



# Full Circle

THE INDEPENDENT MAGAZINE FOR THE UBUNTU LINUX COMMUNITY

ISSUE #81 - January 2014



## BOOK REVIEW



## SECURE YOUR PC LYNIS HOWTO AND SECURITY Q&A

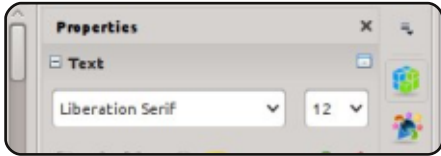
NEW



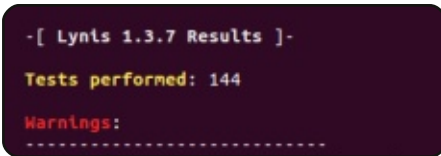
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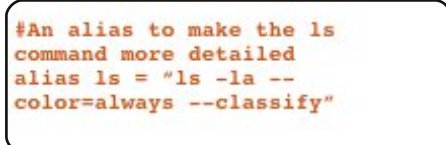
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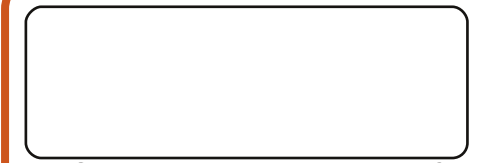


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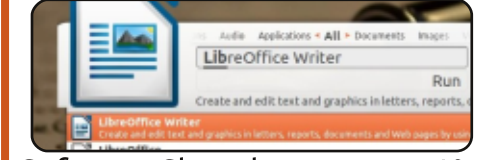
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## WELCOME TO THE FIRST FULL CIRCLE OF 2014!

We have a full suite of articles for you again this month. Python, LibreOffice, Inkscape, and Blender are all here and are joined by an excellent article on using the Lynis application to test the security of your PC. The article is written by the creator and programmer of Lynis, Michael Boelen. Make sure you give it a whirl to see if your PC is up to snuff.

Michael has also agreed to take your security questions each month. For the next couple of months he's going to answer the questions you all sent in. Keep sending in your security related questions and I'll pass them along to Michael. Don't panic though, Gord will still be doing his regular Q&A.

We have a couple of good game reviews this month (Limbo and Joe Danger 2). I've also been grabbing some games during the recent Steam sales. Since they were pretty cheap I bought an extra copy/two which I'll give away at the end of my reviews. So, keep an eye out for my future game review giveaways.

If you're a RAID guru then do check out Charles's Linux Labs article as he's looking for some help in getting a RAID array set up. I've added a short Linux Labs article on how to back up using Back In Time. Take my word for it. Do it, and do it now!

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

Ronnie

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



This magazine was created using :



## Full Circle Podcast

Released monthly, 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:

- Les Pounder
- Tony Hughes
- Jon Chamberlain
- Oliver Clark



<http://fullcirclemagazine.org>



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## LIBREOFFICE 4.2 BRINGS NEW FEATURES FOR POWER AND ENTERPRISE USERS

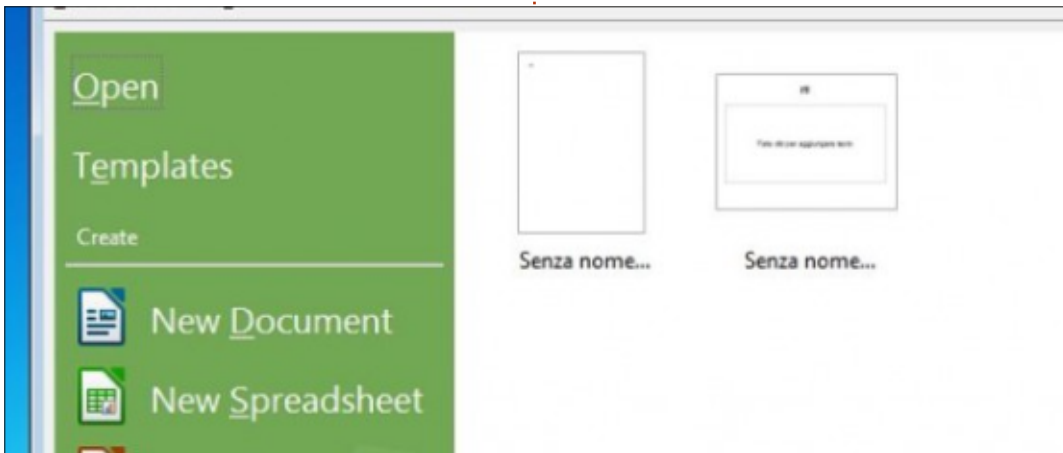
The Document Foundation has released the latest version of the popular open-source office suite. LibreOffice 4.2 is said to feature “a large number of performance and interoperability improvements targeted to users of all kinds, but particularly appealing for power and enterprise users”.

The Foundation said that Calc has gone through the largest code refactoring ever, giving major performance wins for big data (especially when calculating cell values, and importing large and

complex XLSX spreadsheets), while an optional new formula interpreter enables massively parallel calculation of formula cells using the GPU via OpenCL. The latter works best with a Heterogeneous System Architecture (HSA) such as the new AMD Kaveri APU.

The latest release also offers round-trip interoperability with Microsoft OOXML, particularly for DOCX, as well as legacy RTF. Also, new import filters for Abiword documents and Apple Keynote presentations have been added.

Source:  
<http://www.muktware.com/>



## MAJOR SETBACKS FOR TWO NEW SMARTPHONE OSs, TIZEN AND UBUNTU TOUCH

Will 2014 be the year when scrappy new challengers take on the might of Android and iOS? Never say never, but the challenge won't come from Tizen nor Ubuntu Touch.

Japanese carrier NTT DoCoMo has indefinitely suspended its plans for a Tizen phone launch this year, and Ubuntu backer Canonical has admitted that there's unlikely to be

any Ubuntu handset coming from a major manufacturer or carrier this year.

And then there's Ubuntu Touch, which is basically the venerable desktop Linux distribution wrangled into mobile form. It's a very intriguing concept — for smartphone or tablet use, it displays like a normal mobile OS, but connect it to a monitor and keyboard and it suddenly turns into the desktop version.

This has great potential, particularly in the enterprise, but British Ubuntu backer Canonical



had a rough second half of 2013. First it failed to hit an incredibly lofty \$32 million crowdfunding goal for the Ubuntu Edge, a high-end handset that was intended to showcase what the OS could do with powerful hardware – this was good for getting the name out there, as Canonical did still manage to break the record for the most money pledged in a crowdfunding drive, but manufacturers may not have seen it as a ringing endorsement.

Then Canonical's timetable slipped – the October 2013 release of Ubuntu was supposed to be the one where all that mobile-desktop harmony came in, but it turned out that Ubuntu's new touch-friendly Mir display server was only ready for mobile, not desktop. Hopefully full convergence will come in April, in Ubuntu 14.04.

Last month, Canonical chief Mark Shuttleworth said the firm had signed up a manufacturer to ship Ubuntu on high-end phones sometime in 2014. "We are now pretty much at the board level on four household brands," he added.

Source: <http://gigaom.com/>

## FIREFOX OS BEATS UBUNTU TO SMART TVs

Mozilla has partnered with Panasonic to put Firefox OS on smart TVs.

The web-based OS has so far been confined to mobile, with the first budget smartphones arriving last year, and facing stiff competition from Android.

Now Panasonic has plumped for Firefox OS to power its next-generation smart TVs - largely due to its use of HTML5.

According to Panasonic, adopting HTML5 should make it easier for third-party developers to build apps for its televisions.

For example, developers could use Mozilla's WebAPIs to build software for tracking and controlling smart appliances round the home - making the TV, rather than the smartphone, the centre for the smart home.

Panasonic added that it would open up core functions, such as TV menus, to developers.

"In next-generation smart TVs, basic functions, such as menus and [programme guides], which are currently written as embedded programs, will be written in HTML5, making it possible for developers to easily create applications for smartphones or tablets to remotely access and operate the TV," the company said.

Neither company has released further details of new hardware or what the OS looks like. Panasonic said the first smart TVs running Firefox OS would arrive later this year, but didn't reveal pricing or UK availability.

The partnership means Mozilla has pipped Canonical to the post in bringing its open-source OS to televisions. Canonical announced plans to bring Ubuntu to smartphones, tablets and TVs in 2011 - but has only just found its first mobile partner.

In an interview with PC Pro last year, founder Mark Shuttleworth suggested the company still planned to bring Ubuntu to TVs eventually. "Ubuntu TV has been folded into the mobile codebase," he said. "We're now working on production. It might be phone in

this release, tablet in the next release and, ultimately, everything converged."

Meanwhile, Mozilla said a tablet version of Firefox OS should arrive later this year. "As we move along in 2014, you will see the tablet version of Firefox OS mature, and at some point it should be ready for consumer-facing devices," Andreas Gal, vice president of Mobile, told eWeek. "The reference hardware with Foxconn is targeted at developers that want to help us build the tablet version of Firefox OS."

Source:

<http://www.pcpro.co.uk/>



Last month I received an email from John, a reader of C&C. He had turned to me for advice on using Sed to insert semi-colons within the text file created by Task Warrior. The reason he wanted to do this was to use the conkytext script to format the To-Do list nicely for his Conky. Included in the email was the file as created by Task Warrior. We then spent a couple of days putting together a functioning Sed script (and going through a few format changes), and the end result was an excellent basis for an article. Hopefully by the end of this article, the reader will have an idea how to approach Sed expressions in order to tackle tasks that may at first seem complex.

## THE TASK

We want to add a semi-colon after the contents of every column (in the text shown top right, ignoring the white space). As you can imagine, the fact that the number of spaces vary can make this a difficult task. Also, the last

Note: I've altered all entries in the file, for the sake of privacy.

ID	Project	Due Date	Description	Due in:
3	Work	12/10/2013	Work Project	-8 hrs
6	Work	12/12/2013	Submit 1st draft	-2 days
10	Work	12/15/2013	Prepare Presentation	-5 days
7	University	12/16/2013	Tutorial Class	-6 days
2	Hobby	12/17/2013	Change Pickups in Strat	-7 days
4	Banking	12/17/2013	Pay the bills	-7 days
1	Hobby	12/18/2013	Read Daemon	-8 days
5	Programming	12/31/2013	Update Ruby on Rails Website	-3 wks
8	Work	1/10/2014	Interim Report	-4 wks
9	Hobby	1/13/2014	Build Blu-Ray stand	-4 wks

10 tasks

ID;	Project;	Due Date;	Description;	Due in:
3	Work;	12/10/2013;	Work Project;	-8 hrs
6	Work;	12/12/2013;	Submit 1st draft;	-2 days
10	Work;	12/15/2013;	Prepare Presentation;	-5 days
7	University;	12/16/2013;	Tutorial Class;	-6 days
2	Hobby;	12/17/2013;	Change Pickups in Strat;	-7 days
4	Banking;	12/17/2013;	Pay the bills;	-7 days
1	Hobby;	12/18/2013;	Read Daemon;	-8 days
5	Programming;	12/31/2013;	Update Ruby on Rails Website;	-3 wks
8	Work;	1/10/2014;	Interim Report;	-4 wks
9	Hobby;	1/13/2014;	Build Blu-Ray stand;	-4 wks

;;10 tasks

line (tasks) is supposed to be preceded by three semi-colons (";;10 tasks"). After our first attempt, John came back to me and told me he'd decided to leave the first column semi-colon-less

(shown above).

## MY SCRIPT

Due to the fact that the script is

rather long, as it offers extra functionality (supports some arguments, outputting to a file, etc), I've put it up on pastebin: <http://pastebin.com/SHTVjDTM>.

## THE THOUGHT PROCESS

There are a few things worth noting before we begin:

- The typical format of a sed command is: `sed s/<search>/<replace>/g`
- Sed calls replace “substitute”, hence the `s` at the beginning. The left hand side (LHS) is the search section – here you declare what it is you're trying to match. The right hand side (RHS) is the replace section – here you tell Sed what the found line should look like afterwards. The “`g`” at the end tells Sed to replace all instances (as it would otherwise quit after the first match).
- Putting anything in `\(\)` will allow you to refer back to it on the RHS of the expression.
- There are certain special characters that can be used in sed. We mainly need the “`\s`” expression, which stands for any space.
- Declaring a set number of repetitions can be done with: `\{3\}` for 3 repetitions, `\{3,\}` for three or more, and `\{3,6\}` for three to six.
- You must escape the semi-colon.

Some tips as to how I decide on each expression:

- Figure out where you need to

insert the character, as that defines where you group (in our case before the spaces, hence the second group is almost always started before the space character)

- Work bit-by-bit. Start with a simple sed command like: `sed -e "s/^[0-9]*/FC/g"` (FC for first column). This just matches any line started with a number, and replaces it with “FC”, so you can visually check what is being matched. Doing so let me realize that all single-digit ID's started with a space, and helped form an expression for it. It's not included in the actual file, since our end formatting has changed since then. Once you have a working command for the task you outlined, you can move onto a second expression.
- If you have issues with step 2 because you can't get the regular expressions working, try using `grep` and the same regular expression. This lets you rule out the expression itself being wrong, and indicates it's a quirk of Sed's you haven't accounted for yet.
- If you want the same formatting at the end, the RHS of the expression should almost always be the same, and if it isn't, it's an indicator that you're either going too complicated, or the chunk you're working on is too big, so try

to break it down some more.

## THE EXPRESSIONS

```
first_expression="s/\ ([a-zA-Z0-9])\ (\s\{2,15\})\ /\1\;\2/g"
second_expression="s/\ ([0-9]\{3\})\ (\s[a-zA-Z0-9])\ /\1\;\2/g"
```

```
third_expression="s/\ ([a-zA-Z])\ (\s[0-9]\{1,2\})\ /\1\;\2/g"
```

```
fourth_expression="s/\ (^ [0-9]*\stasks)\ /\;\;\1/g"
```

```
fifth_expression="s/\ (^ [A-Z]*)\ (\s*[a-zA-Z])\ /\1\;\2/g" # Check for any number of capital letters at the start of a line, followed by a space and more text, and insert a semicolon.
```

## THE EXPLANATIONS

The first expression tells Sed “Look for any character (a-z, A-Z, or 0-9), and see if it's followed by 2 or more spaces, then add a semi-colon before the spaces”. The trick to this is knowing that Sed can group matches to the regular expressions. This is why we have escaped brackets around the expressions. “`\(a-zA-Z0-9)\)`” then becomes match “`\1`” in the replacement section of Sed. We are

essentially forming two groups – the character that precedes the spaces, and the spaces themselves. Then, in the replacement step, we're inserting a semi-colon between the two groups. This corresponds to column 2 and column 4 in our file, as well as all the headers except ID. The reason why ID isn't included is due to the fact that we state 2 or more spaces, and changing that to one or more would cause issues in all the descriptions. Note: The semi-colon must be escaped (have a backslash in front of it). Also, if you want to match more than 15 spaces, simply leave that side of the comma empty - `\{2,\}`.

The second expression tells Sed “Look for any 3 consecutive digits that are followed by a space and a letter or number, then insert a semi-colon”. What this matches is the date – the format of the date is always going to be so long that only one space is inserted between columns. Naturally, you could check for any number of spaces, but that could cause issues if you use numbers in your Projects. This will apply to any format of date where the year is at the end. This handles column 3 in our file.

The third expression can be translated as “Find all letters followed by a 1 or 2 digit number, followed by a slash, and insert the semi-colon.” The only column that contains a slash is our formatted date column – this applies therefore to the column before it (Project). The reason why I didn't include numbers in this case, is because the second expression could handle this if you tell Sed to accept any number of spaces after the 3 digits. This handles column 2 in our file.

The fourth expression handles the last line of the file, and inserting the 3 semi-colons before tasks. It essentially groups the entire line (10 tasks) and then inserts three semi-colons before that group. If you're adding semi-colons before any lines starting with numbers, then you should move this expression to the start of the list of expressions, so Sed doesn't match it.

The fifth expression simply states “Find the line that starts with any number of capital letters, and insert a space afterwards”. I go a little more specific, and state “followed by any number of spaces and more letters”. However, it's

not necessary in our example, and is simply there to be a bit more robust.

That about covers the steps I undertook in this scenario. I realize that this is a relatively specific occasion, and not everyone will want to have this exact formatting. My hope is that following my process will help you understand how to approach these sorts of problems. If it's wished for, I can spend an article focusing on short formatting problems, and working through it step by step. If anyone is interested in that sort of article, please let me know via email. As always, any questions/concerns or requests can be directed to me at [lswest34+fc@gmail.com](mailto:lswest34+fc@gmail.com).



**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).

## LIBREOFFICE SPECIAL EDITIONS:



<http://fullcirclemagazine.org/libreoffice-special-edition-volume-one/>



<http://fullcirclemagazine.org/libreoffice-special-edition-volume-two/>



<http://fullcirclemagazine.org/libreoffice-special-edition-volume-three/>

## INKSCAPE SPECIAL EDITIONS:



<http://fullcirclemagazine.org/inkscape-special-edition-volume-one/>



<http://fullcirclemagazine.org/inkscape-special-edition-volume-two/>





This month, I'm going to discuss a product that is new to me, but has apparently been around for a number of years. It's called NextReports from Advantage Software Factory, and you can get it free from <http://www.next-reports.com/>. Not only that, but it's open source and it runs under Windows and Linux!

Before I start telling you about the product, let me get on my soapbox and vent for a moment or two. For a long time, I've been working with databases and reports. One of the things that I've had issues with is that while there are free database solutions out there, like SQLite and MySQL, there was precious little available that was free for report designer tools. More times than not, any reports either had to be done with very expensive software tools, or the developer had to roll his own. Some tools were available, but were lacking. When it came to charting, well, you pretty much had no choice but to use the expensive stuff. Believe me, I've looked for years for really good free reporting

tools, and I'm not sure how I have missed this package for so many years (version 2.1 was released in March of 2009 and they are currently up to version 6.3). But now that I've found it, I'm absolutely pumped about it.

Now that I've stepped down from my soap box, I can begin to sing its praises. It is a suite of three parts, a reports designer, a report engine and a report server. All I have had a chance to play with is

the reports designer, but if the designer is any indication of the power, ease and flexibility of the rest of the suite, this thing is a winner.

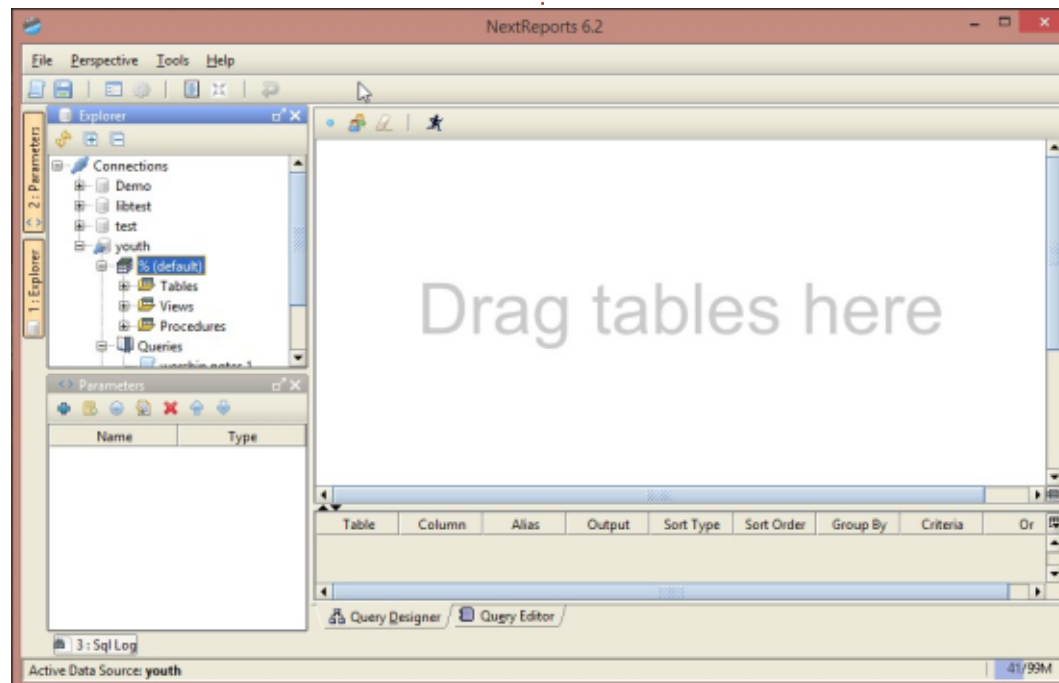
This month, we are going to concentrate on the designer. Because of some constraints on my time, I'm working on a Windows machine, but everything that I show can be done in Linux (so please forgive me in advance).

One of the first things you should know is that it supports databases like Oracle, MySQL, SQLite, MSSQL and more. Everything is based on queries and a really good thing is that only SELECT type queries are allowed. This means that nothing in the source database can be changed by accident. You can enter your own queries or use a visual designer.

The screenshot shows how nice a UI it is. Things are pretty intuitive and it won't take you long to be productive at this. Let's take a look at the steps to get going.

Start with File | New | Data Source. Next, name your source whatever you want to call it.

Now tell NextReports what kind of database it is in the dropdown called "Type:". You can skip over the Driver section and go to the URL: section. This is where you put the path to the database. If you are using, for example, a SQLite database, this will be filled in for you: "jdbc:sqlite:<dbfile-path>". Replace the <dbfile-path> with the



path to your database. Other types of databases have similar types of information already populated to help you. Next, click the "Test" button to make sure you can connect. If everything goes correctly, then click "Save" and you'll see it added to the Connections tree. The next thing you need to do is make a connection to your database that you have just added. Now, right click on the database and then click on Connect.

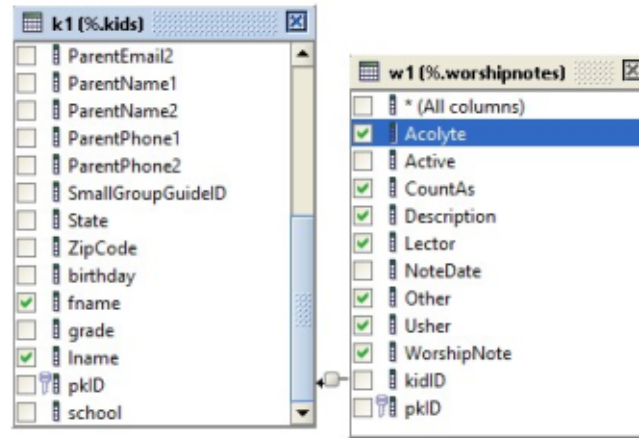
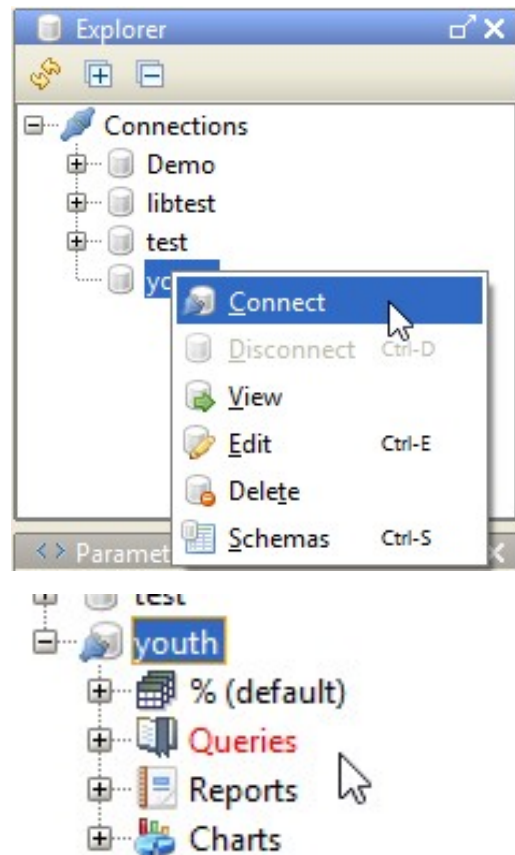


	Table	Column	Alias	Output	Sort Type	Sort Order	Group By	Crit
1	kids (k1)	fname		<input checked="" type="checkbox"/>				
2	kids (k1)	lname		<input checked="" type="checkbox"/>				
3	kids (k1)	Active		<input checked="" type="checkbox"/>				
4	worshipnotes (w1)	WorshipNote		<input checked="" type="checkbox"/>				
5	worshipnotes (w1)	Usher		<input checked="" type="checkbox"/>				
6	worshipnotes (w1)	Other		<input checked="" type="checkbox"/>				
7	worshipnotes (w1)	Lector		<input checked="" type="checkbox"/>				
8	worshipnotes (w1)	Description		<input checked="" type="checkbox"/>				

Once you are connected, you'll see that you have four possible things to choose from. The "%" is the database tables. The next three are so you can create new queries, reports and charts. Simple enough. Now click on the "+" sign

to the left of "%" which will open up your database table display. Now you will have Tables, Views and Procedures in the tree. Once again, click on the "+" sign next to "Tables". This will show all your tables. Now if you want to use the

visual query designer, just drag the table(s) you want to deal with onto the designer canvas to the right.

Once you have all your tables there, you can start making connections between the tables.

In the example here, I have two tables, one with information about kids in a confirmation class and the other with entries for worship notes taken. The worship note table doesn't have the kid's name in it, just an id that points to the kid information table. I did a drag and drop to make that link between the kidID field and the pkID of the kid table. Then I selected each field I wanted to have in the result set. In this case, the kid's first and last name and an active (or not-deleted) flag in the kids table and multiple fields from the notes table. The grid below shows each of the fields, which table it comes from, and other information.

	Table	Column	Alias	Output	Sort Type	Sort Order	Group By	Criteria
	kids (k1)	fname		<input checked="" type="checkbox"/>	Ascending	2		
	kids (k1)	lname		<input checked="" type="checkbox"/>	Ascending	1		
	kids (k1)	Active		<input type="checkbox"/>				= 1
	worshipnotes (w1)	WorshipNote		<input checked="" type="checkbox"/>				
	worshipnotes (w1)	Usher		<input checked="" type="checkbox"/>				
	worshipnotes (w1)	Other		<input checked="" type="checkbox"/>				
	worshipnotes (w1)	Lector		<input checked="" type="checkbox"/>				

As you can see, we can set criteria like "Active = 1", choose to display a field or not, and set sort type and sort order. Once you are satisfied with this, you can click on the tab below and see your actual SQL query.

```

1 SELECT
2     k1.fname,
3     k1.lname,
4     w1.WorshipNote,
5     w1.Usher,
6     w1.Other,
7     w1.Lector,
8     w1.Description,
9     w1.CountAs,
10    w1.Acolyte
11 FROM
12     kids k1,
13     worshipnotes w1
14 WHERE
15     w1.kidID = k1.pkID AND
16     k1.Active = 1
17 ORDER BY
18     k1.lname,
19     k1.fname
    
```

To test your query, simply click on the "running man" and you will (hopefully if you did it correctly) get the query results in a grid below the editor. If you want to add manual lines you can. For example, I want to combine the kids first and last names (fname and lname) into a full name. We can do that by putting a line after the "k1.lname," line like this:

```

k1.fname || " " || k1.lname
as FullName,
    
```

The "||" characters are concatenation characters so we will have the two fields with a space between in a field named "FullName". Don't forget the comma at the end. Once you have your query the way you want it, click on the save button to save the query. You will be asked what you want to call it.

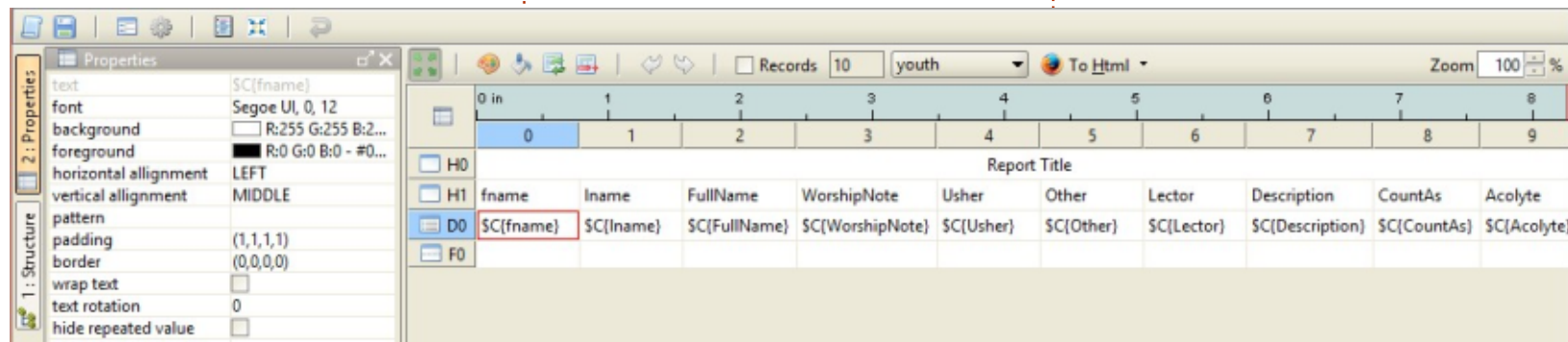
Next, click on the Query item in

the tree and right click on the query you just created. Select "New Report from Query". The query designer canvas goes away and is replaced by the report designer.

On the left is the properties window for any given field or the entire report. On the right is the report designer itself. Notice that it looks like a spreadsheet. Each row is considered a "band" and holds information for that report row. In the case of this example,

we have four rows, two header rows, one detail row and a footer row. You can add or delete rows as needed. This method is not quite as free-form as some other report designers, but makes for a very nice and clean report.

The two header rows hold our report title and column headers. The detail row has each field we will be reporting on and the footer row is the report footer. Let's take a look at how the report looks as a default. Click on the button at the

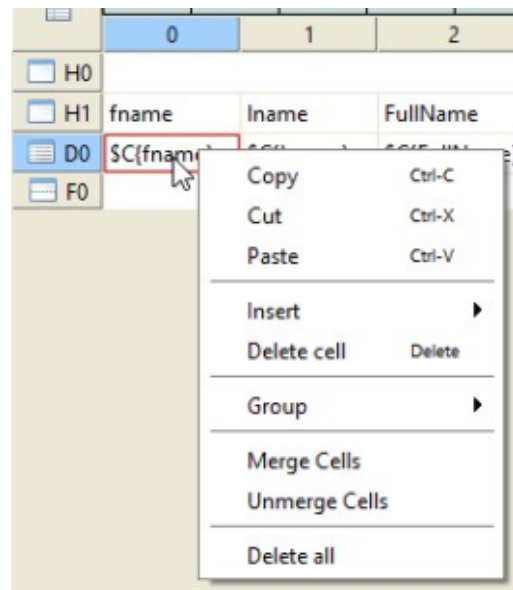


Report Title									
fname	lname	FullName	WorshipNote	Usher	Other	Lector	Description	CountAs	Acolyte
Michael			1	0	0	0		1	0
Michael			1	0	0	0		1	1
Michael			1	0	0	0		1	0
Michael			1	0	0	0		1	1
Michael			1	0	0	0		1	0
Michael			1	0	0	0		1	0
Michael			1	0	0	0		2	0
Michael			1	0	0	0		2	0

top of the bar marked "To Html" to see the report. (I blurred the kids last names, that's not an issue in the generator.)

For a report with almost no work, that's really nice. But let's pretty it up a bit. Let's create a group that puts all of the data for any given kid under the kid's name.

Right click on the first column of the data row. Select Group and then Add.



You will be presented with a new window asking which of the fields you want to create the group upon. In this case, I select FullName and then click the Ok button. Now

we have a grouping break. We can also get rid of the three fields (fname, lname and FullName) in the detail section, since we'll be displaying the name in the group band. Simply right-click on them and select "Delete Cell". Now you can resize the three empty cells on the left to make the gap less obvious.

Taking a quick peek at what the report looks like now will show you that the information for each kid is all nicely grouped together.

That's nicer, but now let's do something kind of fun. All the 1s and 0s obviously stand for yes and no. That's rather boring for a report, so let's add an advanced conditional statement for each of those fields that will show a box

	0	0	1	0	praise song	1	0
Garrett	1	0	0	0	1	1	
	1	0	0	0	1	0	
	1	0	0	0	1	0	
	1	0	0	0	1	0	
Trevor	0	0	0	0	1	1	
	1	0	0	0	1	0	
	1	0	0	0	1	1	
	1	0	0	0	1	0	
	0	0	0	0	1	1	
Zachary	0	0	0	0	1	1	

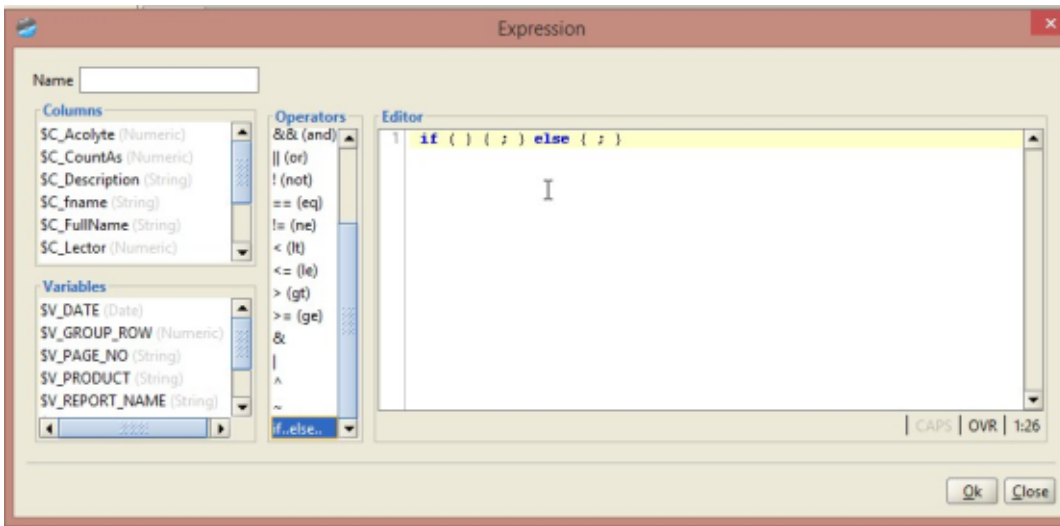
with a check for Yes (or 1) and an empty box for No (or 0). It's really easy to do, but makes your report look like you spent days on it. By using the Wingdings font from Windows, the two characters we want are 0x6F(0168) for an empty box and 0xFE (0254) for a checked box.

Before I go on, the one thing that Windows does better than Linux (that I have found) is the use of the Alt+NumPad entry of special characters. Linux doesn't allow that. There was a work around that used Ctrl+Shift+U then the unicode value for the character you wanted. However, that doesn't work on all machines. The easiest way I've found to do this on Linux, is to open Character Map, use the search function to find the unicode

character you want, double-click the character to copy it to the "Text to copy:" box, then click the "Copy" and then paste it into your document. The unicode characters for them are 2610 (empty box) and 2611 (checked box) using the WingDings 2 font. I'm sure there are many other easier ways to deal with this, but I'm shy on time. (Be sure you have Common selected in the Script list.)

We'll start with the WorshipNotes field. On the detail row, right click on the field you want to do. In this case it's marked `{WorshipNote}`. Choose Insert, then Expression. Yet another wonderful thing that NextReports gives us is the ability to do pretty much everything with as little typing as possible. Look in the center of window where it says Operators. Double click on the "if..else.." selection, and it will fill that into the editor for you as a template so you don't make a mistake.

Now, we want to put the WorshipNotes field in the parentheses of the editor. Simply click in between the two parentheses to place the cursor and then double-click on the field



you want to go in there. BAM! It's filled in for you. Now click after the field name in the editor and then double-click on the "==" operator. Then add a "1", so the editor line reads

```
if ( $C_WorshipNote == 1 ) {
; } else { ; }
```

We are almost finished with our expression The first set of curly brackets define what to do if the expression is True and the second is what to do if it's false. In this case, we'll use the CharMap (in windows, Linux has one as well, for example gucharmap if you are using Gnome) to copy the characters into our editor string. Or, under windows, you can hold the {Alt} key and press 0168 for the

empty box and 0254 for the checked box. So now our expression is (at least in Windows):

```
if ( $C_WorshipNote == 1 ) {
"p"; } else { "o"; }
```

Name the expression ( I used WNotes ) and save it. Under properties for that field, select the font (WingDings is what I used here) and this is what it will look

Trevor

<input checked="" type="checkbox"/>	0	0	0	1	0
<input checked="" type="checkbox"/>	0	0	0	1	1
<input checked="" type="checkbox"/>	0	0	0	1	0
<input type="checkbox"/>	0	0	0	1	1
<input type="checkbox"/>	0	0	0	1	1

Zachary

like.

There's our pretty little boxes. Doing this to the other fields is just as simple.

It only took me about 3 hours of playing with the package to get to this point and a whole lot further. I can truly say that I have a great amount more to learn but that's for another day. You can use templates to color your report, you can add images, and much more.

Next time, I'll talk about how we might go about embedding these reports into a Python program. Until then, have fun playing with this wonder FREE software.



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



With the release of LibreOffice 4 came some new features and improvements. Among the most interesting is the Experimental Sidebar. The new sidebar puts a lot of the operations and tools in one easy location. The sidebar eliminates the need for the formatting toolbar for many objects.

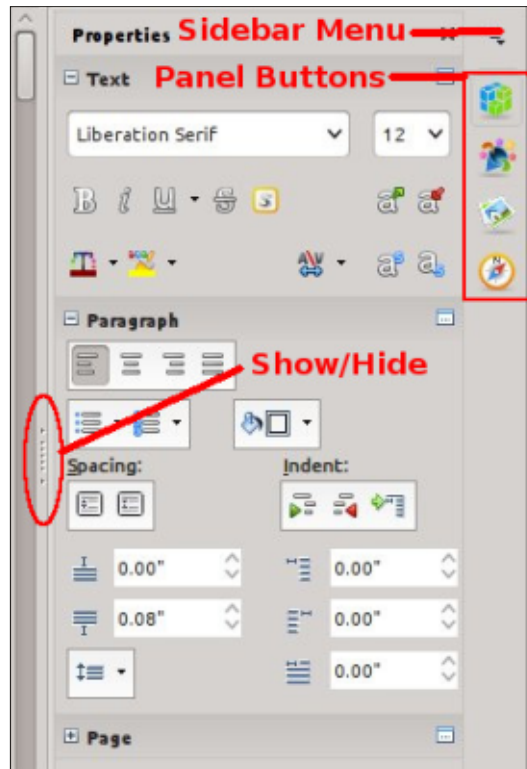
Today, we will look at the sidebar and how it adapts in accordance with the document you are currently working with. Just remember that the sidebar is an experimental feature, which means it can crash the program without warning. So, when using the sidebar, I recommend saving often.

## SETUP

Since the sidebar is experimental, we need to activate it. From any LibreOffice screen, Tools > Options > LibreOffice > Advanced. Check "Enable experimental sidebar (on restart)" and click OK. You will need to restart LibreOffice in order for this change to take affect.

## OVERVIEW

The sidebar for LibreOffice is similar to the sidebar in Calligra or the ribbon in Microsoft Office. While it can't replace everything, you will find yourself using it instead of the formatting toolbars and dialogs. The sidebar actually has more features than the formatting toolbar by default.



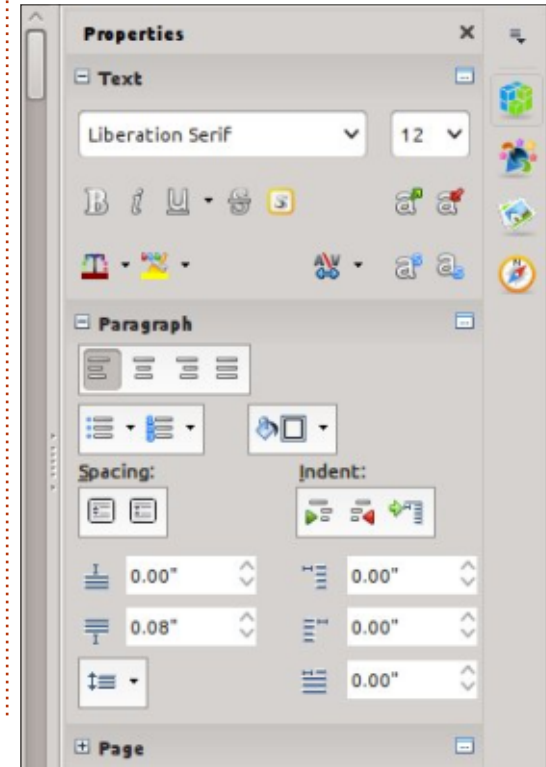
By default the sidebar is docked to the right side of the main window. You can show or hide the sidebar using the show/hide button on the inside border, or through the menus View > Sidebar. From the sidebar menu you can undock/dock the sidebar. You can also customize the sidebar by removing the panels you will not use.

The sidebar is a collection of panels. The available panels depend on the program you are using. You can access each of the panels by selecting their icon from the right side of the sidebar or from the sidebar menu. Each of the panels serves as a shortcut to different tools in the program. Of these, I personally use Properties, and Styles and Formatting most often. Let's take a closer look at each one.

## PROPERTIES

The Properties panel shows you the properties for the current item in the document. You can adjust

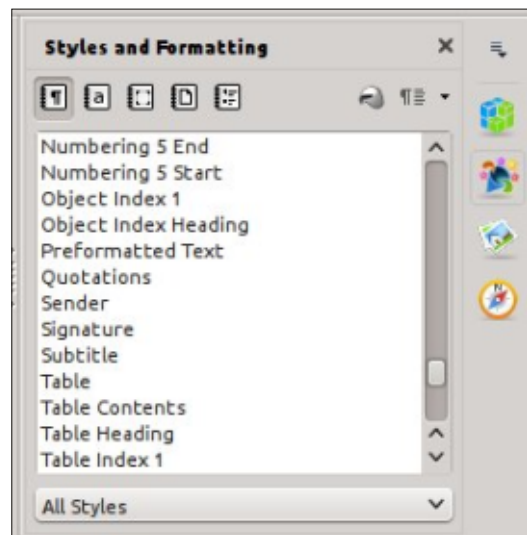
the different properties using the icons in the panel. Changing properties using these icons is the same as making manual changes through the dialogs and formatting toolbar, meaning it has no effect on the underlying style assigned to the item – only the current item. If you cannot find a property, you can click on the "More Options" button in the corner of each property type to get a complete properties dialog with tabs. You can collapse and



expand any of the blocks using the expand / collapse button next to the block title.

As an example, when typing in a Writer document, you will see three property blocks in the Properties panel: Text, Paragraph, and Page. The Text block allows you to control different settings related to text – font, bold, italics, color, etc. The Paragraph block allows you to control the paragraph's alignment, spacing, margins, etc. The Page block lets you change the page's size, orientation, margins, and columns.

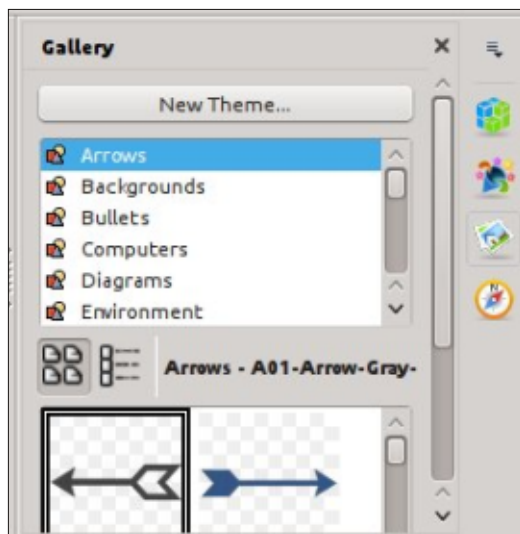
## STYLES AND FORMATTING



The sidebar takes the Styles and

Formatting window and docks it in the sidebar. This allows you quick access to your different styles. Though you could still just use the button on the Formatting toolbar, the new sidebar does provide a central location for this tool and others like it. The window still provides styles broken down by type (characters, paragraphs, frames, pages, and lists), as well as the subcategory drop-down list. You still create and modify styles in the same manner as with the Styles and Formatting window.

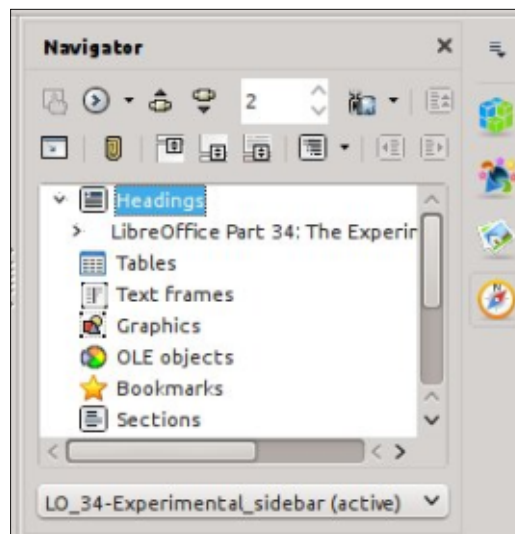
## GALLERY



The Gallery is a collection of images for use in your documents. The Gallery panel presents a list of

categories, called themes, at the top, and a list of images underneath. You can use this library of images to insert clip-art and backgrounds into your documents, as well as sounds into your presentations. You can add to and create new themes in your Gallery. A complete how-to on the Gallery library is for a future article.

## NAVIGATOR



The Navigator is a catalog of your document headings, tables, sections, images, etc. The Navigator allows you to quickly move from one point in your document to another by reference to an object. This becomes quite handy in large documents, and is a

good argument for giving meaningful names to your OLE objects and images.

## MASTER PAGES (IMPRESS ONLY)

The Master Pages panel is used for selecting and creating master pages in Impress. I discussed Master Pages in part 16 of this series, FCM#63:

<http://fullcirclemagazine.org/issue-63/>. This panel is just a translation of the old Master Pages section of the Impress Tasks pane.

## CUSTOM ANIMATIONS (IMPRESS ONLY)

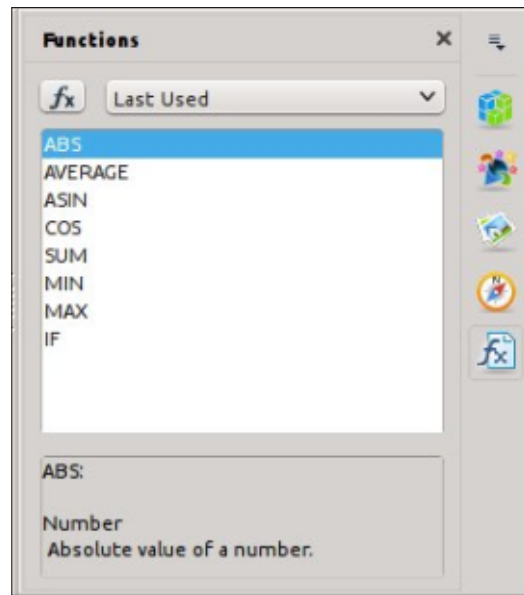
The Custom Animations panel is used to animate objects on an Impress slide. I discussed animations in part 18 of this series, FCM#65:

<http://fullcirclemagazine.org/issue-65/>. This is also a translation from the old Impress Tasks pane into the new format.

## SLIDE TRANSITIONS (IMPRESS ONLY)

Slide Transitions control how a presentation moves from one slide to another. For more details see part 18 of this series, FCM#65: <http://fullcirclemagazine.org/issue-65/>. This panel is another copy from the old Impress Tasks pane.

## FUNCTIONS (CALC ONLY)



The Function panel gives you access to all the Calc functions. A drop-down list divides the functions into categories, including “Recent Used” and “All” categories. Below is a list of all the functions in the selected category. You can insert the function into the current cell by double-clicking the function

name or selecting the fx button next to the drop-down list of categories. This gives you quick access to the functions and is much easier (in my opinion) to use than the function wizard.

The experimental sidebar is a tool that makes access to common tools quicker and easier. LibreOffice has accomplished this by making the panel’s expansions and combinations of common toolbars, and translating older panels and wizards to the new format. You can compare it to the sidebar in Calligra or the Microsoft Office ribbon bar. I have found it handy to use, but keep in mind that it is experimental and might crash LibreOffice occasionally.



**Elmer Perry's** history of working, and programming, computers involves an Apple ][E, adding some Amiga, a generous helping of DOS and Windows, a dash of Unix, and blend well with Linux and Ubuntu. He blogs at <http://eeperry.wordpress.com>

## PYTHON SPECIAL EDITIONS:



<http://fullcirclemagazine.org/issue-py01/>



<http://fullcirclemagazine.org/issue-py02/>



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



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



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



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





Systems based on Linux are relatively secure by default. Not only is the amount of malware just a fraction compared with Microsoft Windows, but the architecture of the operating system helps in defending against common attacks. Still, whatever operating system is in use, weaknesses are introduced quickly. In this article we look at some common practices to improve the security of an Ubuntu system and how we can check it ourselves.

## IT ALL STARTS WITH DATA

Usually it's not the operating system nor the application software which is vital to us as users of the system. What really matters to us is the data we create. Photos, written documents, or simply some notes we put into a text file. Security professionals have their holy CIA triad, with Confidentiality, Integrity, Availability as main pillars. Availability is simply having the data available when we want to access it. Creating regular backups

is, for example, a method to ensure we can always access our data, even if the primary storage location is lost. Well, this not only makes sense for people who are into security, but also for us! Integrity seems also to be important. We want to make sure that we can access the data, in the same way we stored it in the first place. Saving a document, and after that not being able to read it again, is not making us happy. For this article we have a special look at confidentiality, or, in other words, making sure that only the right people can access our system, our software and our data. As the title suggests, there is a utility named Lynis, which can help us to make the system more secure, and keep it secure.

## WHO IS LYNIS AND WHAT DOES SHE DO?

Lynis is six years old, and helps us by performing a security scan of our system. With all the magic involved, we might almost call her a sorcerer. For now, let's call it an

audit and hardening tool. The software is open source, free to use and consists of a set of shell scripts. Each script has a specific goal to fulfill, like scanning the available software, performing tests, or providing specific functions to main Lynis script.

## INSTALLATION

When it comes to installation, most Ubuntu users will directly perform an apt-get install and start

using the software. While that's totally fine, we want to make sure that we are using the latest version of Lynis, so we'll not use the apt-get installation.

To find the latest version, visit to the project website <http://cisofy.com/lynis/> and browse to the download section. With wget we download the file, followed by sha1sum to validate the integrity of the download. If the SHA1 hash matches with the

```
root@ubuntu-desktop: ~/lynis-1.3.7
[+] Initializing program
-----
Scan options:
--auditor "<name>"           : Auditor name
--check-all (-c)            : Check system
--no-log                     : Don't create a log file
--profile <profile>         : Scan the system with the given profile file
--quick (-Q)                 : Quick mode, don't wait for user input
--tests "<tests>"            : Run only tests defined by <tests>
--tests-category "<category>" : Run only tests defined by <category>

Layout options:
--no-colors                  : Don't use colors in output
--quiet (-q)                 : No output, except warnings
--reverse-colors             : Optimize color display for light backgrounds

Misc options:
--check-update               : Check for updates
--view-manpage (--man)       : View man page
--version (-V)               : Display version number and quit

Error: No parameters specified!
See man page and documentation for all available options.
```



# HOWTO - IMPROVE UBUNTU SECURITY WITH LYNIS

hash on the website, our last step would be to extract the downloaded tarball with the tar command.

Commands:

```
wget http://cisofy.com/files/lynis-1.3.7.tar.gz
```

```
shasum lynis-1.3.7.tar.gz
```

```
tar xfvz lynis-1.3.7.tar.gz
```

## FIRST RUN

It is time for our first Lynis run and to determine how well this particular system is secured. Move into the directory (`cd lynis-1.3.7`) and run it from the local directory (`./lynis`). Lynis will provide the available parameters. The most common ones are `-c` (check) and `-Q` (quick). The first one instructs Lynis

to run all tests, and the latter is used to skip waiting after each section. If you prefer to check section by section, then use only `-c`.

For this run we will use the check-all and quick parameters:

```
lynis -c -Q
```

Depending on the software installed and the related configurations, Lynis will perform as many tests as needed. Depending on your configuration and software packages, the amount of tests might vary between different runs. On the particular machine used for this article, 144 tests (of 250+) were performed. We can see this number in the logfile, but also at the end of the screen output. The hardening index of this machine was a mere

44, which is considered low.

## HARDENING THE SYSTEM

Now that we have a first impression on how well our system is hardened (or the lack of) the next step is to determine what actions are suitable for our system. As with all changes to a system, there is some risk involved that it may break something, expected or unexpected. So don't try to fix everything in one go, but apply changes in small steps. As usual, start with the quick wins and then move towards the ones which take more time to implement.

In this case the system seems to be missing security patches, as Lynis found vulnerable packages. As it is a warning, and usually easy to fix, we start with that. When

clicking on the Software updater, it notifies us that security patches are available (as expected). That's already something easy to fix, yet very important.

The second warning indicates that Lynis found only one nameserver (or DNS server) configured, or just one that actually works. These servers are used for DNS, which is the engine behind resolving domain names to IP addresses for network communication. While this might be a more serious risk on a server, for our simple desktop one DNS server is fine. If that one stops working, we quickly find out anyways, as we won't be able to browse the web anymore. Servers on the other hand might act in an unexpected way, while we won't always be able to see it. So depending on the role of the system, the warning may be something to seriously consider fixing. In this case we don't mind, and to avoid this warning showing up each time, we can ignore the test in the scan profile.

We edit `default.prf` and tell Lynis to skip test `NETW-2705`, which is the ID found at the end of each warning or suggestion line.

```
-[ Lynis 1.3.7 Results ]-
```

```
Tests performed: 144
```

```
Warnings:
```

```
-----  
- Found one or more vulnerable packages. [test:PKGS-7392]  
- Couldn't find 2 responsive nameservers [test:NETW-2705]
```

# HOWTO - IMPROVE UBUNTU SECURITY WITH LYNIS

```
default.prf:
# ** Skip one or more
specific tests **

# (always ignores scan mode
and will make sure the test
is skipped)

#
config:test_skip_always:AAAA-
1234 BBBB-5678 CCCC-9012:

config:test_skip_always:NETW-
2705:
```

So now we installed our security updates and told Lynis that we are fine with only one working DNS server, let's do another run.

That is already looking much better! The index not only turned yellow instead of red, it also provided us with additional security due to installing the patches. Since software is usually the weakest link, staying up-to-date with patches from the

security repository is important. Ignoring tests won't make a system more secure, but at least it helps us to focus on the things we can really improve.

As dealing with each individual result would make this a very long article, it is more useful to have a look at dealing with suggestions in general. With each suggestion, the primary focus should be on understanding the meaning behind each suggestion. Secondly, the impact and risk of changing pieces of the configuration. Last, but not least, proper testing and making sure the adjustment has no bad influence on the goal of the machine. For example, blocking access to a web server may result in possibly a more secure system, but it won't be able to handle web requests.

Since each system has a completely different purpose, some suggestions might be more suitable for servers, while others apply both to desktops and servers. It is up to you, the user, to decide what suggestions are worth investigating. Others can be ignored in the scanning profile, as shown above.

Useful hints behind each test can be found in the log file (`/var/log/lynis.log`), which usually shows the related files. Additionally, the related test itself is in the include directory, to determine what the test is looking for. Then there is the CISOfy website with documentation and information about the individual tests themselves. Finally, of course, the Internet. Usually more people will have similar reported suggestions or questions regarding

the implementation.

**Happy hardening and stay secure!**

For more security advice, check out Michaels new monthly security column for FCM.

```
Files:
- Test and debug information      : /var/log/lynis.log
- Report data                     : /var/log/lynis-report.dat
```

```
Hardening index : [56]      [#####      ]
```

```
Enterprise support and plugins available via CISOfy - http://cisofy.com
```



**Michael Boelen** is the author and project lead of Lynis. When not working (at his company, CISOfy), he likes to take part in sport, loves reading, and enjoying life with friends. He can be reached via [michael@cisofy.com](mailto:michael@cisofy.com) or on Twitter ([@mboelen](https://twitter.com/mboelen)).

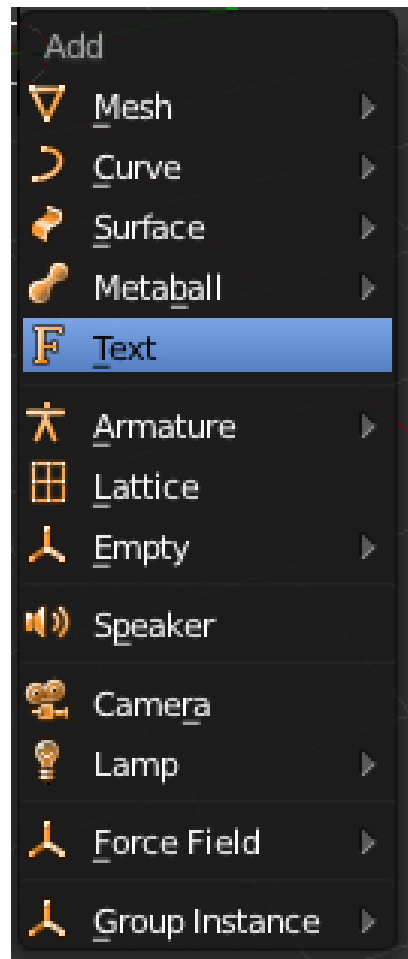


# HOW-TO

Written by Nicholas Kopakakis

# Blender Pt 10a

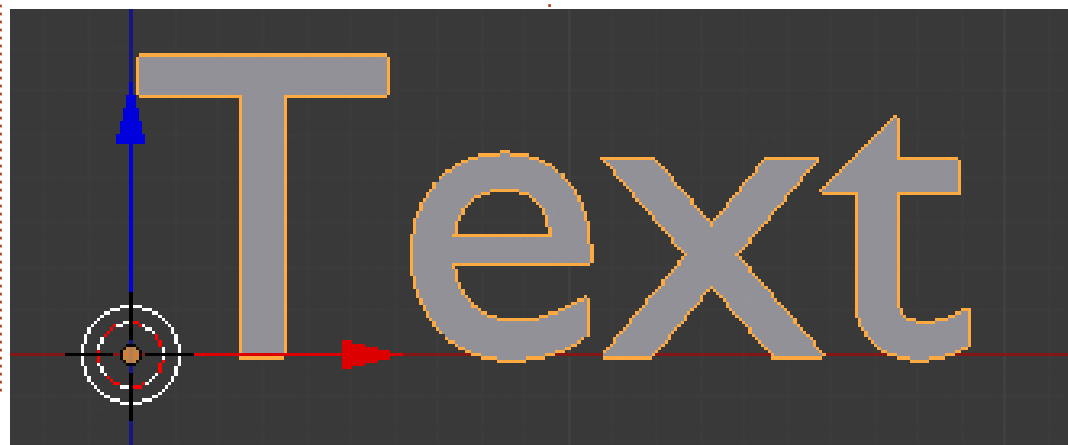
This month we are going to have some fun with text in Blender. So, start up blender and delete the default cube (select the cube, press X, and confirm the deletion). Now, press the A-key to add a new object in your scene. Add text (see image below)



The first thing that you notice is that, for some reason, blender adds text object facing the top view. I prefer to change that to face the front view so let's rotate our text object 90 degrees on the X-axis (Press R-key, then X-key, and then press 90).

Now, using the num-pad, press 1 for front view and 5 for orthographic view. You must have something like the image below.

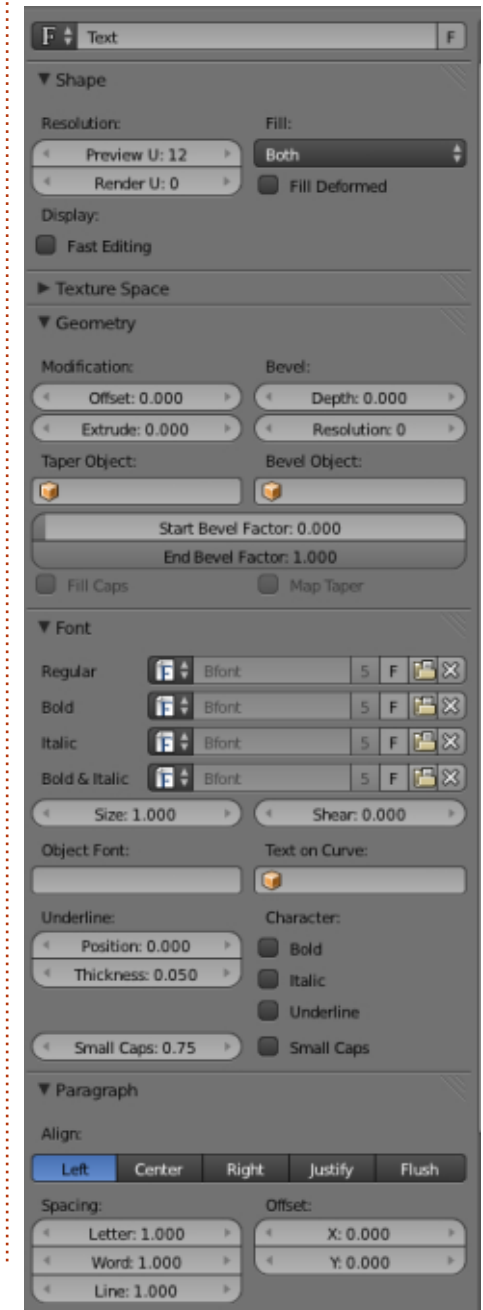
Now that we have a better look of our text, let's change it. Press the tab-key to enter the edit mode. Change the default "Text" to "Full Circle Magazine". Exit edit mode by pressing the tab-key again. Great!

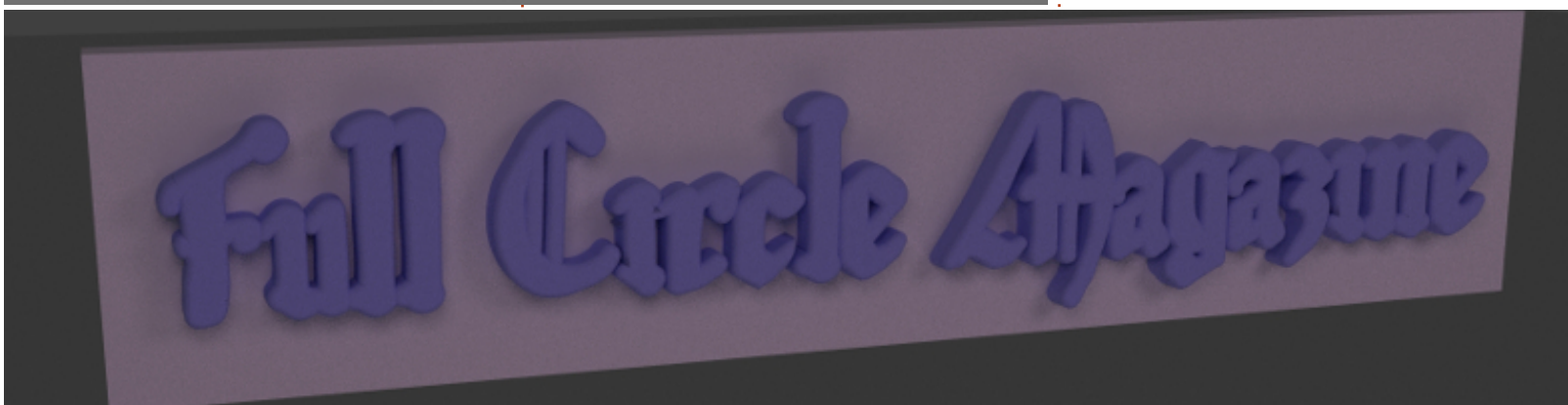
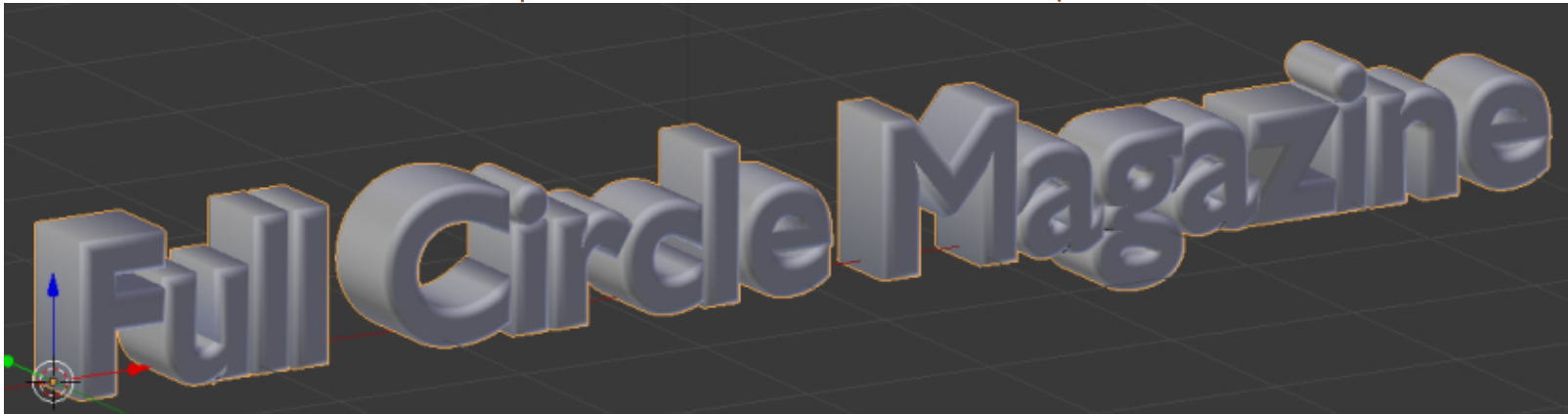
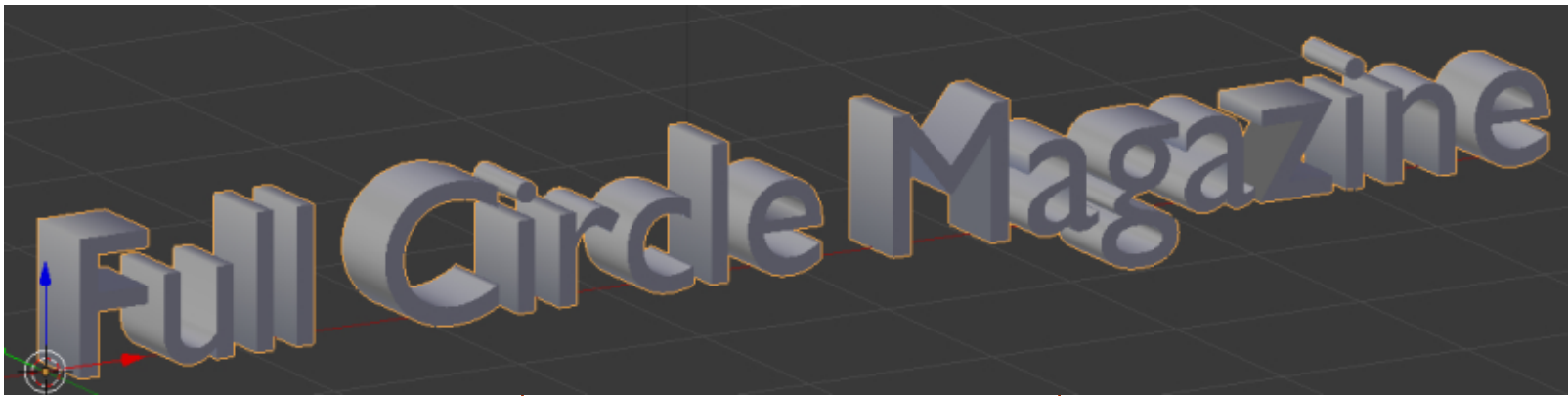


But we have a very boring text (although it says "Full Circle Magazine"). With your text object selected, examine the properties window. Select the tab with an F as an icon to reveal some interesting stuff about our object.

First of all, change the name of our object from the default "Text" to "FCM". Then, change the extrude value under Geometry to 0,2. You don't see any difference to your text. But, if you rotate your view (by holding the middle mouse button and moving your mouse, or by pressing 2,4,6 and 8 on the num-pad), you can see that we extrude our text. Great!

Also we can adjust the depth of





our bevel factor.

Change the value of Depth to 0,05 and the Resolution to 10.

Ok. Now we are going to change the Fonts.

Press the file icon (the icon between F and X), and navigate to your Fonts folder. Select the font of your desire. I choose Isabella (search the repositories for ubuntu-studio-font-meta package). The Geometry values that we changed earlier are not suitable for this font. I'll make extrude = 0,05 and Bevel = 0,02.

Ok, now let's add a box and rotate, scale, move it. Also use textures! It will be easy to create something like the image below.

**To be continued...**



**Nicholas** lives and works in Greece. He has worked for a post-production house for several years and migrated to Ubuntu because "it renders faster." You can email him at: [blender5d@gmail.com](mailto:blender5d@gmail.com)

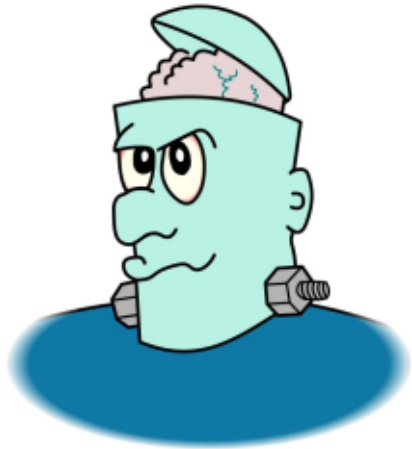


# HOW-TO

Written by Mark Crutch

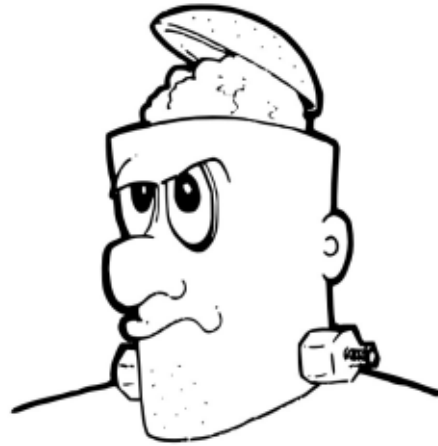
# Inkscape - Part 21

Over the past five instalments, we've used Inkscape to trace bitmap images, both manually and automatically. In part 17 I introduced a sketch of a cartoon character, "Frankie", and proceeded to demonstrate a few ways to manually trace it. The first method was simply to draw over the outlines using the normal Bézier Path tool, which resulted in a drawing like this:



Seeking some variation in the outlines, I then proceeded to introduce a number of ways to trace the sketch, but they all suffered from one obvious omission: color. Although they introduced some dynamics to the

image, they all resulted in the outline being rendered as a single filled path. The best looking result arguably came from automatically tracing an inked and cleaned-up version of the image (see part 19 for details), but that still produced only a nice looking outline consisting of a single complex path with over 1000 nodes.



Changing the fill on this image would just result in a colored outline. In order to color the drawing itself, it's necessary to create each area of color as a separate path that can be placed below the outline. In other words you have to manually re-draw each area of the image to create a set of

paths that can be filled. If it sounds like a lot of extra work, that's because it is, but Inkscape does have a Paint Bucket tool that can help.

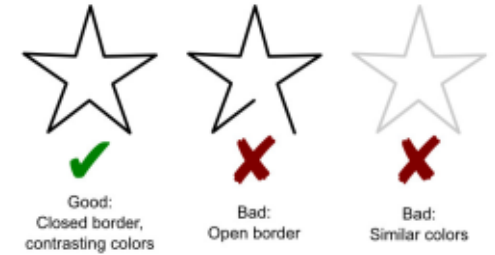


The Paint Bucket – sometimes referred to as a Fill or Flood Fill tool

– is commonly found in bitmap editors such as The GIMP, so you may already be familiar with its basic operation. In Inkscape, it's present in the main tool palette and can be selected using the Shift-F7 keyboard shortcut, by pressing the "u" key on the keyboard (easier to remember if you imagine it as a sort of bucket shape), or by clicking on the icon.

Once selected, clicking the mouse inside a "bounded region" in your drawing will create a path that fills it with the currently selected fill and stroke. In simple terms, a bounded region just means an area of a single color that is completely surrounded by a differently colored border, with no breaks. In practice the color of the border must be significantly

different from the area you are filling.



The region to be filled is actually calculated based on the color of each pixel in the area, so it's a bitmap operation rather than a vector one. The pixel you click on is taken as the starting point, then the algorithm tries to expand outwards by considering adjacent pixels. If a pixel's color is close to that of the starting pixel, then it gets added to the fill region and the algorithm continues by considering the adjacent pixels of the newly enlarged region. If the pixel's color is significantly different from that of the starting pixel (i.e. it's the boundary color), then it's not added to the fill region and the process stops trying to grow in that direction. This is repeated until the fill region can't grow any further because it has hit



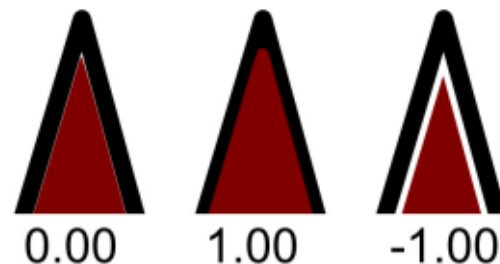
the boundary on all sides. Finally Inkscape creates a path that surrounds most of the pixels in the fill region, converting the bitmap-based search into a vector result.

If all that talk of algorithms has got you confused, a simpler way to imagine it is as though you're trying to pour ink into a shallow dish. The ink will spread out along the base of the dish – but only where the base is flat and even enough – and stop when it reaches the edges. Similarly the bucket-fill algorithm tries to spread the fill region out – where the colors are similar enough – and stops when it reaches the contrasting boundary.

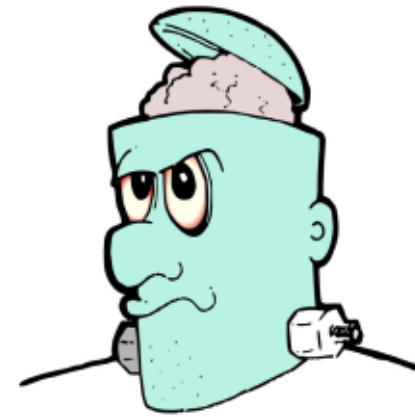
Taking a closed star as our object to be filled, zooming it to fill the screen, then clicking anywhere in the white interior, will produce something like this:



In this case the tool was set to a dark red fill and no stroke, and we've managed to create a new path which approximately fills the outline. It's only approximate because the new path doesn't actually reach the edges and corners of the star, leaving a thin gap that shows up when zooming in within Inkscape. This is a common problem with the bucket fill tool, but it can be alleviated to some extent by setting the "Grow/shrink by" option on the tool control bar to a positive number. This will cause the calculated path to grow outwards so that it overlaps the boundary a little. Set it too high and it will extend beyond the boundary, so a little trial and error is often needed. You can also use a negative number in order to shrink the path away from the boundary if you want to. Here's a close-up of the top point of the star with different grow/shrink values.



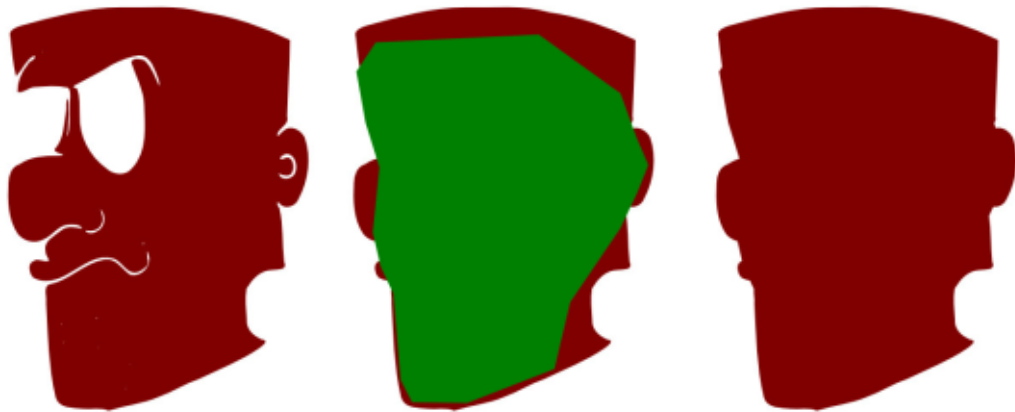
As our aim is to color a comic sketch, it's the middle option – a positive grow/shrink value – that interests us at this stage. As you can see, the new path extends well into the border but we can send it to the back of the z-index, bring the outline to the front, or draw our color fills on a lower layer, to give us our original outline with the appearance of a filled interior. It's a quick and easy way to fill some of the larger areas of a character like Frankie.



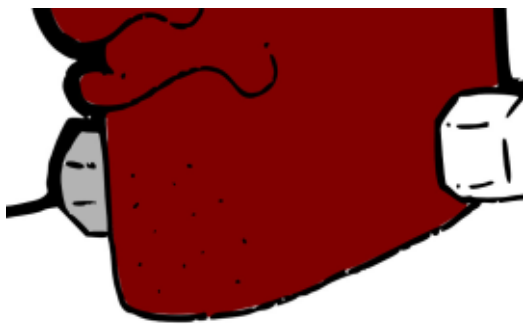
It's not a bad start, but there are a few problems. Some of the fills don't quite get into all the corners, or leave gaps near the outlines, and the bucket fill didn't work at all on the jumper and the nut on the right hand side. Let's start by looking at the fill for the face in isolation, temporarily changing the color so it stands out a little more.



There are 96 nodes in this path, but many of them aren't really necessary. We don't need it to follow the outline of the mouth and nose, and we certainly don't need to trace every bit of stubble. Even the eyes aren't necessary as we can simply stack their own bucket-filled paths on top of the face path. With a bit of node editing it's easy to simplify this complex path. Adding and subtracting rectangles, ellipses or other paths using the Boolean operations is a quick way to deal with lots of nodes at once. In this case I'll simply draw an approximate path using the Bézier tool (shown in green), then use Path > Union to combine it with the face.



Putting this path back into place shows that there are still some gaps around the edges. We can correct this just by dragging a few nodes and handles into position – with the path now significantly simplified this is a much easier job than it would have been previously.



The bucket tool often has a problem with concave corners. One way to reduce the issue is to zoom in on the object you're filling. This results in more pixels being used in the flood algorithm, giving a more accurate fill. Unfortunately it only

works for small objects because the whole, unbroken boundary has to be visible in the Inkscape drawing window, or at least only slightly outside it. Otherwise you can fill at a low zoom level, then get in closer and fill again to finish off the corners. If the first fill is still selected you can hold Shift to cause the second fill to be added to the same path, or you can simply create them as two paths then use Path > Union to merge them into one. Most commonly, though, it's easiest just to do a little manual node editing to get the path to fill the corners.



Taking a closer look at the nut and bolt, it's clear that the problem here is a gap in the sketch which means we don't have a completely bounded region to fill.

If your boundary has small gaps in it, then don't despair: the bucket fill tool has a "Close gaps" option on the tool control bar that allows it to automatically deal with such issues. This feature can be set to close small, medium or large gaps, or turned off entirely. Be aware that closing gaps might also prevent it filling legitimate parts of the drawing if you have a complex boundary that pinches together in some areas. Even the "large" setting only closes gaps of a few pixels in size, so you may find it works only if you zoom out a bit – which in turn gives you less accuracy in the corners.

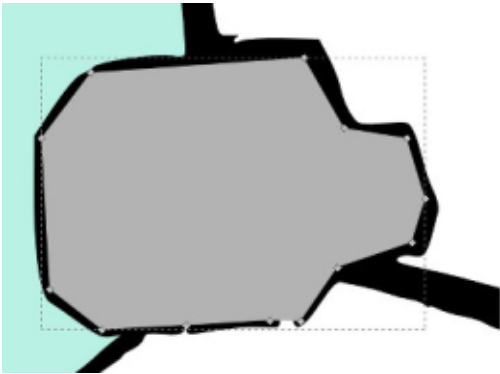
An alternative approach is to manually close the gaps. Remember that the fill algorithm is concerned only with how different each pixel's color is from the initial start point. That allows you to use a contrasting color to draw lines or other objects to plug any gaps before filling. I usually draw these plugs in a color that also contrasts

with the boundary so that they stand out afterwards and are easy to find and remove. In this case I've drawn a red triangle using the Bézier tool as my plug: it takes only a few clicks to create, but the size and color makes it obvious that it's an object to remove once it's served its purpose. The color is different enough from the white background that the algorithm will just consider it to be part of the boundary.



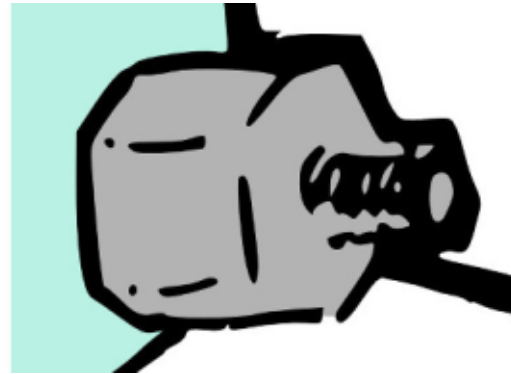
Manually plugging gaps lets you use the bucket fill while still being zoomed in close enough for it to get into the corners. In this case, however, there are enough separate areas that some extra manual work would be needed to color it all anyway, so it's just as easy to manually fill the whole shape. By using the Bézier tool to





lay down straight lines that follow the center of the outline it's quite simple to color a small region such as this. Once the Bézier path has been drawn, sending it to the back will hide the straight edges behind the outline to retain the hand drawn final appearance.

The bucket fill tool also has a few other tricks up its sleeve. Because it works on pixel values, it can be used to fill areas of a bitmap image, even without tracing it first. In that case the background color can often be less than uniform due to artifacts introduced with JPEG compression, so the bucket fill has a Threshold setting on the tool control bar to adjust the amount that a pixel can deviate from the initial starting color for it to still be considered as part of the background. Adjusting this setting lets you fine tune the fill to only very specific colors, or broaden it

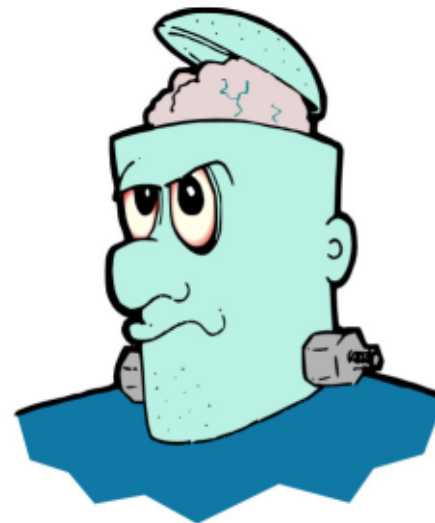


to allow quite a range. As well as filling bitmaps, this can be handy when you want to fill an area that has a gradient or other color variations.

You can also change the basic rule of the algorithm entirely using the "Fill by" pop-up menu. Instead of looking for general changes in pixels' colors you can choose to focus on only the red, green or blue components, the hue, saturation or lightness, or even the alpha channel. These options are rarely used, but could be invaluable when your background and boundary aren't distinct or contrasting enough for the standard algorithm to notice the difference between them.

After another manually drawn path for his jumper, and a little node work to remove and re-create the veins in his brain, it's finally

time to reveal the finished version of Frankie. Having to separately color each section of a sketch can certainly be time consuming, but if you compare this version with the simple manual trace presented at the start, I hope you'll agree that the extra effort required to maintain some variation in the outline has been worth it. Whilst the manual trace has a decidedly vector feel to the image, this final version retains a lot more of the hand-drawn style.



Mark's Inkscape created webcomic, 'Monsters, Inked' is now available to buy as a book from <http://www.peppertop.com/shop/>



The Ubuntu Podcast covers all the latest news and issues facing Ubuntu Linux users and Free Software fans in general. The show appeals to the newest user and the oldest coder. Our discussions cover the development of Ubuntu but aren't overly technical. We are lucky enough to have some great guests on the show, telling us first hand about the latest exciting developments they are working on, in a way that we can all understand! We also talk about the Ubuntu community and what it gets up to.

The show is presented by members of the UK's Ubuntu Linux community. Because it is covered by the Ubuntu Code of Conduct it is suitable for all.

The show is broadcast live every fortnight on a Tuesday evening (British time) and is available for download the following day.

[podcast.ubuntu-uk.org](http://podcast.ubuntu-uk.org)



## GUIDELINES

The 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).**

## RULES

• There is no word limit for articles, but be advised that long articles may be split across several issues.

• For advice, please refer to the **Official Full Circle Style Guide:** <http://url.fullcirclemagazine.org/75d471>

• Write your article in whichever software you choose, I would recommend LibreOffice, but most importantly - **PLEASE SPELL AND GRAMMAR CHECK IT!**

• In your article, please indicate where you would like a particular image to be placed by indicating the image name in a new paragraph or by embedding the image in the ODT (Open Office)

document.

• Images should be JPG, no wider than 800 pixels, and use low compression.

• Do not use tables or any type of **bold** or *italic* formatting.

If you are writing a review, please follow these guidelines :

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

## TRANSLATIONS

If you would like to translate Full Circle into your native language please send an email to [ronnie@fullcirclemagazine.org](mailto:ronnie@fullcirclemagazine.org) and we will either put you in touch with an existing team, or give you access to the raw text to translate from. With a completed PDF, you will be able to upload your file to the main Full Circle site.

## 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.**



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# ASK THE NEW GUY

Written by Copil Yáñez

Hi, everyone! Welcome back to Ask the New Guy!

If you have a simple question, contact me at [copil.yanez@gmail.com](mailto:copil.yanez@gmail.com).

Today's question is:

**Q: I like to read on my Kindle. How easy is it to read my e-books on Ubuntu?**

A: You're hardcore, I like that. Not content to show up at your favorite coffee shop with a Kobo in your messenger bag, you come with a full tower PC, 32" monitor, mechanical keyboard (the kind that sounds like a Cold War teletype machine, circa October 1962), and one of those granny baskets to carry the 6 stacked car batteries it takes to run it all. I have to give you mad props, though. At least you don't hog the outlet.

Okay, so maybe you're not reading books on your desktop, maybe you'd like to use your laptop to catch up on a few pages of Game of Thrones while sitting

on one. Hey, I'm not judging. And considering the Ubuntu Phone is right around the corner, maybe knowing how to get your e-books on Ubuntu isn't such a bad idea.

Can it be done? Dunno. Are we done here?

Fine. Let me see what I can find out.

As with any exhaustive review like this (meaning, one where I hit the keys randomly until I come up with a solution), I begin in the

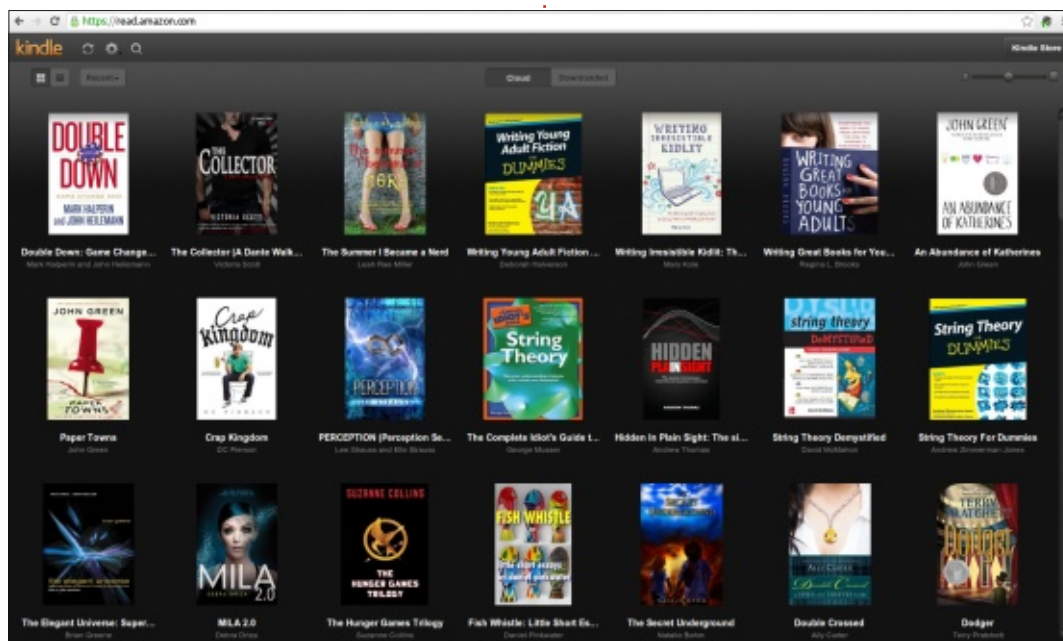
Ubuntu Software Center. My razor-sharp intellect tells me I should start by typing the word "Kindle" into the search field. Yeah, I'm practically Einstein. When I do, I find something called Jutoh. The description seems to indicate it's more for content creation than reading. But at \$39.00, I didn't bother to download it. This may be a perfectly reasonable price for the software, but I don't have that kind of money lying around. If I did, I'd pay someone to code my new Date-a-Geek website, where you can select your age, sexual

preference, and preferred operating system. I seriously advise you steer clear of anyone looking for Hurd enthusiasts, though. They plan a date, but never show up.

Anywho, it turns out Amazon doesn't have a native Ubuntu client for Kindle Books. This seems a little odd until you realize there's a dead simple solution called the Kindle Cloud Reader. You can access it by pointing any browser (I used Chrome) to: <https://read.amazon.com>. Use your Amazon login and, voila! Your Kindle library pops up.

This is a very slick and easy way to get your Kindle books on any device that has internet access. My guess is there will be a native app for the Ubuntu phones (purportedly coming in 2014). But if you don't see it on Day 0, you can always access your Kindle titles this way.

Depending on your worldview (like, say, if you own an independent bookstore), you might not be a huge fan of Mr. Bezos and



his juggernaut. If that's the case, there are plenty of other ways to read your e-book titles, no matter where you purchased them.

Let's start by looking at the major e-book readers and see how easy it is to get your favorite titles on your favorite OS.

The Nook is available from Barnes & Noble. It's a snazzy device with more models than the Kindle and, at least in the US, you can bring your Nook to the in-store cafe, and "borrow" any of their available titles while you're there. There's a Nook app for most devices, including your internet-enabled freezer. But not Ubuntu.

*Pffft, whatever.*

Here's the thing about Ubuntu. You remember that scene in *Back to the Future*, when Doc Brown shows up at the end of the movie in a modified DeLorean? He digs around in Marty's trash and pulls out a banana peel and some backwashed soda, and pours it into the Mr. Fusion to get it running again.

Ubuntu is the Mr. Fusion of operating systems. Your favorite

app isn't available natively for Ubuntu? Who cares! We'll take your app, slather it in our special sauce, and run it like we're witch doctor's raising the dead. Nothing can stop us! ***Muahahahahahahahahaha!!***

All you need is a little wine. No, I'm not suggesting you get drunk, although that certainly can't hurt. I'm referring to WINE (Wine is Not an Emulator), software that allows you to run Windows programs in Linux. I have no idea what's under the hood, but The Force is strong with this one. Seriously, even if you don't need to run e-book apps, just download WINE and thank me later. At some point in the future, you'll download a .exe file, wondering how you'll ever get it

working, only to have WINE rise like some benevolent genie after you rubbed her lamp, and grant you the wish of software compatibility.

Seriously, sometimes WINE is indistinguishable from magic.

To get WINE, go into the Ubuntu Software Center, search for it, and select it for install.

Back to the Nook. No Ubuntu client? No problem. Simply download the Windows client and click on the .exe file. Now that you have WINE installed, there is nothing else to it. WINE won't work with all software, of course, and even when it does, there's a

possibility it won't work exactly the way you expect.

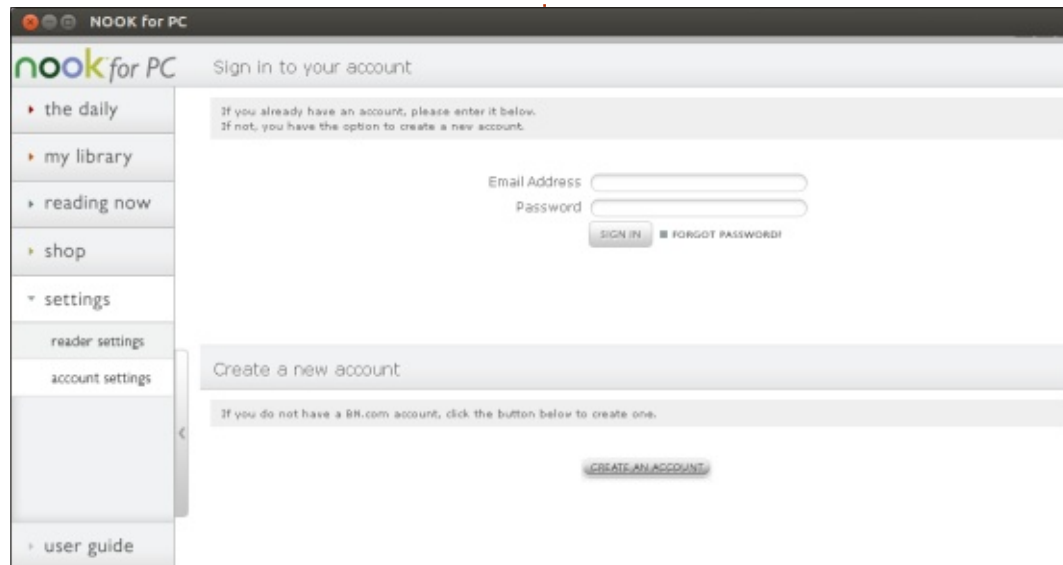
But where the Nook is concerned, it couldn't have worked better. The install took about ten seconds.

Something else about the Nook that's kinda fun, you can actually get Ubuntu loaded on it. Now, don't come crying to me if you brick your e-reader or void your warranty. But how cool would it be to have Ubuntu running on the Nook (rather than the other way around)?

Another major e-reader is the Kobo. When I checked the Software Center, I found an app, downloaded it, and was well through level 20 on this cool little 2D side-scrolling shooter before I realized there's a game called Kobo in the software center. In case you were wondering, no, you can't read e-books on that.

Instead, download the Kobo app for Windows. When you click to install it, WINE will act like a wealthy magnate's man-servant and take care of everything.

Kobo also seems to offer the



# ASK THE NEW GUY

best options for open e-book formats like EPUB.

If you don't have a reader, or you simply want a good way of reading your various PDFs, .docs and open source ebook formats on Ubuntu, you can always download one of several e-reader apps from the Software Center. FBReader and Calibre are both available there, and both pop up on "best of" lists on a regular basis, so they're worth giving a try.

No matter how you roll (discreet Ubuntu tablet or full-fledged power-mad PC user), you no longer have to wait until you get home to find out how Fifty

Shades of Grey ends. (Spoiler Alert: probably in a damp bed strewn with enough sex toys to make Ke\$ha blush). Just pick the app that works with your preferred library and get your kink on!

## Good luck and happy Ubuntuing!



**Copil** is an Aztec name that roughly translates to "you need my heart for what again?" His love of women's shoes is chronicled at [yaconfidential.blogspot.com](http://yaconfidential.blogspot.com). You can also watch him embarrass himself on Twitter (@copil).





When FCM was asked about RAID, it seemed like a good idea for me to finally implement RAID at home. Since I have a fair amount of access to different hardware, including lots of hard drives, the others at FCM agreed to let me write an article on RAID – despite having never created a RAID array before. I’m far from being a RAID expert, though I did talk to several people who’ve

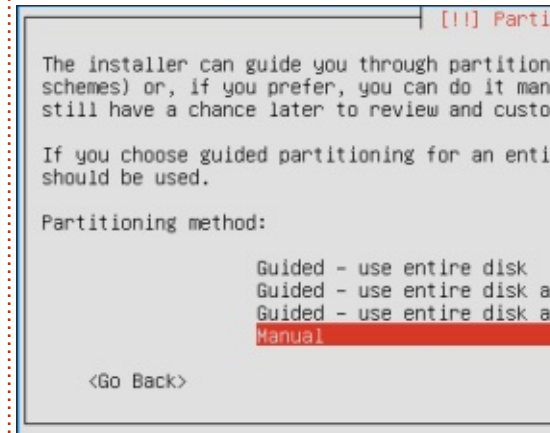
created RAID arrays before writing Part 1 (FCM 80).

As you’ll see I managed to create the RAID 10 array (mirroring and striping) that I talked about in Part 1. But when I went to test the array by removing the drive, it degraded and I was unable to restore the array before being redirected to another screen and then to a grub prompt.

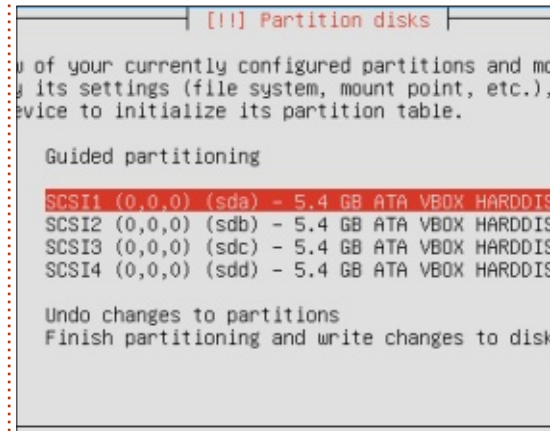
When I created my original RAID 10 array, I used 4 hard drives (each a 250GB SATA hard drive). The total array size was 500GB since 2 drives are striped together (500GB), and they got mirrored to the other 2 drives. For this article, I’m using screen shots from a RAID 10 array I created using Virtual Box.

When I started to set up the array, I was stuck because I kept booting Live CDs and starting a graphical install. The problem with graphical installs is that they don’t seem to have a RAID option. Even after I installed mdadm and other RAID tools, no RAID options appeared the the graphical drive configuration screen. Both the text and graphical installers let you choose to manually partition your hard drive(s), but the text installer has extra tools so you can easily set up RAID arrays.

Once you get to the hard drive configuration stage, be sure to choose Manual install instead of Guided - use entire disk.



Because all of the drives are fresh without any previous installation, we need to create a partition table for each individual drive. Choose each drive and hit enter.



Once you select a drive you’ll be prompted to Create a new empty partition table on the device?



Choose Yes.



Note that you will have to repeat this process for each drive in the array if it has never been initialized before. At this point, I set up a swap partition on each of the 4 drives (this may be part of the reason my array ultimately failed when I removed a drive).

On the remaining space for each drive, I created a physical volume for RAID partition. To do this, select the FREE SPACE partition, then choose **Create a new partition**. Select **Continue** if you're satisfied with the size. For the Type of partition, be sure to use **Primary** partition for the partition you're going to use as RAID. On the screen where it asks **Use as**, the default is Ext4 journaling file system; change this to **physical volume for RAID**.

When all drives are set up navigate to the **Configure Software RAID** option just under Guided partitioning.



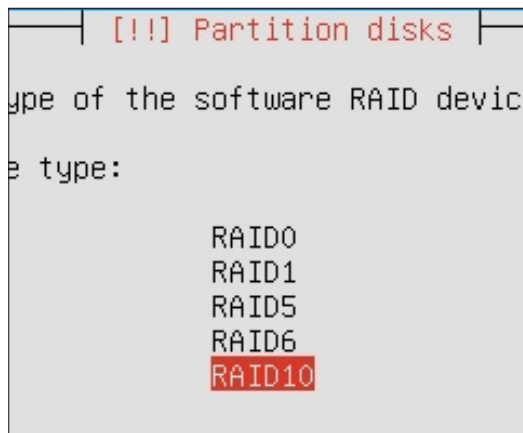
You're given one last chance to make changes to your configuration at this point. Choose **Yes** to the 'Write the changes to the storage devices and configure RAID' question if you're happy with your drive layout.

The next step is to **Create a MD device** (multiple device). As I understand it, if you already have Linux installed and configured on a system you can use mdadm to do

the same steps from here on.



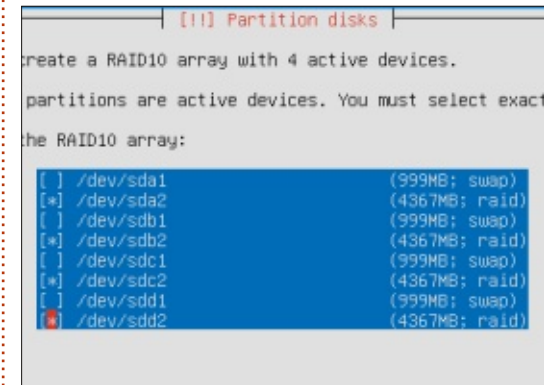
Finally we're given a choice of the type of RAID we want. In a 4 drive configuration I had the choice of RAID 0, 1, 5, 6, or 10. I chose RAID 10.



The next step is another point where I got really confused because, as I understand RAID 10, I should have had 500GB (2 x 250GB) in my original configuration but

when I chose to use 2 drives as active and 2 drives as spare, I had only 250GB available. I was thinking the 2 spares might be the mirrors in the array which appears to be an incorrect assumption. I ended up choosing all 4 drives as active, and 0 as spares, to make the 500GB RAID partition available.

(Thanks to *Mion* and *koala\_man* from the #linux channel on the freenode IRC network for confirming that setting 4 drives as active and 0 as spares was the right choice.)



Select **Continue** when you're done selecting the active partitions. Note: in my screenshot, I have both swap and RAID partitions.

At this point, the next menu that appears is the 'Create a MD device' menu we were at earlier.



```
RAID10 device #0 - 8.7 GB Software RAID device
#1 8.7 GB
512.0 B unusable
SCSI1 (0,0,0) (sda) - 5.4 GB ATA VBOX HARDDISK
#1 primary 999.3 MB F swap swap
#2 primary 4.4 GB K raid
SCSI2 (0,0,0) (sdb) - 5.4 GB ATA VBOX HARDDISK
#1 primary 999.3 MB F swap swap
#2 primary 4.4 GB K raid
SCSI3 (0,0,0) (sdc) - 5.4 GB ATA VBOX HARDDISK
#1 primary 999.3 MB F swap swap
#2 primary 4.4 GB K raid
SCSI4 (0,0,0) (sdd) - 5.4 GB ATA VBOX HARDDISK
#1 primary 999.3 MB F swap swap
#2 primary 4.4 GB K raid
```

Select Finish to move on from the 'Create a MD device' menu. You'll see the 'starting up the partitioner' screen as Kubuntu tries to figure out our newly created MD RAID device.

Now the partition disks menu shows a RAID 10 device. In my virtual machine example' that device is 8.7GB (which makes sense since  $2 \times 4.367\text{GB} = 8.734\text{GB}$ ). We have 2 striped drives while the other 2 mirror the striped array.

We're now editing partition #1 of RAID10 device 0. By default the partition is set as **Use as: do not use**, change this to the **Ext4 journaling file system** and set the mount point to **/ - the root file system** then select **Done setting up the partition**.

```
[!!!] Partition disks
#1 of RAID10 device #0. No existing f

Use as: do not use

Copy data from another partition
Erase data on this partition
Done setting up the partition
```

We're almost done setting up the RAID10 array. On the next screen select 'Finish partitioning and write changes to disk'. We have one last chance to make changes before everything gets written to disk. Once you **Write the changes to disk**, your partitioning is done and your regular Linux install continues.

I was excited to see Kubuntu boot up after setting up the RAID10 array for the first time.

Then I removed a physical drive and the following message appeared:

**\*\* WARNING: There appears to be one or more degraded RAID devices \*\*** ... Do you wish to start the degraded RAID?

I had about enough time to snap a picture of the screen before it seemed to automatically choose and fail on me. At that point, I shut down the machine and added the drive back that I just took out, sadly all I got was a grub prompt.

It looks like I had the chance to perhaps fix the array at the degraded screen, but it passed by without a response from me, so I never had the chance to choose to fix the array. I mentioned earlier

that I'm not experienced with RAID (but having access to drives affords this experience). So I'm calling on experts out there to help this article along for next month. Can this be fixed from the grub prompt?



**Charles McColm** is the author of *Instant XBMC*, and the project manager of a not-for-profit computer reuse project. When not building PCs, removing malware, encouraging people to use Linux, and hosting local Ubuntu hours, Charles blogs at <http://www.charlesmccolm.com/>.

```
** WARNING: There appears to be one or more degraded RAID devices **

The system may have suffered a hardware fault, such as a disk drive
failure. The root device may depend on the RAID devices being online. One
or more of the following RAID devices are degraded:
Personalities : [linear] [multipath] [raid0] [raid1] [raid6] [raid5] [raid4] [raid10]
md0 : inactive sdc2[2](S) sda2[0](S) sdb2[1](S)
729661440 blocks super 1.2

unused devices: <none>
You may attempt to start the system anyway, or stop now and attempt
manual recovery operations. To do this automatically in the future,
add "bootdegraded=true" to the kernel boot options.

If you choose to start the degraded RAID, the system may boot normally,
but performance may be degraded, and a further hardware fault could
result in permanent data loss.

If you abort now, you will be provided with a recovery shell.

Do you wish to start the degraded RAID? [y/N]:
```



After the great hard drive format of November 2013 (which I accidentally caused), I decided that it was definitely time to get a backup on the go. I have some of my files saved to my SpiderOak Hive folder so they are safely in the cloud and the FCM data has always been in the safe hands of Google Drive, but the rest? Well...

## INSTALLING

Installing Back In Time is done using your distro package/software manager. There is a Back In Time for Gnome (backintime-gnome) and one for KDE (backintime-kde), so choose whichever you prefer.

## BACKING UP

Actually doing a backup is pretty simple. Load Back In Time, then work your way across the tabs entering the relevant information such as where to save your snapshot (aka: backup), which folder(s) to backup, how often backups should be deleted, how

often to backup, etc. You may want to exclude things like Ubuntu One, DropBox and SpiderOak Hive as they're already backed up to the cloud. Include them if you want to be super safe

## SNAPSHOT!

With your information in, it's time to take your first snapshot using the button at the top left of the window. That's it. You're done!

I have mine set to backup my entire /home directory every day at 2am (when I'm asleep). At the moment the backup (and the original /home) is only 100GB. The drive the backup is stored on (separate from the original files) is 1TB, so more than enough for a good while.

The good thing about Back In Time is that it backs up only new, or recently altered, files, so it's not backing up everything every time. Only the new files/edits.

If you've always thought your files were safe and it would never

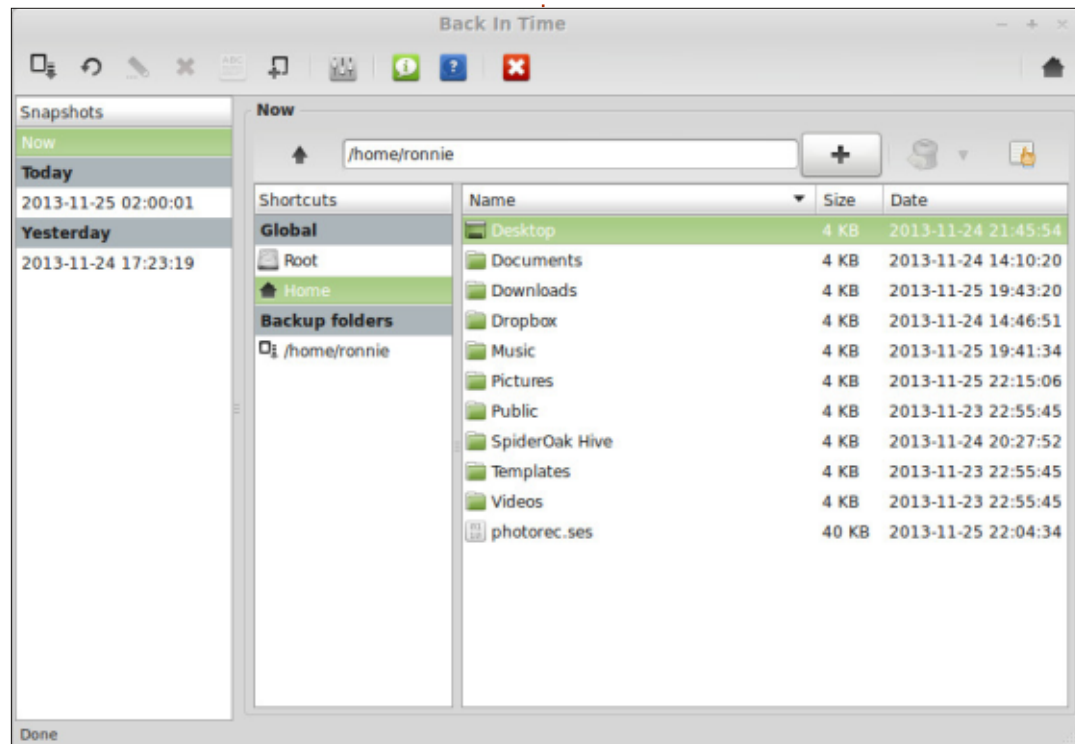
happen to you?... Take it from me. Make a backup and do it now as you could, at any time, lose everything. Don't take the chance! Get out that old dusty hard drive and use it as a backup device.

**Back In Time** website:

<http://backintime.le-web.org/>



**Ronnie Tucker** is the founder and editor of Full Circle Magazine. When not accidentally formatting his 1TB hard drive into oblivion he creates digital and traditional art. His work can be seen on his site: [RonnieTucker.co.uk](http://RonnieTucker.co.uk). You can also follow him on Google+: [google.com/+RonnieTucker1](https://plus.google.com/+RonnieTucker1)





I have been using the Ubuntu strain of Linux for about six years. I dabbled with SuSE in the mid-nineties but did not get very involved as this was the start of the age of Microsoft and Windows.

Since my incursion into the world of Linux, the scenario has changed completely. Gone are the days of having to fight with the software to get it to recognize certain hardware. As did many other Ubuntu users, I switched to Linux Mint as soon as Unity came to light. Now, after the years, I am more up-to-speed with the command line and the intricacies of Linux.

An interesting development, in my case, has to do with kids and my eleven year-old grandson and all of his mates. When he was six, he was given an old laptop with Windows ME. An organ grinder would be a friendly description. I installed PC/OS Linux and it worked a treat, well enough for him to play Club Penguin. He was then given, as a present, a netbook with Windows XP. I changed this to Ubuntu and

subsequently to Linux Mint. So he has been using Linux for five years with no complaints. That is until a couple of months ago when he started at an up-market and very demanding Secondary School in London with a very noticeable uniform and strong dress code. His IT Teacher told him that as a Linux user he is very much on his own as the school uses Macs and MS products; no Linux. This was a serious setback to someone just starting a secondary education. The face of my grandson said it all.

I decided to give a helping (if not devious) hand. A dual boot computer would solve this anomaly. However, finding a computer that does not have Windows 8 pre-installed is not so easy. There was an article in FCM about companies in the UK that sell computers with no operating system, but I live in Spain and all the major department stores and computer suppliers here insist on selling you Windows 8. I managed to find a computer consultancy company that supplied me with a high-spec notebook with no OS and

a Spanish keyboard. There is very little difference between an English and Spanish keyboard.

I used a boot-able Gparted CD to format the hard disk and then installed Windows 7. Using the Windows Disk Manager, I shrank the MS partition and then using Gparted again to create a swap partition and an extended partition for Linux. The Windows installation was a nightmare as it would not recognize Wi-Fi, LAN, bluetooth, or the keyboard, out of the box. You have to download the drivers, which takes forever to find the right ones. There is also the added frustration of having to install some kind of anti-virus software. The Linux Mint 15 64-bit installation worked like a dream, instantly recognizing all hardware at a glance. With the dual boot installation, Linux Mint boots by default, with a 10-second delay if you want to boot into Windows. I installed all the extra packages that would be of use to an eleven year-old school boy and sent it off to the UK.

The feedback I have had so far from my grandson is: "awesome, all my classmates are very jealous, and my IT teacher is really impressed." I am sure over the coming months the school may change tack when they see the huge advantages of Linux.

Regarding the saga of MS and Windows 8, the company is going in the wrong direction. I can state my opinion with respect to the Spanish market. People are not buying Windows 8 computers because it is for touchscreens and these are so much more expensive. It also requires a lot of RAM. The 28% unemployment in Spain may also be another reason. If you want to install Windows 8 on a machine running XP, Vista or 7, you have to get a bank loan to buy the software as there is no upgrade available. In several major stores that sell computer equipment here in Spain, I asked about the sales of Windows 8 machines and the answer was a very negative look that they are not selling.





Within a few months, Windows XP will reach its end of support. Lots of PCs are still running this operating system, and some of them are old or have low resources; a newer Microsoft OS cannot be installed; maybe the owner cannot afford or simply does not want to change the rig.

There's a nice project, named StartUbuntu, which aims to move XP exiles to Lubuntu; it is light and elegant; it has a kind of familiar look for XP users; nevertheless a post-installation tune-up is required in order to install codecs, flash plugin, java, and some applications. Also, Lubuntu will not have an LTS version until the next release.

I remember myself as an XP user one year ago, when I jumped to Xubuntu LTS from XP; the installations of codecs, plugins, packages, ppa - where I wanted more up-to-date stuff - were all some kind of magic when I did it the first time, and I was wondering if there's any distribution that could fully replace XP just via the

standard installation.

Looking for such a distro, I found LXLE, and decided to test it in a real installation, for my home tasks.

LXLE's website says that it is a distribution that's very light on resources, based on Ubuntu LTS, presents an LXDE desktop, maintains updated software, and works out of the box after installation.

I downloaded the RC 32-bit live image, something more than 1.2 GB in size, and using UNetbootin,

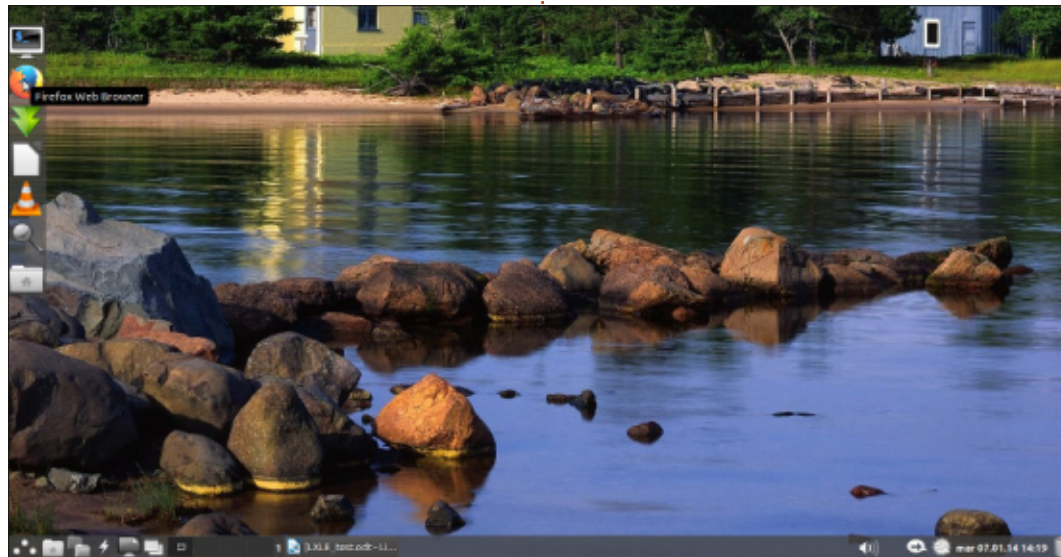
like an XP user can do, I prepared an usb stick for my driving test.

The default option of the bootloader brings up an LXDE environment with a beautiful background wallpaper, and an icon in the lower left side of the desktop enable us to replace it with random wallpapers from a very nice collection. Moving the mouse pointer to the left side of the desktop reveals an application bar, presenting the supposedly more used applications launchers; this bar is auto-hiding. On the top left corner is the install icon; on the right side of the desktop a simple

Conky widget shows us some system information. On the bottom side of the desktop there's the system bar, including menu, two file managers, a fast app launcher, the work-spaces pager, the taskbar, volume control, network manager, a weather application, and few other goodies.

I've set up an internet connection and launched the installer. The installer is the Ubuntu one, a very friendly and fast installer: I chose language, keyboard, time zone, user/password and the partitions set-up, and within less than 30 minutes - updates from internet included - the new system was ready for its first boot on my hard disk.

The boot is quite fast and we are presented with a login mask, on which we find language options and 5 desktop set-up options: Windows XP, OSX, G2, Unity and Netbook. The first four are very similar in content, but the positions of the various bars and menu vary, and they mimic respectively the



## REVIEW - LXLE LINUX

desktops in Windows XP, Mac OS X, Gnome 2, and Unity, giving a feeling of a comfortable, familiar look. The fifth desktop, Netbook, is similar to a tablet desktop, with big icons grouped on tabs.

I spent the most part of my testing time on the Windows XP paradigm, the layout we are presented with when starting the live media.

The system load is small even for my Pentium M, 2.13GHz and 2GB ram – less than 5% cpu usage, around 140MB of Ram. Conky takes about 2.5% of the cpu load; by editing the `~/.conkyrc` file, I raised the update interval of Conky from 1 to 10 seconds and the cpu usage dropped to under 2%.

Actually no post installation task is required; LXLE comes with a full featured set of tools; we have out of the box codecs, flash plugin and java; the microcode package is part of the installation. We have Firefox, Claws Mail as email client,

Filezilla for ftp management, Flush as torrent client, and Pidgin for messaging. There is the movie player Totem and a music player Guayadeque; there's Vinagre for remote desktop. We have Gimp for image manipulation and Shotwell for photo archiving, OpenShot for video editing, and Audacity for audio editing. There's Libreoffice as an office suite, Evince as document reader, FBReader for e-books. We find also a personal finance manager, HomeBank. There's a selection of games, and Steam.

A good collection of system tools is included in the installation, like Lubuntu software center, Synaptic package manager, GDebi deb package installer, Gparted for partitions management, and Ubuntu One for personal cloud storage. LXLE comes also with a handy tool for PPA management, Y PPA Manager, and installs a collection of 100 gorgeous background wallpapers.

To complete my set-up, I installed only VLC media player, not strictly required, but because I like it, and I found it updated at the last version. And VirtualBox, by enabling the official repository from Oracle; Skype is another application that I'm still not able to replace with Linphone in the LXLE standard software collection.

Another smart feature of LXLE is a bunch of PPAs enabled – we will always have the last stable version of some packages; some examples are: Libreoffice, Gimp, VLC, and of course lxle PPA.

I had a very good time on LXLE: nice and responsive, with most of the tools I need ready for me just after the installation was over; the only small glitch was the locale setting – it did not work perfectly on all menus and packages.

Official site: <http://lxle.net/>  
Download: <http://lxle.net/download>

## SUMMARY

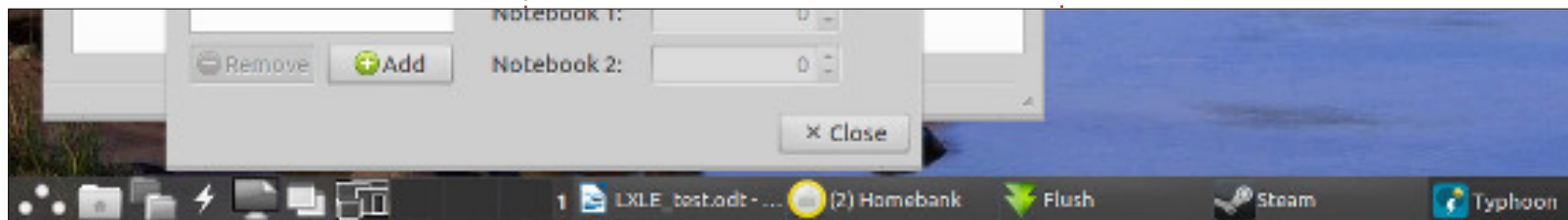
I give 4.5 / 5, because localization is not functioning, it could be annoying. However, the objective of being an easy and out-of-the-box Windows XP replacement is fully achieved.

### The good:

- light and fast: LXDE helps in keeping the system responsive
- nice: the desktop looks great
- rich: most of the software packages I use were ready out-of-the-box; the huge collection of packages from Ubuntu/Debian is available
- stable: I did not run into any problem even if I was running a RC version

### The bad:

- localization is not perfect: some menu entries and some packages did not change to locale settings; it's a minor issue but could be annoying for newcomers.





# BOOK REVIEW

Written by Mark Crutch

# Super Scratch Programming



**Publisher:** No Starch Press  
**Pages:** 160, full color  
**ISBN:** 978-1-59327-531-0  
<http://nostarch.com/scratch/>

Every review of a book about Scratch starts by describing what Scratch actually is, so I'll get that out of the way in one quick sentence: Scratch is an educational programming environment aimed at kids, in which computer programs are constructed from simple building blocks slotted

together like an on-screen jigsaw puzzle. What's more important, at least as far as this book is concerned, is that there are now three versions of Scratch that you might choose to use on your computer.

Installing Scratch from the Ubuntu repositories will get you version 1.4—a locally installed copy that can be used offline. More recently, version 2.0 has been released which uses Adobe's Flash plugin to run inside a web browser. There is also an experimental offline version of 2.0 which uses Adobe AIR as its host environment, but Linux support for AIR was discontinued some time ago so this version will run on only some 32-bit Linux distributions. In practical terms, therefore, Linux users have a choice between the offline 1.4 release, or the online Flash-based 2.0.

Older editions of this book (see FCM#68 Book Review) covered only 1.4. The latest version covers only 2.0. In practice, the differences are mainly in the layout of the user

interface—most of the functionality remains the same between the two versions. This affords the publishers the great option of providing copies of Chapters 1 and 2 from the older edition of the book as a free download, so this book actually works for both releases. Be aware, however, that the replacement chapters aren't simply a download away, as the book's introduction implies. Instead, you have to request them by emailing the publishers at an address that is revealed only in the "Super Scratch Educator's Guide", which can be downloaded from the website, and is a worthwhile addition in its own right.

The website also provides various resources that are used throughout the book to download as a single zip file. Again, make sure you download the correct version, as the 2.0 files are not backwards compatible with a 1.4 Scratch installation.

Once you've got past the administrative issues of installing or loading Scratch, getting the

right versions of the introductory chapters, and downloading the correct resources, you can finally get your teeth into the book itself. Proverbially, we're told that we should "never judge a book by its cover", but in this case you really can. The cover is bright and colorful, with an almost rubbery matt lamination that feels great in the hand, and is indicative of the attention that's been paid to the design and printing throughout. Scratch relies on shapes and colors to identify the building blocks that make up each program, so having the whole book in full color makes it easier to match the example code to your development environment.

There's a comic strip that loosely connects the chapters which also benefits from the color print, presenting vivid and exciting vector panels that will help to capture the attention of younger readers. The plot – what there is of one – won't satisfy adult readers, but in my inexhaustive testing, it went down well with kids around ten years of age. The comic is a



small enough part of the book that older teens or adults can easily skip it without losing out on anything important.

Actually writing code using Scratch is dealt with throughout the bulk of the book by creating a different game in each chapter. The games tenuously link to the story in the comic, but otherwise each chapter could be treated as a stand-alone tutorial for writing a game in Scratch. The variety of genres covered by the nine games is impressive, ranging from a side-scrolling driving game, through a logic puzzle, and culminating in a beat-em-up.

Each chapter starts with a very brief overview of the Scratch topics that will be covered, and a description of the game, but from there it's straight into the code. The instructions are clear and concise, and are presented in callout boxes that sit alongside the relevant part of the code. My one criticism – and it's aimed more at Scratch itself than this book specifically – is that presenting screenshots of completed Scratch scripts can encourage kids to simply copy the blocks verbatim, trying to match their jigsaw to the picture without really

understanding what each part does. This book doesn't take the time to build any scripts up bit-by-bit, but rather provides finished scripts, albeit with copious annotations. This isn't necessarily a bad thing, as it allows younger children to begin coding even if they don't understand the underlying concepts. For older kids, however, a little additional adult guidance (and there are some good suggestions in the downloadable Educator's Guide) may help to move them beyond simple copying and into the realms of real programming.

One concern I had before reading the book is that it's been translated from a Traditional Chinese language version. I'm pleased to say that the translation is excellent, and not once did any of the prose feel forced or badly phrased. Although it's been translated into American English, there are actually very few Americanisms in the book, making it appropriate for both sides of the Atlantic.

Overall I feel that this is an excellent book for introducing a child or young teen to the world of programming, and, comic plot

aside, would even be useful to adults with no prior experience in that area. A little extra help may be needed to help younger kids to understand how the individual building blocks relate to the finished game, but in avoiding too much detailed explanation, the book does manage to escape the descent into tedium that can often affect more worthy programming introductions.



**Mark's** Inkscape created webcomic, 'Monsters, Inked' is now available to buy as a book from <http://www.peppertop.com/shop/>

## Full Circle Podcast Episode 38, Just The Two Of Us

Your hosts:

- ~~Les Pounder~~
- Tony Hughes
- ~~Jon Chamberlain~~
- Oliver Clark  
and ~~Freaky Clown~~



from the  
Blackpool (UK) LUG  
<http://blackpool.lug.org.uk>

In this Episode we announce the new format for the shows, talk about our hardware, review, issue 76 of the magazine and we have an interview from the STEM York Raspberry Jam.

Download



# SOFTWARE SHOWDOWN

Written by Tushar Bhargava

## At Your Fingertips

Another lazy Sunday afternoon. After eating a far too heavy lunch, I was getting ready to write yet another article. I pressed <Ctrl+Spacebar> and a grey window popped up. I started typing into it and had got only as far as 'lib' when the familiar icon of LibreOffice Writer came. I hit the enter key and leaned back in my chair, the scene harmonizing with my already indolent mood. 'Installing Synapse was a smart move,' I thought to myself.

Synapse is a 'semantic launcher'. I've always felt that is an incredibly dry description for an extremely useful program. Synapse is part of a category of software known as application launchers. Such software not only allow you to quickly access your favourite apps but often also include powerful search functionality. Call it an overactive imagination but I always think of app launchers as obsequious digital ferrets, running around uncovering files, locating apps, and placing them all at your fingertips.

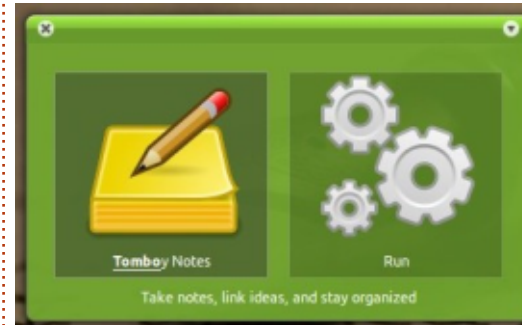
Though there is no shortage of application launchers, I chose to review three of the most popular ones - GNOME Do, GNOME Pie and Synapse.

### HISTORY

GNOME Do was originally created by David Siegel. It was inspired by Quicksilver for Mac OS X and GNOME Launch Box.

GNOME Pie was created by Simon Schneegans, a student of computer media science at the Bauhaus University in Weimar. He explained his reasons for creating another application launcher: "I realized a trend in application launchers to be keyboard based. All of them (Gnome-Do, Synapse, Kupfer, Unity's Dash, Gnome-Shell, etc.) are mainly focused on keyboard input - I wanted to create something which could be used with your mouse only." And so GNOME Pie was born and released to the public in September, 2011.

### USER INTERFACE



GNOME Do is summoned using <Super+Spacebar> where 'Super' is the Windows (or if you're lucky Ubuntu) icon key. GNOME Do has a simple two-pane user interface (UI). Your typed text and match show up in one pane, while the other pane shows the actions possible. There is a tiny cross icon in the top left-hand corner for closing Do, and an equally tiny icon in the top right-hand corner which opens a menu that includes 'About Do', 'Preferences', 'Donate' and 'Quit' options. The UI is fully customizable: you can choose a theme and the background colour as well. The screenshot below shows Do using the 'Nouveau' theme with a green background colour (a bit self-evident).



GNOME Pie has a unique and intuitive interface. It is a circular application launcher and can be navigated by using both the mouse and the keyboard, though using the mouse is preferable. The UI consists of a central display circle surrounded by the items. The user can choose from several themes such as 'Funky', 'Glossy' and even some OS-specific themes such as 'Elementary' and 'Unity'. I found the 'pie' UI concept cute and refreshing – the only drawback being the lack of icons sometimes (as can be seen below). GNOME Pie also has a notification tray icon which, on being clicked, shows 'Preferences', 'About' and 'Quit'.





Synapse is best thought of as a floating search bar that can be activated using <Ctrl+Spacebar>. You type in the text and the icon of a matching application will be shown. You can use the side keys to access filters such as 'Documents', 'Images', 'Videos'... which help narrow the search. Synapse's UI can also be themed; there are 6 themes to choose from including 'Do-ish' which turns Synapse into a perfect GNOME Do clone! Synapse also has a notification tray icon which, when clicked, shows 'Activate', 'Preferences' and 'Quit' options.

## FUNCTIONALITY AND EASE OF USE

Launching applications from GNOME Do is fairly straightforward. Just type in the name and hit 'Enter'. Searching is equally simple and surprisingly powerful. The plugins allow Do to search your Tomboy notes, Firefox bookmarks, Banshee, and, of course, your files and folders. Your search can also include your Google Calendar events and Google Docs if you provide your user details to the program.



GNOME Do also allows you to set simple reminders and find word definitions using GNOME dictionary. These features work well however, but, as I experienced with the reminder option, users need to learn how to phrase the command for using these features. The syntax, though simple, is not necessarily obvious and often leads to a Google search or two. Oh, and did I mention all the features stated above are simply a small part of the 'Official Plugins'? And that Official Plugins are roughly half of 'Community Plugins'? With such powerful add-ons, you can do literally anything from the comfort of Do's two-pane UI.

GNOME Pie in an innovative twist consists of several 'pies'. For instance, there is an 'Applications' pie, a 'Multimedia' pie, and so on.

Each pie has a different keyboard shortcut. Users can, of course, create their own pies. Each item in the pie is called a 'slice', and users can add their own slices with some basic command-line knowledge. Unlike Do, GNOME Pie does not have a search functionality. Though it has some additional features like being able to control multimedia playback with a pie, it primarily is an application launcher. This is not a bad thing or a negative, simplicity has its own benefits. Many users will find GNOME Pie intuitive and useful; however, power users who want a host of additional features should probably choose GNOME Do or Synapse.

If you've ever done a Google search, you can probably use Synapse. Launching applications and finding files using Synapse is

extremely simple. If you're unhappy with the primary result, use the down-arrow key to show a list of alternatives. The side-arrow keys allow you to use the filters to narrow your search. Integration with Zeitgeist makes Synapse very effective; it managed to find most of my search queries within seconds. Synapse also has a decent list of plugins though they are less in number compared to Do. Plugins include the ability to control Banshee and Rhythmbox, search the web, and even perform some basic calculations. These plugins are not always easy to use. For instance, figuring out how to use 'OpenSearch' took some time. However, once you learn how to use them, the plugins are simply awesome and a good return on the initial time investment.

All the 3 programs had the option to automatically start up at login – circumventing the need for any other application launcher to start them.

## CONCLUSION

Which application launcher you wish to use ultimately comes down to personal preference. For users



who don't want too many features and just want to access their favourite applications, GNOME Pie is hard to beat. It is easy to configure, looks good, and its circular UI is a breath of fresh air. For users who would like the ability to search for files and folders along with launching applications, Synapse is a good choice. It has a simple UI and a powerful search – along with a decent number of plugins. For power users who want to do everything from their application launcher, GNOME Do with its huge plugin library is perfect.

If I had to recommend an application launcher to someone without knowing much about them, I would suggest Synapse. It provides sufficient features for most users and its themable UI is extremely intuitive.

## EPILOGUE: THE END OF APPLICATION LAUNCHERS?

While researching Synapse for the article, I chanced upon an interesting post at a site called 'Tech Drive-in'. It claimed that the launcher was not being maintained anymore. Looking at the project's

Launchpad page, I realized the latest version was about a year old. I asked a question on the same page but got no answer. I can only hope the project is being maintained.

Even GNOME Do hasn't been updated in a long time; seeing this, a user asked about the project status. Here's how Christopher Halse Rogers, the current project lead of Do, responded, *"It's not dead, but it is reasonably mature, and I don't have a lot of time to work on it at the moment."*

With the introduction of Unity, many Ubuntu users have questioned the need of application launchers. What do you think? Are app launchers doomed? Would love to hear your response at the poll on my blog.

On a more positive note, Simon Schneegans, the creator of GNOME Pie, is busy working on its successor - OpenPie. According to Mr. Schneegans, OpenPie will work on touch devices. Maybe that will be the future form of application launchers, just so long as it's Open Source.

## SUMMARY

### GNOME Do



#### The Good

- Simple two-pane UI
- Largest plugin library
- Powerful search including content from even Tomboy notes

#### The Bad

- Some plugins are complex to use and require a particular syntax
- Lack of notification tray icon

Website: <http://cooperteam.net/>

### GNOME Pie



#### The Good

- Innovative great-looking UI
- Ability to use both mouse and keyboard for navigation
- Many theme options

#### The Bad

- Lack of search capabilities
- No plugin library

Website:

[http://www.simonschneegans.de/?page\\_id=12](http://www.simonschneegans.de/?page_id=12)

### Synapse



#### The Good

- Simple intuitive UI
- Powerful search with full Zeitgeist integration
- Decent plugin library

#### The Bad

- Some plugins complex to use
- Only 6 theme options

Website:

<https://launchpad.net/synapse-project>

## THE WINNER OF THIS SOFTWARE SHOWDOWN IS

Synapse !

**Note:** This article was first published in *Open Source For You* magazine, and is released under a Creative Commons Attribution-NonCommercial 3.0 Unported License



# LETTERS

If you would like to submit a letter for publication, compliment or complaint, please email it to: [letters@fullcirclemagazine.org](mailto:letters@fullcirclemagazine.org). PLEASE NOTE: some letters may be edited for space.



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[ubuntuforums.org/forumdisplay.php?f=270](http://ubuntuforums.org/forumdisplay.php?f=270)

## ANDROID

I am writing this in response to Gord's comment, "... *Android developers decided a phone shouldn't look like a flash drive when it's plugged into a computer*" (FCM#80, page 40).

Although newer Androids don't use the standard external flash method, they do offer a choice between PTP (Picture Transfer Protocol) and MTP (Media Transfer Protocol). Of course, older Androids still use the older method.

PTP allows the computer USB access to the photo folders, DCIM and Pictures. However, MTP allows you full access to the internal storage excluding the system area.

If you are using Ubuntu 12.10 or earlier, you need to install the MTP drivers. Add repository `ppa:langdalepl/gvfs-mtp` and install `libmtp-runtime` via Synaptic, or via the terminal as follows:

```
sudo add-apt-repository
ppa:langdalepl/gvfs-mtp
```

```
sudo apt-get update
```

```
sudo apt-get upgrade
```

I don't recall if you have to restart your computer, so restart just in case.

Again, this installation is only for 12.04 and 12.10; 13.04 and above already have the MTP drivers.

Plug your Android into your computer's USB port. Go either to your Android USB options > MTP or to Settings > Storage > menu > USB computer connection > MTP. (Your Android's menu system may differ slightly; this is for stock Android.) Open Nautilus or whatever file manager you use and browse!

Remember to dismount your Android phone before disconnecting, especially if you have made changes.

**Paddy Landau**

## GNOME 3

Much has been said over the last few years about Gnome 3, Unity and anything that tried to change the Status Quo. Much of it has been negative unfortunately, unfair in my opinion.

Recently I have found myself increasingly using Gnome 3. It's excellent with a few additions of course, but then that's the beauty of Linux – is it not?

I use Ubuntu, override Unity with Gnome 3, and add Cairo Dock. I also run Windows 8 and it is a pale imitation of Linux to say the least. Additionally I run Ubuntu Server in VirtualBox both in Ubuntu and Windows 8. I run some extensions - auto move extensions, drop down terminal and workspace indicator.

I think it comes down to what works. Gnome 3 and Ubuntu tick all my boxes, as does Open Source Software in general, I run Thunderbird and Geany in Windows for example.

**Richard Austin**

## FULL CIRCLE NEEDS YOU!



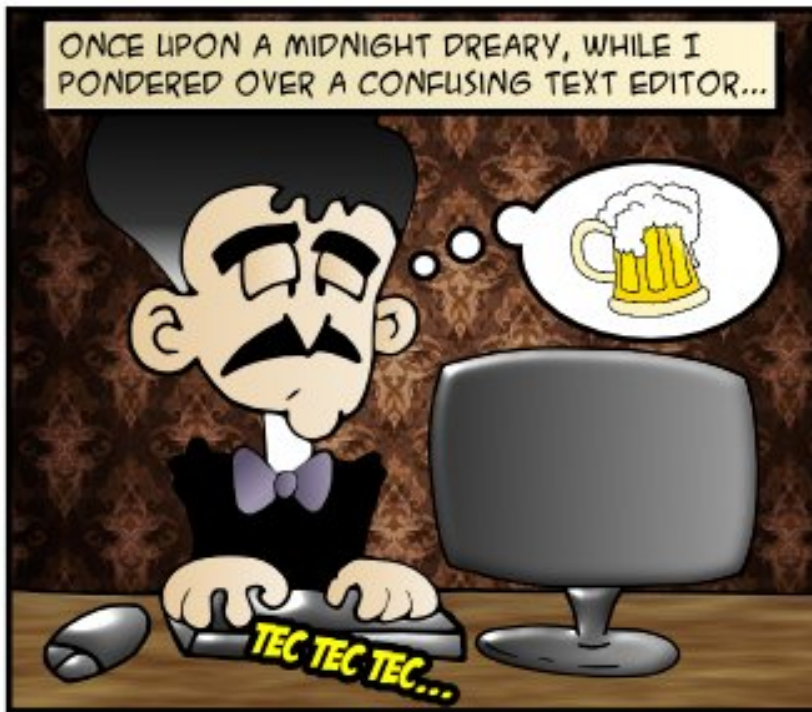
Without reader input **Full Circle** would be an empty PDF file (which I don't think many people would find particularly interesting). We are always looking for articles, reviews, anything! Even small things like letters and desktop screens help fill the magazine.

See the article **Writing for Full Circle** in this issue to read our basic guidelines.

Have a look at the last page of any issue to get the details of where to send your contributions.

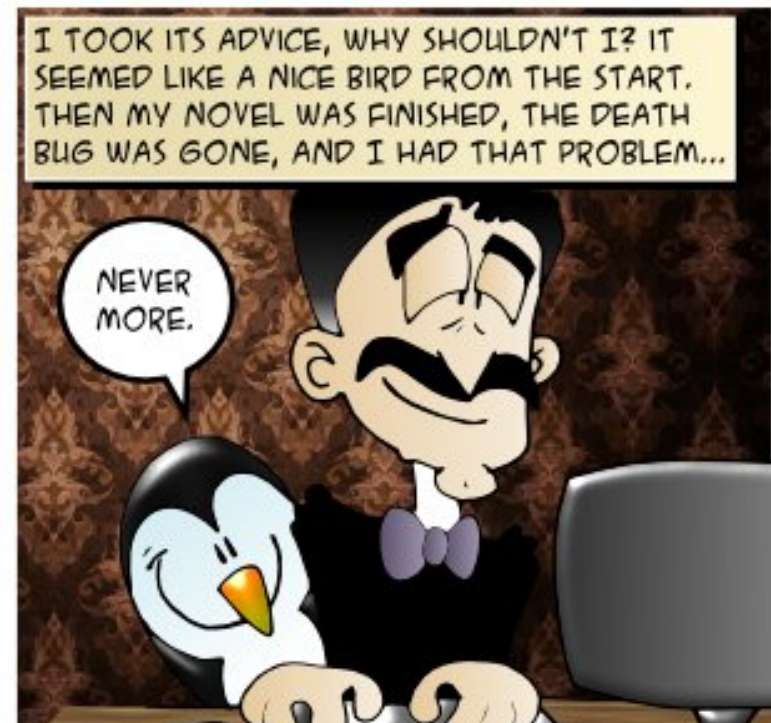
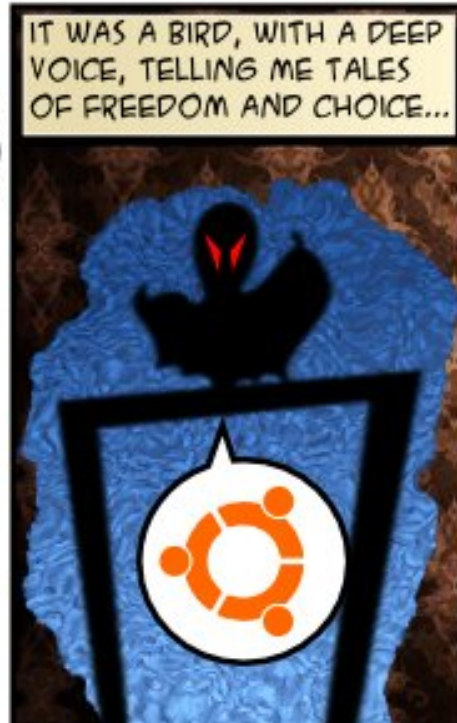
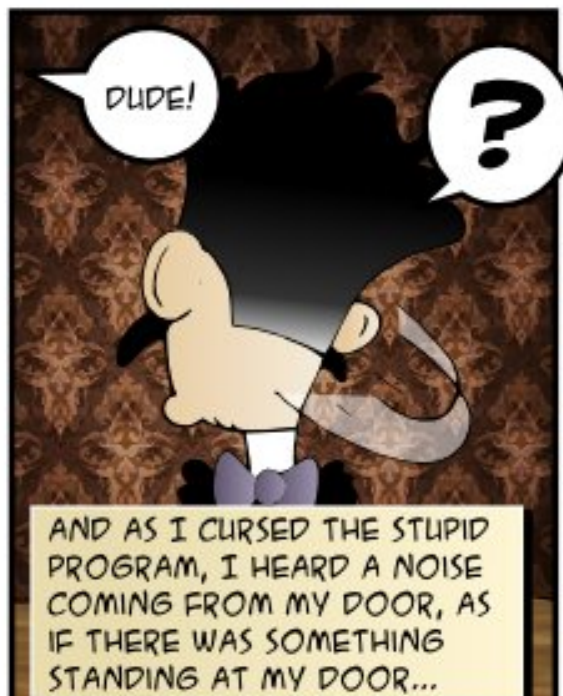
**Tuxidermy**

All work and no play  
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 All work and no play  
 makes Ed a dull...



THE RED MASK OF SCREEN DEATH CAME TO GREET MY DREAMS FAREWELL.

**ERROR  
 ERROR  
 ERROR**





**Don't kernel panic! Gord will be back shortly for more of your questions.**

In this new section **Michael Boelen** (creator of *Lynis*) will answer your Linux security questions. Do you have a question on Linux/Ubuntu security for Michael? Please email it to: [misc@fullcirclemagazine.org](mailto:misc@fullcirclemagazine.org).

**From Ben McTee:** I'm currently running Xubuntu 13.04 as a music, video, and file server for my home and abroad. I have an SSH server set up with key authentication only (password is disabled). In order to access my server remotely, port forwarding is enabled on my Airport Extreme router, forwarding all port 80 traffic to my server. I have Plex Server installed and set up to allow streaming of videos to my devices while I am away from home. Additionally, I use Webmin to manage services, servers, SAMBA, and other tasks on the Xubuntu machine. Are there checks

I can perform, either locally or remotely, to ensure an attacker is not able to gain access to my system from outside the network? I have read of security flaws in Webmin, but at the same time love it for its convenience.

MB: If a malicious person (or script) would like to enter your network, it's a matter of finding the weakest link. One way to find this is using a well-known network port (like port 80) combined with a piece of easy identifiable software (e.g. Webmin). There are few things which can be done to strengthen the weakest links: use a non-standard port to thwart most malicious scripts, encrypt data if possible, limit access by using an IP filter or an additional layer of authentication. In your case, you already applied several of these methods. One way to test them is to check what ports are open from "outside", and check if others can determine what you are running. As always, apply security patches to those packages with known vulnerabilities, especially if they listen on the network.

**From Ben McTee:** What is the best method of automatically notifying me if an attack is being attempted on my network (port scanning, for example).

MB: One should first know the definition of an attack. Unfortunately this differs for every individual or company. In the field of security incident response, we consider mainly any events which are outside normal behavior, and with a clear malicious intent. Port scanning would therefore not be an attack or a trigger for security incident response. It's simply a common thing on the internet, similar to brute forcing accounts via SSH. But performing a distributed denial of service on your system is considered malicious and not a daily event. So my advice is to decide first what you want to protect and what you would do with events occurring. Would you investigate each port scan attempt and would it be worth the time?

**To test your PCs security, see Michael's HowTo article earlier in this issue on Lynis.**



**Michael Boelen** is the author and project lead of *Lynis*. His company *CISOfy* provides security guidance to individuals and companies by sharing open source software, support and knowledge. He loves sport, reading, and enjoying life with friends.



Have you ever played a game that ends where it began? If you haven't, then you must play "Limbo." Limbo is a single-player, puzzle-platform video game that is completely black and white from beginning to end. Once I got started playing this game, I couldn't put it down.

In Limbo, you are a boy who wakes up in an eerie forest and must find his missing sister. Unlike most games, there is no tutorial and nothing to tell you how to control your character; you are indeed in Limbo. It doesn't take long to figure out that you have only one option and that option is to move to the right. It also doesn't take long to figure out that you are very limited in what you can do; you can basically only walk left/right, jump, and pull or push various objects. However, what makes this game stand out is that you must use the few skills you have to solve puzzles, which keep increasing in difficulty, in order to keep advancing in search of your sister.

An example of the type of

puzzles to be solved is a bear-trap that decapitates you as soon as you step on it. You learn that you are supposed to jump over it in order to stay alive. Later, when a gigantic spider blocks your path and there is no way you can progress without becoming food for the spider, you have to use a nearby bear-trap to injure the spider just enough for it to move and let you pass. Eventually, the spider ends up catching you anyway and wrapping you in its spiderweb, then your task is to figure out how to break free from the web.



Although the gameplay is simple (to say the least), the puzzles keep getting more difficult and are also more fun to solve. You eventually get out of the forest and go into other environments, such as a semi-deserted city and an industrial area. Some of the puzzles near the end involve odd concepts, such as magnets and reverse-gravity devices.

Limbo was originally released in July 2010 as an exclusive on Xbox Live Arcade by independent game developer, Playdead. In 2011, it was released for Microsoft

Windows, PlayStation 3 and OS X. In 2012, it was made available for Linux as part of the Humble Indie Bundle V. The game has been a success for the most part. In August 2010, shortly after its initial release, video game magazine "Game Informer" gave it a 9 out of 10 rating. Other reviews have been just as favorable.

Currently, Limbo is available for \$8.00 through the Ubuntu Software Center. To install it, all you need to do is buy it and let the Software Center do its magic. However, it seems that Limbo runs through a Wine-encapsulated package developed by CodeWeavers, the good folks behind Crossover Linux. When Limbo was ported over to Linux as part of the Humble Indie Bundle V back in 2011, there was some backlash due to the fact that it didn't run natively on Linux.<sup>1</sup>

## CONCLUSION

I strongly recommend Limbo to anyone who enjoys either puzzle or platform games. There are more

pro's than con's and the game has a high re-play value.

## Pros

- The lack of instructions, combined with the eerie soundtrack and the black-and-white old movie effect throughout the entire game, all combine to portray to the player a very uneasy feeling of being stuck in some sort of limbo.
- Puzzles keep gradually getting harder to solve thus making it very rewarding when you finally solve one, which then keeps you hooked on solving the next puzzle and makes it hard to put down the game.
- Easy controls, no fancy movements or complicated key-binding combinations certainly make the game easy to play right from the start.
- I am not 100% certain, but I believe that some of the background art was hand-drawn with lead pencil which successfully establishes a very dark mood that the developers were after.
- The game is short, it can be completed anywhere between two to five hours.
- Limbo currently costs less than \$10 which is just right for a game lasting less than 10 hours.
- You don't need the latest

graphics card or drivers to play this game.

- I had no glitches while playing this game and in fact I wasn't even aware that it was using Wine until after I read about it in an article.

## Cons

- Lack of instructions can be intimidating at first.
- The game doesn't yet run natively on Linux. However, the Ubuntu Software Center takes care of Wine and all its related dependencies so that you don't have to worry about anything in order to play the game.
- The game isn't free. It's not free as in beer, and it's not free to modify.

Overall, I would definitely recommend Limbo to anyone who wants a game to play. I originally bought the game when it first came out as part of the Humble Indie Bundle V. I had to re-play it in order to write this article and it was as if I were playing it for the first time. I had to make myself stop playing it so that I could actually write this article and tell you how good a game it is and what a high re-play value it has.

Limbo gets five out of five stars. The cons are not substantial enough for me to deduct any stars from its perfect score.



**Oscar** graduated from CSUN, is a Music Director/Teacher, beta tester, Wikipedia editor, and Ubuntu Forums contributor. You can contact him via: [www.gplus.to/7bluehand](http://www.gplus.to/7bluehand) or email: [www.7bluehand@gmail.com](mailto:www.7bluehand@gmail.com)



Joe Danger 2, in my view, is how a sequel should be. It is more polished and feels bigger than the original, but when you look at it there are fewer tracks than the first game. Even with this, there is more variety from snowy mountain-sides where you are chased by an avalanche, to a desert with lava pits.

The campaign is split into scenes. For example, you will have parts inspired by James Bond movies with similar music and plotlines. It does seem to lose focus as you progress. Collaborating these genres together and creating scenes focused on one movie series would have worked to their advantage here.

A strong point to note is that each scene now has unique goals. Being primarily focused on action movies, there are a few chase sequences where Joe has to survive getting attacked by numerous characters or to catch Team Nasty. You still have to collect stars but adding these new

goals makes it easier to distinguish between tracks. Added to this is, once you have finished a level, you are given a percentage of how you have done against other players. This feature can be very delightful and traumatising at the same time as you may get "you were faster than 88% of players" in one level

and 32% in another. This also gives the game more longevity as you keep going back to the levels to improve your score and your rank.

Not only do the tracks have variety, but so do the vehicles that Joe has. In the first game, all you

had was the motorcycle but now you have access to skis, mine carts and jetpacks to name a few. It may seem like common sense in a trials type game but it vastly broadens the appeal of the campaign as it alters the way you play. Especially the jetpack which adds dimension and makes the game even more





# UBUNTU GAMES

fun to play.

The game also has a mode called "Deleted Scenes." These are basically stand-alone tracks that are dramatically harder than the campaigns. Since there are less levels in the campaign compared to the previous game, this also lengthens the game and adds more of a challenge. The game also has a level editor so that you can create your own tracks, share them with

the world, and get other players to try out your track. The creation mode is good as it allows you to go into a test mode so that you can perfect your track before uploading it.

Overall the game is really fun and will have you playing levels over and over to get each objective complete and obtain that perfect score. There are a few minor gripes with the game but nothing that will

keep you from playing it. I definitely recommend this game to all platform and trials game fans. With having a cartoonish style, it's playable for all ages and, with all the added features, it will keep you playing beyond the main campaign.

To run the game you will not need a high spec computer. Here are the recommended specifications:

OS: Ubuntu 12.04  
Processor: Intel Core i5 or equivalent  
RAM: 4GB  
Graphics: Nvidia Geforce GTX 660 with 1GB/equivalent or higher  
Hard drive: 2GB storage

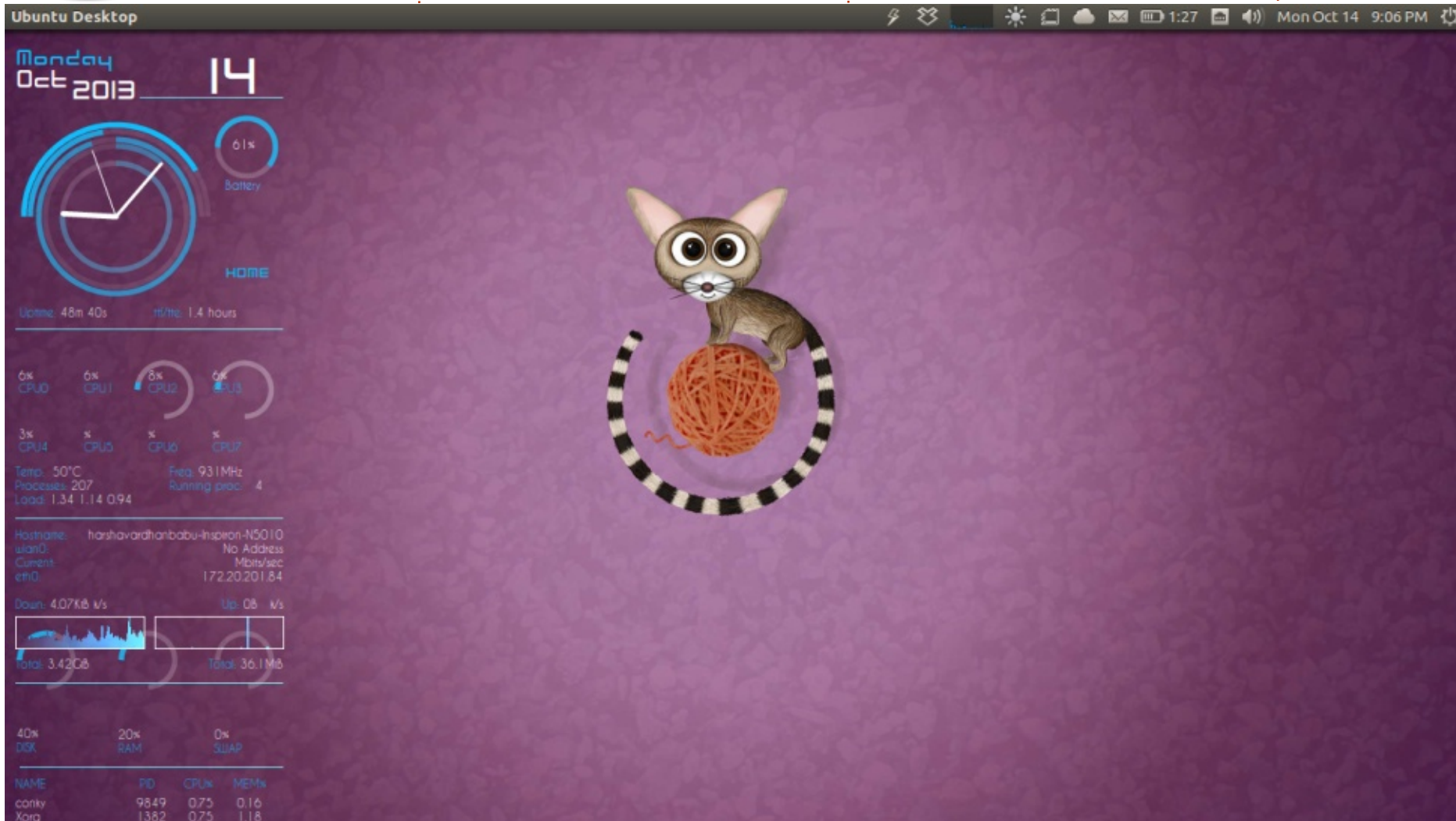


Oscar graduated from CSUN, is a Music Director/Teacher, beta tester, Wikipedia editor, and Ubuntu Forums contributor. You can contact him via: [www.gplus.to/7bluehand](http://www.gplus.to/7bluehand) or email: [www.7bluehand@gmail.com](mailto:www.7bluehand@gmail.com)



# 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 currently pursuing a Masters in Chemical Engineering from IIT Kanpur, India. I have been using Ubuntu for about 4 years and a huge fan of Full Circle.

The following are the specs of my Laptop:  
Dell Inspiron N5010, screen size 15.6 Inch. CPU is an Intel Core i3 processor, 2.40 GHz; RAM is 4 GB;

H.D.D is 500 GB. I am running Ubuntu 13.04 (Raring Ringtail) with Conky and faenza icon theme with jupiter 0.1.7.

**Harsha Vardhan**



I started using Linux from Ubuntu 7.04 but, after 10.04.3, I switched to Linux Mint due to that (in my opinion) horrible Unity desktop. Now, for 2 years, I'm using Linux Mint.

My system spec's (Home-build

desktop):  
ASUS P5KPL-AM SE  
Intel Core2 Quad CPU Q8200  
4 GB memory  
nVidia GeForce 9500GT  
  
Linux Mint 15 - Cinnamon desktop

Desklets:  
Drives-Manager  
Accuweather  
  
Applets:  
CPU temperature indicator  
GPU temperature indicator  
Network Data Usage Monitor

File Manager as Root  
  
Icon theme: Faenza  
  
**N Nnm**

TeeJee Tech: Deluxe Conky Theme Pack - Mozilla Firefox

07:55 <sup>27</sup> October 2013  
Sunday  
HD 254GiB / 291GiB RAM 649MiB / 1.93GiB CPU 24%

USED RAM/SWAP 649MiB/12.7MiB CPU 24%

aditya  
2h 46m 23s Linux  
CPU 31%  
RAM 32%  
SWAP 0%  
/home 22.4GiB

SYSTEM  
Linux 3.5.0-31-generic  
aditya-desktop  
Uptime: 2h 46m 23s

CPU  
compiz 16.34%  
Xorg 5.45%  
firefox 2.97%  
flareget 0.50%  
conky 0.50%

MEM  
firefox 6.43%  
compiz 5.50%  
nautilus 2.64%  
zeitgeist-rts 2.38%  
zeitgeist 2.28%

DISKS  
Free: 254GiB  
Free: 254GiB  
Free: 0B  
Used: 22.4GiB  
Used: 22.4GiB  
Used: 0B

ETHERNET  
Up: 0B / 0B  
Down: 0B / 0B

24% compiz 16.00  
Xorg 6.00  
firefox 3.00  
flareget 0.50

32% 649MiB  
SWAP 0% 12.7MiB

Root 7% Home 7%  
VO 0B - .1

I am running Ubuntu 12.10 on an assembled PC. I have used conky with the help of conky-manager a lot.

### hardware:

memory:1.9 Gib  
processor: Intel® Core™2 Duo CPU E7500 @ 2.93GHz × 2  
graphics:null  
hdd:312.9 GB

Most men here would agree that my PC is more beautiful than any woman.

**ADITYA**





# HOW TO CONTRIBUTE

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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)  
**Podcast** - Les Pounder & Co.  
[podcast@fullcirclemagazine.org](mailto:podcast@fullcirclemagazine.org)

**Editing & Proofreading**  
Mike Kennedy, Gord Campbell, Robert Orsino, Josh Hertel, Bert Jerred

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