter should be a hexadecimal value from 0x60 through 0x66, 0x68 through 0x6F, or 0x78 through 0x7E. These are interrupt vectors available to network cards running under DOS.

The second parameter is the Interrupt Request (IRQ) for the network card itself. I recommend **0x05** for this to work under QEMU as we specified this in the **freedos** batch file.

The third parameter is the I/O address assigned to the network card. For QEMU, this is **0x300**. We can change this in the **freedos** batch **file** by adding the **io=** parameter to the **-device** parameter we specified for the network card.

We need to edit AUTOEXEC.BAT so it reads as follows:

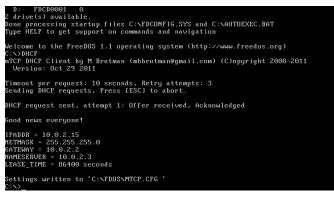


Reboot FreeDOS, and we should get a working TCP/IP connection.

The presence of NE2000 in the modules list indicates that the packet driver is available and working.

If you want DHCP service, type **DHCP** to get an IP address. By default, QEMU uses a bridged network, that is, QEMU shares the same Internet connection with the PCLinuxOS host. This may or may not be what you want.

Here, FreeDOS is sharing the Internet connection with PCI inuxOS.



Other Packages Required on the PCLinuxOS Side

Besides the QEMU packages, **qemu** and **qemutools**, there are some other packages that need to be installed from Synaptic on PCLinuxOS.

**ipxutils**: This is used to configure IPX interfaces on PCLinuxOS (especially if you plan to use ODI drivers in QEMU).

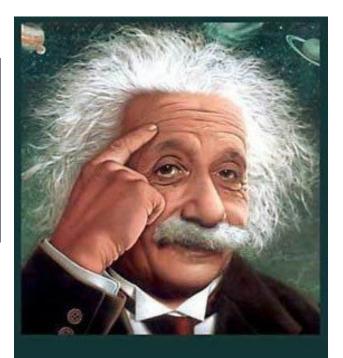
**libncpfs**: This library handles Novell Netware filesystems on PCLinuxOS.

**vde**: This is Virtual Distributed Ethernet, the mechanism that makes communication between actual PCLinuxOS machines and virtual machines (such as QEMU and VirtualBox) possible.

Also, if you are planning to use NetBEUI, you will need at least the **samba** packages. The easiest way to accomplish this is to install the **task-samba** metapackage in *Synaptic*.

As for the Microsoft client, that client is no longer publicly available.





It's easier than E=mc²
It's elemental
It's light years ahead
It's a wise choice
It's Radically Simple
It's ...



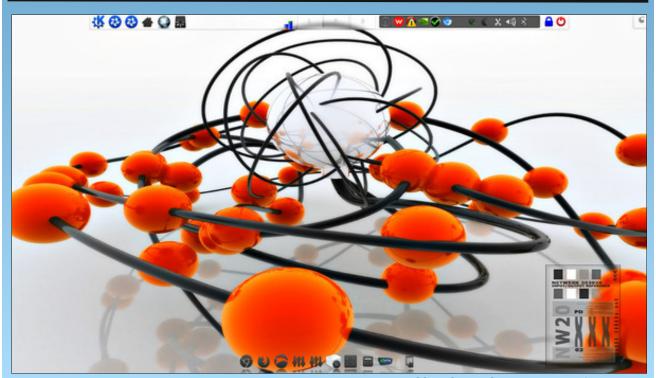








## Screenshot Showcase



Posted by zakoz, July 23, 2012, running KDE 4.

# Customize Your Default Search Engine In Opera

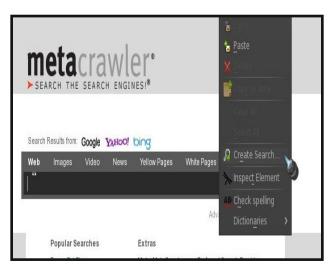
#### by T6

I don't like to use Google as my default search engine. It is good, but sometimes it doesn't do what I need. I used to work with metacrawler, until I abandoned Firefox. In Opera, I couldn't find a way to add metacrawler directly. That is, until I found the steps required to do it.

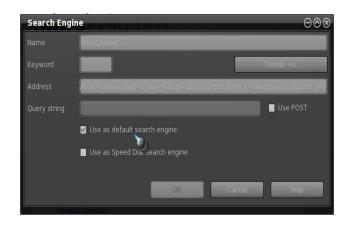
First, open Opera web browser.

**Second**, in the address bar enter the address of the search page you prefer. In my case, I entered www.metacrawler.com.

**Third**, right click on the search box, then select "Create Search..."



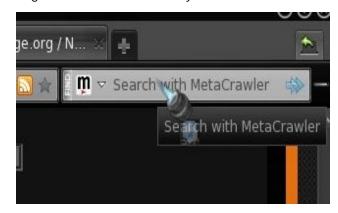
**Fourth**, in the search engine window you can assign a name for the new search engine, a keyword, mark "Use as default search engine" to replace Google or your current search engine, and "Use as speed dial



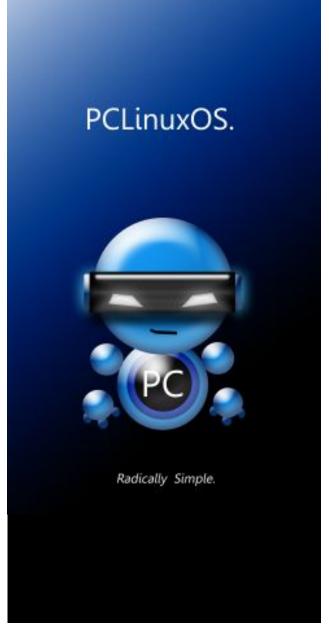
Just mark what you need, and press OK.

**Don't modify the address**, or the new search engine will not work.

If you marked "Use as default," the new search engine should be immediately available.



I tried this process with Bing, Yahoo, Google, and Ask, among others, and it worked well.



# Download YouTube Videos The Light Way

#### by longtom & longtomjr

I have an oldish PC. Ok – it's an old brick. I know, I know. That means that downloading videos from the popular hosting sites like YouTube always meant use of quite a lot of resources. So, I was browsing

around for a program that could do this cheaply in a terminal. I found youtube-dl.

I tried it and it worked very well. I figured out how to make sure the resolution I like is downloaded, the file name is the way I want it. etc.

Longtomjr felt it would be a lot cooler to make this easier to use with a bash script and zenity.

So this is what you need to do.

Download youtube-dl from here. Right click on the date and choose "Save Link As..." This will give you the most up-to-date version of youtube-dl, which is a Python script with no external dependencies (making it safe to use on your system, without fear of borking your installation).

Meanwhile, download longtomjr's custom bash script, Youdl.sh, from here, or enter the following in your favorite text editor (saving it as youdl.sh):

#!/bin/bash

cd ~/Downloads

if [ \$szReso == 720 ]

fi

szAnswer=\$(zenity --entry --text "Enter Link" --entry-text "link"); echo \$szAnswer

szReso=\$(zenity --list --text "Chose
Resolution" --radiolist --column "Pick" -column "Resolution" False "720" True "480"
FALSE "360" FALSE "240");
echo \$szReso

szSavePath=\$(zenity --file-selection directory);echo \$szSavePath cd \$szSavePath

then
~/bin/youtube-dl.py -1 -f 45 \$szAnswer
fi

if [ \$szReso == 480 ]
then
~/bin/youtube-dl.py -1 -f 35 \$szAnswer



#### **Download YouTube Videos The Light Way**

```
if [ $szReso == 360 ]
then
   ~/bin/youtube-dl.py -1 -f 34 $szAnswer
fi

if [ $szReso == 240 ]
then
   ~/bin/youtube-dl.py -1 -f 5 $szAnswer
fi

zenity --info --text "Session complete,
press ok"
```

Create a folder /home/you/bin, and copy youtube-dl and Youdl.sh into /home/you/bin. Be sure that both files are marked to be run as an application.

At that point, I renamed youtube-dl to youtube-dl.py

Run Youdl.sh in a terminal. It will run without a terminal, but then you can't see the progress.

We decided to make a .desktop file in order to have it in the menu (PCLinuxOS LXDE).

If you would like something similar, here is the .desktop file. Alternatively, you can enter the following in your favorite text editor, and save it as YouTubeLight.desktop (or any other name that you wish to call it).

[Desktop Entry]
Name=YouTube downloader
GenericName=Download Manager
Comment=Simple Youtube Download Manager
Exec=/home/longtom/bin/Youdl.sh
Icon=/home/longtom/icons/YT\_download.png
Encoding=UTF-8
Version=0.1
Type=Application
Terminal=true
StartupNotify=false
Categories=Utility;X-MandrivaLinux-System-FileTools;

Replace the red text with your username, and save it in /home/you/.local/share/applications/. (Thanks, Leiche!)

That's where we called it a day. It does what we wanted and then some. Maybe you will find some use for it, too.

We found that it works with:

YouTube.com.

YouTube.com playlists (playlist URLs ir "view\_play\_list" form).

YouTube.com searches, using the special keyword "ytsearch" as a form of URL, as in "ytsearch:cute kittens". Do not forget the quotes if you want to include spaces in your search. Other variants are "ytsearchN" to download more than the first result, with N being a number, and "ytsearchall".

YouTube.com user videos, using user page URLs or the specifc "ytuser" keyword.

metacafe.com.

Google Video.

Google Video searches ("gvsearch" keyword).

Photobucket videos.

Yahoo! video.

Yahoo! video searches ("ybsearch" keyword).

Dailymotion.

DepositFiles.

blip.tv.

vimeo.

myvideo.de.

The Daily Show/Colbert Nation.

The Escapist.

A generic downloader that works in some sites.

There you go! Now you can join me and Junior in downloading YouTube videos (and videos from other streaming sites) the light way.

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

PCLinuxOS Magazine's
searchable index!

The PCLinuxOS magazine



### Asunder: A Brief Review

#### by longtomjr

"Asunder is a graphical Audio CD ripper and encoder for Linux. You can use it to save tracks from an Audio CD as any of WAV, MP3, OGG, FLAC, WavPack, Musepack, AAC, and Monkey's Audio files." ~ Asunder official website

Asunder is surely a nifty, light and simple tool with a lot of features. As mentioned above, it can rip your CDs to almost any format. Another plus point is that it has a CDDB lookup integrated, so you can just insert your CD – wait for a couple of seconds, and voila – you have all your CD's info. Now you just go ahead and rip it.

In the Preferences menu you can choose a lot of stuff. Example: create M3U playlist, your destination folder, your format and some other settings for the brave. Just a little warning. When you choose your format, make sure you don't have two formats selected. This happens to me all the time - unless you want to.

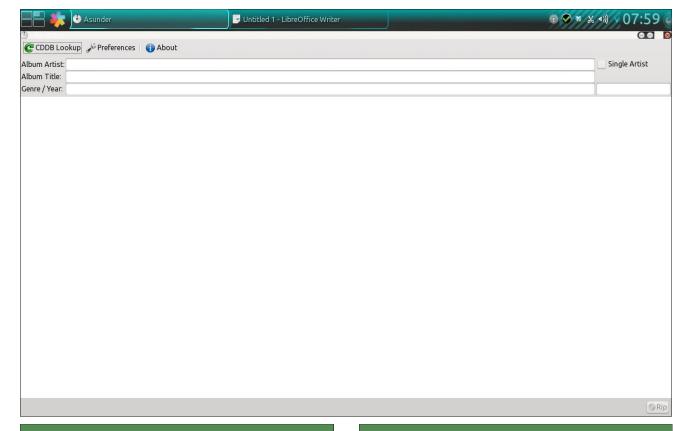
Just a two more notes:

To rip to MP3s, you will need Lame installed from the package manager.

Always make sure of your settings before you rip. You don't want your AACs in your bin directory.

Have fun ripping with Asunder!





### **Visit Us On IRC**

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

### **Reach Us On The Web**

PCLinuxOS Magazine Mailing List:

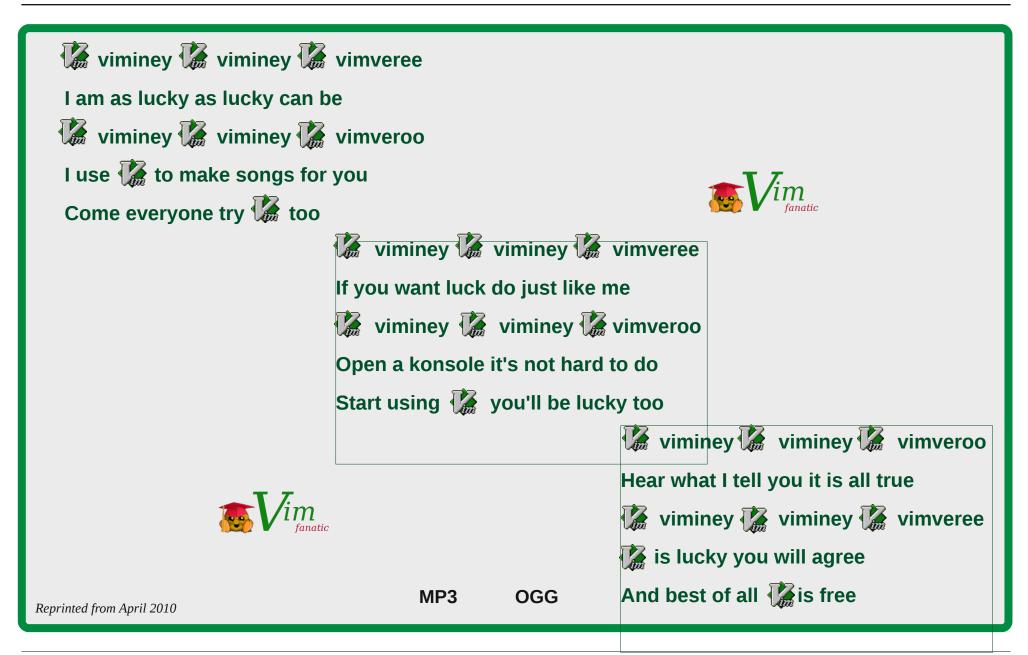
http://groups.google.com/group/pclinuxos-magazine

PCLinuxOS Magazine Web Site: http://pclosmag.com/

**PCLinuxOS Magazine Forums:** 

http://www.pclinuxos.com/forum/index.php?board=34.0

# ms\_meme's Nook Reprise: Vim Viminey Vim Viminey Vim Vimveree



PCLinuxOS Magazine Page 41





## Screenshot Showcase



Posted by RobNJ, July 10, 2012, running e17.

# Embed PDFs In Firefox With Evince Via Mozplugger

#### by Paul Arnote (parnote)

If you happen to run the KDE version of PCLinuxOS, whenever you click on a PDF, the file opens in an embedded Okular window inside of Firefox. But what if you are running the E17, LXDE, Xfce, Gnome or Openbox desktop? Surely you won't be too crazy about installing Okular, which brings in most of KDE with it, along with all of its Qt4.x dependencies. To do that, you might as well just install KDE.

Fortunately, there IS another alternative. Thanks to mozplugger (in the PCLinuxOS repository), you can have Firefox open PDFs in an Evince window embedded right in Firefox. Yep. That's right. Any PDF file you click on will open in a new tab, populated with the PDF file displayed in an embedded Evince window (with one exception, which we'll cover later).

#### **How It Works**

The whole process of setting this up is easy. First, search for and install mozplugger from the PCLinuxOS repository.

Next, open your terminal program and type the following at the command prompt (all on one line):

mousepad /home/YourUsernameHere/
.mozilla/mozpluggerrc

Replace "mousepad" with your favorite text editor (leafpad, gedit, geany, etc.), and replace "YourUsernameHere" with the login name you used when you signed into your session. Since we're using the command line, you can also replace "/home/YourUsernameHere" with ~.

Now, enter the following lines into your text editor:

application/pdf: pdf: PDF file
application/x-pdf: pdf: PDF file

text/pdf: pdf: PDF file
text/x-pdf: pdf: PDF file

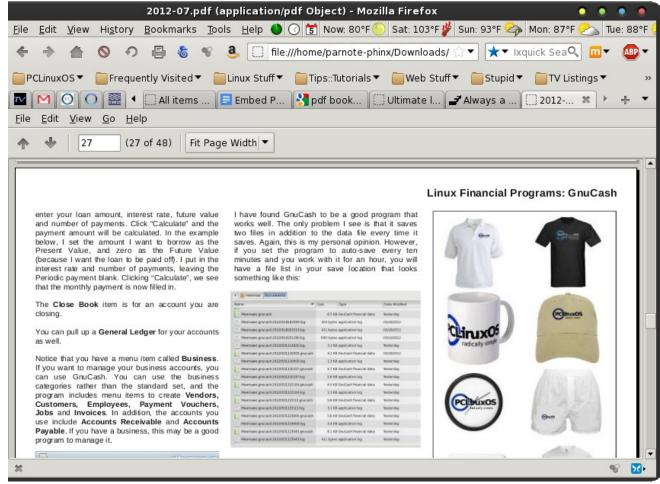
application/x-postscript: ps: PostScript

file

application/postscript: ps: PostScript file

repeat noisy swallow(evince) fill:
evince "\$file"

Save the file (just select File > Save and the file will be written to the location you specified on the command line), and restart Firefox.



July 2012 issue of The PCLinuxOS Magazine displayed in Firefox, inside an embedded Evince window.

#### **Embed PDFs In Firefox With Evince Via Mozplugger**

When Firefox has restarted, go find a PDF file on the web (that shouldn't be too hard) and click on it. If you did everything properly, you should see the PDF file open in the current tab in Firefox, displayed in an embedded Evince window.

#### **Caveats & Customization**

Take note that the magazine PDF downloads will not work using this method, since the download of those files are managed by a \*.php script on the magazine web site. In fact, any PDF download managed by a \*.php script will bypass Mozplugger. However, once you've downloaded the magazine PDF, you can select File > Open File..., then select the magazine PDF file you just downloaded. The magazine PDF will then open in the current tab in Firefox. Of course, it is just as easy to open the PDF file (at that point) in Evince's own window.

When you installed mozplugger via Synaptic, a default mozpluggerrc file was also installed to your /etc folder. Mozplugger will use the first mozpluggerrc file it finds, looking first in the .mozilla directory in your /home folder, then in a series of other folders in your path. To see the list, along with the order of directories it searches for the mozpluggerrc file, type **man mozplugger** at the command line. As an insurance policy, a backup mozpluggerrc file is also installed to your /etc directory, named mozpluggerrc.default.

While you *could* edit the mozpluggerrc file in /etc (you can only edit it as the root user), I think it's safer to simply create and edit the mozpluggerrc file in your .mozilla folder. It does not require root access to edit, and if you mess things up, you can always just delete it and start over, without fear of losing any functionality. Go ahead and take a look at the mozpluggerrc file in your /etc folder. If you see some functionality you'd like to enable (such as viewing LibreOffice files right in Firefox), copy that section of the mozpluggerrc file in /etc and paste it into the

mozpluggerrc file in the .mozilla directory in your /home directory.

Also, if you prefer to use a different PDF viewer than Evince (such as xpdf or epdfview), replace "(evince)" in the last line of the above entry in the mozpluggerrc file with the name of your preferred PDF viewer. Again, check the mozpluggerrc file in your /etc directory for specific examples.

Say you had mozplugger handling the opening of certain file types, but now you want to prevent mozplugger from opening them. Just as easily as you created the mozpluggerrc file, you can edit it to exclude them from having mozplugger handle them. Simply find the relevant section in the mozpluggerrc file and place a # in front of each line related to that file type. The # at the beginning of the line causes mozplugger to treat the line as a comment, and it skips those lines. This way, if you ever want to change back to having mozplugger handle the display of those file types, you only have to remove the #, re-save the mozpluggerrc file, and restart Firefox.

#### **Summary**

If you do everything correctly, mozplugger can add a lot of convenience and functionality to Firefox, enabling it to display file types right in its own tabs that you would otherwise have to open in a separate application window. Mozplugger can add a lot of power to an already powerful Firefox.



The PCLinuxOS Magazine

Created with Scribus 1.3.9



**Open Source Initiative** 



### Want To Help?

Would you like to help with the PCLinuxOS Magazine? Opportunities abound. So get involved!

You can write articles, help edit articles, serve as a "technical advisor" to insure articles are correct, create artwork, or help with the magazine's layout.

Join us on our Google Group mailing list.



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

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

### **Testimonials**

### Never Fails to Amaze Me by plankton172

Yesterday, I bought a drawing tablet for my 13-yr old son: a Genius F509. I initially contemplated on getting the more expensive Wacom Bamboo, but since this is the first pen tablet he's use, we'll find out first if this model will do until we see the need to upgrade. I got home and booted the desktop PC to Win7 and installed the tablet (it required the driver on the included CD-ROM to properly install). I tested it on GIMP, and it was okay. I restarted the PC and booted to PCLinuxOS. Without installing anything, I tested the tablet on GIMP. Lo and behold - not only did it work out-of-the-box, the pen tablet even seemed more responsive than it was while running in Win7! This OS just hits one home run after another! How can I say that? It's because it's the same with my iPod, Kindle, Novo7 Android tablet, Panasonic digicam, Samsung cellphone ... it recognizes virtually all external devices I plug into it. Everything not only works, it makes working with gadgets even better and way smoother.

It's actually been more than a year since I first tried PCLinuxOS. At first, I thought it was just going to be my "backup" OS. It only took a few weeks before I realized it's more appropriate to make it my \*main\* OS. I actually want to make it my \*only\* OS, if not for my wife and son who still need Win7 for a few things to be done.

I guess there is little to say about PCLinuxOS that hasn't been said already. It's (radically) simple to install, maintain and use. There is a little bit of a learning curve, but it is not very steep. The forum and magazine are extremely useful in getting info and help. Were they not, then I don't think I would be using this for so long.

I have only one nagging problem on my desktop PC install which I have never quite solved 100%. I suspect it involves flash and/or the video card drivers, but I will post that matter in the proper section.

Until then, thank you and MABUHAY, PCLinuxOS!



One of a Kind by andy

To all involved with the creation and support of PCLinuxOS and to anyone thinking of going this OS route,

Due to work taking most of my time, I had strayed away from Linux for about 3+ years until the spring of 2011 or so. My last Linux install had been RHL v.8, and I liked it just fine. Work started slowing and I

was again looking around at Linux. I then found out that since I left the circle momentarily, that the above mentioned distro was no more, sort of. I started downloading/installing a lot of various distros and desktop versions.

After a 17 OS multi-boot Linux install of various distros and all of them alongside two versions of that other monopoly (for gaming), PCLinuxOS KDE and Full Monty KDE created a look and feel with their OS that has become home for me. I played around with each one of the 17 multi-boot installs for about five or six months to see what might happen, or not happen, and found that PCLinuxOS KDE says what it does and does what it says. It just flat out runs, and runs, and runs. I especially liked that it utilized the RPM based repo as well, since I recalled that my previous Linux installs utilized it.

My old single core AMD XP3200 was showing its age with today's KDE. I just couldn't see anything better than a fresh new up to date system with PCLinuxOS as the mainstay. KDE was OK on the old setup, but when multi-tasking, the old system showed its age.

I really like all the eyecandy of the KDE of today, and the PCLinuxOS version is by far the easiest to manage out there for me.

I have converted four people in the last six months to PCLinuxOS KDE. Two of the four were ready to have only Linux and to be done with with the other guys. The other two had family that wanted to utilize software they already had for some projects and aren't really going to be the admin to their system or interested in learning wine or VirtualBox. I'll be their admin now, and those two now have a dual boot setup. They are very happy, as am I.

### More Screenshot Showcase



Above: Posted by Crow, July 12, 2012, running KDE 4. Below: Posted by T6, July 3, 2012, running KDE 4.





Above: Posted by ferry\_th, July 3, 2012, running Openbox. Below: Posted by LKJ, July 2, 2012, running Gnome.

