MUUGLines

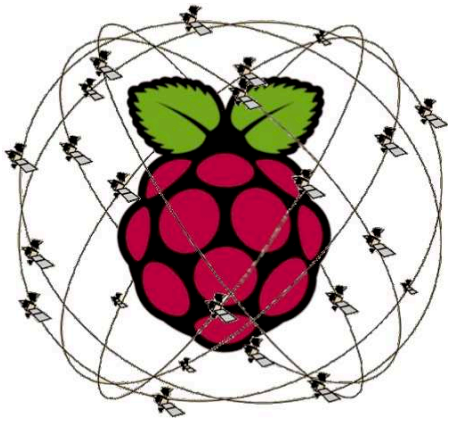
The Manitoba UNIX User Group Newsletter

Volume 33 No. 9, May 2021 Editor: Troy Denton

Next Meeting: May 11th, 2021 (Online Jitsi Video Meeting)

Get your own Stratum 1 NTP with a Raspberry Pi and GPS – Wyatt Zacharias

GPS uses extremely accurate atomic clocks to triangulate your position on the earth. Wyatt Zacharias will demonstrate how to harness these signals using a Raspberry Pi and GPS receiver to provide extremely accurate Stratum 1 time via NTP to other devices on your network.



May Door Prizes:

Draw for one e-book: any Mastery title by Michael W. Lucas. (`https://mwl.io`) Thanks Michael! (See page 4 for more info.)

We will also have our usual e-book giveaway.

Door Prizes Thank Brian Lowe

If you attended our last meeting and entered the door prize draw, you likely noticed that the e-book prize listings were in a much friendlier, prettier format. You can thank longtime member Brian Lowe for that! He wrote a `perl(1)` program to extract the metadata from the e-book files and create the nice view we now enjoy. Thank you Brian!

Where to Find the Meeting:

`jitsi.merlin.mb.ca/muug.2021.05`

This month (just like last month) we are using our own online Jitsi meeting server hosted by `merlin.mb.ca` . The virtual meeting room will be open around 7:00 pm on May 11th, with the actual meeting starting at 7:30 pm. You do not need to install any special app or software to use Jitsi: you can use it via any modern webcam-enabled browser by going to the aforementioned link. No camera? Join without, or use your phone with the Android or iOS app! Thank you `MERLIN` (the Manitoba Education Research and Learning Information Networks) for providing the hosting and bandwidth for our meetings.

The latest meeting details are always at:

`https://muug.ca/meetings/`

Spotted in the Wild

Spring releases attempting to co-exist in the open-source ecosystem

Spring 2021 has seen some exciting new releases in popular open source distributions:

Ubuntu 21.04 - "Hirsute Hippo"

Canonical has released their latest (non-long term support) flavour of Ubuntu, with the following notable features:

- Linux 5.11 kernel
- Improved Active Directory integration
- Desktop once again uses Wayland by default
- Numerous server software version upgrades
- GNOME 40 desktop environment

Fedora 34

The Fedora project has announced the release of Fedora 34 – some notable new features include:

- BTRFS transparent compression to save disk space and extend your SSD lifespans
- GNOME 40 desktop environment by default
- PipeWire is the new default audio daemon, touted as a better experience than the previous Pulseaudio

FreeBSD 13.0

The FreeBSD project has gone through 5 release candidates to bring you FreeBSD 13.0-RELEASE, with the following new features:

- Improved ZFS performance
- Faster networking – a 5x performance increase for some configurations
- Complete LLVM toolchain
- Many more improvements – see the release notes for details

OpenBSD 6.9

Our favourite Calgarian BSD distribution has recently released version 6.9 with the following notable features:

- Preliminary support for the Apple M1 chip
- Assorted arm64 improvements
- Improved hardware support and driver bugfixes
- Added/improved support for wireless network interfaces
- Many bugfixes alongside kernel and userland improvements

"This is Why We Can't Have Nice Things" - Academic Jerks Muck With Security for Science

University of Minnesota researchers have recently been lambasted by kernel maintainer Greg Kroah-Hartman (and many others) for submitting their "hypocrite commits" to the Linux kernel project.

The idea behind "hypocrite commits" is expanded in their paper – in essence, the researchers have submitted bugs that are not immediately obvious, and yet intentionally cause memory issues to be exploited by malicious code. Effectively, they are attempting to measure the security of the kernel development process, instead of the kernel itself.

While their controversial research has garnered them some notoriety, the researchers have also earned their University an indefinite ban from contributing to the Linux kernel:

> *[...] I will now have to ban all future contributions from your University and rip out your previous contributions, as they were obviously submitted in bad-faith with the intent to cause problems.*
>
> *- Greg Kroah-Hartman, linux-nfs mailing list*

U. Minnesota mascot Goldy Gopher is seen internalizing shame

You can see the academic paper in question here:

https://github.com/QiushiWu/QiushiWu.github.io/blob/main/papers/OpenSourceInsecurity.pdf

You can read more of Greg's mailing list roast here:

https://lore.kernel.org/linux-nfs/YH%2FfM%2FTsbmcZzwnX@kroah.com/

Internet Security Hero Daniel Kaminsky Passes Away at 42

The internet mourns the recent passing of Daniel Kaminksy, who discovered critical flaws in the Domain Name System (DNS) protocol in 2008. Daniel handled this severe security issue by cooperating with vendors of DNS server software, and going so far as to contact the Department of Homeland Security about the vulnerabilities.

Daniel Kaminsky was known as a "Paul Revere" figure among the security community for his careful and ethical handling of a very sensitive security issue.

> *"He did things because they were the right thing to do, not because they would elicit financial gain,"*
>
> *-Trudy Maurer, Kaminsky's Mother*

Story via CBC at

https://www.cbc.ca/radio/asithappens/as-it-happens-tuesday-edition-1.6004045/daniel-kaminsky-saved-us-all-when-he-discovered-an-internet-flaw-says-his-niece-1.6005715

Spectre Still Haunting Kernel Code

The now-infamous Spectre security vulnerability and it's related mitigations are still having ripple effects in the Linux kernel, as seen in CVE-2021-29155:

> *An issue has been discovered in the Linux kernel mechanism to mitigate speculatively out-of-bounds loads (Spectre mitigation).*
>
> *Unprivileged BPF programs running on affected systems can bypass the protection and execute speculatively out-of-bounds loads from the kernel memory. This can be abused to extract contents of kernel memory via side-channel.*
>
> *-Piotr Krysiuk, oss-security openwall mailing list*

The 5.11.16 stable kernel contains patches to address this issue.

You can read more about this CVE at the following locations:

https://www.openwall.com/lists/oss-security/2021/04/18/4

https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2021-29155

New Game Release on Linux: "Total War: Rome Remastered"

Fans of war sims and real-time strategy games will be excited to see *Feral Interactive*'s new release of *Total War: Rome Remastered,* with Linux support out-of-the-box:

> *The stage is set, armies have been assembled and battle lines drawn: Total War: ROME REMASTERED is out now!*

> *Offering a huge set of improvements, tweaks and additions to the classic game, Total War: ROME REMASTERED marks a triumphant entry into the modern era.*
>
> *-Via https://www.feralinteractive.com/en/news/1114/*

This release is part of the growing trend of new titles being released directly for Linux.

Total War: Rome Remastered is available for Windows, Mac, and Linux via the Feral Store or through Steam.

https://www.feralinteractive.com/en/games/rometwremastered/

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Thank You LES.net

A big thanks to LES.net for providing MUUG with free hosting and all that bandwidth!

https://les.net/

Thank You Michael W. Lucas

MUUG would like to thank Michael W. Lucas for donating one of his ebooks every month as a door prize. You can view and purchase his tech books here:

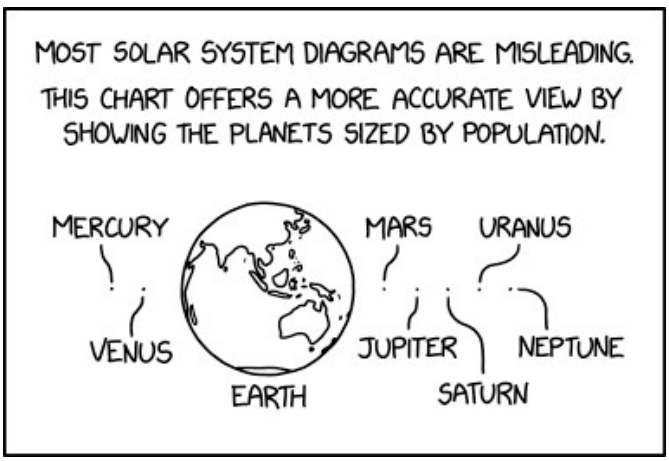
https://www.tiltedwindmillpress.com/product-category/tech/

$1,000 worth of Free Credit Card Processing!

Sign up with Square (the credit card processor that MUUG uses at our monthly meetings) with the referral link below and ***both you and MUUG*** will receive $1,000 in free processing for the next 6 months (180 days).

You must use the following referral link for MUUG to receive the credit:

https://squareup.com/i/MANITOBAU1



XKCD via https://xkcd.com/2439/