MUUGLines

The Manitoba UNIX User Group Newsletter

Volume 35 No. 10, June 2023 Editor: Bradford C. Vokey

Next Meeting: June 6th, 2023 7:30pm

Once again, note the early meeting date. MUUG is continuing to meet on the first Tuesday of every month. Update your calendars!

In Person and Online

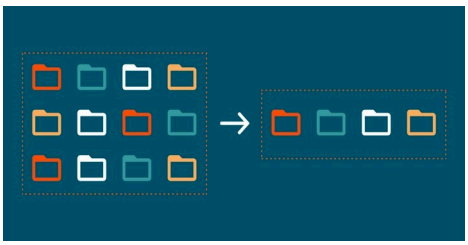
After a very successful hybrid meeting last month (with 11 attending in-person and 10 joining online) we will continue meeting both physically and online. We encourage all members to attend in person. However, if you cannot attend in person, please watch and interact with the meeting online and partake of our professional grade camera, microphone and dedicated stream moderator.

In person attendees will again 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.

To attend via the internet: Refresh the meeting link below anytime after 7:00 pm on June 6th. There is no need to create an account in Big Blue Button, nor login. Just enter a name as your screen name and hit **join**.

https://muug.ca/meet

Main Presentation: Using BTRFS deduplication to consolidate 90 hard drives



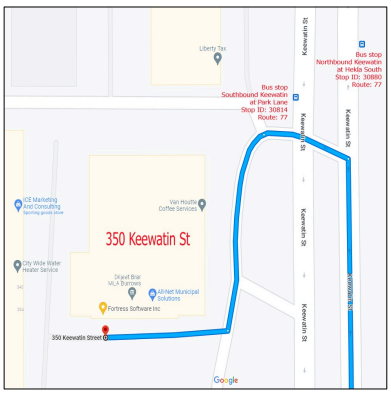
This month, Chris Audet will provide a brief overview of BTRFS deduplication, as well as demonstrate a practical application - a large HDD consolidation being planned for later this year.

Where to Find the Meeting

NEW LOCATION

Fortress Software Inc.
350 Keewatin St – Unit #2

MUUG Treasurer, Brad Vokey, has once again graciously donated the use of his work office. The doors will be open at 7:00 pm with the meeting starting at 7:30 pm.

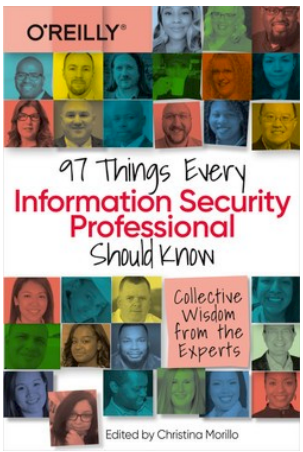


If driving, enter the lot using the most north-eastern entrance (far right in the top picture) and drive around to the south west corner of the building (see the route in detail to the left). You can use any of the free, ample, and safe parking spots that say "reserved" or "MUUG" in front of units #1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

Door Prizes



We have dead trees! Last month we gave away (to one of our in-person attendees) the physical book *Practical Monitoring: Effective Strategies for the Real World.* So that means that this month we still have a physical copy of *97 Things Every Information Security Professional Should Know* by *O'Reilly.*

Their *97 Things* series has been going on for a while now and is similar to, and somewhat replaces, their older *Hacks* series. Each one is a mash-up of on-topic anecdotes and tidbits deemed to be of the most importance by each contributing author.

> *Whether you're searching for new or additional opportunities, information security can be vast and overwhelming. In this practical guide, author Christina Morillo introduces technical knowledge from a diverse range of experts in the infosec field. Through 97 concise and useful tips, you'll learn how to expand your skills and solve common issues by working through everyday security problems.*

Also, for this month, we will be giving away a couple of *NIX-themed stickers. See the *Stickers* section later in this newsletter.

Additionally, a few *Communications of the ACM* magazines graciously donated by Dan Keizer will be up for grabs as door prizes. And, as usual, we will be giving away a couple of e-books, including one graciously donated by Michael W. Lucas of Tilted Windmill Press.

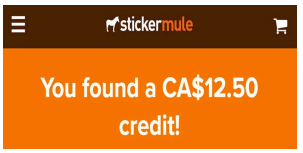
Everyone is encouraged to enter the door prize draw, both in-person and virtual attendees. You don't have to be a member to enter, but members have exclusive access to the first draw. Members also get the privilege of not having to be present (physically or virtually) for the draw in order to claim their prize.

*NIXy Stickers

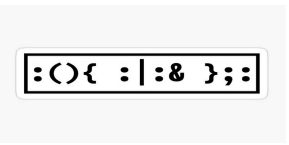
MUUG has acquired some very fine stickers from StickerMule. We'll be giving some away as door prizes over the next few meetings.

Show up in person to check out the full assortment! Surely one must match your favorite distro? One even caused an after hours discussion (see the bash fork bomb article in this newsletter).

Want your own complete set? Use our special $12.50 MUUG credit link here ***before*** buying your own set `here`.



The Bash fork() Bomb



One of the *NIX stickers that we looked over last meeting was just the characters shown in this picture to the left.

After the meeting lots of discussion was had guessing what it possibly did and how bad it could possibly be? So, Alberto was brave enough to try it on his laptop (in a VM of course), and it immediately made his VM totally unresponsive, even when run as a normal user. Buy why?

Vivek Gite, the founder of nixCraft wrote a great `article` explaining what this bash code does, and how to protect your systems from this built-in denial-of-service attack. Many Linux distributions have now set lower ulimit defaults to prevent this, but many still do not. One user commented fairly recently:

> *I tried it on my phone, in the termux app.*
>
> *It should be a somewhat isolated environment, but my phone crashed and I had to wait until the Battery ran out.*
>
> *Don't try this at phone.*

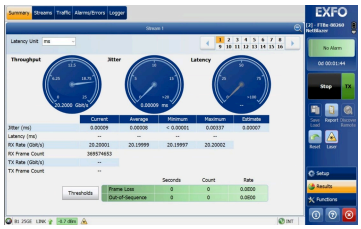
https://www.cyberciti.biz/faq/understanding-bash-fork-bomb/

Fast Forward: The future is multi-gig

Is anyone interested in 20 Gb fibre to the home?

Google Fiber's differentiating factor has long been their vision that the internet should be measured in gigs, not megs. They used to get asked, "who needs a gig?" Today it's no longer a question. Every major provider in the U.S. and Canada seems to have now gotten the gigabit memo, and it's only going up from there — some providers are already offering 2, 5, 8, even 10 gig products.

Google Fibre in the US began raising that bar further in 2021 with the launch of a 2 Gig product (2 gig down; 1 gig up) at just $100 a month, but they knew that was just the next step. In the coming months, they will have announcements to dramatically expand their multi-gigabit tiers. These will be critical milestones on their journey to 100 Gig symmetrical internet.



And they're already closer than you might think. In September 2022, they took their testing out of the lab and into the home, starting with their first trusted tester, Nick Saporito, the Head of Commercial Strategy for GFiber. Look closely at that speed test from Nick's house in Kansas City — yes, that's 20.2 gig download you're seeing!

Debian 12 "Bookworm" release date set to June 10

Debian's upcoming release code-named 'Bookworm' is almost here, with many improvements and new features over Debian 11 Bullseye.

Debian 12 'Bookworm' contains over 11,200 new packages, bringing the total to over 59,000 packages!

Most software included with Debian has been updated, with 9,500+ packages being removed for being old or obsolete.

Are you excited?

https://news.itsfoss.com/debian-12-features/

MUUG 2023 BBQ: Tuesday, August 1st, 2023

MUUG is having another summer BBQ and everyone is invited!

Spouses, children, and significant others are also welcome to attend.

Date: August 1st, 2023

Time: 6:30 pm

Location: BBQ Site #5, Assiniboine Park

For the second year in a row MUUG is hosting another BBQ event, but this time at Assiniboine Park!

Burgers, hot dogs, and pop will be provided by MUUG. Feel free to bring your own food to share with others and your own beverages if you like.

Please RSVP via email to board@muug.ca with the subject "MUUG BBQ" before July 25th so we know how much food we need to buy and bring.

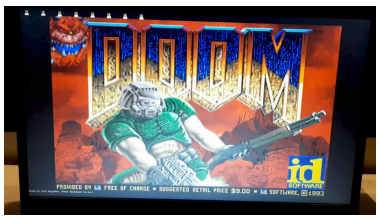
Firefox 113 Release

Firefox Version 113.0, first offered to Release channel users on May 9, 2023, now has nifty new PIP (picture-in-picture) features!

Say hello to enhanced Picture-in-Picture: Rewind, check video duration, and effortlessly switch to full-screen mode on the web's most popular video websites. All with easy keyboard shortcuts:

https://www.mozilla.org/en-US/firefox/113.0/releasenotes/

Doom Linux



This Linux distribution is as simple as possible and loads no bloat other than what's needed to launch the game. The ISO image is just 18 MB.

Some of the comments are gold:

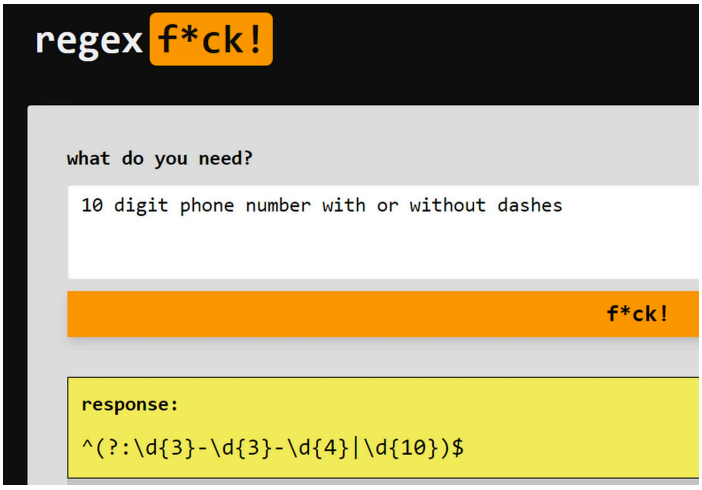
> *"Systemd? No! Systemdoom!"*
>
> *"I like what you did there."*
>
> *"they should have used psDoom instead..."*

https://hackaday.com/2022/06/09/a-linux-distribution-for-doom/

A GPT 3.5 tool for generating regex

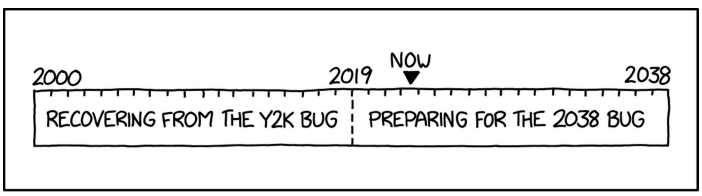
Need a regex but not sure where to start?

Have GPT to make it for you using plain English!



https://fuckregex.dev/

Y2K and 2038



REMINDER: BY NOW YOU SHOULD HAVE FINISHED YOUR Y2K RECOVERY AND BE SEVERAL YEARS INTO 2038 PREPARATION.

https://xkcd.com/2697/

Devs Plan Major Changes for KDE Plasma 6

KDE Plasma is looking to adopt "better defaults" in version 6.

The two biggest changes to KDE's default settings will be moving from single-click to open a file, to double-clicking. Single-clicking to open has been a KDE staple for a long time, but it's the exact opposite of literally every other major environment, so it makes sense to align this basic interaction with people's expectations. Of course, this is KDE, so it'll be a toggle to customize it, in the same way it is now.

The second major change is Wayland by default. While X.org will, of course, still work and be available to distributions and users, Wayland will be KDE's official recommendation from here on out. With X.org development having pretty much halted completely, and quite a few major distributions now defaulting to Wayland, this is the right move to make. For all the Wayland haters – feel free to donate your time and expertise to X.org development, *because no one else is.*

KDE Plasma 6 is not *officially* scheduled for release until the end of 2023.

https://www.osnews.com/story/136142/kde-plasma-6-better-defaults/
https://www.omglinux.com/big-changes-revealed-for-kde-plasma-6/

Two core Unix-like utilities, sudo and su, are getting rewrites in Rust

An AWS-backed group believes the command is too central to the web to keep as-is.

Two of the most fundamental tools of the modern Unix-like command line, sudo and su, are being rewritten in the modern language Rust as part of a wider effort to get critical but aging infrastructure pieces replaced by memory-safe counterparts.

> *"Sudo was first developed in the 1980s. Over the decades, it has become an essential tool for performing changes while minimizing risk to an operating system, but because it's written in C, sudo has experienced many vulnerabilities related to memory safety issues."*

https://arstechnica.com/information-technology/2023/05/two-core-unix-like-utilities-sudo-and-su-are-getting-rewrites-in-rust/

New Linux kernel NetFilter flaw gives attackers root privileges

A new Linux NetFilter kernel flaw has been discovered, allowing unprivileged local users to escalate their privileges to root level, allowing complete control over a system.

The researcher states that this impacts multiple Linux kernel releases, including the current stable version, v6.3.1. However, to exploit the vulnerability, it is required first to have local access to a Linux device.

Netfilter is a packet filtering and network address translation (NAT) framework built into the Linux kernel that is managed through front-end utilities, such as IPtables and UFW.

https://www.bleepingcomputer.com/news/security/new-linux-kernel-netfilter-flaw-gives-attackers-root-privileges/

Google offers a free course to learn Rust: The programming language of the future

Google has launched a new online and free course for those interested in learning Rust.

Rust has gained popularity in recent years due to its focus on memory safety and its ability to handle concurrency safely.

The course, called *"Comprehensive Rust,"* is designed for beginners and is expected to be completed in a total of four days.

https://facialix.com/en/google-offers-a-free-course-to-learn-rust-the-programming-language-of-the-future/

https://google.github.io/comprehensive-rust/welcome.html

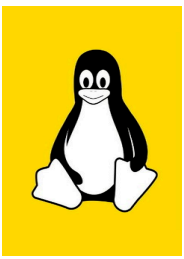
Our favorite fonts for the Linux terminal

Here is an entirely subjective list of some fun fonts for your Linux console.

OCR-A *Sorry Wyatt, I did not see anyone mention the OCR-A font?*

https://opensource.com/article/23/4/linux-terminal-fonts

Some Incredible Stories Around Tux: Our Lovable Linux Mascot



We've all seen our favourite Linux Mascot. In this Linux trivia series, Avimanyu Bandyopadhyay scoured every nook and corner of the web to gather some interesting trivia about our cute and friendly penguin, starting from its early days.

His article cites the original email from Linus Torvalds, dated May 9, 1996, where Linus suggested using a "contented" penguin:

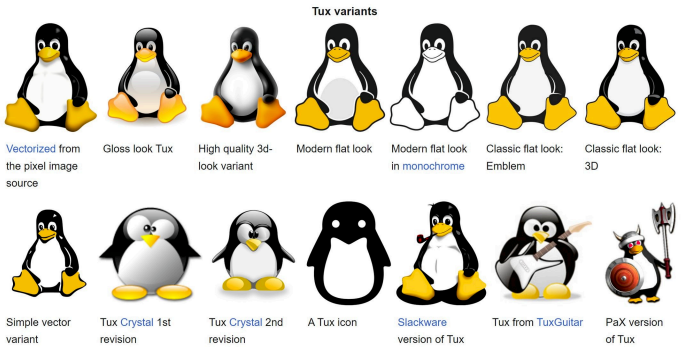
> *"Now, with penguins, (cuddly such), "contented" means it has either just gotten laid, or it's stuffed on herring. Take it from me, I'm an expert on penguins, those are really the only two options."*

Based on discussions on a linux-kernel mailing list and using an initial suggestion by Alan Cox, Larry Ewing used GIMP 0.54 to create the first Tux image.

https://itsfoss.com/tux-trivia/

More history can be found on Tux's Wikipedia page:

> *The first person to call the penguin "Tux" was James Hughes, who said that it stood for "(T)orvalds (U)ni(X)". However, tux is also an abbreviation of tuxedo, the outfit which bears resemblance in appearance to a penguin.*



https://en.wikipedia.org/wiki/Tux_(mascot)

And for those that would like a ***short video history*** of Linux (and Tux) here is a great YouTube video:

https://www.youtube.com/watch?v=E0Q9KnYSVLc

A New Thunderbird Logo!

Jon Hicks, the creator of the original Firefox and Thunderbird logos, was asked to re-imagine his iconic design in light of Thunderbird's exciting future.

After nearly 20 years, the Thunderbird Council shared a completely redesigned Thunderbird logo. They say it honors their history and vital connection to Mozilla, while carrying them forward into the next 20 years.

It's no secret that after many years of being viewed as stagnant, Thunderbird is enjoying a resurgence. They say the Thunderbird project is thriving with a renewed sense of purpose, and they see an invigorating energy bubbling up from their users, their community of contributors, and their core team.

Just like the software, the current Thunderbird logo has seen small, iterative improvements throughout the last 20 years. But now the software is evolving (see the next article!) into something more modern while retaining its powerful customization and they believe it deserves a fresh logo that properly represents this revitalization.

But you should never forget your roots, which is why they asked Jon Hicks, the creator of the original Firefox and Thunderbird logos, to re-imagine his iconic design in light of Thunderbird's exciting future.

There are new logo versions for Linux, Windows, macOS, Android, and iOS.

https://blog.thunderbird.net/2023/05/introducing-the-brand-new-thunderbird-logo/

K-9 is Thunderbird for Android

If you missed the exciting news last summer, the K-9 Mail Android app is now part of the Thunderbird family, and the Thunderbird Council says they are working steadily on transforming it into Thunderbird for Android.

https://k9mail.app/2022/06/13/K-9-Mail-and-Thunderbird.html

https://blog.thunderbird.net/2023/05/thunderbird-for-android-k-9-mail-april-progress-report/

The Future of Thunderbird

This author's favourite email client, Thunderbird, turns 20 years old on July 28th, 2023, and for better or worse, some big changes are coming!

Alessandro Castellani, Thunderbird's Product Design manager, has some good insights into what's happening and where things are going. Consider his article from February 2023 (and his companion video below) the first painting in a more complete mural showing where Thunderbird is headed, and why some of the things they're doing might seem counter-intuitive.

With this year's release of Thunderbird 115 "Supernova," they're doing much more than just another yearly release. It's a modernized overhaul of the software, both visually and technically. Thunderbird is undergoing a massive rework from the ground up to get rid of the technical and interface debt accumulated over the past 10 years.

> *"Thunderbird is literally a bunch of code running on top of Firefox. All the tabs and sections you see in Thunderbird are just browser tabs with a custom user interface. Unfortunately, this approach comes with a hefty cost."*

If you use Thunderbird, you owe it to yourself to read his full article or watch the video:

https://blog.thunderbird.net/2023/02/the-future-of-thunderbird-why-were-rebuilding-from-the-ground-up/

https://youtu.be/EoLb6aHakno

I am sure I will write another newsletter article come December complaining about all the new "features"!

Use weeBell to Create Your Own Local Landline Telephone Service

Dan Julio created weeBell, which is hardware that lets you create your own telephone service to take advantage of old landline phones.

Residential landline is experiencing its death throes and even commercial operations tend to rely on various kinds of VoIP (Voice Over Internet Protocol) services. That means that there are literal mountains of useless POTS (Plain Old Telephone Service) phones with no use littering our homes and thrift stores. Wouldn't it be nice if they could serve a new purpose? If you think so, then you'll want to check out Dan Julio's weeBell project that gives you the hardware necessary to create your own local telephone service that you can use for a variety of purposes.

https://www.hackster.io/news/use-weebell-to-create-your-own-local-landline-telephone-service-9d6ad9624efb

$1,000 worth of Free Credit Card Processing!

If you ever have a need to collect credit card payments be sure to sign up with Square (the credit card processor that MUUG uses) 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 to receive the credit:

https://squareup.com/i/MANITOBAU1

Share Your Thoughts

Please email MUUG with your comments and suggestions regarding the newsletter and the meetings. Whether it's criticisms or commendations, we want to hear from you. Specifically, what sort of material would you like to see and/or hear about.

Send an email to: board@muug.ca.

A big thanks to Les.net for providing MUUG with free hosting and all that bandwidth! Les.net (1996) Inc. is a local provider of VoIP, Internet and Data Centre services. Contact **sales@les.net** by email, or +1 (204) 944-0009 by phone.

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/

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Help us promote this month's meeting, by putting this poster up on your workplace bulletin board or other suitable public message board:

https://muug.ca/meetings/MUUGmeeting.pdf