



MUUGLines

The Manitoba UNIX User Group Newsletter

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Editor: Trevor Cordes

Next Meeting: January 10th, 2017

Presentation: webmin

“Webmin is a web-based interface for system administration for Unix. Using any modern web browser, you can setup user accounts, Apache, DNS, file sharing and much more. Webmin removes the need to manually edit Unix configuration files like /etc/passwd, and lets you manage a system from the console or remotely.” Adam Thompson will demonstrate the installation and use of Webmin as an alternative to editing config files and using the command line.

RTFM: fio

This month’s RTFM will be presented by Wyatt Zacharias, who will talk about the **fio(1)** command. The “flexible I/O tester,” **fio** is “a tool that will spawn a number of threads or processes doing a particular type of I/O action,” usually “to write a job file matching the I/O load one wants to simulate.”

The latest meeting details are always at:
<https://muug.ca/meetings/>

February Meeting Special Notice

Heads up for the subsequent month! The normal February meeting day this year falls on Valentine’s Day, so we will be changing the meeting date to the following Tuesday, February 21. **Note**, this affects **February’s** meeting, **not** January’s.

Where to Find the Meeting

University of Winnipeg, Room 1L11

Meetings are held in the University of Winnipeg's Lockhart Hall, south-east corner of Spence Street & Ellice Avenue. From January to April, we can be found in room 1L11, Lockhart Hall. Doors are



usually open by 7:00 pm with the meeting starting at 7:30 pm. Parking is available on the surrounding streets. See uwinnipeg.ca/maps for further information about parking and access to the campus.

Dandy Door Prizes

Get them while they’re hot! This month we will be giving away:

- *Essential System Administration* by A.Frisch, O’Reilly: An oldie but goody for sure, and amazing how much of it is still highly relevant
- Linux Pro Magazine: Special issue this month includes on the enclosed DVD a digital copy of every single article LPM has ever published from issue #1 until now. A treasure trove of information, reference and reading!
- Ebooks: We continue with our you-choose-your-title O’Reilly and No Starch ebook giveaways with another two planned for this month.

As a reminder, door prize entry is free to every attendee, even non-members. The first draw will select from members only. Subsequent draws will select from all entrants.

Vinyl Stickers

MUUG continues to give away free vinyl stickers with our shell logo: show up and grab a couple. They look great on laptops, or use them to promote MUUG around your office or school!

.NET on Linux?

.NET Core is now an “open source framework” and recent collaboration between Microsoft and Red Hat has resulted in a .NET you can develop with and run on Linux. This author questions the sanity of such a thing: so I leave it to you to be the judge. In any event, such moves by Microsoft seem to me that Linux has “won”, in a 1999-mindset kind of way. Hooray. Check out the free O’Reilly ebook on the subject:

<http://tinyurl.com/zkobmsc>

MethBot’s Giant Video Ad Fraud

In a stunning revelation, WhiteOps has revealed a group of cyber criminals making \$3M-\$5M a day using their 570,000+ computer “bot farm” to pretend to watch video ads and pretend to mouse-move and click on ad links in the videos. On average they received \$13 per thousand fake “views”. This represents the largest known ad fraud perpetrated to date.

How did they pull it off? They bought 6000 domains, put on average 40 pages on each domain. The URLs were specially crafted to make the pages appear to be from legitimate big-time publishers like Vogue. On each page would be an embedded video ad that would be hosted by a major third-party ad syndicator. The ad company’s algorithms would be fooled into thinking the page was a high-value site being viewed by high-value end users and serve up high-value ads.

Then the bot farm would initiate hits on those pages and use very advanced techniques to fool the ad provider into believing real end users were watching and clicking on ads.

The ad syndicator would then pay the owners of MethBot for their value in “generating traffic” to the vendor sites. Ultimately, it is the vendors who would pay for all this fake traffic.

This goes to show once again that in the digital realm, nothing is really guaranteed. Bots can be programmed to emulate humans, and visit, hit and view counts can’t really be trusted. Similarly, in recent months, Facebook has admitted to ad purchasers that many of their metrics had been exaggerated. If you buy ad space anywhere on the

net, be sure you are really getting what you are paying for!

<http://tinyurl.com/ztz73ee>

UK Passes Law to Hack Citizens

A month ago, the UK passed a law allowing government agents, with a court order, to hack into private citizens’ computers and smartphones. They can utilize hacker tools, malware, OS exploits, etc., to gain access without your knowledge.

The law also stipulates that ISPs will record the domain and date of every website each citizen accesses. That data will be made available to agents without a court order, with a “supervising officer” deciding whether or not to allow each request.

<http://tinyurl.com/jq2m2qq>

Optimizing NFS

Jeff Layton in Admin Magazine provides a great article on tuning your NFS setup to obtain optimal performance. He touches on sync vs. async, daemon count, block size, timeouts, client-side caches, mount options, MTU, TCP tweaks, subtree checks, and more.

If you’re like many people in that you feel your NFS performance isn’t quite what you expect, take a gander at these and see if any could apply to you.

<http://tinyurl.com/hd4aqhg>

Hacking Typing via Audio

Add this to your list of “gee, I would never have thought of that” concepts: University of California, Irvine, put out a study that “found that typing done during a video call using Skype [...] could be recorded and translated from sound into text.” They found that it’s “possible to build a profile of the acoustic emanation generated by each key on a given keyboard”.

If a user is typing a password or other sensitive information during their video chat, that information can be retrieved on the other end. The attack isn’t easy, nor does it work on every kind of keyboard, but “when it works, it works hard and bad.” Note to self: don’t type anything sensitive while on a video call.

<http://tinyurl.com/j7f7whq>

Whither finger? To Forecast!

Sick of a certain weather network web site taking about ten seconds to load all of its cruft, just to find it not working properly in the area of the page you actually care about anyhow? Want a great way to see your local forecast in about one second with nice ASCII graphics? Miss the old “finger”? On any *NIX system, type:

```
finger winnipeg@graph.no
```

If that doesn't work, first install the **finger** package with your distro's package manager (in a RH/Fedora-like distro, that would be *yum* or *dnf install finger*). For other cities, just change the *winnipeg* part of the command. For easier access, add an alias to your shell rc file!

Now, which MUUGer wins the prize for longest-time-since-they-last-used-finger?

IoT DDoS in SSH

This month's acronym overload comes courtesy of the burgeoning Internet of Things (IoT). If you haven't yet heard of IoT, it's basically a wave of products for your home – from thermostats to fridges to garage openers – with (near) full-fledged OS's, that almost never get their software properly updated and as a result are heaven for hackers.

Akamai recently discussed how IoT zombies (compromised devices) are being used as a new vector for DDoS (Distributed Denial of Service) attacks. An Akamai director dubs it “The Internet of Unpatchable Things”.

To illustrate their point, they found that a ten year old OpenSSH vulnerability is being exploited on some IoT devices. Said security hole was long since patched – just not on your IoT widget. So if you come home and your doors are unlocked, the cat is gone, it's 35C, and the fridge is spitting out ice cubes onto the floor for no reason, you know who (what) to blame.

<http://tinyurl.com/he967w6>

Torvalds Tidbits

In the November 2016 Linux Pro Magazine (a copy of which you can win if you attend the January meeting!) Linus Torvalds provides an exclusive interview. He reminisces on 25 years of Linux and gives a glimpse into his personal life.

A choice quote:

LM: Now that your kids are [...] moving out for college [...] will you still be doing Linux or will you start something else

LT: That's odd, because when I got my first child, at that point people were worried: Oh, now he has children [...] that's bad. Now he will stop maintaining Linux.” And now the children are going away, and you're asking me whether I will stop maintaining Linux. [...] I don't think it will change a lot.

Linux DistroMania

Also in the aforementioned LPM issue, is an article chronicling some of the wackier Linux distros. They count 500+ distros that have come and gone over the past 25 years.

You might find these entries amusing:

- **Suicide Linux**, perhaps for those with masochistic tendencies, is Debian-based and “configures your system so that every incorrectly typed command deletes all the data on the hard drive with an *rm -rf /*.” Dare you to run it!
- **Justin Bieber Linux** based on Debian, also known as **Biebian**. Don't ask...
- **Hannah Montana Linux**: says the author: “I installed this so you don't have to.”

Social:



<https://muug.ca/meetings/video>

Modern Perl 4th Edition

Book Review by Trevor Cordes

Modern Perl by *chromatic* (Pragmatic Bookshelf) is much more than it pretends to be. The title intimates a focus on “new” perlisms, but the book actually covers the gamut (minus a comprehensive enumeration of functions, which you can obtain elsewhere). It is modern in the sense that it covers all major features and additions as of Perl 5.22.

To be sure, this book is not one for novices (try *Learning Perl*, O’Reilly, just released in a spanking new 7th Edition). Any intermediate or expert Perl user should find this book highly useful, especially if they haven’t been keeping up with the changelog of each perl release.

Written in a concise, no-nonsense style, the book proceeds to lay out the major Perl idioms you should know to be effective. A sample of topics covered: return context, unicode filehandles and strings, type coercion, lists!=arrays, references, exceptions, pragmas, and “beyond syntax”. I found satisfaction in finally learning why $((1,2),3) == (1,2,3)$. Another great section is “What to Avoid” which highlights old idioms that should no longer be used.

The Object Oriented (OO) section is quite large, and devotes a lot of space to Moose, an OO object system that takes most of the grunt work out of the OO paradigm. Whether you tend towards OO or procedural, the book has you covered.

I found some of the advanced topics intriguing and a lot of fun to finally grok. Closures and code generators are two that stand out. Such idioms are becoming quite common in other languages, and Perl keeps up with the Joneses quite handily.

Whilst well-written, the book contains numerous formatting errors; it is clear an automated syntax highlighter was used; it could use some work. Lastly, the book is available as a dead tree from the usual suspects, or as a **free** ebook from Pragmatic.

<http://tinyurl.com/q8ezwdq>

Why Perl?

It was recently asked at a MUUG meeting what language an admin should learn. Perl was mentioned by many, and while not lauded by all, it was clear that if you must learn just one admin language, Perl would make a very good candidate. The author of *Modern Perl*, *chromatic*, gives his five reasons as:

1. **Compatibility:** almost all Perl code since Perl was invented 30 years ago will run unmodified in modern Perl.
2. **Quality:** automated, massive test suites on core and CPAN minimize bugs. Security holes are extremely rare.
3. **Usability:** its man pages and other documents are copious and well-written, and CPAN has ready-to-use code for nearly everything.
4. **Scalability:** Perl bridges C and shell; it’s useful for everything from one-liners to million-line programs.
5. **Availability:** it has been ported to every professional OS you can think of, including Windows.

I would add to that list that if you know C, then you are already halfway towards knowing Perl. Likewise, if you learn Perl, you’ll be on your way to understanding C. If you use *NIX long enough, you will end up going into C source code one day, trust me. And if you admin long enough, you’ll end up going into Perl code one day to tweak something. In addition, the same applies, but a little less so, to awk, sed, bash and lisp! Perl borrows from them all.

Personally, I like perl’s terseness and compactness: the ability to do a ton of work with a low code character count, yet it can remain readable and maintainable if you are careful (and document).



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