



*Technical UNIX<sup>®</sup>User Group*

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newsletter of the  
**Technical UNIX<sup>®</sup>**  
**User Group**

**This month ...**

President's Corner  
Christmas Song  
Book Reviews  
A Day in the Life of a System Administrator  
Christmas Party

Late Breaking News...  
Christmas Party to be held at  
Kirk Marat's Home  
Near The University of Manitoba

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# Thoughts From The Editor

By Susan Zuk

We're getting ready for a Christmas Party!!! Yes, Christmas is almost here and we are preparing for our 3rd annual Christmas gathering. The gathering will be held at Kirk's house. Kirk's address is 622 Townsend Avenue, (between King's Drive and Aurora) in Fort Richmond. Kirk's home phone number is 269-2225 and his work number is 474-6259.

Eric Carsted is presenting us with his first President's Corner. We'll be hearing more from him as the year proceeds.

This month features a review on two system administrator books. One is suggested for the AT&T System V user and the other is presented for the BSD System Administrator. They sound like they should be very good. The UNIX Administration Guide for System V includes one of the authors who writes for UNIX World. Rebecca Thomas is the individual who takes care of the Wizard's Grabbag.

Our second article shows some of the mail which is transmitted between members. In this article, mail is being transferred between Gilles Detillieux and Derek Hay. Take a look at what transpires. This also leads us into a new column. If you have any questions please submit them and we will try to provide answers in the newsletters. This will help all the members with items they may be interested in and allow for a sharing of knowledge.

I have also included a short jingle in this newsletter. I found it last January and have waited a whole year to be able to insert the item in our newsletter. Hope you enjoy the article "Twas the Night Before Implementation".

I hope you and your family have a Merry Christmas and a happy and healthy New Year. Come join us at the Christmas party and Kirk's house!!!

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## Group Information

The Technical Unix User Group meets at 7:30 pm the second Tuesday of every month, except July and August. The newsletter is mailed to all paid up members 1 week prior to the meeting. Membership dues are \$20 annually and are due at the October meeting. Membership dues are accepted by mail and dues for new members will be pro-rated accordingly.

## The Executive

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## ANNOUNCEMENT...

### Meeting Location:

The December meeting location will be provided by the Kirk Marat. The gathering will be held at Kirk's house. Kirk's address is 622 Townsend Avenue, (between King's Drive and Aurora by the University of Manitoba) in Fort Richmond. Kirk's home phone number is 269-2225 and his work number is 474-6259.

# President's Corner

By Eric Carsted

As the new president of TUUG I am faced with the enormity of the task of filling the shoes of our past president, Gilbert Detillieux. The only solution I could come up with was not to even try. Having only worked steadily in a Unix environment for just under two years I don't consider myself a "Unix Guru". It will be a long time before I will be a fountain of knowledge that Gilbert is. Fortunately Gilbert is still with us to answer all our "Technical" questions. Once it was clear what I couldn't do for the group I was faced with the question what could I?

I have set some goals for myself that I hope to fulfill before the end of my term. I have broken these tasks into two categories, one for the meetings and two for the Winnipeg Unix community in general.

For our meetings it is my goal to run smooth meetings that start and end on time, to have interesting topics that address both technical concerns regarding Unix and more general issues that face the industry, possibly bring in a

speaker for a one day seminar/mini convention, and to host the final June meeting/barbaque.

For the Winnipeg Unix community I would like to promote the group and increase membership, recruit corporate sponsors (to assist with the cost of a speaker), and organize a Winnipeg Unix Expo in a year or two that will be open to the general public.

I know I have set some difficult tasks for myself and I will appreciate any and all the assisting I can get from both the Executive and the general membership. In closing I would like to remind everyone that you don't have to be a member to attend our meetings, everyone is welcome, and that we all will benefit from an "Open" system. I hope I can fulfill your expectations of me as well as my own.

I'd like to wish you all a Merry Christmas and a Happy New Year. We'll see you at the Christmas Party.

## Twas the Night Before Implementation

Twas the night before implementation  
and all through the house,  
not a program was working, not even a browse.

The programmers hung by their keys in despair,  
with hopes that a miracle soon would be there.

The users were nestled, all snug in thir beds,  
while visions of inquiries danced in their heads.

When out on the spot there arose such a clatter,  
I sprang from my desk to see what was the matter.

And what to my wondering eyes should appear,  
but a super programmer (with a six-pack of beer).

His COBOL is lustered, his WFL it shimmered,  
his PASCAL and ALGOL, oh how they glimmered.

His resume glowed with experience so rare,  
he turned out great code with a bit-pusher's flair.

More rapid than eagles his programs they came,  
and he whistled and shouted and called them by name;

On update! On add! On inquiry! On delete!  
On batch jobs! On closing! On function complete.

His eyes were glazed over, fingers nimble and lean,  
from weekends and nights in front of a screen.

A wink of his eye and a twist of his head,  
soon gave me to know I had nothing to dread.

He spoke not a word, but went straight to his work,  
turning specs into code; then turned with a jerk.

And laying his finger upon the "enter" key,  
the system came up and worked perfectly.

The updates updated; the deletes, they deleted;  
the inquiries inquired, and closing completed.

He tested each whistle, and he tested each bell  
with nary a dump, and all had gone well.

The system was finished, the test were concluded;  
the client's last changes were even included.

Then the client exclaimed with a snarl and a taunt  
"It's just what I asked for, but not what I want!"

# Book Review

*Reviewed By Stephan M. Chan*

*Reprinted with Permission from the November 1990 issue of CommUNIXations, published by UniForum*

**Title:** UNIX Administration Guide for System V

**Author:** Rebecca Thomas and Rik Farrow

**Publisher:** Prentice Hall; 636 pages

**Title:** UNIX System Administration Handbook

**Author:** Evi Nemeth, Garth Snyder and Scott Seebass

**Publisher:** Prentice Hall; 593 pages

Containing broad knowledge of the UNIX system, these books can aid system administrators (SAs) in setting up a UNIX system and resolving problems that arise while it is in use. Each is far superior to most vendor documentation in explaining the overall philosophy and strategy of administering a system and handling users. Rather than just detailing hundreds of commands and subsystems, they also include the reasoning behind them.

While expecting the reader to be familiar with the basics of UNIX, these books are accessible to novice UNIX SAs as well as experienced administrators who want to keep up to date. The concepts they cover will benefit people who administer a wide range of system sizes.

The first UNIX system administrators were experienced UNIX programmers at Bell Labs and UC Berkley who wrote and/or modified the UNIX kernel and device drivers. They spent much of their time incrementally altering existing systems to run more smoothly. As UNIX evolved into a widely distributed product, more stable versions of the operating system became the norm and systems had to be set up and maintained from scratch by people less adept with computer systems in general and UNIX in particular.

Typical vendor documentation adequately describes

different commands so the the experienced SA can select the correct command line options. But a newly appointed SA may not know the principles involved in choosing, installing, designing and configuring a computer system, much less which specific commands to use or options to select. Documentation often lacks broad explanation of the responsibilities and duties of an SA. These books remedy such shortcomings, as well as providing a user-friendly method of explaining inescapable tasks.

Thomas and Farrow organize their book into 10 chapters and nine appendices. The main text covers account management, backups, the UNIX file system, startups and shutdowns, the UNIX LP system, system accounting, UUCP, security and system problems. The appendices describe the shell environmental variables, give the source code for a variety of utilities and offer other hands-on tips.

The authors concentrate primarily on AT&T System V, though they spend some time on the historical divergences of XENIX and the Berkley Software Distribution (BSD). Each chapter is written to stand alone and can be read independently as needed.

The arrangement helps teach system administration and mixes information found in UNIX documentation with the experiences of other SAs and the authors' own research. For example, the authors explain that, while it is customary to have the most experienced user inherit the role of SA, personal characteristics such as dependability, organization, fairness and tactfulness are often more important than experience. The veteran programmer may be a better advisor, but someone technically less senior may act effectively as the implementor, spokesperson, security officer and diplomat.

In addition to covering the nitty-gritty details, the book also conveys the philosophy behind the many

tasks that an SA should be doing, offering a coherent view of the job itself. As well as stating how to use different subsystems, the authors excel at explaining the benefits they can provide to the user. An example of this is in chapter 8, on UUCP. Along with the standard material in vendor documentation, the authors explain not only what the UUCP system is good for but why you should use it. Among the many reasons is that UUCP provides a gateway to a worldwide network of UNIX system users for exchanging electronic mail and network news around the globe on a daily basis.

Another example of thoroughness is the explanation of RS-232-C interfacing, along with the diagrams of the actual connectors and pin-outs needed for connecting a computer to a modem - a component that is critical to setting up a useful UUCP system.

*UNIX System Administration Handbook* is organized in 26 chapters and 17 appendices (which give the descriptions and source code for numerous programs.) While covering many of the same topics as Thomas and Farrow, Nemeth and company concentrate mainly on BSD versions 4.2 and 4.3, though there are many examples from SunOS 3.2 and 3.4, Pyramid dualPort OSx, and AT&T 3B/15 System V.2. The topics appear in the order in which an SA would probably want to face them in a new system.

The first six chapters cover the essentials necessary when unpacking a UNIX distribution and installing it for the first time. Chapters 7 through 14 discuss device drivers, kinds of hardware that are typically used with UNIX and how to install, configure and operate this hardware. The next five chapters cover five major software subsystems: electronic mail, telephone communications, network news, backups and accounting. The final chapters cover an assortment of generally useful topics.

The authors' strong points are in topics critical to SAs who are responsible for multiple UNIX systems connected via LANs. For example, an 84-page chapter on networking under BSD discusses the Internet, Ethernet hardware and installation, network software, routing tables, network design and

management, NFS, Yellow Pages and the Berkely Internet Name Domain Server.

These are topics of significant complexity, seldom covered thoroughly in vendor literature. This sort of material is probably beyond the scope of the beginning SA who is managing a stand-alone 80386 machine. However, for the more advanced SA in charge of a UNIX network or the beginning SA who must manage a BSD UNIX system, the book fills a void.

The authors clearly differentiate line printer administration under System V from that under BSD, devoting a separate chapter to each. They also offer extensive coverage of Berkley's sendmail, while Thomas and Farrow concentrate on System V's mail and mailx.

Nemeth and company devote a chapter to Netnews and discuss the various newsgroups, how news is retransmitted between computers and a description of some of the major important newsgroups.

Choosing between the two books is made relatively easy by their differing major focuses. It makes sense to choose Thomas and Farrow if you have systems based on AT&T System V Release 3. They offer step-by-step coverage of the important topics and security loopholes. Nemeth, Snyder and Seebass suit those primarily concerned with BSD versions or in charge of multiple computers connected via one or more LANs. Also, their coverage of network protocols, design, security, management, electronic mail and Usenet news is more extensive.

*Stephan M. Chan is president of Uniprime Systems, Inc., a computer consulting firm in Baltimore, MD, which specializes in systems design engineering involving UNIX.*

*Books for this column are selected and furnished by Cucumber Bookshop, Inc., 5611 Kraft Dr., Rockville, MD 20852; (301) 881-2722.*

# A Day in the Life of a System Administrator

*By Derek Hay & Gilles Detillieux  
FACS Records Centre*

## Subject: modified files

### Question:

I have just noticed that some files on my system were modified on Jul 23/90 by someone, but I have no way of knowing who did this. Is there any way of finding out which files were changed on a certain date and who did it. All I know is that it happened at about 7:5? in the am. on July 23/90. Some of the modified files are as follows:

Permissions	Owner	Group	Name
rwxr--r--	root	root	.mnt.lock
rw-----	root	root	advtab
rw-rw-r--	root	sys	ps_data
rw-r--r--	root	other	systemid
rw-r--r--	root	other	mnttab
rw-r--r--	root	root	oadvtab

I have checked the sulog and there was no entry for that time and date, also I do not remember ever touching these files. Any light that you could shed would be helpful.

### Answer:

Don't panic. It is normal for these files to be modified. (If there is one thing a Unix system administrator learns quickly, it's that things are always going on behind the scenes.) Our machines here all rebooted on Sunday eve., due to a power failure. It's possible that yours rebooted Monday morning (we had thunderstorms).

The files /etc/ps\_data and /etc/mnttab are always cleared when the system reboots. The other ones are not familiar to me (these things always change in different implementations). I assume that systemid contains the system name for UUCP and TCP/IP, and it's probably normal for it to be initialised on reboot. The advtab and oadvtab are likely tables for some subsystem or other, and also likely to be initialised on reboot. I never saw .mnt.lock before, but it must be related to the mount command, like mnttab.

If you were to check other system logs, you would likely find other clues of a reboot at that time. (e.g. "who -a /usr/adm/wtmp" will give all sorts of info on logins and reboots, if your system maintains that log file. Also, /usr/lib/cron/log will indicate when cron started up.)

If you do a "ps -fe", it should give you the start time of many background processes, many of which should be Jul 23.