

# MUUGLines

The Manitoba UNIX User Group Newsletter

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## Next Meeting: April 10<sup>th</sup>, 2012

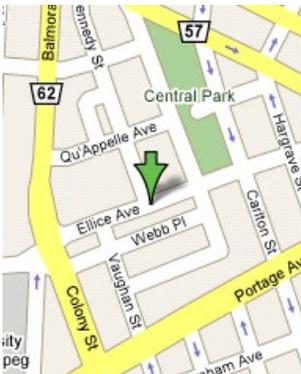
### RTFM: date(1)

April's RTFM will feature the date(1) command, presented by Michael Doob.

### Topic: pfSense firewall

Adam Thompson will talk about (and demonstrate, if all goes well) pfSense, a wholly UNIX-based network firewall and network services appliance that can run on anything from embedded devices up to the latest super-servers. pfSense is based on FreeBSD, and thus uses the pf(4) packet filtering framework from OpenBSD to do most of the heavy lifting. Supporting multi-WAN, HTTP acceleration, DNS, DHCP, authentication, and wireless NICs among other features, it's an ideal system for someone who wants a free, open-source firewall that's still incredibly easy to manage.

### Where to Find the Meeting



Meetings are held at the IBM offices at 400 Ellice Ave. (between Edmonton and Kennedy Streets). When you arrive, you will have to sign in at the reception desk. Please try to arrive by about 7:15pm, so the meeting can start promptly at 7:30pm.

Limited parking is available for free on the street, either on Ellice Ave. or on some of the intersecting

streets. Indoor parking is also available nearby, at Portage Place, for \$5.00 for the evening. Bicycle parking is available in a bike rack under video surveillance located behind the building on Webb Place.

## Upcoming Meetings

May 8<sup>th</sup>, 2012: TBA

### Hard Drive Vendors Do It Again

As if their public image wasn't damaged enough by the Thailand floods and shortages, Western Digital and Seagate have recently announced they are shortening the warranties on most of their drive models.

Seagate consumer-class drives (Barracuda, Momentus, non-XT) are all going down to 1 year from 3. XT and Enterprise models (apparently including SAS!) are lowered to 3 years.

WD Blue and Green now have only 2 year warranties, down from 3. WD Black drives are the only ones to keep their 5 year warranty, making the WD Black, a 7200rpm drive, the best spinning-rust drive choice at the moment.

They have tried this trick in the past and back-pedalled after a couple of years, so we'll see where this goes this time. With most SSD drives now coming with 5 year warranties, and spinning-rust drive prices still double what they should be because of the flood, this may be the final nail in the coffin for old-world drives.

## RAID5 Predicted To Break

Don't panic. The prediction was made in 2007 that gave RAID5 two more years before it would "stop working". Since the world is still here, the prediction was a tad wrong. However, the article (see URL below) is a good read as its points may still be relevant.

The theory is that drive capacities keep going up but unrecoverable read error (URE) rates remain static. A URE of  $10^{14}$  bits, which is representative, means within every 12TB of reads, you will probably see a URE. The author posits that if you had a 12-ish TB RAID5 array, and you had a single drive failure, and replaced a disk, the whole array would have to read around 12TB of data to rebuild to include the new drive. This means that on most RAID5 rebuilds of what is now a reasonable array size, you will encounter more errors, get a second drive drop-out and be panicking to find your tape backups.

Truth or fiction? You be the judge.

<http://tinyurl.com/bwhry7b>

## Linus Saves The Day!

Linus Torvalds has supplied prior-art evidence that may invalidate a Microsoft patent that was being used to extort royalties from Android device vendors. The patent covers the storage of long filenames in FAT filesystems. Linus found some Usenet posts that he himself wrote, which predate the Microsoft patent by three years.

<http://news.techeye.net/software/linus-torvalds-busts-microsoft-patent>

## Android Fixes DoS Flaw

Italian researchers discovered a flaw in the current Android OS that allows a malicious app to consume all resources making the phone unresponsive until hard-rebooted, and possibly beyond.



Google implemented the fix suggested by the researchers and the fix should be available shortly as part of the standard Android update procedures.

This highlights the under-publicized vulnerability of smart phones, and is probably just the tip of the iceberg for the coming storm for all OS brands.

<http://tinyurl.com/7q6egzj>

## Videos OfThe Month

Back by popular demand, MUUG-suggested viewing:



The DevOps Transformation (thanks to Rob Keizer):

<http://www.youtube.com/watch?v=3KpPBnEtRj4>

Singing floppy drives?

[http://www.youtube.com/watch?v=yHJOz\\_y9rZE](http://www.youtube.com/watch?v=yHJOz_y9rZE)



## Linux From Scratch 7.1 Out

The LFS project announces the availability of version 7.1 of its manual. The 345 page document provides step-by-step directions on building your own personal Linux "distro" customized to your needs.

[http://www.youtube.com/watch?v=yHJOz\\_y9rZE](http://www.youtube.com/watch?v=yHJOz_y9rZE)

## Fedora 18 Name

It's that time again, time to pick the release name for the next Fedora. Names must have some relationship to the previous (F17) name Beefy Miracle. Nominated names this time include:



Red Hot

Tusker Whammy

Spherical Cow

and... wait for it...

Vegetarian Ding-Dong

If you are a Fedora contributor with login access, you can take part in the voting process.

## **Bad Capacitor Plague Continues, Morphs**

By Trevor Cordes

The leaky / faulty capacitor problem plaguing the computer and consumer-electronics industries, the one that was supposed to have been resolved in 2005, is still with us. Some say it is getting worse.

Almost everyone will have had experience with this problem, even if they are unaware of it. Almost every computer and CE device (TV, DVD player, etc) contains aluminum capacitors. These are failing at alarming rates to this very day. The most talked about instance seems to be about Samsung TV's circa 2009, which are failing only 6 months after the 1 year warranty expires.

The problem of the faulty, stolen electrolyte formula may no longer be with us (though this author is not convinced), but new problems may have arisen. One could be the EU lead-free initiatives which became industry-standard and nearly 100% adopted in the last few years. They mandate the use of lead-free solder when producing circuit boards. An unintended consequence of this is that boards must be heated and wave-soldered at a non-consequentially higher temperature. Capacitors, and other components, have certain heat tolerances, and exposing them to higher temperatures can reduce their lifespan and cause premature failure.

Like many government initiatives with good intentions, the cure may be worse than the disease. By drastically shortening the life of products, we may be doing more environmental harm than good. If consumers are discarding their CE (bulky computers,

TV's, etc) more frequently, then we trade lead in our landfills for massively increased amounts of bulk and other toxic chemicals (capacitors themselves contain many toxic substances) in our landfills.

Also, the production of most of the components that go into these devices takes massive amounts of resources such as water and metal, and produces large amounts of pollution. The resultant impact on the Earth is probably worse under these new regulations.

Next time you have a device fail, if you are handy, open it up and check all capacitors for bulging, leaking and gooping, especially on the power supply areas of the device. In many cases, simply replacing a couple of capacitors can turn a 40lb doorstop destined for the landfill into a working TV or computer again. Even external power supplies (wall-warts and inline bricks) have exhibited bad caps!

<http://tinyurl.com/6ptvgdz>

## **DRAM Maker Elpida Bankrupt**

The super-cheap RAM prices we are enjoying today comes at a cost. Longtime DRAM manufacturer Elpida, whose products are probably in at least one device you own, filed for bankruptcy last month in Japan.

Record low DRAM pricing caused many quarters of losses and Elpida failed to secure a bail-out from the Japanese government. This however is a boon for Micron and Hynix, who may be bidding on Elpida's assets.

## **Red Hat Breaks A Billion**

Red Hat just announced it made \$1.13 billion in revenue in one year (fiscal year ending Feb 29). This makes it the first Linux company to break that substantial milestone, proving that open source can pay.



## Linux 3.3 Supports Android

The recently released Linux 3.3 kernel contains parts of the Android project that have now been merged into the vanilla kernel. This initial step could lead to the support for Android apps on normal Linux distributions like Ubuntu.

Linux 3.3 also now supports UEFI boot, updated support for AMD and Nvidia graphic chip power management.

## HP Commits To Linux

HP has recently commented that it will be ramping up the use and support of Linux (and Windows) on business-critical platforms, at the expense of HP-UX, its proprietary UNIX OS. They plan to give back to the community and work more closely with Red Hat in the future.

HP and Red Hat also continue down their path of abandoning the IA64 Itanium architecture, which appears to finally be drawing its last breath.

<http://tinyurl.com/7ywny64>

## Linux Pro Magazine Review

By Trevor Cordes

With the advent of Linux Journal switching to an electronic-only



format, and the discontinuance of Linux Magazine several years ago, there's a dearth of Linux magazines available at the moment. The only one left in North America is Linux Pro Magazine, which took up the reins from Linux Magazine (and also bought the subscriber list and honoured existing subscriptions).

Linux Pro Magazine is a pricey offering, with yearly subscriptions just under the \$100 mark for Canadian subscribers. They offer an optional bonus DVD each month with the magazine for only \$10 more per year. However, since the DVD usually contains freely (as in beer) downloadable content (such as the latest linux distro), it's of dubious value.

The magazine is in British-size format, slightly bigger than normal Canadian magazines. It's very high quality on extremely glossy paper. It always has a very polished look and rarely contains typos.

The articles run the gamut, from reviews of GUI user apps to intermediate-level administration articles to perl programming. I find overall it is moderately more user- and novice-centric than the old Linux Magazine. The regular columnists are pretty good, though their topic choices tend to stay within their favourite few topics. The guest writers often provide excellent in-depth and more advanced articles.

The whole magazine often has a European feel to it, with the non-standard paper size and international set of contributors. However, it never degenerates into the adolescent feel that so many UK computer magazines have.

They often run trial subscription deals, where you can get a taste at very little cost, like 3 month for \$3:

<https://www.linuxpromagazine.com/Subscribe/Trial-Subscription>

They also publish sister magazines Admin and Ubuntu User. If you've been to MUUG meetings lately you've probably seen these magazines as door prizes.

Overall I would rate the magazine as excellent, with price and slight lack of advanced topics as my only complaints.

## OpenBSD srandom() bug

Stop the presses! OpenBSD has a bug with potential security implications. Mukund Sivaraman came across a slightly funny bug in srandom(). If you use srandom(0) to seed with the value 0 (probably you would not do that, but it is possible if you make a typo), then every subsequent call to random() will return 0. Not very random, and not very good security implications for things that rely on good randomness.

<http://tinyurl.com/6wlqwlw>