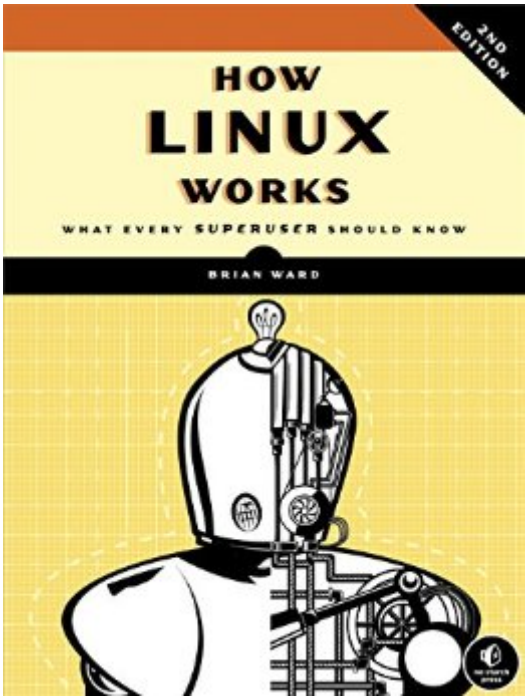
How Linux Works: What Every Superuser Should Know



Synopsis

Unlike some operating systems, Linux doesn’t try to hide the important bits from youâ ”it gives you full control of your computer. But to truly master Linux, you need to understand its internals, like how the system boots, how networking works, and what the kernel actually does.In this completely revised second edition of the perennial best seller How Linux Works, author Brian Ward makes the concepts behind Linux internals accessible to anyone curious about the inner workings of the operating system. Inside, you’ll find the kind of knowledge that normally comes from years of experience doing things the hard way. You’ll learn:How Linux boots, from boot loaders to init implementations (systemd, Upstart, and System V)How the kernel manages devices, device drivers, and processesHow networking, interfaces, firewalls, and servers workHow development tools work and relate to shared librariesHow to write effective shell scriptsYou’ll also explore the kernel and examine key system tasks inside user space, including system calls, input and output, and filesystems. With its combination of background, theory, real-world examples, and patient explanations, How Linux Works will teach you what you need to know to solve pesky problems and take control of your operating system.

Book Information

File Size: 1831 KB

Print Length: 394 pages

Page Numbers Source ISBN: 1593275676

Simultaneous Device Usage: Unlimited

Publisher: No Starch Press; 2 edition (November 11, 2014)

Publication Date: November 14, 2014

Sold by:Â Digital Services LLC

Language: English

ASIN: B00PKTGLWM

Text-to-Speech: Enabled

X-Ray: Enabled

Word Wise: Not Enabled

Lending: Not Enabled

Enhanced Typesetting: Not Enabled

Best Sellers Rank: #20,880 Paid in Kindle Store (See Top 100 Paid in Kindle Store) #2 inÂ Kindle Store > Kindle eBooks > Computers & Technology > Operating Systems > Unix #6 inÂ Books >

Computers & Technology > Networking & Cloud Computing > Network Administration > Linux & UNIX Administration #7 inÂ Books > Computers & Technology > Operating Systems > Linux > Networking & System Administration

Customer Reviews

I’ve read reviews all over the web of Brian’s new edition, and I’m frankly confused. The range of opinions go from "This is very basic, don’t bother if you’re advanced" to "Don’t bother if you’re a beginner, way too much detail on the inner workings than you need." 3 bears? Just right for... who? Part of the problem might be the subtitle: "What every superuser should know." In Brian’s usual dry sense of humor, this refers to the $ vs. # prompt difference between user and "superuser" (kernel access) at the command prompt. It does NOT mean (goodness no) that you have to be some kind of superuser in the programming sense to understand or greatly enjoy this book.In one fell swoop Ward does a number of things with the specialized term in unix/linux (superuser is simply what Windows folk would call a sysop or administrator, or hackers would look at with rootkits/kernels as privilege escalation): 1. Letting casual users know they will be using the command line rather than graphic interface 2. Demonstrating the major update from the first edition: this book is a LOT more about the kernel than the first edition, thankfully so!This is a TOTAL update, so even though I frequently advise going back to a previous edition for unethical publishers and authors that do a cosmetic update and call it a new edition, this is NOT the case here-- Brian has totally reworked the book to bring it up to date with many features Linux was missing (especially in Ubuntu dists) when the first edition was written. This new edition is a MUST, as 10 years has been a lifetime in the Linux world-- frankly the first edition is a paperweight now.

In How Linux Works, Brian Ward gives a clear and understandable explanation of what happens under the hood of your Linux machine. He outlines all the major parts from how Linux boots to how disks and hardware is presented to the user.Ward’s explanation of the workings of Linux is clear and remains free of needing to understand any actual programming to follow (although some familiarity may be helpful in the chapters on compiling source code or using development tools). If you need a more advanced explanation with real kernel code and examples of the actual internal data structures, this book will not give it to you. If you need clear explanation that makes it understandable what happens when you issue a command, this book will give it to you. The emphasis remains on understanding the layers of the system and what they do in somewhat broader terms instead of the actual ones and zeros that are manipulated (which really only kernel

developers need to understand).Ward covers a diverse set of topics including how the various boot loaders work, how system processes are loaded when the system first comes online, how users are managed and seen by the kernel, and many others. Many examples of how to configure the kernel both from editing configuration files to using command line tools are given that can alter how many of these things work.The desktop environment is briefly discussed, but the focus is mainly on the layers directly below this. Some discussion is given on shell scripts and compiling source code, but these issues are probably best learned from texts devoted to them as their coverage here is brief, but welcome for anyone looking for where to go next.Overall, I would highly recommend this text to anybody wanting to start using Linux.