

Advanced Linux Networking

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LAM ALIJAH

Linux Network Administrator's Guide Apress

"Advanced Linux Networking" is designed to help users achieve a higher level of competence. It focuses on powerful techniques and features of Linux networking and provides the know-how needed to improve server efficiency, enhance security, and adapt to new requirements.

TCP/IP Architecture, Design, and Implementation in Linux Sams Publishing

This practical, tutorial-style book uses the Kali Linux distribution to teach Linux basics with a focus on how hackers would use them. Topics include Linux command line basics, filesystems, networking, BASH basics, package management, logging, and the Linux kernel and drivers. If you're getting started along the exciting path of hacking, cybersecurity, and pentesting, Linux Basics for Hackers is an excellent first step. Using Kali Linux, an advanced penetration testing distribution of Linux, you'll learn the basics of using the Linux operating system and acquire the tools and techniques you'll need to take control of a Linux environment. First, you'll learn how to install Kali on a virtual machine and get an introduction to basic Linux concepts. Next, you'll tackle broader Linux topics like manipulating text, controlling file and directory permissions, and managing user environment variables. You'll then focus in on foundational hacking concepts like security and anonymity and learn scripting skills with bash and Python. Practical tutorials and exercises throughout will reinforce and test your skills as you learn how to: - Cover your tracks by changing your network information and manipulating the rsyslog logging utility - Write a tool to scan for network connections, and connect and listen to wireless networks - Keep your internet activity stealthy using Tor, proxy servers, VPNs, and encrypted email - Write a bash script to scan open ports for potential targets - Use and abuse services like MySQL, Apache web server, and OpenSSH - Build your own hacking tools, such as a remote video spy camera and a password cracker Hacking is complex, and there is no single way in. Why not start at the beginning with Linux Basics for Hackers?

Red Hat Linux Networking and System Administration Pearson Education

There's a great deal of excitement surrounding the use of Linux in embedded systems -- for everything from cell phones to car ABS systems and water-filtration plants -- but not a lot of practical information. Building Embedded Linux Systems offers an in-depth, hard-core guide to putting together embedded systems based on Linux. Updated for the latest version of the Linux kernel, this new edition gives you the basics of building embedded Linux systems, along with the configuration, setup, and use of more than 40 different open source and free software packages in common use. The book also looks at the strengths and weaknesses of using Linux in an embedded system, plus a discussion of licensing issues, and an introduction to real-time, with a discussion of real-time options for Linux. This indispensable book features arcane and previously undocumented procedures for: Building your own GNU development toolchain Using an efficient embedded development framework Selecting, configuring, building, and installing a target-specific kernel Creating a complete target root filesystem Setting up, manipulating, and using solid-state storage devices Installing and configuring a bootloader for the target Cross-compiling a slew of utilities and packages Debugging your embedded system using a plethora of tools and techniques Using the uClibc, BusyBox, U-Boot, OpenSSH, tftpd, tftp, strace, and gdb packages By presenting how to build the operating system components from pristine sources and how to find more documentation or help, Building Embedded Linux Systems greatly simplifies the task of keeping complete control over your embedded operating system.

Linux Kernel Networking Prentice Hall

Authoritative Answers to All Your Linux Network Server Questions--Specifically for Linux Administrators Tap into Linux's impressive capabilities as a network server. Written by one of the world's leading Linux system administration experts, Linux Network Servers teaches you, step-by-step, all the standard and advanced techniques you need to know to configure and administer a full range of network services, from file and printer sharing to email and the Web. Hundreds of clear, consistent examples illustrate these techniques in detail--so you stay on track and accomplish all your goals. Coverage includes the following: Installing Linux Understanding the boot process Working with the network interface Setting up login services Using Linux name services Configuring a mail server Setting up Apache Web server

Configuring network gateway services Configuring desktop configuration server Setting up file sharing Setting up printer services Securing your server Troubleshooting The Craig Hunt Linux Library The Craig Hunt Linux Library provides in-depth, advanced coverage of the key topics for Linux administrators. Topics include Samba, System Administration, DNS Server Administration, Apache, Security, and Sendmail. Each book in the series is either written by or meticulously reviewed by Craig Hunt to ensure the highest quality and most complete coverage for networking professionals working specifically in Linux environments.

Linux Administration O'Reilly Media

A complete, in-depth reference guide to understanding kernel networking.

Linux TCP/IP Network Administration "O'Reilly Media, Inc."

Build a better defense against motivated, organized, professional attacks Advanced Penetration Testing: Hacking the World's Most Secure Networks takes hacking far beyond Kali linux and Metasploit to provide a more complex attack simulation. Featuring techniques not taught in any certification prep or covered by common defensive scanners, this book integrates social engineering, programming, and vulnerability exploits into a multidisciplinary approach for targeting and compromising high security environments. From discovering and creating attack vectors, and moving unseen through a target enterprise, to establishing command and exfiltrating data—even from organizations without a direct Internet connection—this guide contains the crucial techniques that provide a more accurate picture of your system's defense. Custom coding examples use VBA, Windows Scripting Host, C, Java, JavaScript, Flash, and more, with coverage of standard library applications and the use of scanning tools to bypass common defensive measures. Typical penetration testing consists of low-level hackers attacking a system with a list of known vulnerabilities, and defenders preventing those hacks using an equally well-known list of defensive scans. The professional hackers and nation states on the forefront of today's threats operate at a much more complex level—and this book shows you how to defend your high security network. Use targeted social engineering pretexts to create the initial compromise Leave a command and control structure in place for long-term access Escalate privilege and breach networks, operating systems, and trust structures Infiltrate further using harvested credentials while expanding control Today's threats are organized, professionally-run, and very much for-profit. Financial institutions, health care organizations, law enforcement, government agencies, and other high-value targets need to harden their IT infrastructure and human capital against targeted advanced attacks from motivated professionals. Advanced Penetration Testing goes beyond Kali linux and Metasploit and to provide you advanced pen testing for high security networks.

Advanced Linux Programming John Wiley & Sons

Learn to install and administer Linux on an individual workstation or an entire network with this comprehensive in depth reference. You'll find everything you need to get up and running with any Linux distribution, including the latest version of Red Hat. Updated to cover the new 2.4 kernel and complete with an expanded section on advanced networking, this book shows you how to install and configure Linux, set up Internet services, handle single-host administration, and much more. Plus, you'll get eight pages of blueprints illustrating the differences between Linux and Windows NT/2000. If you are a professional administrator wanting to bring Linux into your network topology, a home user with multiple machines wanting to build a simple home network, or are migrating from Windows, then you need this book.

Linux in a Windows World Addison-Wesley Professional

This is the eBook version of the printed book. If the print book includes a CD-ROM, this content is not included within the eBook version. Advanced Linux Programming is divided into two parts. The first covers generic UNIX system services, but with a particular eye towards Linux specific information. This portion of the book will be of use even to advanced programmers who have worked with other Linux systems since it will cover Linux specific details and differences. For programmers without UNIX experience, it will be even more valuable. The second section covers material that is entirely Linux specific. These are truly advanced topics, and are the techniques that the gurus use to build great applications. While this book will focus mostly on the Application Programming Interface (API) provided by the Linux kernel and the C library, a preliminary introduction to the development tools available will allow all who purchase the book to make immediate use of Linux.

Linux Observability with BPF McGraw-Hill/Osborne Media

Publisher's Note: Products purchased from Third Party sellers are not guaranteed by the publisher for quality, authenticity, or access to any online entitlements included with the product. Gain Essential Linux Administration Skills Easily Effectively set up and manage popular Linux distributions on individual servers and build entire network infrastructures using this practical resource. Fully updated to cover the latest tools and techniques, Linux Administration: A Beginner's Guide, Eighth Edition features clear explanations, step-by-step instructions, and real-world examples. Find out how to configure hardware and software, work from the command line or GUI, maintain Internet and network services, and secure your data. Performance tuning, virtualization, containers, software management, security, and backup solutions are covered in detail. Install and configure Linux, including the latest distributions from Fedora, Ubuntu, CentOS, openSUSE, Debian, and RHEL. Set up and administer core system services, daemons, users, and groups. Manage software applications from source code or binary packages. Customize, build, or patch the Linux kernel. Understand and manage the Linux network stack and networking protocols, including TCP/IP, ARP, IPv4, and IPv6. Minimize security threats and build reliable firewalls and routers with Netfilter (iptables and nftables) and Linux. Create and maintain DNS, FTP, web, e-mail, print, LDAP, VoIP, and SSH servers and services. Share resources using GlusterFS, NFS, and Samba. Spin-up and manage Linux-based servers in popular cloud environments, such as OpenStack, AWS, Azure, Linode, and GCE. Explore virtualization and container technologies using KVM, Docker, Kubernetes, and Open Container Initiative (OCI) tooling. Download specially curated Virtual Machine image and containers that replicate various exercises, software, servers, commands, and concepts covered in the book. Wale Soyinka is a father, system administrator, a DevOps/SecOps aficionado, an open source evangelist, a hacker, and a well-respected world-renowned chef (in his mind). He is the author of Advanced Linux Administration as well as other Linux, Network, and Windows administration training materials.

Linux Basics for Hackers *Red Hat

This book "provides a solid foundation on which students build their knowledge of the Linux operating system. The first half of the book gives a brief overview of Linux origins and features, followed by detailed installation instructions, and comprehensive coverage of file system types, management and administration. The latter half of the book focuses on more advanced topics such as advanced installation, working with the BASH Shell and X-Windows, systema administration and trouble shooting tips." - back cover.

Linux Network Servers Apress

Linux Kernel Networking takes you on a guided in-depth tour of the current Linux networking implementation and the theory behind it. Linux kernel networking is a complex topic, so the book won't burden you with topics not directly related to networking. This book will also not overload you with cumbersome line-by-line code walkthroughs not directly related to what you're searching for; you'll find just what you need, with in-depth explanations in each chapter and a quick reference at the end of each chapter. Linux Kernel Networking is the only up-to-date reference guide to understanding how networking is implemented, and it will be indispensable in years to come since so many devices now use Linux or operating systems based on Linux, like Android, and since Linux is so prevalent in the data center arena, including Linux-based virtualization technologies like Xen and KVM.

Linux Administration: A Beginner's Guide, Eighth Edition O'Reilly Media

Build your expertise in the BPF virtual machine in the Linux kernel with this practical guide for systems engineers. You'll not only dive into the BPF program lifecycle but also learn to write applications that observe and modify the kernel's behavior; inject code to monitor, trace, and securely observe events in the kernel; and more. Authors David Calavera and Lorenzo Fontana help you harness the power of BPF to make any computing system more observable. Familiarize yourself with the essential concepts you'll use on a day-to-day basis and augment your knowledge about performance optimization, networking, and security. Then see how it all comes together with code examples in C, Go, and Python. Write applications that use BPF to observe and modify the Linux kernel's behavior on demand Inject code to monitor, trace, and observe events in the kernel in a secure way—no need to recompile the kernel or reboot the system Explore code examples in C, Go, and Python Gain a more thorough understanding of the BPF program lifecycle

Linux Advanced System and Network Administration Packt Publishing Ltd

Definitive guide to implementing, managing and troubleshooting Linux networks. Detailed coverage of Linux routing, file management, directory services, security and internetworking with Samba.

[Linux Networking Cookbook](#) No Starch Press

A practical guide to testing your network's security with Kali Linux, the preferred choice of penetration testers and hackers. About This Book Employ advanced pentesting techniques with Kali Linux to build highly-secured systems Get to grips with various stealth techniques to remain undetected and defeat the latest defenses and follow proven approaches Select and configure the most effective tools from Kali Linux to test network security and prepare your business against malicious threats and save costs Who This Book Is For Penetration Testers, IT professional or a security consultant who wants to maximize the success of your network testing using some of the advanced features of Kali Linux, then this book is for you. Some prior exposure to basics of penetration testing/ethical hacking would be helpful in making the most out of this title. What You Will Learn Select and configure the most effective tools from Kali Linux to test network security Employ stealth to avoid detection in the network being tested Recognize when stealth attacks are being used against your network Exploit networks and data systems using wired and wireless networks as well as web services Identify and download valuable data from target systems Maintain access to compromised systems Use social engineering to compromise the weakest part of the network—the end users In Detail This book will take you, as a tester or security practitioner through the journey of reconnaissance, vulnerability assessment, exploitation, and post-exploitation activities used by penetration testers and hackers. We will start off by using a laboratory environment to validate tools and techniques, and using an application that supports a collaborative approach to penetration testing. Further we will get acquainted with passive reconnaissance with open source intelligence and active reconnaissance of the external and internal networks. We will also focus on how to select, use, customize, and interpret the results from a variety of different vulnerability scanners. Specific routes to the target will also be examined, including bypassing physical security and exfiltration of data using different techniques. You will also get to grips with concepts such as social engineering, attacking wireless networks, exploitation of web applications and remote access connections. Later you will learn the practical aspects of attacking user client systems by backdooring executable files. You will focus on the most vulnerable part of the network—directly and bypassing the controls, attacking the end user and maintaining persistence access through social media. You will also explore approaches to carrying out advanced penetration testing in tightly secured environments, and the book's hands-on approach will help you understand everything you need to know during a Red teaming exercise or penetration testing Style and approach An advanced level tutorial that follows a practical approach and proven methods to maintain top notch security of your networks.

Linux Observability with BPF Prentice Hall

This IBM® Redbooks® publication describes important networking concepts and industry standards that are used to support high availability on IBM System z®. Some of the networking standards described here are VLANs, VLAN trunking,

link aggregation, virtual switches, VNICs, and load-balancing. We examine the various aspects of network setups and introduce the main Linux on System z networking commands and configuration files. We describe the management of network interface parameters, assignment of addresses to a network interface, and usage of the `ifconfig` command to configure network interfaces. We provide an overview of connectivity options available on the System z platform. We also describe high availability concepts and building a high availability solution using IBM Tivoli® System Automation. We also provide the implementation steps necessary to build a redundant network connections set up between an IBM z/VM® system and the external network switches using two Open Systems Adapter-Express 3 (OSA-Express 3) adapters with 10 Gb Ethernet ports. We describe the tests performed in our lab environment. The objectives of these tests were to gather information about performance and failover from the perspective of a real scenario, where the concepts of described in this book were applied. This book is focused on information that is practical and useful for readers with experience in network analysis and engineering networks, System z and Linux systems administrators, especially for readers that administer networks in their day-to-day activities. For additional reading: A Technote is available that explains changes to using channel bonding interfaces introduced with SLES 11 SP 2. It can be found at: <http://www.redbooks.ibm.com/abstracts/tips1000.html?OpenLinuxAdvancedSystemandNetworkAdministration> "O'Reilly Media, Inc."

You've experienced the shiny, point-and-click surface of your Linux computer--now dive below and explore its depths with the power of the command line. The Linux Command Line takes you from your very first terminal keystrokes to writing full programs in Bash, the most popular Linux shell (or command line). Along the way you'll learn the timeless skills handed down by generations of experienced, mouse-shunning gurus: file navigation, environment configuration, command chaining, pattern matching with regular expressions, and more. In addition to that practical knowledge, author William Shotts reveals the philosophy behind these tools and the rich heritage that your desktop Linux machine has inherited from Unix supercomputers of yore. As you make your way through the book's short, easily-digestible chapters, you'll learn how to:

- Create and delete files, directories, and symlinks
- Administer your system, including networking, package installation, and process management
- Use standard input and output, redirection, and pipelines
- Edit files with Vi, the world's most popular text editor
- Write shell scripts to automate common or boring tasks
- Slice and dice text files with `cut`, `paste`, `grep`, `patch`, and `sed`

Once you overcome your initial "shell shock," you'll find that the command line is a natural and expressive way to communicate with your computer. Just don't be surprised if your mouse starts to gather dust.

[Linux Advanced System and Network Administration](#) "O'Reilly Media, Inc."

A companion for any system administrator interested in integrating Linux into their Windows environment. This book takes an in-depth look at exactly how Linux can be brought into an organization that's currently based on Microsoft Windows system. With tips and techniques, it has the practical advice you need to migrate to this software.

[Linux Advanced Routing and Traffic Control HOWTO](#) IBM Redbooks

Linux is the fastest growing operating system. As the number of companies implementing Linux increases, so too does the rapidly-developing need for skilled users, developers and administrators. Advanced Guide to Linux Networking and Security was especially designed for individuals who want to move beyond just the basics of Linux installation and administration into a broader study of the many security issues surrounding this operating system. With its comprehensive Linux security coverage, this text can fit into any Linux Security course and is intended to follow the Complete Guide to Linux System Administration by Nick Wells.

[Linux+ Guide to Linux Certification](#) Que Publishing

A Practical Guide to Advanced Networking, Third Edition takes a pragmatic, hands-on approach to teaching advanced modern networking concepts from the network administrator's point of view. Thoroughly updated for the latest networking technologies and applications, the book guides you through designing, configuring, and managing campus networks, connecting networks to the Internet, and using the latest networking technologies. The authors first show how to solve key network design challenges, including data flow, selection of network media, IP allocation, subnetting, and configuration of both VLANs and Layer 3 routed networks. Next, they illuminate advanced routing techniques using RIP/RIPv2, OSPF, IS-IS, EIGRP, and other protocols, and show how to address common requirements such as static routing and route redistribution. You'll find thorough coverage of configuring IP-based network infrastructure, and using powerful WireShark and NetFlow tools to analyze and troubleshoot traffic. A full chapter on security introduces best practices for preventing DoS attacks, configuring access lists, and protecting routers, switches, VPNs, and wireless networks. This book's coverage also includes IPv6, Linux-based networking, Juniper routers, BGP Internet routing, and Voice over IP (VoIP). Every topic is introduced in clear, easy-to-understand language; key ideas are reinforced with working examples, and hands-on exercises based on powerful network simulation software. Key Pedagogical Features NET-CHALLENGE SIMULATION SOFTWARE provides hands-on experience with advanced router and switch commands, interface configuration, and protocols--now including RIPv2 and IS-IS WIRESHARK NETWORK PROTOCOL ANALYZER TECHNIQUES and EXAMPLES of advanced data traffic analysis throughout PROVEN TOOLS FOR MORE EFFECTIVE LEARNING, including chapter outlines and summaries WORKING EXAMPLES IN EVERY CHAPTER to reinforce key concepts and promote mastery KEY TERMS DEFINITIONS, LISTINGS, and EXTENSIVE GLOSSARY to help you master the language of networking QUESTIONS, PROBLEMS, and CRITICAL THINKING QUESTIONS to help you deepen your understanding CD-ROM includes Net-Challenge Simulation Software and the Wireshark Network Protocol Analyzer Software examples.

The Linux Command Line, 2nd Edition No Starch Press

* Clear and abundant examples, using real-world code, written by three experienced developers who write networking code for a living. * Describes how to build clients and servers, explains how TCP, UDP, and IP work, and shows how to debug networking applications via packet sniffing and deconstruction. * Well suited for Windows developer looking to expand to Linux, or for the proficient Linux developer looking to incorporate client-server programming into their application.