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MUUGlines

The Manitoba UNIX User Group Newsletter

March 14, 2000: Maximum RPM, Minimum Hassle

This month, Gilbert Detillieux will be taking you on a quick tour at Maximum RPM! Specifically, we'll be looking at using the RPM (Red Hat Package Manager) utility. This program is well documented in the book Maximum RPM, which is available online at the RPM web site, and in printed form from SAMS Publishing (although it may now be out of print).

In this presentation, Gilbert will take you through the main features of RPM, as described in the book, starting with using the rpm command to effectively manage installed software on your Linux system, and ending off with using rpm to build packages from scratch, including setting up a spec file.

Location change: Once again, for this month only, the meeting will be at the ISM 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.

Limited parking is available for free on the street, or in a lot across Ellice from ISM, for $1.00 (we think) for the evening. Indoor parking is also available nearby, at Portage Place, for $2.00 for the evening.

As always, we're open to suggestions for meeting programmes, not to mention presenters! Feel free to convince someone you know to give a talk at on of our meetings, and be sure to mention that it's very informal. We're not expecting professional public speakers here. Contact any of the board at board@muug.mb.ca or in person at our meeting if you have an idea!

We will also have a round-table discussion, in which anyone can raise questions regarding their experiences (or lack thereof) with all things Unix. We realize that it can be a little intimidating, but please be assured that no question is too easy (or "dumb")!

Linux on S/390

by Doug Shewfelt

Recently, Slashdot (http://slashdot.org) posted a link to an article written by Scott Courtney (http://www.4th.com/tech/linux/vmlinux.shtml). (The original link was to http://www.linuxplanet.com/linuxplanet/reports/1531/1, but I was never able to get through to that site.) In this article, Courtney described his impressions of IBM's port of Linux for the S/390 family of mainframes.

This launched an active discussion on Slashdot. A number of people claimed that mainframes were obsolete, and anything they could do could be done with a network of inexpensive PCs, such as a Beowulf cluster. Another group argued that the two are not equivalent. Mainframe computers are optimized for moving large amounts of data; Beowulf clusters provide a lot of processing power, but are limited in the amount of input and output they can do.

Many applications, such as web servers, need I/O speed more than processing power. Mainframe manufacturers are using Unix to expand into this market. Amdahl, for example, announced in January a new version of its UTS Unix system (http://www.amdahl.com/cgi-bin/press-index/20000124-001.htm).

As well, the mainframes are designed to be reliable, and have extensive tools for administering large production sites. Although mainframes have a reputation for being big and expensive, a mainframe may be smaller, cheaper, and easier to administer than a room filled with servers that would provide the equivalent throughput.

The second thing that interested me in this article was its discussion of IBM's VM operating system. This is a virtual machine system that has been available for decades. It allows one or more operating systems to be loaded underneath a VM session. I found myself comparing this mature product to much newer products like VMware for the Intel architecture.

The current Intel architecture offers incomplete support for running a virtual machine. VMware has to emulate in software a number of functions that would normally be performed directly by the hardware. Programs that use these functions tend to run much more slowly under VMware. IBM modified its S/390 architecture to work well with VM — practically all parts of the S/390 instruction set can be virtualized in hardware. That means that operating systems and applications running under S/390 VM run almost entirely on the bare hardware.

The author of the article talks about a S/390 system administrator who decided to see how many Linux images he could put on a mainframe.

Courtney says "His test system finally ran out of resources at 41,400 Linux images. That's not a typo — there were forty-one thousand copies of Linux running on one logical partition of one mainframe, under VM." I was impressed. I didn't realize that it was possible to have that many operating systems running on one machine.

The death of mainframes and the death of Unix have been predicted many times. They both seem to be remarkably resilient.

Easy Information Technology (eIT) easyLinux 1.2

Reviewed by Gilbert Detillieux

With the glut of Linux distributions currently being offered, I couldn't help but wonder: Is there a need for yet another one? The answer would depend on whether or not the distribution offers something unique and useful.

I recently received (won as a door prize) a copy of the 2-CD set of eIT's easyLinux, version 1.2. The company, eIT, operates out of Germany, with offices in California, USA, and Singapore. Curiously, the evaluation CD's MUUG received were sent from Singapore, and not California. The first CD is bootable, and contains all of the easyLinux distribution and the installation software. The second CD contains two applications: Sun's StarOffice 5.1a, and Applix's ApplixWare 4.4.2.

As the name would suggest, easyLinux is designed to be easy for novice users to install and configure. I had no problems booting the CD and getting the X Window-based installer program to load on my test system, an IBM ThinkPad i-Series laptop. Once the installer came up, it gave me a few different options for the installation method. I chose the "professional" install, which would give me more control over the process, but easier installation options are available for the less experienced.

After that, I had the option of different types of configurations for the system, depending on the intended use. I chose the laptop installation. This gave me a dialog box to select a particular make and model of laptop computer. Unfortunately, this list contained many models of Toshiba laptops, but nothing else, other than a generic selection for all the rest. (Presumably, this list will be expanded in future versions.)

The next step was hard disk partitioning. The GUI interface for this was quite nice, and seemed to be fairly intuitive. Since I was installing this over of a previous installation of Red Hat 6.1, and since the partitioning software recognized my existing partitions, there wasn't much to do here, so I didn't exercise this part of the software. It's worth noting that there was also a button to launch fdisk instead, and this gave you the choice between the venerable old console-mode fdisk command, and GUI front-end to fdisk.

Oddly, after this, there was very little left to do as part of the base installation. There was no option to configure things like the network, the timezone, etc., as I'm used to seeing. There was also no package selection at this stage. The installer just went ahead and did the base installation, while displaying a progress bar. The next step was a reboot of the system.

After rebooting, easyLinux launched the X server and the KDE display manager automatically. Remember, all of this is before I was able to do any package selection, so you get all of X and at least the core KDE applications installed whether you want them or not. Given that, this distribution may not be appropriate for older systems, where disk space is at a premium, or where the CPU may not be fast enough for a full-blown KDE environment.

I was then able to login as root, with no password required. (OK, they said it was easy; they never said anything about security!) Fortunately, the first thing that then popped up was a password change dialog, so I was able to easily set up a root password. (This is all before being able to set up a network too, so the machine isn't really left vulnerable to the world.)

Next, an application called eHelpAgent was launched, to guide me through the rest of the install, which included X Window setup, network setup, and finally, package selection!

The GUI interface for doing the X setup was quite nice. (Remember, we were already in X, from early in the install, and certainly after the reboot. However, only the most basic VGA server was running at this point, with a limited resolution of 640x480, with 16 colours.) The setup program let me pick from a number of video cards or chipsets and monitors. The Neomagic chipset for laptops was one of the choices, and there was little else I had to worry about. The setup program started the new X server in test mode, and after I indicated everything was OK with that, it restarted the whole X session with this new server.

Logging in again, and continuing with eHelpAgent, I was then able to continue with the installation process. I skipped network setup, as this was for LAN setup only, and not for modem/PPP setup. Another application called eProfile was then launched, to start the package selection.

At this point the first CD was needed again. With eProfile, packages can be selected according to "profiles", and you can even set up your own custom profiles. After picking a profile, you can then select individual packages, which are organized hierarchically (similar to RPM groups, in a Red Hat installation). Package selection and installation was then a trivial matter.

The various packages (except for maybe the base installation, of which I'm not sure) are stored on the CDs in RPM format, so installation and removal is fairly easy. However, the package descriptions were often extremely brief, sometimes only a single line, and sometimes not even translated from German. There were also a lot of English misspellings, not only in the package descriptions, but also in some of the installer menus. For instance, eHelpAgent often referred to packages as "packets."

The number of packages available in this version was rather limited, compared to what you get in many of the other distributions these days. So, it looks like in many ways, this distribution is still very much a work in progress, and may not be quite ready for prime time. Still, the inclusion of StarOffice and ApplixWare was an unexpected bonus.

I started by asking whether we needed yet another Linux distribution, given all the other choices available. The big advantage to easyLinux, as far as I can tell, is the ease of installation, which is a big plus if you're a novice user and just want to get a basic Linux workstation with X11 and KDE. So, there may be a niche for easyLinux to fill. For an early version, this is quite a decent offering, but it will have to improve in a number of ways if eIT wants to compete in the long term. (This is particularly true given the fact that many other distributions are now also offering easy to use, X Window based, installers.)

If you've got hardware constraints, or are looking for something more customisable and application-specific, then easyLinux may not be for you. Me? I'm going to stick with Red Hat Linux for a while longer, but I'll be interested to see what happens with easyLinux, and a number of the other new distributions struggling for market share, in the years to come.

VMware 2.0 Beta Now Available

From: The VMware Team
<vmwarenews@vmware.m0.net>

VMware is pleased to announce the availability of beta versions of VMware 2.0 for Linux and VMware 2.0 for Windows NT and Windows 2000. With exciting new features such as suspend to disk and Instant Restore, SCSI support and faster performance, VMware 2.0 is our best product yet.

You can preview Version 2.0 by downloading a beta version of the product. This will allow you to try the new features and run multiple operating environments with more functionality than ever before. To download your free beta license for VMware 2.0, go to: http://vmware1.m0.net/m/s.asp?H836714390X502212

If you purchase VMware 1.x now, you will receive a FREE upgrade to Version 2.0 when it is available. For current customers, VMware will offer attractive upgrade prices for its products. Come see VMware 2.0 in action at the Windows 2000 Conference & Expo in San Francisco, Feb 15-17.

Why MUUG Online 3.0?

by Gilbert Detillieux

Welcome to the third generation of MUUG Online servers. MUUG began its online presence in 1992, with a small Sun 386i called MONA (MUUG Online Network Access), which provided MUUG members with interactive dial-up access to a UNIX server connected to the Internet.

This was essentially the first public access ISP in Manitoba, but was soon superceded by larger scale commercial services. So, modem access was terminated in late 1994, and the system was finally retired in 1995. In 1994, MUUG started to run its second generation server, code named LISA. This server took over the remaining functions of MONA, which included e-mail handling and FTP. This server was also used to launch MUUG's first World Wide Web server.

All of this was accomplished on a donated Sun SPARCstation 2 board, a spare 1 GB disk drive from MONA, and a new 1 GB disk and a system enclosure purchased by the group. Main memory was a mere 16 MB initially, which was sufficient to support a small SunOS 4.1.3 kernel and the services we needed to run.

In July of 1997, a 9 GB disk was purchased, and the server's operating system was changed to Red Hat Linux 4.2. Services provided remained essentially the same, but the new OS was chosen to support larger disks and allow us to more easily add new software.

We started using the Apache web server, and used "mirror" to set up a number of mirrored FTP archives. Disk space quickly got tight, and the following summer, a 23 GB disk was added to the collection (just in time for the death of the original 1 GB disk).

We took less than a year to fill up that disk too! Furthermore, with increased network bandwidth and with more users attempting to do huge downloads from our FTP server, the poor old SPARCstation 2 was having trouble keeping up with the load, resulting in poor performance, aborted transfers, and other problems. So, the MUUG board decided it was time for a new server system again.

In February of 2000, after several months of planning and delays, we're proud to announce the arrival of the third generation MUUG Online server! This system's current configuration is an Intel Celeron 400, with 128 MB of memory, and two 27 GB EIDE disk drives. A SCSI controller is also included, which will allow our existing SCSI disks to be migrated to this server once the SPARCstation 2 is retired.

The operating system is Red Hat Linux 6.1. Services are essentially the same as before, so migration should be easy. Users should see a significant increase in performance, however. The newer Linux version will also make software updates easier, and allow us to add new services as required.

DVD and CSS

From: Paul Schenker <p.schenker@eit.de>

easylinux.com is selling the first Linux designed specifically for the desktop. Naturally, our customers want to be able to play DVD movies on their computers. To do this we have a DVD player program - but there is a problem: An industry group controls which company can offer such a player program and which cannot. They gave a license to Microsoft - but not to Linux. For this reason, there is no DVD playback for the 12 million Linux users available yet.

easyLinux.com has applied for a regular license from the DVD Copy Control Association (www.dvdcca.org) who has assumed the responsibility of Licensor of DVD technology. If you feel supportive for easyLinux in this matter please send an email to css-license@lmicp.com and state your point of view (please send us a copy at p.schenker@eit.de).

MUUG Contact Information

To contact the MUUG board for membership information or anything else, send e-mail to board@muug.mb.ca. We have a Web presence as well, at http://www.muug.mb.ca/, where you can find all kinds of information, including details of upcoming and past meetings and presentations and references related to them. We're always interested in article submissions. Submit your articles and ideas to editor@muug.mb.ca.