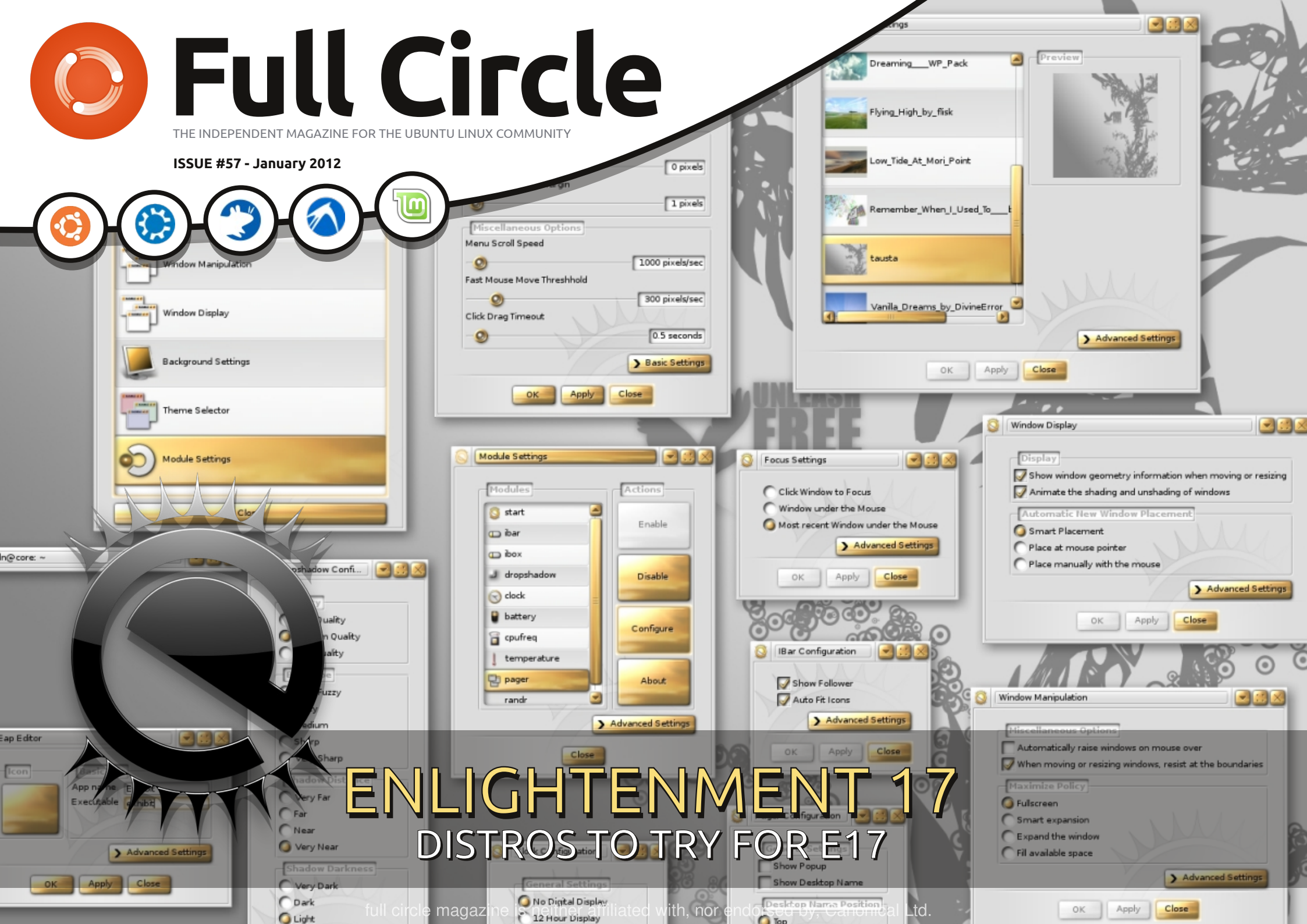
Full Circle
THE INDEPENDENT MAGAZINE FOR THE UBUNTU LINUX COMMUNITY
ISSUE #57 - January 2012
ENLIGHTENMENT 17
DISTROS TO TRY FOR E17
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Full Circle

THE INDEPENDENT MAGAZINE FOR THE UBUNTU LINUX COMMUNITY

HowTo

Columns

Opinions

EDITORIAL

Welcome to the first issue of Full Circle for 2012!

Happy new year! I hope all of you had a great holiday season and that you're ready for more Full Circle. This month we have an article on Enlightenment17 (aka: E17) and which distros have, and had, E17. I haven't tried it in quite some time, but I'm tempted to install Bodhi on my laptop. Oh, and Greg is hoping to return next month with his Python articles. He's a bit busy with real life at the moment. But, fear not, the LibreOffice and Backup articles continue. This month Allan looks at DropBox. Last month we looked at creating a persistent USB stick. This month we take it one step further and create an encrypted USB stick. And if you run a web server you'll want to take a look at our article on Varnish web cache.

We also have a couple of great games being reviewed and a quick article on how to install and run Minecraft. Disclaimer: Full Circle magazine can not be held responsible for the immediate lack of real life interaction which inevitably happens after installing Minecraft. You have been warned! If in doubt, listen to Alan Pope's comments regarding Minecraft in the latest Full Circle Podcast.

And did you hear the news that Canonical have launched Ubuntu TV? It sounds to me like it's an Ubuntu version of XBMC/Boxee to embed into TV's. Check out the news page for more on that. I'm sure you'll all be delighted to know that it looks just like Unity.

I also want to thank all of you who wrote to me after I mentioned that I'd received no letters throughout December 2011. Suffice it to say that I now have enough letters for several months! Thank you all!

All the best, and keep in touch!
Ronnie
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:
Robin Catling
Ed Hewitt
Dave Wilkins

http://fullcirclemagazine.org

Ubuntu TV

by Robin Catling

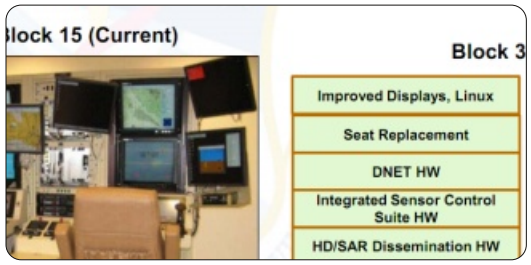
Canonical has taken the covers off Ubuntu TV, the latest technical product within the Ubuntu brand. Press coverage is synchronised across the Consumer Electronics Show (CES), selected news titles (PCPro among them) and on the Ubuntu website http://www.ubuntu.com/tv.

This is the first public look as Ubuntu TV, which, as Mark Shuttleworth promised, aims to broaden the reach of the Ubuntu open-source operating system beyond the PC - Ubuntu on everything tablets; smart-phones and TVs. Canonical is showing the first Ubuntu TV at CES in Las Vegas with an expectation of the first Ubuntu-powered television on sale by the end of this year. Tellingly, there are no announcements of partners or deals with any brand-name manufacturers in these announcements and Canonical CEO Jane Silber wouldn't name any in talks.

Despite Google's renewed push on Google TV, it could be seen as a direct response to the rumours of Apple lining up a dramatic next generation of Apple TV. Just how Canonical intends to sit between these two tectonic plates, neither of which has a track record of success - yet - appears to rest on confidence; that device manufacturers want an open, neutral platform from a supplier that doesn't profit its' own brand at their expense.

Although movie streaming services will be supported as well as live television broadcasts a major issue is going to be deals for content. In the meanwhile, you can glory in the Ubuntu TV interface, which, as we discussed on the podcast, could well be the killer application for which Unity was destined.

Air Force Drone Controllers Embrace Linux



"Last year, U.S. military drone control systems were infected with Windows USB worms. They seem to be moving the control systems to Linux now," said Mikko Hypponen, chief research officer at F-Secure, via Twitter.

As evidence of the apparent shift, he posted pictures of a drone control system from 2009 (the image was originally published by the Air Force), which appears to sport a Windows graphical user interface. For comparison, Hypponen then posted an unclassified slide (above) from a 2010 briefing that details Linux as being part of a 2011 upgrade.

Source: informationweek.com

EPUB / MOBI

Finally we have both epub and mobi formatted ***Full Circle*** on the downloads page. At the moment it's only **FCM#56** that's online, but we're hoping to have back issues online shortly. If you've any problems with the epub/mobi files/formatting you can drop an email to Jens at: mobile@fullcirclemagazine.org

Big thanks to Jens, Oppih and the beta testers for making them a reality.

FC Notifier Update

The **Full Circle Notifier** is still at 1.0.2, but the PPA has been updated for Oneric. FCN is a small application that sits in your system tray and will announce issue/podcast releases, and can be set to download them too! **For more info, see the FCN Google Group: http://goo.gl/4Ob4**

Using SSH And Rsync

Back in issue #37, I wrote about configuring an SSH server on your computer, in order to use it as a SOCKS proxy. Since I imagine not all that many people want to use it as such, I decided to focus on my second-most used command (my first-most used command is “pacman” - ArchLinux's solution to package management). Before I get into what that command is, I'll briefly explain why you might be interested in this solution. Specifically, it lets you sync directories and files between two computers over the LAN (and, if properly configured, over the Internet as well). I use it in order to keep my music synced between my laptop and my PC, keep my configuration files up-to-date, and to copy anything I need from one device to the other. There are a few choices of commands you could use, two of which would be scp (secure copy), and rsync. I'll be focusing on rsync in this article, because it offers progress information, update features, and useful switches like --ignore-existing.

A few of you may be asking why I don't just use Dropbox, an external hard drive, or a USB stick (for smaller files). The answer is quite simple: Dropbox offers a limited amount of space, and the other options require me to remember to do this regularly. If you have SSH configured on your “sender” (in this case, my PC from which I transfer the files), and an SSH client (no server required) on your “receiver” (my laptop, in this case), then you can easily write a small script to run a cron (in other words, regularly, and without any input). If you want to automate this, you will need to configure SSH to use keys instead of passwords, so that you can access your server without having to input anything. This is fairly simple (using ssh-keygen to create the keys, and then copying the public key to the server), and is explained in plenty of places (see the Links section below for a link to a Wiki).

Once you have SSH configured, it's time to think about how the script should appear. I won't supply an example script, simply because I haven't implemented a decent one yet. There are some things you should take into consideration when designing your script, such as:

The script should only do something if you're on your home network (this can be done by checking the ESSID of your wireless, or, if you connect your laptop to the LAN by cable when at home, checking if eth0 is active, or simply deciding on a specific time the script should run). The reason for this is because otherwise you'll have lots of failed SSH connections when doing this in a location besides your home network. I recommend thinking about your habits, and finding a solution that works best for you. Then write it into an if-statement in the script.

How many files/directories do you want to sync, and which ones exactly? You can either hard-code each file or directory into the script, or create a text-based list of locations on your machines, and then use a while statement and readline to handle each line separately. A few files I would recommend: .bashrc (or your rc file for the shell you use), .Xdefaults (for terminal colors), Music, Pictures, any configuration files for window managers (XMonad, DWM, etc.)

Do you want to update (meaning newest copies of the files are the ones to keep), or ignore files if they already exist on the receiver (useful for music and pictures), do you need to be recursive (that means following a directory tree). There are some other useful options to consider that rsync offers (see the second section of this article).

Is the destination folder and the source folder in the same location? If not, you'll need to keep track of where each file is supposed to go (similar to #2).

Space – do you have enough space on your receiver for all the files from your sender, and, if not, what are you going to do about it? You can either reduce your list of sync files, or build a check into the

script using df -h to set a limit (i.e. if there are only 9GB left, stop syncing entirely, and email you/prompt you).

Once you've taken these points into consideration, it's time to write the script. I recommend you have at least 2 checks in the script (if you're connected to the right network, and if the sender is currently online). The rest of the script is entirely up to you, including when and how to run it. Back in issue #24, I wrote an article on cron, and since then have used plenty of examples, so I will only briefly discuss your options. When configuring the cron job, you can either dump the script in /etc/cron.hourly, or /etc/cron.daily. The other option is to edit your crontab (crontab -e <username>). In the crontab you can then create a line for the script that either runs every set number of hours/days, or set it to run at a specific time (or a specific date), and so on. I think a script that runs once a day is going to be quite enough for this.

rsync

As you can see from point 3 above, rsync offers a lot of checks to avoid copying more files than necessary. Some useful ones are:
-u (--update): Skips files that are newer on the receiver
--inplace: updates files in-place
--append: adds data on to the ends of shorter files
-x: Avoid crossing filesystem boundaries (i.e. stick to one partition)
--existing: Do not create new files on the receiver, only update existing files
--ignore-existing: Ignore files that already exist on receiver
--max-size=SIZE: Don't copy any files larger than this (--min-size also exists, though less useful in this case)
--exclude=PATTERN: Excludes any file matching the pattern
--exclude-from=FILE: Reads the pattern(s) from the file
--partial: Keep partially copied files

Some other useful switches for rsync:
--delay-updates: Puts updated files into place at the very end.
-r (--recursive): Follows directory trees.
-d: Copy directories without recursing (by default rsync doesn't enter any directory at all)
-l (--links): Copy symlinks as symlinks
-E (--executability): Keep files executable (useful for scripts)
-h: Human-readable sizes and output
--progress: Display a progress bar for each file

For the full list, check rsync's manpage.

The basic format for rsync commands is:

```
rsync <switches> <source> <destination>
```

So, if I wanted to update all files from ~/scripts on my PC with ~/.bin on my laptop, I'd write:

```
rsync -ru lswest@127.0.0.1:/home/lswest/scripts ~/.bin
```

This will then copy it over. Logically, you'll want to use the actual IP of your PC instead of the localhost IP, but this is only an example.

As we round off this article, I'd like to make a few notes on off-site syncing: Syncing over the Internet, while useful, should be kept to a minimum, simply because the traffic, while encrypted, will be rather large, and might cause issues with an admin, or any kind of data limit you might have. Also, ssh keys are (generally) more secure than passwords, so I highly recommend using them wherever possible.

If there is a large influx of requests for an actual example script, I will happily deliver it next month. I do, however, recommend you try writing your own, or customize any example scripts you find to suit your needs. If you're of the opinion you'd like one, please let me know in an email (address is below). If you have some concrete questions about a script you're writing yourself, you're also welcome to email me about it.

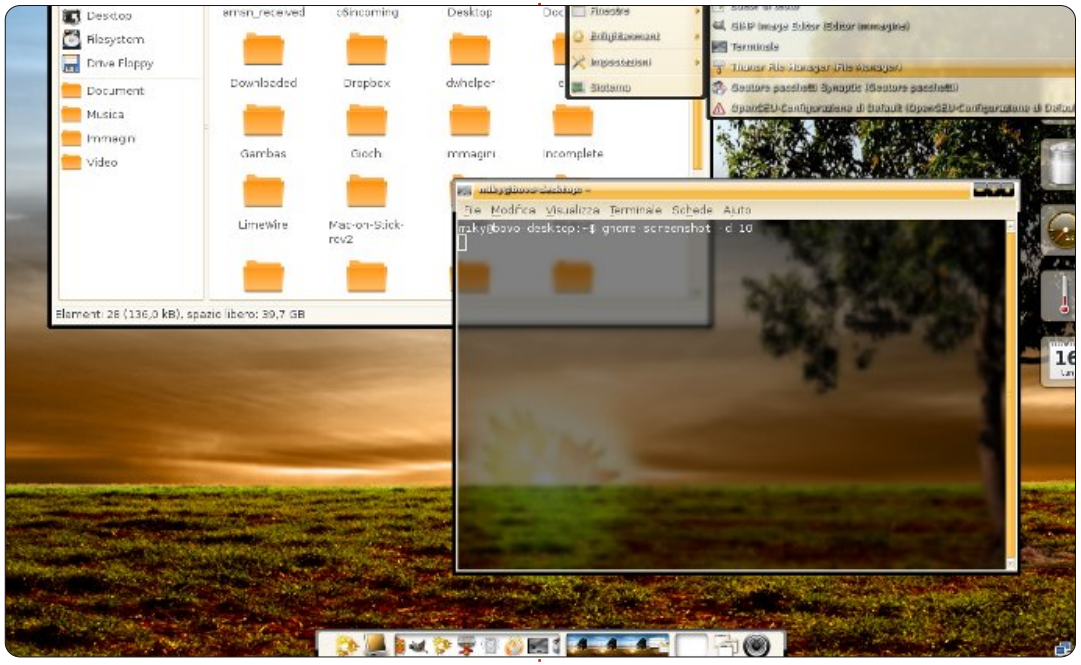
If anyone has questions, concerns, or simply wants to share a script they've implemented, feel free to email me at lswest34@gmail.com. If you do email me, remember to include C&C or FCM in the title, so that I don't overlook it.

Links:
https://wiki.archlinux.org/index.php/SSH_Keys#Generating_an_SSH_key_pair

Try Enlightenment

NOTE: Don't kernel panic, programmers, Greg will be back with more Python next month.

In the mean time, you can grab Robin's ***Python Special Edition: Volume 3*** from the FCM site. It reprints parts 17 to 21, of Greg's Python series, in one handy PDF.



Enlightenment is one of many desktop environments available for the Linux desktop, and has been featured in many Ubuntu respins. **E16**, its first incarnation, was released by Carsten Haitzler (Rasterman) in 1997; its newest version, E17, has been in developmnent since 2000. It is a very lightweight, themeable window manager built on a set of libraries (EFL) built to be used in creating flexible interfaces for a wide range of devices, from smartphones to multimonitor desktops. Enlightenment's default configuration is structured around the Engage dock, the iBar application launcher, iBox minimized window holder, analog clock, laptop battery meter, CPU useage monitor, and Pager module that controls switching between virtual desktops. Shelves, analogous to panels in GNOME or XFCE, control the placement of these individual modules on any one of up to 2048 virtual desktops stretched across an 8x8 grid. Enlightenment has gained a following among Linux users because of its beautiful, flexible, lightweight interface. Conversely, during its decade-long development, E17 has never truly left beta status and has earned a reputation for being difficult to configure and prone to crashes and segfaults, which makes remasters featuring it particularly attractive.

One of the first Ubuntu respins to feature Enlightenment as a window manager and desktop environment was ***OpenGEU*** (shown above), initially named *Geubuntu*. Developed in Italy by Luca DiMarini (TheDarkMaster, who wrote for FCM in the early days) in 2007, the respin's name was changed in 2008 to abide by Canonical's restrictions on the use of its trademark – only an officially recognized remix can use Ubuntu in its name. The first OpenGEU public offering, Luna Crescente, was based on 8.04 Intrepid Ibex; the next two updates, 8.10 Quarto Di Luna and 9.04 Luna Serena were based on the corresponding Ubuntu releases. As of 2011, the future of the distro is uncertain – according

to an update on the website in 2010, an updated version of OpenGEU was supposed to be based on Debian Testing. User feedback on the distro was always extremely favorable, since its primary competitor, Elive, was based on Debian and charged a fee to download and install.

gOS (shown above right), created by Good OS LLC founder Dave Liu in in 2007, was initially offered to the public as "an alternative OS with Google Apps and other Web 2.0 apps for the modern user." Version 1.0.1_386 came preinstalled on the Everex gPC T2502 sold at WalMart. It was

based on Ubuntu 7.10 Gutsy Gibbon using E17 for window management and as a desktop environment, and prominently featuring an Apple-inspired interface with Google gadgets in place of the OSX Dashboard. Because of its reliance on Enlightenment, Ajax technology and Web 2.0 apps, a typical gOS system took up very little hard disk space (2 GB) and had very modest hardware requirements (a 1 GhZ processor and 256 MB of RAM). In reviews of the distro, E17 was compared very favorably with other Ubuntu respins which used GNOME or XFCE for its overall lightness, responsiveness, and speed. As of January 2008 Version 2.0.0 beta, codenamed “Rocket”, was offered on Everex's new line of Cloudbook netbooks. Because of problems, the next rewrite of gOS, V2 Rocket, eliminated E17 as a desktop environment and window manager in favor of GNOME, Compiz Fusion and Avant Window Navigator; some Enlightenment code was retained. By version 3, the last to be offered before the website and blog went offline, gOS had become a generic GNU distro, based on Ubuntu 8.04 LTS, GNOME, Web 2.0 and Mozilla Prism

technolog; E17 had been completely phased out. As of now, gOS Space and gOS 3.1 Gadgets are available for download from LinuxFreedom, but the website is offline. Forums are still available for users interested in the current possibilities of this now somewhat dated distribution.

OzOS (shown left) is an Xubuntu derivative created by Ruis Pais utilizing the E17 window manager; it features an elegant desktop and minimal suite of applications. With its left-centered vertical implementation of the iBar, ozOS seems to slightly foreshadow GNOME3 – whether that's a good or bad thing is up to the user to decide. Otherwise, the launchers and iBar take the user to the typical set of XFCE applications – Thunar as file manager, Xfburn and Parole for multimedia, Mozilla Firefox. One of its innovations, apt-foo, which allowed browser-based package installation, was found to be problematic, even after a .deb package apt-url was installed in the usual fashion through Synaptic. The project's web site, http://www.cafelinux.org/OzOs/, is currently inaccessible and not much information is available. On Distrowatch, the distribution's status has been changed from Active to Dormant.

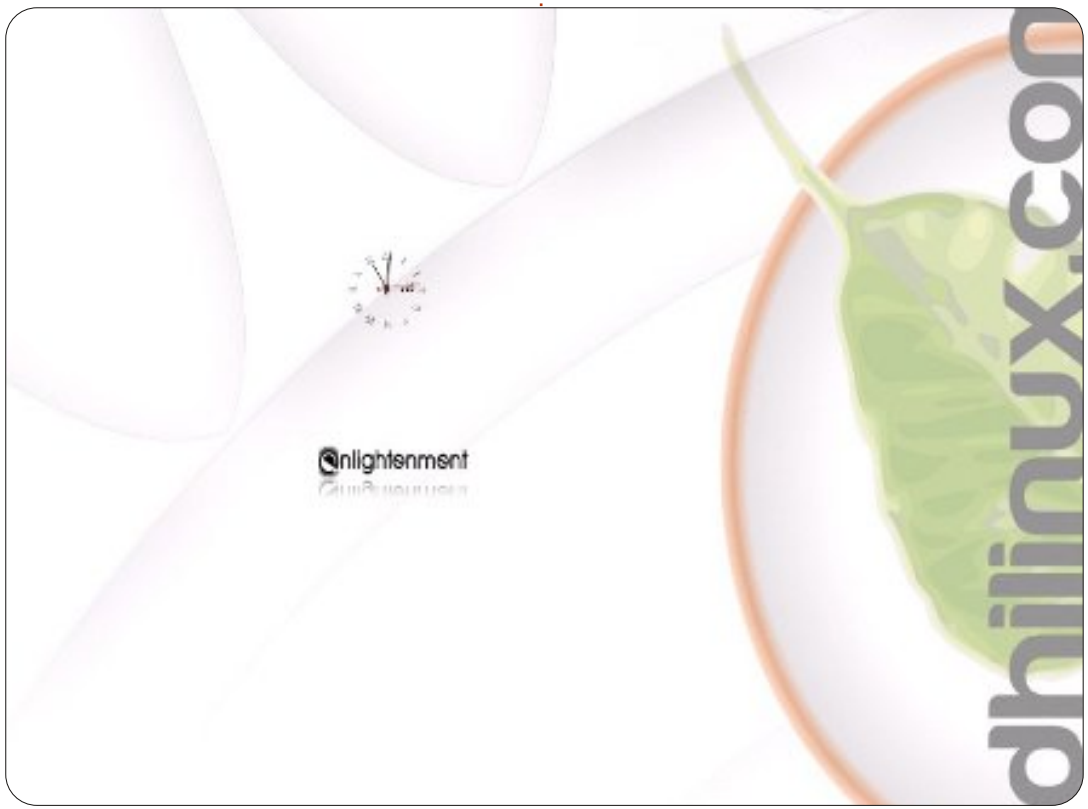
MoonOS (shown above)is an Ubuntu remaster developed by Chanrithy Thim in Cambodia. Version 2 “Kachana” was initially released February 2009, closely

followed in September of the same years with version 3 “Makara”. This update was based on Karmic Koala 9.04, E17 and the Linux 2.6.28 kernel – it was a visually unique respin and its implementation of E17 was highly regarded. It also featured, a la Linux Mint, proprietary tools: moonAssistant, moonControl, moonGrub and moonSoftware. The distrubution is currently active, but the latest version “Neak” has taken a new path, based on GNOME 2.28 and featuring Docky.

Bodhi Linux (shown right) is the current, modern Ubuntu spin based on E17. Its primary developer, Jeff Hoogland, launched its first alpha on November 16 2010, after he got frustrated reconfiguring E17 on all of his systems. The distro went through four more alpha versions, a beta and four release candidates before Version 1 was released on March 26, 2011. Prominent features of the distro include the use of lightweight apps like the Midori web browser and PCManFM file manager. Currently at v 1.3, lead developer Hoogland's blog details ambitious plans for version 2, planned to follow Ubuntu 12.04 Precise Pangolin – 64-bit versions are planned.

Booting into a live session, Bodhi offers seven profiles that the user can choose from, Bare, Compositing, Desktop, Laptop, Fancy, Tablet, Tiling. Each profile is optimized for a certain type of use and a specific user preference – desktop, laptop and tablet obviously tailored to each screen and hardware profile, the others for a user's visual or organizational preference – less is more, or effects and eye-candy enabled. After this, a second screen offers the user a choice of 7 themes. Choosing the Desktop profile and Bodhi-detorious theme brings the user to a spartan but very responsive desktop. The software selection is limited on the disc, but as developer Hoogland says, “All the applications are available from the click of a mouse.” Particularly since one of Bodhi's innovations is a successful implementation of the browser-based software installer previously mentioned in ozOS. Select Install Software from the left-click desktop menu of the Application menu on the bottom shelf, and Midori brings you to Bodhi's website, where software is categorized, previewed and available to Install Now. Currently, Bodhi is a semi-rolling distribution, requiring clean installs only when new Ubuntu LTS versions are released. According to Hoogland, via the website, a dedicated package manager is “in the works”, after which point Bodhi will be a truly rolling distribution requiring no reinstalls.

E17 has a varied history as an Ubuntu desktop environment. In a post of his blog, Thoughts on Technology, Bodhi developer Jeff Hoogland gave it fifth place in the list of commonly known and used Linux DE's – yes it is beautiful, powerful, flexible, but since it's still in beta, be warned, crashes and segfaults can cause headaches. So take on of these remixes and give them a try if you're interested in E17. They're all definitely worth a try.

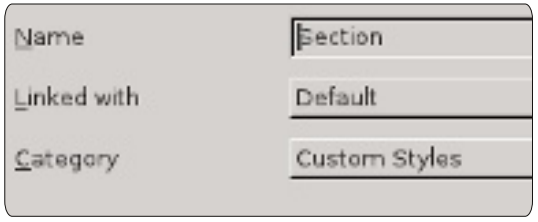


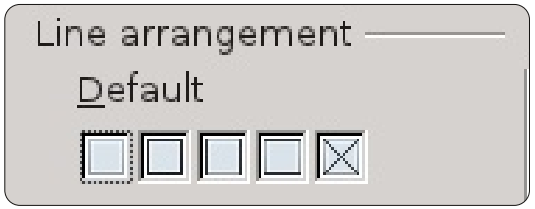
In the last part of this series, we added the data and formulas for our budget worksheet. The end result, while functional, is not very pretty or easy to read. Now, we will add some styles to our spreadsheet to help make the worksheet not only more pleasant to look at, but easier to read and find specific data. We will accomplish this using cell styles.

Back in part 3 of this series, we used paragraph styles to format the paragraphs in our documents. Cell styles are Calc's equivalent to paragraph styles. Cell styles allow us to specify the border, font, background color, font effects, number format, alignment and cell protection. Styles help to create consistency throughout the spreadsheet.

Section and Column Title Styles

We'll start by creating styles for our section titles and column titles. Click on the styles icon (above).





Now, we will create a style for our column titles based on the Section style. Basing one style on another style makes it quick and easy to just add and change the differences between the styles. In the Styles and Formatting windows, right-click on the Section style and select New. Give the style the name "Column Title." You will notice that the style is linked to the Section style. If you browse through the tabs, you will see all the settings we made for the Section style are already set. To distinguish column titles from sections, we will give them a different background color. On the Background tab, select a suitable light color for the background, such as Blue 8.

Applying the Section and Column Title Styles

Now, we can apply our two new styles to cells in our spreadsheet. The sections are "Income This Period", "Assets", and "Expenses". Select the cells for these items and double-click on the Section style in the Styles and Formatting window. You can select more than one cell and apply the style all at once. For example, highlight all the column titles under Income (Source and Amount) and double-click on the Column Title style. Do the same for the column titles under the other two sections.

Editable, Total, and Date Styles

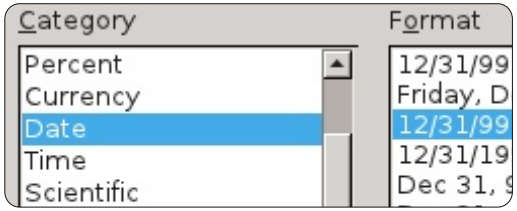
Editable items are the items in our budget spreadsheet that we will need to change from use to use. These are most of the cells under the column titles, except those that contain formulas - which are our total cells. We will first create the Editable style and use it as the link for our Total and Date styles.

In the Styles and Formatting window, right-click on the default style and select New. Give the new style the name "Editable". On the Number tab, select currency and

your currency type. Set your font and font size on the font tab. I suggest a font size of at least 12 points. Make sure the font style is regular (not bold or italic). On the border tab, create light gray borders on the left and right. You can accomplish this by clicking on the third box under defaults. Make sure that the Protected box is unchecked on the Cell Protection tab.

Now, we will create the Total styles by linking it with the Editable style. Right-click on the Editable style in the Style and Formatting

window, and select New. Once again, we are starting with an exact copy of the style we right-clicked. Name the style “Total”. We will make changes to distinguish our totals from ordinary items. On the Font tab, change the style to bold. On the background tab, select a darker gray color than the light gray we used for the borders - like gray or gray 40%. Finally, check Protected on the Cell Protection tab.



Apply the styles much in the same manner as we did previously. You will notice that if you apply the Editable style to the date column under expenses, you get a strange result for your dates (probably ####). That's because it was converted into currency. Right-click the Editable style and create a new style named “Dates”. All we need to do here is change the number type to Date and select a simple numeric date style on the Numbers tab.

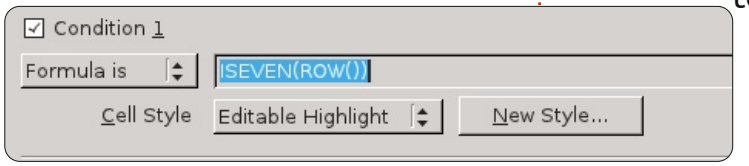
Conditional Formatting

We need a way to break up the big block of data under the Expenses section. We could just put borders around them, but large groups of bordered boxes look dull. Instead, we will highlight all the even rows with light gray. We also want to do this quickly. For this we will use conditional formatting.

```
ISEVEN(ROW())
```

With this formula, whatever style we choose will only apply to the even rows. For the cell style, click on the New Style button. Give the style the name “Editable Highlight” and link it to the Editable style. On the Borders tab, change the border color from light gray to gray. Move to the Background tab and change the background color to light gray. Click OK to save the changes. You will notice the Cell style is now Editable Highlight. Click OK and you will see the even number rows are highlighted in light gray.

Unfortunately, this has the side effect of changing our dates again, but that is easily fixed by doing the same thing with the Date style. Select all the dates in the Expenses section. Format > Conditional Formatting. Once again use the formula ISEVEN(ROW()). Click on the New Style button and name the new style “Dates Highlight”. Link the style with Dates style. Change the border color to gray and the background to light gray. OK to save the style, and OK to apply the conditional formatting.



Finishing Touches

Just a few simple things to make all things even. If you have more than two items in the Income section, you can add the highlights to it as well using conditional formatting and the Highlight Editable style. Also, you can right justify the “Total Expenses” and “Total Payments” labels at the bottom.

Now, to test run your spreadsheet. Remember, we protected the cells we didn't want to change. Tools > Protect Document > Sheet. You can enter a password to password-protect the document, or just click OK to protect it without a password. If you try to edit one of the protected cells you will get a message window saying the cell is protected. However, the unprotected cells are easily edited as before. Using cell protection is a good way to keep your formulas from getting changed once you have the spreadsheet set up and working the way you want it.

In the next part of this series, we will prepare our spreadsheet for printing by adding a header and footer to the page, and looking into our printing options.

	A	B	C	D	E
1	Income this Period				
2	Sources	Amount		Type	
3	Work	$2,150.00		Period Income Tote	
4	Freelancing	$300.00		Checking Balance	
5	Bonus	$50.00		Savings Transfer	
6	Misc	$5,000.00		Total Expendable	
7				Savings Balance	
8				Retirement Balance	
9				Gross Assets	
10					
11				Expenses	
12	Type	Due	Amt Due	Amt Pay	
13	Savings	01/05/12	$15.00	$15.00	

Elmer Perry's history of working, and programming, computers involves an Apple IIE, adding some Amiga, a generous helping of DOS and Windows, a dash of Unix, and blend well with Linux and Ubuntu.

Backup Strategy - Part 5 : DropBox

Written by Allan J. Smithie

The Cloud back-up and storage market is getting crowded with new players offering ever more ludicrous amounts of free space, but we couldn't run this series without looking at one of the established 'brand names'; Dropbox is one of the most popular Cloud storage and file sharing programs, and has built up quite a following in the last couple of years.

View from the Top

Dropbox is a reliable on-line data backup service that lets you access and share files from almost any computer or mobile device - using native clients or its web interface. It is one of the few truly platform-agnostic services, with client software for Windows, Mac, and Linux; you'll find a .deb package for the Dropbox client in the 11.10 Ubuntu Software Center for a painless, one-click install of a client we can happily report 'just works.' Add to that mobile clients for iPad, iPhone, Android, and Blackberry, and you can see the Dropbox bid for ubiquity across devices that gives it an appeal beyond its competitors. I'd have to say some of those mobile apps do look a little thin on functions, but that's not unique to Dropbox.

From our corner, the current Linux client is a mature development over previous, ahem, 'idiosyncratic' versions, so now the free package of 2GB online storage with a high reliability desktop client, collaboration features and continuous development, is quite sufficient for home users starting out in the Cloud. By way of an incentive, Dropbox has an attractive referrals programme for increasing your initial free allocation from 2GB of free space up to a usable 8GB by referring friends.

Feel the Width

The paid plans (above 2GB) go up to 50GB (Pro 50 at $9.99 a month) and 100GB (Pro 100 at $19.99 a month). Beyond that, Dropbox will do you a deal on the Teams plan for storage space in the Terrabytes. The paid service at times looks a bit pricier than competing online data backup services, depending on the current offers in the market, whilst the help and support options are a little limited. You can contact Dropbox support only by email at present. I'm guessing the margins are too thin to afford technical and customer support by chat or telephone as well. The online Help Center is fairly rich, organized by topic and operating system. Dropbox also hosts a product tour, a forum, and a wiki. That said, turnaround on simple queries seems to occur within a couple of hours.

Features

Dropbox was one of the early services to enable 'blind' public links for sharing files over the web, which is one of the things I do most. You can share individual files, whole folders, or image galleries - that are viewable by anyone, either by creating a public link or by sharing them with a controlled group. Create the folder that contains the items you want to share, and then enter the email addresses to which you want to send the sharing invitation. Two more of the Dropbox features worth outlining are Versioning and Sync.

Anything stored on the Dropbox servers has one-month history – that is, any files deleted can be recovered with the next thirty days; it's a simple feature for home users' convenience rather than any kind of version-control for writers, programmers or designers. There is unlimited 'versioning,' called Pack-Rat, or Dropbox Rewind for businesses, which is a paid add-on.

The Sync feature will help a lot when you spread your work across multiple devices. Installing Dropbox on each device registered with your account will enable the automatic synchronize function whenever you change, add or

delete a file. It's quite flexible in the choices available:

• what to sync - select the folders you want to sync
• with whom to sync – you select the people (using email invitation) with whom you want to sync a particular folder .

Anything you do on individual machines can also be managed from the web interface, so you don't need to have a Dropbox client installed on shared machines in order to have access to your data wherever you go.

The only negative point I really have against Dropbox is conflict management; I don't mean it's like a war zone, but sometimes you have issues if different people access a file at the same time and modify it. It's a tricky technical issue in networking and databases at the best of times, so this is not a surprise 'feature' of a Cloud storage service, particularly when Dropbox is pushing the collaborative and sharing side of operations.

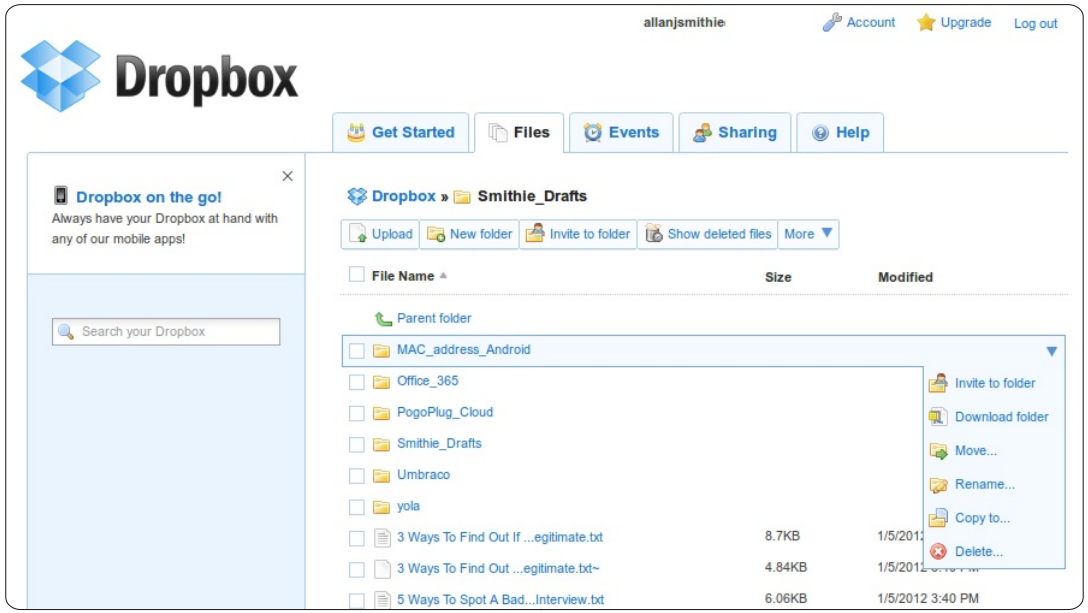
One thing that isn't supported is sycning files outside of the centralised Dropbox folder. You can work around this by linking, but when other operating systems have implemented virtual folders ('libraries'), we could do with a sync service that's able to do the same.

Security

This is always the potential pitfall of the Cloud. Dropbox uses the SSL Secure Socket Layer protocol for transfers, and encrypts all files using AES-256 before storing them on its servers; anything shared is then made visible by exception. Public folders are viewable by anyone who can find them. Photo gallery links give access to anyone with whom you share the link to the gallery, but they cannot access other areas of your account.

I think the mechanism of sharing by email invitation needs some work. The next feature release needs to link Dropbox users by account, thereby securing sharing within the bounds of Dropbox security. I believe this is how the Teams product works, so this needs to filter down to the consumer level.

One thing I found a little



unsettling was the April 2011 change to the Dropbox privacy policy. “We may disclose to parties outside Dropbox files stored in your Dropbox, and information about you that we collect, when we have a good faith belief that disclosure is reasonably necessary.” In other words, the encryption keys are known to Dropbox staff. This, too, is not unique to Dropbox, but it should serve as a reminder that the convenience of the Cloud may be offset by the loss of control over your personal data.

Conclusion

I haven't had to worry too much, this last year. Dropbox sits quietly in my notification area, reliably getting on with the job; background syncing is no trouble, it doesn't hog my bandwidth when on-line, and the availability across platforms makes for a break-out experience, whether at home or at work.

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

Create an Encrypted USB Stick

Written by Kalven Slade

Many articles seem to focus on using various utilities such as UNetbootin or Universal USB Installer from pendrivelinux.com, but none of these are necessary to install Ubuntu on a USB hard disk or flash drive, and they don't account for the possibility of losing your portable OS, which may contain personal information.

This guide will walk you through how to create an encrypted portable OS that will allow you to have a secure device where you can update and store files.

Everything in the document assumes that you are doing a fresh install of Ubuntu 10.04.2 (11.10 has also been tested to work,) and doing each step in order. This guide will also be easier to follow if you disconnect any other drives including internal ones except the CD/DVD. (If your other drive remains, make sure you place Grub on the correct disk!)

With this being a portable OS, using Xubuntu will make it faster on flash drives, and allows it to function on computers with lower memory requirements than Ubuntu.

Encryption will help you secure your data if you lose or have your computer stolen.

Ubuntu has built in support for two types of encryption by default, using the Alternate Install CD: full disk encryption, and profile/home encryption. You can add additional encryption using TrueCrypt.

A USB flash can be slow (sometimes too slow!); a USB or ESATA hard drive will function much better.

Linux, unlike Windows, can easily be moved from computer to computer, and boot from your portable drive.

Try to stay away from restricted features like 3d video support on your portable install.

Boot the Alternate Install CD for Ubuntu or Xubuntu, and choose install from the menu.

Unless you need to modify settings, just choose the defaults for your language, location, keyboard configuration, host name, and time zone.

Setting up your partitions is very important, and probably the hardest part to do correctly. You want to limit how often the drive is both read and written to; encryption adds a bit of overhead. EXT3 and EXT4 are too slow, also having a swap space will cause speed issues as well. I have found that it is best to create a FAT32 Partition for sharing files between Windows computers, and using EXT2 for your Ubuntu install.

Choose manual from the partition menu. Choose your USB drive (and not any existing partitions), and press Enter. It will ask you if you want to create an empty partition table on this device. Choose yes.

Below your drive, it should now be listed as free space. Choose it and create a new partition. This new partition will be your FAT32 partition for Windows transfers. I have a 16 GB flash drive, and choose to allocate 3 GB for my FAT32 partition. Make it a Primary partition, at the beginning of the disk. Change the file type to FAT32, and mount point to none. Then choose done setting up this partition.

Now we can create the Boot partition, choose your free space again, and create a new partition, 256 MB is good. Make sure you change from GB (Gigabytes) to MB (Megabytes), or you may not have enough space for your OS. Make it a Primary Partition at the beginning of the disk. Change the File system to EXT2, mount point to /boot, and bootable flags to on. Now you can choose done setting up this partition.

From the remaining free space, create a new primary partition with Physical volume for encryption as the file type, then choose done setting up this partition.

Choose Configure encrypted volumes from the menu, yes to write changes to the disk. Choose Create encrypted volumes, choose finish.

Create a password and verify.

You will now be back to the partitioner, and you will see a new encrypted volume drive is listed, select the partition (it will will have a file system of EXT4), and press enter.

Change the file system to EXT2, mount point to /, and choose done setting up partition.

Choose finish partitioning and write changes to disk.

Choose no when you see the warning about a missing mount point for the FAT32 partition and the missing SWAP partition, then yes to write changes to the disk.

Continue with the install, do not choose home directory encryption for flash drive installs.

Once installed, run updates, and reboot, then you're done!

Encryption Info

You can change and add passwords for your full disk encryption - 8 passwords are allowed, and they are numbered 0-7.

To see which keys are in use:

```
sudo cryptsetup luksDump /dev/<drive>
```

Changing Your Password

To change your password you will need to first add a new one, and then remove the old one.

Step 1: Add New Password:

```
sudo cryptsetup luksAddKey /dev/<drive>
```

Enter any passphrase: <your current password>
Enter new passphrase for key slot:
Verify passphrase:

Step 2: Remove Old Password: run a dump again to verify key slot added:

```
sudo cryptsetup luksDump /dev/<drive>
```

```
sudo cryptsetup luksKillSlot /dev/<drive> <key slot number>
```

Enter any remaining LUKS passphrase:

Verify removal with another dump:

```
sudo cryptsetup luksDump /dev/<drive>
```

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

Use Varnish Web Cache

If you operate a web server, pay attention. This article will help you accelerate your page loads and provide you with a more secure network. Varnish is a state of the art web application accelerator. You can operate Varnish on the localhost or use a dedicated box. Varnish is extremely efficient at its job because it was built specifically to cache web requests. Unlike Squid and others, Varnish has one job, which it does very well - cache.

All requests are passed through the Varnish Configuration Language or regular expressions (regex). Varnish Web Cache uses the highly flexible Perl Compatible Regular Expressions (PCRE) regex, which is currently found in high profile projects such as Apache, PHP, KDE, Postfix, Analog, and Nmap. The default configuration is generally enough to get you going with a basic HTML/CSS driven website. However, if you operate a Content Management Driven site, or anything with Cookies, you will need to do some tweaking so that you are not caching cookies during login.

Installing Varnish on Ubuntu

As of this writing, the current Varnish release is 3.0.2. The Ubuntu apt-get repo contains the Varnish package, however I would strongly recommend using the latest stable release at http://varnish-cache.org. Below are 4 simple commands to input through Terminal, which will add the Varnish GPG key, add the Varnish software repository, and install the latest software version.

```
curl http://repo.varnish-cache.org/debian/GPG-key.txt | apt-key add -

echo "deb http://repo.varnish-cache.org/debian/ $(lsb_release -s -c) varnish-3.0" >> /etc/apt/sources.list.d/varnish.list

apt-get update

apt-get install varnish
```

Configuring /etc/default/varnish

The varnish file tells the software how it should store cached files, (Malloc or File), which port to connect with, and other primary details. When you first install Varnish, you will need to edit this file and change line 4 from "START=no" to "START=yes" to enable your cache. All of the default values are generally acceptable. The primary component of your configuration in the varnish file includes the information shown in the box below.

The primary configuration options include:
-a (Varnish listen port (i.e. the port that the public will use to access content - should be port 80))
-T (admin listen port)
-f (VCL configuration file location)
-S (the secret password file (by default, a secret file is generated in /etc/varnish/))
-s (malloc or file cache storage).

```
DAEMON_OPTS="-a :80 \
             -T localhost:6082 \
             -f /etc/varnish/varnish.conf \
             -S /etc/varnish/secret \
             -s malloc,3G"
```

File or Malloc Cache Storage

File storage configures the cache to place less used cached objects on hard disk, while more frequently used data are stored in RAM. Malloc storage keeps everything in RAM. Malloc storage will always be much faster than disk. However, if you have to use file storage, use an SSD as your storage medium.

Configuring /etc/varnish/default.vcl

The default.vcl is where you will spend most of your time. Once you have the /etc/default/varnish file

configured, you will need to work on your /etc/varnish/default.vcl. One of the first tasks is to define a backend. As I mentioned earlier,

```
backend default {
.host = "10.1.10.55";
.port = "8500";
.connect_timeout = 60s;
.first_byte_timeout = 60s;
.between_bytes_timeout = 60s;
.max_connections = 250; }
```

you can use varnish on your webserver directly or use it on a dedicated box.

If you have Varnish operating on a dedicated box or are using a dedicated NIC, the .host declaration will define the LAN IP of your webserver. Otherwise, you would use the loopback address of 127.0.0.1. The .port directive tells Varnish the Apache listen port. Additional configuration options are optional, but give you more control over user activity.

If you use a Content Management System (CMS) for your web content, your VCL will need fine tuning so that you do not cache Cookies or other items that shouldn't be cached during admin sessions.

I recommend visiting this 2-part article for configuring your Wordpress VCL at http://goo.gl/1rlj4 and http://goo.gl/HXzg3. If you are using some other CMS, you will need to determine what Cookies are used, and define them in your VCL. The two aforementioned links provide a basic template for defining Cookies, as you can add or replace entries fairly easy.

Security and Protection

Varnish can also provide a level of security to your network by creating a flexible method of IP blocking and path handling variables. For example, if you wanted to block IP addresses before they arrive to your webserver, simply insert the following regex into your /etc/varnish/default.vcl and reload Varnish. Blocking IP addresses with Varnish lets you maintain an IP firewall before it's too late.

Once you have your VCL configured how you want it, validate it using:

```
# IPs we serve an error page to.
acl forbidden {
"74.123.97.86";
"140.112.121.222";
"184.106.205.36";
"193.188.86.192";
}

sub vcl_recv {
## forbidden
    if (client.ip ~ forbidden) {
        error 403 "Denied.";
    }
}

Varnish can also be used to block access to file
paths.

sub vcl_fetch {
if (req.url ~ "^/w00tw00t") {error 403;}
if (req.url ~ "^/phpmyadmin") {error 403;}
if (req.url ~ "^/PhpMyAdmin") {error 403;}
if (req.url ~ "^/databases") {error 403;}
if (req.url ~ "^/pma") {error 403;}
if (req.url ~ "^/Toata")  {error 403;}
}
```

```
varnishd -C -f
/etc/varnish/default.vcl
```

The -C flag prints your VCL as compiled C# and validates it, while the -f flag is the location of your VCL file.

Configuring Apache for Varnish using

VirtualHost

If you are using Apache's VirtualHost feature, you need to add a line in your /etc/apache2/httpd.conf file to let Apache know what you are doing. You will need to define the .port number that you assigned it in Varnish (e.g. NameVirtualHost *:8500).

Next, configure your /etc/apache2/sites-available/domain.com using the template shown right. The port number on the first line needs to match what you have placed in your /etc/varnish/default.vcl backend declaration.

Lastly, change the Listen directive in /etc/apache2/ports.conf to match the port specified above (e.g. Listen 8500).

Helpful Commands

varnishstat - performance counters and diagnostics
varnishtop -i rxurl - lists all traffic passing through your Varnish cache
varnishadm - the Varnish administrative console, where you can issue ban commands and others
varnishd -C -f /etc/varnish/default.vcl - prints your VCL as compiled C# and validates prior to enabling it live
service varnish reload - reloads your VCL without erasing your current cache.
varnishncsa - displays Varnish access logs in Apache

References:

https://www.varnish-cache.org/docs/3.0/reference/vcl.html

http://kaanon.com/blog/work/making-wordpress-shine-varnish-caching-system-part-1

https://www.varnish-cache.org/trac/wiki

```
<VirtualHost *:8500>
ServerName domain.com
ServerAlias www.domain.com
DocumentRoot /var/www/folder
</VirtualHost>
<Directory /var/www/folder/>
          Options -Indexes FollowSymLinks MultiViews
          AllowOverride All
          Order allow,deny
          allow from all
     </Directory>
```

A PLEA ON BEHALF OF THE PODCAST PARTY

As you often hear in the podcast, we're calling for opinion topics for that section of the show.

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

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

You can post comments and opinions on the podcast page at fullcirclemagazine.org, in our Ubuntu Forums section, or email podcast@fullcirclemagazine.org. You can also send us a comment by recording an audio clip of no more than 30 seconds and sending it to the same address. **Comments and audio may be edited for length. Please remember this is a family-friendly show.**

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

Robin

Write For Full Circle Magazine

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).

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

Writing

There is no word limit for articles, but be advised that long articles may be split across several issues. In your article, please place where you would like a particular image to be. Please do not use any formatting in your document.

Images

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

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

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

When you are ready to submit your article please email it to: articles@fullcirclemagazine.org

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

Non-English Writers

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

REVIEWS

Games/Applications

When reviewing games/applications please state clearly:

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

Hardware

When reviewing hardware please state clearly:

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

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

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Mana World Server On Old Hardware

Written by Charles McColm

Traditionally our family has two periods of the year that we do a big cleanup - spring cleaning and at the start of a new year. This year, instead of tossing out our old Athlon64, I decided to reuse it as a development server for our existing MMORPG server. I first became aware of The Mana World (TMW) in late 2007 when the client software, tmw, appeared in the universe repositories of Ubuntu 7.10, Gutsy Gibbon. At the time, the TMW client was primitive but quite functional. Over the past several years, the game has advanced both on the client and server side.

The great thing about running a TMW server is that it doesn't require a lot of horsepower if you plan on running a small server for friends and family. We originally set up our server on a Pentium III 1.1 GHz CPU with 256 MB of RAM (mind you the hard drives were lightning fast 15,000 RPM SCSI drives). This setup was enough to host 5 simultaneous players over the Internet on our ADSL connection. Currently, we host the Auldsbel server on a hyperthreaded Pentium 4 2.8 GHz system with 2 GB of RAM, and that also runs the front facing web server. Hosting a web server is helpful for getting the client software to show who else is online, but it's not necessary to get the server running.

We used a server install of Ubuntu 10.04 LTS as the base for our server, and used a notebook running the client software to test the configuration. You may want to install the server on a desktop version of Ubuntu if you plan on using a single machine for the server and client. The TMW server is based on the eAthena (newer TMW server software exists that's written from scratch, but the main server still uses modified eAthena code) project.

eAthena was originally developed as an open-source server Ragnarok, but TMW developers have done a great job modifying it for the Mana World client. To begin, you need to install git-core, build-essential, flex, and bison:

```
sudo apt-get install git-core
build-essential flex bison
```

Next you create a directory to hold the server software, and download and build the tmw-ea server software:

```
mkdir ~/tmw-ea

cd ~/tmw-ea

git clone
git://gitorious.org/tmw-
eathena/mainline.git eathena

git clone --recursive
git://gitorious.org/+tmw-
admins/tmw/tmwa-server-
test.git eathena-data

cd eathena
```

Be patient while git clones the repositories. Depending on which version of Ubuntu you're running, you may run into problems with Make being older than version 3.82 (the version developers recommend you use to make the project). If you run into problems making the project, run the next step:

```
mkdir -p
obj/{common,login,char,map,la
dmin,tool}

make
```

Multiple servers can be run from the same point, but the tmw-ea main server binaries should be copied to a standard folder:

```
sudo cp login-server char-server map-server ladmin /usr/local/bin/
```

The next step is to add git hooks to allow updating of the client data. Without this step, you'll still be able to run the server software, you just won't be able to pull updates from the git repositories.

```
cd ../eathena-data

ln -s ../../git/hooks/post-merge .git/hooks/

ln -s ../../../git/hooks/post-merge client-data/.git/hooks/
```

The last little bit of setup is to make the config files, and checkout client data and funky music:

```
cd client-data

git checkout master

cd music

git checkout master
```

At this point, our server is set for us to log-in locally. I set up a static IP for the development server in our Tomato-MLPPP Linksys WRT54L router, and assigned it the same hostname I assigned the production system. Before we can test the server, we have to load 3 server processes: the character server, the login server, and the map server (the configuration files for these three servers are what we'll modify later for an Internet facing server). For now we'll load the server executables to test the server:

```
cd ~/tmw-ea/eathena-data

./char-server & ./login-server & ./map-server &
```

When you log in to the server for the first time, you'll see the character log-in on the terminal you launch the server from.

From my notebook I loaded the TMW client:

```
sudo apt-get install tmw
```

There are a number of TMW clients. The one in the Ubuntu 10.04 repository is a bit dated and freezes for GM's when they entered a room where clients were logged in. Better to use the manaplus client available from http://manaplus.evolonline.org/ if you intend to expose your server to the rest of the world.

When the TMW client is loaded, click the Custom Server button, and enter the hostname you gave your server (or domain-name/dynamic DNS name). At this point, we're just confirming the server is working locally and setting ourselves up to be GM - before exposing it to the rest of the world.

When the client connects, click the register button. Note: you cannot register through the client if you intend to play on the official Mana World server. On the main server, you have to register through the web site, and wait for approval. On your own server you just register a username.

The next screen is the character management screen where you choose a character. Since this is the first time you've logged on, all the character slots will be blank. Create a character and assign statistics on the next screen. You can also change hair color and hair style. As you might have guessed, one user login can have multiple characters.

You want to make sure you create a character before inviting anyone else to the server so you can set the first character to be the game master (GM). The TMW variation of eathena stores character data in ~/tmw-ea/eathena-data/login/save. The file account.txt stores character information. The file gm_accounts.txt is where you set up who will be GM on your server. GM's and developers normally are assigned special levels. You can find these levels in the file ~/tmw-ea/eathena-data/world/map/conf/atcommand_local.conf. What's important is that you set yourself up as a level 99 GM. If you assign other GMs set their level to 60 so they have limited GM power. The gm_accounts.txt file is formatted in the following fashion:

```
account_number gm_level
```

The first user account is normally assigned a number of 2000000. Subsequent accounts increment the user account number by 1, so the next user account created would be 2000001. So to make the first user account GM we would give the gm_account.txt the following information:

```
20000000 99
```

The ~/tmw-ea/eathena-data/login/save/gm_accounts.txt file can be modified while you're logged in to your server. Once you've given yourself GM level, you can try some of the GM commands. All GM commands begin with an @ symbol. @help will give you a list of GM commands in the debug tab. The keen-eyed will notice that many of the @gm commands scroll right off the screen. To correct this problem we need to adjust the amount of lines available in the chat window of the client software. In the top right corner of the tmw client software, click the Setup button, then click the chat tab, and adjust Limit max lines in chat to 120.

GM's have the power to create items, spawn monsters, warp to players, warp players to other places, even launch an all-out player versus player war, so choose your GMs carefully. GM actions are logged in a plain text file tmw-ea/eathena-data/world/map/gm.log.year.month (for example tmw-ea/eathena-data/world/map/gm.log.2012.01). We found that looking at the gm log files from the main server gave us a better understanding of the @gm commands and how they're used. Luckily the main server is transparent with their log files, and they can be viewed online at http://server.themanaworld.org/gm.

Putting your server online

In order to make your server available to everyone on the Internet, you'll need to punch some holes in the firewall of your router. In particular, TCP and UDP for ports 5122, 6122, and 6901. You'll also need to modify the configuration files for the server executables. There are a lot of configuration files, in a few places. The configuration files we want are all suffixed with _local.conf. In particular we want to modify the following files:

```
~/tmw-ea/eathena-data/world/conf/char_local.conf
~/tmw-ea/eathena-data/world/map/conf/map_local.conf
~/tmw-ea/eathena-data/login/conf/ladmin_local.conf
```

There are 3 variables we want to set, the IP addresses for the login server, the character server, and the map server. If you're using a dynamic DNS service, the dynamic DNS name can be used in the place of the character and map server, but you should use your local address for the login server (on our test server we used 127.0.0.1 and it worked fine for the login server). Note that if your DNS changes while the server is online the server may be unavailable. Our ISP offers a very inexpensive static IP address, which is what we use in place of the character and map server variables. Our char_local.conf looks something like this:

```
// Comment : Login server IP
login_ip: 127.0.0.1
// Comment : Character server IP
char_ip: auldsbel.dyndns.org
```

Similarly our map_local.conf looks like this:

```
// Character Server IP
char_ip: auldsbel.dyndns.org
// Map server IP
map_ip: auldsbel.dyndns.org
```

The ladmin_local.conf file is an important configuration file used by the ladmin tool. Using ladmin, the administrator can execute a variety of administrative tasks without using the client to log in to the server.

You can find a number of other configuration files in the ~/tmw-ea/eathena-data/world/map/conf directory. If you want to have magic in your world, you'll want to look at the magic.conf.template file and the build-magic.sh shell script. The help.txt file in this directory is the same help file that gets displayed to GMs who issue the @help command. You will also likely want to customize the motd.txt (message of the day) file.

Like a lot of Linux software, the Mana World eAthena server is highly customizable. While you can run a server identical to the main server, you'll probably want to customize your server more extensively. Good sources for information on further customization can be found on the Mana World forums, wiki, and in the How to Develop sections of the Mana World web site.

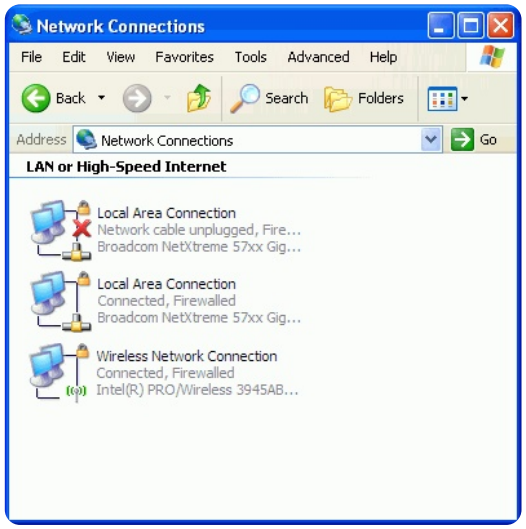
URLs of Interest:
The Mana World - http://www.themanaworld.org/
TMW Forums - http://forums.themanaworld.org/
TMW Wiki - http://wiki.themanaworld.org/
How to Develop (& server set-up) - http://wiki.themanaworld.org/index.php/How_to_Develop
Auldsbel TMW server: http://auldsbel.org/

Charles is a step-father, husband, and Linux fan who runs a not-for-profit computer refurbishing project. When not breaking hardware/servers he maintains a blog at http://www.charlesmccolm.com/.

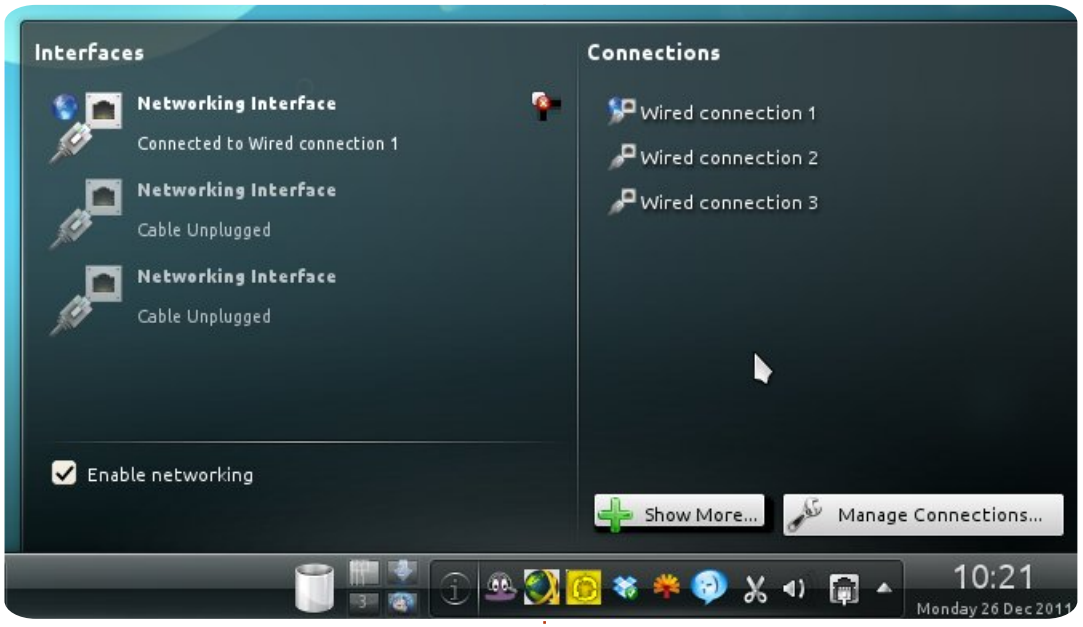
CLOSING WINDOWS

Network & Wireless Settings

Written by:
Ronnie Tucker (KDE)
Jan Mussche (Gnome)
Elizabeth Krumbach (XFCE)
Mark Boyajian (LXDE)
David Tigue (Unity)



Examining your network or wireless settings in Windows is actually quite confusing, not to mention intimidating. You can see them by going to the Control Panel and choosing Network Connections. What you see isn't exactly user friendly, but I suppose it does the job.

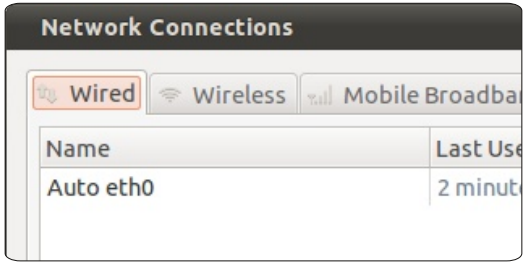


Kubuntu:

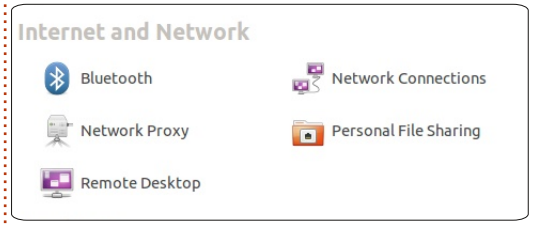
The network and wireless settings (above) are available through the System Settings window, but a quick short-cut (and a better way to manage it) is the icon in your taskbar (far right) that looks like a network plug and socket. Clicking that gives you quick access to not only your settings, but also to find which wireless networks are available to you.

Gnome-Shell:

The Gnome-Shell version does not have such a nice settings-screen .The screens to set and change the network connections look like this:

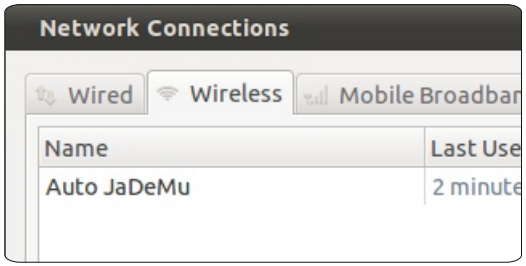


The settings can be found at: System > Preferences > Network Connections, but also top right in the panel. Here you see an icon with two anti-parallel arrows. Click the icon > Edit Connections. A third way is through the Control Center (System Settings) - which can be found in the drop menu connected to the Shutdown button at the top-right on your screen.



To change a connection, click the name of the connection > Edit button. You will now see a new window with 4 TABs. Of these 4 TABs, 1 is important and that is the 'IPv4 Settings' tab - where you select how your connection needs to operate. The most common way is to select Automatic (DHCP). This can be done when your computer makes contact with a router with a build-in DHCP server. The DHCP (Dynamic Host Control Protocol) server generates IP-addresses for all connected computers (which are set to Automatic-DHCP). As can be seen in the next picture, you don't need to set anything (Address,

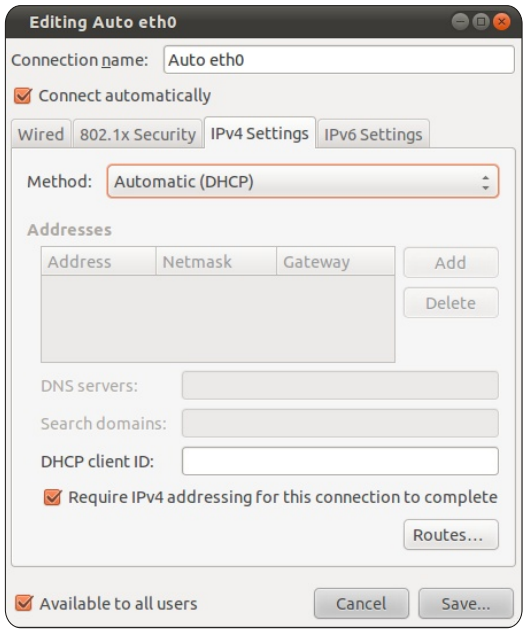
Netmask, Gateway, DNS server, and Search domain) yourself, just let the system handle this.



For a wireless connection, after setting things straight, you still need to make contact with your wireless network. For this, right-click the network icon in the top panel, and choose the network you want to connect to. If it is a secure network, type the password you've assigned, and you should be connected in seconds.

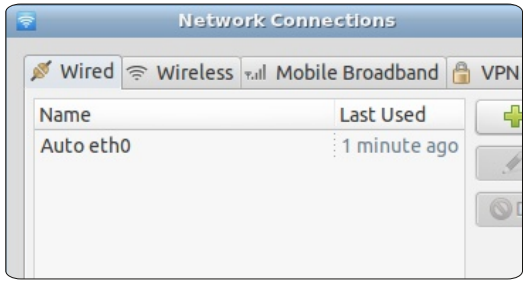
Xubuntu:

Xubuntu uses the nm-connection-editor from Gnome, it is available for launching through Settings > Network Connections, or by right-clicking on the network indicator icon in the top panel and selecting "Edit Connections...". However, for basic wireless setup, you will want to right-click on the network indicator icon in the top panel, and simply select the wireless network you wish to connect to.

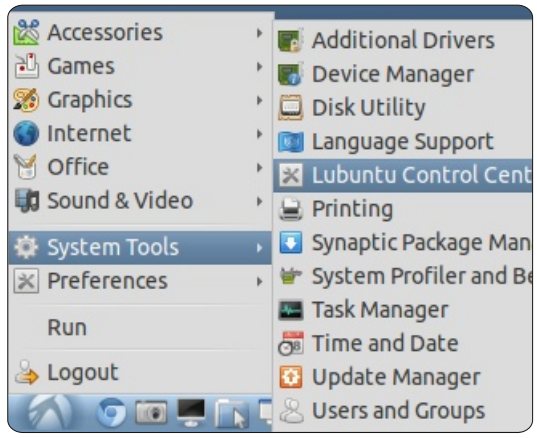


Lubuntu:

Settings are made in the same way as described for Gnome-Shell; however, opening the Network Connections window is, not surprisingly, done differently. The easiest way is to click on the network icon in the Panel; by default it's on the right-hand side.



Alternatively, you can access it through the main menu by clicking System Tools > Lubuntu Control Center.



From the Control Center, click the Network icon.

Once in the Network Connections window, you configure your network settings for Wired and Wireless (and other) connections as described for Gnome-Shell or Ubuntu.

Next month we'll discuss the formatting of media such as USB sticks, hard drives and SD cards.

SUDOKU

Numbers 1 to 9 are to be filled into the 9x9 grid so that every row, every column, and every 3x3 box contains the numbers 1 through 9.

EASY

			6	9			3	1
4		8			2			6
6				7				
5		6	9		3	7		8
								9
	8	9	1	6			2	
	3				5		8	2
7		5	4	8	6		9	
		1			9		4	

HARD

			3		4		1	
4		1						
	2	3	6	9		4		8
	4	2				1	8	
			9		8			
	8			2	7	5	6	
	3	4	8		5		9	2
	7							5
				3	6	7		1

Solutions are on the second last page.

MY STORY

Written by Charles McColm

My tech journey began like many of my generation - on a Commodore 64. August 1983, I became involved with BUG, the Barrie Users' Group, a group then dedicated to hacking Commodore hardware and software. BUG turned me on to Bulletin Board Systems (BBS). It was hard not to become enchanted by BBS technology: multi-line door games, informative forums, and the System Operator (sysop) breaking in to chat. For several years, I ran my own BBS, at first under MS DOS, then IBM's OS/2 Warp operating system. Which brings up a funny story.

Late 1995, I went to Comdex in Toronto, with evaluating both Windows 95 and OS/2 in mind. I visited both booths, and was stunned by how rude the Microsofties were. I patiently waited at their booth to test a machine only to be summarily booted off. The IBM camp was busy too, but they were much more pleasant, and not only showed me OS/2 but connected me with a sysop running OS/2. When I went home, I was fired up about OS/2. I went to a local computer store where it so happened that another local sysop worked. When I went to buy OS/2, he vehemently warned me against buying OS/2 saying I should buy Windows 95 when it came out. Long story short: my BBS was up and running the same afternoon, and he never did get his working under Windows 95.

It was shortly after I started running OS/2 that my youngest brother came home from University with a Slackware Linux CD. It was interesting, but for some reason that eludes me, I ended up subscribing to the Walnut Creek FreeBSD CD-ROMs. In a Richard Stallman-like fashion, it was a printer driver that turned me back to Linux.

I also hooked up with a small group of individuals looking to create a Linux desktop, WCLP, for 486DX computers with 16 MB of RAM and a 500 MB hard drive. That project connected me with another not-for-profit project, The Working Centre's Computer Recycling Project. For the past six years, I've been blessed to be the manager of that project. In the mid-2000's, the Linux distribution we started was surpassed by other projects with similar goals. When it came time to decide on a new Linux distribution for our Linux builds, I went with the hot new thing: Ubuntu 4.10. Since that time we haven't looked back.

Our project is also a part of the Microsoft Registered Refurbisher program. The Working Centre has for many years provided computer basics training and Microsoft Office training, so it's helpful that we also offer Microsoft Windows and Microsoft Office on certain machines. Microsoft has been very good to us and kept the cost of licenses low enough that we can pretty much offer them on par with our Linux systems.

What surprises some is that we sell almost as many Linux machines as we do Windows machines. I attribute this to a few factors: even with unattended installations, it's still often easier for us to install Linux; Linux is easier for us to support because we don't have to deal with malware as much; Linux tends to work better with the variety of hardware we have without us having to download drivers separately (printers for example).

Of course not everything is perfect, so, when someone considers buying an Ubuntu Linux system, we sit them down in front of a machine, give them a brief overview about using Ubuntu Software Centre, Firefox and LibreOffice, and let them decide if they feel comfortable enough to try Ubuntu.

Most people are comfortable when they learn they can do many of the same jobs in Ubuntu Linux. Many of the people we work with haven't tried Linux before, and I'm often surprised to learn they're still running Linux months later. I suppose I shouldn't be surprised - all Linux really takes is the willingness to learn and play.

MY OPINION

Written by Allan J. Smithie

I got into a conversation with Chromebook Enthusiast (CE) over on my blog where we disagreed on the implications of the recent Chromebook price cut. 'CE' wrote:

> *The Chromebook is a great concept as a thin client... for education, in the classroom, with Internet access, and access to my VDI infrastructure, it's a very compelling solution. The total cost of ownership is really nice. They're also not throwing in the towel just because the price is dropping. They're actively developing new products, enhancing the operating system and management systems."*

I grant the concept is sound, particularly where the infrastructure is in place to support the Chromebook with reliable, always-on Internet connectivity. You may be right in that the education market may save it -- but only if it achieves momentum through market penetration. It has to reach into education, business and consumer in order to continue. I recall from my education we had the RM Nimbus and the BBC Micro, neither of which could resist the home and business market domination of the IBM PC clone. Perhaps that's a bad comparison, but one sector by itself will not guarantee continued sales.

We know that Chromebooks are under pressure from the tablet market, hence the price cut. Tablets are not only 'cool' but do have sufficient internal storage to take out and about. We know Chromebook owners (Ed Hewitt, reviewing in Full Circle #52) who have hit the limits of the platform in terms of access and storage, at which point they take flak from friends and colleagues who then taunt the embarrassed Chromebook owner by saying "you paid how much for that?"

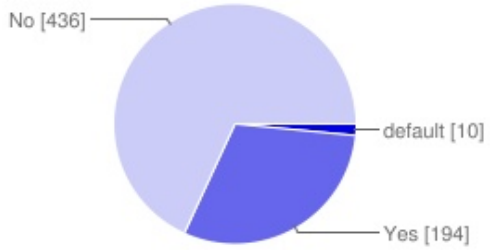
For sure, Google is not yet pulling out, and, if any company has the staying power to develop a mature platform, Google is it. However, without manufacturing the devices itself, Google is reliant on the likes of Acer and Samsung to put hardware into hands. How long they will stay in - if profits, shareholder and market confidence drop - is a different question. Volume over time enables price cuts, anything else is at the expense of margin; the hardware business is tight on both right now. Conventional workhorse laptops and shiny tablets-cum-e-readers are the fashionable stars of the day. With public spending cuts, the education sector has its work cut out to make the case for non-standard kit in 'niche' platforms. Only if the total cost of ownership is compelling, with the politicos keeping out of decisions, can the education sector stay on board. I'm all for freedom of choice, but economics and marketing may yet lose the day for the Chromebook.

I THINK...

Last month's question was:

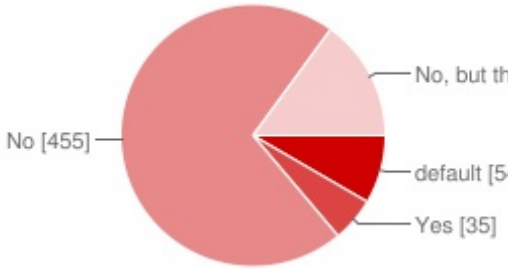
The SpiderOak Questionnaire

Do you have a SpiderOak account?



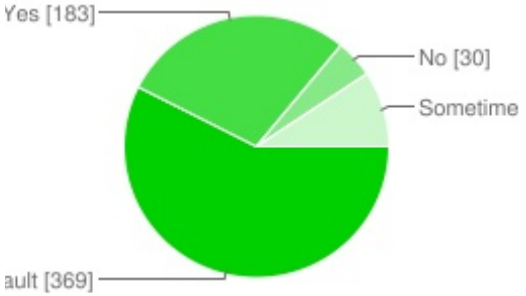
Yes	194	30%
No	436	68%

Are you a paying customer?



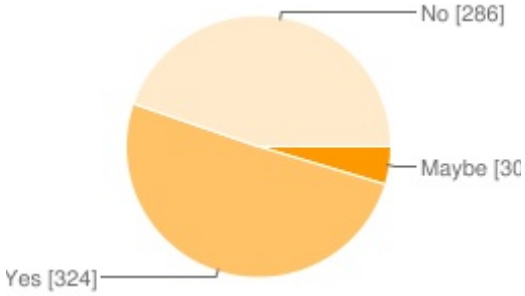
Yes	35	5%
No	455	71%
Considering	96	15%

Are you happy with SpiderOak?



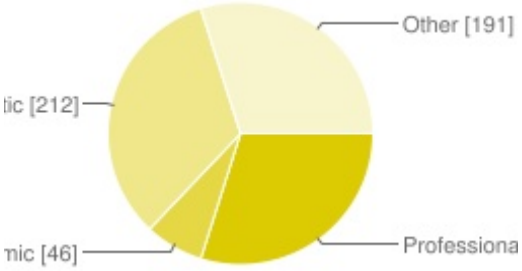
Unknown	369	57%
Yes	183	29%
No	30	5%
Sometimes	60	9%

Have you heard of SpiderOak?



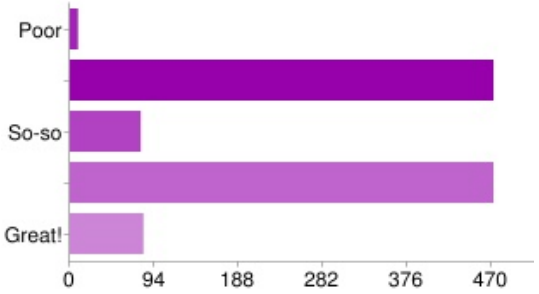
Maybe	30	5%
Yes	324	51%
No	286	45%

How do you use SpiderOak?



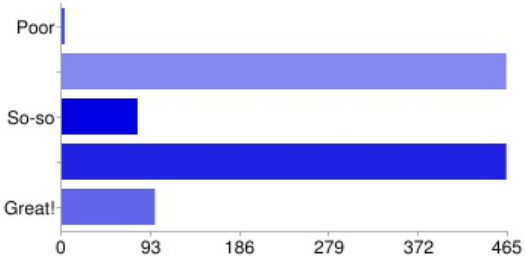
Professional	191	30%
Academic	46	7%
Domestic	212	33%
Other	191	30%

Rate the application in the following characteristics - Usability



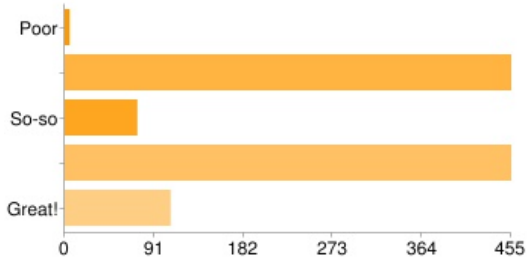
Poor	9	1%
	472	74%
So-so	79	12%
	472	74%
Great!	82	13%

Rate the application in the following characteristics - Invisibility



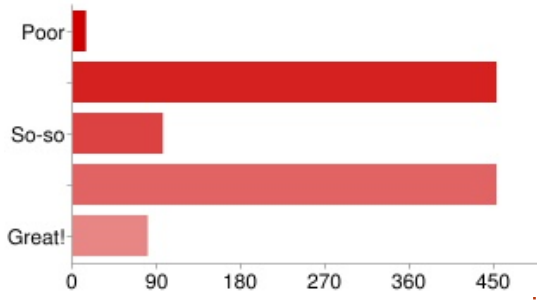
Poor	3	0%
	463	72%
So-so	79	12%
	463	72%
Great!	97	15%

Rate the application in the following characteristics - Portability



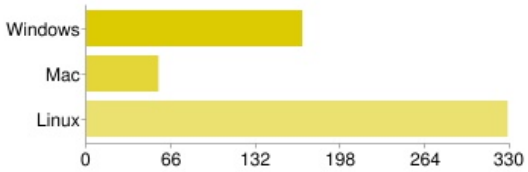
Poor	5	1%
	455	71%
So-so	74	12%
	455	71%
Great!	108	17%

Rate the application in the following characteristics - Available Space



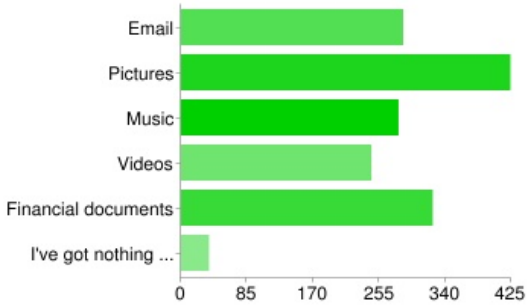
Poor	14	2%
	452	70%
So-so	96	15%
	452	70%
Great!	80	12%

Which platform do you run SpiderOak on?



Windows	168	45%
Mac	56	15%
Linux	328	87%

What types of important files do you have on your computer?



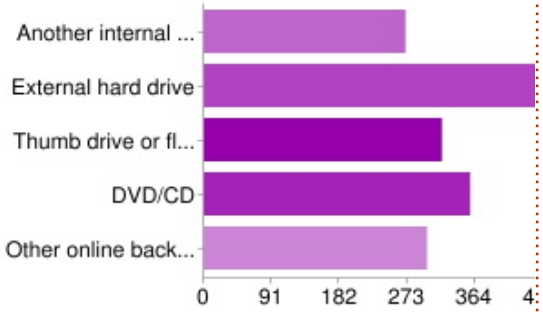
SpiderOak Winners!

Thomas Morris, Marc Bohets, Lars Biemans, Johnathan Morlock, and one other person who's still to reply.

Congratulations to you all, and thanks to SpiderOak for the prizes. Keep your eyes peeled for more competitions in Full Circle. Assuming I can get prizes.

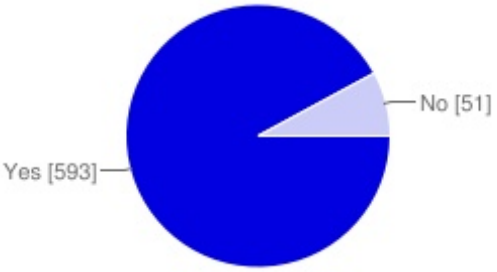
Email	286	56%
Pictures	424	83%
Music	280	55%
Videos	245	48%
Financial	324	63%
Nothing	36	7%

Have you ever used any of these backup methods?



Another internal hard drive
271 51%
External hard drive
456 86%
Thumb drive or flash drive
320 61%
DVD/CD
358 68%
Other online backup provider
300 57%

Would you recommend SpiderOak to others?



Yes	593	92%
No	51	8%

What are some things you would improve, or add, to SpiderOak?

A script that would allow for a file manager (Dolphin, Nautilus, et al) to have right-click "add to SpiderOak" option.

SpiderOak allows deleting older versions through the command line. I'd like to see that functionality put into the GUI.

As a new user it is difficult to tell. Also as a 72 year-old pensioner, and domestic user, 100GB is way over the top for my needs - although $50 a year for 50GB would be ideal for me and many others in my position.

I would add a two-stage backup capability, such that synchronization would happen both to a local backup disk on my network server AND off-premises at SpiderOak. The directories to be backed up would default to being identical on both services, but there is no reason to require that they be identical.

Faster recognition of new files and faster syncing to other devices (it can occasionally take a few minutes to detect, upload, finalise, and then sync down). Mainly it is just simply excellent!

Add option to easily clean, for example, all files older than date X. Or all "duplicated" files older than date X, etc.

Picture (and other file) backups on Android.

Make the UI more intuitive and user-friendly.

Possibility to upload files via the web.

This is the first I've heard of this service. Maybe if you put yourself out there a bit more, others might get to know you.

Add an estimated time to completion based on the current network performance. I have a slow link, so during backup upload, I need to plan my PC usage by leaving my PC on for a longer time.

The only problem I've had with SpiderOak was that the size of data being backed up on each device all was counted across all the devices. I.e. 1GB on Home + 1GB on Work = 2GB in total space used.

Ability to see the files are already in your directory before attempting to restore them after an OS reinstall.

It should be much easier to share files you have on your SpiderOak drive.

One of the primary reasons as to why I am not specifically using the services is that it is not fully compatible with my screen reading software. Unfortunately, being blind, one has got to settle for the more accessible software.

This month I'd like to pose the question:

If you have a mobile/cell phone, which OS does it use?

To give your tuppence worth go to: http://goo.gl/EWbS2

Closing date for this question is **Sunday 19th February 2012.**

REVIEW

Written by Art Schreckengost

openArtist 5th Incarnation

In the past, I've reviewed some unknown Ubuntu derivatives, but recently I came across one so obscure I'm not quite sure how I found it.

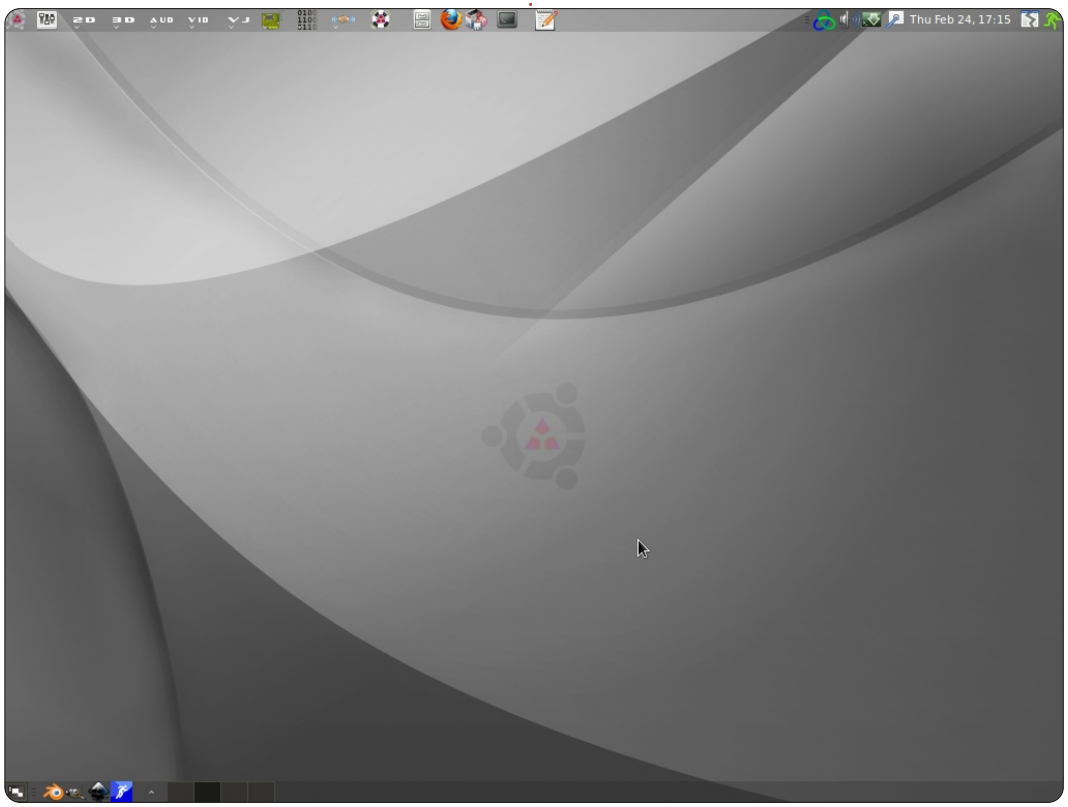
I'm referring to openArtist 5th Incarnation (oA hereafter), an OS that has managed to stay hidden even though it's been out 3 years (DistroWatch and Wikipedia have zip). About the only information I could gather was limited to either the website (www.openartisthq.org) or 2009 developer posts on BlenderNation.com and BlenderArtists.org.

But this transparency is largely on purpose as the developer (an Austrian student going by the name cellstorm) has opted to keep his OS underground until he's sure it's ready for wide release.

Based upon 64-bit Ubuntu Maverick 10.10, oA packs the Linux 2.6.35 kernel with Gnome 2.32 desktop as default. 3 versions of Openbox are offered as alternates along with Hildon, all of which will be reviewed shortly.

The website is largely a work-in-progress, so forums appear sporadically used while the news-page consists of a one-sentence entry from February 2011, stating a new version has been released (a revision several months later gets no mention). The download from this site links to SourceForge.net, and shows over 70 downloads per week (so why such little press?).

Releases, as you may have gathered, get the title of "Incarnation," and each new version gets a whole number instead of the usual decimal point system. I can find no 1st - instead 2nd, 3rd, and 4th Incarnations were released in March, June and December 2009, after which the pace slowed until 5th was issued in February 2011 (with a revision, but no number change, in October).



At 2.9GB, the ISO image may seem hefty, but this is 1GB less than ArtistX and 600MB less than oA 4th Incarnation, the previous release. Recommended HDD allotment is 10GB (it does take 9) but that's for live mode users (using a flash drive with persistence). Those opting for full installation would be wise to allocate no less than 20GB. I'll explain why later.

I opted for full installation on my Acer laptop but there are oddities and warnings to watch for. First, the keyboard defaults to UK settings, so don't blindly click on the forward button unless you desire that (cellstorm is changing this to US).

Second, pay heed to the pop-up warning box. Due to some programs being modified, they will not work properly - unless "tux" is used as both the user-ID and

password, at least initially. Enter whatever you like but the installer automatically defaults to tux (the password can be changed post-installation but the user-ID must remain tux).

Installation was breezy at 30 minutes, but what's really impressive is that the post-install updates were a minuscule 10MB indicating the latest updates were slipstreamed into the image. Hallelujah!

By the way, you'll be prompted by the Canonical nag to upgrade to 11.04 but don't! I tried it just out of curiosity, and it not only failed but created an unusable OS.

Unlike Ubuntu, where you'll see a splash screen and have no clue what's going on in the background, oA gives users scrolling hardware checks for roughly 45 seconds until the Gnome desktop appears. There is no musical ditty, either.

As for drivers and codecs, let's just say if your file won't play or open, it's defective. There were no hardware issues, and resource usage was within reason (RAM rarely peaked above 20% of my 4GB, and processor stress averaged 20% too, with the occasional spike to 40%). Compiz settings are dialed down, which helps, but users can add all the flaming windows and wobbly menus they desire if their video card will take it. Wireless worked out of the box, and even my video card didn't need a driver (something that Ubuntu usually nails me for after the first boot).

The desktop design consists of black and gray sweeps punctuated by the Ubuntu circle of friends dead center with the oA triple arrowhead logo in the center of that (think Mitsubishi logo with arrowheads instead of diamonds). Several alternate backgrounds are available including atomic bomb blast pics (odd for an artistic venture).

Top and bottom panels are there, with the lower bunk reserved to park minimized apps or browser windows. It's the top that will catch your eye. To the left are menu entries for 2D, 3D, AUD, VID, VJ, hardware (represented by a video card icon) programming (shown as binary code), and collaboration (two hands clasped) along with the usual main menu button consisting of the oA arrowhead logo. Clicking on any one of these causes a menu to drop with the appropriate programs.

To the right are the ubiquitous time, date, wireless, sound, and battery icons - with extras for Guake Terminal, Dropbox and easystroke.

This does make for crowded real estate up top, but cellstorm includes alternate designs in the Switch Gnome Layout program ranging from XP lookalikes and Gnome standards to tablet oriented offerings.

After you've got the desktop design decision settled, it's time to pay a visit to the main menu, but you had better be prepared. Synaptic Package Manager shows 3,400 installed packages along with 130 PPA sources while the website listing of applications shows 1,400 installed.

As a side note, don't be like me and attempt to print the website applications listing – it's over 30 pages.

In short, oA is a packed house.

Let me give fair warning by stating the menu design is at first awkward.

Opening the main menu produces the standard Gnome structure - with major division headings (and a few more), but cellstorm redesigned the sub-menus. Instead of alphabetical listings, programs are separated by specific use and put in blocks, each separated by a barely visible line. While each block is alphabetized, the sequence starts again for each block. As a result you may see programs starting with A after those starting with M.

For example, Office is broken into 9 program blocks I call Creative Writing, LibreOffice, PDF Tools, Presentation, Slide Presentation, Mind-Mapping, Home Budgeting, Drawing, and Database. Relevant programs are in each block and alphabetized accordingly, but first-timers will be confused since the listing process starts anew for each block.

While there is logic in this design (grouping programs by use instead of alphabetically but randomly), the dark theme all but obliterates the separator lines, and since there are no block sub-titles, users will have to play a guessing game until they get the gist of it.

Changing to a lighter theme did make the separator lines stand out and that may help some.

An unintended consequence of program blocks is that adding new programs doesn't guarantee they'll be placed where you hope (or expect) and finding existing apps is something of a chore.

GoldenDict is under Office but Dictionary got slapped into Utilities and when I installed Google Chrome the menu heading got tossed in a block containing BitTorrent clients instead of the one reserved for browsers.

This means you'll have to play cat-and-mouse to find programs until you adjust to the sequence (I found it easier to park app icons on the desktop or panels).

There is no easy way to change this menu structure, although you could go through Main Menu or alacarte and switch program locations (imagine doing that for 1,400 programs!).

Any perceived shortcomings in such a design are outweighed by cellstorm's inclusion of heavily modified mouse-over program descriptions, some of which span several hundred words over several paragraphs as opposed to the usual Ubuntu cryptic one-liners. Mind you, he has done this for hundreds of programs, and it's really time to give up if you can't figure out what an app does after reading these mini-tutorials!

Design features aside, it's time to discuss what the menu contains. Below is a listing of maybe 5 to 10% of the total programs included in any category (forgive me if I misspell a few):

2D Graphics: Gimp, Inkscape, Skencil, vectormagic, Shotwell, Picasa, RawTherapee, Darkroom, gThumb, Rapid Photo Downloader, Karbon 14, Xara, DNGConverter, Stop Motion Capture, Agave, F-Spot, Fotowall, Cinepaint, Fotoxx, FontForge, Pixelize, GimPhoto, Gimp PaintersStudio, ArtRage, Disc Wrapper, Pencil, Hugin, Peacock, MyPaint, Krita.

3D Graphics: Blender 2.5 and 2.4, Houdini, Lodepaint, shaderlink, shaderdesigner, 3Delight, freestyle, Luxrender, Pantograph, Yararay, Librecad, Helios, DraftSight, Sweet Home 3D, Blender Game Engine, MeshLab, Wings3D, ArtofIllusion.

Audio: Aqualung, Audacious, Amarok, Mixxx, aquaduo, Audacity, Patchage, Traverso, PsychoSynth, Hydrogen, Jackbeat, Qutesound, darksnow, Shoutcast, DeaDBeef, VLC, Banshee, Stretch Player, Renoise, SLTV, Oscilloscope, Flumotion, Ardour, Rosegarden, Jokosher, Ableton Live.

Video: Cinelerra, OpenShot, Pitivi, Handbrake, DeVeDe, 2ManDVD, k9copy, make.tv, OGMRip, AcidRip, dvdisaster, Videoporama, Webcamstudio, Wxcam, Gimp Animation, Avidemux.

VJ: Veejay, freej, freemix, fluxus.

Hardware: Arduino, Fritzing, LightControl, Wacom Control Panel, Wiican.

Collaboration: Chandler, Nixnote, AbiWord, Helga, DrawPile, Dropbox, celtx.

Internet: Midori, Firefox, Thunderbird, utorrent, Minitube, JBidwatcher, Bid-O-Matic, Pidgin, Skype, Google Earth, Google Gadgets, Nicotine, Chromium, Opera, RSS Owl.

Office: Storybook, BookWrite, TextRoom, Planner, OpenProj, GanttProject, Time Tracer, Install LibreOffice, AbiWord, TaskJuggler, PDF Mod, Impress!ve, iFreeBudget, HomeBank, PyCAD, LyX Document Processor.

Programming: Qt Creator, Komodo-Edit, gedit, Aptana Studio, Python 2.6 and 3.1, BlueGriffon, Bluefish, Amaya, Thingamablog.

Utilities: Gscrot, Parcellite, Searchmonkey, Furious ISO Mount, Screenlets

Games: Yo Frankie!, Secret Mario Chronicles, dji Game Manager, SuperTuxKart, atanks

System (Control Center): Ubuntu One, Wireshark, aircrack-ng, Gparted, Brasero, K3b, Turbojet CD/DVD, Lacie 4L Lightscribe, ISO

Master, Furious ISO Mount, UNetbootin, mintUpdate, BleachBit, Ubuntu Tweak, conky, Remastersys, Clonezilla, luckyBackup, Firestarter, Vidalia Tor GUI, Seahorse, RamDefrag, Guake Terminal, Easystroke MouseGestures.

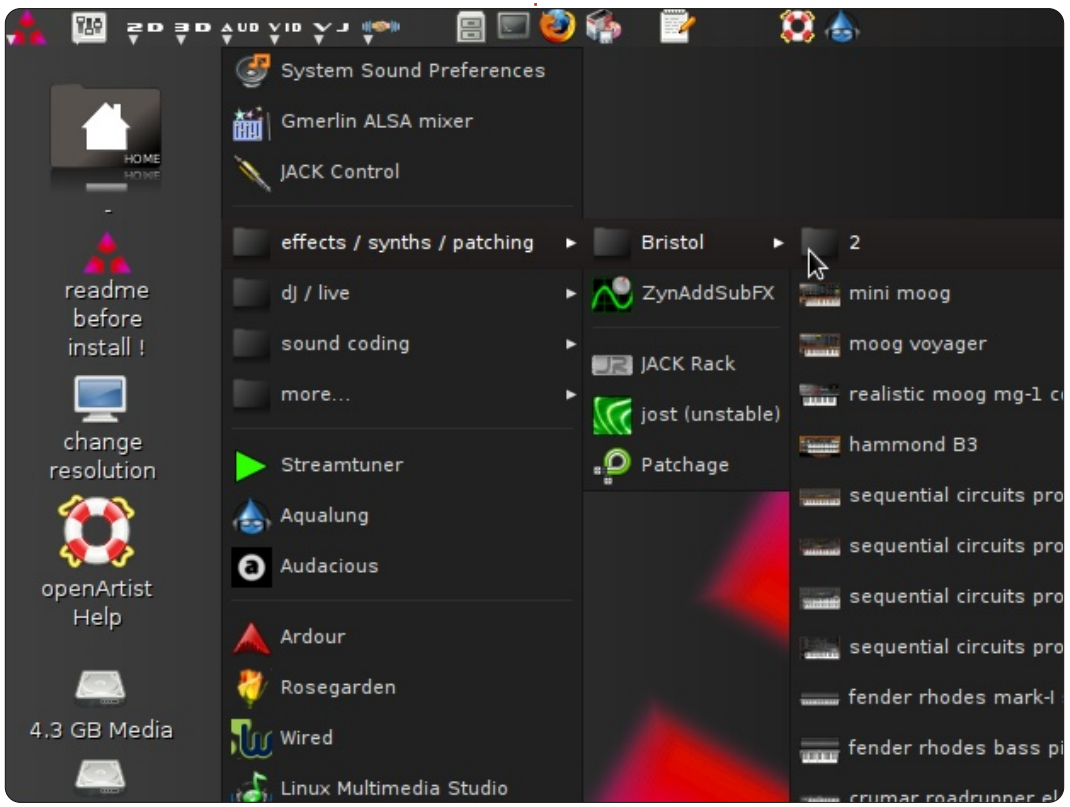
While this may appear impressive, what's really astounding is that another 1,000+ apps are not listed above!

Naturally, there is a sense of redundancy in having this many programs, but they are there and users have the option of using what they want and ignoring or uninstalling the rest.

The beauty of oA is that programs cover a wide range of categories and are not all artist-oriented. Most menu categories are well stocked, and some odd security apps are in the mix such as Wireshark and aircrack-ng. Even Firefox has the Scroogle Scraper add-on that cloaks web searches. Must be underground artists out there enjoying wireless code cracking - while remaining anonymous.

But there is a bit of hocus-pocus in the menu. Not all of what you see is actually there.

Although not an accurate count, nearly 60 programs have either gray question marks or white boxes with blue borders as icons, and these designate recommended but not installed programs (only one, LibreOffice, had "Install" in the title, the rest were just marked with icons). According to the website, these were not installed due to space or licensing issues (the design of icons for these programs also varied. Some got question marks, while others saw the blue and white boxes - so I can only guess each computer interprets the icons differently).



Clicking on one of these "programs-to-be" initiates a process in which a terminal window opens to execute an automatic apt-get install command. There is no user interaction in most cases beyond this – just sit back and watch the show.

While some are small and take little time, others are humongous. Ableton Live was 620MB to download, and took 900MB once installed, and a few others tipped the scales at 100MB+. When all was said and done, I saw my HDD usage balloon from 9GB to nearly 16GB, which is why I'd recommend no less than 20GB if you plan a full installation. Those opting to use persistence via a USB drive had better plan on buying the largest stick available.

Would it be simpler to make a list of affected programs and perform a one-time bulk download via Synaptic Package Manager?

Sounds great, but it's not quite that easy. Some of these programs are not listed in the repositories, and a couple (like virtualdub and avisynth) are Windows programs designed to work in Wine. Try if you like but I seriously doubt it will shave much time off the procedure.

How long did it take me to install these apps? Roughly 8 hours over 2 days. Of course there is nothing to say you must install these, but it's nice to know they are available should the need arise.

There were a couple of installation failures, such as Remastersys and LibreOffice, but these turned out to be site problems or links pointing to out-of-date versions (the former has been discontinued while the latter apparently changed versions). In both cases, I merely found other outlets and got the programs from there.

In most behemoths like oA, you can expect a raft of programs that don't work, but I had just one failure to cooperate, and that belonged to mintUpdate (it had a stroke during a repository update so I switched to Ubuntu Tweak and never had a problem again). These are not cellstorm problems, so I'm not going to ding him there.

Those preferring other than Gnome have four desktop choices -- Hildon, Openbox, Ardour, and Blender (the last two being Openbox variations that autostart the listed program).

Originally designed for Nokia devices using the Maemo.org OS, cellstorm admits Hildon is an experiment at this time and, quite frankly, it never worked for me. Consisting of a black background with a settings icon in the right corner, users will soon discover this icon disappears if a mouse click comes remotely close, and the only way out is Ctrl, Alt and backspace.

Unless you like playing “chase the disappearing icon”, pass on Hildon.

Openbox has the standard desktop or variations that open either Ardour or Blender automatically (but the underlying desktop is still Openbox). No matter the choice, Openbox operated much quicker than Gnome once booted (LibreOffice scooted to an open page in less than 5 seconds compared to 15 in Gnome); however, it was no quicker from a cold boot than Gnome (indicating it's the hardware checks that are dragging the process down). Logging out of Gnome to Openbox was a different story. Once your password is entered and okay is clicked, the ready desktop appears within 2 seconds.

Curiously, CPU usage in Openbox was an almost non-existent 2% on average - with rare spikes above 5% - but RAM stayed

at 14% at idle - with spikes to 25% (higher than Gnome).

The Openbox menu structure is different than Gnome's, and that's both good and bad. The “block” style program listing is there, but the icons and separator lines are gone, and the theme goes to white letters on a black background. For whatever reason, I found this easier to comprehend than the Gnome version, but there is a slight hitch. Since there are no icons in Openbox (just program titles), users have no way of knowing which programs are not yet installed until they click and see the terminal box.

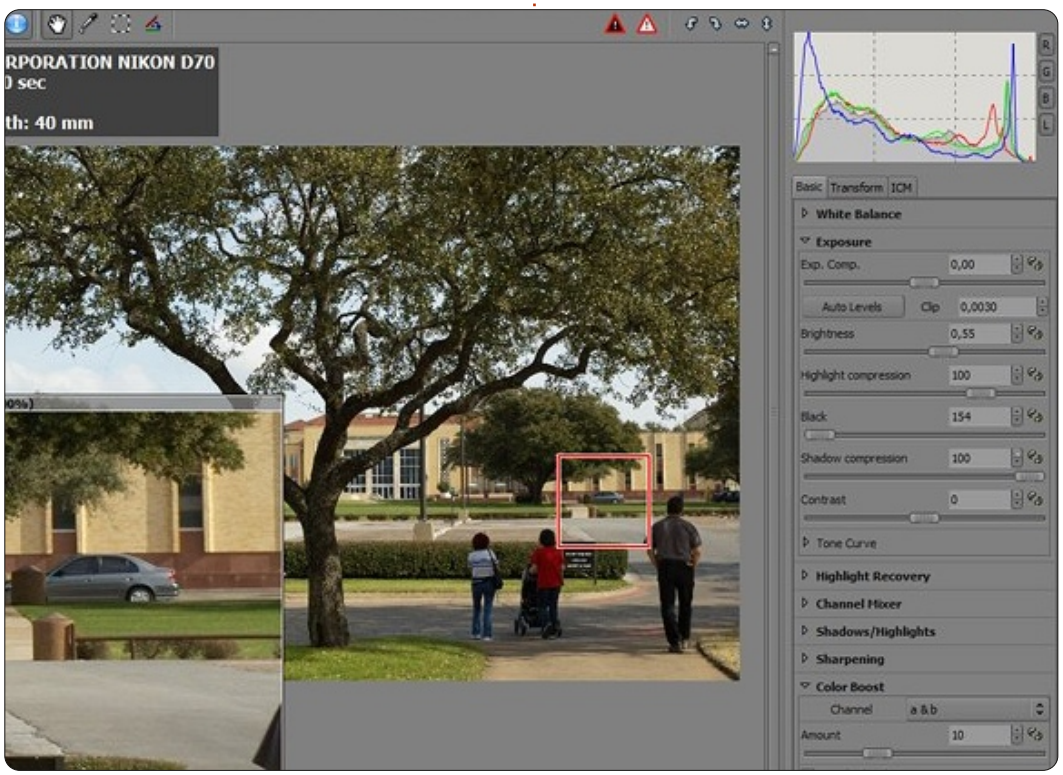
I'd recommend starting with Gnome until the programs-to-be are installed, and then switch over to Openbox for the faster interface.

At this point, some are undoubtedly itching to ask how oA compares with ArtistX, the other Ubuntu based distro for the artistically inclined.

While ArtistX may be better known (they rate a DistroWatch mention), it's limited to 32-bit, admits to being Ubuntu with a boatload of unmodified repository programs, and stacks the deck with artistic apps to the detriment of other categories (such as deleting the Games entry completely).

Given enough time and bandwidth, just about anybody can take base Ubuntu and pack enough programs to create an ArtistX clone. I seriously doubt many can create an oA knock-off, though, especially since some of the programs are for Windows, made to work in Ubuntu or heavily modified from what you'd normally expect.

I let several friends test oA for just over a month, and most came to the same conclusion – oA is a powerhouse packed with programs you just won't find anywhere else. True, it's a little quirky, and takes some getting used to, but that's part of the fun.



The truth remains that oA is packed to the rafters with programs, many of which are not to be found in any other Ubuntu derivative. Packing a Windows computer with apps like these - and you can count on draining your bank account quickly.

This isn't to say it's all roses with oA. Sure, you can install the OS, and ignore all the programs-to-be, but why? If you want something ready-made, go with plain Ubuntu or the lighter-weight ArtistX. If you want something unique, and yet stable, go with oA. Chances are you'll be the only one in your neighborhood (and possibly state) with this OS.

Okay, the menu design is initially awkward, some menu programs aren't there until you force the issue (never saw that before), and OS documentation outside of the website is nearly non-existent (CIA classified missions get more coverage than oA), but remember you can't get that shiny pearl without shucking quite a few ugly oysters.

Even with all the design peculiarities, I didn't have anybody give up on it (one user even cloned my hard drive thinking there was no way they could get it all for free), and I heard just a couple complaints (mainly about the menu design and slow boot times).

Helping matters greatly is cellstorm's forum participation via the oA website. The forums may have sporadic usage, but if you post a question he responds within a day, and seems more than willing to assist those having problems (making me wonder why oA isn't better known).

Given a few changes, mainly to structure and some procedures, oA could jump up in the pack to become a known entity instead of being the ghost it currently is.

LETTERS

Every month we like to publish some of the emails we receive. If you would like to submit a letter for publication, compliment or complaint, please email it to: letters@fullcirclemagazine.org. PLEASE NOTE: some letters may be edited for space.

Connecting The Garmin

To download data from a Datalogger-GPS Wintec WBT 100 under Ubuntu:

```
sudo gpsbabel -t -w -i wbt,erase -f /dev/ttyUSB0 -o gpx -F out.gpx
```

Remove and replace the batteries from your Garmin, connect the USB cable, and turn the GPS on while connected to your PC. Now type:

```
lsusb
```

You should see something like:

```
>> Bus 004 Device 002: ID 091e:0003 Garmin International GPSmap (various models)
```

which means the Garmin has been found. Otherwise disconnect and reconnect.

To download track data from your GPS map Garmin 60CSx under Ubuntu, type:


```
sudo gpsbabel -t -w -i garmin -f usb: -o gpx -F out.gpx
```

To upload way points and track data made using the Visugpx site, type:

```
sudo gpsbabel -t -i gpx -f trace.gpx -o garmin -F usb:
```

Laurent Aldon

Ctrl + Alt + Del

I have a question. One of the things I like about Windows is the "Windows button + E" combo that brings up Explorer. Is there a similar thing in Ubuntu? And, while we are at it, is there something similar to the ever popular Ctrl-Alt-Del?

These are really small beefs, and I can't sufficiently thank anyone who has done anything to further the Linux cause over the years. Every time I use GIMP or OpenOffice, I feel like I am pulling a fast one on the rest of the world.

Geoff Coleman

Gord says:
(Thanks to ***Roy*** in the Ubuntu Linux Yahoo Group)
http://www.ubuntu-unleashed.com/2011/04/complete-list-of-ubuntu-unity-shortcut.html

http://askubuntu.com/questions/28086/what-are-unitys-keyboard-and-mouse-shortcuts

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- ubuntuforums.org/forumdisplay.php?f=270

http://www.techdrivein.com/2011/04/31-useful-ubuntu-1104-unity.html

Screensavers and Themes

I no longer have any Windows computers at all. I love Linux and the open source movement in general. I am still only an intermediate user (the terminal annoys me), so I'm not as knowledgeable as some. But, I have noticed a change in 11.10 and

the 12.04 alpha of Ubuntu that certain "intermediate" user type things are missing. Screensavers are completely gone, and the startup application menu is empty - with no obvious way of showing the list that used to show in the old releases. I even tried launching it from the terminal with sudo, but it still doesn't make any difference. And the inability to change the colors of Gnome themes really ticks me off!

Is this just temporary as we switch to GTK3, or something users like me need to get used to?

Clem

Gord says: this page has instructions: http://www.addictivetips.com/ubuntu-linux-tips/how-to-activate-screen-saver-in-ubuntu-11-10/

Movin' On Up

As I sit down to write this letter, I cannot help to think that Mr. Shuttleworth had good intentions with Unity and Ubuntu. I sense that the community felt a loss when they realized that Ubuntu was being sacrificed for commercial interests. Perhaps, the idea was to create a tablet or mobile centric distribution? Elimination of the Ubuntu Netbook Edition represented, in my opinion, a leap that the community was not ready to make.

What options do we have? There are plenty of distributions available - such as Fedora, OpenSuse or Arch. However, instead of any of those, let's consider another distribution closer to home. Back in May of 2011, Lubuntu was officially recognized as an Ubuntu derivative. I tested Lubuntu and found that it is trim and lightweight, just like Ubuntu used to be. If you intend on switching away from Ubuntu because of this Unity debacle, I suggest giving Lubuntu or another derivative a try before completely leaving us. I think that you will find loyalty and community is still a part of the Canonical values, even if it looks a bit off right now.

Mark Moore

I have been using Linux for about a year now, and have used only Mint10+KDE and Kubuntu 11.10. (Now Gnome, Ubuntu,) I recently found out that I could add extra desktop environments. From my login screen I can choose from KDE, Ubuntu, Gnome, Gnome Classic, Cairo, and a few others for low graphics mode.

On to my question. I have been reading all the hate letters about Unity the desktop - "Not a big fan myself," and the complicated methods of changing it back to Gnome. Why don't users download another desktop environment? Are there any cons about doing this?

I have seen some minor blending of the two Kubuntu & Ubuntu, such as Ubuntu programs and icons, but nothing bad that I've seen.

Rob

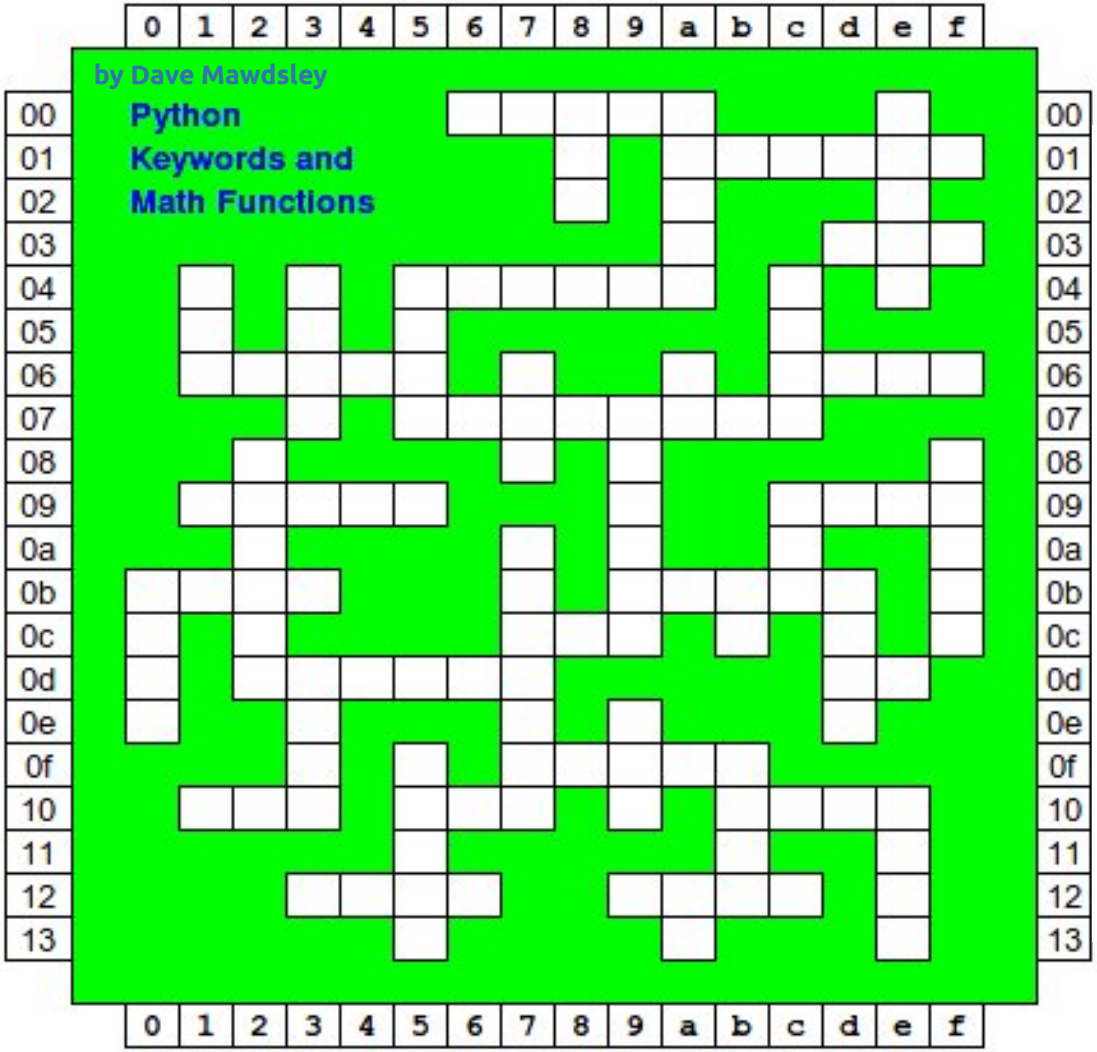
Nvidia Woes

I love Linux, but the one thing that prevents me from using it is my Nvidia card. It comes with Optimus, and my laptop doesn't have a switch to turn Optimus off. I tried Bumblebee and Ironhide (or whatever it's called), and neither worked. Nvidia needs to step it up and help out Linux.

Ben

If you would like to submit a puzzle for publication, please email it to: letters@fullcirclemagazine.org. Solutions are on the second last page of this issue. No peeking!

A Crossword Puzzle of Python & Maths

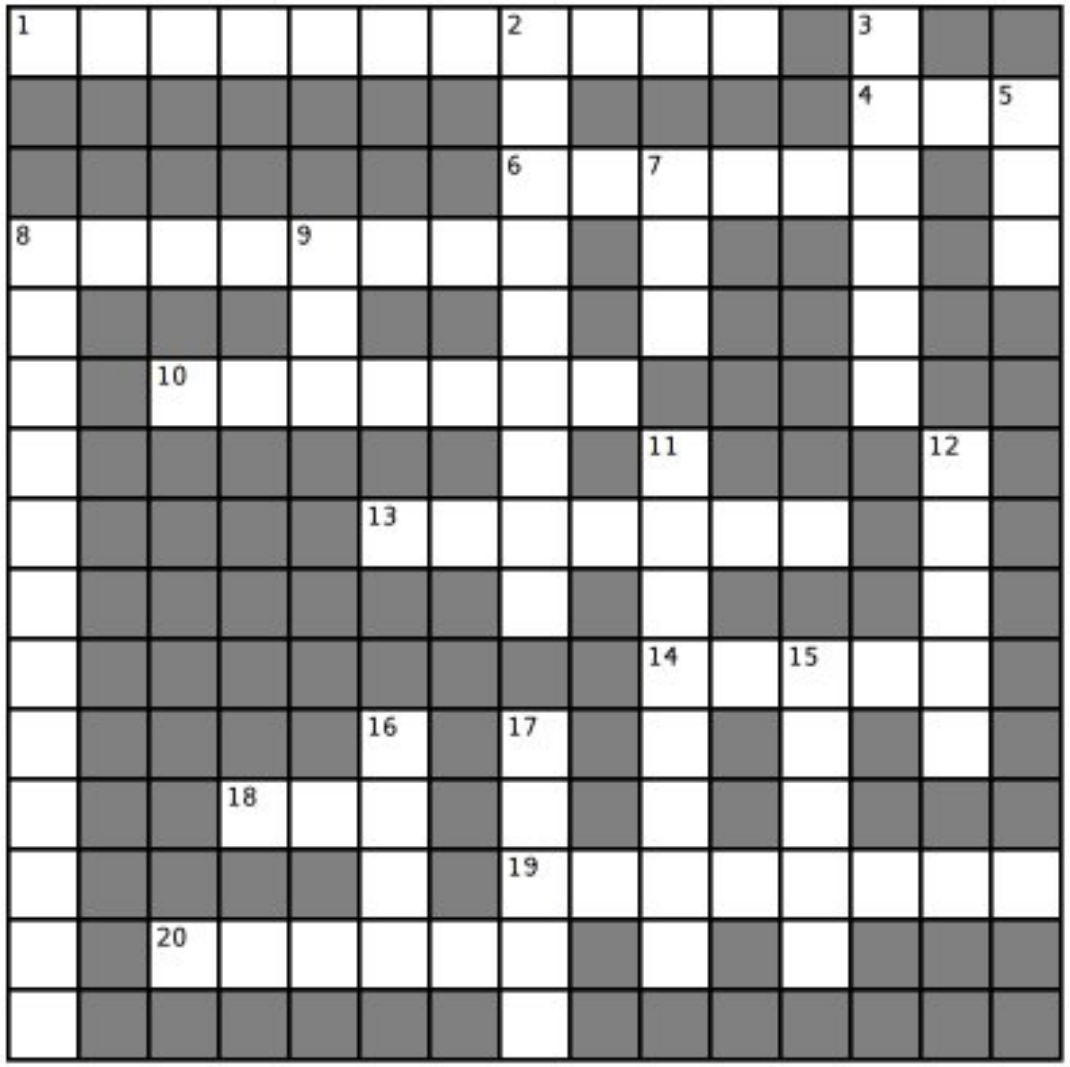


	Clues Across		Clues Down
00 6	f(8) = (0.5, 4)	**00 8**	For professional help call an ...ert.
01 a	April 15th chore	**00 a**	Doctors should ... prescriptions.
03 d	ratio of opposite leg to adjacent leg	**00 e**	water cooler task
04 5	Use of 'try' usually leads to ...	**04 1**	when superman's fist hits something
06 1	Don't ... away your productive hours.	**04 3**	function returns pi/2 when given 1
06 c	lead pipe cinch	**04 5**	A factory worker isn't one of these.
07 5	loop control feature	**04 c**	"Eat that dinner or ...!"
09 1	Go to the head of the ...	**06 a**	... like Flynn!
09 c	a seal of a different kind	**06 7**	... another thing!!!
0b 0	function of -11.9 is 11.9	**07 9**	Sometimes local wine is better.
0b 9	To speak, first ... your hand.	**08 2**	Some newer cell phones can go ...
0c 7	I'm ... your ordinary guy!	**08 f**	elevator destination
0d 2	anonymous function without 'return'	**09 c**	ratio of adjacent leg to hypotenuse
0f 7	function of 1.5 and 4 yields 24.0	**0a 7**	special exit from a 'try' block
10 1	ratio of opposite leg to hypotenuse	**0b 0**	f(3.4) = (0.39999999999999991, 3.0)
10 5	If at first you don't succeed ...	**0b b**	... only I had a Porche.
10 b	function returns pi when given -1	**0b d**	misspelling of elf
12 3	function of 0 is 0.0	**0d 3**	reason for vacationing in Florida
12 9	f(2) = 3.7621956910836314	**0e 9**	A person with no hearing is ...
		0f 5	f(1, 2) = 0.46364760900080609
		0f b	lateral ... in a sport
		10 e	Square trees must have...
		12 a	historical route: ...egon Trail

The solutions to all the puzzles are on the second last page of this issue. **No peeking!**

CRYPTIC CROSSWORD

by Ilavenil Thirumavalavan



Across

1 You might be free to work here (11)
4 Messaging protocol in a circle (3)
6 Test drive a Linux distro using this (6)
8 Mixed up, bad, at sea? Try organizing your information in this (8)
10 If you use Linux on your mobile, you're probably using this OS (7)
13 A twisted lamprey is a versatile media player (7)
14 Character encoding scheme (5)
18 An interface for Windows users (3)
19 Manifestation of a browser (8)
20 They are likely to use 16 down (6)

Down

2 Mutant FTP solution (9)
3 Instant messaging in derived language? (6)
5 If you like the terminal, this is the interface for you! (3)
7 Vigorous, energetic, text editor (3)
8 Linux philosophy, according to Torvalds (2,2,8)
9 Berkeley UNIX? (3)
11 Package manager related to a part of a neural network? (8)
12 As clear as a Lynx (5)
15 Temporary storage scattered in a catechism (5)
16 Alcoholic emulator (4)
17 Log on as this if you are new to a computer (5)

The solutions to all the puzzles are on the second last page of this issue. **No peeking!**

Q&A

Compiled by Gord Campbell

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

Q How can I uninstall a program?

A Go to the software centre, search for the name of the application, select it, and click the "uninstall" button.

Q How can I install iplist (aka IpBlock) in 11.10.

A Use pgl instead, the successor of moblock/blockcontrol/mobloquer. http://sourceforge.net/projects/peerguardian/

Q I have lost my password. How can I log on?

A (Thanks to ***bcbc*** in the Ubuntu Forums.) Boot in recovery mode. You might need to select the third option, "Remount read/write". Then select "root shell prompt." It will put you at a command prompt, type:

```
passwd [userid]
```

where [userid] is your userid. In my case, it's gord. Enter your new password twice, then it should say your password was updated. Enter the command:

```
exit
```

Select "Resume normal boot," and you should be able to use the password you just created.

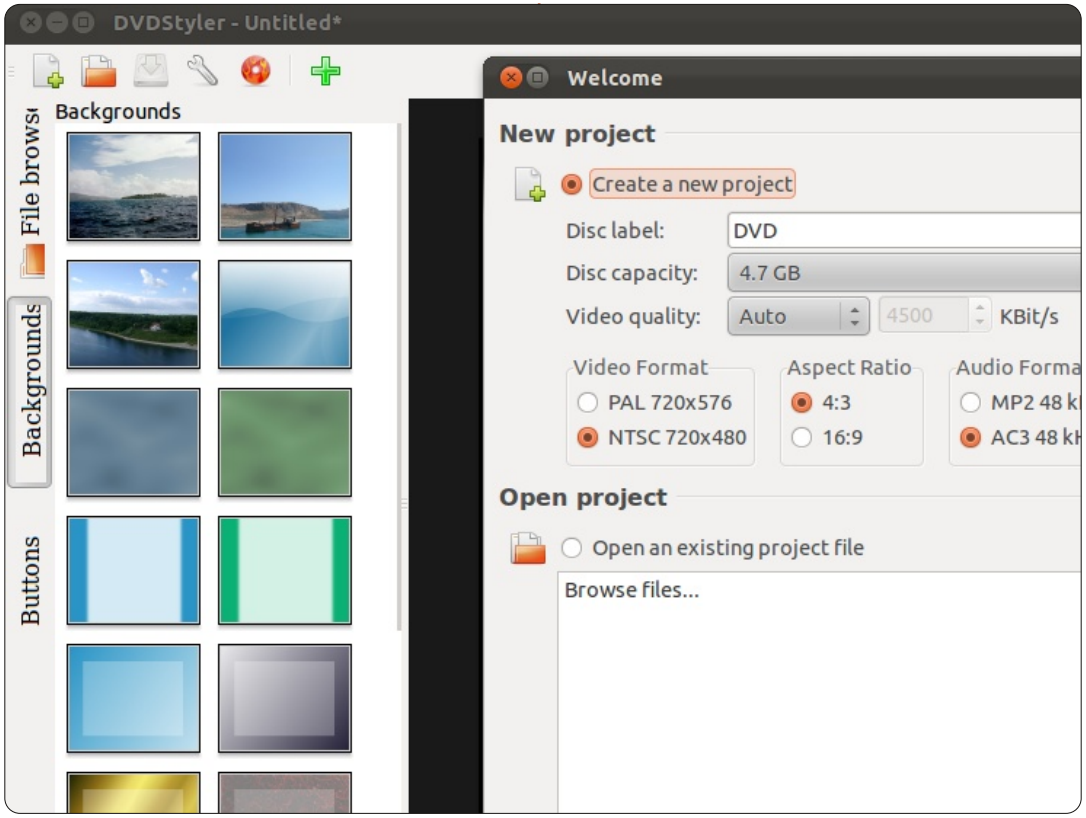
Those of you concerned about security should note that this method provides anyone (who has physical access to your computer) complete access to all the programs and unencrypted data.

Q Will *Microsoft Office Professional 2010* work under Wine?

A Yes, with Wine version 1.32. See this for full instructions: http://ubuntuforums.org/showthread.php?t=1885051

Q Running DVDstyler fails with a segmentation fault in Ubuntu 11.10.

A (Thanks to ***Rattus*** Norvegicus in the Ubuntu Forums) It works fine under Gnome Classic.



Q Using Ubuntu 11.10, how can I get my Firefox bookmarks over to a new machine? They've taken out the Backup/Restore using a .json file.

A Open "Show All Bookmarks." Now, move your mouse up to the left half of the top panel, and "import and backup" will appear.

Q I installed Xubuntu 11.10 on my desktop. In live mode, it showed my hard drive partitions on the desktop as icons, but, once installed, the mounted partitions are not shown on the desktop. Why?

A The LiveCD is run from CD or USB, so hard disk partitions are viewed as external. For a hard disk-based OS, partitions are internal. Only external media appear on the desktop.

Q As far as I can make out, Oneiric does not work with Intel GMA500 video?

A Have a look at http://ubuntuforums.org/showpost.php?p=11356431&postcount=4605

Q Is Avidemux available in the Ubuntu 11.10 repositories yet? It wasn't when 11.10 was first released.

A (Thanks to ***linuxman94*** in the Ubuntu Forums) Yes, it is. For future reference, you can check what repos packages are in by searching in http://packages.ubuntu.com. Note that you might need to search through all three of oneiric, oneiric-updates, and oneiric-backports.

Q I am trying to install Drupal. "sudo apt-get install drupal7" said the package is not found.

A Even the latest version of Ubuntu still has Drupal6 in its repositories, while 7.10 is available at drupal.org.

Q I have a hot new system with an MSI Z68A-G45 (UEFI) motherboard and i7-2600k CPU. Several versions of Ubuntu all hang at the same place early on in the boot, just after detecting USB pen drive or USB hid, when booting from CD.

A (Thanks to ***Trevelyon*** in the Ubuntu Forums) I used the nomodeset noacpi options and the installation CD comes up. Also had to add them (after installation) to boot from the SSD.

Q I downloaded the Ubuntu 10.04.3 32-bit desktop ISO, then used Startup Disk Creator to make a bootable USB stick to install Ubuntu on several other computers. When I boot from it, I get "Boot Error" on a blank black screen.

A Try using Unetbootin to create your USB stick, and if that fails, burn a CD.

Q I'm using Ubuntu 11.10. I recently installed gtkpod to upload songs to my classic iPod. When I open gtkpod, it just has a blank screen - the iPod is nowhere to be found. It shows up in the places list and the audacious music player.

A (Thanks to ***sasasas*** in the Ubuntu Forums) I installed Amarok. GTKpod would have been nice as it has the ability to remove duplicates.

Tips and Techniques
New Technology, 2012 Edition

New technology always causes disruptions, and UEFI (Unified Extensible Firmware Interface) is no exception. For now, UEFI appears to be replacing or supplementing the BIOS on high-end desktop systems, but you can expect it to spread throughout the industry over the next couple of years. If you're thinking of buying a new computer, you should check on the current state of support for its various features before you buy.

UEFI supports hard drives larger than 2 TB, and brings graphics and the mouse to the power-on interface. It also opens up a lot of potential for the future, which was not possible with the 16-bit, 1 MB limits of the BIOS. The large hard drives use another new technology, GUID (Globally Unique Identifier) Partition Table, or GPT, instead of the old MBR partition table.

The other hot new technology is Solid State "Disks" (SSD), which cause their own disruptions.

The combination led Antti Kirjavainen, who logs on as Ubutuxer, to ask this question in the Ubuntu Forums: "is it possible to get Ubuntu 11.10 or 12.04 to boot from an SSD connected to an Asus P8H61-I motherboard?" Three days later, he posted the solution!

In his first post, Kirjavainen explained that he could boot from a USB stick, and install Ubuntu onto the SSD, but when he booted the installed system it yielded a black screen with a blinking cursor.

Oldfred, Zensov and Robgill commented on the question, then Kirjavainen gave the solution. In his (slightly edited) words:

1) GPT partitioning seemed to be a problem for the Ubuntu installer. I took the SSD out of the PC, plugged it into another PC with a SATA-to-USB adapter, and created a normal partition table on it without any of the non-working GPT crap. I created the partitions as follows (with cfdisk, gparted also works):

1: FAT 32 partition for the EFI bootloader. I set this to 500 MB size and formatted it with mkfs.vfat.
2: / (root) partition (ext4).
3: /home partition (ext4).

I use no swap on computers like this, that have 16 to 32 GB of RAM.

2) I kept the SSD plugged to the other PC with the SATA-to-USB adapter and mounted the boot partition. I created a folder efi/grub under it with the command "mkdir -p efi/grub".

3) Now the disk was ready for installation. I put the SSD back in the new PC, booted up Ubuntu installation from the USB stick and installed it as usual, formatting / and /home as ext4 in the process.

SUCCESS!!!

The PC boots in about 10-15 seconds, as you'd expect from an SSD. The network card on this motherboard works on Ubuntu 11.10 out-of-the-box as well. 10.04 doesn't seem to recognise it, 11.04 I'm not sure.

My advice to others reading Ubuntu's EFI/UEFI instructions:

Do NOT start recompiling Grub or other more complicated stuff. It is completely unnecessary.

The instructions are outdated for 11.10 and just creating the FAT partition with a folder efi/grub is enough for Ubuntu to automatically recognise and install the bootloader there. Ubuntu 11.10 already has a working GRUB for EFI systems, you do NOT need to compile one yourself, at least not for the Asus EZ.

So, in short: create the partitions on a non-EFI system, mkdir 2 folders and install. If I only knew from the start that it was this simple....

After a long career in the computer industry, including a stint as editor of Computing Canada and Computer Dealer News, Gord is now more-or-less retired.

Gema Gomez-Solano

Elizabeth Krumbach: Can you tell us a little about yourself?

Gema Gomez-Solano (above): I love good software and computers. When I was at high school, and I watched the film Sneakers, I decided to become a Computer Engineer. I admired those computer wizards who could do almost anything with a keyboard. I really wanted to be part of a group that could do cool things with technology, no matter how complicated.

I studied Computer Engineering in Barcelona, Spain; a Master equivalent degree at the Catalonia Polytechnic University. After finishing university, I was hired by a security company in Barcelona to do security audits and assessments.

In 2004, given my security background, I was offered a role in London as a Test Engineer at Symbian within the security team. This was my first time working at an English company, and in an international environment. We had teams in the UK and India, and later in China. Testing an operating system was one of the most complex and enlightening experiences of my career. I grew as a tester and as a QA engineer during the first years there. The security team moved to Cambridge and I decided to stay in London doing integration testing within the kernel team.

Then, in 2007, Symbian decided they wanted to build a strong System Test team, and offered me the Technology Architect position for that team. We built a technically strong test team who changed the quality of the OS visibly and for good. It felt great to see that project develop after all the battles that we had to fight to make it happen.

Then Nokia took over Symbian, and announced it was going to become open-source. After spending 9 months helping the team to integrate in the new organisation, I decided to take some time off to rethink my career to find the next challenge. I had seen the team grow and establish itself as a smoothly running testing team, so my job there felt done and I was eager to find a new project that I could help develop and build.

As my next challenge I took up an opportunity to join VMware in London. I did API testing for almost a year with them but it didn't really feel like the challenge I had been seeking. So I kept trying to find what I was looking for, and that's how I came across Canonical and the Ubuntu project. It was an operating system; it was in need of testing if it was to become the predominant OS. And, most importantly, it was a chance to collaborate with a great community from around the globe. This opportunity got my attention instantly, and, when I was offered the QA Engineer position, I didn't hesitate.

Five months and one UDS down the line, it still feels good and lots of things are starting to happen within the Canonical Platform QA team and within the community in terms of QA. I enjoy seeing how my work has a direct impact on a system used by millions worldwide. I would like to see Ubuntu become the operating system everyone uses and that comes with every computer that is sold. Most importantly, I personally would like to see the QA work that we are doing for Ubuntu become a de facto standard in terms of quality assurance and good testing practices.

EK: How and when did you first get involved with open-source?

GG: The first time I thought about open-source as a way of making software was when I was told Symbian was becoming open-source. We had to think about how to make our code available to everyone, as well as keeping the continuous integration and testing of the code going. That was the first time I really thought about the concept of open-source, and realised how powerful the idea is.

My partner has been a developer of an open-source project, Dragonfly BSD, for some time now. I have seen him work on that project, and interact with its community, for years. He tried to convince me to do testing for them - but I was so busy with my day-to-day work that I never had enough quality time to dedicate to that.

So my first real taste of open-source, and being part of a community, has been with Canonical and the Ubuntu Project. I am learning to work with the community and to bounce ideas back and forth until they become work items and get implemented. Initially, the QA list felt somewhat lifeless, and the community was a bit stuck on what it was doing. Not much collaboration was going on

ubuntu qa

so we split some of the tasks our team was doing this cycle, and made them available to the community. We've raised the awareness of testing, and plenty of community members have started to collaborate with us, and a lot of discussions are going on at the moment regarding the future of QA in Ubuntu. All geared towards taking the quality of Ubuntu to the next level.

I have also started talking to the Mozilla QA team regarding a test case management tool (Case Conductor) they are creating that we would like to use for Ubuntu as well. They are keen on collaborating, and would like to gather requirements from us so that the tool is fit for purpose for Ubuntu, too. We will soon be involved in beta-testing and other collaboration with the Mozilla team on this tool. So inter-community collaboration is something I am exploring at the moment.

EK: What is your role within the Ubuntu Project?

GG: I started working for the Platform QA team at Canonical back in August, and I have been watching the project during the final stages of Oneiric Ocelot as well as learning more about Linux and the community.

I wrote a high level strategy of what I think needs to happen in the coming 2 years for our quality levels to rise significantly. The plan was well received at the management team, and we got a green light to start implementing it. I have since moved to be the technical lead of the Platform QA team. We are currently working on putting the right tools in place so that developers can act on the important defects as soon as they are found. The Daily ISO testing is already following this principle, and its quality is improving noticeably as we speak. We are keeping track of the defects we find as part of our testing efforts, and of the defects we didn't find but are found later in the development cycle, so that we can improve the testing of future releases. Our overall aim is to build a solid automated testing suite as soon as we have the basics in place.

We changed the format of the meeting to make it more QA focussed, splitting it from the Bug Control meeting. Now both groups have different times to meet and discuss their issues and progress, and we have a set of tasks that community members are contributing to, with the aim of improving the quality of Ubuntu. I am driving and coordinating this effort at the moment, but this is not going to be my focus going forward since there will be a QA Community Coordinator with whom my team will collaborate closely and I will be just one more community contributor. The QA Platform team will be helping shape the testing effort and trying to make every little effort a worthwhile contribution to the whole. Historically, there has been little leadership in the QA front, and we are trying to bring good practices from the industry to the open-source community to improve the situation.

EK: Do you have any suggestions for others who are looking to get involved with Ubuntu and open-source in general?

GG: I think open-source is an unstoppable force that is driven by a huge worldwide community. I'd

say the first step is to figure out what you want to do with your free time, then choose a project that you'd like to contribute to and see if they are in need of any of your skills; odds are they are. If you are a developer but do not want to write code in your free time, you might enjoy reviewing code or beta-testing a product to find problems, or triaging some bugs. Maybe you are good at languages and want to contribute by translating the software.

Or if you enjoy breaking software, and would like to do quality assurance and testing of a particular product, and you are prepared to join a very dynamic and challenging environment, I'd like to see an email from you on our ubuntu-qa@lists.ubuntu.com list (it's open to anyone: https://lists.ubuntu.com/mailman/listinfo/ubuntu-qa).

We are in the process of gathering as much help as we can get. The tasks that are being worked on at the moment at the community level for Precise are available on the wiki: https://wiki.ubuntu.com/QATeam/TasksPrecise

The QA Team for Ubuntu has a weekly gathering. Feel free to attend our weekly meeting and ask questions so that you get to know the team and what each one of us is doing. It takes place every Wednesday at 17:00 UTC in #ubuntu-meeting on freenode. We are thrilled to see new people show up and contribute. The agenda for the meetings, and details and logs of past meetings, are available here: https://wiki.ubuntu.com/QATeam/Meetings

Crayon Physics Deluxe

This month we take a look at a game that also has potential as a science teaching tool in comprehensive schools. Some time ago, I grabbed Humble Bundle 3, including Crayon Physics Deluxe - a thoroughly planned collection of physics puzzles you solve by drawing different shapes. As I'm also a student of physics, I was intrigued to test the realism of the game. It turned out to be pretty much what I expected -- and more. Plus, it was created by the Finnish game developer Petri Purho of Kloonigames.

Installation & Overview

There was no trouble getting the game going, I just downloaded the .deb file and installed it with:

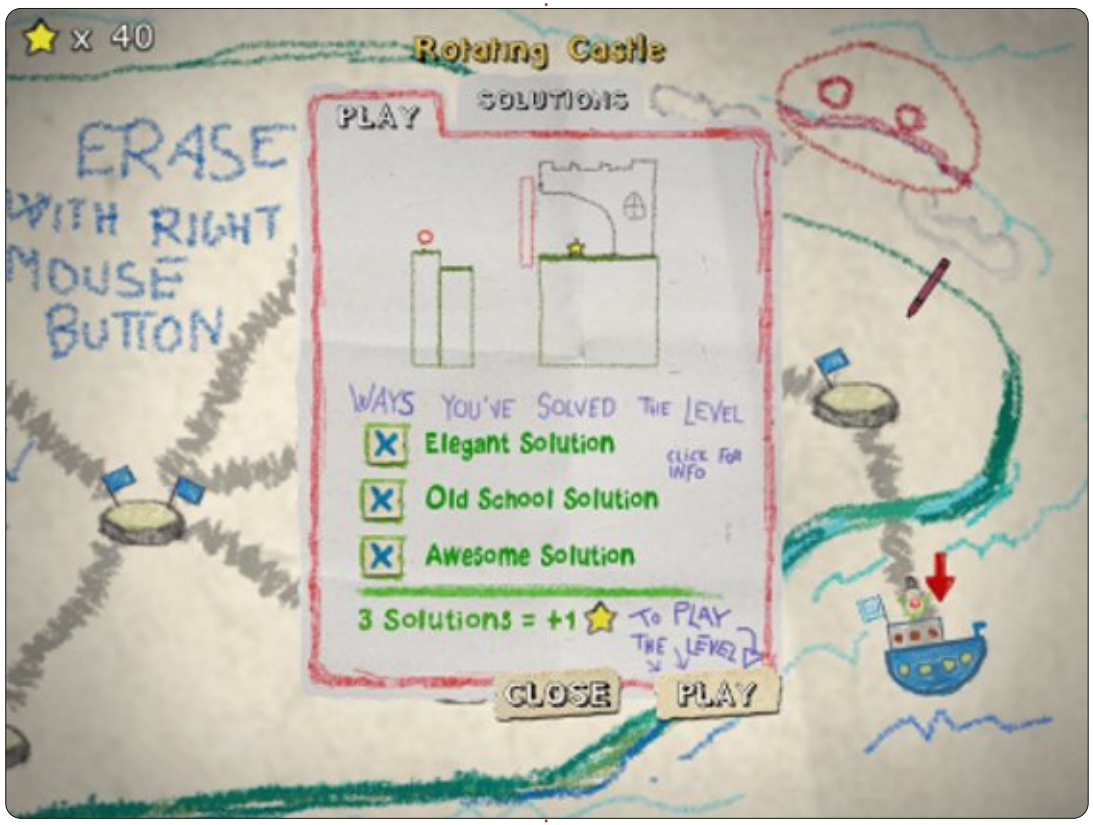
```
sudo dpkg -i package_name.deb
```

The minimum requirements, at 1 GHz, 512 MB RAM, and 128 MB graphics RAM, are easily met (if in doubt, you can download the demo at http://www.crayonphysics.com to test your specs). When you start Crayon, you are asked to register for additional features but this is not obligatory.

Because of the really calm music and bright-coloured graphics, my first impression was that this is probably a game for children or something. The levels seemed very easy, and I hacked through forty of them before realizing I had completely missed the point. Crayon is about elegance. Not only is it enough to find a solution to a problem: it must be "a good one", i.e. meaning not to draw unnecessary objects. To complete each level perfectly, you have to come up with three different ones: elegant, old school, and awesome. The awesome solution is something you can choose freely among the ones you have developed to solve the problem.

Gameplay & Features

Basically, you control a pen with your mouse, and draw objects of various dimensions to create dynamical movement. In each problem, your goal is to move a ball

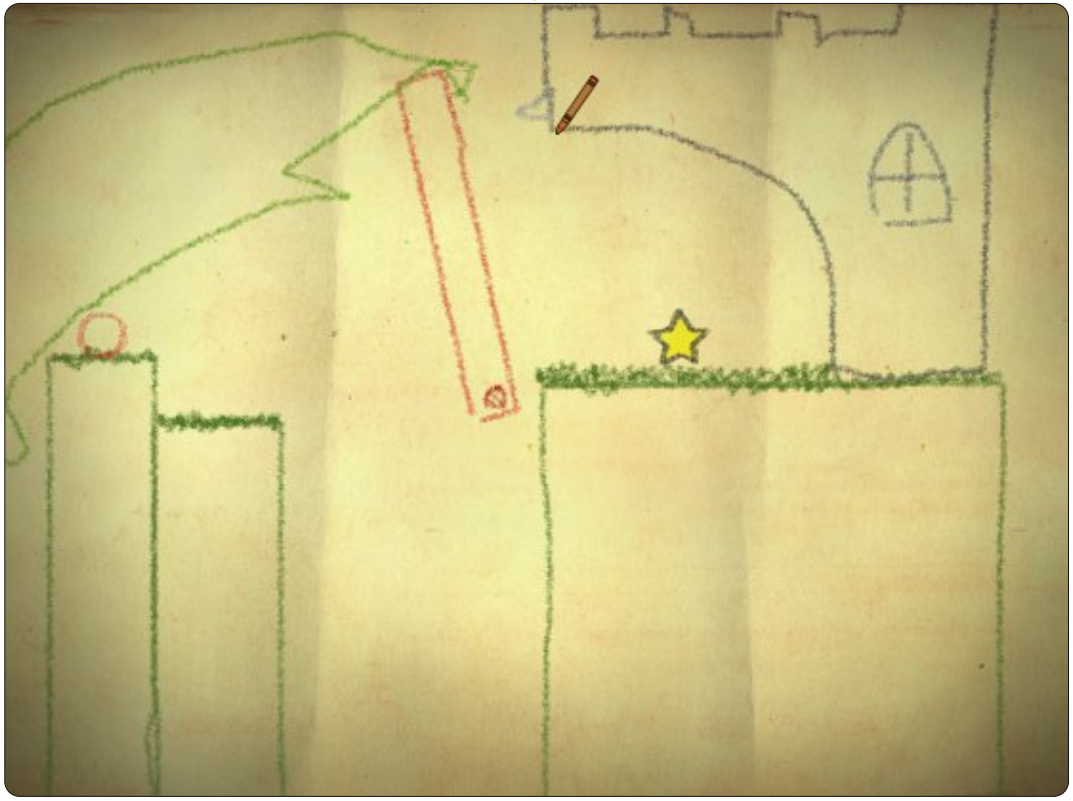


in such a manner that it will collide with a star, or, in some cases, multiple stars in one run. You can cheat by clicking on the ball to give it a small initial movement boost; this is not allowed in proper solutions. Actually, you can go further and realize that by adding objects beneath the ball you increase the potential energy (the energy associated with "higher ground" that is readily transformable to movement) of the ball, thus having an "infinite" supply of energy (in practice, the energy is limited by the height of the screen). Once you notice this little trick, there is no point in finding just some solution: it has to be a reasonable one, using the properties of the laws of physics instead of "faking energy".

As for the gameplay itself, everything works as it should. Controls are introduced along the way so there is no need for a separate tutorial. Physics modelling is good. Only one slight problem occurs when you have multiple objects very close to one another. If you try to delete a specific one, another might accidentally disappear. This is not a real problem, though, if you play by the rules, in which case you need only a few objects for a good solution.

The rotating castle problem and its solution are presented. The huge green-colored "arm" drags the bridge down, and gives the ball a movement boost towards the star. Most solutions, like this one, are developed by making small adjustments to known solutions (of course, in the beginning there are no "known solutions", so you have to create one).

The offline game alone has over 70 levels to provide tens of hours of excitement, if one commits to find all the elegant solutions without extra help. Registration gives access to extra content, and there is also a level editor for creating custom physics models of one's own. Some of the levels towards the end are very, very difficult: I noticed that my physics background did not help me much. In one custom scenario, a rocket is used to guide the path of the ball. A rocket is one of the standard components of Crayon Physics.



Crayon Physics as a teaching and learning tool

I started my university studies to become a physics teacher, and, as far as my experience can tell, this game would be an awesome tool in comprehensive school. It makes Newton's laws become real through meaningful experiences, not just some non-living graphs in textbooks (which, by definition, are boring: games aren't). This is important, since the scientific research in physics education has shown students experience clear conceptual difficulties dealing with "real physics" (as opposed to problem-solving skills, which still could be excellent).

If I was to teach school physics now, I would contact the developer for a permission to use the game during lessons.

Where to get it

If you did not catch the Humble Bundle, Crayon Physics Deluxe can be bought at the Developer's website http://www.crayonphysics.com. Although a bit pricey compared with the Bundle, it's still a good choice. I'd recommend it to anyone into puzzles and physics!

Riku Järvinen (rierjarv) is a CS major student from Finland who delves into the Linux and Open Source gaming world once in a while.

Jamestown

Jamestown: Legend of the Lost Colony is the knockout debut from Final Form Games. This top-down shooter takes what we all know and love from classic shooters and gives it a refresh - with imaginative storytelling and amazing graphics. The solid gameplay is the cherry on top that makes this recent Humble Indie Bundle feature a great addition to any gamer's collection.

Jamestown takes place in the 17th century as the British battle for survival on colonial Mars. You begin your journey as an escaped convict from the Tower of London en route to the Lost Colony of Roanoke. Your mission is to clear your name by way of heroic deeds, which leads you to the Eastern Frontier - where John Smith helps to defend the colony from the allied Spanish/Martian troops.

There are four ships available - Beam, Gunner, Charge, and Bomber. Your first ship is the basic, yet still capable, Beam. On the keyboard, Z is the main attack and X is the special attack. In this case, a beam can quickly eliminate larger and stronger enemies compared to the standard Z attack. Enemies that are killed drop gold coins - which help fill your vaunt meter, which activates a shield for a short period of time and is quite helpful when there is an incoming barrage of enemies. The vaunt, which is activated by pressing the space bar, also gives you a bonus that boosts that level's star rating.

After completing a level, there is an in-depth breakdown of your performance such as enemies destroyed and highest combo. After a few stages of battle, you can head to the shop and spend that hard earned gold to unlock items like ships, challenge packs, and various game modes. Overall, the controls and gameplay are very solid and smooth; there were no noticeable glitches or bugs, and the controls were comfortable on both mouse and keyboard.

The graphics and soundtrack are an integral part of most games, but Final Form did an impeccable job

with the quality of the stage design, music, and sound effects. The detail and care put into the lush pixel environments give it a polished look, and Chilean composer Francisco Cerda created a beautiful soundtrack to complement it. These elements are what really set Jamestown apart from other top-down shooters on the market today.

Overall, Jamestown is a ton of fun to play, especially with a couple of friends in co-op mode. The shop items and challenge packs add to the replay value, and the graphics and soundtrack enhance the experience of this classic shooter with a twist. Jamestown is available for $9.99 at http://www.finalformgames.com/jamestown/.

Pros: quality graphics/sound, replay value, innovative story

Cons: none

Jennifer is a fine arts student from the Chicago-land area. You can find her on Google+ or follow @missjendie on Twitter.

Installing Minecraft

This article assumes you have Ubuntu installed and ready to go, and you're sitting looking at a Unity desktop [I'll add Kubuntu notes where I can - Ed].

First, you need a 3D video driver. On your nice new Unity desktop, which is probably confusing you, click on "Dash home" on the top left of the Unity desktop.

At the bottom of the screen you'll see some icons. Click on the Pencil/Pen/Ruler icon.

Top left of the next screen, you'll see "Additional Drivers." This is for your video card, and perhaps other things. (For Kubuntu, click K > Applications > System > Additional Drivers). Select an appropriate video driver, then click on "Activate." Enter your password in the box that pops up. Let the driver download and install. You'll probably have to reboot to load the drivers. The little gear shape at the top right of the Unity desktop has the shutdown option in it.

Now it's time to install Java. If you previously installed the "restricted extras," you probably have it already. If not, click on the "Ubuntu Software Centre." It starts out as the 5th icon up on the left side of the Unity desktop, looks like a shopping bag. (In Kubuntu, it's K > Applications > System > Muon Software Centre.)

Search for "Java."

You'll get several options, you want "OpenJDK6 Java runtime" (not seven - you want JDK six). Install it.

Go to Minecraft.net and download the minecraft.jar file by saving it on your desktop, or wherever you like. First, open it in your favorite archive manager, and poke around. You're looking for the favicon.png file. It's a picture of a Minecraft block, save a copy of it somewhere out of the way for later.

Go back to your minecraft.jar file, right click on it, and select 'properties' at the bottom of the menu. In the BASIC tab, click on the picture and navigate to the favicon.png you saved earlier. In the PERMISSIONS tab, check the "allow executing this file as a program" ("Is Executable" in Kubuntu) check box, and in the OPEN WITH tab (In Kubuntu you get this by right-clicking the file and selecting "Open With..."), and select OpenJDK Java 6 runtime - and make it default while you're there.

TIP: You can also enter:

```
java -jar
```

as the starting application to the 'open with' window in Kubuntu. You can also create a desktop 'widget' shortcut to the jar file in Kubuntu.

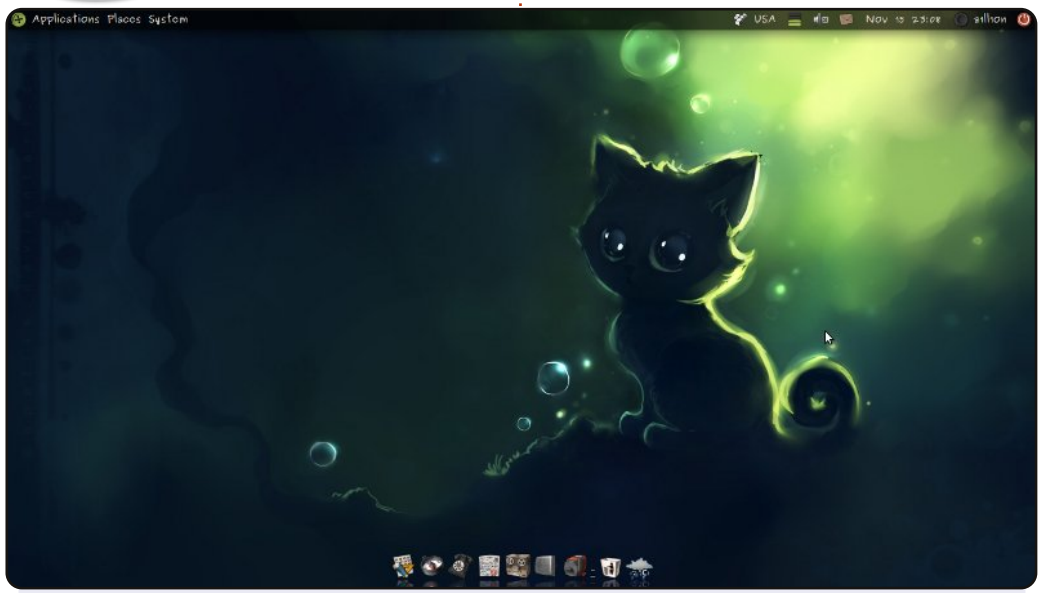
That's it! Run Minecraft, it'll download what it needs, and go.

I have it running at about 50 to 80 frames per second at 1024 X 768 resolution...on a 32 inch Toshiba TV! The 3D analglaph is mind-blowing, by the way... I was afraid of the depth at first (heights make me nervous), and those holes into the bedrock gave me the willies!

Your system may vary slightly or a great deal, but that's how I got mine going perfectly.

MY DESKTOP

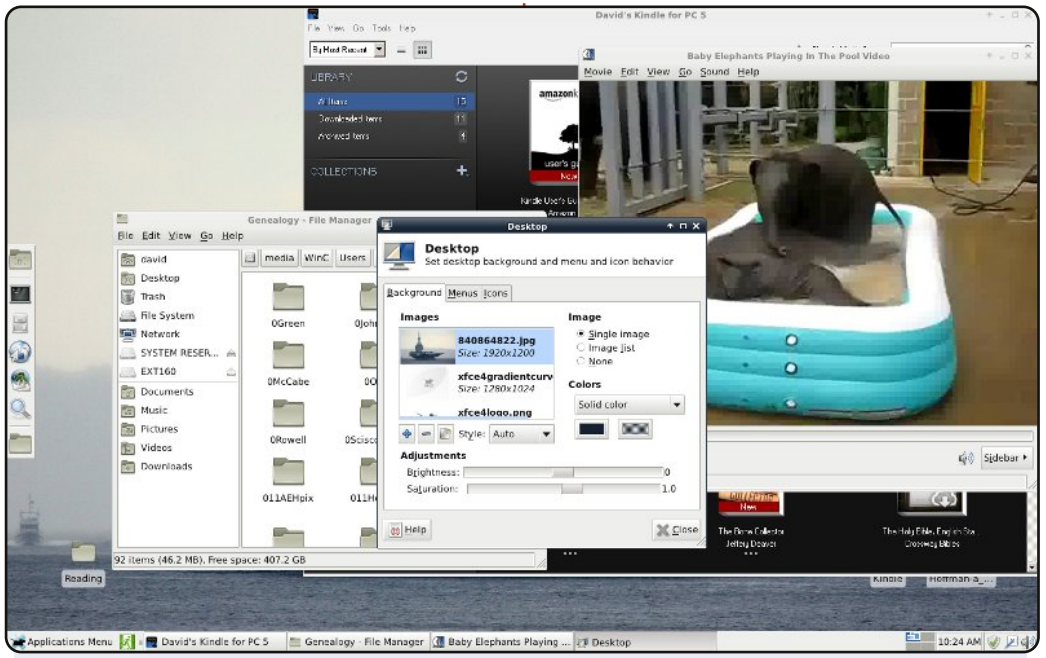
Your chance to show the world your desktop or PC. Email your screenshots and photos to: misc@fullcirclemagazine.org and include a brief paragraph about your desktop, your PC's specs and any other interesting tidbits about your setup.



I like simplicity and functionality, so here is my 11.04 classic desktop. I'm running Ubuntu on my laptop from 10.04. You can see Docky here, and my favorite UboIconsTheme from http://gnome-look.org. Find my wallpaper on deviantart, thanks Apofiss (http://apofiss.deviantart.com) for his(her) art.

For me, there is no problem that can't be solved with Ubuntu.
My laptop is budget-priced:
Processor: AMD Athlon II Dual-core N350 2.4GHz
RAM 2GB
Resolution 1366x768
Laptop HP G62

Aleksandr Palchenko



Having tried Unity and Gnome 3 from a live environment, and not liking either all that well, I decided to look into alternatives.

This shows XFCE 4.8 running on top of Linux Mint 11. I've moved the 'bottom panel' to the left side (it's usually set to auto-hide), and the 'top panel' to the bottom, like Mint does it. XFCE already has its Menu where Mint Gnome would have it.

The Thunar file manager window shows that I can access my Windows 7 files. Desktop settings are available as shown. I can play videos. In the back you can see Amazon's Kindle book reader, running on Wine.

Dave Rowell

My desktop is running Xubuntu 11.10, 64-bit. I record TV shows and movies using Freevo (1.90), and edit photos with Gimp. The background is a picture I took at Seal Rock beach in San Francisco, USA.

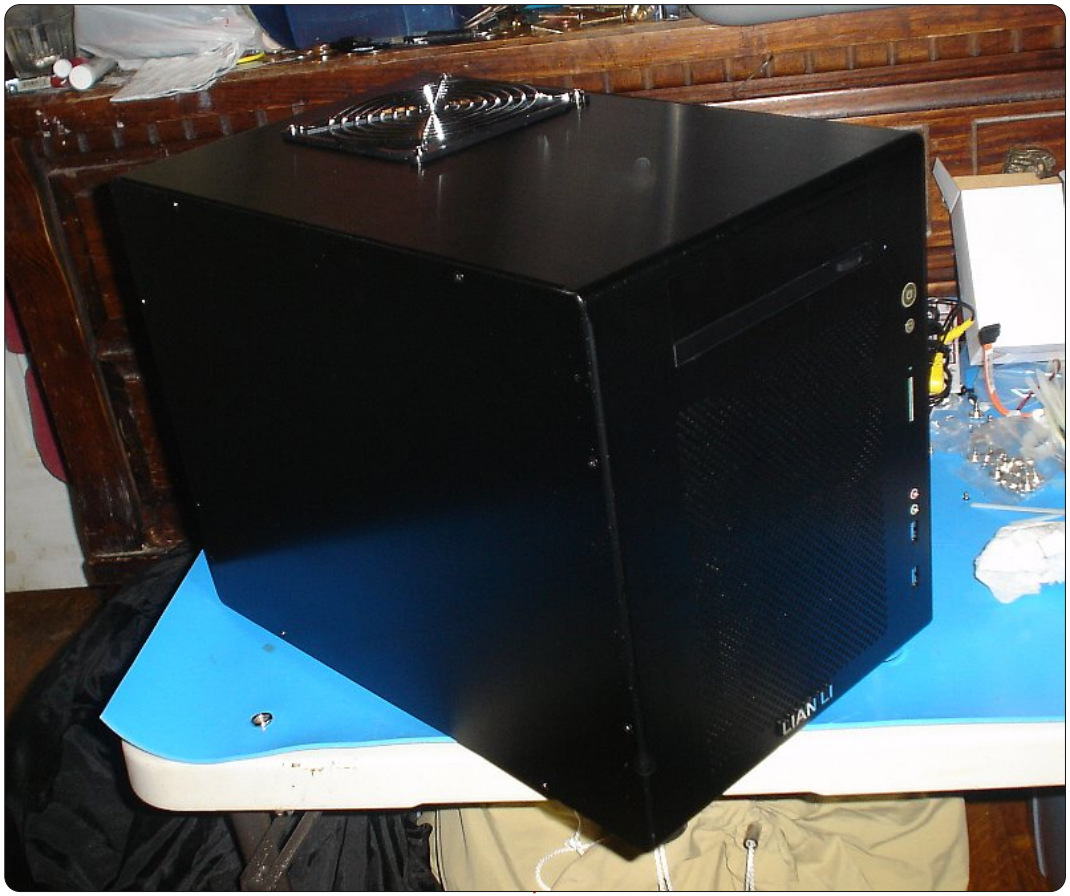
My computer is a ZaReason Strata 9660
CPU specs: Intel Core 2 Duo 2.2 GHz
4 GB of ram
Intel wifi-5300
AMD Radeon Graphics card 256GB memory

Philip Raymond

Hi, My name is Tarun. This is my Dell Inspiron laptop. I run Ubuntu 11.04 (natty) on my laptop, I3 processor, 4 GB Ram, and 1 GB ATI Radeon graphic card. I like my desktop simple and sober - with no icons on the desktop. The only thing I don't like is Gnome's panel, so I removed the panel and installed AWN window manager. The calender and clock are screenlets.

I also maintain a blog with my friend on various tips and tricks. The blog may be good for people interested in Linux.

Tarun



I built a new computer to run Linux on, beginning with a lovely little Lian Li case. I took these pictures on two different days. I had a bad mobo and returned it. I took one of the pics with a sound card but it doesn't fit because it's old PCI and not PCI-E.

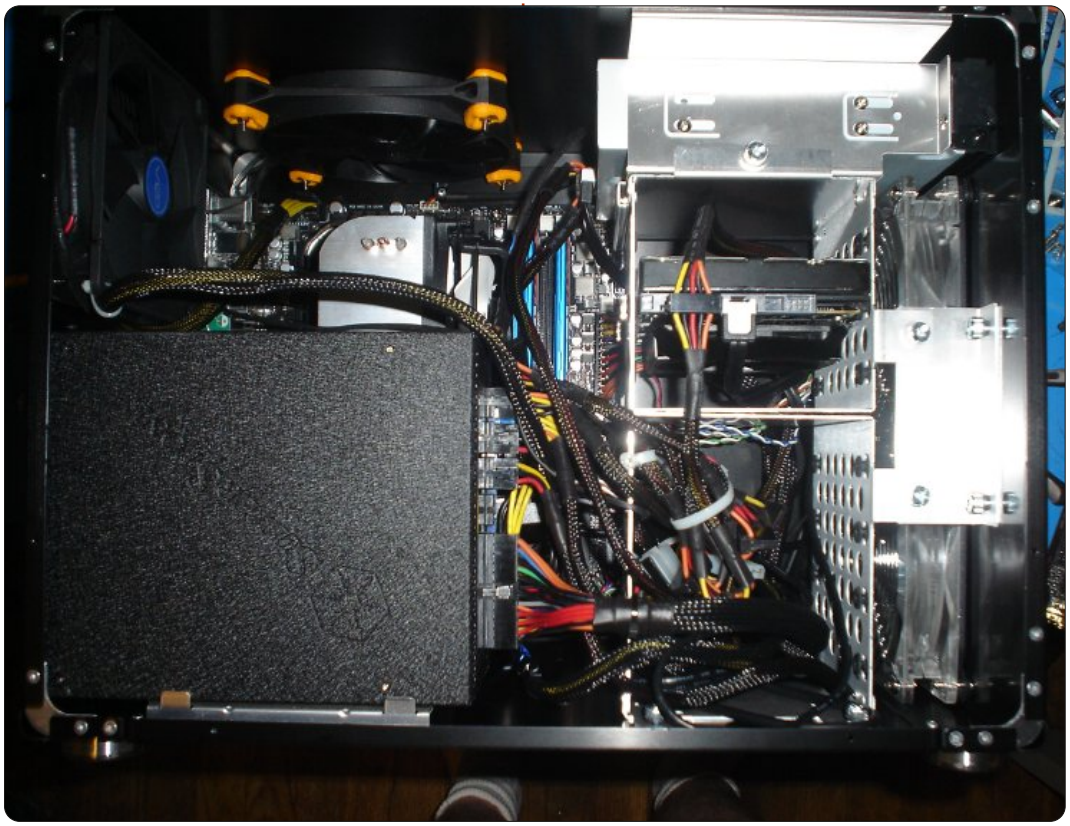
I am going to add a sound card in the future but don't know which one. I was looking at an ASUS card but someone wrote it has issues with live recording - if you need to record a guitar, and keep it in sync with another track, you're out of luck.

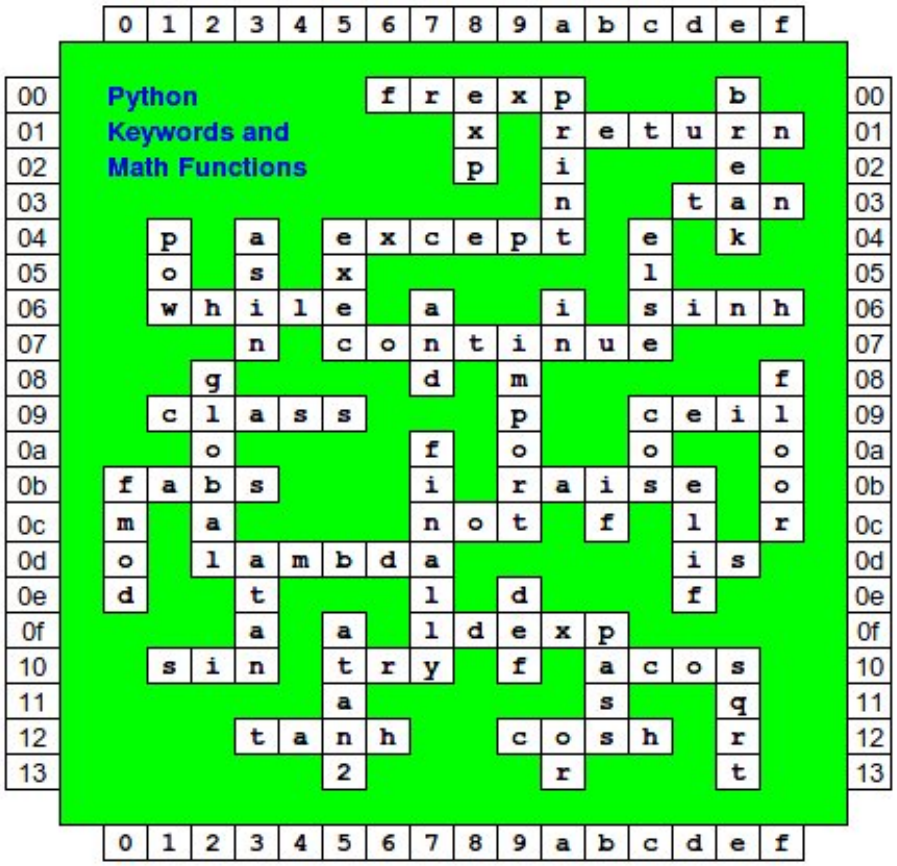
I also have my computer connected to my stereo - with Bose speakers, and kick-ass woofers, and also high-end Audio Technica headphones! They are insane and have huge range. The onboard audio isn't the best and has distortion.

I use Linux Fedora 16 and OpenSUSE. I'm currently building my own distro called memorysticky_OS or memorysticky_Linux - you can pronounce the "underscore" if you want - any way is fine!

I am also purchasing a custom-built Unicomp Spacesaver model M keyboard, with buckling spring switches and control key with no caps lock -- and also with custom colors to hopefully match my distro. It's PS/2, and will, most likely, have n-key rollover which means any amount of keys pressed simultaneously will activate. USB supports only 6-key rollover max. Many cheap keyboards have 2 key. Originally, I bought it with the Das Keyboard Pro, with cherry mx blue switches, but the enter key failed after just a week. I got an RMA (Return Materials Authorization), and returned it for good.

Nicholas J Ferrulli





SUDOKU

EASY

2	5	7	6	9	4	8	3	1
4	1	8	3	5	2	9	7	6
6	9	3	8	7	1	2	5	4
5	4	6	9	2	3	7	1	8
1	7	2	5	4	8	3	6	9
3	8	9	1	6	7	4	2	5
9	3	4	7	1	5	6	8	2
7	2	5	4	8	6	1	9	3
8	6	1	2	3	9	5	4	7

HARD

8	9	7	3	5	4	2	1	6
4	6	1	7	8	2	9	5	3
5	2	3	6	9	1	4	7	8
7	4	2	5	6	3	1	8	9
6	1	5	9	4	8	3	2	7
3	8	9	1	2	7	5	6	4
1	3	4	8	7	5	6	9	2
2	7	6	4	1	9	8	3	5
9	5	8	2	3	6	7	4	1

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