MUUGLines

The Manitoba UNIX User Group Newsletter

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Next Meeting: Tuesday, May 8, 2018 at 7:30 PM

RTFM: systat(1) with Adam Thompson

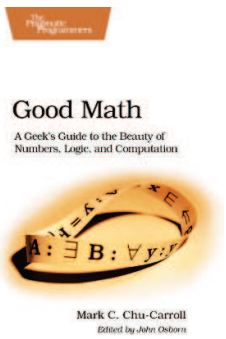
UNIX systems in the 1990s routinely came with terminal-based system performance-monitoring tools. Linux and FreeBSD unfortunately did not continue this tradition with the exception of top(1). OpenBSD has had standard system monitoring tools since inception, but in 1995 they added systat(1), a full-screen system monitor designed to run on the console or in a terminal. Adam will demonstrate the use of systat(1) and describe some of the interesting details it displays that are still difficult to get today on other systems.

Presentation: LISA 2017 Review / Intro to Docker (Demo)

Katherine Scrupa will summarize her experience from the training portion of the 31st annual Large Installation System Administration conference. The training section had a devops-heavy focus, including Docker, Golang, PostgreSQL, Git, tuning, and CI/CD. Katherine will also give a beginner-level demonstration of Docker containers.

Door Prizes

Books include DNS & BIND (1st edition!) and Good Math (A Geek's Guide to the Beauty of Numbers, Logic, and Computation). Plus we will be giving away a couple of e-books and the usual assortment of miscellanea. Come to the meeting for your chance to win!



This Month's Meeting 1M28 Manitoba Hall, U of W

Meetings are held in the University of Winnipeg's Manitoba Hall, in the east end of the University Complex, near Balmoral St. We can be found in room 1M28.

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.

OpenBSD 6.3 Released

On April 2, the OpenBSD project announced the 44th release of OpenBSD, version 6.3. This marks over 20 years with only two remote holes int he default install.

Notable changes include

- SMP is supported on arm64
- File system handling in suspend/hibernate has been improved
- Updated versions of OpenSMTPD, OpenSSH and LibreSSL

Bionic Beaver

Canonical has released the latest LTS version of Ubuntu, called Bionic Beaver (18.04 LTS). The most prominent change since 16.04 LTS is the

switch from the Unity desktop interface to the GNOME destop environment. Where possible, the Ubuntu developers did their best to retain the visual style of the Unity desktop, but, well, start getting used to window controls on the right.

Python 3 is now the default Python stack; the GPG binary is now provided by GnuPG2; a swap file is now the default for new installations rather than a swap partition; and systemd-resolved is now the default DNS resolver.

This is Canonical's 7th long-term supported release and will be supported until April 2023.

Microsoft's IoT Security Platform

Microsoft has opted to use its own version of a Linux operating system instead of Windows 10 to drive its new Azure Sphere solution for securely connecting Internet of Things devices.

Microsoft introduced Azure Sphere at the recent RSA security conference in San Francisco. Azure Sphere is a platform that connects microcontroller units, or MCUs, embedded in cloud-connected devices. The platform operates a new cross-over class of MCUs that incorporate real-time and application processors with built-in Microsoft security technology and connectivity.

The Azure Sphere OS is built on a custom Linux kernel.

1.1.1.1

On April 1, CloudFlare announced their new, privacy-first DNS service. But what does DNS have to do with privacy?

What many Internet users don't realize is that even if you're visiting a website that is encrypted, that doesn't keep your DNS resolver from knowing the identity of all the sites you visit. That means, by default, your ISP, every WiFi network you've connected to, and your mobile network provider have a list of every site you've visited while using them.

Why 1.1.1.1? It has often been used as a placeholder, which means that since it is actually a valid public IP address, that address is flooded with garbage requests. APNIC held the address, and agreed to give it to CloudFlare in exchange for analyzing the garbage data.

So now you can configure any host or device to use 1.1.1.1 and 1.0.0.1 to use CloudFlare's fast and private DNS servers. Free!

BSDCan

The 15th annual BSDCan (https://www.bsdcan.org/2018/) is on June 8/9 this year. BSDCan is a technical conference for people working on and with 4.4BSD based operating systems and related projects held in Ottawa, Canada.

To give you an idea of the many meaty talks scheduled, check out "The Tragedy of systemd" (click-baity title ahoy!):

> This talk is about why something like systemd came to be. It looks into the history of system bootstrap over various UNIXes (and others), then looks at macOS and launchd before drawing direct parallels from launchd (and its cohorts) to systemd. From there it looks at why the ideas behind systemd are largely beneficial and the things it does better than what came before it, including the notion that "service management" is an underdeveloped concept on a lot of UNIXy systems and that it extends well beyond bootstrap to the entire system lifecycle.
>
> Then, in order to bring it all back down to earth, the talk discusses what systemd gets wrong before moving on to the actual tragedy of the piece: That the people behind systemd seem largely ill-equipped to manage the social aspect of the level of change they're pushing and that this could sour large groups of people on the entire idea of something like systemd. It ends with a discussion of how FreeBSD (or other BSDs) could implement the ideas behind systemd in better ways.

CPU Utilization is Wrong

CPU utilization is the metric everyone uses to measure a processor's performance. But %CPU is a misleading measure of how busy your processor really is, says Brendan Gregg, senior per-

formance architect at Netflix, in what he calls a "five-minute public-service announcement," at the 16th annual Southern California Linux Expo (SCALE).

In his Lightning Talk, "CPU Utilization is Wrong," Brendan explains what CPU utilization means—and doesn't mean—about performance and shares the open source tools he uses to identify reasons for bottlenecks and tune Netflix's systems. He also includes a mysterious case study that's relevant to everyone in 2018.

Beep: Security Risk

For well over a decade, Beep has been used by developers on Linux to get a computer's internal speaker to produce a beep. What makes Beep useful for certain programs is the fact that it allows users to control the pitch, duration and repetitions of the sound. The utility has not received any updates since 2013.

An unnamed researcher discovered recently that Beep versions through 1.3.4 are affected by a race condition that allows a local attacker to escalate privileges to root.

The security hole has been assigned CVE-2018-0492 and it has been sarcastically described as "the latest breakthrough in the field of acoustic cyber security research." Someone created a dedicated website for it (holeybeep.ninja), a logo, and named it "Holey Beep."

The individual or individuals who set up the Holey Beep website have also provided a patch, but someone noticed that this fix actually introduces a potentially more serious vulnerability that allows arbitrary command execution.

RHEL 7.5 Released

April 10th saw the release of the 5th update of Red Hat Enterprise Linux 7. Based on kernel 3.10.0-862, this release features

- Integration of Red Hat Ansible Automation with OpenSCAP
- The introduction of Virtual Data Optimizer (VDO) which provide inline dedupe and compression of primary storage
- Distributed File System (DFS) support in SMB v2 and v3
- Windows Server 2016 forest and domain functional levels

WSL DistroLauncher

Microsoft has released an open source tool that makes it easier for programmers and developers to run Linux on Windows 10.

The new tool, released at the beginning of April, also helps Linux distribution maintainers bring their distros to the Windows Store to run on Windows 10's Windows Subsystem for Linux (WSL). Microsoft developed the project for distribution maintainers and for developers who want to create custom Linux distributions to run on WSL.

The release of the Windows 10 Fall Creators Update let anyone use WSL to install and run command-line interface tools for several Linux distributions. Canonical's Ubuntu Linux distro was the first to run on WSL, followed by Suse, Fedora, Kali Linux, Debian and others.

One key advantage of distributing through the Windows Store is the ability to install multiple Linux distributions and run them side by side.

WSL Gets Copy and Paste

Apparently, some Windows 10 users have been clamoring for the ability to copy and paste both from and to WSL (Windows Subsystem for Linux) consoles – a reasonable request. Well, as of Insider Build 17643, this is finally possible.

"As of Windows 10 Insider build #17643, you can copy/paste text from/to Linux/WSL Consoles!!! We know that this is a feature MANY of you have been waiting for – our sincerest thanks for your patience and continued support while we untangled the Console's internals, allowing us to implement this feature. To ensure that we don't break any existing behaviors, you'll need to enable the 'Use Ctrl+Shift+C/V as Copy/Paste' option in the Console 'Options' properties page," says Rich Turner, Microsoft.

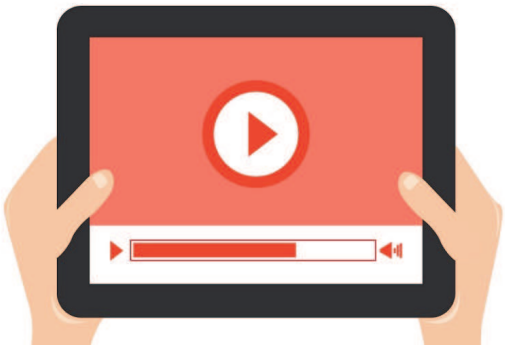
Turner further explains, "This setting can be set independently for each shell or shortcut: If you

pin your shortcuts to your favorite shells (e.g. Cmd/PowerShell/Linux) to your task bar, and modify the properties of Consoles launched via these shortcuts, your settings will only be made to the affected shortcuts. If you later launch the same shell via the Start menu, or the run dialog, your settings will not be found as they'll have been saved to your pinned shortcuts, not your Start menu tiles/shortcuts, or registry settings."

bhyvecon 2018

Earlier this year, at bhyvecon 2018 (in Tokyo), Mike Larkin gave a presentation (slides) which had an excellent summary of the state of vmm, and a tantalizing glimpse of possible future directions. A video is also available.

Watch MUUG Online



Missed a meeting, or want to follow along with a demo at home? Video recordings of the Daemon-Dash and presentations are now available on the MUUG website and on our YouTube channel.

https://muug.ca/meetings/video

https://www.youtube.com/channel/UCOhD-mKEXk9oUJActy_u4cUA

MUUG has gone social!

Twitter:
twitter.com/manitobaunix

Facebook:
facebook.com/ManitobaUnix

MeetUp:
meetup.com/Manitoba-UNIX-User-Group

A big thanks to Les.net for providing MUUG with free hosting and all that bandwidth! Les.net (1996) Inc., a local provider of VoIP, Internet and Data Centre services, has offered to provide a 10% discount on recurring monthly services to MUUG members. Contact `sales@les.net` by email, or +1 (204) 944-0009 by phone, for details.

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

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