

# MUUGLines

The Manitoba UNIX User Group Newsletter

Volume 26 No. 5, January 2014

Editor: Robert Keizer

## Next Meeting: January 14, 2014

### Presentation and RTFM

Katherine Scrupa will be presenting Wireshark as the main topic.

*“Wireshark is the world’s foremost network protocol analyzer. It lets you see what’s happening on your network at a microscopic level. It is the de facto (and often de jure) standard across many industries and educational institutions.”*

Kevin McGregor will be presenting an RTFM from the depths of CLI Magic; @climagic on Twitter.



## Where to Find the Meeting

University of Winnipeg Lockhart Hall (marked “L” on the map), on the south-east corner of Spence and Ellice. Parking is available on the surrounding streets. We are usually in room 1L08, but are occasionally shuffled into nearby rooms such as 1L06 or

1L07. Look for a sign on the door of 1L08 indicating the change, or peek in the door windows.

## MUUG Mugs!

Back by popular demand! MUUG has ordered coffee mugs, etched with our age-old, lovable logo. We are offering them at \$15, cash. There are a limited number available, so get yours at the next meeting!

## Print Newsletter Now Optional

*This headline may look familiar. If you haven't acted on this yet, please consider doing so soon, and help save a tree! :)*

You asked for it, now you got it! If you desire, you can now opt out of the dead-tree (paper) newsletter that MUUG mails to members every month. You will instead receive an e-mail copy of the newsletter each month. Alternatively, you can opt to receive *both* the print copy and the e-mail one. (At present we cannot opt you out of both simultaneously.) MUUG is more than happy to continue mailing paper copies to those who prefer, but it is worth noting that a significant portion of MUUG's yearly operating budget goes towards postage.

To change your preferences, send an e-mail to [board@muug.mb.ca](mailto:board@muug.mb.ca) stating your choice (and preferred e-mail address if relevant), or come see Trevor Cordes during the break or afterwards at any general meeting.

Current limitations in our systems mean you will receive a paper copy of the newsletter plus your renewal form (regardless of your preferences) on your membership renewal anniversary. We are working on e-mail renewal forms as a feature in the future.

## KDBus & Systemd Bootable



“Open-source developers this week achieved a pleasant late Christmas present for Fedora users of having a working system with using the in-development Linux kernel DBus implementation (KDBUS) paired

with the latest systemd code can now yield a booting system. “

Lennart Poettering wrote on [the systemd mailing list](#), "We reached a major milestone in kdbus development today. We have all the userspace and compat stuff ready to make a full Fedora system boot cleanly and work fine with kdbus on the backend. With current git kdbus and current git systemd things should just work."

[http://www.phoronix.com/scan.php?page=news\\_item&px=MTU1NDM](http://www.phoronix.com/scan.php?page=news_item&px=MTU1NDM)

## Belgian Telco Accepts Bitcoin

*"Belgian telecom Mobile Vikings announced this week that it will begin accepting payment in BitCoin. Combined with mobile wallet apps, the service promises to revolutionize point of sale technologies. Could this be the tipping point for both BitCoin and payment by mobile phone?"*



<http://blog.mobilevikings.com/vikings-can-top-up-using-bitcoin>

## Telehash

### JSON + UDP + DHT = Freedom

*It works by sending and receiving small encrypted bits of JSON (with optional binary payloads) via UDP using an efficient routing system based on Kademia, a proven and popular Distributed Hash Table.*

*It's very much in the R&D stages yet, but check out the field-test utility in [node-telehash](#) for a simple demo.*

*The current spec is implemented in a few languages (any help here would be great!) and prototype apps are being created to test it. Questions can be directed at [twitter](#), or to [Jeremie Miller](#) directly.*

It seems as though peer-to-peer technologies, specifically distributed hash tables are becoming more and more prevalent. From Bitcoin to finding seeders on torrents, DHT as a technology seems to be winning in the war of new communication systems.

Some of the swell in popularity can be attributed to the fact that most DHT's utilize algorithms that contact only  $O(\log(n))$  nodes when searching for a particular key, given  $n$  nodes in a system.

<http://telehash.org/>

## Longest Uptime

What's the longest uptime on a UNIX like machine that you've achieved?

In March of 2013 a Netware system was shut down after 16 years of continuous operation.

A Sun 280R system running Solaris 9 was up for a little over 10 years. It also was turned off in March of 2013.

Perhaps you were wondering how you could physically move a running machine, keeping it 100% operational during the moving process. There is the Hot-Plug Field Kit, produced by a company called CRU under the brand WiebeTech.

<http://goo.gl/UmOKg>

<http://goo.gl/mxsqq>

<http://goo.gl/vzbs6K>

## FreeBSD 10.0 Coming Soon



Recently there was the [release](#) of FreeBSD 10.0-RC4. Pending anything horrible being found, the release will happen on the 14th of January.

Major changes include the use of LDNS and Unbound instead of BIND; LDNS was required as

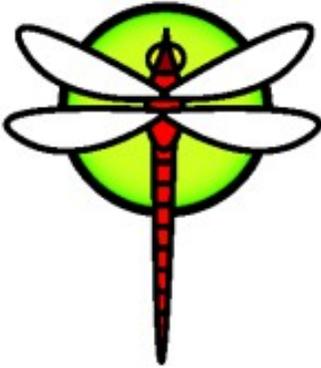
DNSSEC support in OpenSSH depends on LDNS.

Some users may notice the removal of GCC from the default base installation for the x86 and x86\_64 architectures. The standard compiler being shipped and installed is now CLANG.

If you wanted to run FreeBSD on a Raspberry Pi, want no more. The latest release support the Raspberry Pi platform out of the box.

Hyper-V Virtualization. That's right, FreeBSD 10.0 will ship with the ability to hook into Hyper-V hosts, providing a rock solid infrastructure atop ... erm ... sand.

## DragonFly BSD: No ISA



As of December 5th 2013, DragonFlyBSD-CURRENT does not support any ISA devices except for legacy keyboard and such things.

You may know the distribution for its HAMMER file system; In recent years however it has made very large strides in tuning the

kernel for SMP systems. Removing almost all blocking mutex locks from IO operations.

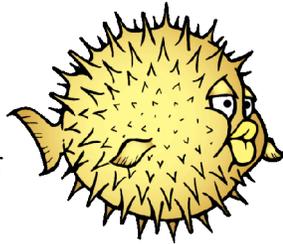
Under certain workloads, DragonFly BSD actually outperforms major Linux distributions.

<http://goo.gl/FXtS3s>

## OpenBSD Gets vioscsi

As of release 5.5 the security focused distribution has support for Virtio's scsi disk. While not known for its great disk speeds, this little addition to the kernel will allow for better support in virtualized environments.

<http://goo.gl/1MLcmu>



## PHP Function Names Based on strlen() Hashing

Rasmus Lerdorf has posted to the php.internals group explaining why the function names for PHP are all over the map.

So for all you hecklers out there, let it be known. There is a reason why `htmlspecialchars` is named the way it is.



*[...]. Back when PHP had less than 100 functions and the function hashing mechanism was `strlen()`. In order to get a nice hash distribution of function names across the various function name lengths names were picked specifically to make them fit into a specific length bucket. This was circa late 1994 when PHP was a tool just for my own personal use and I wasn't too worried about not being able to remember the few function names.*

-Rasmus

<http://goo.gl/kV8G6r>

## Programming Languages of 2013

While C, Java, Object-C, C++, and C# take slots one through five for most used, Javascript has been bumped into the top 10, coming in at number 9.

Other movers this year were Ruby and Perl, falling one and two places respectfully, along with Lisp and Delphi/Object Pascal who both dropped 5+ slots down.

This left room for MATLAB, F#, PL/SQL, and D to rise, with all coming in at under 20.

<http://goo.gl/DMs2>

## Cairo Proposed as Part of C++

*Cairo is a 2D graphics library with support for multiple output devices.*

Herb Sutter posted this to the cairo graphics list:

*[...]. We are actively looking at the potential standardization of a basic 2D drawing library for ISO C++, and would like to base it on (or outright adopt, possibly as a binding) solid prior art in the form of an existing library. [...]*

<http://cairographics.org/>

<http://goo.gl/VgcY8H>

## bzr is dying;

With commercial support from Canonical, Bazaar is one of the many source control systems that follows a git-like system of branching. While some will point out a few of the not so subtle differences, no-one can deny that git is the more popular choice.

Eric S Raymond has recently posted to the Emacs-Devel mailing list stating that Emacs should abandon bzr; as sticking with an alternative source control system will have social and signaling effects.

*[...]. In practice, I judge that sticking with bzr would have social and signaling effects damaging to Emacs's prospects. Sticking to a moribund version-control system will compound and exacerbate the project's difficulty in attracting new talent.*

*The uncomfortable truth is that many younger hackers already think Emacs is a dinosaur - difficult, bulky, armor-plated, and generally stuck in the last century. If we're going to fight off that image, we cannot afford to make or adhere to choices that*

*further cast the project as crusty, insular, and backward-looking. [...]*

<http://goo.gl/mbZqpn>

<http://goo.gl/LunZK>

## Google VP9

Google's new VP9 codec has gained some key partners in recent weeks. Intel, NVIDIA, ARM, Broadcom, LG, Samsung, and many more companies have agreed to support VP9 codec support in their products.

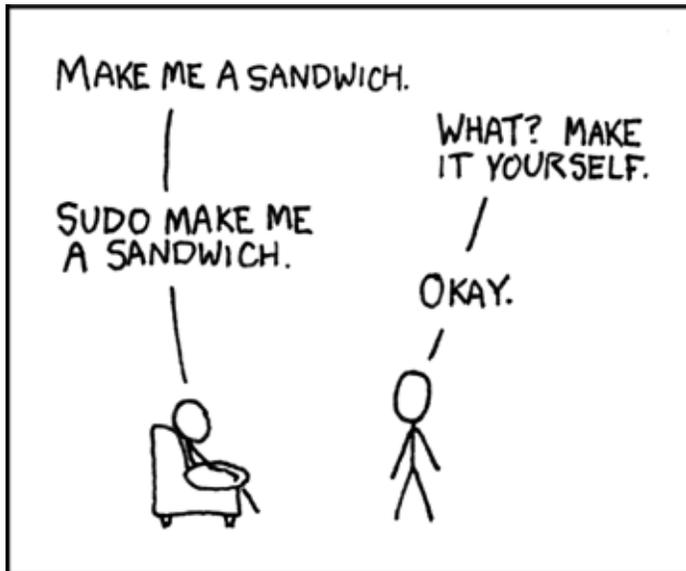
With Chrome, FFmpeg, and Firefox all supporting VP9 in the coming months, there seems a small chance that VP9 will not become an industry standard; One larger than VP8.

VP9 is a direct descendant of VP8, another Google backed standard designed for WebM and HTML5.

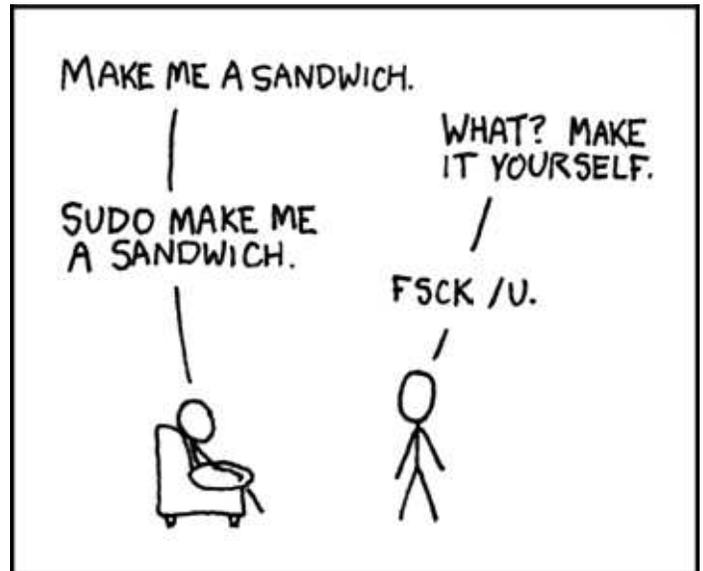
<http://goo.gl/ATK9vS>

<http://goo.gl/PnfVIv>

## XKCD 149: Sandwich: Myth vs Reality



Myth



Reality