

MUUGLines

The Manitoba UNIX User Group Newsletter

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Editor: Kevin McGregor

Next Meeting: January 8th, 2019

Test driving oVirt with nested KVM

oVirt is a KVM based virtualization solution by Red Hat which works on a data-centre / multi-server scale. Mark Jenkins will show that you don't need a rack full of servers or a SAN to try it out or simulate a production environment. The secret sauce for this is nested KVM.

RTFM: `systemctl(1)`

Most Linux distros have now adopted `systemd` as the new `init` process. Gilbert Detillieux will introduce the very basics of using `systemctl(1)` to control daemons in a `systemd`-based environment.

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

A 3 line diff

The OpenBSD 6.2 song has finally been released! Check out the lyrics and audio download links at <https://www.openbsd.org/lyrics.html#62>.

Microsoft Goes Gold

Kenneth R. Westerback writes

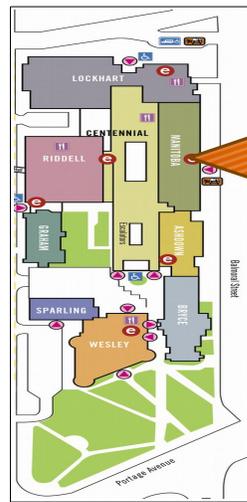
Microsoft goes Gold for 2018!

The [OpenBSD Foundation](#) is happy to announce that [Microsoft](#) has increased its support level from Silver to Gold for 2018.

This is the [fourth consecutive year](#) that Microsoft has made a contribution to the OpenBSD Foundation and we are grateful for their continuing support.

Where to Find the Meeting

University of Winnipeg, Room 1M28



Meetings are held in the University of Winnipeg's Manitoba Hall, on the east side of the University Complex.

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.

Open Source Endorsed

The Government of Canada has officially endorsed the use of Open Source software. The latest update to "Directive on Management of Information Technology" (<https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=15249>) now includes this section in Appendix C (Mandatory Procedures for Enterprise Architecture Assessment):

C.2.3.8 Use Open Standards and Solutions by Default

- C.2.3.8.1 Where possible, use open standards and open source software first
- C.2.3.8.2 If an open source option is not available or does not meet user needs, favour platform-agnostic COTS over proprietary COTS, avoiding technology dependency, allowing for substitutability and interoperability

- C.2.3.8.3 If a custom-built application is the appropriate option, by default any source code written by the government must be released in an open format via Government of Canada websites and services designated by the Treasury Board of Canada Secretariat
- C.2.3.8.4 All source code must be released under an appropriate open source software license
- C.2.3.8.5 Expose public data to implement Open Data and Open Information initiatives

Thanks to all who made this happen!

The Open BSD Virtualization FAQ

Readers may not be aware, but OpenBSD in its OpenBSD/amd64 and OpenBSD/i386 varieties comes with virtualization built in, brought to you by the vmm(4) subsystem.

Now getting started with OpenBSD virtualization has become even easier: The OpenBSD FAQ has a new Virtualization section, written mainly by Solene Rapenne (solene@) and added to the site in this commit, that offers an introduction to the concepts as well as instructions on how to get started with vmm(4).

Check out the FAQ at <http://www.openbsd.org/faq/faq16.html> and play with it!

Microsoft's Edge Moves to Chromium

There will be one less web browser renderer in the near future – Microsoft's Edge browser will use Chromium.

“Today we're announcing that we intend to adopt the Chromium open source project in the development of Microsoft Edge on the desktop to create better web compatibility for our customers and less fragmentation of the web for all web developers. As part of this, we intend to become a significant contributor to the Chromium project, in a way that can make not just Microsoft Edge – but other browsers as well – better on both PCs and other devices.”

See the announcement here: <https://blogs.windows.com/windowsexperience/2018/12/06/microsoft-edge-making-the-web-better-through-more-open-source-collaboration/>

What are our members using? Opera? FireFox?

Understanding HID Report Descriptors

Because I found this funny (from LWN.Net):

For those who would like a deeper understanding of how the human interface device (HID) protocol works, Peter Hutterer has posted a [detailed overview](http://who-t.blogspot.com/2018/12/understanding-hid-report-descriptors.html) (<http://who-t.blogspot.com/2018/12/understanding-hid-report-descriptors.html>). “Originally HID was designed to work over USB. But just like Shrek the technology world is obsessed with layers so these days HID works over different transport layers. HID over USB is what your mouse uses, HID over i2c may be what your touchpad uses. HID works over Bluetooth and it's celebrity-diet version BLE. Somewhere, someone out there is very slowly moving a mouse pointer by sending HID over carrier pigeons just to prove a point. Because there's always that one guy.”

Banana Pi 24-Core ARM Server

Slashdot reader MojoKid writes:

ARM-based server processors have threatened to take on Intel in the data center for some time but not much has materialized thus far in terms of significant deployments. However, a new breed of low cost ARM server implementations may be in the works with a many-core platform called Banana Pi. The latest Banana Pi device being teased is something very different in the form of a 24-core ARM server (<https://hothardware.com/news/banana-pi-server>) that speculation suggests might be sold as a Banana Pi server board or as a finished server product.

A video has surfaced that reportedly shows a 24-core ARM Cortex-A53 processor with 32GB of RAM, though the OS only sees 29.4GB of that RAM. The OS is Ubuntu 18.04.1 LTS with MATE desktop. Unless the processor used in this device is something

unannounced, and that seems unlikely, the chip itself would likely be a SocioNext SC2A11. The same processor is used in the Linaro Developer Box. The demo shows the server fully loaded at 100% CPU utilization building a Linux kernel and reportedly the system also supports NVMe storage as well as TensorFlow workloads for machine learning. Not much else is known about the system at this time but it's an interesting development in the Linux server space to be sure.

Parachutes Don't Work

Research published in a major medical journal concludes that a parachute is no more effective than an empty backpack at protecting you from harm if you have to jump from an aircraft. But before you leap to any rash conclusions, you had better hear the whole story. The gold standard for medical research is a study that randomly assigns volunteers to try an intervention or to go without one and be part of a control group. For some reason, nobody has ever done a randomized controlled trial of parachutes. In fact, medical researchers often use the parachute example when they argue they don't need to do a study because they're so sure they already know something works. Cardiologist Robert Yeh, an associate professor at Harvard Medical School and attending physician at Beth Israel Deaconess Medical Center, got a wicked idea one day. He and his colleagues would actually attempt the parachute study to make a few choice points about the potential pitfalls of research shortcuts.

They started by talking to their seatmates on airliners. [...] In all, 23 people agreed to be randomly given either a backpack or a parachute and then to jump from a biplane on Martha's Vineyard in Massachusetts or from a helicopter in Michigan. Relying on two locations and only two kinds of aircraft gave the researchers quite a skewed sample. But this sort of problem crops up frequently in studies, which was part of the point Yeh and his team were trying to make. Still, photos taken during the experiment show the volunteers were only too happy to take part. The drop in the study was about 2 feet total, because the biplane and helicopter were parked. Nobody suffered any injuries. Surprise, surprise. So it's technically true that parachutes offered no better protection for these jumpers than the backpacks.

See the paper at
<https://www.bmj.com/content/363/bmj.k5094>

Obnoxious Shell Effects

Courtesy of CLIMagic on Twitter:

THX-like sound

```
play -q -n synth sine F2 sine C3 remix - fade 0 4 .1  
norm -4 bend 0.5,2477,2 fade 0 4.0 0.5
```

It's a Trap!

Install "ack" (or "ack-grep" on some systems) then run "ack --bar"

Play a random video when cd'ing

Add this function to your .bashrc file:

```
cd(){ builtin cd "$@";(mplayer -really-quiet -nborder  
-endpos 30 -geometry 400x280+0+0 "$(ls -1  
~/Videos/*|shuf|head -1)" 2>/dev/null &); }
```

See more at

<http://www.climagic.org/coolstuff/obnoxious-shell-effects.html>

More from CLIMagic, but useful

```
socat -d -d TCP-L:22,reuseaddr,fork SYSTEM:"nc \  
$SOCAT_PEERADDR 22" # Confuse people SSHing  
to your host with a redirect back to theirs.
```

Okay, not so useful: Eye Of The Tiger on dot matrix printer: <https://t.co/hzpzmfjere>

```
(xsel -b || pbpaste) | hexdump -c # Dump your paste  
clipboard to hexdump for character by character  
investigation of what you just copied.
```

```
qalc "145Gibyte / 1.35(Mibyte/second) to day" # How  
many days will it take to transfer 145GiB at  
1.35MiB/sec? Use qalc!
```

VirtualBox 6.0 Released

For those interested in getting into virtualization on the desktop, or wanting to avoid containers, Oracle has announced VirtualBox 6.0.

Highlights of VirtualBox 6.0 include support for exporting virtual machines to Oracle Cloud infrastructure, much-improved HiDPI and scaling support for high-end displays, including better detection of displays, support for surround speaker setups for

Windows 10 Build 1809 users, and Hyper-V support on Windows hosts for better performance.

VirtualBox 6.0 also brings a major revamp to the UI, providing users with a much simpler and intuitive graphical interface that will help them set up virtual machines in a few minutes without any hassle.

These include a new file manager that puts users in control of the guest filesystem to easily copy files between the virtual machine and the host operating system.

Among other noteworthy improvements implemented in VirtualBox 6.0, we can mention support for the soon-to-be-released Linux 4.20 kernel for Linux-based hosts, 3D graphics support for Windows guests, VMSVGA 3D graphics device emulation for Linux and Solaris-based guests, initial support for macOS Guest Additions, and a new vboximg-mount utility for macOS hosts to allow users to access the contents of guest disks on the host.

VirtualBox 6.0 also brings better audio and video recording, improved support for attaching and detaching remote desktop connections, better serial port emulation, networking and iSCSI fixes, support for DHCP options in VirtualBox Manager, performance improvements for shared folders, and initial shared folder support for OS/2 Guest Additions.

Goodbye 32-bit Linux?

Is this the start of the end of 32-bit Linux? BetaNews reports on the Lubuntu distro:

It is the year 2018, and 2019 is right around the corner – 64-bit processors have been mainstream for a really long time. If you are still using a computer that is 32-bit only, it is time to toss it into a dumpster. No, I'm not being an elitist; it is simply time to move on. A much superior laptop can be had new for a few hundred bucks. Hell, you could probably buy a used 64-bit machine for under \$100.

With all of that said, I am proud of all Linux-based operating system maintainers that have the courage to ditch 32-bit processor support. Some misguided Linux community members will decry this, claiming

that the open source kernel can breathe new life into old hardware. That's true, but it's time for the world to raise the bar on what the bottom is – all hardware can't be supported forever. The latest major operating system to drop 32-bit support? Lubuntu.

“Lubuntu has been and continues to be the go-to Ubuntu flavor for people who want the most from their computers, especially older hardware that cannot handle today's workloads. However, the project and computing as a whole has drastically changed in many ways since its origin ten years ago. Computers have become faster, more secure, and most notably, have moved off of the traditional 32-bit i686 (generalized as i386 in Debian and Ubuntu) architecture,” says Simon Quigley, Lubuntu.

Quigley further says, “As an increasing number of Linux distributions have focused their attention on the 64-bit x86 architecture (amd64) and not on i386, we have found that it is harder to support than it once was. With i386-only machines becoming an artifact of the past, it has become increasingly clear to the Lubuntu Team that we need to evaluate its removal from the architectures we support. After careful consideration, we regret to inform our users that Lubuntu 19.04 and future versions will not see a release for the i386 architecture. Please do note that we will continue to support Lubuntu 18.04 LTS i386 users as a first-class citizen until its End of Life date in April of 2021.”

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