

The "Right"
Distributions



What's in a present?



the first and only magazine for the New Linux user

Become a file management wizard with Krusader

Install new software the easy way with Adept

ISSUE 19 • NOVEMBER 2006





#### **20** Gadgety Gift Guide



#### 27 Audacity



51 Quake 4



#### ISSUE 19

**NOVEMBER 2006** 

## CONTENTS

#### P<sub>2</sub>P

- Linux Distributions PHIL HUGHES
- The Perfect Gift for the Perfect Linuxer TONY MOBILY
- Letters
- 14 Q&A with Mango Parfait MANGO PARFAIT

#### **HOME PLATE**

- 20 Gadgety Gift Guide SEAN CARRUTHERS
- 24 100%-TUX Presents JAY KRUIZENGA
- 27 Rich Multilayered Sound with Audacity JOHN KNIGHT

#### **NEXT MONTH**

- The best programs in theme with the holiday season coming up—make your own cards and more!
- Turn your old laptop into a powerful workhorse using Linux.

#### SUITED UP

- 31 Managing Finances with K M y M o n e y
  - PHIL HUGHES
- 33 Project Management with Planner

PHIL HUGHES

#### **TUX EXPLAINS**

- 35 Managing Software with Adept
  - PHIL HUGHES
- 38 File Juggling with Krusader DMITRI POPOV
- 41 Building a Home File Server
  - PHIL THANE
- 46 Get Real-Time Support Using Qunu

MATIJA SUKI JE

#### **DIVERSIONS**

51 Quake 4 COLIN MCGREGOR

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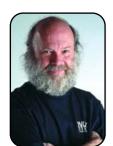
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#### FROM THE PUBLISHER

## **Linux Distributions**

Is there a "right answer"?

PHIL HUGHES

One of the most popular questions I get is, "Which distribution should I use?" The answer is similar to the one for the question, "Which car should I buy?" That is, the right answer depends on what you want to do with it. For example, a car with a manual transmission is always the right answer for me, but it may not be the right answer for someone else.

With that disclaimer out of the way, I recently have been telling people an almost generic answer: Kubuntu Dapper Drake. Why? Because it is easy to install, easy to update, complete, reliable and totally free, all the way down to being able to get a CD or DVD mailed to you. That doesn't necessarily make it the best choice for everyone, but it certainly has decreased the amount of free consulting I have been doing.

In order to support my opinion, I do at least need to know about the competition. All the competition? Well, it would be nice, but that just doesn't fit into my life. There are lots of choices, and unlike car models, they can change significantly every few months. So, let's wait for our next Linux Smackdown issue for a broader analysis. For the moment, I am going to take a brief

look at some of the free alternatives to my ongoing Kubuntu Dapper Drake answer.

First, let's take a quick look at Edgy Eft, the next Kubuntu version. As I write this, there is a prerelease available with the final release to be available later in October 2006. Edgy has a very different mission than Dapper. Dapper was put together to be a long-term stable release. There have been regular updates to fix some minor nits, but all in all, it lives up to its goal.

On the other hand, Edgy is designed to be on the bleeding edge. While playing with it, I found some things I wish I had on my stable system. For example, boot-up time has been lowered significantly. Even on my older IBM ThinkPad T23 system, the system is up and running in less than a minute. The down side is there are things that work on Dapper on the same hardware but fail with Edgy.

Edgy has many more cute features. For example, the first time users log in, they are prompted to customize the KDE configuration. This includes language selection, "system behavior" (offering you a KDE, UNIX, Microsoft Windows or Apple Mac OSlike environment), level of eye candy and theme. This is particularly well done where each step offers



## BUT, IF YOUR GOAL IS A SOLID COMPUTING PLATFORM RATHER THAN WANTING TO SEE WHAT'S NEW, I FEEL DAPPER WILL REMAIN THE RIGHT ANSWER FOR AT LEAST THE NEXT SIX MONTHS.

explanations of what the various options mean.

We can hope the problems are addressed before the final release is shipped. Some certainly will be. But, if your goal is a solid computing platform rather than wanting to see what's new, I feel Dapper will remain the right answer for at least the next six months. (I say six months because there is a new Kubuntu release every six months.)

Another option is Open SUSE 10.1. Unlike Edgy, it is a conservative update to SUSE 10. It is easy to install, complete and reliable like Dapper. I would not hesitate to recommend it for a desktop. Note that I am writing this article on a SUSE 10 system, and although I have OpenSUSE 10.1 on another system, I haven't bothered to upgrade this system. If anything, that is a testimonial for how stable SUSE 10 is.

Just released is Mandriva 2007. Mandriva, formerly Mandrake, has always been geared for the desktop user. In terms of licensing, there are free and non-free options. I decided to download the one-CD free version and give it a test drive. In fact, it is still downloading right now via BitTorrent.

Another plus for Mandriva, if you happen to be in Latin America, is that they have a partnership with HP. Various HP computers are available in this market with Mandriva preinstalled. This is not a new announcement and was based on Mandriva 2006, but I expect 2007 will be available soon.

So, it is here, and I am installing. Mandriva One, the single-CD,

is similar to Kubuntu in that it is a live CD that then allows you to install it on the hard disk. So far, it has irritated me by not having a back button where it needed one and expecting me to double-click on the install icon.

The install is done, and it just said, "please halt your computer, remove the CD and reboot". Um, why didn't it just do all that?

Okay, rebooting. It said, "press Esc for verbose mode". I did. It still says the same thing. But, it did come up, and it seems to work. After a reasonable amount of playing, it appears as complete as one CD can be and reliable. It properly configured my wireless card and generally seems to run fine. Probably the biggest difference between Kubuntu and even OpenSUSE and Mandriva is that Mandriva has a lot more self-promotion.

Bottom line: once it is up and running it works fine. Although this single-CD version is free, there are lots of "you need to buy it" options. I don't need to explain them, because if you decide to install this version, you will be told all about them.

That's the end of my homework for this month. What will I tell people who ask which version of Linux they should install? I will (still) tell them Kubuntu Dapper Drake. The main change in my story is that if they ask, "What about SUSE 10.1 or Mandriva 2007?" I can tell them that they are also good options.

Phil Hughes is Group Publisher for SSC Media Corp.





FROM THE EDITOR

## The Perfect Gift for the Perfect Linuxer

Buying Linux gifts, the fun way.

TONY MOBILY

I am having a great deal of trouble writing this piece. For a number of reasons, I don't buy gifts. Well, I do, but I make sure they are anonymous, and (shame on me) I don't do it very often. And now, here I am writing an introduction to our "Holiday Gift" issue!

Anonymous or not, most people at some point in their lives have been at the stage when they asked themselves: what on earth am I going to buy for XYZ's wedding/anniversary/surprise present—especially considering that XYZ loves Linux? Or, sometimes you might want to find a gift for yourself—you might have some extra money and decide to treat yourself with the best gadget, because you received a bonus payment or suddenly found money in your old trousers (yes, that happened to me).

What you need, in this case, is this issue of *TUX*, where we talk about presents and gadgets that Linux users definitely will love. Sean Carruthers (*the* resident Gadget Guy here) and Jay Kruizenga compiled their own lists of favourites, and you surely will get some inspiration or hints from their articles, however much you plan to spend.

Mango is with us this month as well. She has recovered from her September holiday, and I can guarantee that she's back, because I just had dinner with her and her boyfriend! Mango talks about spam (the type you get in your inbox, not the meaty one I served as a joke for dinner), Thunderbird and computer security. She personally asked me to confirm that she's not a fictional character, as if there were any need for that.

John Knight, who I also had as a guest for dinner a couple of days ago (but no, Mango wasn't there), explains in detail how to use Audacity to create your own music. I hadn't realised how powerful Audacity was until I read John's article. I am most impressed, and I must say his article (as well as meeting him) made me want to write music. Hopefully, listening to my early attempts won't become a requirement to buying a *TUX* subscription.

For those *TUX* readers wearing a (possibly homemade) suit, this month we have two articles that will certainly be interesting for you: Phil Hughes talks about KMyMoney and Planner to make sure that your finances are well kept and your projects are well planned. They are simple programs, but I am sure many of you will find them interesting.

Because installing software always has been one of the most-discussed issues in Linux, we thought we would clear it up and talk about Adept, which makes software installation a breeze. As Phil explains in the article, all you have to



do is pick the piece of software you want, and voilà, everything is ready to run. I am sure we will refer to this article in the future.

Dmitri Popov talks about Krusader, a file manager for the power user with very interesting features. Lazy Linux users simply use the file manager that comes with their desktops. Krusader is the next step. Once you start using it, you'll wonder how you managed your files without it!

On a completely different note, this month Phil Thane explains how to set up a file server from start to finish, without ever touching the command line. I personally feel that this article is evidence Linux has gone really far. It's finally possible—and, in fact, easy—to carry out tasks that up until two or three years ago would have given any system administrator countless headaches. I am tempted to set up a file server myself!

And, if you get stuck, you always can set up a Qunu account and get real-time help from an expert. When Matija Suklje offered to write an article about Qunu, I was a little sceptical. Then I used it and realised its potential. If Qunu goes as far as it ought to, it will be a great support opportunity for the Linux newbie!

If you feel like a bit of fun, different from boring, bidimensional programs, jump right to the end of the magazine and read Colin McGregor's article on Quake 4. In the olden days, video games were used as stress relievers. Quake 4 might not satisfy your stress-relieving goals, but it's definitely fun to play!

I hope you enjoy this issue of TUX as much as I enjoyed working on it. As always, comments and suggestions are most welcome.

Tony Mobily (BSc) is a computer consultant, journalist and Zen Buddhist. He lives in Australia working as a magazine editor and consultant. Tony has been an active member of the Open Source movement for many years. In 2004, he founded Free Software Magazine, a popular publication about free and opensource software. He is also the author of the book Hardening Apache and several articles about Linux and open-source software.





## **LETTERS**

#### Fedora and ipw2100: a Solution

A question was brought up to Mango, in the August 2006 issue, from Cliff about Fedora Linux and the ipw2100 wireless card driver.

Fedora doesn't include firmware for the ipw\* series of drivers in the distribution. I'm not an expert on license restrictions, but for some reason, Ubuntu does include this firmware.

This site is where you grab the firmware: http://ipw2100.sourceforge.net/firmware.php

On Fedora, you can check whether the driver loaded by running:

su -c 'dmesg | grep ipw'

Or, on K/Ubuntu, type:

sudo dmesg | grep ipw

You will get a message about not finding the firmware if that is indeed the problem. Once you download the firmware, simply put all the files included in the archive into /lib/firmware.

Then you can reboot or use the command rmmod ipw2100 && modprobe ipw2100 (or 2200 if you have the slightly newer card) to reload the module. You can run dmesg again to see if it found the firmware.

In Fedora, once you have the card installed, enable the NetworkManager service by going to the Services option inside the Administration options menu (if you are using GNOME), and select both NetworkManager startup scripts. This enables a systray applet in GNOME that can handle switching wireless access points and WPA.

Hopefully this helps. Mango offered a lot of help about making sure the device was recognized, but nothing was mentioned about the firmware, which is most likely the problem. My Fedora install found my card right away.

Chris

#### **Linux and Hardware Support**

I just read that you're the new editor [Tony Mobily] for *TUX* magazine. Congrats!

Recently, I started looking into buying a new mouse. Granted, I'm pretty happy with your basic, corded two-button scroll-wheel mouse (which works on every Linux distro I've ever tried). However, I'd like to upgrade to something a little more fancy, and what better way to spend that M\$FT voucher I got a while back when the state of Minnesota recently settled with them (I got an \$84 US credit out of the deal for software and some specific types of hardware).

Anyway, I've been looking at Logitech's products, and from what I can determine, they do not have or support Linux for



their products. And they do not intend to in the near future.

So, I'm writing to you hoping to bring an awareness to a greater problem: we need more support from the major hardware vendors out there for Linux! This is not a new problem, and very likely it will take care of itself once desktop Linux takes off, but I believe it's a topic that's worth revisiting. Thanks for reading and looking forward to a Linux future!!!

--

#### Terrance L. Dreyer

Hardware manufacturers think only in terms of user base. If enough people request something, they will satisfy that request. To solve the "hardware problem", we need to make sure there are plenty of people out there using Linux as their desktops. They will start to complain about hardware not working, and if enough people complain, hardware vendors will listen. The good news is that this is finally happening! In this very issue, we cover several Linux-friendly devices.—Ed.

#### **Activation? No Thanks.**

I used Xandros until a few months ago, and after reading about Xandros requiring activation, it is unlikely I will use it again. I agree that in your reviews of distros it would be nice to include important information, such as the fact that a distro requires activation in order to be used.

I am now using Debian, Linspire and Freespire, and one thing I like about Linspire, Inc., is that they don't try to think of ways to make life more difficult for customers.

\_

#### **Pollywog**

#### Accounting Software: Quasar Is Linux and GPL

I have just read the Letters section in the October 2006 issue of your fantastic magazine, which I devour as soon as I can get to download it each month. I could go on and on about how great your mag is, but here's the point.

I work for a collection of companies in South Africa, and we've migrated from Win to Lin over the last couple of years. Our companies are involved in retail and wholesale. We found Quasar Accounting to be a super solution. Quasar accounting is a full-featured accounting package with point-of-sale capability too. Linux Canada is the company that manufactures it, and we've had great support and interaction with them whenever we've been unsure about how to go about doing something. Quasar runs server and client components, which can be one and the same machine. It runs on your choice of Red Hat, Fedora or SUSE and has Postgres/Firebird/Sybase as your choice of database back ends. The clients can run on the same distros as well as on WinXP (so it's great for a mixed/migrating environment).

I'm the IT tech guy and not an accountant, but our accountants are extremely happy with how it does the accounting.

Regarding scalability, we use Quasar Accounting via a VPN connection spread across our country in about 30 locations, and we have tested it as functional down to as low as 3KB/sec.

Oh, and did I mention is really easy to use and set up, with comprehensive documentation?



(Disclaimer: I do not work for Linux Canada, nor do I receive any income/commission from them, I'm just really glad to use a great product that runs natively on Linux.)

I hope this is helpful to Mr Lowrie and others who may be searching for the same. Perhaps it might be worth considering an article on it sometime. See http://www.linuxcanada.com for more information.

#### **Andrew**

We will definitely review Quasar soon. Thanks for the hint!— Fd.

#### **Linux Hardware and No Linux Support?**

I am pleased to say that I've now migrated totally to Linux for my home computing, and even remote access to my work computer network runs just fine on Linux, so I'm not missing Windows at all. I've noticed recently, however, that some of the gizmos I buy come with CDs designed to run only in Windows. I can understand this, as Windows is still the most common OS, but I have difficulty accepting this when the devices themselves turn out to be running on an embedded Linux.

I'm referring to my TomTom GO700 Satnav and my Sony Ericsson W900i phone, both of which run on Linux but come with Windows discs and not a mention of Linux in their information. I find that when I plug these in to my USB socket, I can see the contents of the device, and in the case of the

phone, I can interact with it in Linux without difficulty, moving music back and forth and so on, but when I try to update information or add features to the Satnav, it is impossible without resorting to Windows.

Is it just me, or is there a way of solving this? Or, are the producers of devices that use embedded Linux ignoring the Linux community?

#### Ian Brooksbank

I know exactly what you mean. It feels unbearably unfair; a device that runs Linux ought to support Linux itself! However, it's a market-size issue. Not enough people have requested Linux compatibility to the maker of Satnav. This is quickly changing, and by publishing TUX magazine, we are making sure it changes as quickly as possible.—Ed.

#### MyBooksPro for Accounting

Regarding the Letters section in the October 2006 issue of TUX: please inform Peter E. Lowrie that there is at least one full-featured, robust accounting package for Linux that probably will meet the needs of most of his clients. The application is called MyBooksPro, and it is available from AppGen (http://appgen.com). It is very reasonably priced and has both Linux and Windows clients that install easily. Most spiffy is that their multi-user license is based on number of simultaneous sessions and not the number of seats. Thus, a two-user MyBooksPro license actually provides more accessibility than the five-user Peachtree version we used previously.



I don't recall how I came upon this application, but I think the process began with a Google search for "General Ledger accounting for Linux", or something similar. It wasn't very difficult and took very little time.

#### **Doug Thompson**

Thanks Doug! We talked about MyBooks in the May 2006 issue. I should have pointed that out myself.—Ed.

#### OCR Software for Linux?

I would like to thank everyone at TUX for a great magazine, and I would also like to welcome you [Tony Mobily] to TUX; you will not regret taking this post, and I look forward to reading your column.

I was a Microsoft slave for about 16 years—until Mandriva 2006 came out. I was disappointed that I was not able to use two products: a good OCR and a Bible study program called E-Sword, until I came across a program called CrossOver. I have been able to install E-Sword with a couple of hours compiling it. It runs very well, and no problems have been found. On the other hand, for the OCR package, I have to have a dual-boot system to use OmniPage 12. I have tried the Linux products, but with the work that I do, "old books" does not do a very good job—I can type faster. Is there anything that you could do to move those in high places to supply Linux users an OCR program that works well? (I tried CrossOver, and I could not get it to install OmniPage 12.)

I'm looking forward to future *TUX* magazines. They have

taught me a lot. Even with things that are above my head, I read about them and found that I have been able to understand what people have shown or asked me.

#### **Stephen Chaffer**

I found the following programs, after a bit of Googling:

- Kooka: http://www.kde.org/apps/kooka
- *Ocrad:* http://www.gnu.org/software/ocrad/ocrad.html
- *GOCR:* http://jocr.sourceforge.net
- *VueScan:* http://www.hamrick.com
- Clara OCR: http://freshmeat.net/projects/claraocr

Kooka in particular is very promising.—Ed.

#### Microsoft Bashing and History

In the October 2006 issue, the Letters section included a letter titled "A Whole Bunch of Observations" by Andrew Hawkins. In it Andrew wrote, "First up, what is it with Linux people who feel they have to bash Microsoft at every given opportunity? Without a simple and easy-to-use operating system, computers would not be as popular as they are today. No matter what your feelings about the business models, pricing strategies and so forth of Gates and Co., it's hard to deny that they have helped spread the use of computers. They may not have gotten everything right, but without them, would



we be as far along as we are today?" To which you replied, "About this question: 'without them [Microsoft] would we be as far along as we are today?' Who knows? My gut feeling is that without Microsoft we would be much, much further. But nobody actually knows."

I would like to echo your response in a whole-hearted way. Andrew needs to understand that this is typical Microsoftspeak, that it's insidious and that it's simply not correct. (I'm not picking on Andrew personally; there are millions upon millions of people in his former circumstance.)

The true facts are that Microsoft often makes outrageous claims and—well, because they are Microsoft—everyone simply believes them and accepts the claims at face value. But, so often the facts are presented in a distorted fashion, or they are simply wrong.

I personally first heard the concept that "Microsoft helped advance the computing use of the American people" in testimony Bill Gates made to the US Congress. I think that was about 1994—in other words, Windows 95 may have been out but only just barely. Gates was referring to DOS! It is an undeniable fact that the computing public is better served by widely interoperable software, and a monopolistic operating system is one way to accomplish that. But suppose for a minute that Gates had not licensed MS-DOS to IBM and instead Apple's Macintosh became the monopolistic OS. Wouldn't the American public have been better served to achieve the widespread level of usability and commonality that arrived by about 1996 in, say, 1988? How can Microsoft claim that delaying this widespread acceptance and usage of the personal computer by almost a decade was a positive service to American society?

Naturally, another means of achieving wide interoperability is by having software—both applications and systems software—that mingle cooperatively. I believe the Open Source movement is a better means of accomplishing this than any profit-motivated cooperation.

But Andrew says, "Members of the Linux community should be bigger than that", and the editor replies "Windows-bashing is undeniably happening, and that's very normal when there are two factions competing against each other!" This time you are both right. Attend any football game between arch-rival schools and observe what happens when factions compete. Nevertheless, we ought to take the moral high ground and be better than that. I suggest we Linux users ought to wage a consistent campaign to right the record of public opinion for all of the Andrews out there—this will often involve disagreeing with "history" as Microsoft presents it—but avoid Windows-bashing as much as possible. That's mv \$0.02's worth.

#### **Bill Cupp**

Thank you for your kind, wise words Bill. They are definitely worth more than just \$0.02; I swear!—Ed.

#### Predicting the Role of Desktop Computing

Nit-picking: I'm an aging geek who writes a small, twice monthly links-type e-zine (Don's Patch on http://freelists.org), a recent Linux convert and an avid reader of TUX.



In a recent TUX Desktop Watch newsletter, you used the word "prophetized" and, having grown up in a Southern Baptist world, I've often heard the word "prophecized", but according to Merriam Webster, neither of those is a word. The closest thing listed is prophesied, which would have worked, but in your shoes I'd probably have looked at what I typed, thought about it for a second, back-spaced over it and typed "predicted" (grin).

Commentary: time and again when changes occurred in the traditional way things were done, there have been conservative individuals who ranted and raved against the evils of change. This is the traditional way of change, and the background noise provided by the nay-sayers helps call people's attention to the changes which are occurring, thus facilitating implementation.

The implementation of Web 2.0 offers an enormous boon to consumers in that they finally can be spared the expense of the computer itself. The full power of computing will be readily available from public libraries, Internet cafés, and new venues are certain to appear. For example, coin-operated computer terminals will probably become common fixtures in convenience stores. Privacy is bound to become less of an issue, because no matter how insistent the government is about demanding its own private "back door" into computer systems, the ordinary consumer is entitled to privacy. If it's not currently a right guaranteed by the legal system, forcing the issue can only make it so.

Nevertheless, I'm sitting here at a desk I made myself, typing on the keyboard of my own computer, and that's not an ability I'm prepared to give up any time soon. People didn't stop

buying horses when the automobile was invented, nor stop buying automobiles when the bus was invented.

As the lines between television, telephone, gaming console and personal computer become ever more blurred, one thing seems clear. Whether it continues to be called a desktop computer or it evolves into something with an entirely different name, I will continue to have a computer in my home that belongs to me, and I suspect that most other consumers will have one too.

#### **Don Crowder**

About the word...er "predicted", you are absolutely right. What else can I say? I get a little confused between US spellings, UK spellings and Australian spellings—okay, I am out of excuses. About having your "own" computer, what you say is absolutely true. However, it's also a matter of how much you can do with your computer alone, without an Internet connection.

I will carefully avoid proph... predicting the future, but your PC's role, already diminished by the Internet, might shrink more and more.—Fd.

#### **Viewing IE Sites with Linux**

Thank you for your magazine—I enjoy reading it every month. For years I have attempted to switch from MS Windows to an alternative operating system like Linux, because invariably my Windows machines would get slower and slower and crash (I hate that blue screen of death!)—not to mention all of the security issues with Windows. I have never been able to switch completely, because my work requires me to view Internet Explorer-only Web sites. The ID and masking features



in Opera, as well as the Firefox extension user agent switcher, never seemed to work 100% on these sites. I seemed doomed to using Windows forever—that is, until now.

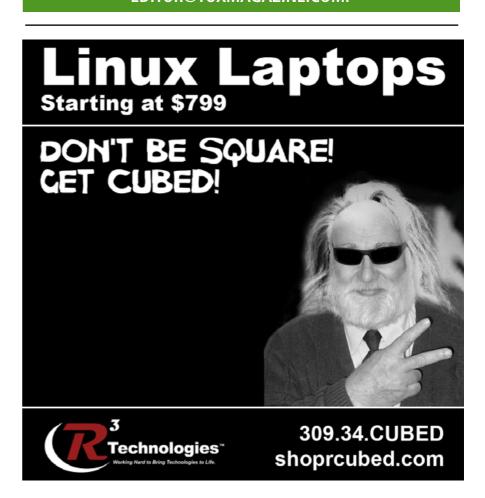
I came across a wonderful open-source project called IEs4linux that a young programmer in Brazil named Sergio Lopes started. He wrote a script that automatically installs IE 6 as well as (optionally) IE 5.5 and IE 5.0, plus all ancillary items needed to run IE on a Linux machine. The user must have a valid MS license—in my case, my PC came with Windows XP preinstalled, so since I installed Slackware Linux and no longer use the Windows XP, that license covers me. You run the script, answer four questions, and the entire install proceeds automatically—perfect for a newer Linux user like me. Since installing, I have been able to view and use all of these IE-only Web sites without a hitch. The Web address for this project is http://www.tatanka.com.br/ies4linux/page/Main Page.

Now, if someone could tell me how to print from a Linux machine to a printer that doesn't have a Linux driver for it (my color laser Okidata C5100), I'd shout about the virtues of Linux until I was blue in the face.

Ed

Although it's great that you were able to view IE-only Web sites, I am not a great fan of these solutions. Especially today, with Firefox gaining more and more market share, Web sites that work only with IE really shouldn't exist. Webmasters should receive countless complaints from thousands of users who can't view those idiotic Web sites. About printing, we are preparing an issue dedicated to the topic right now—stay tuned!—Ed.

SEND LETTERS TO THE EDITOR TO EDITOR@TUXMAGAZINE.COM.







## **3&A** with Mango Parfait

Mango's take on fighting spam, configuring Thunderbird and security.

MANGO PARFAIT

I am very happy this month. My boyfriend Otaku made a friend named Bob and that makes Otaku very happy. Bob is very nice, but he is very old. I think he is 40-years old or even more. Bob is very smart for an old man. I like that because I had a question last month about modems, and I do not know anything about modems. If I get more guestions about old things like modems, maybe Bob can help me answer them. Bob does not use KDE, and he does not use GNOME. He uses Xfce. I do not like Xfce. That is okay. It is okay for Bob to be wrong.

Bob is lonely. He is looking for a girlfriend. I cannot help him. My best friend Bunny does not have a boyfriend, but I do not think it is good for Bob to have a young girlfriend who talks about armadillos all the time. One of the only old girls I know is my mom, and she is married to my dad.

I got lots of good questions this month—thank you very much. Please send me more good questions!

Hi Mango, do you really look like your picture? Also, it would be appreciated if you could go through the tools available to deal with spam. I have heard of SpamAssassin and SpamCop, along with the spam filters included with products like Thunderbird. I'm also familiar with the tool MailWasher.net available for MS Windows. Is there a similar program in Linux that can allow you to look at e-mail headers on the POP server before actually downloading the message body? That would useful for avoiding viruses and the like, and a real time-saver on a dial-up network connection. Incidentally, what's the best distro/method for getting a Winmodem to work in Linux? By the way, any news about another startup company like BlueSecurity trying to deal with the spam issue? Thanks.—Kevin Vollick

Of course I look like my picture. It is a picture of me. If it was a picture

of somebody else, I would not look like my picture. I tell you one truth, I am not a natural blonde, so that is not how I always look. I have naturally blue hair. But this is how I look now. I am much prettier in person, but you cannot put me in person in a magazine, so this is the best *TUX* can do.

Spam filters are very complicated, and I do not think you want a lesson on how different filters work. I think you want some advice. So, I will give you advice.

I do not know how you have your computer set up, so I will start with some guesses. Here is something good to do. Install these programs: spamassasin, pyzor and razor. I do not know what Linux you use, so I can't tell you how to install these. These programs may help you. They may do nothing. It depends on other programs you use.

Now, I give you better advice. You use Thunderbird, so install Spamato4Thunderbird. This is a very



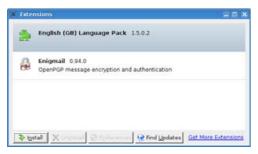


Figure 1. Thunderbird Extensions Dialog

good spam filter. This is better than the spam filter that is in Thunderbird already. You need to install Java to make Spamato4Thunderbird work. I think you should install the Java plugin for Firefox too. I do not tell you how to install Java and the plugin. You must learn that for your Linux distribution.

Do you have Java and the Java plugin installed? Good. Here is how to install Spamato4Thunderbird. Click Tools→ Extensions on the main menu of Thunderbird. You will see the extensions window, as shown in Figure 1.

Click on the link Get More Extensions. Your browser will go to a page for extensions. Search for spamato, and go to the right extension page for Spamato4Thunderbird. You will see a page with something like what you see in Figure 2.

You can see instructions there, but I

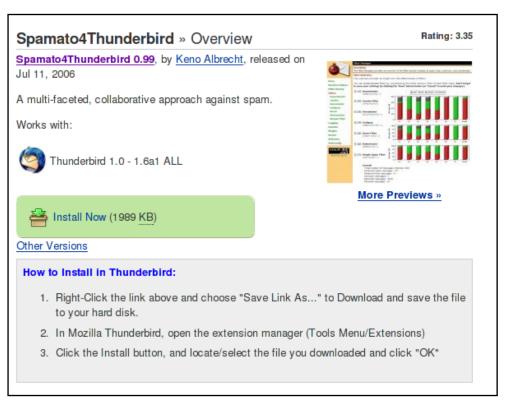


Figure 2. Spamato Installation Page

say them here. Right-click on Install Now and save the file. It is easy to save this file to the desktop. Click on the Install button in the window you see in Figure 1. Pick the file you saved. It will end with .xpi. Look at Figure 3 to see me install

Spamato from my desktop.

Now you see something like Figure 4. You see Spamato4Thunderbird here? Very good! Read the message. Spamato does not work until you restart Thunderbird.

Fxit Thunderbird and start Thunderbird





Figure 3. Install Spamato from the File Dialog

again. You will wait for a few minutes, and then you will see a pop-up window like the one shown in Figure 5. Click the Yes button.

Now you will get an e-mail from Spamato, as shown in Figure 6. You can click on the link in the e-mail to get instructions, but you do not need this. Now you add three icons to the Thunderbird toolbar, Right-click on the Thunderbird toolbar and click the Customize... menu selection. This is easy to find. There is no other menu selection!

You will see a window with buttons you can put on the toolbar. Scroll or make the window bigger to see three icons for Spamato. You see a Spam button, a No Spam button and probably a Loading... button. Drag these buttons to the toolbar, one and then the next and

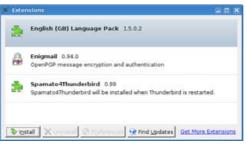


Figure 4. Spamato4Thunderbird is installed but not ready.

then the next. Maybe you want a space first or maybe two spaces if you like this better. You will see a toolbar like the picture in Figure 6.

Are you done? No. Now you select a spam e-mail and click on the Spam button. Do the same select and click the Spam button for every spam e-mail you get. Never delete spam e-mails. Always use the Spamato Spam button. This teaches Spamato how to know messages are spam. Spamato does not recognize spam until you teach it a lot of messages. After you teach it a lot of messages, it knows spam better than any other spam filters I use. It is much better than the Junk filter in Thunderbird.

What does the third icon do? This takes you to a Web page to look at what Spamato is doing and to config-



Figure 5. Spamato checks your e-mail address.

ure Spamato. Click on the third icon with bars. You should see a Firefox page like the one shown in Figure 7.

This page is very empty! This is a new installation, and Spamato did not learn anything yet. I will let you play with this page. There are many things vou can do.

Here is one important thing. When Spamato starts to filter spam, it can make a mistake and filter a good message. It remembers the messages for two weeks. Do you see the link on the left called Filter History? Click this link. It takes you to a list of messages that have finished coming in. You can see messages Spamato thinks are spam and messages Spamato thinks are good. There are links you can click to view a message that you do not know about. There are buttons to tell Spamato that a message is spam.



SPAMATO SINGS A SPAM SONG WHEN IT FINDS A SPAM MESSAGE. YOU CAN CHANGE THIS SOUND IF YOU DO NOT LIKE THE SONG.

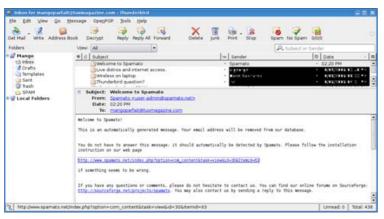


Figure 6. Thunderbird after you add Spamato icons to the toolbar.

There are buttons to tell Spamato that a message it thinks is spam is not spam. This is important. If you tell Spamato a message is not spam, it does not put that message back into an IMAP inbox. Do not be afraid that Spamato lost your message. If you tell Spamato that a message is not spam, Spamato puts the message in the Local Folders inbox. Look there to find this message. You can move it to the IMAP inbox now if you think this is okay.

Spamato sings a spam song when it finds a spam message.

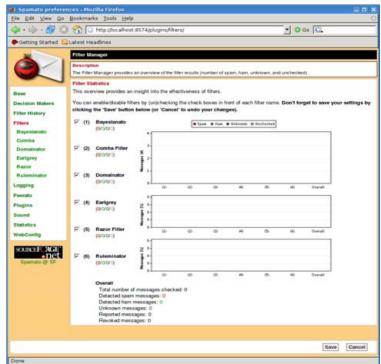


Figure 7. A Starting Spamato Configuration and Examination Web Page

You can change this sound if you do not like the song. Keep using Spamato, and it will get better and better.

You ask me about BlueSecurity. There is a big controversy about BlueSecurity, and I do not want to talk about that. I will leave it for opinion columns. You know I do not tell people my opinions about things like BlueSecurity or GNOME or other things. I only answer questions.



Seeing this month's issue [October 2006] is on e-mail and some articles on Thunderbird, I thought I would see if you could answer this guestion. I have Linux on three computers and am using Thunderbird on two of them (desktop and laptop). I have the same problem with both. When I click on an HTML link in an e-mail, nothing happens. I have read about different things to try, but none of them worked.

I am using Ubuntu Linux and have checked Preferred Applications and made sure that my browser was set to default firefox %s and my Mail Reader was set to mozillathunderbird %s, which they are. I also looked through all the settings, including the advanced settings but cannot find anything to change that will make my links work.

I thought I would give you a try at this one, and hopefully you can come up with a answer for me. Thanks, and keep up the good work in this column.—Irv

Hi Irv. Mozilla Thunderbird does not look at your default browser unless you tell it to look at your default browser. I do not do that anyway. I always want Thunderbird to start up Firefox or use an open Firefox window. Do you want that? Here is what to do. Start your favorite editor, like gedit, with sudo. Edit the file /etc/mozilla-thunderbird/global-config.js, like this:

\$ sudo gedit /etc/mozilla-thunderbird/global-config.js

Look for the first two lines that start with pref. Take out the comments if there are comments. Change the last part of the command to start up Firefox. Look at Listing 1. This is the way my file looks. Thunderbird will use Firefox for links if you make your file look like this.

Listing 1. The /etc/mozilla-thunderbird/global-config.js File

```
GLOBAL CONFIG FILE
// *** PUT YOUR GLOBAL CONFIGS HERE ***
/*
   use this if you have no access to gnome configuration
   as described on http://www.jwsdot.com/debian/faq.html#q9
   and don't care about debian default settings.
*/
pref("network.protocol-handler.app.http","firefox");
pref("network.protocol-handler.app.https", "firefox");
/*
   uncomment this if you want your browser configured as
   your default by means of the debian alternatives mechanism
* /
// pref("network.protocol-handler.app.http","x-www-browser");
// pref("network.protocol-handler.app.https","x-www-browser");
/*
   use this to tune your gtk2 mouse feeling
* /
// pref("widget.gtk2.dnd.threshold",25);
// pref("widget.gtk2.double click timeout", 300);
/* enable locale packages */
pref("intl.locale.matchOS", true)
```



#### YOUR COMPUTERS ARE SAFE IF YOU DO NOT CHANGE THE LINKSYS SETTINGS TO LET INTERNET PEOPLE GET TO YOUR COMPUTERS.

Dear Mango, I've been using Linux for about six years, but in some ways, I'm still a newbie, because I am always in a rush to get specific tasks done and don't have time to play with the system as much as I would like. Thus, it has taken more than a year for me finally to get this e-mail written. I have three guestions starting with a trivial one and moving up the food chain.

Your columns encouraged me finally to switch from GNOME to KDE. I currently use Kubuntu and love it. However, about the same time, SUSE/Novell just switched from KDE to GNOME. Any comments?

Internet security—just how vulnerable are client computers if one doesn't open e-mails from strangers offering to enlarge various body parts and such? A friend of mine leaves his Windoze XP box on all the time with a live broadband connection, no firewall, virus protection software not updated for months and has had no noticeable problems. I have likewise had no noticeable problems with my Linux box, though I can't determine if Shorewall is running or not (it is installed). Both of

us use the same model Linksvs router between our computers and the outside world. It does NAT, but has only a rudimentary firewall. If no servers are intentionally installed (other than the X-server), are we still vulnerable? With one of these cheap routers doing NAT, is there a general rule as to which is more secure, having it face the outside and present non-routable addresses to an internal firewall serving the internal net or switching the positions of the firewall and router? (What? You said you didn't have any servers! See below.)

I hope you also will entertain OpenBSD guestions. I have been trying to solve this problem off and on for about six years without any luck. Basically, I would like to set up a command-line-only OBSD box to act as an IP-less bridge to screen incoming and outgoing traffic silently for badness.—In/UnSecure in Un/Indiana

What do I think about SUSE? I think there are GNOME bosses and KDE bosses. They have a fight, and the GNOME bosses win. Maybe I am wrong. Maybe SUSE is just stupid.

The Linksys router protects the Windows computer and the Linux computer. If the Linksys router is not too old, it does not let anyone on the Internet change the settings. Your computers are safe if you do not change the Linksys settings to let Internet people get to your computers. The Linux computer is more safe than the Windows computer, because there are many viruses and trojans for Windows that you can get from e-mail or Web sites. There are not many viruses or trojans for Linux, and it is hard for a virus to break Linux if you run Linux as a normal user.

I do not know what you mean about entertaining OpenBSD questions. I will dance for them, maybe? I do not answer them. TUX is for desktop Linux people. TUX is not for command-line BSD people.

I am a sweet, humble, delicate and very cute genius who is at your service to answer your Linux questions. Send your questions to mango@tuxmagazine.com. I am deeply sorry that I do not have time to respond to anyone directly by e-mail, but I will select as many questions as I can and answer them here.

## **Gadgety Gift Guide**

#### Presents a Linux lover definitely will love.

SEAN CARRUTHERS

Looking for a gift for the Linux fan in your life? It can be a challenging task, but fear not—we've put together a list of some of our favourite gadgets that are Linux-friendly.

#### **MEMOREX TRAVELDRIVE ID**

http://www.memorex.com \$80 US

For the person who's always carrying around a ton of different USB Flash drives, it can be a challenge to keep them all straight. Which drive has the work documents? Which one has the photos?



The TravelDrive ID solves that problem.

What it does: it stores up to one gigabyte of data, but it has a built-in LCD "label" that lets you identify it at a glance.

Why it's soooo cool: although other USB

Flash drive are identifiable only if you place a sticker on the side of them, the Memorex TravelDrive ID has a small LCD window along one side that shows you the drive's volume name. If you rename the drives on your computer, the window automatically updates to the new name. Better yet, the LCD window also shows how much of the drive's memory is currently being used, so you easily can tell which drive has enough room for your files.

Who would love it: anyone who constantly juggles multiple USB keys filled with different types of data.

#### **POWERSOUID SURGE3000 CALAMARI**

http://www.powersquid.net \$80 US

There's nothing worse than trying to plug in your cell phone, MP3 player, cordless phone, DVD player and all your other electronics gear, if all you have is a standard power bar. Even if you have enough plugs, chances are some of your gadgets use an oversized power brick that covers up an adjacent power outlet. What to do?

What it does: rather than lining up all the outlets in a row, the PowerSquid breaks each of



the outlets onto six individual "tentacles", so you can accommodate a power brick of any size or orientation. Additionally, the two middle outlets have small LED lights, so you can locate them easily in the dark (for instance, if they're tucked away behind a home theatre setup). Plus, it protects against surges and comes with a \$500,000 US connected equipment warranty.

Why it's soooo cool: in addition to the individual tentacles for plugging in your electronics, the PowerSquid also features a flat-profile rotating connector at the end of the power cord

that plugs in to the wall, allowing it to be plugged in to almost any outlet. And, of course, it kind of looks like a squid. (It doesn't shoot ink at you, thankfully.)

Who would love it: people who are always battling with their power bars to get everything connected.

#### **OLYMPUS EVOLT E-330**

http://www.olvmpusamerica.com \$850 US and up (depending on configuration)

Although most digital cameras come bundled with Windows-only software, the cameras themselves usually work just fine with Linux machines—thanks to the fact that they are



designed to appear as a Mass Storage Class device when connected to a computer. Simply plug it in via USB, and it will show up as a removable drive. The Evolt line is Olympus' series of consumer-level digital SLR cameras, and the E-330 adds the killer LiveView feature. If you already have Olympus lenses, you can buy the E-330 body by itself, but you also can buy it pre-bundled with a variety of different lenses offered by Olympus.

What it does: the Evolt E-330 is a 7.5 megapixel digital SLR, which means high-resolution pictures, and it has the ability to use a growing number of lenses designed to be used with the four-thirds system. Unlike with other manufacturers' cameras, which are designed to accommodate lenses from the film era, the lenses for the four-thirds system are designed from the ground up to work with digital. This means lenses that are smaller and lighter, so you won't have such a load on your shoulder when you carry a few lenses with vou.

Why it's soooo cool: although digital SLRs all have an LCD viewfinder on the back, most show the photograph only after you've taken the picture. (With an SLR camera, the image coming in through the lens hits a mirror and is redirected up to the eyepiece; because the mirror is in the way, nothing hits the imaging sensor until you press



the shutter button and the mirror slides out of the way.) The Evolt E-330 was the first camera to use the LiveMOS imaging sensor, which allows you to preview the image on the LCD screen before you actually press the shutter. The E-330 also allows you to use the LCD to zoom right in on a smaller section, so you have exactly the focus point vou want.

Who would love it: people who want to get into the world of digital SLR photography, but who aren't already weighed down by a substantial investment in older film-era lenses.

#### **MAXTOR SHARED STORAGE II 1TB**

http://www.maxtor.com \$800 US

It seems that no matter how much hard drive space you have on your computer, it's never enough to go around. Worse, even if you have enough hard drive space on one machine, sharing your files with other computers around the house can be a real chore, if you're not ready to roll up your sleeves and learn all of the ins and outs of safely sharing your files. That's where networkattached storage devices really come in handy you simply plug them in to your home network, and with a few guick configurations, you can gain access to your shared files from any other computer on your network, even when all your other computers are switched off.

What it does: it has a full terabyte of storage space—that's 1,000GB of storage space. This makes it a great choice if you want to set up a



shared media library or have a device on your network that you can use to perform backups. Although the software included works only with Windows. Linux users easily can connect to it using Samba—the way they would network with any other computer.

Why it's soooo cool: c'mon, it's a *terabyte*. Admit it—that's pretty cool. And, for those who are more technically inclined, the Maxtor network-attached storage devices have proven to be pretty modder-friendly, with third-party firmware available for those who don't really want to use the pre-loaded Maxtor firmware.

**Who would love it:** people with a ton of files to share, who don't want to leave their noisy computer running 24/7.

#### **LOGITECH Z-5450 DIGITAL SPEAKERS**

http://www.logitech.com \$499 US

Good sound is always a plus, especially when you want to play back a DVD movie complete with surround sound. Logitech has a number of years' experience in the world of multichannel speaker setups. This is a completely digital speaker set—and one that's designed to hook into more than only your PC.

What it does: a lot of speaker sets are little more than speakers, subwoofer and a volume control. This particular set features a breakout box with connectors for a number of different audio sources, including two optical connectors, a digital coax connector, and multichannel



analogue (in the form of three 1/8-inch jacks, like you'd find on a surround-capable sound-card). The breakout box has a small LCD window that shows you your input source and what surround mode you're using. You also can use the window to adjust your subwoofer, centre channel and surround levels. And, for those who don't always want to rattle the floorboards, there's also a headphone jack on the side of the breakout box.

Why it's soooo cool: the sound is amazing—it's THX-certified, even! And, you can hook the same set of speakers to your computer, your component DVD player and your digital cable box.

Who would love it: people who want great sound out of their computers and their other home theatre equipment without having to set up multiple surround speakers. It's also a great choice for those trying to fit all of their various multimedia gear into a small space.

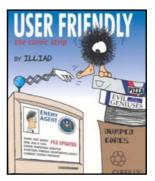
#### **USER FRIENDLY BOOKS**

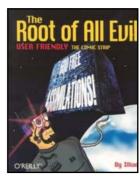
http://www.oreillynet.com/pub/au/614 \$13 US each

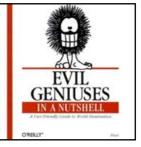
You've seen the *User Friendly* comic on-line at http://userfriendly.org and in magazines like our sister publication *Linux Journal*. But, you also can get the adventures of the *User Friendly* gang in paperback books that can be thumbed through even when the Internet connection goes down.

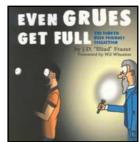
**What it does:** not only does each book provide a few hours of entertainment, but the books also help people better understand the wacky world of open source, coding and ISPs.

Why it's soooo cool: ISP customer-support hijinx, marketing mayhem, Windows put-downs, distribution battles and a sentient dust puppy. What more could you want?









Who would love it: people who love comic strips but think there just isn't enough Linux talk in them.

#### **SAMSUNG SYNCMASTER 244T MONITOR**

http://www.samsung.com \$950 US

Desktop real estate is always at a premium—as soon as you open up that Web browser, there's not much room to do anything else on the screen, which means constant flipping back and forth between applications or between virtual desktops. For those who want to rock the desktop with a bit more screen space, it's hard to beat a monitor this big.

**What it does:** it provides a whopping 1920 x 1200 pixels of desktop space, which is more than enough to keep a number of applications open at



the same time. It features the usual VGA and DVI inputs for connecting up to your computer, but there's also a component connector for hooking up directly to your DVD player—team it up with a set of high-quality surround speakers (like the Logitech speakers described above), and you've got a killer mini-home theatre setup.

Why it's soooo cool: the screen quality is great, and you can cycle through the multiple inputs to switch between Linux (on your PC) and an episode or two of Battlestar Galactica (on your component DVD player).

Who would love it: anyone who wants a high-resolution computer screen that can double as a compact high-definition multimedia monitor.

#### PARALLELS WORKSTATION (FOR WINDOWS/MAC)

http://www.parallels.com \$50 US (Windows) or \$80 US (Mac)

If you know a Windows or Mac user who is



curious about Linux but isn't quite ready to commit an entire computer to explore the operating system, you're no longer stuck with a live CD. You can help them get virtual instead!

What it does: instead of requiring a separate partition to install a new operating system, Parallels creates a virtual machine in the form of a large file on your regular operating system's partition. When you start up Parallels and that virtual machine, it mounts the disk image found in that large file and runs it in a separate memory space, so that what happens in your virtual machine doesn't interact with your main operating system. The good news about Parallels is that so long as you have the hard drive space available, you can install as many of these virtual machines as you like. And, if you want to back up your virtual machine, you simply need to make a copy of the file that serves as your virtual machine. So, why am I talking about this in a Linux magazine? Because you can install pretty much any operating system designed to run using an x86 processor, including Windows 3.1 through Windows XP, OS/2 and, yes, many different distributions of Linux. There are presets for installing kernel 2.4



and 2.6, but there's also a custom Linux setup for versions of Linux that don't quite work with those settings.

Why it's soooo cool: you get to run Linux on your computer without having to overwrite your current operating system. You don't have worry about messing up your machine while re-adjusting partition sizes, and you can run two different operating systems at the same time.

Who would love it: people who want to explore the world of Linux but don't want to (or can't, for business reasons perhaps) give up on their old operating system.



Sean Carruthers is a freelance technology journalist from Toronto. He spent six years at Canada Computer Paper, first as Products Editor at *The Computer* and later at HUB Digital Living magazine. As a freelancer, he has written for the Globe and Mail, http://globetechnology.com, HUB Digital Living, Computer Dealer News,

Homefront and CE-Biz. Although a relative newbie with Linux (SUSE, thank you very much), he has extensive experience with tech gadgets of all sorts and is enjoying figuring out which ones are compatible with Linux.

## 100%-TUX Presents

#### When having Linux installed is not enough.

JAY KRUIZENGA

The Holidays are here again. It's a great time of year—a time for family and the exchange of gifts. If you're like me, you may sometimes find it difficult to shop for one or two members of your family, because they already have everything they could possibly need or want. Perhaps you don't have a clue what to get the Linux lover in your family. Hopefully, this article gives you a few ideas. I have listed the items mentioned here based on price (high to low) knowing full well that most people do not have the money to spend more than \$500 US on a single family member; therefore. I've included numerous gift ideas for a limited budget. All items mentioned in this article would be appreciated by any Linux fan—it might even be the best gift of the year! So, having said this, let's take a look at a few extra-great TUX gift ideas.

#### LINUX-CERTIFIED LC2000 SERIES LAPTOP

http://www.linuxcertified.com/linux\_laptops.html Starting at \$999 US (check on-line for special sales)

Most laptop computers come with a Windows tax added on, whether or not you choose to use Windows. Linux-Certified laptop computers are

free of that tax.

With five LC2000 units from which to choose, starting at \$999 US, you have a great selection of high-performance Linux laptop computers. These laptops won the 2004 Linux Journal Readers' Choice Award as well as the 2005 TUX Readers' Choice Award, so they come highly recommended. The laptops come pre-loaded with Ubuntu, SUSE Linux or you can have it shipped free of any OS, so you can install your favorite Linux flavor. The five available units are lightweight and powerful. There is a laptop for just about everyone.



Who would love it: people who are in the market for a quality Linux replacement for their existing aging laptop or people who are looking for their very first laptop computer.

#### IBEXPC INTEL OR AMD DUAL-CORE LINUX **DESKTOP SYSTEM**

http://www.ibexpc.com/linuxsystems.html Sale-priced at \$549 US (Intel) or \$649 (AMD) US

Browse your favorite computer store, and you will find numerous Windows PCs fully loaded and ready to go. So, where does an individual find a good-quality Linux PC that packs a vault of



power? IBEXPC is one such manufacturer of well-supported Linux desktop PCs that deliver power at an affordable price.

Although IBEX also carries less-expensive units, the two mentioned here pack the most bang for the buck. They're dual-core—meaning, they are fast. The units come with 2.66MHz processors, 512MB memory upgradable to 4GB, 16x DVD player and 80GB hard drives (everything is upgradable). They ship with no OS installed, with Ubuntu or with SUSE. IBEXPC is a five-star Yahoo! Top Service Award Winner due to its top-quality, on-time and affordable custom-built systems—can't go wrong here. One-year parts and labor warranty included.

Who would love it: the Linux power user who demands a highperformance desktop system.

#### **CUTE AND CUDDLY PENGUIN IPOD/MP3 SOFT SPEAKERS**

http://www.computergear.com/pen.html \$29.99 US

This is the perfect geeky gift for the Linux fan in your life—not available anywhere else. Listen to your favorite tunes with these cute and cuddly stuffed penguins.

Why it's soooo cool: Inside each penguin is a built-in speaker and amplifier. Simply plug the animals in to your iPod or MP3 player and listen to/share your music anywhere. They're powered either by a computer's USB port or two AA batteries.

Who would love it: the music lover in your life.



#### **CUDDLY STUFFED TUX WITH TRAVEL MUG**

http://www.computergear.com/tuxtravmugdo.html \$29.99 US sale-priced

Add a stainless-steel travel mug capable of holding 16 ounces of Java to an 8" plush cuddly Tux doll and what do you get? A perfect combo. This gift set is great for displaying one's pride in Linux. No one can miss the Tux doll, and every Linux user needs a travel mug embellished with Larry Ewing's Tux mascot.

Who would love it: kids of all ages and java lovers.

#### LINUX-BRANDED APPAREL AND MORE!

http://www.cafepress.com

Prices vary depending on article (from \$3.49 to \$25.99 US)



What do you get for that special someone who loves Linux but has everything? You might be able to find an idea at CafePress. There's so much to choose from—more than 2,500 designs!

CafePress is an on-line marketplace where you can find numerous Linux items not available anywhere else. There you will find clothing, such as golf shirts, sweatshirts (hooded and unhooded), T-shirts (short- and long-sleeved),







thongs, tank tops, infant creepers, toddler shirts, even dog shirts, caps/hats, bags, posters, calendars, mugs, mousepads, wall clocks, stickers, magnets and more! Each item comes in multiple styles and designs. You even can design your own logo, upload it and have it printed for that special someone. How cool is that? Be certain to check out *TUX* magazine's gear at CafePress while you're there (http://www.cafepress.com/tuxmagazine).

Who would love it: there is something for everyone at CafePress. Simply type in "Linux", and you will discover more than 2,500 Linux designs. The clothing is good quality (from personal experience).

#### SUBSCRIPTION TO TUX MAGAZINE

http://www.tuxmagazine.com \$9.95 US

TUX is the perfect gift idea for every new-tointermediate Linux user. The benefits of a TUX subscription are obvious—great articles for the newbie Linux user with how-tos and reviews intended to inform the reader of the latest and greatest of all things pertaining to Linux. At only \$9.95 US per year (\$.83 per month), TUX is a great value.

Who would love it: every new Linux user with a fervent desire to learn more.

#### **CUDDLY STUFFED TUX**

http://www.thinkgeek.com/geektoys/plush/288e \$6.99 US









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## Rich Multilayered Sound with Audacity

#### Explore the possibilities of layered audio and spruce up band demos!

JOHN KNIGHT

Until recently, home musicians wanting to make music demos generally had to fall back on the dodgy-tape-recorder-with-a-mic-in-the-living-room approach. Those who were a bit more serious would buy several microphones and a small mixer, or even a four-track recorder. Thankfully, these cheap and nasty methods (with frankly uninspiring results) are no longer necessary with free software like Audacity, which allows musicians to create songs with multiple audio layers, stereo effects and much more. Plus, it's just as cheap as those other methods ever were—and not even half as nasty.

#### **INSTALLATION**

Audacity is in most distribution repositories, in the main Debian archive and in (K)Ubuntu's repositories. To install via Synaptic, simply scroll through the list of packages to the audacity entry; otherwise, look under Sound. If it has a green square next to it, it's already installed. If not, right-click on the package name, and left-click on Mark for Installation. Then click Apply, follow the prompts and close Synaptic. Audacity usually can be found in your menu under Multimedia or Sound. If not, scout through your distribution's menus, and if all else fails, simply enter the command audacity on



Figure 1. Make sure Mic is chosen in this dropdown box.

the command line or in Run Command in the KDE menu.

#### **LAYERS**

The essential advantage of Audacity is the ability to create layers, which is what we focus on today. If you follow along, you'll end up with several lavers of recorded sound waves, one above the other, which all can be modified individually. As my main example, I focus on making a song, but don't feel that Audacity is limited to musicians. The uses of this nifty little program are limited purely by your imagina-

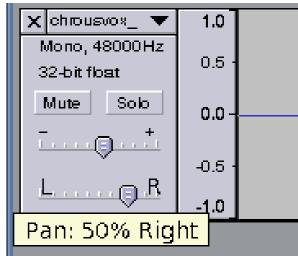


Figure 2. The Control Panel and its controls—note the Close button at the top left.

tion. Enough techno-babble—let's jump right in with an easy demonstration.

#### RECORDING

The following instructions assume you have a microphone and a pair of headphones. Make sure that your microphone channel is unmuted in

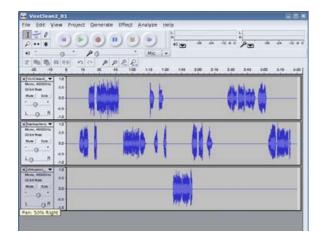


Figure 3. The Three Recorded Tracks



Figure 4. Exporting the Recorded Tracks as WAV Files

the mixer, and if it isn't already chosen, choose Mic from the pictured drop-down list. Say a few test words to make sure it's working, and then do the following:

- See those buttons for Play, Stop, Record and so on? This is the Control Toolbar. Press the Record button, and talk/sing/scream anything for a few moments, and then press the Stop button. As you'll see, a track has just been recorded.
- 2. Press the Play button, and you should hear your voice play back.
- 3. Press Record again, and fire off some more gibberish. You'll notice your voice from before pumping through while you speak; don't get put off, just keep talking for a bit more, and then press Stop.

Now you have two recorded layers of sound. Press Play, and you'll hear both playing at the same time. Record one more and read on.

#### **MANIPULATION**

So far, we have a fairly pointless jumble of sounds, but let's manipulate each of the layers so we can make some cool effects.

Let's go for the second track. If you look on the left, the gray part is called the track's Control Panel, in which you'll see a slider bar labeled L and R. This is called Pan, and it controls the stereo effect of each track. It is currently set to the center. With the second track, set the Pan to 50% left; set it 50% right on the third track, and leave the first track in the center.

Now, press Play! Pretty cool, huh? Let's play some more. See the – and + signs above the Pan slider? This controls Gain, which can either reduce or amplify the volume of the track you're on. Try turning one track up a little and the others down some. What about Mute and Solo? Mute turns the sound off for one or more tracks, and Solo

plays one track by itself. These are some of the very basics of sound engineering, but who wants to show off recorded gibberish? Let's make something useful—a band demo. Those voice tracks are going to be in the way though, so either close the tracks by clicking the X in the top-left corner of the tracks' Control Panel, or open a new project (File→New) and close the current project (File→Close).

#### **MAKING A BAND DEMO**

Although this article is primarily aimed at musicians wanting to make demos, if you're purely interested in layering sound for your own experimentation, simply substitute the mentioned instruments/vocals with whatever you want to use at the time.

To avoid the usual low-fi pitfalls of band demos, we'll record one instrument at a time so that each can be edited individually. The drums are the best place to start. Before you do a proper take, check the sound levels by having a quick bash on the kit, recording it and closing the sound test afterward. Once you're satisfied with the sound, record a take or three (see the Drum Tips and Multiple Takes sidebars for more info), and export each track by doing the following:

- 1. Click on the track's Control Panel, which highlights the whole track.
- 2. Under the File menu, choose Export Selection As WAV, choose the directory you want to save it under and the filename, then click OK.

For now, we're using WAV instead of MP3 or Ogg, because WAV does not lose any quality, unlike compressed MP3/Ogg. It's best to use

MP3/Ogg only at the very end, and only after making a master WAV.

Once you have a take that you're happy with, close any bad drum tracks and import your best take. This is easily done. Either choose Project→ Import Audio from the main menu, or simply drag and drop the file from your file manager onto the Audacity screen.

With the drums finished, let's move to other instruments. I'll assume bass for this, but feel free to record whatever you'd prefer. With your drum track recorded and in place as the first track on-screen, get ready to record. The usual method is to have a microphone facing the instrument's amplifier; this is all an issue of taste, so play around with a few positions and settings, and record a few sound checks with the drums muted. Once you're happy with the sound of what's being recorded, unmute the drum track, and slap on a pair of headphones.

Now, press record when you're ready, and the drum track will be playing through your headphones, and you will be playing bass over the top into a new and separate track. As before, record a few takes and then import the one you're most happy with. With the fundamental drums and bass out of the way, record the other instruments and vocals as you did with the bass. Don't forget to save each individual recording.

#### **MIXING IT ALL TOGETHER**

Now that the recording is out of the way, let's spruce things up. If you don't have them onscreen already, import all of the good takes of each musician and do a basic mix. At first, everything will be in the center and sound a bit off-kilter with some layers standing out too much, or

others being too subdued. Use the Gain slider on each track's Control Panel to turn each track up or down until everything fits in place. The basic mix is out of the way, but it's still boring and mono with everything in the center. Let's add stereo.

As with our first experiment, use each track's Control Panel to move its position around in the stereo image. You may want to try bass and

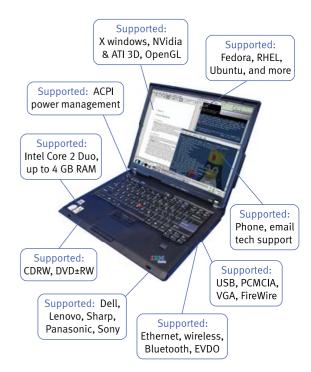
#### **MULTIPLE TAKES**

Recording several takes of each musician is a good idea, because with later editing, you can mix and match the best parts of each take and make a mastered take with quality results. You also can run sections of multiple takes simultaneously to create a thickening effect—this is common with vocal layers, especially in pop records.

#### STEREO/MONO RECORDING?

If you're going to be recording drums and have enough mics and a mixer, you'll want to record in stereo, using line-in instead of the mic channel. The other instruments are best left to mono and then shifted around in the stereo image later. To switch between stereo and mono recording, see the Preferences settings in the File menu. In the Audio I/O tab, go to the drop-down box called Channels in the Recording section. Here you can choose at will between 1 (Mono) and 2 (Stereo).

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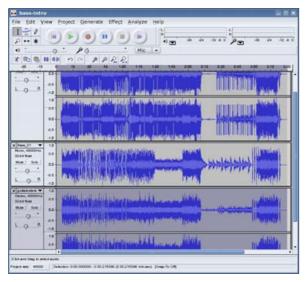


Figure 5. The Satisfying Results of the Final Mix



Figure 6. Recording a Guitar Track Using Audacity

vocals in the center, with the drums a little off to the side, and other instruments like guitars well off to the left and right to give strength to the basic elements and color to the instruments you want to stand out. By now, the song should be taking shape, and it's worth saving.

If you look at options in the main File menu, you'll see Save Project and Save Project As. These save as a file that only Audacity on your machine can read, but it allows you to keep any current work in progress, including the settings on each track. Export As WAV (not to be confused with Export Selection As WAV) saves the entire project as it stands as a single WAV file that can be played by anyone. Audacity will give a warning about down-mixing to stereo—ignore that; it isn't a problem. If you want a smaller file to give to your friends or put on the Net, try Export As MP3/Ogg Vorbis, but only once you have a good WAV master copy.

Now it's up to you as far as where you want to take it and how much more you want to learn. It's well worth learning how to do some editing, how to add effects an so on, but we don't have room to cover these today. Experiment with all the different effects and options in the menus, and download some of the plugins available on the Net. Audacity isn't limited purely to making band demos; what you want to do with it is up to you. You can play around with making straight vocal harmonies, creating soundscapes with many different layers of samples, making audio commentaries over another piece of audio...it's all

#### **DRUM TIPS**

Drums are the hardest part of recording, with entire books dedicated to the subject. The dilemma is that you cannot play with the other musicians or the sound will bleed through the mics. You may want either to play to a metronome or pre-program the drums in something like Hydrogen and save it as a .wav file that can be imported.

#### **RESOURCES**

#### **Audacity Home Page:**

http://audacity.sourceforge.net

**Plugins:** http://audacity.sourceforge.net/ download/plugins

up to you. I look forward to seeing what you come up with!■



John Knight is a 21-year-old, rock-climbing, Japan-loving megalomaniac, trying to take over the world from his bedroom via his keyboard. He spends most of his time tinkering with MPlayer and headbanging to his MP3s.

## Managing Finances with KMyMoney

Making bookkeeping less painful.

PHIL HUGHES

I hate bookkeeping, and I expect I am not alone. I tend to pile up paperwork related to bookkeeping and always find an excuse not to get around to doing it. So, with much resistance, I finally decided to take a look at KMyMoney.

This article is more of a status report than a how-to. I quickly realized that bookkeeping is bookkeeping, and telling you to use the Add Institution menu item to add a bank was not going to be particularly useful. That is, the program is well organized, and you just need to sit down and start entering information. And, when you have a question, the on-line help is there for you.

What KMyMoney is not is a program to run a business. The documentation suggests that it could be extended through plugins to support that kind of work, but the stock program does not include the sorts of documents you need (invoices and purchase orders) for a business.

If, however, your needs are personal finance, you probably will find what you need. For example, stock investments are handled very cleanly. However, on the not-ready list here are stock splits, derivatives and tax reporting.

On the other hand, reconciling a bank statement with what is in the system or producing a net-worth report to show a lending institution is usually more important for most of us.

The program will likely appear in the Office sub-menu of your K menu. Note that if you elect to start KMyMoney from the run box (press Alt-F2), the actual program name to type is kmymoney2.

On startup, you will see a screen like the one shown in Figure 1. In the Set Up menu, you are asked for personalization information, including your



Figure 1. KMyMoney Startup Screen

base currency and an account template to use with many language choices.

I was surprised to see the Nicaraguan Cordoba in the list of currencies. This actually led me to try an account in a different currency, which brings good news and bad news. The bad news is that the default version on Dapper Drake (0.8.2) crashed when I tried doing this. But, there are two

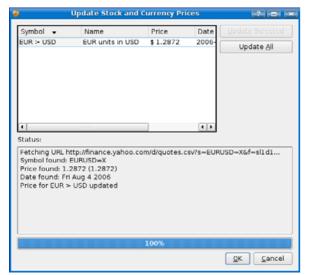


Figure 2. Currency Conversion

pieces of good news. The first is that this problem appears to be fixed in version 0.8.4, and even more important, this feature goes beyond what I expected.

I expected that I'd be able to put in amounts in various currencies, but that I'd then have to tell the program the conversion rate. Although this is an option, once you have added the currency to your list, as shown in Figure 2, clicking the Update All button makes KMyMoney go to the Internet and get the current conversion rate. This also works for stock prices.

Once you get the basics set up, a good next step is to add institutions and accounts. Although only a name is required for an institution, you can add other useful information, such as routing code and contact name.

When you've entered all your banking information, you can add Payees. For example, you proba-

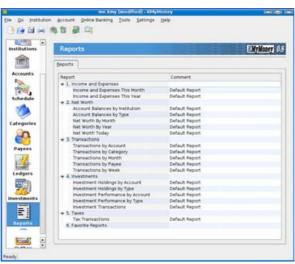


Figure 3. Default Reports

bly write an assortment of checks regularly for utilities and possibly a house payment. These can be entered as Payees. Direct debit is one payment method, so if your house payment, for example, is deducted automatically, you simply specify this. In addition, you can establish the due date, and KMyMoney automatically enters these direct debit transactions.

There are quite a few default reports (Figure 3) and others that can be customized. The reports display on-screen with the option to print them. In addition, you can export them as either HTML or CSV to import into other programs or copy them to the clipboard, so you can paste them into another program.

Customizing reports is not a programming task. You start with a base report and through the Report Configuration menu, you can define exactly what you want on a report.

## WHAT KMYMONEY IS NOT IS A PROGRAM TO RUN A BUSINESS.

KMyMoney is still in active development, and some features aren't included yet. For example, charts and graphs fall in that category. But, all in all, the program seems very complete as far as being functional; it is well designed and extensible. For example, the documentation explains that additional import plugins can be written and points you in the right direction to do that.

Compatibility is always an issue with new software. I have a credit union account that allows me to export transactions in either Excel or Quicken (QIF) format. Well, KMyMoney can import QIF files. In addition, it can export in QIF format and supports QFX and AqBanking formats (whatever they are) for importing.

My conclusion is that if you hate bookkeeping but realize you have to do it to keep your personal finances under control, KMyMoney is the best choice I have seen. In addition, although it is not designed to run a business, if all you need is a program to keep track of your bank accounts and pay the bills—something that is common for people who run a Web business where all the transactions are handled through a shopping cart system—KMyMoney will serve you well.



Phil Hughes is Group Publisher for SSC Media Corp.

## Project Management with Planner

Never miss a deadline again.

PHIL HUGHES

Project management is a lot like accounting. Most of us hate to do it, but we also realize it is necessary. At least for me, the trick is to find a tool that allows me to do the work with a minimum amount of pain.

In my search for project planning software, I looked at a lot of options. Being a geek at heart, the best choice for me personally (Task Juggler) isn't likely to be a win for most *TUX* readers.

So, I settled on Planner. Planner is a GNOME-based program that, like The GIMP, runs just fine in KDE. This means it will look a bit different from programs developed specifically for KDE, but functionally, it will be the same.

Let me say up front that Planner is not the beall and end-all to project planning. I find it adequate for a project where I just need to produce a time line and show dependencies and resource usage. But, if you need a full-blown system, you should look at the various Web-based applications available. DotProject and PhProjekt are two that I have used in the past.

When I installed Planner using Adept, it magically appeared as Project Management in the Office menu. In any case, typing planner in the Run Box (press Alt-F2) should get it going as well. Figure 1 shows what it looks like when it starts.

The left part of the main window offers but-

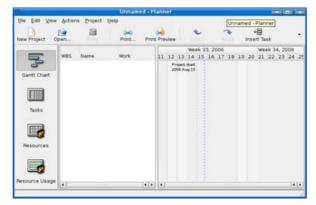


Figure 1. Starting Planner

tons to select the Gantt Chart, Tasks, Resources and Resource Usage views. The top has short-cut icons as well as the typical pull-down menus.

There is nothing magic about entering information here. A project can have any number of subprojects and any number of levels of subprojects. One design decision was a minor irritation but nothing fatal. To add a new task or resource, you select insert and a default entry is inserted. You then edit it (right-click) to put what you want into it.

The one simple thing the program does not do is resource allocation. That is, if I assign

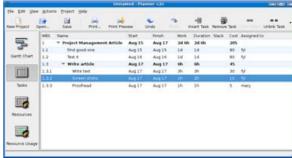


Figure 2. Sample Task List

# I FIND IT ADEQUATE FOR A PROJECT WHERE I JUST NEED TO PRODUCE A TIME LINE AND SHOW DEPENDENCIES AND RESOURCE USAGE.

100% of a resource to two different tasks, it happily accepts that and shows that they can be done at the same time. It does correctly handle less than 100% allocation within the task, so if you assign 50% of a resource, the duration will be twice the work.

#### A PROJECT CAN HAVE ANY NUMBER OF SUBPROJECTS AND ANY NUMBER OF LEVELS OF SUBPROJECTS.

The typical way to avoid this problem is to make one task depend on the completion of another that uses the same resource. I don't like this, but it also seems guite common.

Figure 2 shows the task list for a small project—writing this article. Figure 3 shows the resulting Gantt Chart. The only thing that is less than obvious is the [50] on the last line labeled with fyl. That is where I allocated 50% of my time rather than 100% to the task. You can see that while the work is only one hour, two elapsed hours exist in the schedule.

There is a bit more you can do with resources. You can set the hours available and costs of resources. The Resource Usage display, as shown in Figure 4, allows you to see how those resources are used. The green part of the bars is time not being used. This is a bit misleading as unavailable time and unallocated time both seem to be green. But, the numbers add up. You can have different work times for different people, and you can assign costs.

And, that pretty much covers what Planner will do for you today. It seems like a good tool for many tasks, and it is clearly designed in such a way that new features can be added at some point.



Phil Hughes is Group Publisher for SSC Media Corp.

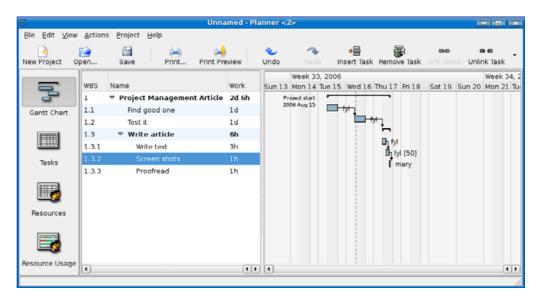


Figure 3. Sample Gantt Chart

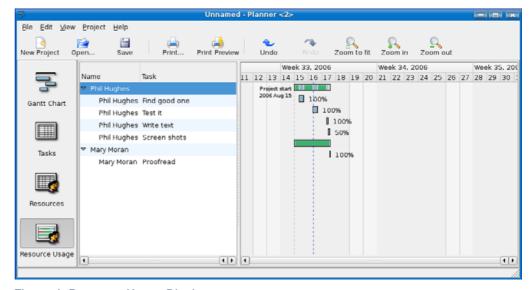


Figure 4. Resource Usage Display

## Managing Software with Adept

Install new software easily and fetch security updates with Adept.

PHIL HUGHES

Linux systems include a program called a package manager, which you use to install new software as well as update and remove software. Various Linux systems offer different programs, but each program offers basically the same capabilities.

For this article, we use the Kubuntu Dapper Drake version of Linux. Although virtually all the programs documented in *TUX* are available for other distributions, in an effort to make things "just work", we are documenting Adept, the package manager used with this distribution. If vou are using a different distribution, you will likely have a different package manager. The concepts are the same, but the appearance will be different.

#### WHERE DOES THE SOFTWARE COME FROM?

The CD or DVD you used to install your system is one source, but most additional software comes from sites on the Internet called repositories. By default, the Adept repository list is limited to the primary Kubuntu repository, plus some repositories containing security updates.

If you do not add any software to your system, you still should run Adept occasionally to fetch security and other updates. Kubuntu automatically starts a program that monitors these repositories

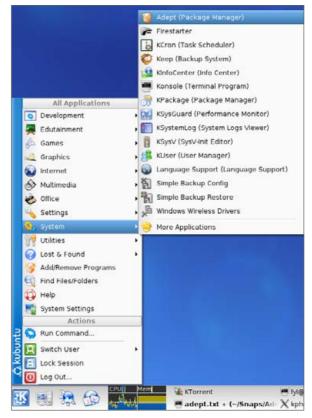


Figure 1. Starting Adept



Figure 2. Adept prompts for your password.

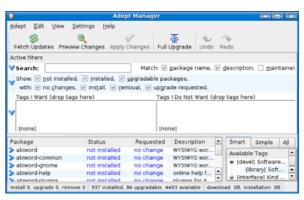


Figure 3. Adept When It First Loads

#### **TUX EXPLAINS**

for you. When updates are available, it displays a red triangle on your panel. Clicking on the trianale starts Adept Updater.

#### **RUNNING ADEPT**

To run Adept, start it from the System sub-menu (Figure 1), or press Alt-F2 and type adept in the Run Box. Enter your password when prompted (Figure 2), and Adept starts.

Figure 3 shows what Adept looks like when it first loads. Note that at the bottom of the window it lists the number of installed packages (937) and the number available (4403). Also note that it says 84 packages are upgradable. This is with the default repositories.

First, I do the upgrades, which simply means clicking on Full Upgrade and then clicking on Apply Changes. This gives me the download size (177MB), which is a lot but worth doing for me. The system is still usable while the download is happening.

Next, I configure additional repositories by going to Manage Repositories in the Adept (upper-left) menu. This brings up a new window showing the repository list (Figure 4). Within this list are the other standard Kubuntu repositories, but they are commented out and displayed in grey.

To activate them, click on each one, then rightclick and select Enable. While you are in this screen, take a look at the bottom where there is a box labeled New Repository and an Add button. You use this feature if you have to add an additional source for software. We won't do anything here now, but should you see instructions that tell you to add a repository for a particular program, this is where you add it.

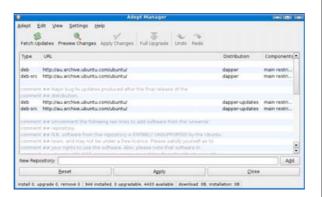


Figure 4. Repository List

For now, simply click Apply and then Close to return to the main Adept screen. Then, in the main screen, click Fetch Updates to update your list of packages available from the repository. Once the updated list is fetched, you likely will see about 19,000 packages available instead of about 4,400. In other words, although you have less than 1,000 software packages on your system, you can select any of these additional packages and install them with no more work than a few mouse clicks.

#### **ADDING PACKAGES**

Now that you've updated your repository list, let's try adding some software. This is TUX, so I entered tux in the search box to see what would match and ended up with the list shown in Figure 5. I know about tuxtype, so I decide to load it. You do this by right-clicking on the line in the list and selecting Request install. For good measure, I toss in tuxmath. The page is updated to show how many packages will be installed (seven) and how much software will be downloaded (6MB).



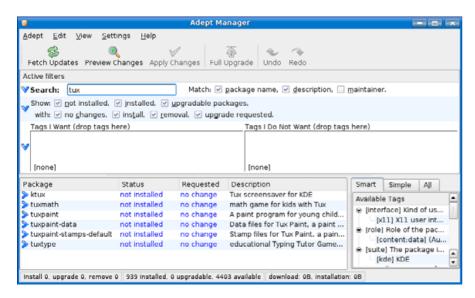


Figure 5. Searching for tux Software

Why seven? Adept automatically figured out what other packages were needed to support tuxtype and tuxpaint. That's it. I click Apply Changes, and the system is updated, adding these new programs. The update includes adding them to the K menu. In this case, I didn't even have a games submenu, so it was added automatically, and the programs appeared in the menu (Figure 6).

That's about all there is to using Adept. It will do a lot more as far as offering you search options, details of packages and such, but you can learn all that easily by playing with it. Now you are ready to make Linux do what you want. Good luck.



Phil Hughes is Group Publisher for SSC Media Corp.



Figure 6. Adept adds the new software to the K menu.

# File Juggling with Krusader

When Konqueror just isn't enough.

DMITRI POPOV

Konqueror, KDE's default file manager and browser, is a good all-around tool, but that doesn't necessarily mean it fits all your file management needs. Sometimes a dedicated file manager can be a better choice for daily computing. Krusader is a powerful and versatile file manager that can make your work more efficient and productive. Krusader is available with most KDE-based major Linux distributions, including Kubuntu (and Ubuntu with KDE), PCLinuxOS, KANOTIX and so on, and you can install the tool easily using your distro's package manager.

#### **CONFIGURING KRUSADER**

When you launch Krusader the first time, it runs the Krusader configuration wizard. This does one simple but rather important thing: it locates helper utilities that Krusader uses for added functionality. Once Krusader has scanned your system, it shows an overview of installed and missing utilities. Although you simply can skip the provided recommendations, it's worth spending time on installing the missing components. Take a closer look at the missing utilities, and use the package manager to install them (on my laptop, for example, I had to install Krename, Kompare and Kget).

Once the wizard has scanned your system, it opens the Konfigurator window, where you can tweak Krusader's settings. First, you have to add paths to the installed helper utilities. Click on the Dependencies icon, and enter the paths into their respective fields. Enter, for example, /usr/bin/kompare into the Kompare field and /usr/bin/kget into the Kget field. Another thing you might want to configure is the startup directories. For example, usually you'd want Krusader to display your home directory in the left panel and some other directory in the right panel. To do this, click on the Startup icon, select the Start with following settings option and enter the desired paths into the Homepage fields. Alternatively, select the Save settings on exit option, and

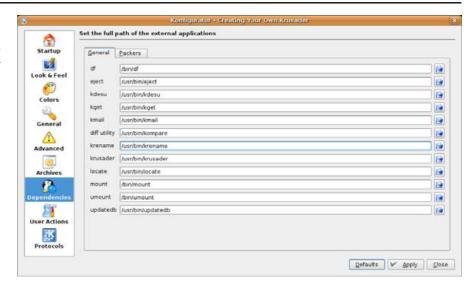


Figure 1. Konfigurator allows you to tweak Krusader's settings.

Krusader will always open the last-used directories on startup. When you are satisfied with the settings, press the Close button, and you should see Krusader in all its glory.

#### **KRUSADER: THE BASICS**

If you've ever tried to work with a twin-panel file manager, you'll feel at home in Krusader. And, even if you are new to it, you should be able to figure out most of Krusader's basic features. You can copy and move files from one panel to another, and you can move around directories using



Figure 2. Krusader's main window is divided into two panels.

the navigation buttons at the top. The function buttons at the bottom allow you to perform the most common file operations with a single key press. Using context menus, you can perform different actions on files and directories—for example, right-click on a file, and you can see its preview, open it with a specified application and manipulate it in a number of ways. In other words, you don't even have to read the manual to master Krusader's basics. But, if you want to unleash its full potential and call yourself a Krusader power user, read on.

#### **MORE-ADVANCED FEATURES**

One of the smartest features in Firefox (or any modern browser for that matter) is tabs; using them you can manage multiple Web pages in a single browser window. Although Krusader is not a browser, its Tabs feature is equally useful and efficient. Using it, you can open multiple windows in the same panel and switch between them by clicking on their tabs. This feature can come in handy in many situations. Let's say you need to

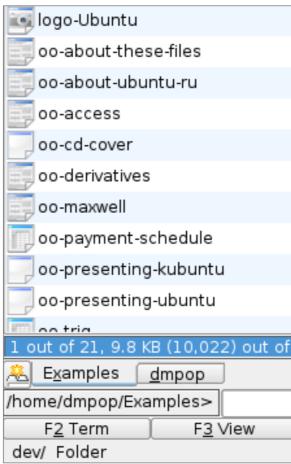


Figure 3. Using tabs, you can manage multiple directories in the same panel.

copy files from different locations into one directory. Simply open the source directories in separate tabs in the left panel and the target directory in the right panel. Then, use the tabs to switch between the source locations, and copy files from them into the target directory.

Krusader includes two nifty tools that make

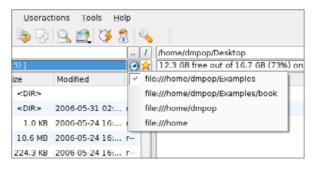


Figure 4. Using History, you quickly can jump to previously visited directories.

navigation through directories faster and more efficient. The first one is the History button; click on it, and you will see a list of all previously visited locations. Select a destination from the list to iump to it.

Another useful tool is the bookmark manager (BookMan), and as the name suggests, it allows you to add bookmarks to locations. Using Bookmarks is easy. To bookmark, for example, the currently opened directory, press the Bookmark button and select Bookmark Current. BookMan also keeps a list of often-visited locations, so you don't even have to bookmark the most popular directories. To keep tabs on your bookmarks, use the Bookmark Editor, which allows you to add and edit bookmarks as well as group them into folders.

Krusader truly excels when it comes to dealing with multiple files: the file manager offers several indispensable tools that help you manage hundreds of files easily. Say you have a music folder containing several hundred .ogg and .mp3 files, and you want to select all .mp3 files and move them into a separate folder. Using Krusader, you can create a filter that selects only the files that match the specified criteria. To do this, press the

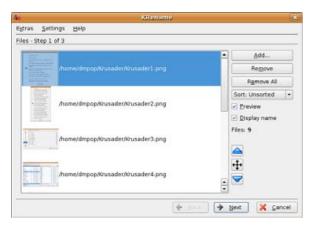


Figure 5. Use Krename to rename multiple files in one go.

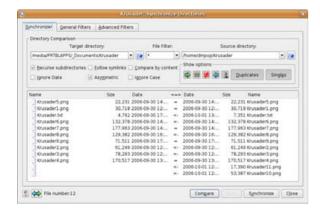


Figure 6. Synchronizer is Krusader's powerful synchronization tool.

select files using the filter button and specify the filter. Because you want to select all MP3 files, type .mp3 into the Enter a selection field. Press OK, and Krusader selects all files with the .mp3 extension. Better yet, you can save the specified

filter by pressing the Add button, so you can select the desired filter from the list when needed.

Need to rename several files at once? No. problem. Select the files you want to rename, and choose File→Multi Rename. This starts the Krename tool that guides you through the renaming process.

Quick tip: one thing that might confuse you in the beginning is how Krusader manages removable media, such as a USB stick or CD. Normally, when you connect a USB stick, it appears on the desktop. But, to access it via Krusader, you have to navigate to the /media directory. Here you should see and access all your removable storage devices.

Krusader also offers a nifty feature that can chop a file into smaller pieces, which can come in handy when you need to send a large file via e-mail or burn a huge backup file on several CDs. Select the file you want to chop, choose File→Split File, specify the size of each chunk and press Split. Of course, Krusader also allows you to assemble chopped files into one (File→Combine Files).

Krusader also can deal with files stored in remote locations, and it can access files via FTP (and its secure version SFTP), FISH (the protocol used to access files on remote Linux machines). and SMB (the protocol used to access files on remote Windows machines). Simply press the New Net Connection button, select the desired protocol, enter the required login info, and you can access the files as if they were on your local hard disk.

Finally, let's take a look at Krusader's most advanced and useful feature called Synchronizer. As the name suggests, this feature allows you to keep two directories in sync. This may not sound

like much, but Synchronizer offers a few advanced functions that make it a rather powerful tool. You can, for example, perform an asymmetric synchronization that moves files only in one direction, which effectively turns Synchronizer into a backup tool. You also can specify a filter, so Synchronizer syncs only specific files.

To synchronize two directories, select them in the left and right panels and choose Commands→Synchronize Directories (or press Ctrl-Y). Pay particular attention to what directories are set as target and source (you can swap the target and source directories by clicking on the Swap sides button in the lower-left corner of the window). Press the Compare button to see a list of synchronization actions for each file. Finally, press the Synchronize button to sync the directories. If you plan to perform the specified synchronization again, you can save it as a profile. To do this, press the Profile button in the lower-left corner of the window, select Add new entry, and give your profile a name. The next time you need to synchronize the directories, simply choose the created profile.

#### **FINAL WORD**

These are only a few of Krusader's features, and there is much more to it than meets the eye. If you want to explore other aspects of this excellent file manager, read the official documentation at http://krusader.sourceforge.net/handbook.



Dmitri Popov is a freelance writer whose articles have appeared in Russian, British and Danish computer magazines. His articles cover open-source software, Linux. Web applications and other computer-related topics.

# Building a Home File Server

Setting up a file server doesn't need to be complicated.

PHIL THANE

With three desktop machines (Kubuntu, Win XP and a testbed, which is currently running ReactOS) and a laptop (Xubuntu) in use at home, our IT is reaching small office proportions, and like many small offices, we run into file sharing problems. Peer-to-peer networking is fine when all the machines are on, but inevitably it happens that the file I want is on a PC that isn't running. Even worse, it might be on my testbed machine that is currently in pieces or undergoing yet another upgrade. So, we need an always-on server that any of us can access any time, but if it is always on, it needs to be guiet, reliable and cheap to run.

These requirements rule out Pentium 4 (too hot and power-hungry) and Windows (needs rebooting too often). Fortunately, I just happen to have a Pentium III of no great distinction that sports a massive passive cooler, and I'm a bit of a Linux enthusiast. Apart from stability, Linux has several other advantages. It's free. It is almost totally virus-resistant, and it comes with excellent fire-walling and security features. And, it is easy to administer remotely, so once it's set up, the server doesn't need its own keyboard, mouse or screen, which saves expense, space, power and heat.



Figure 1. The Case

### THE CASE

I'm planning on hiding this server in the loft, so frankly; what it looks like isn't an issue, the prime requirement of the case is that it is big and airy, allowing good air flow with nothing more than



Figure 2. Strip out everything you don't need.

natural convection. Apart from choosing a big one, there are couple of things you can do to improve air flow. Remove any case fans if you're not actually using them, as they impede the flow through the vents. Remove unnecessary drives; they waste space and their cables impede air flow. All you need is a hard disk for your OS and files and a basic CD-ROM drive to load the OS.

Remove unnecessary cables too, and tie up those you cannot do without to keep them out of the way. Remove surplus cards, as your file server will not need sound, 3-D graphics, USB, FireWire, SCSI or MIDI. On-board graphics or a small basic graphics card is all you need. Remember, warm air is less dense than cold and tends to rise, so make sure there is an inlet at the bottom and an exit near the top. And, if you do hide your server away somewhere, don't bury it in junk or put it in a confined space; let the air get to it.

There are acoustic damping kits available for PC cases that can kill a lot of noise from fans and disks, but as this server will run fanless, it's not necessary and can diminish the transfer of heat through the case. If the case is already padded with the stuff, remove it.

#### THE PSU

The majority of PC power supplies have a fan that blows warm air out the back of the case. but there are fanless designs available and also some semi-fanless designs that run quietly most of the time but have a fan that kicks in when a heavy load on the PSU causes things to get warm. I'm using a 300W fanless FSP Zen model bought second-hand, but many similar models exist. By modern standards, 300W isn't much, but it's plenty for a Pentium III with basic graphics. Depending on your foraging and bargaining skills, the PSU may well cost more than the rest of the project put together, but it's worth it for silent running.

#### THE CPII

My Slot 1 Pentium III originally was used in a slimline IBM desktop machine. (Remember the type you put under the monitor, not under the desk?)

It was fitted with a huge heatsink and had a plastic duct from there to the PSU air intake so that the PSU's fan sucked air over the CPU. Some years ago I re-housed it in a standard ATX mini-tower, but of course, the duct was completely the wrong shape, so I left it off and found the chip ran perfectly well without it. It's not good practice for a chip that's working hard, but in this server, it's going to be idle most of the time. It will just keep the OS and networking software ticking, and from time to time will pass an instruction to a hard disk—not exactly stressful.

Pentium III base units are available from various on-line suppliers and local computer shops. If you buy one with a conventional small heatsink and fan, then around \$10 US on eBay will get you a replacement Slot 1 processor with a large heatsink attached. You might even be able to sell the other one or keep it as a spare.

#### THE MOTHERBOARD

If you go the economy route, buying an old base unit, the board that is fitted will be fine. If you buy one separately, don't get hung up on specs; performance is not really an issue. Having onboard graphics is useful. Fancy 3-D cards use more power and create more heat. but a basic old AGP card will do too. A modern Linux desktop distro needs about 512MB of RAM to run a GUI and graphics applications happily, but in this situation, it will manage with much less, the only irritant being that the actual installation process might be slow.

#### THE HARD DISKS

It's unlikely that a Pentium III motherboard will support SATA, but even an IDE drive will handle data faster than your home network, so that's

#### Koala D420

Dell Latitude D420

- 3 pounds/1" thin
- 12.1"@1280x800
- 1200 MHz Core Duo
- 30-80 GB HD
- Up to 2.0 GB RAM
- DVD±RW
- 802.11a/b/g WiFi
- Ethernet/EVDO
- Fingerprint reader
- Starts at \$1670

### Raven X60s

ThinkPad X60s

- 3 pounds/1" thin
- 12.1"@1024x768
- 1667 MHz Core Duo
- 40-100 GB HD
- Up to 2.0 GB RAM
- DVD±RW
- 802.11a/b/g WiFi
- Ethernet/Bluetooth
- Tablet available
- Starts at \$1800



You choose your laptop: Dell, Lenovo, IBM, Sony, Sharp, Panasonic. You choose your distro: Fedora, Ubuntu, SuSE, Red Hat Enterprise, and more. Let EmperorLinux do the rest. Pre-installation and configuration of Linux on your laptop. Full support for your laptop's hardware. One year of Linux technical support and full manufacturer's warranty.

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not really a problem. I opted for a single 80GB drive from good-old eBay. When it starts to fill up, I'll add another. If you can afford it, buy more or a larger one. If you are really serious about keeping the server quiet, you could invest in flexible drive mounts that isolate the drives from the case.

#### THE OPERATING SYSTEM

Linux, obviously. The version of Linux isn't really an issue; almost any would do. I used Kubuntu. I chose it because KDE has built-in K Desktop sharing based on VNC for remote administration. It is a single CD download that's easy to install. Download the .iso file from Kubuntu's Web site (http://www.kubuntu.org), and burn it to CD-R or -RW. Whichever CD burner software you use, make sure you chose the option to burn an ISO image file rather than the regular Data CD option. If you don't, you'll have a very useful backup, but it won't boot!

Installing Kubuntu should be just a matter of inserting the CD, rebooting and following the onscreen instructions. However, older PCs, such as the IBM used here, will not boot from CD. To get around this you need Smart Boot Manager—a very small file that boots from a floppy and then lets you choose which disk to run from. Choose CD-ROM, and you're all set. Smart Boot Manager has to be written as an image file, and rather like making a bootable CD, simply copying the file to a floppy doesn't work. There are full instructions for both Linux and Windows users on http://linux.simple.be/tools/sbm, and a disk writing utility for Windows that is very easy to use. Incidentally, this is a useful disk to have for any OS that refuses to boot. The only downside to this is

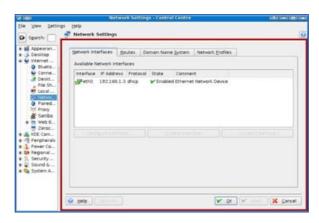


Figure 3. Change from DHCP to Fixed IP

you need a floppy drive, so I put it back in and then removed it once the OS was installed.

Connect your server to your network and Internet router before you start. During installation, it will detect the connection and set it up automatically. It will ask a few basic questions about your location, language and time zone, but nothing taxing. Hostname can be anything, but I use Server. The basic distro includes some desktop software you won't really need, but just go along with the default selection for now. Kubuntu will ask you to set up a user during the installation. Something like System Manager or Administrator is sensible; save your real name for when you set up a normal user account later.

Once installation is complete, it is time to fire up Adept. Debian-based distros use the Apt package management system, and Adept is the KDE GUI that makes it easy to use even if you have an aversion to command-line work and text editing. Go to Start Menu—System—Adept. Browse the

list of installed apps, and mark things like media players and graphics software for removal. If there is anything you are not sure about, leave it. Click Apply Changes to remove the selected apps. Now you can click the Full Upgrade button to update whatever is left. Finally, you need to install some networking applications. Find the following in Adept: samba and samba-common. Mark them for installation and commit changes.

#### **CONFIGURATION**

All configuration paths start at the KDE Control Center.

Unless you have a very unusual network card, Kubuntu will detect it and set it up using DHCP. This will work, but it makes remote administration tricky, as you have no way of knowing the server's IP address. Go to Network Settings, click Administrator Mode, and enter your password. Select the interface, and click Configure. Assuming your router is set up using 192.168.1.1, make the server 192.168.1.2. You can continue to rely on DHCP for your other PCs.

Samba uses the Microsoft SMB protocol to interact with Windows shares. It talks to Samba on other Linux boxes too, making it the perfect way to set up a mixed network. There was a time when configuring Samba made strong sysadmins weep. These days, for home networking at least, it is very easy. Different configurations suit different circumstances, but for starters go to System Administration—Users & Groups, and create a user for each person likely to want to put work on the server.

Now, go to Internet & Network→Samba. In the Base Settings dialog, set a workgroup name (your hostname will be there already). Click the

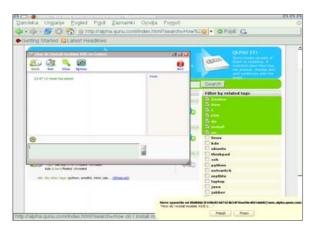


Figure 4. Setting Up Samba via the KDE Control Center

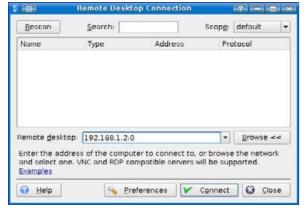


Figure 5. Making a Connection

Shares tab, check that homes is already set (add if necessary), then select it and click Edit. Check Share all home directories (or don't, and add each one you do want to share manually). The

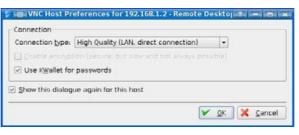


Figure 6. Choose the Connection Speed

remaining tabs in this dialog can be used to increase security, either for business use or perhaps to keep kids out of your files

Click OK on the Shares page to return to the main Samba dialog, and click the Users tab. Select your Samba users from the list, and click Add. Set a password for each (and make sure you record them somewhere and give them to the relevant users) or don't—it depends what you have on your PC and who is able to access it. Click OK to save your changes, and exit.

So far you have only "enabled" sharing. Now, to set up shares, you need either to log in as each user, or better still, run Konqueror as root. Press Alt-F2 to bring up the Run dialog. Enter konqueror, and click Options—Run as different user. Choose root, and enter your password. In Konqueror, browse to /home and right-click on a folder. Go to Properties—Share—Configure File Sharing—OK. Check Simple Sharing, and click Add. Browse to find the folder in question and click OK. Select Share with Samba. Under Samba Options, make the folder Writeable, and under More Samba Options, set Public, Browsable and Available. Return to /home, and click the Reload button. The folder should now

have a hand symbol indicating that it is shared. Repeat this with other folders.

As a final tweak on the folders, again running Konqueror as root, go to a folder's Properties—Permissions menu, and change them to Group and Others can Read and Write. Depending on who has access to your network, you might want to rethink these.

There is no reason why folders have to have people's names. You could just as easily set up and share Photos, Office or MP3.

Accessing the shared folders from a Windows PC is indistinguishable from accessing a normal Windows share. From another Kubuntu box, go to System Menu—Remote Places—Samba Shares. From any Linux box, run your file manager and enter the address of the server in the form smb://your.workgroup. To make life even easier, right-click on the KDE desktop, select Create New—Link to Location, and enter the URL there, giving you an instant Network Neighborhood experience.

#### REMOTE DESKTOP SHARING (RDC)

If the server is to run without a keyboard and screen, and especially if it is to be hidden away somewhere, remote administration is very useful. And it's not the least bit difficult to set up. KDE has simple GUI tools for VNC. On the server, go to Network & Internet→Desktop Sharing. Check Allow uninvited connections, Announce service on network and Allow uninvited connections to control desktop. But *don't* check Confirm Uninvited connections before connecting. It is good practice to set a password at this point.

On the PC you want to use to access the server, run krdc (K Remote Desktop Connection), and



Figure 7. KDE Control Center via VNC on Windows XP

enter the IP address of the server followed by :0 (zero, not O). Click Connect, and the remote desktop appears, giving you complete control of the server.

To control the server from a Windows PC. download and install TightVNC (it's free from SourceForge). Run TightVNC Viewer, and enter the IP address of the server followed by :0.

#### **CHECKING THE SERVER**

Run the server in an accessible location for as long as you can before you hide it away, and check that it can run without a keyboard and mouse. You may need to make changes in the BIOS to enable this. Make sure you can reboot it by remote control. It helps if you set an automatic login via System Administration→Users & Groups→Convenience.

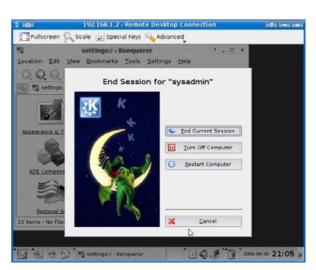


Figure 8. Shutting Down the Server by Remote Control

### **RESOURCES**

### **Smart Boot Manager:**

http://linux.simple.be/tools/sbm

Operating System: http://www.kubuntu.org

**TightVNC:** http://www.sourceforge.net



Phil Thane lives in Wales (UK), has been a teacher and worked for eight years on tech-support (Windowsbased CAD/CAM systems for educational use). Phil started freelance writing 15 years ago and began using Linux about three years ago as a

hobby. He is now a freelance writer/teacher/trainer.

# Get Real-Time Support Using Qunu

When forums and mailing lists are just not quick enough.

BY MATIJA SUKLJE

Qunu is a new system for getting and giving help on-line. It's innovative because unlike community forums, help is given and received in real time. Unlike IRC (Internet Relay Chat), where there are many people talking about a certain topic, Qunu uses a free, open-source instant messaging service (XMPP/Jabber to be exact) to connect a person who seeks help with a person who offers it.

The whole idea is that users who need help simply can search for a person—an "expert", using Qunu's terminology—by keywords (such as Gentoo, KDE, cooking and so forth). People looking for help also can simply type their questions, and the system will present a list of suitable experts that are currently available.

#### **USERS? EXPERTS?**

Are you a user or an expert? Well, it depends on what you want from Qunu. As already mentioned, there are two roles you could take: the user who asks or the expert who answers—although these two roles don't necessary exclude each other. Anyone (users or experts) can search for help—that is why Qunu is there, after all. And, it is not even limited to computer-related questions—you can ask for or offer help for any topic you can possibly think of! Qunu works with the assumption that everyone is an expert of some degree in at least something—regardless of whether it's virtual servers, cooking or literature.

#### **OKAY, SO I HAVE THIS OUESTION...**

If you want to ask a question using Qunu, you don't need any special software, simply a Java-enabled browser, which is compatible with the Qunu home page/Web client. The system currently is tested to work with Firefox



Figure 1. Qunu Main Page

and Opera (and IE), and according to the home page, it should work with Kongueror and Safari shortly. The easiest way to begin is simply to go to http://www.gunu.com, and type in your guestion (Figure 2). After a short



Figure 2. Simply type in your question.

while, you will be presented with a list of experts and tags (Figure 3). In the main part of the page, you will see the list of experts currently available with short descriptions of them and the number of people they have helped already. Clicking on their names shows more information on their knowledge. If you have already found someone you think is capable of helping you, simply click on the two chat bubbles on the right and wait for the chat window to appear. If you need to broaden or narrow your search, simply check and/or uncheck the relevant tags on the right-hand side of the page, and watch the list update according to your specific needs until you are completely happy. Another option is to click on the most relevant tag on the screen instead of asking a question; however, I prefer asking a question, because my problems usually involve more than only one tag.



Figure 3. Qunu presents available experts and relevant tags.

Once you have found a helper, the chat interface pops up (Figure 4). This part probably will be familiar. The conversation window works like any other normal instant messenger program. The toolbar at the top offers some interesting features. If you click on Invite, you can invite any other logged in Qunu users or experts to join if you think they would benefit from your conversation or be able to help you better. Clicking Save opens a window of your conversation in pure HTML that you can save to disk, so you can have a look at it later. Clicking Clear clears the window of text, and under Options, you can turn on or off sounds and emoticons.

Now that you understand the interface, you can start the conversation with an expert. At this stage, there are no Qunu-specific tricks you need to know, but a few standard hints are in order anyway:

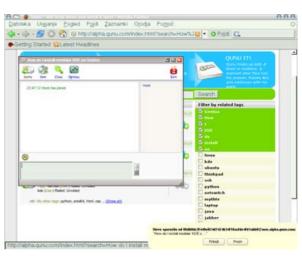


Figure 4. Chat Interface

- Be specific—try to explain the problem and how it came to be in full detail, including what you did, what happened and the output.
- Be polite—people don't like being abused, especially if they are volunteering their time!
- Be cooperative—this is only in your interest; no one can help you if you are not willing to do something to solve your own problem.
- Do not be afraid to admit mistakes—everyone makes them.

After you guit your conversation with the expert, you will be asked if you want to give feedback. Giving feedback is guite simple; there are only two questions. Feedback provides other users with an idea of the expert's friendliness and quality of answers (Figure 6). Ratings of individual experts

# QUNU WORKS WITH THE ASSUMPTION THAT EVERYONE IS AN EXPERT OF SOME DEGREE IN AT LEAST SOMETHING—REGARDLESS OF WHETHER IT'S VIRTUAL SERVERS. COOKING OR LITERATURE.

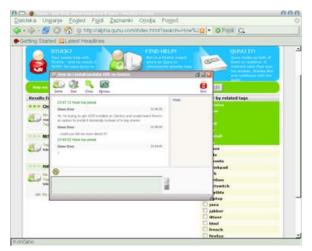


Figure 5. Starting Your Conversation with an **Expert** 

are listed next to their names—place the cursor over each of the three circles for more information about an expert.

#### **BEING AN EXPERT**

So you have arcane knowledge of Python, or you know how to do fancy needlework and want to help anyone in a jam? You are in the right spot with Qunu then! You need at least a capable browser, as stated above, but this is not always practical for various reasons. First, being an expert means you should be logged on the site and have it open all the time so you are available for help. Second, you most likely will miss a lot

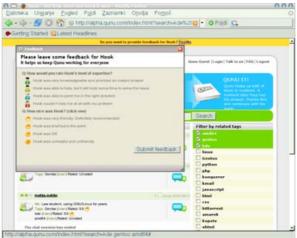


Figure 6. Giving Feedback about an Expert

of calls for help if you do not look at your browser all of the time.

A better idea is to install IM (Instant Messaging) software that supports the Jabber protocol, such as Kopete. Kopete is a nice KDE application that can access several IM protocols at the same time, including Jabber. You need to have at least version 0.12.1 of Kopete to make it work flawlessly. You can check whether you have an older version of Kopete by selecting Help→About Kopete in the Kopete window (Figure 7)

If you are using (K)Ubuntu and your Kopete version is older than the required 0.12.1, you can update it using the official dapper-backports



Figure 7. Check the version in the About Kopete window.

repository, which includes packages that are not yet in Dapper but are stable enough to be there. To do this, open Adept, and after typing in your root password, select Adept→Manage Repositories. When the new window opens, type deb http://archive.ubuntu.com/ubuntu dapper-backports main restricted universe multiverse, and click Add. After you have added the new repository, click Apply and close the manager window. Then, in the main Adept window, click the Fetch Updates button. After the updating finishes, type kopete in the quick filter/search box, right-click on the kopete package that shows up, and select Install from the pop-up menu. After

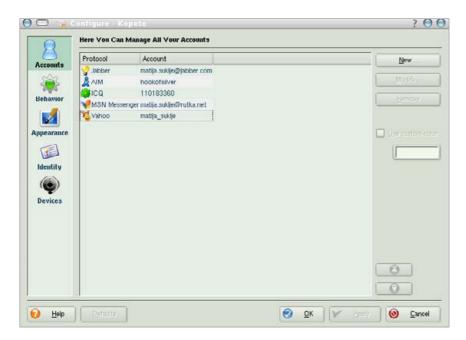


Figure 8. Editing Your Accounts in Kopete



Figure 9. Registering a New Jabber ID in Kopete

PEOPLE LOOKING FOR HELP ALSO CAN SIMPLY TYPE THEIR QUESTIONS, AND THE SYSTEM WILL PRESENT A LIST OF SUITABLE EXPERTS THAT ARE CURRENTLY AVAILABLE.



Figure 10. Adding the Qunu Service to Kopete

that, all you have to do is click the Commit Changes button and wait for Kopete to install.

Now you have the client, but you also need a JID (Jabber ID) to connect to Qunu. This is easy. Simply fire up Kopete, select Settings—Configure from the menu, and click New in the Accounts tab (Figure 8). In the first step of the wizard, select Jabber, and in the second, put in your JID details if you already have a JID; otherwise, choose Register New Account, and fill in the needed information (Figure 9). Here, it doesn't matter which Jabber server you choose—jabber.com seems to do it for me—you are free to chose any other that might catch your fancy.

With the IM client set up to run Jabber, all you have to do now is register to Qunu and add the Qunu service bot to your contacts list. You can register your account by going to http://alpha.qunu.com, clicking Register and following the wizard—it's easy. Now, add the service bot by selecting File—Add Contact—your JID, and enter quser@qunu.com into the Jabber ID textbox (Figure 10).

Once this is done, you are a registered expert on Qunu, but your profile is still empty. To edit your profile, click on quser@qunu.com from your contacts list, and you will be presented with a chat window with the service bot. The bot is quite powerful—if you want to look for help, type help in the conversation with the bot (Figure 11). You probably want to have a name, a short description and some tags. To make a profile for a user named Wittytux, I

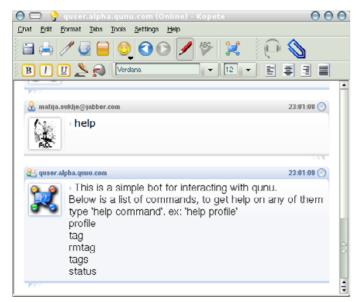


Figure 11. Asking the guser Bot for Help

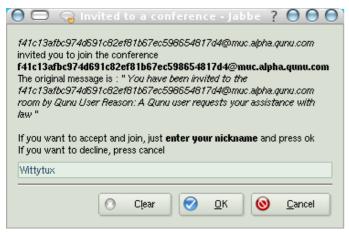


Figure 12. Conference Invitation from a User

# SO YOU HAVE ARCANE KNOWLEDGE OF PYTHON, OR YOU KNOW HOW TO DO FANCY NEEDI EWORK AND WANT TO HELP ANYONE IN A JAM? YOU ARE IN THE **RIGHT SPOT WITH QUNU THEN!**

type: profile name Wittytux. Being a lonatime Linux user. I type: profile desc: I've been using Linux since 1993. And, being KDE- and Gentoo-savvy, I type: tag KDE Gentoo Linux.

When you have your profile set up as you want it (you always can tweak it later), all you have to do is wait for a user to click on you and ask for help. When this happens, you are invited into a new conference (Figure 12). In the textbox, you can write in a nickname if you like, but that invitation expires within one minute. Then, it's up to you to decide how to help people, but remember to be polite!

Qunu automatically takes you off the available/on-line list when you are not available on your IM client and puts you back on when you are marked as on-line in the client, so users do not try to contact you when you are out for lunch. You always can override this setting by telling the Qunu service bot what your status is with status on and status off. If you want to know whether you are listed as available at any given time, simply type status without any further options.

#### IS THAT ALL?

Ounu is still in heavy development and aims to be a massive help system with very broad topics. Its future battle plans for world domination include localisation—translation into several languages is already taking place openly online. Qunu also already is negotiating with some helpline and IT companies to move some of their helplines to Qunu—taking them from the phone and onto your computer, where they are closer to the actual problem. Additionally, Qunu is planning to give experts the option of offering their advice for a small price paid by the user asking for help. Users needing highlevel expertise in a flash probably would be willing to pay for extra-quick, high-end expert help, although there would still be plenty of experts providing help for free.



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# **DIVERSIONS**

# Quake 4

Introducing another great game for Linux.

COLIN MCGREGOR

Quake 4 was produced by Raven Software using the Doom 3 software from id Software and is distributed through Activision. Due to violence, Quake 4 carries an ESRB rating of Mature and isn't recommended for anyone younger than 17.

In Quake 4, you are Corporal Matthew Kane, a Marine taking part in a large invasion dropped on to the Strogg alien home world, with the goal of stopping further Strogg invasions of Earth. This is a first-person shooter (FPS) game where what you see is what Corporal Kane would see looking through his helmet. The game starts with a short animation where you hear a summary of the events in Quake 2, see your unit's landing go wrong and from there join in the battle with other survivors of the landing. Unlike most FPS games, where you basically can assume anything moving is a target, in this game you are often working with a small team of other Marines, and their help is key to keeping you alive.

#### INSTALLATION

As noted in the System Requirements sidebar, Quake 4 has stiff hardware demands. Having a good 3-D graphics video card is key to this game. Although ATI has made strides with its Linux video card drivers, video cards based on the NVIDIA chips seem to be Linux gamers' preferred choice. Further, you should look at cards based on the NVIDIA 6200 chipset or better.

If this sounds good, and your computer can support Quake 4, the guestion is how to install it. Purchase a copy of *Quake 4* for Microsoft Windows 2000/XP. There are two versions of the game: one includes a single DVD, the

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Figure 1. The invasion of the Strogg home world begins.

other includes four CD-ROMs. The CD-ROMs or DVD have the data files. needed for the Linux version of the game. In the package, there is a manual that is vital. It has a security code on the back cover, and the documentation is useful, as once it starts, all versions of the game play the same way. Beyond the retail package, you need to download a copy of the Quake 4 software for Linux. At the time of this writing, the latest version of the software is guake4-linux-1.3-2.x86.run and can be found via id Software's Linux



Figure 2. Operating the Machine Gun on a Hover Truck

Web site (http://zerowing.idsoftware.com). The install program is around 228MB, so dial-up users beware!

Using the Kongueror file manager in superuser mode, execute quake4-linux-1.3-2.x86.run. At this point, the install program will ask you a series of guestions. You will need to agree to the conditions, and the default file location values should be fine. Don't try to run Quake 4 yet; you need to install the data files.

Copy over all the files that are in the Setup/Data/q4base directory on the CD-ROM or DVD that don't exist in /usr/local/games/guake4/ q4base. There were problems with some files originally released with Quake 4; you want to keep the corrected files included with the install program. Whenever Kongueror asks if you want to replace a file, the answer is Skip. If you have the CD-ROM version of the game,



Figure 3. A Shootout with a Strogg Soldier

you will have to change disks and repeat the above process with each CD-ROM.

All the files in /usr/local/games/quake4/q4base need to have their permissions changed so that all the files can be read by Others. In Kongueror, highlight the files, right-click, select Properties, click Permissions, make sure Others is set to Can Read, and then click OK.

The first time you start the game, you will be asked to enter the security code combination of letters and numbers found on the manual's back cover. Then, a few moments later the game begins.

### **PLAYING OUAKE 4**

At the beginning, you will be asked how hard you want the game to be, and unless you are an experienced gamer with excellent reflexes, I suggest you choose Private as opposed to the other levels,



Figure 4. Seeing Some of the Other Marines

TO KEEP THINGS INTERESTING. IN MOST OF THE MULTIPLAYER GAMES. A KILLED PLAYER CAN RETURN TO THE GAME WITHIN A FEW SECONDS. BUT WITHOUT ANYTHING THE PLAYER PICKED UP DURING THE GAME

which go up to General.

Quake 4 includes a multiplayer option that lets you play against other Quake 4 users on a IAN or on the Internet. There are several variations on the multiplayer game. In Deathmatch, you try to make more kills than anyone else in

# **SYSTEM REQUIREMENTS**

- 2GHz Pentium 4 or Athlon XP 2000+ CPU
- 512MB of RAM
- 2.8GB free hard disk space
- CD-ROM or DVD-ROM drive
- 3-D graphics video card
- Soundcard with ALSA or OSS support
- Kernel 2.4, with 2.6 recommended
- Glibc 2.2.4 or later
- For multiplayer mode, a broadband connection is required for Internet play

a certain amount of time. In Team Deathmatch, vour team tries to make the most kills in a certain amount of time. In Tournament, you battle another player one on one. Finally, in Capture the Flag, players are divided into two teams. Each team must get the other side's flag and return it to its own base. To keep things interesting, in most of the multiplayer games, a killed player can return to the game within a few seconds, but without anything the player picked up during the game.

#### **SUMMARY**

In summary, Quake 4 has eye-popping graphics,



Figure 5. Playing Capture the Flag with the Strong team leading 7 to 4 over the Marine team, and 11 minutes 24 seconds left on this level. An extra gun is visible just ahead.

stiff hardware demands and a complex install program. In single-player mode, I found the levels felt a bit too heavily scripted—too predetermined. Still, it's great fun. In multiplayer mode with a fast Internet connection, expect to have a blast.



Colin McGregor works for a Toronto area charity, does consulting on the side and has served as President of the Toronto Free-Net. He also is secretary for the Greater Toronto Area Linux User Group meetings and is the moderator for the Unix Unanimous user group.