



MUUGLines

The Manitoba UNIX User Group Newsletter

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Editor: Kevin McGregor

Next Meeting: April 9th, 2013

Red Hat Enterprise Virtualization

Red Hat Enterprise Virtualization, based on the open-source oVirt platform, competes with VMware vSphere and Hyper-V's Operations Manager. The University of Winnipeg Library is implementing a small RHEV system, and Adam Thompson will introduce and demonstrate the software and discuss some of the challenges encountered as compared to using VMware vSphere.

Important: MUUG Has Moved

Our new home is at the University of Winnipeg in Lockhart Hall room 1L08 which is indicated on the map by the "L". Lockhart Hall is on the south-east corner of Spence and Ellice. Parking is available on the surrounding streets. Look for signage once you're at the building, or ask a security guard.

Upcoming Meeting

May 14th, 2013

Topic: TBD

Location: 1L08 Lockhart Hall, U of W

Announcing Ubuntu Kylin

The China Software and Integrated Chip Promotions Centre (CSIP) announced a new reference architecture for Chinese operating systems. CSIP, which is a part of the Chinese Ministry of Industry and Information Technology (MIIT), has selected Canonical's Ubuntu as the basis for that reference architecture. The announcement is part of the Chinese government's five year plan to promote open source software and accelerate the growth of the open source ecosystem within China.

The initial work is focused on the development of an enhanced version of the Ubuntu desktop with features specific to the Chinese market. The new version is called Ubuntu Kylin and the first version will be released in April 2013 in conjunction with Ubuntu's global release schedule. Future work will extend beyond the



Where to Find the Meeting

1L08 Lockhart Hall, University of Winnipeg

desktop to other platforms.

Ubuntu Kylin goes beyond language localisation and includes features and applications that cater for the Chinese market. In the 13.04 release, Chinese input methods and Chinese calendars are supported, there is a new weather indicator, and users can quickly search across the most popular Chinese music services from the Dash. Future releases will include integration with Baidu maps and leading shopping service Taobao, payment processing for Chinese banks, and real-time train and flight information. The Ubuntu Kylin team is cooperating with WPS, the most popular office suite in China, and is creating photo editing and system management tools which could be incorporated into other flavours of Ubuntu worldwide.

OpenELEC 3.0.0 Released

Open Embedded Linux Entertainment Center (OpenELEC) is a small Linux distribution built from scratch as a platform to turn your computer into a complete XBMC media center. OpenELEC is designed to make your system boot as fast as possible and the install so easy that anyone can turn a blank PC into a media machine in less than 15 minutes.

The main features are:

- It's completely free
- A full install is only 80-125MB
- Minimal hardware requirements
- Simple install to HDD, SSD, Compact Flash, SD card, pen drive or other
- Optimized builds for Atom, ION, Intel, Fusion and more
- Simple configuration through the XBMC interface
- Plug and Play external storage
- File sharing out of the box

OpenELEC 3.0 is built to support XBMC Frodo 12.1 and almost every part of the core OS has been updated and improved since the 2.0 release. The project now supports a broader range of media centre hardware than ever before, including dedicated OS images for the **budget**

friendly Arctic MC001 and ultra-low-cost Raspberry Pi systems.

Raspberry Pi deserves a special mention as it's been a labour of love for the OpenELEC team. OpenELEC was the **very first** XBMC distro to be demonstrated on development Pi hardware back in February 2012.

Quoted

But this is definitely another of those “This is our most desperate hour. Help me, Al-biwan Ke-Viro, you're my only hope” issues.

Al? Please don't make me wear that golden bikini.

— *Linus Torvalds*

KDE Avoids Disaster

The H reports that the KDE project narrowly averted the loss of all of its Git repositories. The KDE Project hosts 1500 code repositories for a number of open source applications that are affiliated with the desktop environment and all of them were nearly wiped out last week due to a combination of a software fault and a problematic mirroring setup.

KDE uses a main Git server at git.kde.org and a number of mirrored servers that provide the Git access for anonymous web users. The developers were treating these servers as backups of the main repository which turned out to be a mistake. When the developers shut down the virtual machines on the main server to perform security updates on the host, something in the process caused filesystem corruption in the VMs that made the Git repositories stored there unusable. Since the secondary servers for the anonymous Git access were configured to sync with the main server and did not check for corruption, they proceeded to synchronise their repositories with the faulty repositories on the main server.

When the KDE maintainers discovered this, it was already too late. The secondary servers had

already deleted most of the corrupted repositories as the corruption meant most of them were not listed in the projects file any more; at this point Git assumed they had been deleted legitimately.

The developers got lucky however, as a new server they had set up for data centre migration was discovered to have retained a pristine copy of all of the project's repositories. This server did not manage to sync with the corrupt copy of the Git data as its synchronisation window fell into the timespan in which the main server was down for the security update. This lucky coincidence and the completely unconnected data centre migration the server had been prepared for therefore saved all of KDE's Git repositories.

The developers had other backups in place, specifically tarballs of the source code for all of the hosted projects, but these backups did not retain the Git metadata and other important information. The project will be making changes to its backup strategy, which mostly involves including sanity checks in the processes that clone the Git repositories to the mirror servers. By adding those checks, corrupted data will not be duplicated in the future and missing project files will not cause repositories to be dropped automatically when they should not have been. As part of this the new main server will also store the Git information on a ZFS filesystem that can restore previous versions of the data through its internal snapshotting mechanism.

NetBSD Crypto Bug

A bug in the NetBSD 6.0 creates weak cryptographic keys. Specifically, the use of a cryptographically flawed pseudo random-number generator in NetBSD 6.0 means that potentially predictable keys were generated. Versions of NetBSD-current older than 26 January 2013 are affected. NetBSD 5.1 and 5.2 do not suffer from the bug, which is due to be fixed in NetBSD 6.1. Until then users need to update their kernels to builds created after 26 January.

Many types of cryptographic keys (including SSH and SSL session keys) generated on affected systems may be weak. A **sizeof() blunder**

introduced data that wasn't sufficiently random for cryptography.

Sysadmins are advised to generate new keys after updating the NetBSD kernel software, as explained in an **advisory** from the NetBSD Foundation.

“For systems newly set up with NetBSD 6, all SSH host keys are suspect,” the advisory explains. “Other persistent cryptographic secrets (for example, SSH or SSL keys of any type) generated using /dev/urandom on NetBSD 6 systems which may have had insufficient entropy at key generation time may be impacted and should be regenerated.”

Your Own FM Transmitter, \$25

Do you have a Raspberry Pi? Turn it into a FM transmitter with some software and a 20 cm wire. From the **icrobotics.co.uk** site: It uses the hardware on the raspberry pi that is actually meant to generate spread-spectrum clock signals on the GPIO pins to output FM Radio energy. This means that all you need to do to turn the Raspberry-Pi into a (ridiculously powerful) FM Transmitter is to plug in a wire as the antenna (as little as 20 cm will do) into GPIO pin 4 and run some code. It transmits on 100.0 MHz. Not great sound (and it's mono), but it works!

http://www.icrobotics.co.uk/wiki/index.php/Turning_the_Raspberry_Pi_Into_an_FM_Transmitter

Ubuntu Shortens Support

The technical leadership of Canonical's Linux distribution **decided** to halve the support time for non-LTS releases to nine months. At the same time, the developers want to make it easier for users of the distribution to get up-to-date packages on a regular basis without the need to perform explicit upgrades of the whole distribution. Matt Zimmerman, Colin Watson and Stéphane Graber unanimously agreed on these points and also clearly voted against moving Ubuntu into a rolling release model. The changes will be implemented in the maintenance schedule

starting with the release of Ubuntu 13.04 (“Raring Ringtail”) on 25 April.

Some CLI Magic

```
find . -ls | sort -n -k 7 | tail -n 20 # Quickly find the largest 20 files in a directory tree
```

```
find / \( -path /proc -o -path /sys \) -prune -o -print # Search the file system, but don't descend into the /sys or /proc directories
```

```
find . -type l -printf "%p" -> "%l\n" | grep "\.\/" # Find symbolic links that point out into their parent directories and beyond
```

```
find . |while IFS=$'\n' read -r file;do f=$(basename "$file"); echo "${#f} $file";done |sort -rn |head # Show 10 longest file/dir names
```

```
for d in */; do df -P $d|grep -q ${d/\/} || echo ${d/\/};done # Show which directories directly below CWD don't have their own filesystem
```

```
find . -name "*[\"\\r$\\n\"]*" # Find a file with a newline or carriage return characters in its name
```

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

```
history | less +/mount # open your active history in less and search for mount immediately
```

```
echo "$(grep "^processor" /proc/cpuinfo |wc -l) cores in $(grep "physical id" /proc/cpuinfo |sort|uniq |wc -l) sockets" # Linux host CPUs
```

We Want You!

MUUG is always looking for presenters. Do you have a side project that you’ve been aching to show off? Do you just want to do a



quick 5-minute demo of some software you found amazing?

If you’re a little nervous about standing up in front of the group to present, you’re not alone! And there’s help. For starters, check out **From Presentation Hell to Hope** on the callfortesting.org site. Some tips from that article:

- Don’t talk to your slides (guilty as charged)
- Pair up with someone
- Study others. **TED talks** are good for this
- Practice in front of someone, even a family pet
- Never do a live demo (except for the countless times you have to)
- Start with a non-technical point or story so that the non-technical people in the audience have something to think about for the duration of your presentation given that it might not be of any interest to them
- Break any tension by directing questions to members of the audience who you know will have something constructive to say
- Poll the audience with questions like “who has tried this?” – you will be surprised who is in your audience and what amazing things they are doing in regards to your topic
- If you find yourself wearing white gloves in Japan, remove them before attempting to use your trackpad

Drop the board an email at board@muug.mb.ca and let us know. Any suggestions for topics you’d like to hear are always more than welcome.