$2.50

MUUGlines

November 1997 Volume 10, Number 3

Extra! Extra! November Meeting Rescheduled

This Month's Meeting

Our meeting date this month, due to it coinciding with Remembrance Day, has been changed. Ordinarily, we'd meet on the second Tuesday of the month (the 11th this month), but we have changed it to the third Tuesday – the 18th –*for this month only*. This means that all of you can spend the 11th with your loved ones, or in your favourite activity (or inactivity!) without wondering what you would be missing at the MUUG meeting!

What will you be missing? We are hoping to have an IBM representative speaking on IBM's VisualAge for Java. This is a very interesting product, given the current state of Internet hype. If we can't manage to bring this to you this month, we will definitely work hard to reschedule it for the near future. Make sure you check our web site (www.muug.mb.ca) and the man.unix.general newsgroup for late-breaking updates on the meeting program.

We'll be meeting at IBM Canada's offices in the TD Centre, at the corner of Portage and Main. We'll gather in the lobby on the main floor – please try to be there by about 7:15 PM. Steve Moffat will then take us up to the meeting room just before the meeting starts at 7:30. Don't be late, or you may not get in.

Notes On Last Month's Meeting

Contributed by Doug Shewfelt

At our October meeting, David Rothenberger from MTS Netcom gave us a presentation on ADSL — Asymmetric Digital Subscriber Line. This new service provides a two-way data stream running on top of a normal voice line. Subscribers will be able to use their phones independently of the data link because the data stream runs at frequencies above that used by the voice line system.

The line needs a special split modem, providing 64 Kbps upload and 1.5 Mbps download. The modem connects to a 10 Base-T Ethernet card on the subscriber's computer. Mr. Rothenberger also mentioned that MTS may be able to change the configuration to shift capacity between the upload and the download sides of the communications link. The modem must also be located within 4 or 5 kilometres of an MTS Central Office — this would cover 90 percent of Winnipeg.

How does this connection work? Well, the modem link uses the standard telephone lines to get a connection back to the one of the MTS Central Offices. The Central Office then transfers the data onto an ATM backbone network, which carries the packets to the subscriber's chosen Internet Service Provider. The ISP then provides the subscriber with connection to the Internet.

The ISPs need to arrange their connection to MTS to be one of the providers that a subscriber can access via ADSL. MTS will deal only with ISPs that have a sufficiently fast connection to the Internet to make the fast ADSL line worthwhile. The ISP may charge additional fees to their subscribers who wish to connect this way. MTS is not trying to act as an ISP or to provide content — it is only providing the infrastructure. For now, the subscriber must be configured with a particular ISP, and cannot change ISPs easily.

The final rate structure for this is not yet established, and still has to be accepted by the regulatory bodies. However, the proposed rate for residential customers is $44.95/month plus a $100.00 setup fee. For small businesses, the suggested rates are $99.95/month with a $150.00 setup fee. The monthly fees include the rental of the modem, and will be reduced in the 1st, 2nd, and 3rd year of continuous service.

Future developments include, of course, higher speeds. Speeds of 6 to 7 Mbps are suggested, with some teams talking about 52 Mbps. (However, the 52 Mbps speed can only be run on no more than 400 metres of normal telephone lines.) As well, speeds are limited by bridge taps — extra lengths of unused cable laid down by MTS for future expansion. Since these extra lengths of cable are not terminated, they tend to resonate at medium to high frequencies, interfering with the signals sent on the ADSL connection.

Another proposed feature is destination selection. In this, the subscribers could select which ISP they connect to when they start the connection. This launched a spirited discussion over the usefulness of this feature. The main argument was that there are few benefits to having multiple service providers when any one will provide full access to the Internet.

RED HAT AND CRACK TO BRING GAMES TO LINUX.

Research Triangle Park, NC— Monday, October 6, 1997 - Red Hat Software, Inc., publishers of Red Hat Linux, the most stable, fast, and secure multitasking operating system available, and Crack dot Com, developers of the cult-hit Abuse and the anticipated 3D real-time strategy game title, Golgotha, today signed an agreement to publish games for Linux.

Marc Ewing, Vice President and Director of Development at Red Hat Software said of the relationship, "Red Hat Software is extremely pleased to be working with such a talented group of artists and programmers. In addition to being on the leading edge of game development, Crack dot Com has been a staunch supporter of the Linux operating system. The combination of Red Hat and Crack will allow Linux users to have an uncompromised multimedia gaming experience."

The alliance between Red Hat Linux and Crack dot Com will bring greater speed, better disk efficiency, and stronger net performance. Crack dot Com envisions a careful marriage of 3D points of view in a real-time strategy format. Specifically, Golgotha incorporates new rendering technology, frantic gameplay, and a strong storyline.

"Since I was introduced to Unix variants almost 10 years ago, I've dreamed of developing and selling games for them.", said Dave Taylor, of Crack dot Com. "Linux has a development environment far superior to Windows and Macintosh Operating Systems. Chances are great that the typical Linux installation is linked to the Internet and on a higher bandwidth connection; this offers better net performance. Linux even has DirectX equivalents, and recently got support for 3DFX's popular Voodoo chipset. This is a very exciting time for us."

This is an exciting time for the gaming community too. Red Hat Software and Crack dot Com are the first to sign a publishing agreement of this kind. Their games will be the first to be marketed, sold, and supported for Unix and Linux. Clearly both Red Hat Software and Crack dot Com realize that this is just the beginning for them, and their alliance promises to bring the latest in technological advancements to the gaming community.

About Crack dot Com

Crack dot Com is a small game development company located in Austin, Texas. The company was incorporated in 1996 by Dave Taylor, who is part of the team that made Doom and Quake, and Jonathan Clark, author of Abuse. Crack dot Com's web site is located at http://www.crack.com/.

* Doom, Quake, and id Software are trademarks of id Software, Inc.
* Abuse, Golgotha, and Crack dot Com are trademarks of Crack dot Com, Inc.

Caldera Open Administration System

Linux is a versatile operating system for home and commercial users. However, Linux users quickly notice one major problem: it's difficult to administer. The solution to this problem is the Caldera Open Administration System (COAS).

This paper explains the COAS project, including the following:
Overview of COAS project
Problems with current administration tools
Goals and strategies of COAS
Development of administration tools
Contribution of administration tools to Linux community

Overview of COAS Project

The purpose of the COAS project is to improve the way users administer their Linux systems. To improve the system, each administration tool will include multiple interfaces. The system will also let users choose the administration tools they want to use, and the tools will be flexible, powerful, and easy to use.

Caldera will lead out in developing the administration system, but Caldera also encourages the entire Linux community to participate in developing the system. All the work done on the core system will be contributed to the Linux community, and the tools will be compatible with any Linux distribution. Working together, the Linux community can really benefit from the work done on this project.

Problems with Linux Administration

Anyone who is familiar with the Linux operating system knows how powerful and robust it is. However, it is also difficult to administer. Many Linux opponents point out the following problems:
Incomplete administration system
Problems with existing administration tools

Incomplete Administration System

New Linux users quickly learn that it's difficult to configure their systems because the current administration system is incomplete. In fact, the Linux operating system doesn't even have an administration system at all. Linux only has a limited number of tools created by the Linux community. For example, there are numerous tools for adding users but few, if any, for setting up firewalls.

Because Linux doesn't have a complete, unified administration system, users turn to other resources (such as how-tos, man pages, and people they know), but they usually end up configuring their systems manually by editing files directly. Users shouldn't have to turn to other resources to configure their systems.

New users expect Linux to include an administration system. Almost all

other UNIX and non-UNIX operating systems have administration systems, so why not Linux? To use Linux as a viable solution in and out of commercial settings, users need a complete, unified administration system.

Problems with Existing Administration Tools

Users around the world have created administration tools for the Linux operating system and have contributed these tools to the Linux community. This unique development process causes some problems. The three main problems are:

The Administration Tools Use Different Interfaces

Because developers of administration tools specialize in different areas and come from different backgrounds, each administration tool has a unique interface. That is, some tools have menus, others use command-line scripting, and still others have a click-and-drag interface.

Many Administration Tools Aren't Full-Featured

Many of the current administration tools used in the Linux community aren't full-featured. Some tools include many features, but they aren't flexible, and vice versa. All users expect the tools to provide added value (for example, setting up firewalls by choosing from predetermined options or manipulating how shadow passwords work). Tools lacking significant value don't get used.

Some Administration Tools Interfere with Manual File Editing

When users configure Linux using administration tools, the system automatically makes changes to any files affected by the configuration. Some administration tools format these changes so the tool can easily reread the new information. However, special formatting may cause problems for users wanting to interchangeably configure Linux manually (by directly editing configuration files) and also configure Linux using administration tools. For example, if a user uses a tool to configure the system, then manually configures the system, and then uses the administration tool again, the tool may not recognize the manual changes.

Goals and Strategies of COAS

To solve the problems associated with Linux administration, Caldera is creating a complete, unified administration system. This system will provide Linux users a way to administer their entire system. A unified administration system will also minimize the time needed to learn many tools and configuration methods.

The new administration system will include the following:

Multiple user interfaces for administration
Modular administration tools
Flexible, powerful administration tools
Easy-to-use administration tools

NOTE: For more technical information on how each goal will be accomplished, see the references following each goal.

Multiple User Interfaces for Administration

The new administration system will provide multiple user interfaces for each administration tool. That way, Linux users can choose the user interfaces with which they're most comfortable. Caldera wants to focus on four user interfaces: command line, curses, X, and Java. Because not all users want to enter an interactive environment (such as X) to administer Linux, the new system will let users do administration tasks from the command line. For example, to change a user's ID number from a command line, the user can enter a command like this: coas change system.users.tbird.uid 102.

Users who aren't as familiar with Linux commands, or users who don't like entering commands from a command line may want a character-based system (curses). The curses interface lets users choose options from menus. For example, to add a new user to the system, the Linux user may choose an option called "Add new users" and then enter other applicable information about the new user (such as the UID and the user's real name).

Users who generally work in the X Window System may want graphical administration tools to configure Linux.

Users who want to do system administration remotely can do so because these administration tools will also have a Java-based interface. This will let users administer their Linux systems even if they're using Windows or UNIX.

For Technical Details
See "Configurators" in the report titled Caldera Open Administration System: Technical Notes

Modular Administration Tools

Because the administration tools will not be developed all at once, and because users may only want to use administration tools that meet their needs, the tools will be modular. That way, users can plug in the tools they want to use at any time. For example, users who don't remember the syntax for editing the printcap or crontab configuration files may want to plug in tools to help them. Conversely, these same users may not want to use a tool for changing a user's name.

When Linux users decide to use certain administration tools, they don't want to re-compile the tools in order to use them. Therefore, the new system will let users plug in the tools and immediately use them without any additional setup.

Though it is likely that new Linux users will use more administration tools than advanced users, even new Linux

users don't want system performance to go down as more tools are added to the system. With the new administration system, system performance will not be a problem-regardless of the number of tools being used.

For Technical Details
See "Caldera Loadable Administration Modules" in the report titled Caldera Open Administration System: Technical Notes

Flexible, Powerful Administration Tools
The new system will include full-featured administration tools. Some Linux users complain that some of the current administration tools aren't flexible and they don't include enough value. To make full-featured, flexible administration tools, the tools will include:

Built-in Intelligence
Each administration tool will include built-in intelligence by performing data consistency and data validation checks. For example, the tools will automatically change any data in the filesystem affected by the change; and the system won't accept invalid values entered into fields.

Backwards Compatibility
The administration tools will be backwards compatible. This means that users can use administration tools one day, and then they can edit files directly the next day without disturbing the configuration data.

Direct Access to Configuration Data
The new Linux administration system will give users direct access to configuration data. That way, users can bypass menus and dialogs and going right to the individual data items to configure the system. Users can also edit any file or information directly by using a command line reference.

Actual Data View
Caldera wants each administration tool to show users what the tools are doing and how they're doing it (to teach them about Linux). For example, inside the administration tool, users will have the option of viewing the file and the data they're changing. That way, if users choose to configure their systems later by manually editing certain files, the users will know where to start.

For Technical Details
See "Schema Definition," "Mappers," and "Ease of Use" in the report titled Caldera Open Administration System: Technical Notes

Easy-to-Use Administration Tools
The new system will also provide easy-to-use administration tools. To make the tools easy to use, they will have the same "look and feel," include extensive on-line help, and be easily translated into foreign languages. Though the tools are modular and will be created by different people, each tool will look like it came from the same source. For example, the tools will include common accelerator keys and similar layouts.

Each tool will also have extensive on-line help. Users will have quick access to general information that explains the tool they are using. Users also will have access to more specific help (for example, field help and descriptions of when and how to use certain options).

For Technical Details
See "Ease of Use" in the report titled Caldera Open Administration System: Technical Notes

Development of Administration Tools
Caldera will lead out in developing administration tools for the Caldera Open Administration System. However, we also encourage Linux users worldwide to create administration tools. Any tools created for COAS will be added to the administration system so all Linux users can benefit from the work that is done.

Work on the COAS project has already begun. For the latest information on the COAS project, see http://www.caldera.com/coas/. This page will include information for users and developers, such as a list of the tools currently available and being developed, SDK information, and frequently asked questions.

Contribution of Administration Tools to Linux Community
After the administration tools are developed, they will be given to the Linux community for their use. In fact, all of the work done on the core administration system will be contributed to the Linux community under the GNU General Public License (GPL). However, COAS developers can release individual tools under a different license, if they choose.

All administration tools will run on any Linux distribution. That way, all Linux users will benefit from the work being done on the project. Working together as a Linux community, we can propel the Linux operating system to the next level, and give Linux users what they expect: a complete Linux administration system that is flexible, powerful, and easy to use.

Questions? coas-info@ caldera.com
Copyright 1997, Caldera, Inc. All rights reserved.

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.