



# Full Circle

THE INDEPENDENT MAGAZINE FOR THE UBUNTU LINUX COMMUNITY

ISSUE #49 - May 2011

LINUX LABS  
SWAPPINESS - PT. 2



**NEW  
SERIES!**

**UBUNTU  
DEVELOPMENT**

**NEW  
COLUMN!**

**THE READERS HAVE SPOKEN**  
YOUR THOUGHTS ON UBUNTU 11.04'S UNITY INTERFACE

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## HowTo



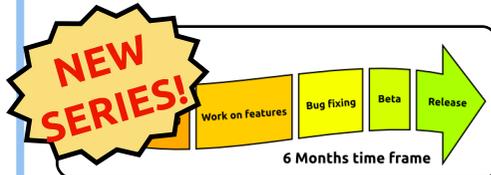
Program In Python Pt22 p.07

The Title of Article  
by Author

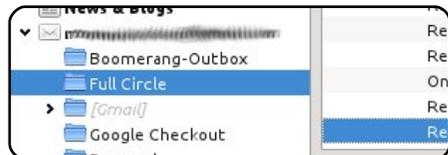
That didn't bode well. Who could be following  
about part of town? And at this particular moment,  
and was making off with the greenbacks. Was



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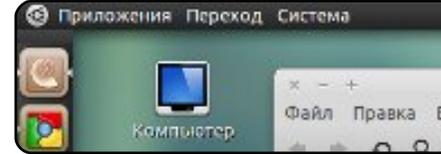


# Full Circle

THE INDEPENDENT MAGAZINE FOR THE UBUNTU LINUX COMMUNITY



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#An alias to make the
command more detailed
alias ls = "ls -la --
color=always --classi
```

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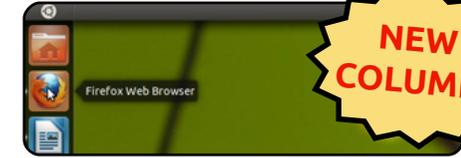
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# EDITORIAL

## Welcome to another issue of Full Circle!

**W**ell, I'm sure that most of you will have upgraded to 11.04 by the time you read this, and the debate rages on about Unity. Reader comments about Unity are featured on page 27. Posing a question, and letting you folks answer it is something I want to keep each month. Although, from this issue onwards, I won't be using email. For the Unity question, I received approximately 250 emails in one day - that went from short comments to a full page rant. All of which I had to sift through! For this month, I've created a short Google Form for you to complete.

Also starting this month is Daniel Holbach's series of articles dealing with Ubuntu development. The first part shows the development process for the six-month cycle. Very interesting! I've written an article on how to use Google (Gmail, Docs, etc.) in Thunderbird. It's not definitive, but it shows just how powerful Thunderbird is with its addons.

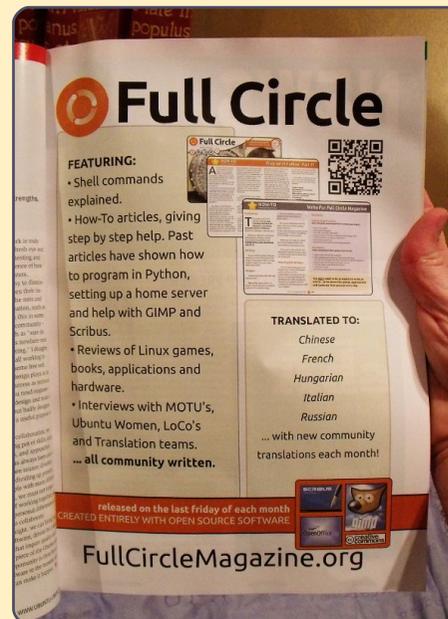
You'll notice (I hope!) that I've redesigned the contents page. This is to group articles together and to try and make sure all articles are on the contents page, rather than just some as I had it before.

And, finally, keep your eyes peeled when flipping through the latest issue of Ubuntu User magazine. We advertise Ubuntu User on our site, and they, in turn, are kind enough to advertise FCM in their magazine with a full page ad!

**All the best, and keep in touch.**

*Ronnie*

[ronnie@fullcirclemagazine.org](mailto:ronnie@fullcirclemagazine.org)



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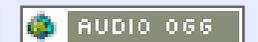
## Full Circle Podcast

Released every two weeks, each episode covers all the latest Ubuntu news, opinions, reviews, interviews and listener feedback. The Side-Pod is a new addition, it's an extra (irregular) short-form podcast which is intended to be a branch of the main podcast. It's somewhere to put all the general technology and non-Ubuntu stuff that doesn't fit in the main podcast.

### Hosts:

Robin Catling  
Ed Hewitt  
Dave Wilkins

<http://fullcirclemagazine.org>





## Miro 4 hopes to fill Android's iTunes void

The open-source audio and video jukebox Miro debuts a new version that wants to be iTunes for Android. Miro 4 for Windows, Mac, and Linux, adds simple and effective desktop-to-Android synchronization to the program, which also offers media file conversion, torrent management, podcast catching, and media discovery. The Android syncing features focus on music and videos and includes built-in app browsing and management via in-program access to the Google Android Marketplace and the Amazon.com Android Marketplace.

“We set the bar very high. We want to be the open iTunes,” said Nicholas Reville, co-founder and executive director of the Participatory Culture Foundation, which publishes Miro and the Miro Video Converter, a separate program that also comes baked into the standard Miro.

Source: cnet.com

## Linux Mint 11 and Fedora 15

Fedora 15, or "Lovelock," and Linux Mint 11, or "Katya," both made their grand entrances onto the world stage in the past few days, giving users of the free and open source Linux operating system yet more compelling options to choose from.

[T]he final release of Fedora 15 launched [...] to a global audience of fans eager to check out its implementation of the GNOME 3 desktop.

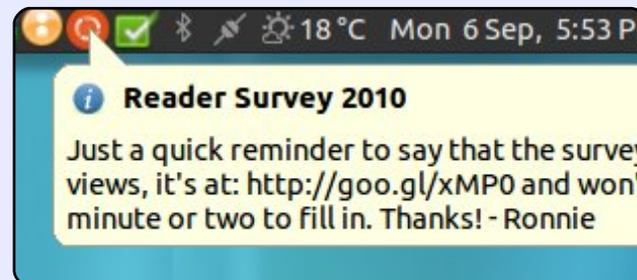
Linux Mint 11 "Katya" uses neither Unity nor GNOME 3; rather, the project developers chose to stick with GNOME 2.32 instead, providing a comfortable and familiar option for fans of that desktop environment.

Source: pcworld.com

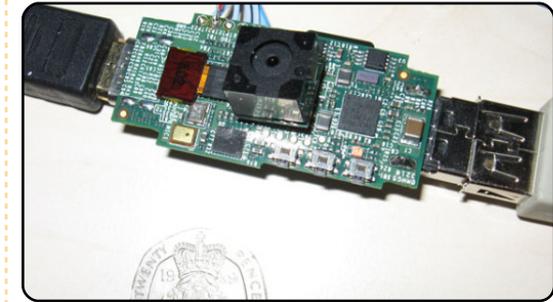
## Full Circle Notifier

Our very own **Full Circle Notifier** is now at 1.0.2. FCN is a small application that sits in your system tray and will not only announce issue/podcast releases, and can be set to automatically download them for you too! Several people have created packages of FCN and translations are starting.

**For more info, see the FCN Google Group:**  
<http://goo.gl/4Ob4>



## Tiny PC Runs Linux



What is it? A fully functioning linux box the size of a USB stick. HDMI: check. USB: check (well, one port, anyway). 700MHz ARM11 processor with 128MB of memory: check. With storage available through an SD card slot, this thing has everything you could want in a computer (except maybe Wi-Fi; at the time of this writing I was unable to confirm networking), and you can carry it on your key-chain.

The Raspberry Pi Foundation [...] expect to in many cases donate these computers through their foundation to interested and deserving students. There's no catch, either, as its creators intend to sell the system for \$25.

Source: pcworld.com



On April 22nd, reader John Niendorf contacted me to request an article on Graphicsmagick. In response to his email, I plan to cover the basic use-cases of graphicsmagick (henceforth referred to as “gm”), a more advanced use (batch processing), and creation of MIFF files as visual image directories.

If your needs are anything like mine, you'll find that gm is excellent if you want to do a batch conversion, or if you want to quickly create a thumbnail from a large image without opening a graphics app. Before reading the list, please take into account that `<something>*` means that it can be repeated indefinitely, and anything in square brackets is optional (but useful to know about). So, without further ado, here's a list of commands I find useful, and keep in mind these are basic frameworks:

**gm identify <file>**  
lists information on format and size of image, and also displays

status of file (incomplete, corrupted, etc).

**gm montage**  
`[<options><input>]* <output>`

Combines all the input files into the single output file, with some formatting options (tiling, display image name below image, etc).

**gm mogrify <options> <input file>**

Transforms the file.

**gm convert <options> <input file> <output file>**

Transforms the file (same as mogrify, except that mogrify overwrites the file).

**gm composite <file to change> <base file> [<mask file>] <output file>**

Merges, blends, and masks the files to create a new image.

This is just a very basic outline of the possible commands, and a basic framework of arguments that can be used with it. As for common options:

**-geometry**  
`<height>x<width><+/-><x><+/-><y>`

This option specifies the geometry of the image window, including x and y offset. Example: `-geometry 1600x1050+10+10`.

**-size <height>x<width>**

This option is passed before the input file, and allows jpeg images to be read in as a small size, in order to cut down processing time. Great for batch creation of thumbnails. Example: `-size 170x160`.

**-thumbnail <height>x<width>**

This option uses preset options to create a thumbnail quickly.

**-resize <height>x<width>**

This option actually scales the image to the supplied size.

**-gaussian <radius>{x<sigma>}**

This option applies a gaussian blur to the image. Sigma refers to the standard deviation. Generally you'll need only the radius option.

**-quality <value>**

This option sets the quality of the output image (for JPG/MIFF/TIFF/PNG). `<value>` can be an integer between 0 and 100 (where 100 = best quality, lowest

**[Graphicsmagick] is excellent if you want to do a batch conversion...**

level of compression).

**-crop <width>x<height>{+-}<x>{+-}<y>{%**

This option allows you to crop the image to the size you specify (and supply an offset).

This list of options should be enough to get you started and experimenting. Once you've found a command you like, with suitable options, you may want to apply it to a large section of files within the current directory. In order to do so, you would use a command similar to this (see below for explanation of options):

```
find . -name "*.jpg" | xargs -l -i basename "{}" ".jpg" | xargs -l -i gm convert -quality 100% "{}.jpg" "{}.png"
```

Here, `find . -name "*.jpg"`

# COMMAND & CONQUER

returns a list of all jpg files in the current directory, which gets passed to xargs, which goes line-by-line ("-l") and removes the suffix(".jpg") from the list ("}") using basename. Afterwards, the list is passed to xargs again, and it then executes gm convert -quality 100% "{}.jpg" "{}.png", which essentially takes each image and converts it to a png file. The middle-step is necessary to avoid having files called "\*.jpg.png" after batch is complete. This trick could also be used for cropping, editing, or resizing a large number of files.

Last, but not least, I'll be covering how to create a visual image directory (a file of thumbnails of the images within a folder). To create the file, use this command:

```
gm convert 'vid:*.jpg'
directory.miff
```

The miff extension stands for the ImageMagick Magick Image File Format. The reason for the format is due to the fact that gm was forked from imagemagick back in 2002. In order to display the file afterwards, simply run the command:

```
gm display directory.miff
```

If you're wondering why this might be useful, imagine having thousands of photos on one PC, and you're looking for a single one. Instead of working on that computer and trying to find the file, you could copy over the miff file and browse it at your leisure, or use it to create a catalogue of thumbnails.

Hopefully you've found the tips in this article helpful, and will continue to put them to good use. If you have any requests or questions, you can reach me at [lswest34@gmail.com](mailto:lswest34@gmail.com). Please put the words "Command & Conquer", "C&C", "Full Circle Magazine", or "FCM" in the subject line, so I don't overlook it. Also, please try to write the emails in English or German, since I otherwise have to rely on Google Translate.



**Lucas** has learned all he knows from repeatedly breaking his system, then having no other option but to discover how to fix it. You can email Lucas at: [lswest34@gmail.com](mailto:lswest34@gmail.com).



## Full Circle Podcast



### Your Hosts:

*Robin Catling*

*Ed Hewitt*

*Dave Wilkins*

Audio: Victoria Pritchard

### Show Notes

00:42	WELCOME and INTRO
01:04	SINCE LAST TIME...
04:55	REVIEW Issue #48 of Full Circle Magazine
12:05	REVIEW: Ubuntu 11.04
57:26	CONTRIBUTE
1.26:23	FEEDBACK
1.27:19	OUTRO AND WRAP



This time, we are going to finish our playlistmaker program. Last time, we got a good bit done, but we left some things incomplete. We can't save the playlist, we don't have the movement functions done, we can't select the file path to store the file in, and so on. However, there are a few things that we need to do before we start coding. First, we need to find an image for the logo for our application in the about box, and for when the application is minimized. You can dig around in the /usr/share/icons folder for an icon you like, or you can go on the web and get one, or create one yourself. Whatever you get, put it into your code folder with the glade file and the source code from last month. Name it logo.png. Next, we need to open the glade file from last month and make a few changes.

First, using the MainWindow, go to the General tab, and scroll down until you find Icon. Using the browse tool, find your icon and select that. Now the text box

should contain "logo.png". Next, in the hierarchy box, select treeview1, go to the signal tab, and, under GtkTreeView | cursor-changed, add a handler for on\_treeview1\_cursor\_changed. Remember, as I told you last month, to click off that to make the change stick. Finally, again in the hierarchy box, select txtFilename, and go to the signal tab. Scroll down until you find 'GtkWidget', and scroll down further until you get to 'key-press-event'. Add a handler for 'on\_txtFilename\_key\_press\_event'. Save your glade project and close glade.

Now it's time to complete our project. We'll start from where we left off using last month's code.

The first thing I want to do is modify the code in class FileDialog. If you remember from last time, if the user clicked the 'Cancel' button, there was an error raised. We will fix that first. At the end of

```
elif response == gtk.RESPONSE_CANCEL:
    print 'Closed, no files selected'
    dialog.destroy()
```

Notice that we aren't returning anything. This is what caused the error. So to fix this, we want to add the following line of code after the dialog.destroy() line.

```
Return ([], "")
```

This will keep the error from happening. Next, let's add the text box event handler we created in glade. To our dictionary, add the following line.

```
"on_txtFilename_key_press_event": self.txtFilenameKeyPress,
```

As you remember, this creates a function to handle the keypress event. We'll next create the function.

```
def txtFilenameKeyPress(self, widget, data):
    if data.keyval == 65293: # The value of the return key
        self.SavePlaylist()
```

the routine, you have the code shown above.

You might imagine, this simply looks at the value of each key that is pressed when the user is in the txtFilename text box, and compares it to the value 65293, which is the code that is assigned to the return key (enter key). If it matches, then it calls the

SavePlaylist function. The user doesn't have to even click the button.

Now on to new code. Let's deal with the toolbar button ClearAll. When the user clicks this button, we want the treeview and the ListStore to be cleared. This is a simple one-liner that we can put

into the `on_tbtnClearAll_clicked` routine.

```
def on_tbtnClearAll_clicked(self, widget):
    self.playlist.clear()
```

We are simply telling the `playlist` `ListStore` to clear itself. That was easy. Now we'll deal with the Delete toolbar button. Much harder, but once we get into it, you'll understand.

First we have to discuss how we get a selection from the treeview widget and the `ListStore`. This is complicated, so go slowly. In order to get data back from the `ListStore`, we first have to get a `gtk.TreeSelection` which is a helper object that manages the selection within a treeview. Then we use that helper object to retrieve the model type, and an iterator that contains the selected rows.

I know that you are thinking "What the heck is an iterator?" Well you already have used them and don't even know it. Think about the following code (above right) from the `AddFilesToTreeview` function from last month.

Look at the 'for' statement portion. We use an iterator to walk through the list called `FileList`. Basically, in this case, the iterator simply goes through each entry in the list returning each item separately. What we are going to do is create an iterator, fill that with the selected rows in the treeview, and use that like a list. So the code (middle right) for `on_tbtnDelete_clicked` will be.

The first line creates the `TreeSelection` object. We use that to get the rows selected (which is only one because we didn't set the model to support multiple selections), fill that into a list called `iters`, and then walk it removing (like the `.clear` method). We also decrement the variable `RowCount`, and then display the number of files in the status bar.

Now, before we get to the move functions, let's deal with the save-file-path function. We'll use our `FileDialog` class as before. We'll do all the code (bottom right) for this in the `on_btnGetFolder_clicked` routine.

```
def AddFilesToTreeview(self, FileList):
    counter = 0
    for f in FileList:
        extStart = f.rfind(".")
        fnameStart = f.rfind("/")
        extension = f[extStart+1:]
        fname = f[fnameStart+1:extStart]
        fpath = f[:fnameStart]
        data = [fname, extension, fpath]
        self.playlist.append(data)
        counter += 1
```

```
def on_tbtnDelete_clicked(self, widget):
    sel = self.treeview.get_selection()
    (model, rows) = sel.get_selected_rows()
    iters=[]
    for row in rows:
        iters.append(self.playlist.get_iter(row))
    for i in iters:
        if i is not None:
            self.playlist.remove(i)
            self.RowCount -= 1
    self.sbar.push(self.context_id, "%d files in list." %
    (self.RowCount))
```

```
def on_btnGetFolder_clicked(self, widget):
    fd = FileDialog()
    filepath, self.CurrentPath = fd.ShowDialog(1, self.CurrentPath)
    self.txtPath.set_text(filepath[0])
```

The only thing really different from before is the last line of this code. We are putting the name of the path returned by the `FileDialog` into the textbox that we set up previously using the `set_text` method. Remember that the data returned to us is in the

form of a list, even though there is only one entry. That's why we use `'filepath[0]'`.

Let's do the file-save function. We can safely do that before we deal with the move functions. We'll create a function called

SavePlaylist. The first thing we need to do (above right) is check to see if there is anything in the txtPath text box. Next we need to check to see if there is a filename in the txtFilename text box. For both of those instances, we use the .get\_text() method of the text box.

Now that we know that we have a path (fp) and a filename (fn), we can open the file, print our M3U header, and walk the playList. The path is stored (if you will remember) in column 2, the filename in column 0, and the extension in column 1. We simply (right) create a string and then write it to the file and finally close the file.

We can now start work on the move functions. Let's start with the Move To Top routine. Like we did when we wrote the delete function, we get the selection and then the selected row. Next we have to step through the rows to get two variables. We will call them path1 and path2. Path2, in this case will be set to 0, which is the "target" row. Path1 is the row the user has selected. We finally use the model.move\_before()

```
def SavePlaylist(self):
    fp = self.txtPath.get_text() # Get the filepath from the text box
    fn = self.txtFilename.get_text() # Get the filename from the filename text box
```

Now check the values...

```
if fp == "": # IF the path is blank...
    self.MessageBox("error", "Please provide a filepath for the playlist.")
elif fn == "": # IF the filename is blank...
    self.MessageBox("error", "Please provide a filename for the playlist file.")
else: # Otherwise we are good to go.
```

```
plfile = open(fp + "/" + fn, "w") # Open the file
plfile.writelines('#EXTM3U\n') # Print the M3U Header
for row in self.playList:
    plfile.writelines("%s/%s.%s\n" % (row[2], row[0], row[1])) #Write the line data
plfile.close # Finally close the file
```

Lastly, we pop up a message box informing the user that the file has been saved.

```
self.MessageBox("info", "Playlist file saved!")
```

We now need to put in a call to this routine in our on\_btnSavePlaylist\_clicked event handler routine.

```
def on_btnSavePlaylist_clicked(self, widget):
    self.SavePlaylist()
```

Save your code and test it. Your play list should save properly and look something like the sample I gave you last month.

method to move the selected row up to row 0, effectively pushing everything down. We'll put the code (below right) directly in the on\_tbtnMoveToTop\_clicked routine.

For the MoveToBottom

```
def on_tbtnMoveToTop_clicked(self, widget):
    sel = self.treeview.get_selection()
    (model, rows) = sel.get_selected_rows()
    for path1 in rows:
        path2 = 0
        iter1 = model.get_iter(path1)
        iter2 = model.get_iter(path2)
        model.move_before(iter1, iter2)
```

function, we will use almost exactly the same code as the MoveToTop routine, but, in place of the `model.move_before()` method, we will use the `model.move_after()` method, and, instead of setting `path2` to 0, we set it to `self.RowCount-1`. Now you understand why we have a `RowCount` variable. Remember the counts are zero based, so we have to use `RowCount-1` (above right).

Now let's take a look at what it will take to do the MoveUp routine. Once again, it is fairly similar to the last two functions we created. This time, we get `path1` which is the selected row and then assign that row number-1 to `path2`. Then IF `path2` (the target row) is greater than or equal to 0, we use the `model.swap()` method (second down, right).

The same thing applies for the MoveDown function. This time however, we check to see if `path2` is LESS than or equal to the value of `self.RowCount-1` (third down, right).

Now let's make some changes to the abilities of our play list. In

last month's article, I showed you the basic format of the play list file (bottom).

However, I did say that there was an extended format as well. In the extended format, there is an extra line that can be added to the file before each song file entry that contains extra information about the song. The format of this line is as follows...

```
#EXTINF:[Length of song in seconds],[Artist Name] - [Song Title]
```

You might have wondered why we included the mutagen library from the beginning since we never used it. Well, we will now. To refresh your memory, the mutagen library is for accessing ID3 tag information from inside of MP3 files. To get the full discussion about this, please refer to issue 35 of Full Circle which has my part 9 of this series. We'll create a function to deal with the reading of the MP3 file and return the Artist name, the Song Title,

```
#EXTM3U
```

```
Adult Contemporary/Chris Rea/Collection/02 - On The Beach.mp3
```

```
Adult Contemporary/Chris Rea/Collection/07 - Fool (If You Think It's Over).mp3
```

```
Adult Contemporary/Chris Rea/Collection/11 - Looking For The Summer.mp3
```

```
def on_tbtnMoveToBottom_clicked(self,widget):
    sel = self.treeview.get_selection()
    (model,rows) = sel.get_selected_rows()
    for path1 in rows:
        path2 = self.RowCount-1
        iter1=model.get_iter(path1)
        iter2 = model.get_iter(path2)
        model.move_after(iter1,iter2)
```

```
def on_tbtnMoveUp_clicked(self,widget):
    sel = self.treeview.get_selection()
    (model,rows) = sel.get_selected_rows()
    for path1 in rows:
        path2 = (path1[0]-1,)
        if path2[0] >= 0:
            iter1=model.get_iter(path1)
            iter2 = model.get_iter(path2)
            model.swap(iter1,iter2)
```

```
def on_tbtnMoveDown_clicked(self,widget):
    sel = self.treeview.get_selection()
    (model,rows) = sel.get_selected_rows()
    for path1 in rows:
        path2 = (path1[0]+1,)
        iter1=model.get_iter(path1)
        if path2[0] <= self.RowCount-1:
            iter2 = model.get_iter(path2)
            model.swap(iter1,iter2)
```

and the length of the song in seconds, which are the three things we need for the extended information line. Put the function after the ShowAbout function

within the PlaylistCreator class (next page, top right).

Again, to refresh your memory, I'll walk through the code. First we

clear the three return variables so that if anything happens they are blank upon return. We then pass in the filename of the MP3 file we are going to look at. Next we pull the keys into (yes, you guessed it) an iterator, and walk through that iterator looking for two specific tags. They are 'TPE1' which is the artist name, and 'TIT2' which is the song title. Now, if the key doesn't exist, we would get an error, so we wrap each get call with a 'try|except' statement. We then pull the song length from the audio.info.length attribute, and return the whole shebang.

Now, we will want to modify the SavePlaylist function to support the extended information line. While we are there, let's check to see if the filename exists, and, if so, flag the user and exit the routine. Also, to make things a bit easier for the user, since we don't support any other filetype, let's automatically append the extension '.m3u' to the path and filename if it doesn't exist. First add an import line at the top of the code importing os.path between the sys import and the mutagen import (bottom right).

Just like in the

AddFilesToTreeview function, we will use the 'rfind' method to find the position of the last period ('.') in the filename fn. If there isn't one, the return value is set to -1. So we check to see if the return value is -1, and, if so, we append the extension and then put the filename back in the text box just to be nice.

```
def GetMP3Info(self,filename):
    artist = ''
    title = ''
    songlength = 0
    audio = MP3(filename)
    keys = audio.keys()
    for key in keys:
        try:
            if key == "TPE1":          # Artist
                artist = audio.get(key)
        except:
            artist = ''
        try:
            if key == "TIT2":          # Song Title
                title = audio.get(key)
        except:
            title = ''
    songlength = audio.info.length    # Audio Length
    return (artist,title,songlength)
```

```
import os.path
```

Then, go ahead and comment out your existing SavePlaylist function and we'll replace it.

```
def SavePlaylist(self):
    fp = self.txtPath.get_text()      # Get the file path from the text box
    fn = self.txtFilename.get_text()  # Get the filename from the text box
    if fp == "": # IF filepath is blank...
        self.MessageBox("error","Please provide a filepath for the playlist.")
    elif fn == "": # IF filename is blank...
        self.MessageBox("error","Please provide a filename for the playlist file.")
    else: # Otherwise
```

Up to this point, the routine is the same. Here's where the changes start.

```
    extStart = fn.rfind(".") # Find the extension start position
    if extStart == -1:
        fn += '.m3u' #append the extension if there isn't one.
        self.txtFilename.set_text(fn) #replace the filename in the text box
```

```
if os.path.exists(fp + "/" +
fn):

    self.MessageBox("error", "The
file already exists.
Please select another.")
```

Next, we want to wrap the rest of the function with an IF|ELSE clause (top right) so if the file already exists, we simply fall out of the routine. We use `os.path.exists(filename)` to do this check.

The rest of the code is mostly the same as before, but let's look at it anyway.

Line 2 opens the file we are going to write. Line 3 puts the M3U header in. Line 4 sets up for a walk through the `playList` `ListStore`. Line 5 creates the

```
else:
    plfile = open(fp + "/" + fn,"w") # Open the file
    plfile.writelines('#EXTM3U\n') #Print the M3U header
    for row in self.playList:
        fname = "%s/%s.%s" % (row[2],row[0],row[1])
        artist,title,songlength = self.GetMP3Info(fname)
        if songlength > 0 and (artist != '' and title != ''):
            plfile.writelines("#EXTINF:%d,%s - %s\n" % (songlength,artist,title))
        plfile.writelines("%s\n" % fname)
    plfile.close # Finally Close the file
    self.MessageBox("info", "Playlist file saved!")
```

`filename` from the three columns of the `ListStore`. Line 6 calls `GetMP3Info` and stores the return values into variables. Line 7 then checks to see if we have values in all three variables. If so, we write the extended information line in line 8, otherwise we don't try. Line 9 writes the filename line as before. Line 10 closes the file gracefully, and line 11 pops up the message box letting the user know

the process is all done.

Go ahead and save your code and give it a test drive.

At this point about the only thing that should be added would be some tool tips for our controls when the user hovers the mouse pointer over them. It adds that professional flair (below). Let's create a function to do that now.

We are using the widget references we set up earlier, and then setting the text for the tooltip via the (you guessed it) `set_tooltip_text` attribute. Next we need to add the call to the routine. Back in the `__init__` routine, after the `self.SetWidgetReferences` line, add:

```
self.SetupToolTips()
```

```
def SetupToolTips(self):
    self.btnAdd.set_tooltip_text("Add a file or files to the playlist.")
    self.tbtnAbout.set_tooltip_text("Display the About Information.")
    self.tbtnDelete.set_tooltip_text("Delete selected entry from the list.")
    self.tbtnClearAll.set_tooltip_text("Remove all entries from the list.")
    self.tbtnQuit.set_tooltip_text("Quit this program.")
    self.tbtnMoveToTop.set_tooltip_text("Move the selected entry to the top of the list.")
    self.tbtnMoveUp.set_tooltip_text("Move the selected entry up in the list.")
    self.tbtnMoveDown.set_tooltip_text("Move the selected entry down in the list.")
    self.tbtnMoveToBottom.set_tooltip_text("Move the selected entry to the bottom of the list.")
    self.btnGetFolder.set_tooltip_text("Select the folder that the playlist will be saved to.")
    self.btnSavePlaylist.set_tooltip_text("Save the playlist.")
    self.txtFilename.set_tooltip_text("Enter the filename to be saved here. The extension '.m3u' will be added
for you if you don't include it.")
```

Last, but certainly not least, we want to put our logo into our About box. Just like everything else there, there's an attribute for that. Add the following line to the ShowAbout routine.

```
about.set_logo(gtk.gdk.pixbuf_new_from_file("logo.png"))
```

That's about it. You now have a fully functioning program that looks good, and does a wonderful job of creating a playlist for your music files.

The full source code, including the glade file we created last month, can be found at pastebin: <http://pastebin.com/tQJizcwT>

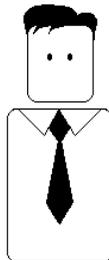
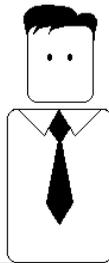
Until next time, enjoy your new found skills.



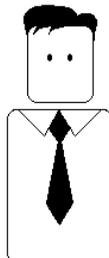
**Greg Walters** is owner of RainyDay Solutions, LLC, a consulting company in Colorado and has been programming since 1972. He enjoys cooking, hiking, music, and spending time with his family. His website is [www.thedesignedgeek.com](http://www.thedesignedgeek.com).

Robot

It is still open.



Although the source code may not be fully available.



by Richard Retel

# EXTRA! EXTRA! READ ALL ABOUT IT!



## THE PERFECT SERVER SPECIAL EDITION

This is a special edition of Full Circle that is a direct reprint of the Perfect Server articles that were first published in FCM#31-#34.

<http://fullcirclemagazine.org/special-edition-1-the-perfect-server/>

## Full Circle Special Editions Released On Unsuspecting World\*



## PYTHON SPECIAL EDITION #01

This is a reprint of Beginning Python Parts 01 – 08 by Greg Walters.

<http://fullcirclemagazine.org/python-special-edition-1/>

\* Neither Full Circle magazine, nor its makers, apologize for any hysteria caused in the release of its publications.



# HOW-TO

Written by Elmer Perry

# Libre Office - Part 4

In the last article we used paragraph styles to format our document by creating reusable styles for consistency in our document. In this article we will create a more advanced layout using frames. While there are programs, like Scribus, which are designed more specifically toward more advanced layouts, LibreOffice gives us several tools which allow us to produce documents with more than just a simple, letter-style layout. One of the most useful of these tools is the frame.

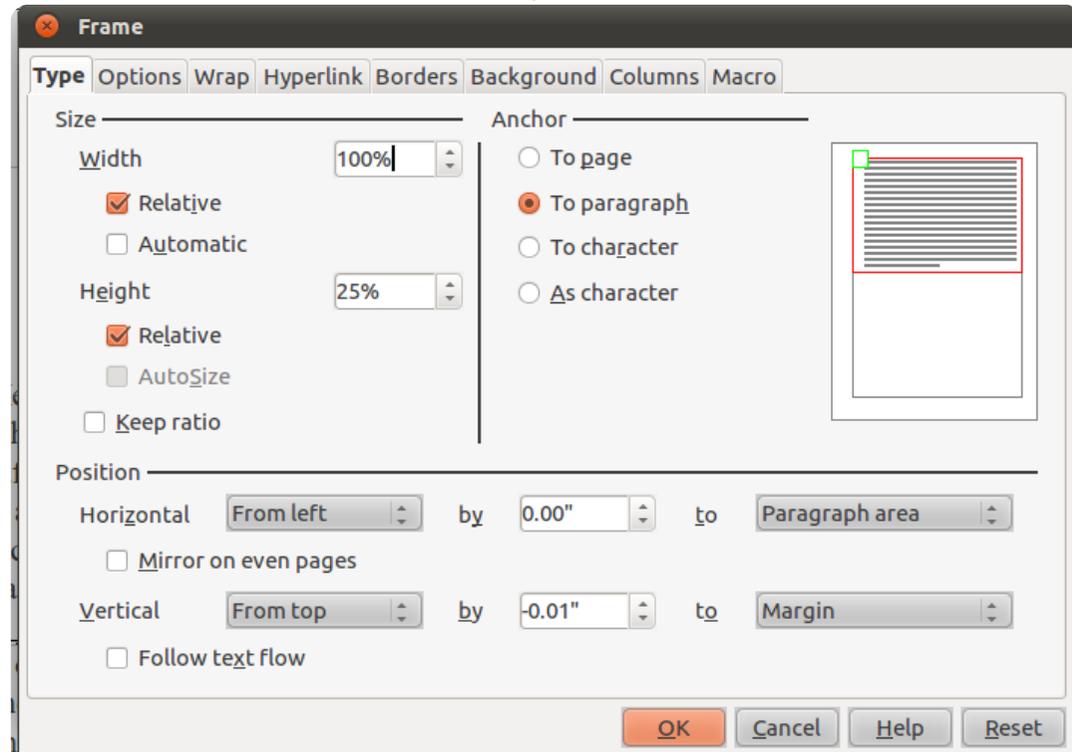
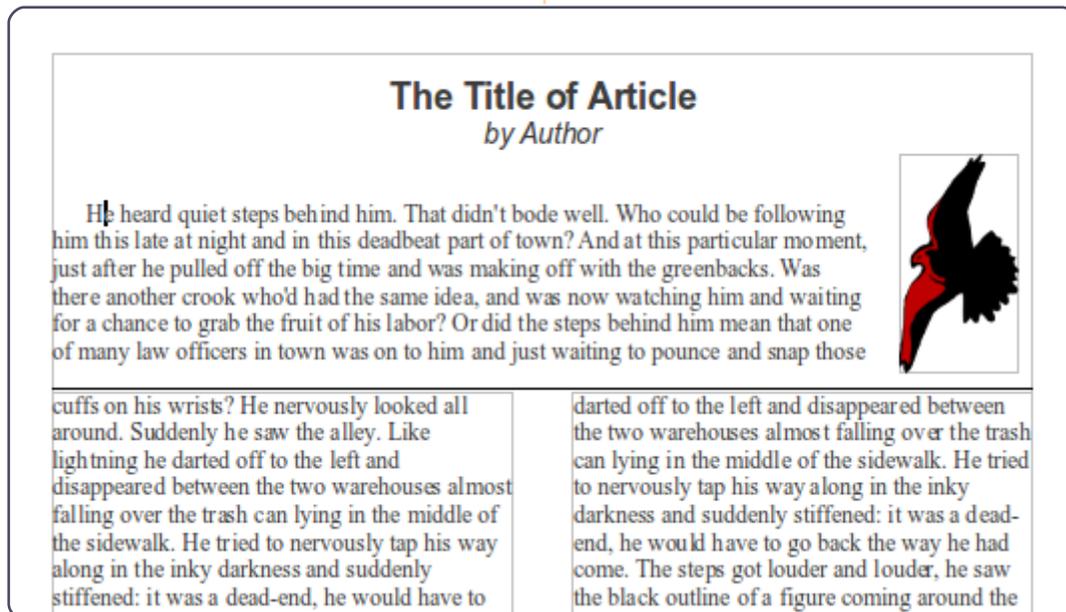
You can think of frames as boxes used to control the flow of text, graphics, and other elements in your document. One of the key features of frames is their ability to link together. When two frames are linked, the text from one frame automatically flows into the other, even if the two frames are on different pages. This feature makes frames ideal for newsletters and other article-based documents.

We will create the beginning article layout, shown in figure 1, using frames to control the flow of

the article text. Start by creating a new document. Now, in the menus, go to Insert > Frame. The frame dialog will pop up. On the type tab, check Relative for both Width and Height. Set the Width to 100% and the Height to 25%. In the position section, set the Horizontal to From Left by 0.00" to Paragraph area. Set the Vertical position to From Top by 0.00" to Margin.

On the Options tab, name the frame "Article Header." The frames are automatically named using the format "Frame#" where # is the number of frames in the document. It is a good practice to give your frames meaningful names to help you remember their purpose.

By default, frames have a border on all four sides, but we want a border only at the bottom

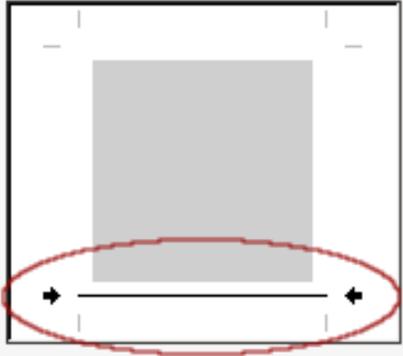


## Line arrangement

### Default



### User-defined



of our frame. On the Borders tab, select the first box under the Line Arrangement defaults. This will clear all the borders. Check at the bottom of the the User-defined box to create a bottom border.

We are now done with the setup of this frame. We will come back to it when we are ready to link our frames together. For now, click on OK. You will see your new frame in your document.

Now, let's create a frame for the bottom half of the article. Click below the header frame. Once again in the menus, choose Insert

Name

Article Header

Previous link

<None>

Next link

Article Body

> Frame. Again, we want a relative width and height. Set the width to 100% and the height to 75%. Set the horizontal position to From Left by 0.00" to Paragraph area. On the Options tab, name the frame "Article Body." On the Borders tab, clear all the borders.

Now, we need the body of our article to have two columns. This is done on the Columns tab. Change the number of columns to 2, and set the spacing to 6%. Click on OK, and your new frame appears. You may need to manually adjust the position of your frames to get them to line up correctly. You adjust the frames position by clicking on the border of the frames. You will see green handles appear on the border. The green handles are used to adjust the size of the frame. We shouldn't need to change the size - just tweak the position. Click and drag on the border where there are no handles to adjust the position of the frames. To make fine adjustments to the position of your frame use

the Alt+Arrow keys.

We now have our frames where we want them. Before we start writing our article, we need to link the two frames together. Double-click on the border of the header frame (the first frame we created). This displays the frame dialog. On the Options tab, click the drop-down box for next link and select the "Article Body" frame. This links our two frames together. Click OK to accept this change and return to the document.

In the document, click inside the header frame. Format a title and byline using any of the methods discussed in previous articles. Now, begin to type the paragraphs for your document. You will notice that when you get to the bottom of the first frame, Writer will automatically move you to the lower frame, and when you reach the bottom of the first column, writer will take you the top of the second. If your article is

## Settings

### Columns

2



### Width and spacing

Column



1

2

Width

47%

47%

Spacing

6%

Autowidth

more than one page long, you could link “Article Body” frame to a frame on another page. This linking is a powerful way to control the layout and flow of an article to create a very professional looking document.

Let's add a graphic to our header frame: Insert > Picture > From File. Select the graphic you want to insert, and click Open. If the image is too big for your document, you will want to resize it. To keep from distorting the image, hold the Shift key while dragging the handles. To put the image into the frame drag it to the lower right corner of the frame, right-click, and Anchor > To Frame.

Double-click the image to bring up its properties dialog. On the Wrap tab, increase the left spacing to give the image some white space.

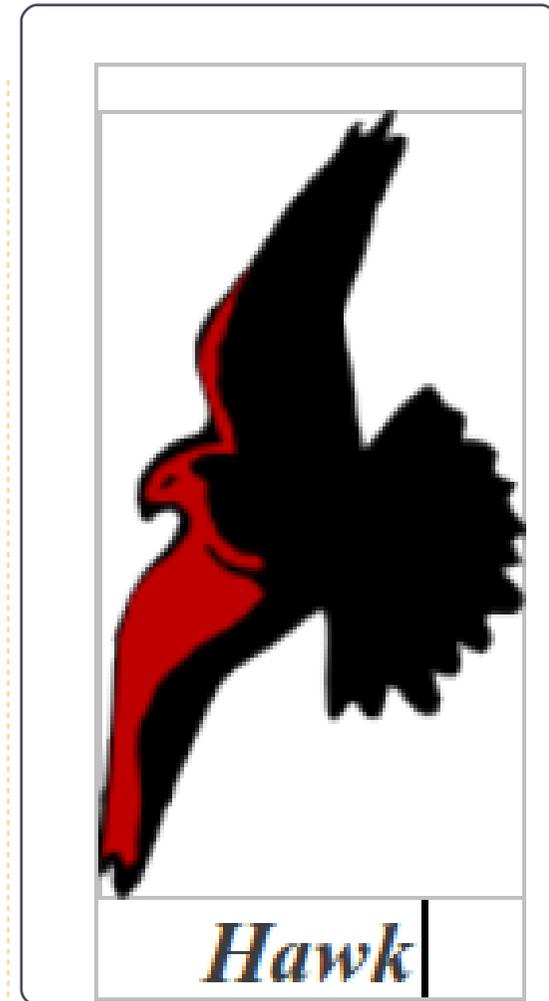
Graphics in LibreOffice are actually frames. When you double-click on a graphic in a document, you get a frame dialog with two new tabs: Picture and Crop. On the Picture tab, you can flip the image vertically or horizontally. You can specify whether the flip happens on just certain pages or on all pages. On the Crop tab, you can adjust the left, right, top, and bottom to crop out certain parts of the image. This is handy when you need only a part of the image, or need to force the image to a certain size without distorting the

image's aspect ratio. Also, you can scale the image to a certain size based on a percentage of the original image size. You can see or change the image size by measurement units as well.

On the right-click menu of an image, you can add a description or caption to the image. Adding a caption creates a text frame around the image with the text at the bottom. This feature is useful for marking illustrations or diagrams in your document. Once you have created the caption, you can highlight it and format it just like you would any other text in a document.

Hopefully, you have gotten some idea of the power of using frames. While our example was fairly simple, you could easily create a more complex document layout using frames. With the ability to link frames, you can create a newsletter layout where articles start on one page, jump to another, and end on yet another.

Next time, we will look at another powerful layout feature available in LibreOffice Writer: Sections.



### Spacing

Left

0.20"

Right

0.00"

Top

0.00"

Bottom

0.00"



**Elmer Perry** is a children's minister in Asheville, North Carolina whose hobbies include web design, programming, and writing.



Ubuntu is made up of thousands of different components, written in many different programming languages. Every component - be it a software library, a tool, or a graphical application - is available as a source package. Source packages in most cases consist of two parts: the actual source code, and metadata. Metadata includes the dependencies of the package, copyright and licensing information, and instructions on how to build the package. Once this source package is compiled, the build process provides binary packages, which are the .deb files users can install.

Every time a new version of an application is released, or when someone makes a change to the source code that goes into Ubuntu, the source package must be uploaded to the build machines to be compiled. The resulting binary packages then are distributed to the archive and its mirrors in different countries. The URLs in `/etc/apt/sources.list` point

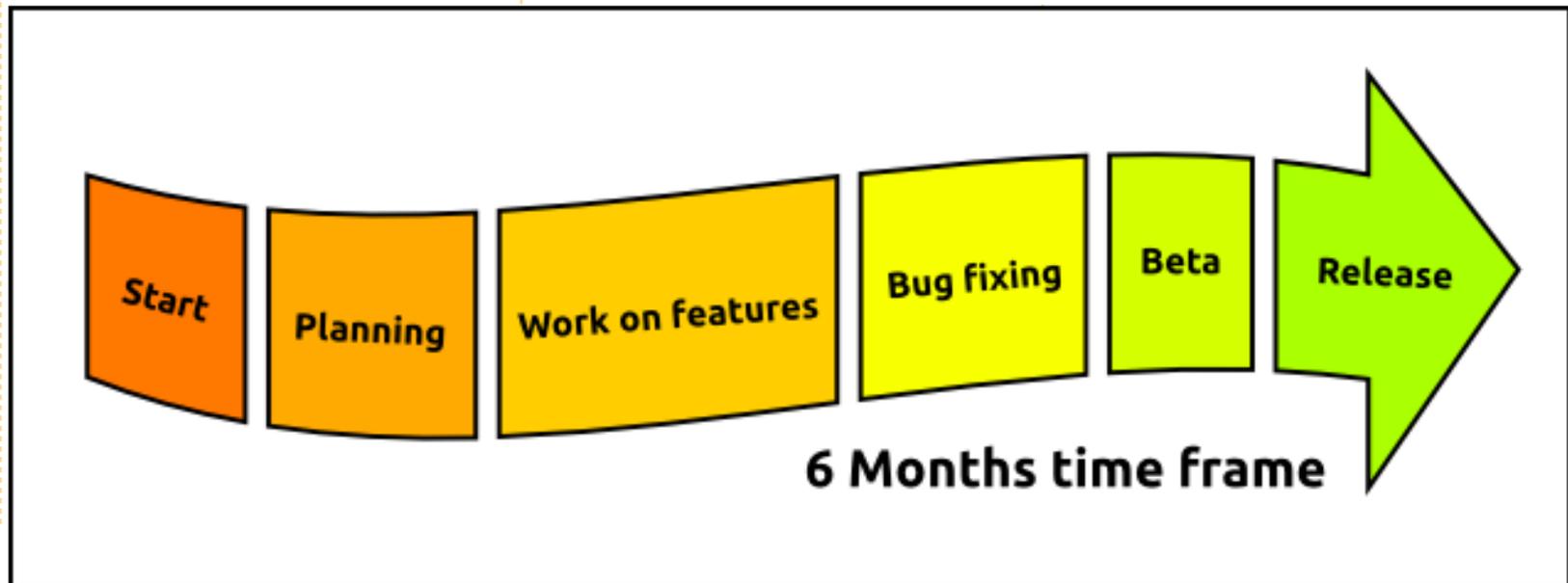
to an archive or mirror. Every day CD images are built for a selection of different Ubuntu flavours. Ubuntu Desktop, Ubuntu Server, Kubuntu, and others, specify a list of required packages that get on the CD. These CD images are then used for installation tests, and provide the feedback for further release planning.

Ubuntu's development is very much dependent on the current stage of the release cycle. We release a new version of Ubuntu every six months, which is possible only because we have established

strict freeze dates. With every freeze date that is reached, developers are expected to make fewer, less-intrusive changes. Feature Freeze is the first big freeze date after the first half of the cycle has passed. At this stage, features must be largely implemented. The rest of the cycle is supposed to be focused on fixing bugs. After that, the user interface, then the documentation, the kernel, etc, are frozen, then the beta release is put out which receives a lot of testing. From the beta release onwards, only critical bugs get

fixed, and a release candidate release is made, and if it does not contain any serious problems, it becomes the final release.

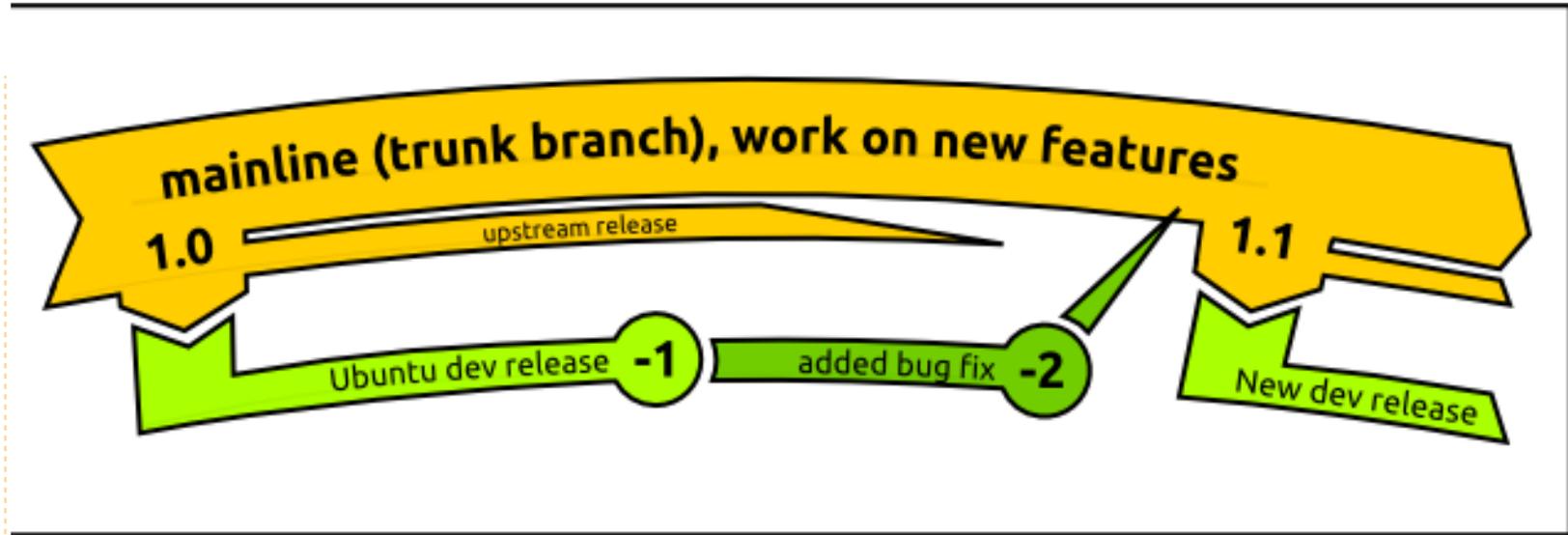
Thousands of source packages, billions of lines of code, and hundreds of contributors, require a lot of communication and planning to maintain high standards of quality. At the beginning of each release cycle, we have the Ubuntu Developer Summit where developers and contributors come together to plan the features of the next releases. Every feature is



discussed by its stakeholders, and a specification is written that contains detailed information about its assumptions, implementation, the necessary changes in other places, how to test it, and so on. This is all done in an open and transparent fashion, so even if you cannot attend the event in person, you can participate remotely and listen to a streamcast, chat with attendants, and subscribe to changes of specifications - so you are always up to date.

Not every single change can be discussed in a meeting though, particularly because Ubuntu relies on changes that are done in other projects. That is why contributors to Ubuntu constantly stay in touch. Most teams or projects use dedicated mailing lists to avoid too much unrelated noise. For more immediate coordination, developers and contributors use Internet Relay Chat (IRC). All discussions are open and public.

Another important tool regarding communication is bug reports. Whenever a defect is found in a package or piece of infrastructure, a bug report is filed in Launchpad. All information is



collected in that report and its importance, status, and assignee, updated when necessary. This makes it an effective tool to stay on top of bugs in a package or project, and organise the workload.

Most of the software available through Ubuntu is not written by Ubuntu developers themselves. Most of it is written by developers of other Open Source projects, and then integrated into Ubuntu. These projects are called "Upstreams", because their source code flows into Ubuntu, where we "just" integrate it. The relationship to Upstreams is critically important to Ubuntu. It is not just code that Ubuntu gets from Upstreams, but it is also that

Upstreams get users, bug reports, and patches, from Ubuntu (and other distributions).

The most important Upstream for Ubuntu is Debian. Debian is the distribution that Ubuntu is based on, and many of the design decisions regarding the packaging infrastructure are made there. Traditionally, Debian has always had dedicated maintainers for every single package or dedicated maintenance teams. In Ubuntu there are teams that have an interest in a subset of packages too, and naturally every developer has a special area of expertise, but participation (and upload rights) generally is open to everyone who demonstrates ability and

willingness.

Getting a change into Ubuntu as a new contributor is not as daunting as it seems, and can be a very rewarding experience. It is not only about learning something new and exciting, but also about sharing the solution, and solving a problem for millions of users out there.

Open Source Development happens in a distributed world with different goals and different areas of focus. For example, there might be the case that a particular Upstream might be interested in working on a new big feature, while Ubuntu, because of the tight release schedule, might be

# HOWTO - INTRO TO UBUNTU DEVELOPMENT

interested in shipping a solid version with just an additional bug fix. That is why we make use of “Distributed Development”, where code is being worked on in various branches that are merged with each other after code reviews and sufficient discussion.

In the example mentioned above, it would make sense to ship Ubuntu with the existing version of the project, add the bugfix, get it into Upstream for their next release, and ship that (if suitable) in the next Ubuntu release. It would be the best possible compromise and a situation where everybody wins.

To fix a bug in Ubuntu, you would first get the source code for the package, then work on the fix, document it so it is easy to understand for other developers

and users, then build the package to test it. After you have tested it, you can easily propose the change to be included in the current Ubuntu development release. A developer with upload rights will review it for you, and then get it integrated into Ubuntu.

When trying to find a solution, it is usually a good idea to check with Upstream and see if the problem (or a possible solution) is known already, and, if not, do your best to make the solution a concerted effort. Additional steps might involve getting the change backported to an older, still supported, version of Ubuntu, and forwarding it to Upstream.

The most important requirements for success in Ubuntu development are having a knack for “making things work

again,” not being afraid to read documentation and ask questions, being a team player, and enjoying some detective work.

Good places to ask your questions are [ubuntu-motu-mentors@lists.ubuntu.com](mailto:ubuntu-motu-mentors@lists.ubuntu.com) and [#ubuntu-motu](https://irc.freenode.net) on irc.freenode.net. You will easily find a lot of new friends and people with the same passion that you have: making the world a better place by making better Open Source software.

## A PLEA ON BEHALF OF THE PODCAST PARTY

As you heard in episode #15 of the podcast, we're calling for opinion topics for that section of the show.

Instead of us having a rant about whatever strikes us, why not prompt us with a topic and watch for the mushroom clouds over the horizon! It's highly unlikely that the three of us will agree.

Or, an even more radical thought, send us an opinion by way of a contribution!

You can post comments and opinions on the podcast page at [fullcirclemagazine.org](http://fullcirclemagazine.org), in our Ubuntu Forums section, or email [podcast@fullcirclemagazine.org](mailto:podcast@fullcirclemagazine.org). You can also send us a comment by recording an audio clip of no more than 30 seconds and sending it to the same address.

**Comments and audio may be edited for length. Please remember this is a family-friendly show.**

It would be great to have contributors come on the show and express an opinion in person.



Time →



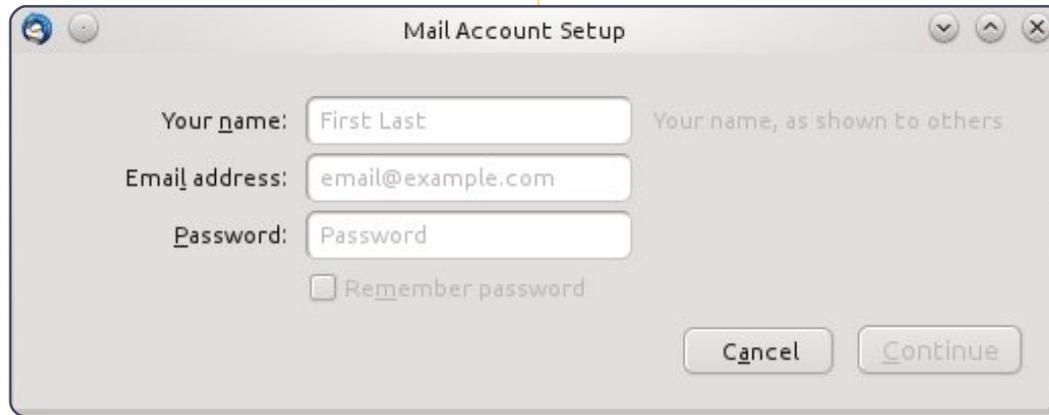
# HOW-TO

Written by Ronnie Tucker

# Use Google In Thunderbird

In this article, I'm going to concentrate on the three main Google contact items; Gmail, Google Contacts (part of Gmail), and Google Calendar. The main problem in using Thunderbird (version three in this case) with Gmail was synchronizing contacts, but that's now easily possible using an addon.

First, we want to show our Google emails in Thunderbird. It's important to note that we'll be showing emails in Thunderbird - by that I mean Thunderbird won't download your emails and delete



them from the server. You'll still be able to access your emails from another computer via the web browser.

Go to: File > New > Mail

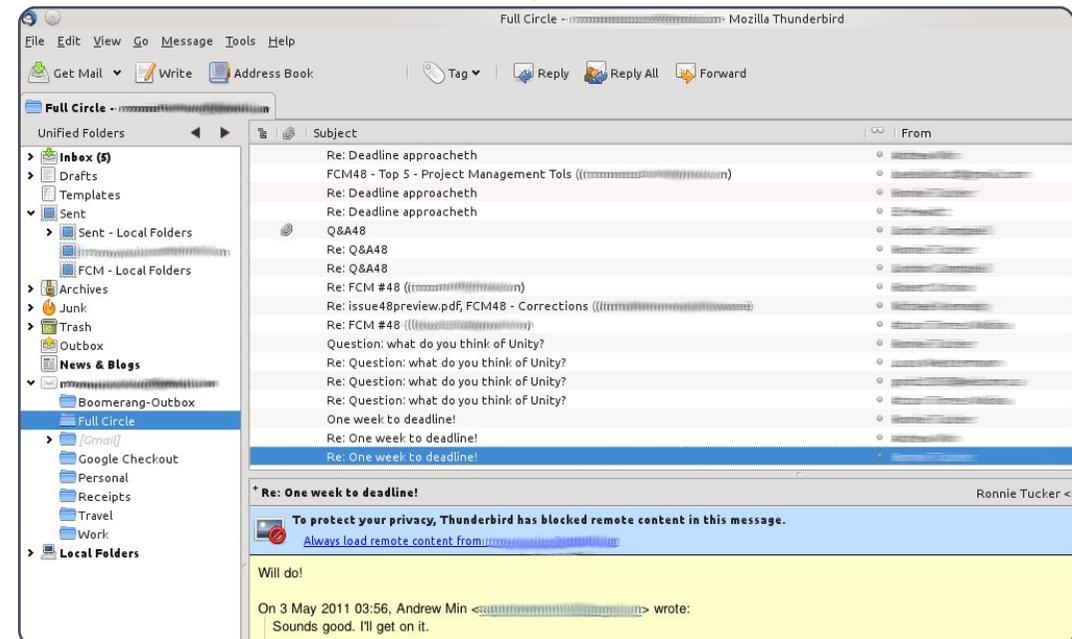
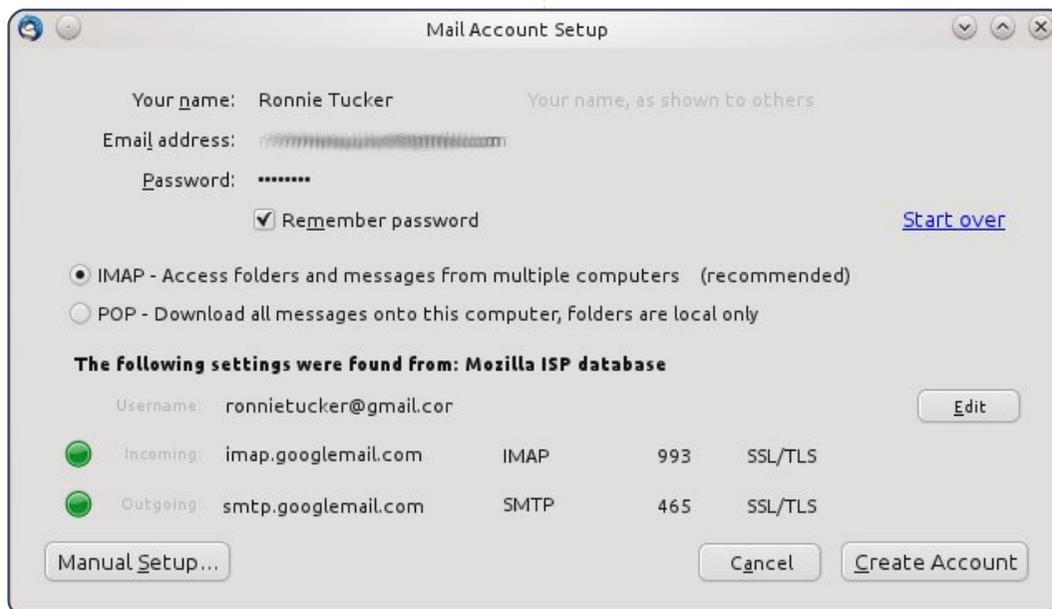
Account and fill in your real name, Google mail account, and your Google mail password, tick the box if you want Thunderbird to remember your password, and

lastly click 'Continue' (above).

Thunderbird will display the best import settings for you (below left).

You can, using the button, configure the settings manually, but for ease of use, click 'Create Account'. After a few moments (depending on your download speed), you'll see all your Google mail in Thunderbird (below right).

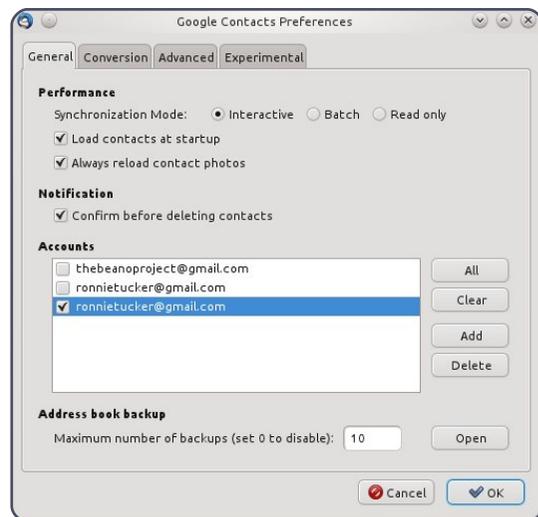
As you can see (in the tree view in the left panel) you also have



# HOWTO - USE GOOGLE IN THUNDERBIRD

access to your 'tags' (as folders) and to your sent and draft folders (under [Gmail] in the list).

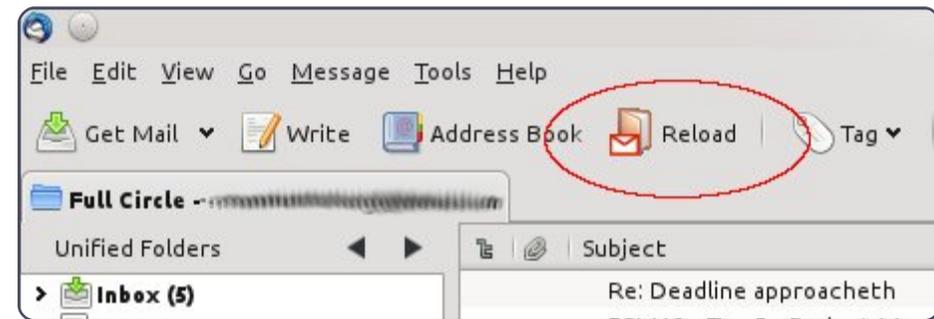
But what if you need to add a contact? Adding it in Thunderbird won't add it to your Google Contacts list by default, so we'll install the addon (also called) Google Contacts. Using your browser, go to: <https://addons.mozilla.org/en-US/thunderbird/addon/google-contacts/>, and click the 'Download Now' button. You'll download a .xpi file, and remember where you saved it! In Thunderbird, click Tools > Addons, and in the window that pops up, click the 'Extensions' icon at the top. At the bottom of this window, click 'Install...' and point it to the .xpi file you just downloaded.



Done! You can now configure the Google Contacts addon in this window by clicking its name, and then the 'Preferences' button (below).

You can check that it works by creating a fake contact in Thunderbird, and, after giving a few moments to synchronize, check (via your browser) that it has appeared in your Google Contacts on the web. To manually force a synchronization, you can right click on the menu bar (where it says 'Get Mail', 'Write' etc), choose 'Customization', and drag the 'Reload' button into your menu (top right).

OK, so, we have our emails and our contacts going back and forth, now we need our Google Calendar. This is done in a similar manner to what we did with the contacts addon, but this second addon is called 'G-Hub Lite'. Download it from: <https://addons.mozilla.org/en-US/thunderbird/addon/google-hub-google-tabs-for-thu/>, and install it like you did with the previous addon. Again, right click on your menu bar and customize it by adding some Google buttons to your menu (below right).



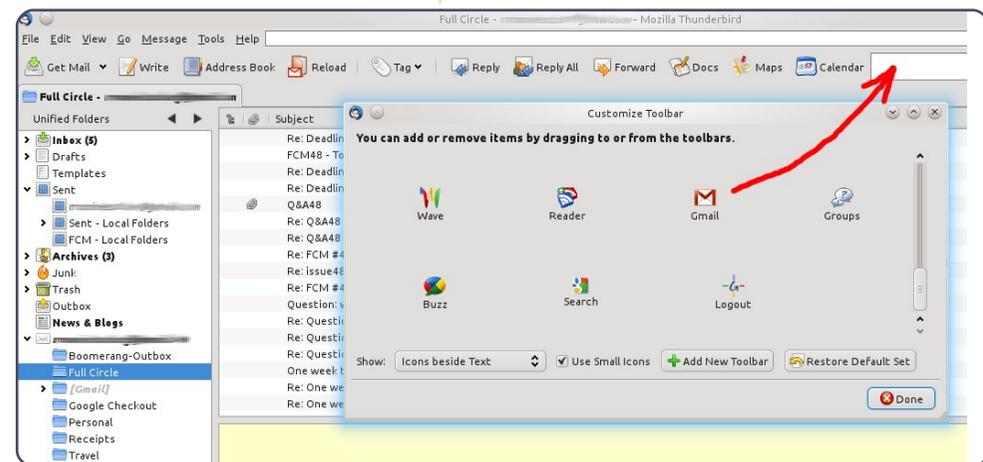
Click the Calendar button you just added, and your Google Calendar will open in a new tab. From there, you use it exactly as you would any other time - adding/deleting items.

**TIP:** G-hub Lite has a button for Gmail (among other things), but it just shows the Google Mail website in a tab which, if that's what you want, is a good shortcut with zero configuration.

addons which make life easier. I have one installed to allow hiding/showing of email headers (*CompactHeader* it's called), and another for exporting emails as plain text (it's called *ImportExportTools*)

**Enjoy Thunderbird, it's more powerful than most people think!**

Thunderbird has many other





## Guidelines

**T**he single rule for an article is that **it must somehow be linked to Ubuntu or one of the many derivatives of Ubuntu** (Kubuntu, Xubuntu, Lubuntu, etc).

Write your article in whichever software you choose. I would recommend OpenOffice, but **PLEASE SPELL AND GRAMMAR CHECK IT!**

## Writing

In your article, please indicate where you would like a particular image to be placed. Please do not embed images into your Open Office document.

## Images

Images should be JPG with low compression.

Regarding image sizes: if in doubt, send a full size screengrab and we will crop the image.

If you are writing a review, please follow the guidelines shown here.

For a more detailed list of the style rules and common pitfalls please refer to: <https://wiki.ubuntu.com/UbuntuMagazine/Style> - in short: US spelling, no l33t speak and no smilies.

When you are ready to submit your article please email it to: [articles@fullcirclemagazine.org](mailto:articles@fullcirclemagazine.org)

If you can't write articles, but hang out in Ubuntu Forums, send us interesting forum threads that we could print.

## Non-English Writers

If your native language is not English, don't worry. Write your article, and one of the proofreaders will read it for you and correct any grammatical or spelling errors. Not only are you helping the magazine and the community, but we'll help you with your English!

## REVIEWS

### Games/Applications

**When reviewing games/applications please state clearly:**

- title of the game
- who makes the game
- is it free, or a paid download?
- where to get it from (give download/homepage URL)
- is it Linux native, or did you use Wine?
- your marks out of five
- a summary with positive and negative points

### Hardware

**When reviewing hardware please state clearly:**

- make and model of the hardware
- what category would you put this hardware into?
- any glitches that you may have had while using the hardware?
- easy to get the hardware working in Linux?
- did you have to use Windows drivers?
- marks out of five
- a summary with positive and negative points

**You don't need to be an expert to write an article - write about the games, applications and hardware that you use every day.**



Last time, we established a kind of sliding scale to determine whether or not a Swap partition is a) essential, b) useful, c) wasteful, or d) obsolete. Don't worry, this isn't an exam. However, it may be worth looking into the topic of Virtual Memory Management, to call it by its proper name, a little further. Ancient Linux hackers among you will have to excuse the Dr. Seuss-level distillation which follows (or else go write your own 300-page book on the subject).

## Page by Page

Memory, as used by a Linux operating system, is divided into pages, which can themselves be categorized by usage:

- Kernel Pages are fixed in memory and never swapped. Some operating systems have pageable kernels, but Linux plays it 'safe'.
- Program or application memory pages are held as read-only in memory and are exact copies of the binary executable on disk.

- File-backed pages are those containing volatile values which haven't been written back out to disk. These might contain changes in memory that haven't been written out yet.

- Anonymous mappings are volatile pages which don't correspond to any file name; these contain the stack and heap variables of running tasks, created by a program requesting a memory allocation from the kernel.

The cached pages can be divided into 'clean' and 'dirty', which the kernel memory manager has to look after in the background.

- Clean means the data in memory



is the same as on disk, or, the values are unchanged since they were instantiated. Clean pages can be discarded whenever the memory is required for something else as they match the original data available on disk.

- Dirty pages contain changed data since the last read or instantiation. These have to be 'evicted' - the changed values recorded to disk - before the memory can be flushed.

It's important to remember that Linux has no separate disk cache, unlike Unix- or DOS-based systems. It's designed to read-in and keep the most useful data from disk as cached pages. Also, the kernel doesn't usually modify the disk directly: changes are made to the files in memory, then 'flushed' after a disk-

write by the memory manager. It's a data-security thing.

At times of peak workload, this is the operation which slows everything down, as the kernel runs out of empty and clean pages in the pool; it has to write dirty pages to disk before it can continue on with its prioritized tasks. File-backed pages are flushed by writing-back to their parent file on disk. Anonymous mappings, however, have no backing-file, these are stacks and arrays of works-in-progress. Where do they go? Into Swap!

If you don't have swap space, then anonymous mappings can't be flushed, they have to stay in memory until they're deleted. This reduces the size of the memory pool that the kernel can draw on to keep running all concurrent processes. It has to keep juggling file-backed pages, which can be even slower in operation; navigating directory trees and performing disk-writes by-the-book. It's a lot simpler and faster to blast out copies of flat pages to

Swap. Remember, RAM is expensive, disk is cheap.

## Partition or File?

The original criticism is that a whole swap partition is a waste, especially if you have only a small hard disk or solid state drive. You can use swap files, as do some other operating systems we won't mention, but remember swap files have to obey the rules alongside everything else on your journaling file system. A swap partition is ring-fenced for paging; no other files can reside there.

## Kernel Panic

This is a recognized medical condition of mental anxiety, brought on in Linux users when they run the free or vmstat commands and discover how little free memory is reported. You can relax, this is quite normal.

The kernel memory manager tries to keep the available RAM filled with cached pages in expectation that the files will be used again and it won't have to go to disk to fetch them. This is intentional. Whole books have

been written on the predictive algorithms used to predict what to cache, what to flush, when, and how much memory is sensible to leave in the empty pool. You can watch your free memory go up and down, if you have nothing better to do. Right after boot-time, there's a large pool, decreasing when you begin running application programs, then increasing again when a program exits and the data pages it held are released.

## Swap On

To check the state of your swap partition, use:

```
swapon -s
```

which gave me the result shown below.

The Linux 2.6 kernel has a parameter called swappiness which you can use to tune the way Linux uses Swap. It is a number from 0 to 100: 0 means minimal swapping, keeping more pages

resident in memory, even if they are idle. Going up the scale to 100 increases the rate of swapping in an attempt to maximize the amount of free memory available in the pool.

The default value for swappiness is 60. You can alter it using root permissions and a parameter command such as :

```
echo 50 > /proc/sys/vm/swappiness
```

Any value set this way lasts until the next re-boot. To change it permanently, you need to edit the vm.swappiness parameter in the /etc/sysctl.conf file .

In adjusting swappiness, you are making a judgment call; it prejudices the kernel memory manager for-or-against swapping out to disk. Set swappiness too high, you risk your disk-writes going through the roof; meanwhile every concurrent process has to wait even longer in line for its data to be read back in from disk before it gets a slice of processing time.



Which brings us neatly back to the need for Swap. It's only there to support our marvelous multi-tasking, time-slicing operating system that we run on our lightning fast, parallel-processing multi-core CPUs. If you only do one thing at a time, you can happily ignore everything I just said. Before you do, try running the top command in a terminal during a busy session.

Filename.....	Type	Size	Used	Priority
/dev/sda1	partition	2931856	109840	-1



# MY STORY

Written by Danish Lala

I joined my new office in July 2010. Assigned to the Purchasing Department, I was given my own workstation. The IT department in my company was humble and friendly. Since they had their department on the same floor as my department, we used to bump into each other often. I was curious to know how the company network was set up and in what manner it was running. Being an Ubuntu fan, I wanted them to have a look at the OS and try it for official use.

Initially, my PC had some problems; some were related to hardware, and some to software. Hence, the IT guys had to spend some time to make amends so that my work would not come to a sudden halt altogether. In the process of problem solving we started to discuss Linux.

A few days later, I was talking about Ubuntu, and my IT guys, Pravin and Kalpesh, were happy to know that someone in the whole company knew about Linux other than themselves. They knew about

Fedora and Red Hat Linux, and wanted to try Linux as a Server OS. Soon, we three started to discuss Linux Server OSs, and they both tried some flavours on two spare PCs which they used as a Server. After a long testing and trial, they chose to install Fedora as the Server OS, and also use it to route the internet traffic through the whole company network.

The company's network was now administered by Fedora OS, and the Internet routed through the same Server PC which was running Fedora (Server Edition). Also Ubuntu 10.04 was installed on a second PC to try out new additions without affecting the Network. But Linux has its own share of problems.

We had to find replacements for old programs, and ensure smooth functioning of the company network and flow of operations. We have IP Messenger on all PCs, and the OS is Windows, hence Gnome IP Messenger came in as a replacement on the Server. Squid was deployed to control

traffic through the network. Also VNC was installed so that, in case of any problems, the same could be solved without the user being affected (since the network is spread over three different levels in two separate buildings). The virus database was also centralised and henceforth all the updates are made from the Central Server. Wine was installed and is now used to run some software which runs on Windows but does not yet have suitable replacements in Linux. There were some minor issues such as blocking of unintended sites by squid, domain assignment, and even some freezes, but they

were solved thanks to the community, which is always there to help us all out.

In this way, Linux replaced an older OS on my company server, and is now fully functional. And yes, since we are an infrastructure company, we have issues on our various sites that are as far as 400-700 kms from us which are solved through TeamViewer.

All my thanks to the Ubuntu community, and my best wishes to your readers. Keep reading and keep using FOSS.





# MY OPINION

Written by Allan J. Smithie

# The Netbook Is Not Dead Yet

**2**007: the launch of the Asus eee-PC created a market in ultra-portables. Almost four years later, the popular press would have you believe it's a market that came and went. They don't explain why two of my local supermarkets are pushing HP-Compaq netbooks at £199, and there's a thriving sector of on-line retailers promoting refurbished netbooks for even less. Meanwhile, the big manufacturers continue to push shiny hand-bag sized toys into higher-margin price ranges.

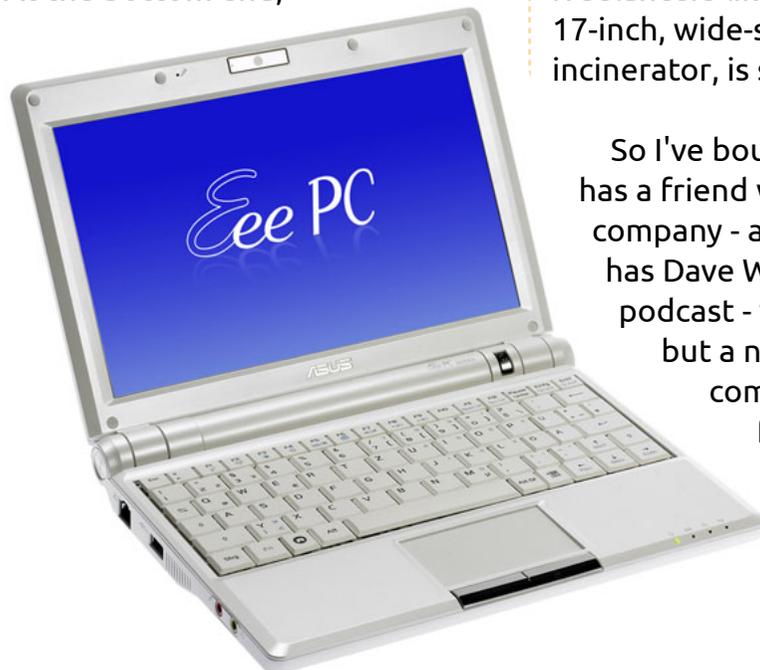
Somebody must still be buying them.

I'm looking at my immediate circle of acquaintances. There's five of us looking at small, lightweight mobile devices, having a proper keyboard, decent screen, wifi, and good battery life.

The answer we seek is minus sim-cards, expensive data plans, and pretensions to be a phone. It's a second or even third computer, good enough for the kid's

homework - or mine - that can get us on-line via a hot-spot, whilst being portable enough for a plane or train. With a cheap office suite, it also plays just enough media and low-resolution games to keep us amused, but it's not our gaming or photo-editing machine, unless you want to tidy up your Facebook photos before posting.

That answer is not an iPad, or an Android tablet. We either don't do the Apple way, can't justify the expense, or simply can't afford it. At the bottom end,



these tablets are glorified smartphones, and, what the heck, the smart people have got one of those already. Besides, smudgy fingerprints on a touch-screen keyboard never struck me as any kind of advantage.

No, there are plenty of consumers who aren't into technology like us, who don't want the clutter of a full-sized PC in the house. There are silver-surfers and sofa-surfers; students; 'road-warriors' trading on the move, and freelancers like me for whom the 17-inch, wide-screen, thigh-incinerator, is simply a waste.

So I've bought a netbook, as has a friend who runs a training company - a techno-sceptic, as has Dave Wilkins from the podcast - who had no budget, but a need for portable computing. Two more friends are looking to buy, one of whom is allergic to technology, the other allergic to carrying heavy

objects.

The next question is what to run on it? The end of the long tail of Windows XP is in sight, although you find far too many XP installations which are now effectively out of support. Windows 7 is in the ascendant. The machines are powerful enough to run it, multi-tasking office, and browser and email clients. It seems the early experiments in Xandros and Linpus-Lite Linux are about done, not that I'm sorry.

But I am finding a number of the refurb's pre-loaded with a thing called Ubuntu 10.10, if only to bring the price down. Who would have thought it? Go forth and evangelize, my children.



**Allan J. Smithie** is a journalist and commentator based in Dubai. His blog, 'No Expert' is at: <http://allanjsmithie.wordpress.com/>



# I THINK...

## The first question to this new section is: What do you think of Unity?

|| I am not very happy with Unity; it feels undone, unpolished, and clunky. 11.04 is a step backwards in my opinion.  
**bupahs**

|| I think the new Unity desktop is awesome and just what Ubuntu needed. It has made me a full-time convert.  
**myzombiebrain**

|| I do not like Unity because it lacks keyboard shortcuts and configurability. "It is what it is" is far from Linux, IMO.  
**jadi**

|| Unity is the way to go, but is still easy to mess up. Don't throw away your classic Ubuntu Gnome desktop just yet!  
**java\_artisan**

|| I really like the Unity concept. Still getting used to it. I miss not having the workspace switcher in the toolbar, otherwise great!  
**EmbarkOnIt\_Phil**

|| Loving Unity so far. No more

need for extra docks, and no more Gnome-do.  
**jmangt**

|| When I installed Ubuntu 11.04, a message appeared saying "your computer doesn't have the necessary hardware for Unity". I assume it means that this nonsense requires some overpowered, overheating, overclocked, overblown video card which uses more power than the rest of the computer. Needless to say, I don't want or need it on my machine.  
**Kurt Godel**

|| I didn't like it at all, and switched to KDE (Kubuntu 11.04). What a relief!  
**Marco**

|| Frankly, I don't like the new view (Unity). I switched back to the classic view ASAP. This may well be due to old dogs and new tricks, but also has something to do with problems in finding things within Unity. It just didn't seem so intuitive. Why I need great big buttons to run Writer and Calc,

etc, I don't understand. Creating your own icons in the classic view is hardly a major issue.  
**David (laidback)**

|| The other thing I dislike is the fact that the "launcher" is glued to the left side of the screen. In all of the videos, screencaps, and demos I have seen of Ubuntu, most of the time the bottom panel was removed and replaced with a Dock (AWN, Dockey, etc). Since this was the way so many folks interacted with their desktops, why not do the logical thing and lock it on the left side? It doesn't make any sense. Unity is a major step backwards in desktop user interfaces. I understand that the ultimate goal is to allow Ubuntu to focus on the touchscreen and tablet interfaces. But right now, the total number of tablets shipping with Ubuntu is..... 0. Why are we focusing on the user interface for vaporware?  
**Kevin Seise**

|| Unity 2D is for me!  
**giantgrengoat**

|| I find Unity a neat, clean, and non-intrusive environment. It focuses on the applications and not on the 'look & glitter'.

On my Netbook, Unity delivers more vertical pixels for my applications than any other DE, even without tweaking. The combined top panel and application menu does it for me.  
**Alain J. Baudrez**

|| I think it's awful. I don't like change for change's sake. Hopefully, a more normal Gnome interface will continue to be available, but if Unity becomes dominant in Ubuntu to the detriment of Gnome, I will probably switch distributions.  
**Graham Niven**

|| Unity in 11.04 is great, when you take the time to learn how it works.  
**girolez**

|| Unity might turn out to be a great desktop someday, but it's truly not ready. It has very little functionality, lots of bugs,

and can't be tweaked. Ubuntu should have gone with Gnome 3 and waited for Unity. I thought Linux was all about choice. I think I'm going to switch to Linux Mint. This is a great opportunity for Linux Mint to lead. I'm keeping my eyes on Linux Mint.

**Wayne**

|| What's this I hear about having to install some drivers before Unity becomes usable? The Live CD said something like "I don't have what it takes so here's the old interface" (wrong words obviously, but along those lines).

**Paul**

|| I have just installed Unity and things are not good. After loading, it locks up for a while, then runs really slow. Unusable. This is the first time I have had problems installing any distro. I'm going to try reinstalling, and if it still has issues, the CD is going into the rubbish bin

**Craig M. Ling**

|| After the Natty upgrade, it looks very like my previous Netbook desktop, polished. Will find out how to edit launcher soon.

**CoffeeJohny**

|| I dislike it. I have used Ubuntu since 6.04, and I have always used the Gnome desktop environment. If I upgrade to Ubuntu 11.04, I will disable Unity to continue to use Gnome. I have tested Xfce, Fluxbox, and KDE, and my favorite is Gnome.

**Alejandro Castaño Fernández**

|| Unity? What Unity? I used Gnome til "Gnome 3" and "Unity" arrived. Then I switched to LXDE, and am as happy as can be. Freedom is what Linux is all about.

**Marc**

|| It needs work, and "may" be good over time after everything is ironed out. Gnome is better IMO and I'm a devotee of Cairo Dock anyway. I'm sticking with 10.04 LTS thank-you-so-very-much, and, if things continue this downward spiral, I may switch to Mint for the next LTS. Too bad for Ubuntu. It's sad to see them take such a hit on an unwise path. Maybe they can pull it off. Time will tell. Most people I speak with do not like Unity.

**Joseph A. Millikan**

|| I really quite like it, except for the global menu which I absolutely hate, as it really just slows you down when working between two or more windows. I have disabled it. For the rest I really like it.

**Chris Giltane**

|| I believe Unity is a massive and great step forward to better interaction between user and computer. It increases the working space, and it adds clarity in what's open and what's available.

|| I'll be putting Unity to the final test at work with a much better computer, but I'm sure it'll increase my productivity and comfort once again. I'm sure too that it will be much improved in the future.

**David Gamino**

|| I dunno if it's been discussed, but how about giving an option of displaying the icons horizontally, the Dockey way, at the bottom of the screen?

**Jari Saarelainen**

|| I think Unity is absolutely amazing: more space, nice

animations, easy search, and nice notifications - can't say anything bad about it.

**Ілля Романенко**

|| I tried 11.04, then went back to 10.10. My screens (two 22 inches) showed me weird things at first, then Unity appeared. It is beautiful, really, but I was lost! I didn't understand how to manage it. Yes, I know I should have taken more time, but I don't have it. So it is like a piece of Art: beautiful, but not for me... yet.

**Franz**

|| Well, I don't really like it. I find it's quite complicated, and it doesn't let me work faster. It actually slows me down a lot. Since I am a python programmer, I don't like to have to search a lot for my files. I'm sticking to Ubuntu 10.10 until Canonical releases another version, for example 11.10.

**Nicholas Manea**

|| Unity helps to keep the desktop clutter-free and organized. Only problem is that I've yet to figure out how to customize it further.

**kra3**

|| There are one or two small

niggles, but, when I started using it, there were a lot more. It seems that the niggles are due to my unfamiliarity with the system, and as I use it, I get better at understanding it.

## **Andrew Ampers Taylor**

|| My opinion is that Unity is a bit too slow for my needs. When I open multiple windows (more than 3 or 4, depending on the applications), it tends to get laggy and slow. I like my PC to be fast.

## **Ardelean Călin**

|| I've been on the fence about going with OpenSuse with its Gnome 3 out of the box, or staying in UbuntuLand with Unity. One thing that I think Gnome 3 does slightly better is the infinite desktops per window/task. I think that both Unity and Gnome 3 need to pass their initial milestone before truly delivering each camp "The Goods."

## **Joe**

|| I don't like it! "Dumbing Down" the Desktop is an insult. I can read, and not just Click on Pictures. This "Simple" interface is too simple! I will stay with 10.04, and not use 11.04!

## **Ichido**

|| Personally I hate Unity. I feel it is trying to take away something that I loved about Ubuntu, the total customization that you can do with everything. The panels work so well to put everything exactly where you want it, but Unity won't even let you right click. I was on the verge of reverting back to 10.10 before I found the 'Ubuntu Classic' option. I will certainly never update to a new version if it supports only Unity.

## **Ryan Holihan**

|| I will not use it on my Samsung NF210 10" laptop. I hope that by the time the next LTS version is out, there is a choice of interface. If not, then I think I'll have to abandon Gnome and go with KDE!

## **Richard**

|| Some things are renamed and took a little bit of time to find. Overall, I like it, and think it was the right step to make for Ubuntu.

## **Michael St. John**

|| I think Unity is a great user interface, but has some shortfalls. It is hard to find

applications, I had to click more and search. It requires a lot of searching. Once you click an icon with several open application instances, it beautifully reveals those applications in grids, but upon further clicking, it doesn't disappear, forcing you to select an application. I'm not happy with this behaviour. Overall I'm happy with it.

## **Robert Ngalu**

|| I truly hate the global menu idea, as I rarely use any window maximized except on my netbook. Having a menu separated from the working window is awful. I very much miss the old standard menus, for which Unity is a poor substitute. I like having the dock for frequently used apps and activities, but there is no reason it cannot co-exist with old style menus.

## **Dazed\_75 a.k.a. Larry**

|| Unity on Ubuntu 11.04? I love it!

## **Jon Mazur**

|| I was prepared to dislike it - but then found myself thinking it was more efficient once I got used to it. Unfortunately, after using it for

three days now, I've discovered that it seems a bit flaky. It has crashed several times, it does not seem to deal well with multiple displays, the launcher occasionally forgets the monitor dimensions and paints itself in unusual positions, and some programs (backintime?) seem to cause problems with the panel. The more I use it, the more I like the concept, but it really seems like it is unfinished/buggy.

## **Wat Grad**

|| I think there is gold in there, but the overall interface did not please me, therefore I reverted to Gnome 2.

## **JJ**

|| Well, it's a bit of a change from the way you used to work, but, once I got used to it, I think it's great!

## **Carla Sella**

|| My take on it is that it's a good note/netbook interface, but, as far as a desktop interface it's terrible. It gets in the way of being productive, too many clicks and not enough customisation for work flow. After experiencing Gnome 3, I'd have to say the same about it. I really think

both are headed in the wrong direction for a desktop interface. They are both trying to dumb down the desktop too much.

## **Randy Blake**

|| Unity exceeded my expectations by a lot. It is really smooth, neat, and easy to use. Unfortunately, many of the Compiz plugins I used and loved with the classic Gnome, do not work (well) with Unity, such as wobbly windows, Compiz cube, etc.

## **Siddarth Kaki**

|| Actually, it sounds rather similar to what a lot of Kubuntu users went through a while back, when they made the jump to KDE 4. It wasn't fully ready at the time, had a lot of bugs, and longtime KDE users often hated it just because it was so different.

## **Matt Jacobs**

|| I found Unity surprisingly good until now. No crashes, easy navigation. I find the lack of customization options annoying, though.

## **Flávio Pontes**

|| As a long term (since Dapper) Gnome user, I've found Unity slow (too many extra steps to

launch applications), and contra-intuitive. The joy of Linux/Gnome is in its flexibility and ability for personal configuration. Unity might be very good if it becomes possible to add extra panels, though maybe this destroys the whole point?

## **Pete**

|| I have been using Ubuntu since 6.04. I can't get Unity to work on any of my systems!

One system has a quad processor, and 4 gig of memory, and Nvidia 7025 video, and still will not load Unity and goes to the default Gnome. It can't get the video drivers (says none available, so low res display), but worked fine on 10.4 and 10.10.

## **Phantom**

|| I think Unity is a bold step forward for Ubuntu. Still in its infancy, the desktop offers a clean and uncluttered look and feel. I really enjoy having the most screen space without pressing F11.

## **Darrin Scarpitto**

|| To me, Unity is a step backwards for Ubuntu. I consider it in the same class as the new Gnome 3: an icon-driven UI that's slow and has a steep

learning curve.

I switched to Xubuntu 11.04 with it's XFCE interface, which still retains a drop-down panel where I can quickly find what I need.

## **Denny**

|| Unity seems a fresh breath of air, and I hope it succeeds. Some bugs still, though!

## **Robert Tedder**

|| I tried it on my laptop and hated it. It doesn't add functionality, instead it removes it. Too many mouse clicks. A dock (I don't use dicky, or any other such thing) that is there, except for when it isn't, and having to move windows around just to get things done.

I am impressed that Canonical is trying new things, and glad that "Ubuntu Classic" is available in 11.04. But if one doesn't like "Docks", and just wants a simple interface that is easy to navigate, Gnome 2 works just fine for me.

So for me, if it ain't broke... why fix it?

## **Korne Iole**

|| I use it on my 10" netbook and I am really satisfied. Much better than the Windows 7 GUI. Easy to customize. I really look forward to installing it on my desktop.

## **Angelos Vlassopoulos**

|| Tried the 11.04 Ubuntu, sorry to say I do not like it. Seemed slow, and I do not like the way it shows your options. Didn't seem to be able to locate "system" so that I could set my preferences. Have un-installed it and returned to version 10.10.

## **Richard**

|| I don't like it. Immediately after installing Natty, I tried to use it for a couple of hours but found it inconvenient and intrusive. Things were not where I expected them to be, or didn't do what I expected them to do. After a while, I was able to figure things out, but it still took me longer to do anything. I was glad to have the option to switch back to "classic".

## **Jim Roche**

|| It seems oriented to casual users and not power users. I have my panels configured, so just about everything I need concerning apps or files is one click

away. With Unity, a lot of stuff I would never use was always shown, and there seems no way to customize it to have everything one click away via a panel. Also, I use old machines, and so 3D effects and other stuff like that seems a big waste of resources. I also don't like Ubuntu distancing itself so much from other Linux distros.

## Carol McAnulty

|| I love Unity. I'd love to see improvements in virtual desktop management, and a cleaner integration of communication services (Email, Contacts, Calendar, Broadcast, and Instant Messaging), but it's miles ahead of where we were with stock Gnome 2.

## Josh

|| I was already switching often between Gnome and KDE, but, for photography, KDE seems the way to go now (yay, Digikam!). I still remember how KDE 4.0 was introduced, and everybody was complaining with strong and plain arguments. They surely had a clear reason to do so. Unity sounds very great, but I don't like the idea that people with older hardware are left standing in the cold now.

## Fred

|| Some things I was used to are not easy to find, such as Ubuntu Update Manager.

Others, such as the Software Manager, have been updated so much that they just look weird. However, new does not equal bad. I like the idea of the dock bar, and how it disappears when apps are in full screen mode. Overall, I think it is less cluttered than Gnome 2.

## Adrian Challinor

|| I really enjoy the new interface. I've been looking forward to it since they announced it. The lenses are very nice, and fit right into my mouse-less computing habits. I like the sidebar launcher, but, honestly, I've had Docky as my sidebar just like that for a while so it's not a new thing for me.

## Les Martin

|| I think Unity is not what a desktop user wants. It would look good on a smartphone. Ergo, I do not want Unity. Even stronger, I do not want Gnome anymore. I already switched to KDE a month ago. I will also not upgrade to 11.04.

## Jef

|| The thing I love the most about Ubuntu is its ability to customise it to however you want.

The new Unity interface reminds me of a Mac - which has almost no ability to customise.

Unity is so darn frustrating as it tries to hide features from the user, which is the opposite of what I want from a OS.

## Dan Gillings

|| I like the autohide feature whenever a window is dragged near the Unity panel... but I dislike the unavailability of the wobble feature in compiz

## Prateek Jadhvani

|| I absolutely love it. Finally, a GUI interface that stays out of your way when it needs to, and is available all other times.

## Arrogant Penguin

|| I didn't really like Unity since it reduced my web page screen width. Gnome 3 gives me more workspace on my 10" netbook than Unity does.

## Mahyuddhien Alghow'ry

|| For the application developer who needs desktops, the interface is not a good option. We need rapid access to different desktops, vis one for personal stuff, one for online docs, one for eclipse/netbeans, and one for the debugger and test results. So, the loser is Ubuntu, as developers shy away and develop with other systems (Debian).

## Leslie Satenstein

|| It is not good. It looks like an ATM machine, or a Touristic Info Kiosk on the street. Less flexibility, less user options. I think I'll go back to pure Debian.

## Bratu

|| I think it is quite bold of Ubuntu to launch Unity, trying to find a place captured largely by KDE and Gnome. I think it will take some time to get used to the concept, but the first impression is nice.

## S Sivakumaran

|| I think it's sad that Ubuntu wants to look like Mac. Unity doesn't seem to have functions I like. I use glipper a lot, and found no way to set it up in

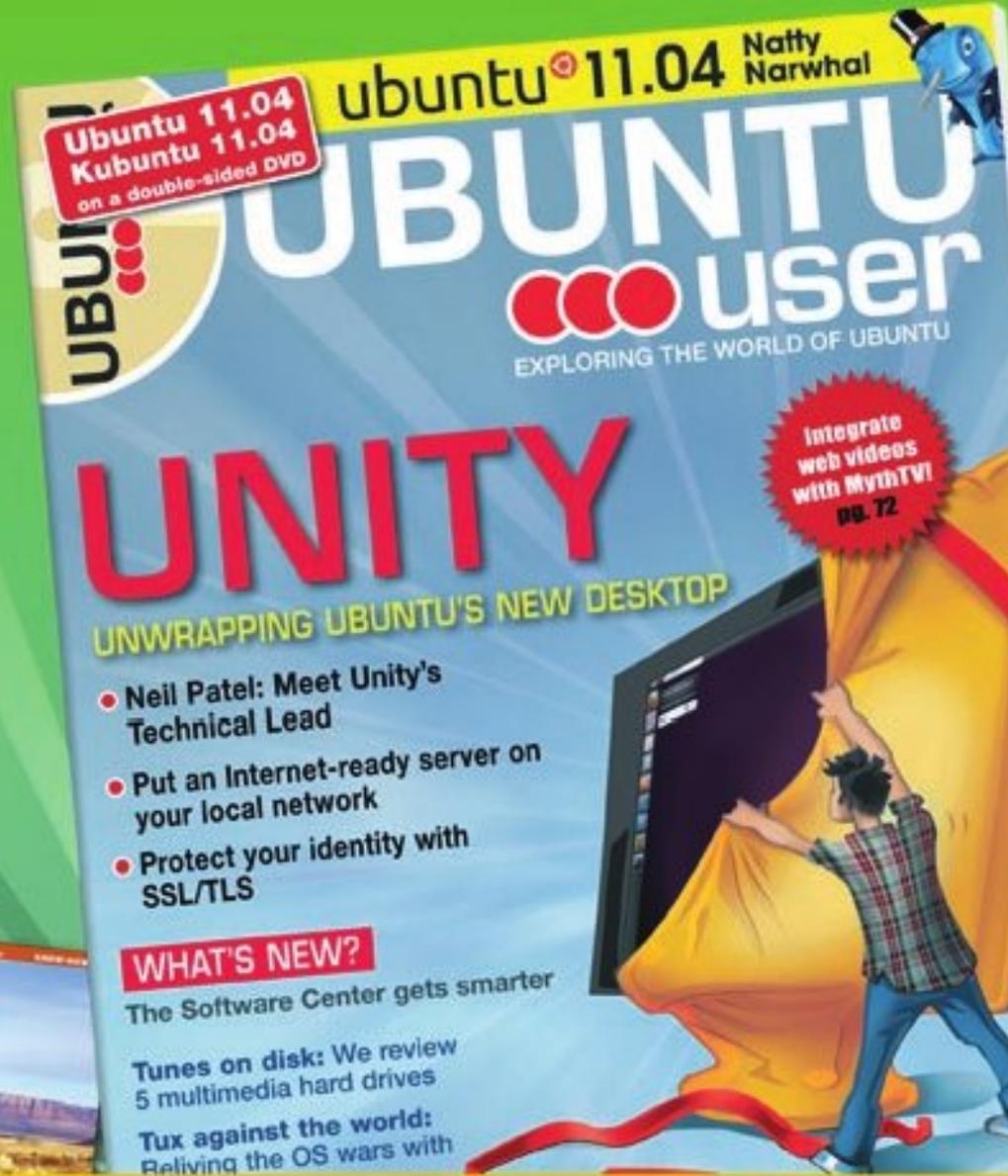


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**W**hen dealing with virtual machines, a.k.a. virtual boxes, you have your choice of 3 major players: Oracle VirtualBox, VMWare, and Parallels. If you're looking for a free one, then you're limited to VirtualBox, since VMWare and Parallels will be dipping into your pocket.

For hardcore Linux users, VirtualBox is issued under the GNU/GPL licensing structure, but the extension pack (read below) is issued under PUEL (personal use and evaluation license). All those letters mean "free" and "not for commercial use". Versions exist for nearly every Linux distribution, including Ubuntu, Suse, Debian, Fedora, Mandriva, Red Hat, and TurboLinux (do they still develop it?). When in doubt, go to the bottom of the download list where you'll find "All Distributions".

Linux users will probably state that VirtualBox is really from Sun Microsystems. After all, that's what their program heading states for their version, and even the icon

states "Sun". However, Oracle took over quite a while ago, and the website at [www.virtualbox.org](http://www.virtualbox.org) doesn't even hint at Sun Microsystems any more. Nevertheless, some Linux distributions that packaged VirtualBox often have outdated variations that do state Sun. The easiest way to tell if a version is up-to-date is to look at the version number. Version 4 is the latest, and apparently the only one offered now, for reasons mentioned below.

Until version 4, users had the option of VirtualBox (which I'll call Base), or VirtualBox OSE (OSE), with the only difference being USB support on the latter. Users apparently became confused by the difference, so Oracle decided one version was sufficient - along with an extension pack to add USB support. Unfortunately, the change didn't end the confusion, and may have added to it. You see, the extension is casually mentioned on the download page, and isn't hyped or highlighted. It's just there among various

downloads and mumbo-jumbo, and I imagine many miss it. And that's sad. VirtualBox is incredibly easy to use, and most will probably figure it out by just poking around, but the website is haphazardly designed, and was obviously created with aesthetics not in mind. Plain Jane comes to mind with underlined hyperlinks all over the place and an HTML help guide instead of a downloadable PDF version.

Before you start, it's advisable to do two things before downloading and installing VirtualBox, especially on Linux. First, uninstall the VirtualBox you have if it's below version 4. If you have version 4, keep it, and download just the extension pack (which, for some reason, is rarely included). Second, watch which OS version you download. You have your choice of Windows, Mac, or Linux, but the website doesn't automatically read what OS you're using, so choose wisely. You'll have to know if you have AMD64 or x86 technology, although downloading the wrong one won't cause any

harm (you'll get the usual "sorry" warning).

Once downloaded, installation is straightforward, with no quirks other than the usual Linux nag that another version exists in the repository (not the right versions, though). Just remember to download and install the expansion pack too, or you'll be lacking USB support. You should see a menu heading, but I'd advise you put an icon in the panel and/or desktop for easy access. If you're like me, you've already got a few hundred programs installed, and the thought of scrolling through a load of programs to find one is frustrating.

The interface is pleasantly designed, and will walk anybody through the process. If you are new to using virtual machines, I'd recommend experimenting with another version of Linux since they require no serial number or special tweaking. Once you install one guest, the rest fall right into place.

Now it's time to clarify a couple

of often-used words when dealing with virtual machines. First, the host is what you are currently using on your computer. In my case, it's Ubuntu Linux 10.04. Second, the guest is the operating system (OS) you plan to install in the virtual machine - Windows 7 Ultimate in my situation.

Installing a guest is a simple affair - with just a few quirks you must watch for:

- Know which guest you plan to install. Yes, that sounds stupid, but you have a choice of several, and you don't want to pick Windows 7 when you really want XP.
- Amount of RAM to devote to the guest (see my note below).
- Amount of hard-drive space and whether or not you want auto-expansion.

This is the point at which the casual or inattentive user can make bad decisions. The guest choice is straightforward, but if you intend to load Windows, be sure you have a valid disc and serial number. Failure to have either will resort in an aborted operation and a half-installed

guest. You'll find out later how that can come back to haunt you.

As for the RAM, don't get overly zealous. Fortunately, VirtualBox will give a warning that designating too much RAM for the guest will cripple the host OS. As a rule of thumb, no more than 50% should be allocated - it was 2GB in my case. How critical is this? Recently, I was called to assist a person who had allocated all RAM to the guest thereby crippling the host. Both have to work in tandem, and they do rely on each other, so don't overdo it.

The hard-drive choice is generally defaulted at 20GB or thereabouts, and that's a fair amount to start with (it seems to pick about 10% of the hard drive, so this amount can vary), but make sure you check the auto-expansion option. This allows the partition to expand as your Windows or Linux OS gets larger when you add programs. Failure to check the box will lock you into the space allocated. Fortunately, if you do forget, you can go back and change that parameter; just do it before your space is full.

It appears VirtualBox reads USB

ports only when peripherals are attached, but it does know the ports are there. If the expansion pack is installed properly, you'll see a heading in the menu for USB. Failure to install the expansion pack will result in the USB area graying out. Of note, USB 2.0 is supported, but nothing is available for USB 3.0. If you have 3.0 peripherals they'll be downgraded to 2.0 if allowable.

Once you've set the parameters, the magic begins. The partition is created on your hard drive, and it'll be a couple minutes before VirtualBox asks you to insert the guest OS DVD in your drive. Linux installers can use a USB flash drive, if available, or the DVD, but Windows users are stuck with the DVD.

Normally, Windows 7 can take up to an hour or so to install on a fresh hard drive, but it takes less in VirtualBox, mainly because it borrows basic information from the host, and already knows the time, language, date, keyboard style, and other minor things. In all, VirtualBox took roughly 30 minutes to install Windows 7, and, from there, Microsoft took another hour to download a slew

of updates and verify the serial number. In short, count on about 1.5 hours for a full install of Windows 7 - most of which is taken up by updates and serial number verification. XP installers can easily count on 2 hours waiting for 1GB+ of updates and security fixes (if you have an XP disc it's out-of-date by 2 years or more, so be prepared).

Once installed, your guest OS will have a menu heading in the VirtualBox directory. Each guest OS you install gets a new heading, and I've personally squeezed 5 on the menu, but you can open only one at a time. Clicking on any guest heading will open a virtual machine window that you can maximize or keep as a smaller window overlaying the host desktop. A separate menu for just your guest OS will be inside that window since VirtualBox closes after opening the guest (and then reopens once you finish). There is a quirk, though. If you go full screen, the menu for VirtualBox disappears and is nowhere to be found until you run your mouse at the screen's bottom. At that point the missing menu appears. If you opt for the smaller window the menu is always present but you

lose screen real estate and may have to scroll to see pages.

Operationally there isn't much of a difference in the guest. In my case Windows 7 worked just fine, and I could switch between host and guest at any time by merely minimizing or moving the guest virtual window.

As for file swapping, I've always found it to be problematic. Virtual machines like to claim that files can be swapped or read between host and guest, but my experiences have been less than successful. Sometimes they transfer, sometimes they don't, and I've never gotten the same results twice. I use Windows 7 only because my work requires it, so file swapping is not a major concern for me, but if you do need to transfer files between host and guest, be prepared for trials and tribulations.

When I authorized file sharing in VMWare and Parallels, I'd often get crossover interference. When I installed music files in my Windows guest, they were opened by Windows Media Player by default, but when I closed that

virtual machine and went back to my host, things got goofy. When attempting to open music files in the host, even with VMWare or Parallels closed, the guest OS would abruptly open to expose Windows Media Player. I finally learned to right-click music files to have them open with the program I wanted outside of the guest. I could understand this if the guest virtual machine was open, but VMWare and Parallels would go the extra mile by opening themselves and then the guest OS. That was just aggravating after a while. VirtualBox suffers no such ills. It never once attempted to open the guest without first asking me.

The only time you may witness interference is when guest and host programs collide. I discovered that opening Pidgin in Ubuntu while Messenger was running in Windows 7 would cause Messenger to shut down since it sensed I had signed on from a different location. Curiously, Pidgin never shut down, just Messenger.

Internet connection is a breeze. Again, the guest takes the

information from the host and runs with it, although you may have to re-enter your wireless key if one exists. If you're wondering, you will have connections in both the guest and host, and I had browsers open in both with no degradation in connection speeds.

Once you're finished using the guest, you have the option of shutting down, suspending, or sending a power off signal to the guest. Shutting down is obvious, and suspend merely halts the guest for future use (sort of like hibernation or sleep), but I have no idea what sending a power-off signal is. It did the exact same thing as shutting down. If you forget where you're at, and use the Windows button to shut down, don't worry. VirtualBox figured some users would do that, and should you attempt to shut down via that system, its menu will pop up to remind you you're in a virtual machine, and take over by substituting its options for Windows. The only real difference in the 3 termination methods is the amount of time it takes to reactivate the guest. Shutting down and then powering back on requires a cold boot with the usual

Windows 7 times, but suspending and restarting will have you up and running in about 15 to 20 seconds. This is about the same time it takes to get 7 out of hibernation on a Windows computer. Quite impressive, actually.

While it could be argued that other virtual machines such as VMWare and Parallels also save guests in their current state, they operate quite differently. Parallels on my Apple takes a good minute to open a saved desktop, and VMWare took nearly 2 minutes to open a suspended guest. Both were just slow enough that I took to shutting down the guest OS and doing cold boots to restart them since the time difference was minimal.

One thing to mention is a little quirk that may confuse some. Insert a flash drive or CD/DVD into your optical drive, and it'll show up in both the guest and host. Ubuntu shows a desktop icon, while Windows 7 shows either a desktop or taskbar icon. But that's half the fun. Ejecting a flash drive in Ubuntu will not eject it from the guest OS and Windows would always return with a snarky remark

about removing drives without requesting permission. This is nothing unusual. USB peripherals and optical-drive discs are seen by both the host and guest, and deactivating one doesn't necessarily do the same for the other OS.

What if you tire of a guest, and want to dump it? Go to the menu in VirtualBox and delete it. The only problem with this procedure is that the partition remains until you resize, delete or overwrite it, and this may require the assistance of GParted via Linux for the first two options (overwriting with a new guest is the easiest).

There are a few foibles to watch for, though:

- An aborted installation is bad. Forgot your serial number, or power went off halfway through? Not only do you have a dead guest, you've still got the partition. You have to completely reinstall the OS into the same partition to overwrite it, or use GParted to delete it.
- If you suspend your guest session for easier opening in the future, it saves everything good,

bad or indifferent. Even the original time and date are saved until you manually correct them or the computer does an internet time check. Never suspend a guest session if a program locks, because it will still be locked when you come back. Reboot or shut down the guest if problems arise.

- VirtualBox names your guest upon installation, and often will use the same title twice for different versions of the same OS. Install 7 Premium and Ultimate and you may get the same title. Remember you're picking from a pre-defined list but you can change titles at installation if you want.
- Watch the mouse movements! Moving to the far left of the virtual machine screen will cause it to collapse to the right margin. It's still there and is still open, but you'll have to click on the VirtualBox icon in the host to get the screen back.
- A virtual machine is no safer than a new computer installation. If you're using Windows in the guest, don't count on Linux as the host to be a firewall or anti-virus backup. Count on installing those in the

Windows guest (and, no, they won't conflict with any related programs you already have installed in the host).

About the only other snafu I noticed involved updating, especially if you're using a version below 4. Seems Oracle is not updating older versions; they are just replacing them with the newest version. While helping a friend who was using an old version, I got the update warning, and downloaded the recommended new version (which automatically installed). Upon restarting VirtualBox, I got the same update warning again. Seems the download was a full program, not an update. You have to uninstall the old for the new. Fortunately, you lose nothing, and your virtual machines will still be there, but make sure you uninstall the old version! If you put icons on the desktop or panel, make sure you replace them, too. They will link back to the old version, not the new.

But the real curiosity in this test involved a peculiar twist in the overall results. VirtualBox is free, and the general theory among computer "experts" is that

anything free just won't work. These are the same persons who state OpenOffice.org suite will never be as good as Microsoft Office because the latter costs \$300 while the former is free. Guess what? The experts are wrong. VirtualBox beat both VMWare and Parallels in my testing. Speed differences are dramatic with VirtualBox beating both of the proprietary competitors, and overall operations are just smoother. Sort of sad when you consider that I spent over \$100 at some point for the other two, when the best alternative is the one that costs nothing. Sometimes you don't get what you pay for.





## Libre/Open Office

**L**ately I have committed myself to studying Libre/Open Office because I am giving support to clients, and I have to know a little bit about Office, so this tutorial came at the perfect time for me.

I hope that you will do this series as a general Office guide, and wouldn't stick with features from just LibreOffice. In other words, I would like to study the inner workings of LibreOffice and how to use them.

**Hanan**

Elmer says: *Everything I have covered so far will work in both OpenOffice and LibreOffice. I haven't seriously used Microsoft Word in over a decade (for anything other than reading documents on computers I have no control over the programs running on them). I'm pretty sure Word has a way to create things like paragraph styles, but I wouldn't know how to go*

*about it. The purpose of the series is the use of LibreOffice. I will be covering spreadsheets, presentations, and so on at some point. The best way to learn office programs is to learn how the different features work so you can put them together to create well formatted documents. I am open to suggestions and ideas.*

## My Desktop

**I** read your magazine and I thank you for the quality of the articles. I love the section custom desktops, but I think it would be more interesting if published how to make this custom desktop.

**Rubén Darío Alvarado**

Ronnie says: *We'd love to give you full info on how to recreate some of the desktops featured in FCM, but most users don't supply enough information regarding their desktop.*

## Downloading

**E**very month I receive your notification of a new edition having been released. I can never find the right URL or attached file to get/read it.

Could you please draw a big sign on the website, or just directly send your PDF file to my mail box?

**Hsien-Hung**

Ronnie says: *We seem to get a lot of email from people who can't find the PDF's. There is a menu at the top of the page (on the FCM site) which clearly says 'Download'. Click that link and you'll see links to all issues of FCM. It really is as simple as that!*

## Roy's Rant

**Y**our editorial in FCM#48 has given me the opportunity to let loose with my one and only rant in my life. I sometimes think

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[ubuntuforums.org/forumdisplay.php?f=270](https://ubuntuforums.org/forum/display.php?f=270)

you are UK based [*I am - Ronnie*] and if so you will understand, I hope.

### End of Shipit

What a disaster! It so annoys me, these top level people of all kinds in the Linux world. They sit there with their mega mega bits per second internet connection and think it applies everywhere. NO IT DOES NOT. Even my broadband connection is throttled back e.g. it can take up to 4 minutes to download Full Circle. Upgrading is a nightmare but more on that below. I hope that the local user groups will be well publicised and I will have a look on a good

speed day to see how it works and if I can participate in a small way but one has to be careful otherwise one could be way out of pocket on postage costs but lets not be negative.

## Long Term Support

I used to upgrade every 6 months as new versions of Kubuntu (Desktop) and Ubuntu (Laptop) came along but this became more and more difficult, plus there were always bugs in the new release, so I am sticking with 10.04 as I need a solid reliable system so I can be confident of satisfying my customers. Please bear the LTS people in mind when writing your excellent magazine.

## Ebooks

Two very useful articles. I have downloaded calibre as I wanted to get the Ubuntu books but when going to Amazon they would only continue with my purchase if I registered a kindle with them, so I gave up. This is not your fault of course, I only mention it in passing as a general interest thing.

Thanks for your excellent magazine every month. Thanks to

you I am now learning python (though the very name sends shudders down my spine).

## Roy Read

## Music Apps

**Y**ou forgot to mention MuseScore (<http://musescore.org/>) in the TOP 5 - MUSIC NOTATION APPS. It's a "must have" for any musician on a Linux box.

## Rolando Ramos Torres

## Our Pleasure!

**I** just wanted to express my gratitude to the Full Circle crew for publishing this outstanding magazine free of charge. I find it astonishing that something of this high quality can be created using open source tools.

As a long time casual Linux user (10+ years), I always enjoyed playing with Linux over the years but could never imagine it

becoming a competitive desktop operating system, given the fact that you had to be a professional systems administrator just to get Linux installed and running let alone use it to accomplish actual work. After reading through several issues and installing Linux Mint on an old laptop, I'm convinced that in the next five years or so we may finally see a true "year of the Linux desktop".

## Neal

## Ubuntu 11.04

**T**hank you Ed for the very good review (Full Circle Podcast). I agree with most of what you said, but as someone who has been using Ubuntu since 8.10, and a real Linux enthusiast but novice user, I have a few minor issues with Unity.

For me the key word is lack of choice, which used to be what I always loved about the whole open source culture. Why can't we do simple things in Unity such as customising the ridiculous size of the icons? Why can't I even remove the workspace switcher icon,

which always used to be the first thing I used to do after installing any new Ubuntu distro. Now I am forced to look at that useless grey icon on the launcher for the rest of my life.

Don't get me wrong, I really like the look and feel of Unity and the new dash. I can see how it will make finding and launching applications easier, but all I am asking for is to be able to decide which applications I want on the launcher and how big the icons should be. I am a simple man using Ubuntu to do simple everyday things, such as sending files to people via email.

So, imagine my disappointment when I also discovered that I can no longer just right click on a file in Nautilus and send it to an email recipient. I've spent almost an hour trying to find a solution, but to no avail. For me that is like 2 steps forward and 3 steps back. Linux Mint is starting to look like a great alternative for me now.

Many thanks again for a fantastic magazine and podcast series!

**Marcel AKA @JlabrAdore**



## News

• **Trine out on Linux.** Hugely successful XBLA and PC title, Trine, has been released on Linux via the 'Humble Frozen-byte Bundle'. Trine 2 is expected to be released later this year to Linux.

Even though the 3rd Humble Bundle has now been released, a review of Revenge of the Titans from the previous bundle is long overdue. This Tower Defence RTS indie title was released a few weeks ago. I've waited until its release to review the game.

Revenge of the Titans (RotT) is a Sci-Fi Strategy game which mimics the tower defence style games. If you are unfamiliar with tower defence, the aim is to block advancing armies from moving across the map, usually along a set path, and the player is required to build defence towers to stop the advancing forces. RotT is similar in this way, but the enemy will move

in any direction across the map, so towers may have to be placed all over the map.

The Story surrounding RotT is about an alien invasion against Earth. Later you will be pushing the Titans back to their homeworld. There is no in-depth story to RotT, but it has never required it. It's just a great arcade strategy game with an aim to the campaign.

The main bulk of the content is the campaign, which is huge. It consists of 50 missions, which require you to defend your base on each map across all 5 planets you visit. The campaign is highly enjoyable, with plenty of variation in the maps and the Titans you will be fighting. The campaign eases you nicely into how RotT works and plays, but the difficulty will rack up quickly. There is plenty of replay-ability with the campaign with achievements to be earned and new high scores to gain. With the campaign exhausted there is an 'Endless Mode' and 'Survival Mode' where you have to defend

from hordes of titans for as long as possible. A nice bonus is the online leaderboard, displaying the best times across the world.

The gameplay is rather simple and easy to pick up; essentially you place towers in the path of oncoming enemies and wait for them to come in range. Each mission is roughly the same, across the campaign and other game modes. Though, RotT differs from typical tower defence games, since it has a tech-tree system and some resource gathering is involved. There are crystals dotted around

the map, which have to be refined to give you currency to purchase towers. Some titans will also drop currency and other power-ups to aid you in your battle. The tech-tree system has been seen before in my RTSs such as C&C, although it's a new concept for tower defence. The tech-tree is split into two parts, the research side and defence. Research is required to be able to purchase better defences, and there are plenty of upgrades to obtain from either side. It's a nice system which works well, and you may find yourself carefully managing your money



and replaying missions to unlock new weapons. The power-ups which can be purchased, or picked up in a battle, can be very useful to you, varying from huge explosions wiping a large group of titans to slowing them down. The controls are intuitive and the interface is very streamlined.

The graphics are very retro, but are very clean and crisp. There are some nice visual effects and the whole game generally has a nice look to it. The sound is excellent from the soundtrack, and sound effects in the game are all top quality. I am disappointed by the lack of graphic options to allow it to be scaled down and up for

certain systems. Even though it's a 2D game with no demanding graphics, it's not an ideal netbook game.

Revenge of the Titans is an excellent RTS title, and the best game of the 2nd Humble Indie Bundle. It takes the exhausted tower defence style games in a direction which works very well, with a much welcomed tech-tree system, and more flexibility with tower placement. A huge campaign, achievements, and further game modes, give the game plenty of longevity and replay-ability. In my opinion, it is currently one of the best titles on Linux.

If you missed out on the Humble Bundle, a demo is available, and RotT can be purchased for £20 from Puppy Games

(<http://www.puppygames.net/revenge-of-the-titans/>)

**Score: 9/10**

**Good:**

Unique Gameplay  
Lengthy Campaign  
Great "Retro" Look  
Achievements!

**Bad:**

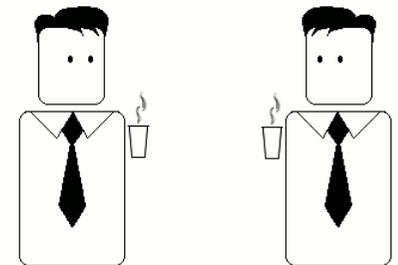
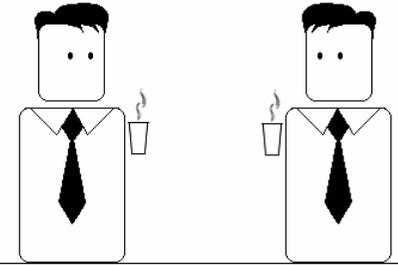
Campaign becomes difficult quickly  
Lack of Graphic Options



**Ed Hewitt**, aka *chewit* (when playing games), is a keen PC gamer and sometimes enjoys console gaming. He is also co-host of the Full Circle Podcast!

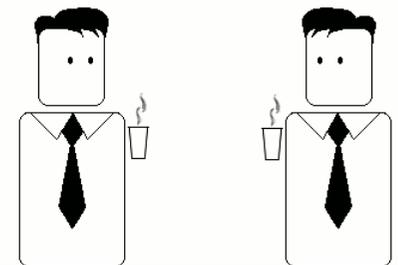
## Quantitative Easing

So basically I just wrote a few promissory notes.



Then payed for them with the money I printed.

Pure genius.



by Richard Redei



# Q&A

Compiled by Gord Campbell

If you have Ubuntu-related questions, email them to: [questions@fullcirclemagazine.org](mailto:questions@fullcirclemagazine.org), and Gord will answer them in a future issue. Please include as much information as you can about your problem.

**Q** When I installed Ubuntu 11.04, I selected automatic login. I think I can be more productive by using the Gnome desktop. How can I switch to this desktop?

**A** Run System > Administration > Login Screen. Choose "classic" and restart.

**Q** How can I get accurate .doc contents using Open Office Word? Sometimes when I open .doc files in Open Office, indentation and spacing would differ compared to MS Word.

**A** (Thanks to **The Cog**) Perfect compatibility will probably not happen. Even the same version of MS Word on two different computers can render differently, depending on which version of Windows, or even which type of printer it has.

**Q** I just installed Ubuntu 11.04 on my machine, an HP DM4 with core i5-430m. The CPU usage on System Monitor is really high (60+% on at least 2 cores) and I'm not doing anything.

**A** (From the same person) The reason for the high CPU usage was gnome-system-monitor itself, if you have the same problem try using 'top' in a terminal session instead.

**Q** I installed Wine in Ubuntu 10.10 x-64, and I use it to play my Windows games, but some games, like Planet vs Zombies, work so slow, and some games, like World of Warcraft, don't work. Do I have to install any other software to use Windows games on Linux?

**A** (Thanks to **Mark Phelps** in the Ubuntu Forums) In a word -- NO. There is *Winetricks* and *Play on Linux*, but both are add-ons that attempt to improve the Wine experience by making it easier to install and configure certain apps and games.

Check the WineHQ app database for the games and versions you want to run, to see their ratings. Low, or no, ratings means you are wasting your time trying to run that app or game.

**Q** I've started seeing something called "kworker" listed recently when I run top. What is it?

**A** (Thanks to **Llawwehttam** in the Ubuntu Forums) Kworker is what controls the ACPI wakeup signals from the BIOS. The latest kernel, well, all of them since 2.6.35, have had issues with too many wakeups. This is an issue across ALL Linux

distributions. Hopefully it's going to be fixed soon.

**Q** I want to start a process (boinc manager) on boot, without logging in.

**A** (Thanks to **sanguinoso** in the Ubuntu Forums) If you put the startup command in /etc/rc.local it will start on boot. See <http://www.debian-administration.org/articles/28> for more info.

**Q** I'm running Ubuntu 10.04. and suddenly the Alt-Gr key stopped working, meaning I cannot get @ and many other symbols on the German keyboard.

**A** Check your keyboard layout settings in System > Preferences > Keyboard to make sure it's still correct.

**Q** My wireless connection would work fine unless I played a video from Youtube, or a flash source in general, through Firefox 3.6 or Chromium. My wireless connection would disconnect.

**A** (Thanks to *baceman007* in the Ubuntu Forums.) What fixed my problem was to go to the settings on my router. I enabled Security>Firewall>Filter Multicast. (The router is a Linksys E3000). There might be other router settings which could affect this.

**Q** How can I identify my USB devices?

**A** Run Accessories/Terminal and enter the command:

```
lsusb
```

The result will be a list which looks like this, but longer:

```
Bus 003 Device 002: ID
```

```
Obda:0158 Realtek  
Semiconductor Corp. Mass  
Storage Device  
Bus 002 Device 001: ID  
1d6b:0002 Linux Foundation  
2.0 root hub  
Bus 001 Device 002: ID  
04f2:b1aa Chicony  
Electronics Co., Ltd
```

The real information is the nine characters which follow "ID". For example, "04f2:b1aa" is my Chicony device. If you Google the ID and "USB" it will probably take you to the web site: [usb-ids.gowdy.us/index.html](http://usb-ids.gowdy.us/index.html)

You might get a warning about his "certificate," which I chose to ignore. The page should describe your device.

**Q** Does the Natty kernel offer out-of-the-box support for TRIM on a TRIM-capable SSD drive?

**A** Run Accessories/Terminal and enter this command:

```
gksudo gedit /etc/fstab
```

Find the line for your EXT4-formatted Solid State Disk, and

make the options look like this:

```
discard,noatime,errors=remount-ro
```

**Q** After upgrading my MSI U135 to Natty, the wireless connection repeatedly asks for the password, and never connects.

**A** Open Accessories/Terminal and enter the command:

```
gksudo gedit  
/etc/modprobe.d/blacklist.conf
```

Add this line:

```
blacklist rt2800pci
```

Save the file and reboot.

## Tips and Techniques To Natty or not to Natty

Every time a new version of Ubuntu appears, there's a flurry of activity in the Ubuntu Forums. This time (Natty Narwhal 11.04, with its new user interface), there is good news and bad news.

Normally, most of the traffic about a new version is along the lines of, "such-and-such is broken on my computer, how can I go back to the old version?" With Natty, a lot of messages ask, "how do I do such-and-such?" Some are, "it has changed, and I don't like change." Relatively few say, "such-and-such does not work," although there are a few.

My plan is to skip 11.04 on my production environment; I expect that community feedback will make 11.10 much more usable. It will also give me time to consider Gnome 3, which also represents a major interface change. I might even take KDE for a spin. If you're happy with what you have, I suggest you avoid changing to 11.04.

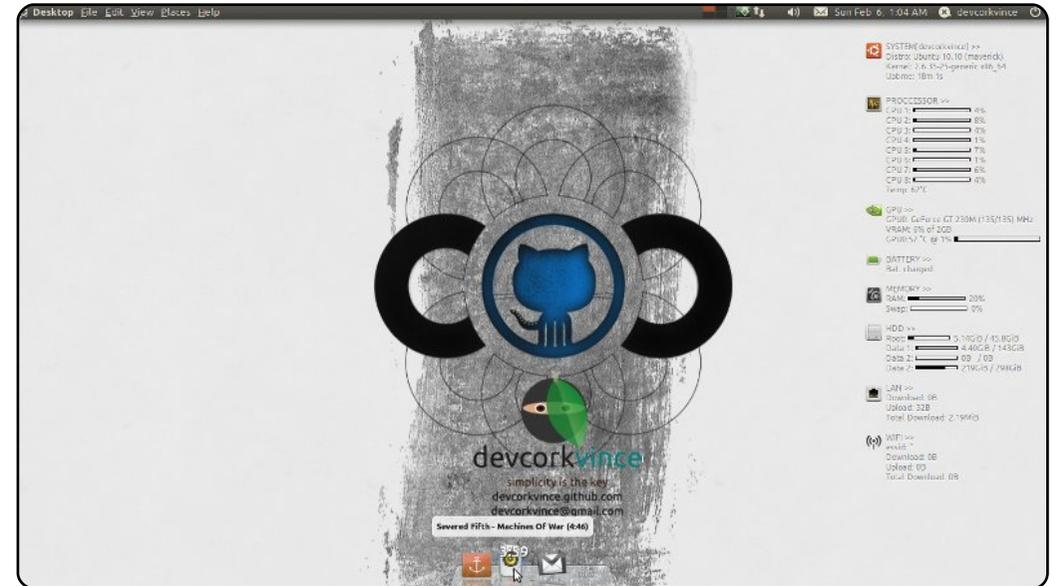
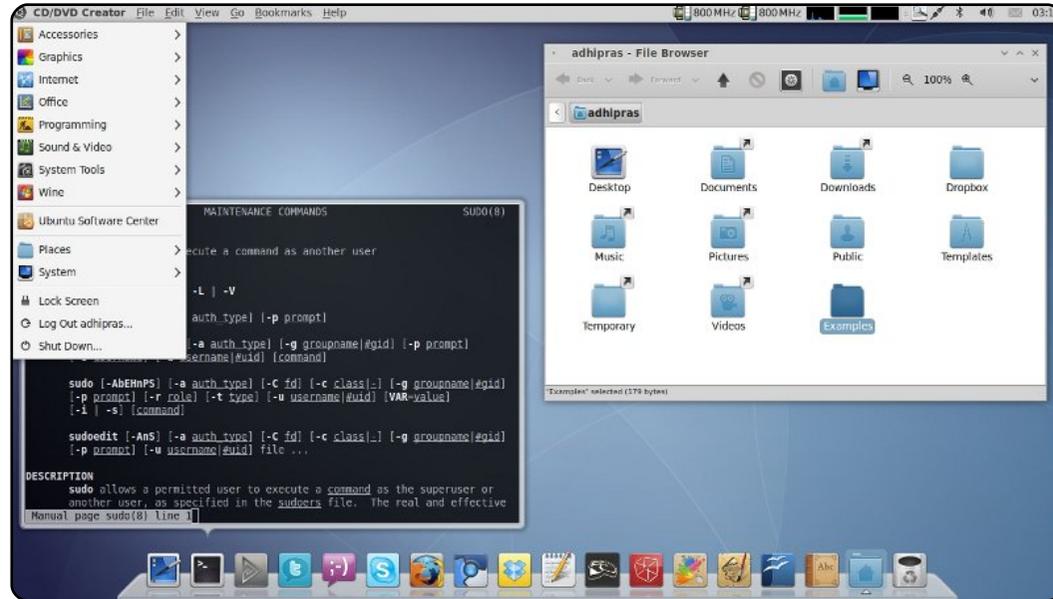
Despite this, I have installed 11.04 on a persistent flash drive, just to see what people are talking about. (Thanks, Multisystem!)

This does affect the Q&A column. More than ever, I will be reporting on solutions which I have not tried myself. Please bear with me.



# MY DESKTOP

Your chance to show the world your desktop or PC. Email your screenshots and photos to: [misc@fullcirclemagazine.org](mailto:misc@fullcirclemagazine.org) and include a brief paragraph about your desktop, your PC's specs and any other interesting tidbits about your setup.



I am running Ubuntu 10.04.2 LTS on my PC with Athlon II X2 245 2.9 GHz processor, 2 GB DDR3 RAM, and 320 HD Drive.

I use MurrinaBlu as my GTK theme/style. You can have it from the Ubuntu repository. For my metacity theme (window border), I pick Absolute. Then, I install Faenza-Cupertino, a blue variation of the Faenza icon theme.

I also add Avant Window Navigator and GNOME Global Menu to make my desktop look a little bit like Mac OS X. Finally, the wallpaper is called Intelmac. You can search it on the web.

**Adhi Prasetya**

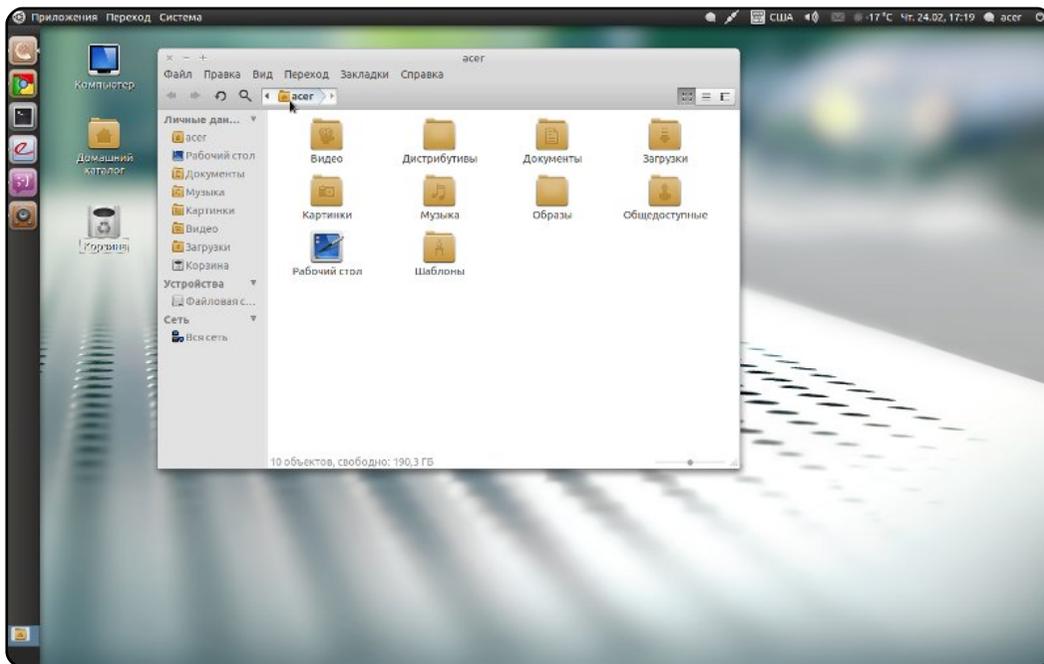
This is my desktop - using Gnome, and listening to **Severed Fifth - Machines of War**. It has "Minimalis Conky 1.0" by deny26, and I modified the conkyrc to show gpu sensors. Also with dockey and gnome2-global-menu. Also the github codeconf.com wallpaper modified.

### My Machine's Specification:

- HP DV6T-2000 QUAD
- GeForce GT 230M 1GB
- Intel Core i7 Q720 @ 1.60GHz
- 4GB RAM

... and powered by Ubuntu 10.10 Maverick with kernel 2.6.35-25-generic x86\_64

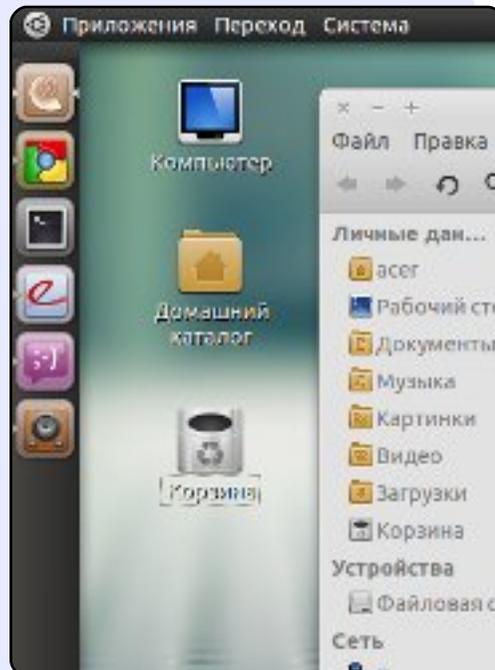
**devcorkvince**



My desktop, Unity style (Ubuntu 10.10 Maverick Meercat x64) in my notebook Acer 7530G (17", AMD Turion X2, 4GB DDR2, HD 320GB, Nvidia 9100M G 256MB)

I use DocbarX with theme "unity\_v", Gnome theme, Elementary, Faenza Icons. I like simplicity, conciseness & clarity.

**Ksunechkin**



I am using Ubuntu Lucid Lynx 10.04 - 64 bit. I customised my desktop using screenlet and AWN. Wallpaper is the newest aircraft from Cessna. I would like to have it one day!

Laptop is a Presario A965Tu  
Intel Centrino Core 2 Duo 2 GHz, with 2 GB RAM.

**Abhijit Navale**

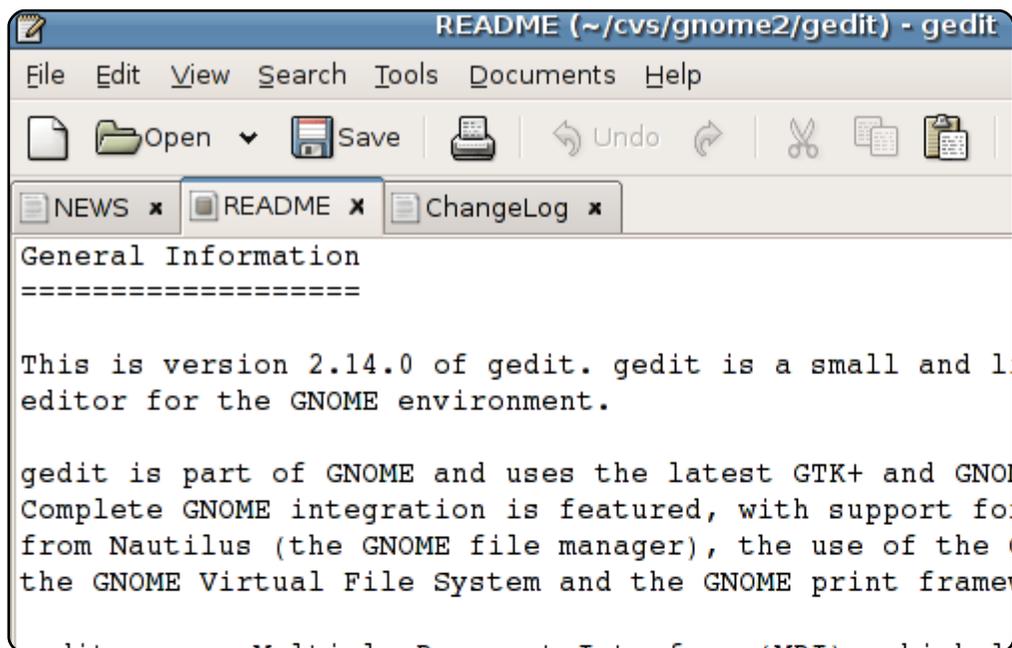


## gedit

Homepage: <http://projects.gnome.org/gedit/>

gedit is the built-in text editor for Gnome users. Unlike Windows's Notepad, however, it's much more than a text file editor. It supports line numbers, line highlighting, bracket highlighting, automatic indents, syntax highlighting, modelines, Python consoles, code snippets, and much more. There's also a wonderful "external tools" plugin, which allows you to utilize scripts like automatic building, remove trailing spaces, or opening terminals. If you code for a living, you probably need something more powerful. But if you just need a basic feature set, look no further than gedit.

To install gedit on non-Ubuntu machines (like Kubuntu), use the **gedit** package.

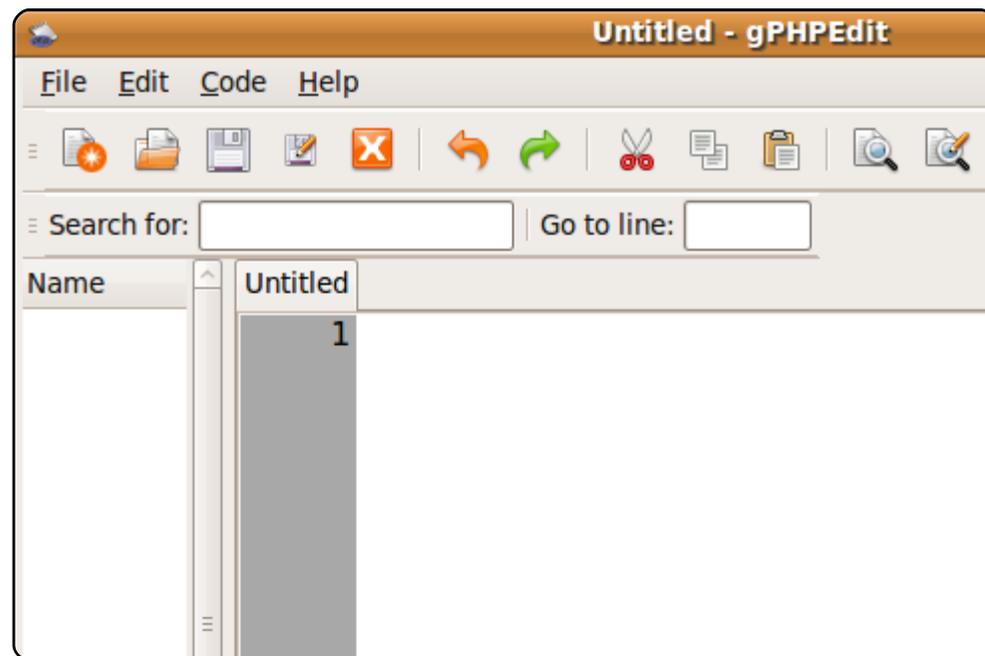


## gPHPEdit

Homepage: <http://www.gphpedit.org/>

If you code primarily in PHP, you may prefer using gPHPEdit. Created by Andy Jeffries, and maintained by Anoop John, gPHPEdit supports HTML, PHP, CSS, and SQL highlighting. More uniquely, it also supports auto-completing PHP functions, auto-completing parameters, and a function browser. It also has built-in support for lint, and an integrated PHP manual. All of it comes in a nice, tidy, simple, Gnome-based interface.

To install gPHPEdit, use the **gphpedit** package in the universe repository.

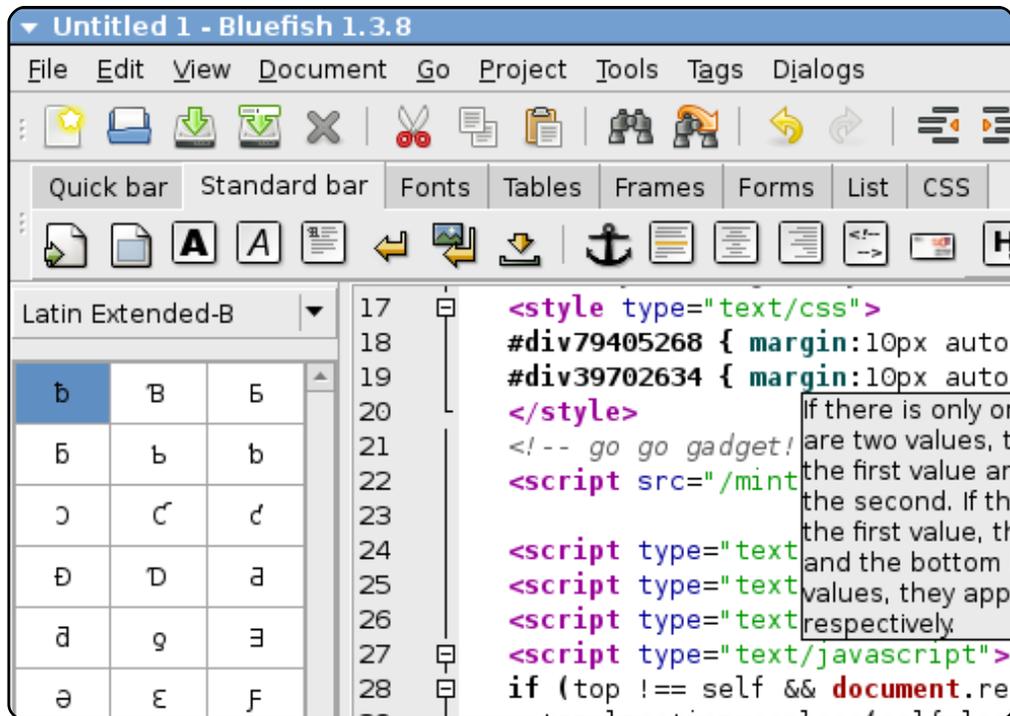


## Bluefish

Homepage: <http://bluefish.openoffice.nl/>

If you need something more powerful than gedit, and code in something other than PHP, give Bluefish a try. This fourteen-year-old project is much more mature than many of its competitors, so it has a lot more advanced features. With support for over a dozen languages, code snippets and wizards, regex searching, external scripts, autorecovery, FTP synchronization, and much more, it's practically a fully-featured IDE. Unlike many of its peers, however, it's fairly lightweight and not incredibly resource-intensive.

To install Bluefish, use the **bluefish** package in the universe repositories.

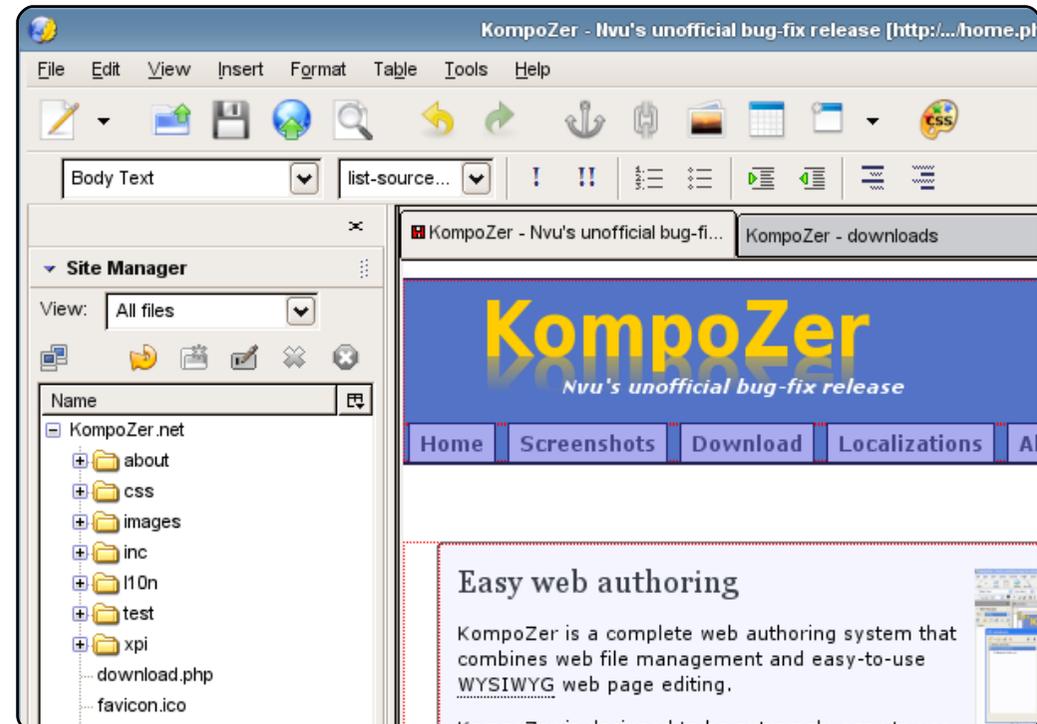


## KompoZer

Homepage: <http://kompozer.sourceforge.net/>

If you prefer GUI editing over hard coding, give KompoZer a try. It's based on Nvu, an old now-unsupported editor, itself based on Mozilla Composer. After 2006, however, Nvu's development ended. KompoZer took up the slack. It supports both WYSIWYG and source editing. That means you won't have to handcode things like tables or paragraphs, but you can also insert more advanced code. All this comes in a platform-neutral IDE that looks good in both Gnome and KDE.

To install KompoZer, use the **kompozer** package in the universe repository.

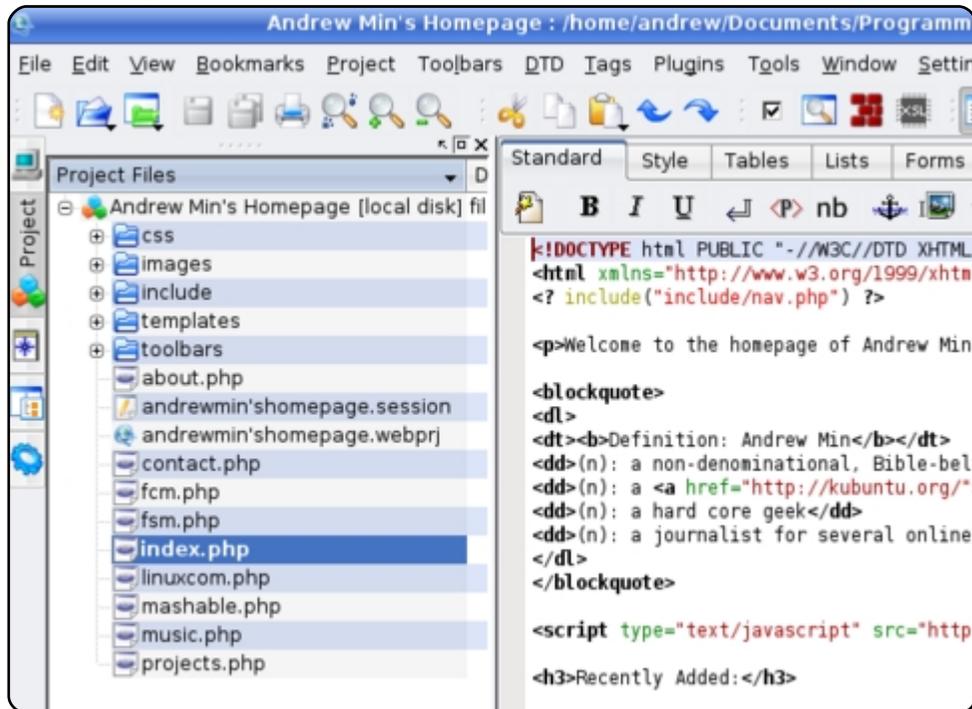


## Quanta Plus

Homepage: <http://kde-apps.org/content/show.php?content=10135>

If you liked KompoZer, you may also want to try out Quanta Plus. It's a KDE application that works as a WYSIWYG editor, a source editor, or, best of all, both at the same time. Like its well-known commercial competitor, Dreamweaver, Quanta Plus supports a "Split Screen" mode, where you can use either the "VPL" (Virtual Preview Layout) mode or the source mode. It also integrates well with the other KDE apps, like Konsole and Cervisia. It also supports lots of more advanced IDE features. The only real downside is that it never got ported to KDE 4.

To install Quanta Plus, use the **quanta** package in the universe repository.



**The Ubuntu UK podcast** is presented by members of the United Kingdom's Ubuntu Linux community.

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Because the show is produced by the Ubuntu UK community, the podcast is covered by the Ubuntu Code of Conduct and is therefore suitable for all ages.

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## Full Circle Team



**Editor** - Ronnie Tucker

[ronnie@fullcirclemagazine.org](mailto:ronnie@fullcirclemagazine.org)

**Webmaster** - Rob Kerfia

[admin@fullcirclemagazine.org](mailto:admin@fullcirclemagazine.org)

**Comms Mgr** - Robert Clipsham

[mrmonday@fullcirclemagazine.org](mailto:mrmonday@fullcirclemagazine.org)

**Podcast** - Robin Catling

[podcast@fullcirclemagazine.org](mailto:podcast@fullcirclemagazine.org)

## Editing & Proofreading

Mike Kennedy

David Haas

Gord Campbell

Robert Orsino

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