MUUGLines

The Manitoba UNIX User Group Newsletter

Volume 36 No. 8, April 2024 Editor: Alberto Abrao

Next Meeting: April 2nd, 2024, 7:30pm

Feature Presentation:
AllStarLink - Ham Radio over IP

AllStarLink is a Radio over IP (RoIP) application based on the popular Asterisk VoIP solution. AllStarLink is designed to connect licensed ham radio transceivers using VoIP protocols to allow extended coverage areas by connecting multiple transceivers at different locations together. Wyatt Zacharias will present on the history of amateur radio repeaters in Manitoba, and how they are being modernized with AllStarLink to use IP networks as the backbone for a connected system.

If you show up in person you will be treated to more beverage choices than we've offered in over a decade: coffee, tea, and pop, as well as cookies. And parking is free, copious, safe, and just a handful of feet from the door.

Please stay home if you are sick that day.

To attend via internet, check and refresh the following link after 7:00pm. There is no need to create an account in BBB, nor login. Just enter any name as your screen name and hit **join**.

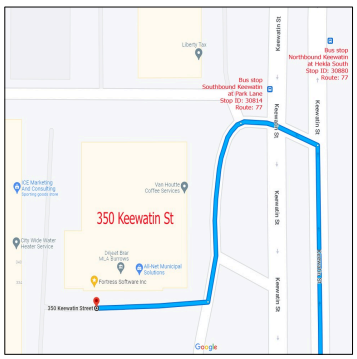
https://muug.ca/meet

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

Where to Find the Meeting

We are continuing to meet on the first Tuesday of every month.

Fortress Software Inc.
350 Keewatin St – Unit #2



Doors will open at 7:00pm. Meeting starts at 7:30pm.

If driving, enter the lot using the most north-eastern entrance (far right in the top picture) and drive around to the south west corner of the building (see route in map detail). You can use any of the free, ample, and safe parking spots that say "reserved" or "MUUG" in front of units #1 through #4 before entering into unit #2. Look for the sign over the door!

Bus stops #30814 and #30880 (route 77) are only 150 meters away. The last bus leaves for Polo Park at 10:15 pm and for Garden City at 10:31 pm. Logan Ave. bus routes #19, #26, and #27 are a 600 meter (8 minute) walk to the south.

Another One!

Oh, how boring would life be without the seemingly weekly new hardware vulnerability!

Register File Data Sampling (RFDS) *may* allow a malicious actor to infer data values previously used in floating-point registers, vector registers, or integer registers.

It affects Intel Atom cores. (laughter ensues)

Oh, not so fast. Those *hilarious* Atom cores are the safest of them all. No speculative execution seems to make it really hard for data to take a random hike elsewhere, somewhere it doesn't belong. We are not talking about these *leisurely, yet perfectly cromulent – and very much safe!* - netbook processors of the late aughts.

The offender here are the new, "superscalar" Atom cores. Before you burst into laughter again, these are also used for the famous E-cores (E is for *efficiency*) of the newest shiniest Intel Core processors.

See? Those netbooks were not *slow,* they were just *secure*!

And Another One!

AMD did not want to be left behind yet again. Due to the trauma it painfully endured for around 10 years, up until the very first Ryzen was released back in February of 2017, it did not want to be left behind this time.

ZenHammer affects Zen 2 (3000 and 4000 series for the desktop, also other models, and a mess for laptops) and Zen 3 (5000 series for desktop, and same mess elsewhere, don't get me started). It is a variant of the RowHammer attack that works on Intel and ARM, involving "hammering" rows of memory cells in order to corrupt adjacent ones, hoping to exploit the ensuing mess to achieve feats such as privilege escalation.

KDE 6 "MegaRelease"

KDE 6 is now live! The new Plasma 6 is dubbed a "MegaRelease", due to the sheer amount of technological changes involved, such as the adoption of Qt 6 and full Wayland support.

But there's more! Partial support for High Dynamic Range (HDR) on supported monitors and software. Content creators rejoice everywhere! Not done yet. Colour blindness correction filters are also available now. These were areas where Desktop Linux was severely lacking not too long ago, and it is great to see that the improvements are coming fast.

It did not make its way to the forthcoming (k)Ubuntu 24.04 LTS release. With that said, it will be available in their backports repository.

It is on schedule for a debut on Fedora 40. There, as a homage to one of Fedora's Fs – First - it will not run on an X11 session. Wayland session or bust. Fear not, though: Xwayland is still available, so your old school applications will work just fine.

To be clear, KDE 6 supports X11 sessions just fine. Not that you would care for that, now that it fully supports Wayland… right?

Yours truly may have a few things to say about the new KDE soon. My living room machine is still going strong as a kick-back-and-enjoy gaming

powerhouse on Fedora KDE, with Wayland and everything, so the new shiny will be there soon. The beta for Fedora 40 is available. If you can't wait… then don't. I will not!

(By the way, are you Wayland yet? It's great.)

Oh, and There's Also That GNOME Thing…

All my homies who are not *tiling window manager* snobs, yes, all… two?… of them, are either on KDE or XFCE, because of course they are.

Now, for the ones who have not seen the light yet, the unfortunate souls who followed the prompts to download an ISO, not checking for "Spins" or "Alternative Editions", well, there's GNOME.

Fedora 40 is debuting GNOME 46. In true GNOME fashion, there's a deluge of changes no one asked for and/or cares about. You can get used to it, and it flows well if you give it a chance, but if you end up loving the add-ons, they'll keep breaking after most GNOME updates. That has not changed.

One, however, may be of interest to the ones who need it: better fractional scaling support.

Note that GNOME 46 **will** be available with Ubuntu 24.04 LTS.

Perl 5.39.9 Released

Here at MUUG, we know at least one person who may be very excited to hear that Perl 5.39.9 has been released.

As much as I could not possibly care less for *your* Perl – nothing personal, I just don't *speak* the language! – I do appreciate and respect releases that avoid going to from version 2 to 100 in 3 weeks, just because they can. It keeps things tidy, and changelogs easier to follow.

The highlight seems to be the new "^^ logical xor operator", dubbed *"cats"* by some.

^^

Rust in the Kernel

No need to "buff it right off". Easy now!

Much was said about allowing bits written in Rust to become part of the Kernel. On one hand, any software project must keep evolving if it wants to stay relevant. On the other, there are dangers that come from embracing any and all fads.

One of the newest kids on the block is Rust, the language that started life as a Mozilla project, but stand on its own feet today. Some hail it as the greatest thing since C; others think Rust is the second coming of $DEITY, and C just sucks, and *all would be well in paradise if only those old geezers could just let it go, you know*; and there are also the ones who believe there can be only one, and that one is C, *and you better get off my lawn, kiddo.*

The Linux Kernel Mailing List was on fire for a while, but, in the end, Rust is in, as long as it behaves, fits in, and doesn't make a fuss.

Kernel 6.8 debuts `the very first device driver written in Rust`.

What's Nouveau is Nova Again

Speaking of Rust, Red Hat is working on a *rusty* driver for Nvidia GPUs.

This driver aims to replace the Nouveau driver for all Nvidia models that use the GPU System Processor (GSP) – for Desktops, that would be anything from the RTX 2000 series onward.

Long story short, the proprietary bits sit on the hardware itself, and the driver is used to "initialize" the GSP, bringing all the goodies to life. That is why Nvidia finally released an open-source driver: there's nothing to hide, all is already hidden.

To top it off, in classic Nvidia fashion, their "open" drivers are released in a very peculiar way, supporting very specific kernels and environments. That works for enterprise customers, but desktop users would seldom pin a specific Kernel version on their machines. One would assume the new initiative is Red Hat's attempt to bridge the gap, and strengthen Rust's claim to Kernel readiness.

And on That Version-go-crazy Note...

LibreOffice 24.2 is the successor to LibreOffice 7.6.

Yes, they moved to a *year.month* release numbering scheme in the likes of Ubuntu.

For everything else, it's still your good, sometimes bad, old LibreOffice. We love to hate it, but it is here for us, and we do appreciate that.

And just like that, as I am here praising it, an image ran away. *Again.*

Redis is Now "Source-available"

If you rely on Redis for your in-memory database needs, you may want to check your licensing requirements. They have adopted what they describe as `source-available` licences.

Expect your favourite distribution to stop packaging it soon.

Alternatives include **KeyDB,** which started as a multi-threaded Redis; **Redict;** and **Garnet**.

Virtualization is Not Dead

While some may see "virtualization" vs "containerization" as the technological *cold war* of our times, for a while, it did seem like virtualization was, shall we say, *stable*. That can be a good thing, of course.

It is not a good thing when things stop working, though, such as when Red Hat took the SPICE away from us. Red Hat Enterprise Linux 9 dropped the protocol, which means that Windows Virtual Machines (VMs) running on the KVM virtualization platform do not perform as well as they used to, at least for direct graphics console access. Their Red Hat Virtualization product is only receiving maintenance updates, and will sunset in 2026. SPICE was the first casualty.

Versions 6.8 and 6.9 of the Linux Kernel contain some huge advances in virtualization technology, including strides on confidential/secure VMs for Kernel 6.8, and performance improvements on both 6.8 and 6.9.

With that said, if you are feeling sad and low, and want to SPICE up your life on EL 9, well… smile and dance, everything is free, `all you need is positivity`! La-la-la, la-la-la-la-la-la!

What About Docker?

Containers are very much alive, of course. Docker, the original flag-bearer of what Linux containerization technology could achieve, may not be so hot right now, at least not to most tech folk.

Just like Redis and HashiCorp, they had to change licensing terms in ways that rubbed many people the wrong way. All the while, our resident veteran Red Hat was right there. They may have left the Virtualization building, taking their SPICEs with them, but they left their Pods, man.

And the Pods are great, man. And getting better too! And they integrate nicely with systemd, oh my! Oops, now I drove a bunch of people away. Sorry.

Well, scrap that (or not). Rootless containers are great. Not having a daemon to manage all your little pods… man, that is really a better way to go about it.

If you have not taken it for a spin, it may be the time to do it. Podman 5.0 was released just a few days ago, the first major release in two years.

Canonical Expands Long Term Support to 12 years, Starting with Ubuntu 14.04 LTS

Have an old install that you just can't let go yet? Canonical has got your back.

The "Legacy Support" addon to Ubuntu Pro expands security and support coverage for Ubuntu LTS releases to 12 years, and is available for Ubuntu LTS 14.04 onward. Standard Ubuntu Pro support for this version ends in April, and the new addon allows for more time – and support – for the migration.

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/`

Coming Up

- Fedora 40 with KDE 6, sans X11. Good night, sweet prince. (and yes, GNOME too, I guess…)

- Ubuntu 24.04 LTS, and its sidekicks Kubuntu, Lubuntu, Xubuntu!

- OpenBSD 7.5.

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