the bookworm

by Peter H. Salus

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There are many books I want to mention this month, so I'll jump right in.

Administration

Mark Burgess has written a number of worthwhile articles, including a series in *;login:*, and has delivered several excellent papers at USENIX (LISA) and other events. I even published an article by him in *Computing Systems* nearly a decade ago.

So I wasn't surprised to receive his *Analytical Network and System Administration.* I was surprised by the approach that Burgess takes to system administration; he's not really so worried about keeping the network(s) or the machines up and running as he is concerned with the functioning of the elaborate and complex "human-computer systems" that make up the information technology conglomerate.

This may well be the first book to approach system administration by means of complexity theory. It's certainly the first one I've read that doesn't concentrate on the how-tos and recipes. It's a very fine piece of work.

Interestingly, while security appears to preoccupy the journalists and the publishers, Burgess devotes only a few paragraphs to it. But I received two works on network security to compensate.

McNab's work focuses on the methodology of poking at your setup to ascertain its weaknesses. It is an insightful guide

to rendering your network less permeable as well as a guide to testing.

Lockhart's book—reviewed in this issue by Rik Farrow, so I'll just give it a brief mention here—really does serve up 100 "tips and tools" to help you harden your network. I found it interesting and learned a good deal from it.

OpenBSD is Theo de Raadt's 1995 branch off the NetBSD tributary of UNIX. I've always thought of it as the variant designed for the paranoid hacker. Palmer and Nazario have written an excellent exposition concerning the sorts of secure architectures you can construct with OpenBSD. My sole problem is that I'm unclear who their audience is. If it's the elementary one, then some chapters (notably the ones on packet filtering, IPSec, and IPv6) may be too tough; if the target is the experienced sysadmin, then I think the chapters on installation, booting, packages, etc., are just padding.

A Penguin Quartet

Hardly anyone plugs in anymore. I'm not even certain that you can buy a notebook without a wireless card. So *Linux Unwired* is a handy and useful guide to Wi-Fi, Bluetooth, infrared, cellular networking, GPS, and other good stuff. If you're not clear on 802.11, 802.11a, 802.11b, . . . , 802.11i, this is the book for you.

If you want to demonstrate to the least geekish person you know that they can, indeed, run Linux (instead of another, nameless, product), get them Grant's *Linux for Non-Geeks.* There are a few things about it that irked me—e.g., Grant's use of "boot" and "boot disk" without explanation; and while Fedora core is provided with the book, at a time when I can buy a machine pre-loaded with Linux at Wal-Mart, there ought to be a chapter that bypasses the install phase entirely—but it's certainly the best

thing I've seen in years for someone who wants to get eased in.

Ward's *How Linux Works* is really very good. In under 400 pages, Ward gives the reader all the information required to understand Linux internals, as I believe you need to do in order to be a skilled user. Ward's book is valuable to both the admin and those using Linux at home or in the office.

Because of some manufacturing glitch, while there are references like "Learning the vi Editor [Lamb]" and "The UNIX Programming Environment [Kernighan and Pike]" and even "A Quarter Century of UNIX [Salus]" scattered throughout the book, there's no bibliography or list of references containing fuller bibliographic information for the reader. However, No Starch has put the PDF of the references on its Web site: *http://www.nostarch.com/download/ howlinuxworks_bibli.pdf.*

It's nearly 40 years since I read Ken Knowlton's ACM paper "A Fast Storage Allocator" and over 15 since Kirk McKusick and Mike Karels' USENIX paper on the 4.3MMU. But I found Gorman's *Understanding the Linux Virtual Memory Manager* really interesting.

If you're into finding out just what makes the inner penguin tick, this is a book for you. Two fish to each author in this section.

Esoterica

Galloway's *Protocol* is a thought-provoking essay in which the author contends that, far from being a place of unrestricted, freely exchanged communication, the Internet is a regulated, constrained, structured bureaucracy governed by the technical protocols (TCP/IP, HTTP, BGP, DNS, etc.). At the end of it all, I don't agree with him, but it's worth reading and thinking about what he propounds.

Graham's *Hackers and Painters* is another thoughtful (and thought-provoking) essay. Graham points out that everything seems to be turning into a computer: the typewriter, the camera, the telephone. . . . Yet society makes fun of nerds and vilifies the hackers who make many things possible. There's a lot of insight here into the intersection of art, commerce, and technology.