MUUGLines

Next Meeting: October 8, 2013

Mini-Topic: Xataface, and RTFM: trap(1p)

This month Brad Vokey will (attempt to) give a demonstration of Xataface: an open-source, full-featured, web application framework for building front-ends to MySQL databases. Xataface auto-magically generates web forms, lists, menus, and more, so that non-technical end users can interact with MySQL databases safely and effectively using an easy to build custom web application.

For this month's RTFM, Gilbert Detillieux will talk about the trap(1p) command, used for signal handling in Bourne shell scripts. Proper use of "trap" is important in coding scripts that clean up after themselves.

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 Annual General Meeting Month Change

The MUUG board has decided to change the annual general meeting month from October to November from 2013 onward. This change is to facilitate nomination of new board members, and to ensure election related tasks are not in conflict with the hustle and bustle directly after the summer break.

MUUG Board Elections

Call for Nominations

Adam Thompson, Nomination Committee Chair

Hear ye, hear ye! This is a preliminary call for nominees to participate in the election for the MUUG board. Those elected will serve from November 2013 until November 2014. The deadline to nominate yourself, or someone else, is October 22th, 2013. Instructions follow.

The MUUG board is charged with coordinating the meetings and other events by the group. It's fun, and you get a role in guiding the group. All are encouraged to apply.

Every November, the Manitoba Unix User Group holds its Annual Meeting, the main goals of which are to elect a new Board of Directors and to pass any special resolutions (aside from that, it is a regular
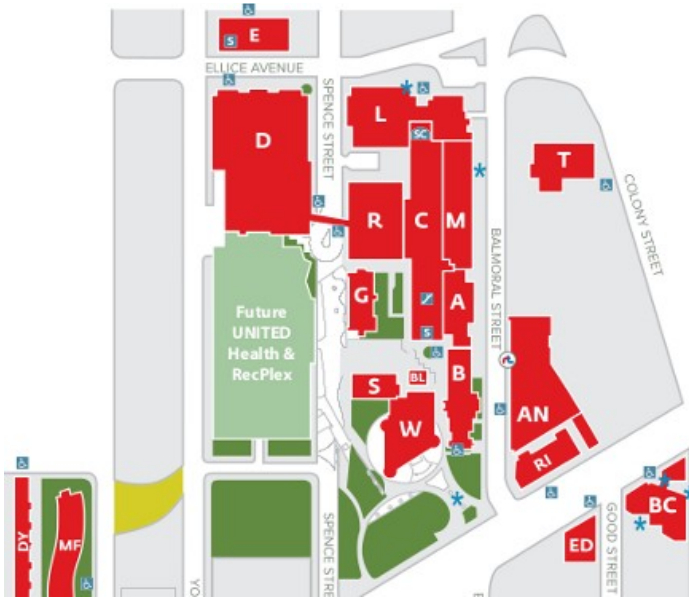
meeting). Any MUUG member in good standing can be nominated to run for a position on the Board. The board can consist of up to ten people.

As of this writing, the following members have let their names stand for election or re-election:

Trevor Cordes
Owner – Tecnopolis Enterprises

Gilbert Detillieux
Systems Analyst – University of Manitoba

Michael Doob
Professor – University of Manitoba

Robert Keizer
Owner – Argyle Machine

Kevin McGregor
Systems Specialist – City of Winnipeg

Adam Thompson
Consultant – athompso.net

Brad Vokey
Owner – Fortress Software Inc.

Print Newsletter Now Optional

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, e-mail 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.

Fedora 20 Named: Heisenbug

Though not yet released, Fedora 20 already gives us something to talk about with its curious name. A Heisenbug is a software bug "that seems to disappear or alter its behavior when one attempts to study it" (source: Wikipedia). It's a play on Heisenberg's Uncertainty Principle which, loosely stated, says that the act of observing a particle changes certain attributes of that particle. Well, at least if you don't have a Heisenberg Compensator à la Star Trek.

The term Heisenbug will bring a smile to every programmer's face, as we have all been there at some time or other: usually late at night, accompanied by much head banging and hair pulling. Let's hope this nomenclature isn't a curse on Fedora 20, dooming it to riddling by Heisenbugs!

As an aside, Fedora turned 10 years old on September 22nd. As an aside aside, FreeBSD recently turned 20.

Nvidia Opens Up (A Bit)

Nvidia recently posted to the Nouveau mailing list that they are releasing select documentation regarding their GPUs. It sounds like the notoriously anti-open-source company will be starting to work a little more closely with the open source community.

http://tinyurl.com/n835rca

ECC Memory

Anyone who knows me knows I am a fervent supporter of ECC memory, which allows the computer to correct for most errors caused by bit-flips in DRAM chips. Most bit-flips are caused by cosmic rays, and a recent Google study on their massive server farm found about 5 such errors per 8GB of RAM per hour. A bit-flip on a non-ECC computer can result in corrupt data or crashing programs.

If you care about your data (most MUUGers will fall into that category) you should be using ECC. That motherboard manufacturers make it difficult and

expensive is unfortunate. Perhaps if more people demand it, it will once again become commonplace.

Seymour Cray of Cray Supercomputer fame once said "parity is for farmers" after he excluded parity/ECC from his CDC 6600 system. He later bit-flipped himself and put parity on the CDC 7600, to which someone remarked "apparently a lot of farmers buy computers".

Merging / and /usr

Coming soon to a distro near you! As of version 17, Fedora has merged /bin and /usr/bin, and likewise /sbin, /lib and /lib64. Other distributions are expected to follow suit. For us old hands, this appears blasphemous. However, after suffering through the migration, this old hand somewhat agrees with the change. It was becoming much too arbitrary and convoluted deciding what should be in /bin versus /usr/bin. Historically, they were separated for hardware limitation reasons: because hard disks were merely tens of MB (or less!), not today's multi-TB behemoths.

Many MUUG meetings ago, during a roundtable we were discussing the evil of Fedora's *systemd* (a /sbin program) and its reliance on *less* (a /usr/bin program). I had argued as much on the relevant *systemd* bugzilla entry. If I was a cynic, I would think that this change (spearheaded by the author of *systemd*) was made, at least in part, to deflect such criticisms of *systemd*.

At least there is precedent for such a change, as apparently Solaris effected this merge in version 11, at least 15 years ago. To end users, there is no perceptible change as symlinks will still allow old locations to be referenced. The only hassle is for administrators doing distribution upgrades, as special pre-boot steps must be taken.

http://tinyurl.com/lg6z8j8

If you oppose the change, you are not alone. For a good laugh, visit the next URL (warning: moderately strong language).

http://tinyurl.com/7ogkgu3

For a great history of the original split, dating back to 1971 (with references to PDP-11's!) visit:

http://tinyurl.com/7dtrck8

Middle-Clicks Maybe-Clacked

Also in the change-decades-old-features category, the GNOME team has made it clear they will be removing the X11 feature of middle-click-paste in the next GNOME version. They claim it is confusing for new users. Old-timers will cringe at the thought, but thankfully we can simply just ditch GNOME (like we needed another reason). XFCE anyone?

The top comments at the following link are priceless and it looks like almost no one wants to lose their middle-click.

http://tinyurl.com/qgw3ush

Valve Announces SteamOS

Valve, of Half-Life game fame, is going to release a Linux-based game operating system meant to power set-top / game-console hardware. Many pundits have already praised Steam on Linux as being much faster than gaming on Windows 8. Perhaps the coming years mark the era of Linux Gaming, and we can all do away with the Windows computers we keep on hand just to play games. Even better, Valve will probably contribute performance enhancements back into the kernel and related projects, benefiting the community beyond gamers.

Linus Hints At Backdoor

At Linuxcon in New Orleans recently, Linus was asked "whether a government agency had ever asked

about inserting a back-door into Linux". In typical Linus playful fashion, he replied "no" while shaking his head "yes", to the laughter of the audience.

3.11: Linux For Workgroups

Linus recently released Linux kernel 3.11, and dubbed it *Linux For Workgroups*. The joke is left as an exercise for the reader (but the accompanying pic may jog memories).

LINUX KERNEL
Version 3.11
Copyleft (ɔ) Numerous People 1991-2013.
All Wrongs Reserved.
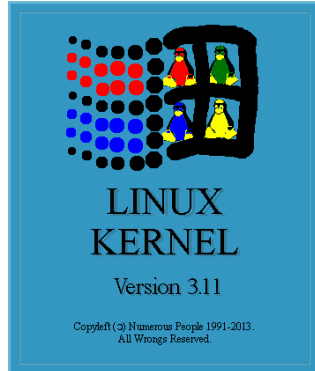
Anyone Home?

Want to programmatically tell if someone is at the computer? Perhaps you want to run a program that does X if the user is there, and Y if they are not. A great way to do this is with a program called *xprintidle* which apparently used to be included in distros' X11 packages. I was unable to find it on the latest Fedora. Luckily, you can make your own with a tiny C program:

```
xprintidle.c:
/* compile with:
gcc -L/usr/lib/ -lXext -lX11 -lXss -o
xprintidle xprintidle.c */

#include <X11/extensions/scrnsaver.h>
#include <stdio.h>
#include <X11/Xlib.h>

int main() {
  Display *display = XOpenDisplay(0);
  if (display != 0) {
    XScreenSaverInfo *info =
      XScreenSaverAllocInfo();
    XScreenSaverQueryInfo(display,
      DefaultRootWindow(display), info);
    if (info) {
      printf("%lu\n", info->idle);
      XFree(info);
      return 0;
    }
```

```
    return -1;
  }
  return -1;
}
```

This program outputs the milliseconds since the user last pressed a key or used the mouse. You can easily test like *sleep 5; xprintidle*. To compile, you may need to install the relevant -*devel* packages for the referenced X11 library includes. On Fedora, those are:

• libXScrnSaver-devel
• libX11-devel

Torvalds Loses 3.12 SSD

"The sudden death of a solid-state drive in Linus Torvalds' main workstation has led to the work on the 3.12 Linux kernel being temporarily suspended. Torvalds has not been able to recover anything from the drive. Subsystem maintainers who have outstanding pull requests may need to re-submit their requests in the coming days. If the SSD isn't recoverable he will finish out the Linux 3.12 merge window from a laptop."

Just because you have a shiny new SSD, doesn't mean you are invincible. Proper practices such as RAID and regular backups are still important with these new technologies, especially while they remain largely unproven over extended timeframes. Even worse, SSDs usually fail in spectacular "all or nothing" ways, unlike spinning-rust disks that usually give you a modicum of hope for partial recovery. In addition, when RAIDing SSDs the possibility of simultaneous multi-drive failure increases, so the trusted old method of mixing drive brands to obtain variability applies in spades.

OpenZFS Launched

The "world's most advanced filesystem" now has its own community, bringing together Linux, FreeBSD, Mac OS X and illumos stakeholders under one umbrella. Over one hundred developers will be involved. One goal of OpenZFS is to reduce fragmentation and improve code and document sharing amongst the various OS's. This could be especially beneficial to GPL'd Linux, which can't include ZFS code that is BSD-licensed.