

MUUGLines

The Manitoba UNIX User Group Newsletter

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Next Meeting: December 9th, 2008

Round-table, Gadget Showcase and Mix & Mingle

With the usually active holiday season approaching, we'd like take things at a more relaxed pace. So this month we'll give more time for the round-table discussion (rather than cutting it short as we had to last month), then instead of a very short coffee break, we'll have a more laid-back mingler with some holiday treats and more time for informal discussion (also called "socializing" in some circles).

This will also be a geek gadget showcase! So, if you've got a cool (but portable) geek gadget to show off, bring it to the meeting. Want to show off that new Eee PC, or that iPhone, OpenMoko phone, or whatever new gadget? Bring it along! Does it run some flavour of UNIX or Linux? Even better. Is it open source? Better still!

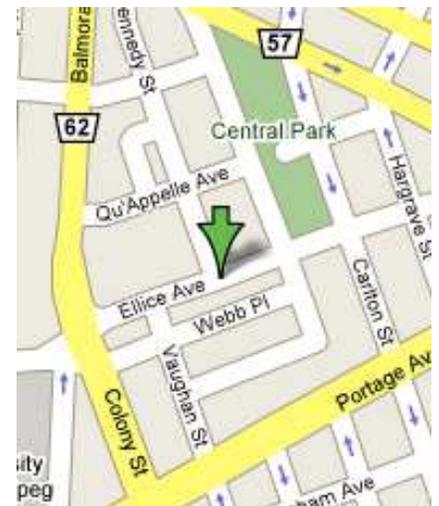
We'll have time to show some things during the round-table discussion (which would be the best time if you need the data projector), or you can just show your gadget to small groups in the later part of the evening.

Where to find the Meeting

Meetings are held at the IBM offices at 400 Ellice Ave. (between Edmonton and Kennedy). When you arrive, you will have to sign in at the reception desk, and then wait for someone to take you (in groups) to the meeting room. Please try to arrive by about

7:15pm, so the meeting can start promptly at 7:30pm. Don't be late, or you may not get in. (But don't come too early either, since security may not be there to let you in before 7:15 or so.) Non-members are welcome, but may be required to show photo ID at the security desk.

Limited parking is available for free on the street, either on Ellice Ave. or on some of the intersecting streets. Indoor parking is also available nearby, at Portage Place, for \$3.00 for the evening. Bicycle parking is available in a bike rack under video surveillance located behind the building on Webb Place.



Upcoming Meetings:

January 13th, 2009: To Be Announced
February 10th, 2009: To Be Announced

Cambridge Launched to Explore Solar System (Fedora 10 Released)

This is Fedora Space Operations announcing with great pleasure the successful launch of the new ship, Fedora 10: "Cambridge."

Strapped into the pilot seats are the latest GNOME (2.24) and KDE (4.1), accompanied on their amazing journey by an all star crew of glitch free audio, better printing and webcam support, and a new faster graphical startup.

Also on this ride are wireless connection sharing and the next evolution in PackageKit, hooking through your multimedia applications to help install supporting software (codecs).

For developers and system administrators on this mission, we have built in appliance tools, Eclipse 3.4, NetBeans IDE, improved virtualization management with remote installation and storage capabilities, RPM 4.6, and new security auditing toolsets.

Please remember to polarize viewports to properly enjoy Cambridge's brand new graphics theme, "Solar," shining on the desktop. Also on this flight is a new lightweight desktop environment, LXDE, joining the more recent desktop environment crew member, Sugar (from the starship OLPC XO), and the venerable GNOME, KDE, and XFCE.

We are now leaving dry-dock for a 13-month mission of innovation and exploration. Crew members and guests are invited to the forward lounge to use, study, modify, and redistribute.

Getting Started With OpenSolaris (My Way)

Kevin McGregor

Be warned, this is not going to be the optimal way to get started with OpenSolaris. Rather, this is the way I'm getting started with OpenSolaris. With that out of the way, let me tell you something about how I came to choose OpenSolaris out of the wide array of options available to me.

It wasn't an easy choice (and may yet change), and it was compounded by my constantly changing and conflicting requirements. That's right, compiling my own requirements was a major problem from the start! The main areas were budget, hardware, software and func-

tion. Well, that covers almost everything possible doesn't it?

Okay, here are some specifics: I wanted a server to run at home. Which services? File and print, DNS, DHCP, maybe a proxy, a web server, a couple of game servers such as BZflag (<http://www.bzflag.org>) and PvPGN (<http://pvpgn.berlios.de/>) and I also wanted to connect my cable to it and run MythTV (or an equivalent) to digitally record TV shows. Did I mention that I'd like to run some virtual machines on it at times?

I also don't really want to spend any money on the OS (or use something unlicensed), and it should run on hardware I have or can acquire for relatively little cost. That should sum it up.

Now for some elimination. Mac OS X is out, because I have an iMac, and I have a dual-tuner card already (Hauppauge PVR-500, PCI) which won't work in my (or possibly any) Macs, and I can't afford the outlay for another one anyway. FreeBSD would do a lot, but doesn't have good support for PVR-type software (that I know of), and its support for virtualization is still immature.

So, how about some distribution of Linux? That would pretty much do it all. I didn't mention, though, that I've been getting increasingly paranoid about my on-disk data security. That is, will I be able to read back what I wrote without error? How would I know? 750 GB drives are pretty affordable, and I have three of them. If they're in a RAID 5 configuration, that's up to 1.4 TB of data to not be very sure about! I've got enough on my mind lately without adding that to the lot.

At this time I started thinking about ZFS. Great claims have been made for it, but what does OSes support it? Solaris, and (in early stages) FreeBSD do. Hmm. Both are out of contention because of my MythTV requirement. I had already begun thinking, though, that maybe my data security requirement – robustness of storage might be a better way to put it – was enough to change some of my other requirements.

Okay how about this: Set up a Solaris server (it's a free download, after all), and share out part of the drives (NFS) to a Linux box with the tuner in it. I have an old box (350 MHz Pentium II upgraded to a 1 GHz Celeron) I can use for the MythTV end, but what would I use for the server?

I won't go into the whole story (this is going to be long enough as it is), but I decided to purchase (gasp) some new hardware. Then I had to make some decisions: Intel? AMD? Which motherboard? Etc. I went with AMD, largely because if you want (as I did) dual-core, 64-bit, full virtualization hardware included CPUs at a low price, AMD is the one for you. And as far as I know, Intel's low-end dual-core CPUs still don't include VT.

I ended up with the ASUS M2A-VM, an AMD Athlon 64 X2 4200+, and 4 GB of RAM. It also has Gigabit Ethernet (another requirement I hadn't mentioned previously, but this is going to be a file server, after all), and four SATA ports.

I had read that part of Sun was putting some effort into developing a Solaris distribution similar in many good ways to a typical Linux distribution. One of the first things I encountered was SXCE (Solaris Express Community Edition), but I quickly found that wasn't what I was looking for. Eventually, I read about and located the "Nevada" project, which at some point released OpenSolaris 2008.05 (the May 2008 version).

I downloaded that ISO, burned it, and gave it a whirl. Or, um, tried to. It started to boot, got to a plain green background with a black cursor (mouse pointer), then dropped back to text mode, then went to a darker green background with a cursor, then a text mode again, then... repeat. And again.

After a little while of this, I figured I should take out anything unnecessary, like say, the tuner card which I hadn't removed yet. After doing that, I got the Live CD desktop booted and started the install. That got to 99% and then hung. I didn't have much left to try, so I swapped the sketchy BenQ DVD burner for a some-

what better quality CD-ROM drive, and was able to install!

Install on what, was the next question. I could install on the 750 GB drives, but as you might expect, it's not feasible to install the OS on one of the three 750 GB drives, then later add the other two and have a 1.4 TB RAID 5 array. So, on to plan, um, D? E? Anyway like most of you readers, I have some spare drives around, so I installed a 120 GB IDE (or PATA, if you prefer) drive and installed on that.

OpenSolaris 2008.05 does have a pretty easy installer. There are few options, and they're pretty clear, as these things go. I won't belabour the details of the install. It installs a decent, functional system with ZFS (non-redundant configuration), and it recognized all of the hardware in the system.

The next step was to set up the big drives as a RAID 5 array. I'll have to specify which drives, to make sure I don't use the wrong ones, so... what are they called? "c0t0d1" or something like that. It shouldn't be too hard – I'll just check... somewhere. In the GUI? I couldn't find anything about drives. None of the commands I knew provided anything useful. I looked through all of the dmesg output -- nothing useful there, that I could recognize.

Okay, there must be a tutorial somewhere. Hey, there's a video extolling the virtues of ZFS! I'll watch that. This fellow's demo had to do the same thing I'm doing, and he... types "format", which lists the drives you can format, then he cancels that (^C). My jaw dropped. That's the easiest way, the way an expert would use in a demo?

It was a bit disturbing, but I followed his example, and got c3d0, c3d1 and c4d0. Now for the heavy-hauling detail work – I have to link these together in a RAID array with some config file, then partition that as a big physical volume, then figure out how to create some logical volumes (deciding on the size of each, what I'm going to put in them, where to mount them, and so on) and make sure I have some space left over to assign to volumes that inevitably turn out to be too small.

With ZFS, that works out to this:

```
% zpool create bfd raidz c3d0 c3d1 c4d0
```

Now, if you're an old Linux hand, you probably took a long blink to prepare for all the details, and missed it. Here it is again:

```
% zpool create bfd raidz c3d0 c3d1 c4d0
```

No, really! That one command took the three disks I listed, created the partition tables as needed, made the partitions, labeled them and linked them in a RAID 5 array (actually, a Sun variant that achieves the same effect), formatted the filesystem and mounted it as /bfd.

Granted, that's only one filesystem, but with a few additional commands I can create more filesystems out of the "bfd" pool and they all share the same pool of storage so I never have to resize any of them.

I'll demonstrate this and more (services!) next time.

Adobe: Flash 10 64-bit For Linux, But Not Windows or Mac OS X (Alpha)

Furthering Adobe's commitment to the Linux community and as part of ongoing efforts to ensure the cross-platform compatibility of Flash Player, an alpha version of 64-bit Adobe Flash Player 10 for Linux operating systems was released on 11/17/2008 and is available for download (<http://labs.adobe.com/downloads/flashplayer10.html>). This offers easier, native installation on 64-bit Linux distributions and removes the need for 32-bit emulation.

Release of this alpha version of 64-bit Flash Player on Linux is the first step in delivering upon Adobe's commitment to make Flash Player native 64-bit across platforms. We chose Linux as our initial platform in response to numerous requests in our public Flash Player bug and issue management system and the fact that Linux distributions do not ship with a 32-bit browser or a comprehensive 32-bit emulation layer by default. Until this prerelease, use of 32-bit Flash Player on Linux has required the use of a plugin

wrapper, which prevents full compatibility with 64-bit browsers. With this prelease, Flash Player 10 is now a full native participant on 64-bit Linux distributions. We are committed to bringing native 64-bit Flash Player to Windows and Mac in future prereleases.

OpenSolaris 2008.11 Release Candidate

The OpenSolaris development package repository <http://pkg.opensolaris.org/> has been updated to reflect the changes in snv_101 and snv_101a including major fixes to the Caiman "Slim Install" and the Image Packaging System (IPS). This build is an initial release candidate build for the OpenSolaris 2008.11 release. For this build, the recommended minimum memory size is 768MB or greater.

Users who wish to update their system to the development build can do so using the "image-update" facility provided by the pkg(1) command or by the "Update All" facility of the Package Manager GUI.

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Due to the amount of e-mail MUUG receives, we've set up an auto-reply to give you immediate feedback, and redirect some of the e-mail to the appropriate places. Why not look at <http://www.muug.mb.ca/about.html#contacts> first?

Share Your Thoughts

E-mail us with your comments on the newsletter, whether it's criticisms or commendations, and continue to send in articles or ideas for the same. Specifically, what sort of material you would rather see: Announcements, technical articles, new products, or...?

If you have a How-To or other idea, and aren't ready to give a presentation at MUUG, an article is a great alternative! If you can write better than the editor, that's terrific; if you can't, submit it anyway and we'll get it into shape for publication. We know that many of you have some great ideas and lots of knowledge. Why not share? Send Mail to: editor@muug.mb.ca.