$2.50

MUUGlines

February 1997 Volume 9, Number 6

This Month's Meeting – Searching the Web!

This month we have an overview and demonstration of searching the World Wide Web in two parts. The first part will cover Tools for Web Searching: DejaNews, Netfind, Archie, Gopher and Hytelnet/WAIS. Part two will be Tips for Effective Searching. This will be an on-line demonstration, and interactive to boot, so bring your questions!

The meeting will start off with the usual round table discussion (question and answer session), so feel free to bring your non-Web-searching related questions, too!

Future Meetings

The following is a tentative outline of meeting topics for upcoming months:

March 11, 1997: UNIX and Internet Security

April 8, 1997: Stupid Web Tricks, and other fun stuff

May 13, 1997: A Look at Java

June 10, 1997: MUUG Barbecue

Where To Go

Our sixth meeting of this year will be at our regular location, IBM Canada's offices in the TD Centre building at the corner of Portage and Main. We'll be meeting at the lobby on the main floor, and Steve Moffat will take us up to the meeting room just before the meeting starts.

This month's meeting is on February 11th at 7:30 PM. Please arrive before this time for the meeting, as it will take some time for Steve to get people up to the meeting room.

Parking is available either in the parkade behind the TD building (off Albert St.), or in the ground level lot just north of the TD building. Entrance to the lot is from Albert Street, behind the parkade. Either way, parking is $1.25 flat rate for the evening.

Security Vulnerabilities in Red Hat Linux 4.0 – Update

By Gilbert Detillieux

In last month's newsletter, a security advisory was printed, warning of a vulnerability in the Vixie cron package, which is part of the Red Hat Linux distribution, among others. At the time of that advisory, no patch or update package was yet available from Red Hat for 4.0, although the suggested workaround provided a reasonable interim solution.

Red Hat has now issued an update package for Vixie cron, as well as many other updates, several of which are security related. To get the updates, go to ftp.redhat.com or one of the many recommended mirror sites (check out http://www.redhat.com/ftp.html for details), then go to the appropriate subdirectory from the top-level of the current Red Hat distribution (e.g. updates/i386 for the Intel platform). Before down-loading packages, you should first get and read the 00README.errata file in that directory, for instructions on the various updates and other recommended fixes.

The following list contains the security related update packages you should install for Red Hat 4.0 on an Intel platform. For each group, obtain all packages within the group which correspond to packages you have installed, and install them in the listed order.

pam-0.50-22.i386.rpm NetKit-B-0.08-8.i386.rpm util-linux-2.5-28.i386.rpm

kernel-2.0.18-6.i386.rpm kernel-source-2.0.18-6.i386.rpm

libc-5.3.12-17.i386.rpm libc-debug-5.3.12-17.i386.rpm libc-devel-5.3.12-17.i386.rpm libc-profile-5.3.12-17.i386.rpm libc-static-5.3.12-17.i386.rpm

lpr-0.13-1.i386.rpm

sendmail-8.8.4-1.i386.rpm sendmail-cf-8.8.4-1.i386.rpm sendmail-doc-8.8.4-1.i386.rpm

vixie-cron-3.0.1-12.i386.rpm

doom-1.8-7.i386.rpm

This list is current, as far as package versions available at the North American mirror sites, as of January 15, 1997.

Note that the above list is only for the security related updates. There are many other packages with important bug fixes, which you may also want to consider. Carefully read the 00README.errata file, and decide based on the information provided what packages you're likely to want.

Have a fun - and safe - time experimenting with your new Linux system!

Announcing Linux Expo '97

The Third annual Linux Expo Technical Conference will be held on Friday and Saturday, April 4th and 5th at the North Carolina Biotechnology Center in Research Triangle Park, NC.

The Expo has expanded dramatically this year. It will be even more valuable and entertaining than last year. We have over a dozen leading Linux developers who will be giving two full days of technical talks on various Linux topics. See the schedule below.

We'll have an expanded vendor exhibition area, installation-fest, birds-of-a-feather sessions, food, and entertainment, including the first annual world famous Linux Bowl! On Saturday juggling tutorials, magic tricks and other valuable stress relieving skills will be demonstrated, and there will be a Linux "install-fest" where you can get help installing the latest distributions of Linux.

All of this will be at no cost: yes like Linux itself the Expo is "Free". Of course you are going to have to figure out how to

get to Raleigh-Durham, North Carolina and arrange your accommodations once here, but entry to the Expo itself will not cost you a penny. The event will be funded by the generous contributions of the sponsors, commercial exhibitors, and those on corporate expense accounts who can afford the limited reserved seating in the auditorium from which the technical talks will be broadcast.

The technical talks, which run all day Friday and Saturday, will be broadcast throughout the Expo area. The talks will be held in the Biotechnology Center's 170 seat auditorium. The limited seating in the auditorium is available on a first come, first served basis so reserve your seat today! The cost is $199, which covers both days. The exhibition area with the vendors, demos, food, entertainment, and the install-fest is free for all.

Much more information on the Expo including info about traveling to, reserving seats at, or exhibiting at Linux Expo, is available at:

http://www.linuxexpo.org

This site will be updated regularly as we add events, exhibitors, and more to the Expo between now and April. This show is going to be extremely useful to anyone using Linux for professional or commercial applications as well as to casual users. It should be a cross between UNIX Expo (tm) and Woodstock. ;-)

If you or your group would like to become involved with sponsoring an activity, presenting a demonstration, or teaching your favorite Linux trick, please contact us at: info@linuxexpo.org

Linux Expo PO Box 4325 Chapel Hill, NC, 27515

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(919) 361-5841

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Technical Talks

MkLinux - Microkernel Linux
by Brett R. Halle <brett@apple.com>

Apple Computer Discusses benefits and technology related to Linux hosted on the Mach microkernel.

Next Generation SparcLinux, and the Free Software Development Model
by David S. Miller <davem@caip.rutgers.edu>

What tomorrow will bring for the SparcLinux port, and why the current development model has taken us to where we are now and will take us to where we are going.

The Debian Linux Distribution
by Bruce Perens <bruce@pixar.com>

An overview, explaining what is unique about the distribution.

The Computer Graphics of Toy Story
by Bruce Perens <bruce@pixar.com>

Trace how the first 100% computer-animated film was made, from story concept to animation. Learn about the 19 computer languages used in the production, and the extensive use of Unix.

Linux and Amateur Radio
by Bruce Perens <bruce@pixar.com>

How Radio Hams use Linux to communicate, design circuits, etc.

Debugging malloc() problems with Electric Fence by Bruce Perens
<bruce@pixar.com>

The author of Electric Fence explains how to debug malloc() problems.

Linux/Alpha—or How to Make Your Programs Fly
by David Mosberger-Tang <davidm@AZStarNet.COM>

This talk focuses on how to optimize code for platforms running Linux on DEC Alpha processors. While the focus is on the Alpha architecture, many of the topics covered are applicable to any RISC processor and even to modern CISC CPUs that employ implementation techniques pioneered by RISCs. The first part of the talk covers performance analysis tools that are available under Linux. The second part covers specific techniques that often improve performance by an order of magnitude or more. The talk assumes some basic knowledge of computer architecture and programming in C.

The Coda Filesystem
by Peter Braam <braam@cs.cmu.edu>

Coda is a state of the art, freely available networked filesystem developed at CMU by the group of Satyanarayanan. It has advances features such as client side write-back caching, server replication, disconnected operation (laptops), bandwith adaptation, and solid security models. The Linux port is nearly complete (Nov 1996) and CMU is making further ports, and improving the performance of the system.

The Linux Network File System
by Olaf Kirch <okir@monad.swb.de>Daveg Gmbh (soon Linux Support Team, Erlangen)

The talk will cover some new development in the NFS area that will improve performance and add several new features, including support for NFS over TCP and alternative authentication flavors. I'm age 29, and have studied mathematics (aka chewing pencils) before becoming a full-time programmer. I've been working (playing?) with Linux since the days of Owen's MCC Interim Releases back in 1992, and I'm happy that I've finally found an employer who actually pays me for playing with my favorite toy.

A Tour of the Linux Networking Stack
by Alan Cox <alan@cymru.net>, Technical Director, CymruNet

The ext2 Filesystem — Design, Implementation, and the Future
by Theodore Ts'o <tytso@mit.edu>, Massachusetts Institute of Technology http://web.mit.edu/tytso/www/home.html

Theodore Ts'o has been involved with Linux since almost the very beginning. "Be a Linux hacker, and you too can see the world and get free hardware."

Linux and Legacy LANs
by Michael Callahan <mjc@stelias.com>

The talk will survey Linux's capabilities as a server for Mac and PC networks using legacy protocols.

General Linux Security
by Alexander O. Yuriev
<alex@bach.cis.temple.edu>

This talk will discuss some threats to Linux security and how to deal with them. It will include information about real break-ins, the loopholes that were utilized by intruders, how the system administrators could have closed the loopholes and how the intruders were discovered. The topics covered will include Security Policies vs. Security Mechanisms, password security, UNIX security model, basics of cryptographic protection, management of priviledges and security of systems connected to networks.

Networks 101 : IPv4 Family of Protocols and Infrastructure
by Alexander O. Yuriev
<alex@bach.cis.temple.edu>

The IPv4 protocol family is the foundation on which the other network technologies are built. Understanding what really happens at that level is mandatory for being able to make correct decisions on issues that system and network administrators face today, whether it is tuning the network to get an extra Kbit of a bandwidth, creating a better filter for a screening router or verifing a claim of a vendor that says "Only mail can go across our SuperGuardian/Deluxe firewall. Only port 25 is open to the outside world." This class is intended for the system or network administrators that are either responsible for configuring and running networks in the organization, or who may want to gain better understanding of nuts-and-bolts of the networking.

Working and Playing Well With Others: Linux Grows Up
by Dr. Greg Wettstein
<greg@wind.enjellic.com>, Chief Techology Officer - Velocity, LLC http://www.enjellic.com

With the Linux development team using a paradigm of 'You Snooze You Lose' to direct kernel releases it can become difficult to find time for entertainment. Don't miss this opportunity to hear a speaker who is world-renowned for bringing humor and a business world perspective to Linux and the free software movement. Dr. Wettstein will discuss strategies for enabling Linux to compete in heterogenous environments composed of legacy mainframe systems, dilapidated mini-computers and the ever present shadow of Windows and Novell Netware. So take a break from kernel patches and enjoy an hour of entertainment while the master of metaphor recants how he developed the bravery to stake his professional career on free software.

The Linux Kernel Memory Management
by Miguel de Icaza
<miguel@nuclecu.unam.mx> Instituto de Ciencias Nucleares

A talk on how the Linux kernel manages the system memory, the interface available to kernel code and how this is used trough the system as well as it's interface to the underlying hardware.

Beyond ELF
by Eric Youngdale <eric@sub2317.jic.com> Senior Software Engineer. Platinum technology Inc.

The ELF file format has become the defacto standard executable format for linux on all of the different architectures, and while it serves us well and offers a lot of flexibility, there are some shortcomings that were not anticipated by the original design committee. Discussions are currently underway about potential extensions which will serve to solve the problems in a backwards compatible manner. In the talk,I will discuss the nature of the problems, and the solutions that are being considered. Eric has been working with Linux since back in the 0.95b days, and over the years has worked in a number of different areas of the kernel. He doesn't have as much time for Linux as he used to, but he still manages to get a few things done inbetween extended bouts of goofing off.

CALDERA ANNOUNCES OPEN SOURCE CODE MODEL FOR DOS

DR DOS + the Internet = Caldera OpenDOS
PROVO, Utah Sept. 10, 1996

Caldera Inc. today announced that it will openly distribute the source code for DOS via the Internet as part of the company's plans to encourage continued development of DOS technologies and applications, further leveling the playing field for software developers worldwide. This effort, targeted to benefit both individual developers and industry partners, follows Caldera's commitment to embrace and fund an open software environment. Caldera also announced plans for internal development and marketing of DOS, including a new product called Caldera OpenDOS .

"DOS continues to meet the technical and financial requirements of a large portion of the computing industry, especially in the areas of network computing devices, specialized game devices and embedded systems," said Bryan Sparks, President and CEO of Caldera, Inc. "Publishing source code for DOS will benefit a large number of independent and in-house developers creating customized solutions based on DOS."

Caldera plans to openly distribute the source code for all of the DOS technologies it acquired from Novell«, Inc. on July 23, including CP/M«, DR DOS«, PalmDOS«, Multi-User DOS« and Novell DOS 7«. Pending an evaluation and organization of the the technologies, the source code will be made available from Caldera's web site during Q1 1997. Caldera learned from its early investment in Linux technologies that the commercial market is now ready to embrace open technology standards for operating systems.

OEMs and Channel Partners

Caldera is currently in OEM negotiations with potential partners that sell products to each of the markets listed above. Caldera's comprehensive OEM program enables OEMs to license Caldera OpenDOS and Caldera OpenLinux as part of a complete set of network and stand-alone solutions. Caldera's leveraged, open- systems model will enable OEM partners to leverage aggressive pricing and shorter development cycles. Caldera plans to release a version of DOS for OEM implementation by December 1996. Caldera's OEM and Channel Partners can utilize the open-source code models for DOS and Linux to create low-cost, custom applications and enhanced utilities for vertical and niche markets. Caldera enables its partners to integrate stable, low-cost Internet devices with the most powerful Internet server platforms and commercial add-on products. Caldera's support for the open-source code model provides partners with maximum flexibility in providing more complete product and service solutions.

Individuals can use OpenDOS source for personal use at no cost. Individuals and organizations desiring to commercially redistribute Caldera OpenDOS must acquire a license with an associated small fee. Source code for proprietary third-party components of Novell DOS 7 will not be published.

Why Did Caldera Want DOS?

Caldera's system software products are based on Linux technologies, including networking and Internet protocols, and other technologies common to UNIX«-based systems. Linux technologies include a DOS box, which allows end users to run DOS applications in Linux system software environments. From the company's inception in October 1994, Caldera planned to license and integrate DOS with its Linux-based software products. These plans included the addition of Internet connectivity tools to DOS, enabling DOS to function as a light-weight, stand-alone client to the Internet, or to Linux when used as a workgroup server. By December 1996, Caldera will integrate DOS with the company's next versions of system software products, including the Caldera Network Desktop. By including DOS, Caldera will ease installation and improve compatibility for simultaneous use of DOS and Linux.

DOS Retail Package

Industry statistics show that DOS operating system products continue to maintain high market share. Industry distribution giant Merisel« lists MS DOS 2nd in the Operating System category on the Retail HOT LIST and 3rd in the same category on the VAR HOT LIST for September 1996.

DOS versions of mainstream software applications are listed throughout the Business; Personal Productivity; Education & Recreation; DTP, Presentation & Graphics; Utilities; and Languages sections of both the Merisel Retail and VAR HOT LISTS. (Visit Merisel's HOT LISTS at http://www.merisel.com/17000001.htm and http://www.merisel.com/50000001.htm.)

In Spring 1997, Caldera will release Caldera OpenDOS, the first commercial-grade, open-source code DOS product. Caldera OpenDOS will build upon its predecessors (CP/M, DR DOS and Novell DOS 7) by adding Novell Personal NetWare , bug fixes to Novell DOS 7 and additional networking capabilities. Potential technologies under consideration include a graphical user interface (GUI); Internet web browser; TCP/IP stack; and other Internet connectivity services. This aggressive update to DOS will leverage internal and third-party development.

Caldera OpenDOS will protect the investments made in existing 286/386 Intel-compatible environments, where DOS meets both the technological and financial requirements of many end users and organizations. By incorporating new technologies, like Internet connectivity, and by openly publishing the source code for DOS to the Internet, Caldera hopes to encourage continued application development that utilizes this established, stable technology.

Technical Support for DOS

Caldera's technical support philosophy focuses on providing installation support to end users and long-term engineering support to Caldera's channel, OEM and third-party developer partners. Caldera's technical support objective is to develop a solid network of channel partners who serve as the primary front-line for technical support on Caldera products. Caldera provides its customers with free installation support during a specified time period and encourages customers to utilize the free, service-rich technical support environment on Caldera's World Wide Web site and available from peers via the Internet. Caldera also offers fee-based direct support options beyond the complimentary installation and Internet services.

Contact: info@caldera.com

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.

To contact the newsletter editor (and I know you want to shower him with dozens of well-written article submissions), e-mail editor@muug.mb.ca.