those who are put off by Microsoft Corp.'s Windows NT Workstation license agreement (which prevents you from using Windows NT Workstation as an inexpensive Web server). Red Hat's processor scalability and multiplatform support — Alpha and Sparc versions are available — make the argument for Linux all the more compelling.

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Mainstreaming Linux

Although file and print services aren't new to Linux, in the past they've been anything but simple to configure. InfoMagic Inc. fixes the problem with a product called InfoMagic Workgroup Server.

For $75 you get the graphical tools necessary to make configuration a no-brainer. In mere minutes, I installed the product and configured native file and print services for my Windows and Macintosh clients. You can get more information about Workgroup Server at http://www.infomagic.com.

Linux is also maturing as a mainstream client, as applications for the OS appear from several fronts. Red Hat Software Inc. offers the Applixware productivity suite (see Product Reviews, Aug. 5, page 84), and CalderaInc. (http://www .caldera.com) sells a suite for Linux that includes WordPerfect for Unix.

Also, Star Division Corp. is planning to release a Linux version of its powerful Star Office 3.1 suite. A beta version, which will be free to noncommercial users, is available now. See http://www.stardivision.com for more information.

The one thing that makes FVWM, Linux's default window manager, daunting is that you have to edit text-configuration files to customize it to your liking. Workgroup Solutions Inc. (http://www.wgs.com) may help remedy this when it releases a Linux version of Common Desktop Environment, a Motif-based window manager available on several Unix platforms.

THE BOTTOM LINE: EXCELLENT
Red Hat Linux 4.0

Red Hat, Red Hat Software's implementation of Linux, is the best Linux so far. Big-league features such as broad device support and symmetric multiprocessing make it a powerful yet inexpensive Internet and intranet server that is remarkably easy to install, configure, and maintain.

Pros: Broad device support and symmetric multiprocessing; vastly improved installation process; expandeddocumentation; better window manager; refined security features; inexpensive price.

Cons: Too difficult to configure the window managers.

Red Hat Software Inc., Durham, N.C.; (800) 546-7274, (203) 454-5500; fax: (203) 454-2582; sales@redhat.com; http://www.redhat.com.
Price: $49 for Intel, $99 for Alpha and Sparc.
Platforms: Intel, Alpha, and Sparc.
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Macmillan Digital Publishing USA and Red Hat Software forge relationship to bring product to retail

Indianapolis, Indiana—February 10, 1997—Macmillan Digital Publishing USA today announced their distribution alliance with Red Hat software, theleading Linux software development company, to bring the software titleThe Complete Red Hat Linux Operating System to retailers nationwide this month.

The Complete Red Hat Linux product will contain everything needed to install, configure and run Linux, the award-winning, next-generation operating system. Included are two CD-ROMs with the latest Red Hat 4.1 distribution. As an added benefit, RPM technology enables easy upgrades, thereby safeguarding the user's Red Hat Linux operating system from becoming outdated. Plus, hundreds of ready-to-run Linux programs and the X Window System graphical interface are included on the discs. Red Hat 4.0 was awarded Infoworld Magazine's "Best of 1996, Operating Systems" award.

The package also includes the 250-page Official Red Hat User's Guide and electronic versions of Linux System Administrator's Survival Guide, RedHat Linux Unleashed and Apache Server Survival Guide, providing more than 2,000 pages of expert guidance that novice and experts need to master this sophisticated operating system. The Linux System Administrator's SurvivalGuide shows Linux users how to configure, optimize and enhance the power of Linux. Red Hat Linux Unleashed is a comprehensive reference for running the operating system, and the Apache Server Survival Guide teaches usershow to run and trouble-shoot the most popular web server software—Apache.

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. E-mail the editor at editor@muug.mb.ca.

bother to bestow a Product of the Year award in this category; this year we present two. One of them goes to Red Hat Linux 4.0.

Linux has traditionally enjoyed a great deal of popularity outside of the corporate environment. But as establishing an Internet presence becomes significant for businesses, Linux — already embraced by several Internet service providers — becomes a natural choice.

Red Hat brings together a winning combination of software such as the Metro/X windows accelerator, a multiprocessor-ready kernel, true plug-and-play autodetection, and the best features one might expect from this implementation of Unix. Red Hat also includes its own desktop windows with a Windows 95 look and feel.

A growing list of software vendors provide applications for Linux, and standard Unix accessories, such as a compiler and GNU emacs, a popular GUI text editor, are in there, as well as HTTP, FTP, and Telnet daemons. For those who like to peek under the OS hood, Red Hat also includes a complete source-code library.

Cheap, powerful Red Hat Linux 4.0 has no Web-connection limits

By Nicholas Petreley

After looking at Red Hat Linux 4.0, I'm in awe of how quickly the Linux operating system is moving forward.

Last summer (see "Linux may give reasons to remove Win95, NT from your desktop system," July 8, page 107) I predicted that Linux, an already popular implementation of Unix, would infiltrate mainstream corporate America. If Red Hat Software Inc. (and all the unsung Linux contributors) continue advancing Linux at the present rate, such widespread adoption is guaranteed.

Simply put, Red Hat is easily the best Linux version released to date. It's a must-try for users new to Linux and a must-have for veterans.

Up, up, and away

Red Hat's installation program makes it far easier to install than any other version of Linux I've tried, including prior versions of Red Hat. It shields you from enough complexity to keep it simple, yet it provides enough options to satisfy Linux geeks.

Red Hat comes with the Apache Web server, one of the most popular servers on the Internet. The server can be installed, configured, and set to run automatically with no more than a click on a single check box during system installation. Setup of FTP (File Transfer Protocol) services is equally easy.

It's just as simple to add Web and FTP services after installation. That's thanks to Red Hat's now famous — among Linux users, at least — installation and removal utility called Red Hat Package Manager.

The OS can be a network file system (NFS) server to Unix clients, and it can provide native file and print services to any 16-bit or 32-bit Windows client and AppleTalk services to Macintosh clients. Red Hat can also be used as a client to NFS and NetWare.

Red Hat licenses and includes Metro Link Inc.'s accelerated X engine, Metro-X, which supports a long list of display adapters. A number of video cards I had problems with in Windows 95 and Windows NT (including the Elsa Winner 2000 Pro and Matrox Millenium MGA) have enjoyed good support by Metro-X for some time.

The Metro-X driver absolutely blazes on my Matrox Millenium MGA card. In addition, Metro Link offers OpenGL for Linux separately if you want to build 3-D graphics applications.

A pretty face and more

This version of Red Hat introduces a new version of FVWM, now called The Next Level. FVWM is a window manager that is configured to look and feel something like Windows 95, with cascading start menus, a task bar, and a pager that lets you switch among a set of virtual desktops. Switching between desktops on my machine is instantaneous, faster than anything I've seen on Windows 95, Windows NT, or OS/2.

The Linux kernel used in this release of Red Hat supports symmetric multiprocessing, a feature that brings Linux into the scalability big league.

It also supports dynamic loading of support modules. That means you can set up the system to load certain features, such as the capability to read OS/2 High Performance File System (HPFS)-formatted drives, only when needed.

Linux can read and write to a long list of file systems, including DOS File Allocation Table (FAT), Virtual FAT (Windows 95/NT long file names), and HPFS. Free NT File System drivers are also available from a variety of FTP sites.

One of the most important enhancements to this version of Red Hat is support for pluggable authentication modules (PAM). PAM is a tremendously flexible means of letting you choose the levels of security you want to attach to any service your server provides — from simple log-in to remote access of applications and FTP services. Essentially, PAM paves the way to soothe fears about Unix security.

A low price and easy installation make Red Hat the ideal alternative for

battery saving feature ensures exceptional battery life.

AvailabilityThe OpenDOS binary may be downloaded from the Caldera web site by accessing the "products and solutions" link at http://www.caldera.com/. For more information on OpenDOS or other Caldera products and technologies, please call (800) 850-7779 in the US, (801) 269-7012 internationally or by E-mail at orders@caldera.com.

Caldera uses its own technological and marketing resources to leverage technologies including the Linux operating system created by independent developers worldwide, and the OpenDOS product range. Visit the Caldera web site at http://www.caldera.com/. For orders and information call (800) 850-7779 in the US or +1 801 269 7012 internationally.

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Bliss, a Linux "virus"

Bliss has been called a virus for Linux, a common Unix trojan, a virus-like trojan with worm-like features etc, depending on whom you ask. Apparently, the definitions aren't very clear. Here's its story.

The first sighting on the linux-security mailing list happened around January 31, 1997.

Then, on February 5th, the author of bliss, apparently a nice guy concerned that an earlier alpha version of his code (which was posted on September 29, 1996 to comp.security.unix, alt.comp.virus and comp.os.linux.misc) could still be in use, posted version 0.4.0 to comp.security.unix, complete with ample warnings and the prospect of a future (GPL'ed?) source code release.

It was promptly analyzed by Alan Cox on February 8th, and, one day later and much more comprehensively, by Ray Lehtiniemi. Quick summary: if you run bliss (which is, by the way, not specific to Linux and can be compiled for SunOS, Solaris, and OpenBSD), it tries to attach itself to all binaries that you have write access to, on all machines that you have rsh access to.

It writes a neat log of all its actions to /tmp/.bliss and even has a —bliss-uninfect-files-please command line option that sometimes might come handy, and actually does what it promises. Bliss was compiled with helpful debugging information.

I especially like the feature where it tries to patch the Linux kernel source, so that the next kernel compilation will produce a much more cooperative Linux.

Moral: don't run it, especially if you're root. That's all there is to it. We all knew already that we should never do anything but system administration as root, now didn't we? We also should never run executables that we haven't compiled ourselves from inspected sources. Big deal. Enter McAfee.

McAfee is a company that makes its money from the fact that people continue to use inferior operating systems that can easily be infected with viruses, with disastrous results. In their press release, dated February 5 and widely reprinted in clueless media everywhere, they claim to have "discovered" bliss (actually, they are talking about the earlier alpha version, but they don't know this), a program that had been publicly available for several months at that time.

They also recommend that you run one of their binaries, without letting you look at the sources, of course. Now what have we learned a moment ago: is that a good idea? An analysis of the press announcement has been provided by Russ Allbery.

Another message shows that the information about bliss was provided to McAfee by a participant on the linux-security mailing list, where the sighting of the alpha version had been posted previously. McAfee, the heroic virus discoverer! Savior of the universe!

And, on a final note: bliss shows that Linux is popular enough to attract virus writers, bliss makes people afraid of running as root which they shouldn't do anyway, and bliss makes people reluctant to run programs without inspectable sources. All hail bliss!

Appendix

For the paranoid: To check whether anything on your system is infected by bliss, do cat /tmp/.bliss. To protectagainst similar programs, use tripwire.

From InfoWorld

RED HAT SOFTWARE INC.

With new software always coming from Microsoft and IBM, the desktop operating system market changes every year. And so do our opinions.

Last year we were unimpressedwith the crop of OS offerings and didn't

$2.50

MUUGlines

March 1997 Volume 9, Number 7

This Month's Meeting – Unix and Internet Security!

This month we have an exciting presentation on security issues with Unix and Linux when connecting to the Internet. Our presenter is Marc Rogers of the City of Winnipeg's computer crime division. Marc is also running an ISP based on Linux, so he has a great deal of personal experience with the latest security issues!

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

Future Meetings

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

April 8, 1997: Stupid Web Tricks, and other fun stuff
May 13, 1997: A Look at Java
June 10, 1997: Intranetworking and Connectivity with Linux

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 Tuesday, March 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.

CALDERA RELEASES OPENDOS 7.01 TO THE INTERNET

OpenDOS Free for Non-Commercial and Educational Use

PROVO, Utah—February 3, 1997—Caldera Inc. today announced the electronic release of OpenDOS to the Internet. This release, which may be downloaded from Caldera's web site, fulfills Caldera's promise to make OpenDOS available by the end of first quarter 1997. The OpenDOS kernel source code will be made available during March. [Editor's note: the binaries are approximately 6 MB including the networking components.]

OpenDOS is the first commercial DOS technology freely available via the Internet. Caldera OpenDOS is a complete operating system supporting all DOS-based applications including Microsoft Windows (3.1 and 3.11), and networking systems that include Novell NetWare, Windows for Workgroups and LANtastic.

The OpenDOS binary is based on DOS 7 technology acquired from Novell in 1996 and provides a mainstream, no-cost OS for research and education. In the future, OpenDOS will also provide a low-cost DOS integration environment for OpenLinux users.

Caldera's release of the OpenDOS binary and source to the Internet allows companies and individuals to use and develop OpenDOS for future use in their own products. OpenDOS also enhances the ability of embedded systems like Network Computers, NetPCs, kiosks, etc. by allowing OEMs and VARs to use well-known technology as a base for their own solutions.

"Caldera is working with the Internet community to make DOS and Linux commercial systems as open and available as possible so that end users have high-quality, low-cost choices," said Bryan Sparks, President and CEO of Caldera Inc. "Both OpenLinux and OpenDOS allow end users to extend their own networks by building on what they already have without the high cost of new software and retraining."

The OpenDOS binary includes:

Full-featured DOS
Full Multitasking—Pentium, 486 and 386
Novell Personal NetWare (client/server)—easy peer-to-peer networking for the end user (SERVER.EXE)
Leading Memory Management—DPMS and DPMI
Stacker Disk Compression—safely and reliably doubles disk capacity
NetWars—new and improved version of the popular "arcade" game
Power management and ROMming
OEM Benefits

OpenDOS provides a complete DOS operating system for OEMs and System Integrators. It extends the familiar, single-tasking, real-mode DOS model by adding industry-leading memory management, plus a full multitasking feature set and API. The OpenDOS feature set also benefits OEMs by making embedded systems easier to design and integrate, plus the