

## Linux Mint Essentials

Develop advanced skills for working with Linux systems on-premises and in the cloud

**Key Features** Become proficient in everyday Linux administration tasks by mastering the Linux command line and using automation Work with the Linux filesystem, packages, users, processes, and daemons Deploy Linux to the cloud with AWS, Azure, and Kubernetes

**Book Description** Linux plays a significant role in modern data center management and provides great versatility in deploying and managing your workloads on-premises and in the cloud. This book covers the important topics you need to know about for your everyday Linux administration tasks. The book starts by helping you understand the Linux command line and how to work with files, packages, and filesystems. You'll then begin administering network services and hardening security, and learn about cloud computing, containers, and orchestration. Once you've learned how to work with the command line, you'll explore the essential Linux commands for managing users, processes, and daemons and discover how to secure your Linux environment using application security frameworks and firewall managers. As you advance through the chapters, you'll work with containers, hypervisors, virtual machines, Ansible, and Kubernetes. You'll also learn how to deploy Linux to the cloud using AWS and Azure. By the end of this Linux book, you'll be well-versed with Linux and have mastered everyday administrative tasks using workflows spanning from on-premises to the cloud. If you also find yourself adopting DevOps practices in the process, we'll consider our mission accomplished. What you will learn

Understand how Linux works and learn basic to advanced Linux administration skills Explore the most widely used commands for managing the Linux filesystem, network, security, and more Get to grips with different networking and messaging protocols Find out how Linux security works and how to configure SELinux, AppArmor, and Linux iptables Work with virtual machines and containers and understand container orchestration with Kubernetes Work with containerized workflows using Docker and Kubernetes Automate your configuration management workloads with Ansible

Who this book is for If you are a Linux administrator who wants to understand the fundamentals and as well as modern concepts of Linux system administration, this book is for you. Windows System Administrators looking to extend their knowledge to the Linux OS will also benefit from this book.

Linux Mint 20 (Ulyana) is based on the Ubuntu 20.04 LTR (Long Term Release). The Cinnamon and Mate desktops are examined in detail. Cinnamon and Mate have custom Mint menus to manage access to applications and devices. Advanced components are also examined such as the LightDM Display Manager, Warpinator, Timeshift, NetworkManager, the Samba server, and Mint software management applications (Software Manager and Update Manager). The Linux Mint X-Apps are also reviewed, including Xplayer, Xed, and Xviewer. Administration topics include system tools, managing users, file systems, Bluetooth setup, printer configuration, and network folder and file sharing. In addition, configuration of wired and wireless connections, firewalls, and service management using systemd are covered. Shared resources are also examined, including the CUPS printing server, the NFS Linux network file server, and Samba Windows file server.

Your step-by-step guide to the latest in Linux

Nine previous editions of this popular benchmark guide can't be wrong! Whether you're new to Linux and need a step-by-step guide or are a pro who wants to catch up with recent distributions, Linux For Dummies, 10th Edition has your back. Covering everything from installation to automation, this updated edition focuses on openSUSE and Ubuntu and includes new and refreshed material—as well as chapters on building a web server and creating simple shell scripts. In his friendly, no-jargon style, IT professional and tech higher education instructor Richard Blum draws on more than 10 years of teaching to show you just why Linux's open source operating systems are relied on to run a huge proportion of the world's online infrastructure, servers, supercomputers, and NAS devices—and how you can master them too. Study the thinking behind Linux

Choose the right installation approach Pick up the basics—from prepping to desktops Get fancy with music, video, movies, and games Whatever your Linux needs—work, fun, or just a hobby—this bestselling, evergreen guide will get you up and coding in the open source revolution in no time at all.

Mastering Ubuntu Server, Third Edition not only strengthens your server fundamentals but also equips you with the advanced concepts of Ubuntu 20.04 LTS. It polishes and expands your skill set to prepare you for better business opportunities.

"Simple yet empowering. Kids will be amazed at how quickly they can get productive." - James McGinn, Bull Valley

**Key Features** Learn to program with Python, a language designed to be easy for beginners Written by father-and-son team Warren and Carter Sande Colorful pictures, clever cartoons, and fun examples Practice questions and exercises Kid-tested and reviewed by professional educators Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About The Book With this book, ANYONE can learn to write useful programs and games in Python. Designed especially for readers 9-16 years old, this book is easy to read and use. Printed in full color, it's never boring, with hands-on practice and interesting graphics throughout. Hello World! Computer Programming for Kids and Other Beginners, Third Edition introduces the world of computer programming in a clear and fun style. Using Python, a programming language designed to be easy to learn, each engaging lesson teaches skills that apply to any kind of programming. It brings to life the basic concepts of computing—looping, decisions, input and output, graphics, and more. Now in its third edition, this international bestseller has been fully updated to Python 3 and includes a new chapter about how the internet works. What You Will Learn

Install Python and get set up for programming Math and data for programming Building GUIs for your programs Creating simple games Adding comments to your code Graphics, sprites, and collision detection Simulate pets and a lunar landing Where to go next on your programming journey This Book Is Written For Like the previous two editions, Hello World! Third Edition is not just for kids. While the tone is light and engaging, it doesn't "talk down" to the reader, and beginners of any age will love its readability and sense of humor. Written by Warren Sande and his son, Carter, it is full of examples that will get you thinking and learning. Reviewed by professional educators, this book is kid-tested and parent-approved. You don't need to know anything about programming to use the book, just the basics of using a computer. If you can start a program and save a file, you can learn to program using this book!

This comprehensive edited volume is the first of its kind, designed to serve as a textbook for long-duration business analytics programs. It can also be used as a guide to the field by practitioners. The book has contributions from experts in top universities and industry. The editors have taken extreme care to ensure continuity across the chapters. The material is organized into three parts: A) Tools, B) Models and C) Applications. In Part A, the tools used by business analysts are described in detail. In Part B, these tools are applied to construct models used to solve business problems. Part C contains detailed applications in various functional areas of business and several case studies. Supporting material can be found in the appendices that develop the pre-requisites for the main text. Every chapter has a business orientation. Typically, each chapter begins with the description of business problems that are transformed into data questions; and methodology is developed to solve these questions. Data analysis is conducted using widely used software, the output and results are clearly explained at each stage of development. These are finally transformed into a business solution. The companion website provides examples, data sets and sample code for each chapter.

O'Reilly's Pocket Guides have earned a reputation as inexpensive, comprehensive, and compact guides that have the stuff but not the fluff. Every page of Linux Pocket Guide lives up to this billing. It clearly explains how to get up to speed quickly on day-to-day Linux use. Once you're up and running, Linux Pocket Guide provides an easy-to-use reference that you can keep by your keyboard for those times when you want a fast, useful answer, not hours in the man pages. Linux Pocket Guide is organized the way you use Linux: by function, not just alphabetically. It's not the 'bible of Linux; it's a practical and concise

guide to the options and commands you need most. It starts with general concepts like files and directories, the shell, and X windows, and then presents detailed overviews of the most essential commands, with clear examples. You'll learn each command's purpose, usage, options, location on disk, and even the RPM package that installed it. The Linux Pocket Guide is tailored to Fedora Linux--the latest spin-off of Red Hat Linux--but most of the information applies to any Linux system. Throw in a host of valuable power user tips and a friendly and accessible style, and you'll quickly find this practical, to-the-point book a small but mighty resource for Linux users.

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?

If you are an embedded developer learning about embedded Linux with some experience with the Yocto project, this book is the ideal way to become proficient and broaden your knowledge with examples that are immediately applicable to your embedded developments. Experienced embedded Yocto developers will find new insight into working methodologies and ARM specific development competence. A complete guide and reference to five major Linux distributions Linux continues to grow in popularity worldwide as a low-cost, reliable operating system for enterprise use. Nine minibooks in this guide cover everything administrators need to know about the five leading versions: Ubuntu, Fedora Core, OpenSUSE, Mint, and Mandriva. The companion DVD includes full Ubuntu installations and ISO images for the other four, saving hours of downloading time. The open source Linux operating system is gaining market share around the world for both desktop and server use; this soup-to-nuts guide covers installation and everything else administrators need to know about Ubuntu, Fedora Core, OpenSUSE, Mint, and Mandriva. Nine self-contained minibooks cover Linux basics, desktops, networking, Internet, administration, security, Linux servers, programming, and scripting Updated to cover the newest versions of the five top distributions, with complete installation instructions and a DVD including the full Ubuntu installations and ISO images for the others Linux users and administrators will be able to install and sample five popular Linux flavors with the information in Linux All-in-One For Dummies. Note: CD-ROM/DVD and other supplementary materials are not included as part of eBook file.

Provides a solid foundation for those considering a career in IT—covers the objectives of the new Linux Essentials Exam 010-160 v1.6 Linux is a secure, reliable, open source alternative to costly operating systems such as Microsoft Windows. As large organizations worldwide continue to add Linux servers, the need for IT professionals skilled in Linux continues to grow. The LPI Linux Essentials Study Guide is a valuable resource for anyone preparing to take the new Linux Essentials Exam—the entry-level certification from The Linux Professional Institute (LPI) which validates knowledge of Linux concepts and applications. Written by recognized experts on Linux and open source technologies, this accessible, user-friendly guide covers desktop skills, the command line, directories and files, networks, scripting, security, users and permissions, and much more. Clear, concise chapters provide numerous hands-on tutorials, real-world examples, color illustrations, and practical end-of-chapter exercises and review questions. An ideal introduction for those new to Linux or considering a career in IT, this guide helps readers: Learn the operation and components of Linux desktops and servers Understand open source software, licensing, and applications Configure networks, security, cloud services, storage, and devices Create users and groups and set permissions and ownership Use the command line and build automation scripts LPI Linux Essentials Study Guide: Exam 010 v1.6 is perfect for anyone beginning a career in IT, newcomers to Linux, students in computer courses, and system administrators working with other operating systems wanting to learn more about Linux and other open source solutions.

If you want to learn how to use Linux, but don't know where to start read on. Knowing where to start when learning a new skill can be a challenge, especially when the topic seems so vast. There can be so much information available that you can't even decide where to start. Or worse, you start down the path of learning and quickly discover too many concepts, commands, and nuances that aren't explained. This kind of experience is frustrating and leaves you with more questions than answers. Linux for Beginners doesn't make any assumptions about your background or knowledge of Linux. You need no prior knowledge to benefit from this book. You will be guided step by step using a logical and systematic approach. As new concepts, commands, or jargon are encountered they are explained in plain language, making it easy for anyone to understand. Here is what you will learn by reading Linux for Beginners: How to get access to a Linux server if you don't already. What a Linux distribution is and which one to choose. What software is needed to connect to Linux from Mac and Windows computers. Screenshots included. What SSH is and how to use it, including creating and using SSH keys. The file system layout of Linux systems and where to find programs, configurations, and documentation. The basic Linux commands you'll use most often. Creating, renaming, moving, and deleting directories. Listing, reading, creating, editing, copying, and deleting files. Exactly how permissions work and how to decipher the most cryptic Linux permissions with ease. How to use the nano, vi, and emacs editors. Two methods to search for files and directories. How to compare the contents of files. What pipes are, why they are useful, and how to use them. How to compress files to save space and make transferring data easy. How and why to redirect input and output from applications. How to customize your shell prompt. How to be efficient at the command line by using aliases, tab completion, and your shell history. How to schedule and automate jobs using cron. How to switch users and run processes as others. Where to go for even more in-depth coverage on each topic. What you learn in "Linux for Beginners" applies to any Linux environment including Ubuntu, Debian, Linux Mint, RedHat, Fedora, OpenSUSE, Slackware, and more. Scroll up, click the Buy Now With 1 Click button and get started learning Linux today!

Send and receive messages with the MQTT protocol for your IoT solutions. About This Book Make your connected devices less prone to attackers by understanding practical security mechanisms Dive deep into one of IoT's extremely lightweight machines to enable connectivity protocol with some real-world examples Learn to take advantage of the features included in MQTT for IoT and Machine-to-Machine communications with complete real-life examples Who This Book Is For This book is a great resource for developers who want to learn more about the MQTT protocol to apply it to their individual IoT projects. Prior knowledge of working with IoT devices is essential. What You Will Learn Understand how MQTTv3.1 and v3.1.1 works in detail Install and secure a Mosquitto MQTT broker by following best practices Design and develop IoT solutions combined with mobile and web apps that use MQTT messages to communicate Explore the features included in MQTT for IoT and Machine-to-Machine communications Publish and receive MQTT messages with Python, Java, Swift, JavaScript, and Node.js Implement the security best practices while setting up the MQTT Mosquitto broker In Detail This step-by-step guide will help you gain a deep understanding of the lightweight MQTT protocol. We'll begin with the specific vocabulary of MQTT and its working modes, followed by installing a Mosquitto MQTT broker. Then, you will

use best practices to secure the MQTT Mosquitto broker to ensure that only authorized clients are able to publish and receive messages. Once you have secured the broker with the appropriate configuration, you will develop a solution that controls a drone with Python. Further on, you will use Python on a Raspberry Pi 3 board to process commands and Python on Intel Boards (Joule, Edison and Galileo). You will then connect to the MQTT broker, subscribe to topics, send messages, and receive messages in Python. You will also develop a solution that interacts with sensors in Java by working with MQTT messages. Moving forward, you will work with an asynchronous API with callbacks to make the sensors interact with MQTT messages. Following the same process, you will develop an iOS app with Swift 3, build a website that uses WebSockets to connect to the MQTT broker, and control home automation devices with HTML5, JavaScript code, Node.js and MQTT messages Style and approach This step-by-step guide describes the MQTT protocol for your IoT projects

In this book, you will receive a crash course that will introduce you to everything you need to know to pass the LPI Linux Essentials(R) certification exam. This book covers just the essentials with no fluff, filler, or extra material, so you can learn the material quickly and conquer the certification exam with ease. The LPI Linux Essentials(R) exam is the first certification exam in the Linux Professional Institute's certification path. This certification is designed to test your ability to use the basic console line editor and to demonstrate an understanding of processes, programs, and components of the Linux operating system. This book assumes that you have no previous experience with the Linux operating system and will teach you exactly what you need to know to take and pass the Linux Essentials(R) certification exam on your first attempt.

This book provides an introduction to Bluetooth programming, with a specific focus on developing real code. The authors discuss the major concepts and techniques involved in Bluetooth programming, with special emphasis on how they relate to other networking technologies. They provide specific descriptions and examples for creating applications in a number of programming languages and environments including Python, C, Java, GNU/Linux, Windows XP, Symbian Series 60, and Mac OS X. No previous experience with Bluetooth is assumed, and the material is suitable for anyone with some programming background. The authors place special emphasis on the essential concepts and techniques of Bluetooth programming, starting simply and allowing the reader to quickly master the basic concepts before addressing advanced features.

Ubuntu is a Debian-based Linux distribution with versions available for both desktops as well as servers. The Server edition, Ubuntu Server, has set the industry standard for Linux in the data center as well as the cloud. Organizations, inventors, and hobbyists alike will benefit from its flexible configuration, fast deployment, and a plethora ...

Teaches you how to improve your hands-on knowledge of Linux using challenging, real-world scenarios. Each chapter explores a topic that has been chosen specifically to demonstrate how to enhance your base Linux system, and resolve important issues. This book enables sysadmins, DevOps engineers, developers, and other technical professionals to make full use of Linux's rocksteady foundation. Explore specific topics in networking, email, filesystems, encryption, system monitoring, security, servers, and more-- including systemd and GPG. Understand salient security concerns and how to mitigate them. Applicable to almost all Linux flavors--Debian, Red Hat, Ubuntu, Linux Mint, CentOS--Practical Linux Topics ?c?an be used to reference other Unix-type systems with little modification. Improve your practical know-how and background knowledge on servers and workstations alike, increase your ability to troubleshoot and ultimately solve the daily challenges encountered by all professional Linux users. Empower your Linux skills by adding Power Linux Topics to your library today. What You'll Learn Solve a variety of challenges faced by sysadmins and DevOps engineers Understand the security implications of the actions you take Study the history behind some of the packages that you are using for a greater in-depth understanding Become a professional at troubleshooting Extend your knowledge by learning about multiple OSs and third-party packages Who This Book Is For Having mastered the basics of running Linux systems this book takes you one step further to help you master the elements of Linux which you may have struggled with in the past. You have progressed past the basic stages of using Linux and want to delve into the more complex aspects. Practical Linux instantly offers answers to problematic scenarios and provides invaluable information for future reference. It is an invaluable addition to any Linux library.

Linux mint 20.2 (Uma) is based on the Ubuntu 20.04 LTR (Long Term Release). The Cinnamon and Mate desktops are examined in detail. Cinnamon and Mate have custom Mint menus to manage access to applications and devices. Advanced components are also examined such as the LightDM Display Manager, Warpinator, Timeshift, NetworkManager, the Samba server, and Mint software management applications (Software Manager and Update Manager). The Linux Mint X-Apps are also reviewed, including Xplayer, Xed, and Xviewer. Administration topics include system tools, managing users, file systems, Bluetooth setup, printer configuration, and network folder and file sharing. In addition, configuration of wired and wireless connections, firewalls, and service management using systemd are covered. Shared resources are also examined, including the CUPS printing server, the NFS Linux network file server, and Samba Windows file server. Be advised that there are few changes between Linux Mint 20.2 and Linux Mint 20.

Learn Linux, and take your career to the next level! Linux Essentials, 2nd Edition provides a solid foundation of knowledge for anyone considering a career in information technology, for anyone new to the Linux operating system, and for anyone who is preparing to sit for the Linux Essentials Exam. Through this engaging resource, you can access key information in a learning-by-doing style. Hands-on tutorials and end-of-chapter exercises and review questions lead you in both learning and applying new information—information that will help you achieve your goals! With the experience provided in this compelling reference, you can sit down for the Linux Essentials Exam with confidence. An open source operating system, Linux is a UNIX-based platform that is freely updated by developers. The nature of its development means that Linux is a low-cost and secure alternative to other operating systems, and is used in many different IT environments. Passing the Linux Essentials Exam prepares you to apply your knowledge regarding this operating system within the workforce. Access lessons that are organized by task, allowing you to quickly identify the topics you are looking for and navigate the comprehensive information presented by the book Discover the basics of the Linux operating system, including distributions, types of open source applications, freeware, licensing, operations, navigation, and more Explore command functions, including navigating the command line, turning commands into scripts, and more Identify and create user

types, users, and groups Linux Essentials, 2nd Edition is a critical resource for anyone starting a career in IT or anyone new to the Linux operating system.

The Bash Guide for Beginners (Second Edition) discusses concepts useful in the daily life of the serious Bash user. While a basic knowledge of shell usage is required, it starts with a discussion of shell building blocks and common practices. Then it presents the grep, awk and sed tools that will later be used to create more interesting examples. The second half of the course is about shell constructs such as loops, conditional tests, functions and traps, and a number of ways to make interactive scripts. All chapters come with examples and exercises that will help you become familiar with the theory.

**ALL YOU NEED TO KNOW TO SECURE LINUX SYSTEMS, NETWORKS, APPLICATIONS, AND DATA—IN ONE BOOK** From the basics to advanced techniques: no Linux security experience necessary Realistic examples & step-by-step activities: practice hands-on without costly equipment The perfect introduction to Linux-based security for all students and IT professionals Linux distributions are widely used to support mission-critical applications and manage crucial data. But safeguarding modern Linux systems is complex, and many Linux books have inadequate or outdated security coverage. Linux Essentials for Cybersecurity is your complete solution. Leading Linux certification and security experts William “Bo” Rothwell and Dr. Denise Kinsey introduce Linux with the primary goal of enforcing and troubleshooting security. Their practical approach will help you protect systems, even if one or more layers are penetrated. First, you’ll learn how to install Linux to achieve optimal security upfront, even if you have no Linux experience. Next, you’ll master best practices for securely administering accounts, devices, services, processes, data, and networks. Then, you’ll master powerful tools and automated scripting techniques for footprinting, penetration testing, threat detection, logging, auditing, software management, and more. To help you earn certification and demonstrate skills, this guide covers many key topics on CompTIA Linux+ and LPIC-1 exams. Everything is organized clearly and logically for easy understanding, effective classroom use, and rapid on-the-job training. **LEARN HOW TO:** Review Linux operating system components from the standpoint of security Master key commands, tools, and skills for securing Linux systems Troubleshoot common Linux security problems, one step at a time Protect user and group accounts with Pluggable Authentication Modules (PAM), SELinux, passwords, and policies Safeguard files and directories with permissions and attributes Create, manage, and protect storage devices: both local and networked Automate system security 24/7 by writing and scheduling scripts Maintain network services, encrypt network connections, and secure network-accessible processes Examine which processes are running—and which may represent a threat Use system logs to pinpoint potential vulnerabilities Keep Linux up-to-date with Red Hat or Debian software management tools Modify boot processes to harden security Master advanced techniques for gathering system information

If you are a system administrator who manages multiple servers, then you know how difficult it is to keep your infrastructure in line. If you've been searching for an easier way, this book is for you. No prior experience with SaltStack is required.

**Develop and deploy fully functional applications and microservices utilising Tomcat, Glassfish servers, Cloud and docker in Java EE 8 Key Features** Explore the complete workflow of developing enterprise Java applications Develop microservices with Docker Container and deploy it in cloud Simplify Java EE application development **Book Description** Java EE is one of the most popular tools for enterprise application design and development. With recent changes to Java EE 8 specifications, Java EE application development has become a lot simpler with the new specifications, some of which compete with the existing specifications. This guide provides a complete overview of developing highly performant, robust and secure enterprise applications with Java EE with Eclipse. The book begins by exploring different Java EE technologies and how to use them (JSP, JSF, JPA, JDBC, EJB, and more), along with suitable technologies for different scenarios. You will learn how to set up the development environment for Java EE applications and understand Java EE specifications in detail, with an emphasis on examples. The book takes you through deployment of an application in Tomcat, GlassFish Servers, and also in the cloud. It goes beyond the basics and covers topics like debugging, testing, deployment, and securing your Java EE applications. You'll also get to know techniques to develop cloud-ready microservices in Java EE. What you will learn **Set up Eclipse, Tomcat, and Glassfish servers for Java EE application development Use JSP, Servlet, JSF, and EJBs to create a user interface and write business logic Create Java EE database applications using JDBC and JPA Handle asynchronous messages using MDBs for better scalability Deploy and debug Java EE applications and create SOAP and REST web services Write unit tests and calculate code coverage Use Eclipse MAT (Memory Analysis Tool) to debug memory issues Create and deploy microservices Who this book is for** If you are a Java developer with little or no experience in Java EE application development, or if you have experience in Java EE technology but are looking for tips to simplify and accelerate your development process, then this book is for you. Encouraging hands-on practice, Mastering Linux provides a comprehensive, up-to-date guide to Linux concepts, usage, and programming. Through a set of carefully selected topics and practical examples, the book imparts a sound understanding of operating system concepts and shows how to use Linux effectively. **Ready-to-Use Examples Offer Immediate Access to Practical Applications** After a primer on the fundamentals, the text covers user interfaces, commands and filters, Bash Shell scripting, the file system, networking and Internet use, and kernel system calls. It presents many examples and complete programs ready to run on your Linux system. Each chapter includes a summary and exercises of varying degrees of difficulty. **Web Resource** The companion website at <http://ml.sofpower.com/> offers a host of ancillary materials. Along with links to numerous resources, it includes appendices on SSH and SFTP, VIM, text editing with Vi, and the emacs editor. The site also provides a complete example code package for download. **Master the Linux Operating System Toolbox** This book enables you to leverage the capabilities and power of the Linux system more effectively. Going beyond this, it can help you write programs at the shell and C levels—encouraging you to build new custom tools for applications and R&D.

Enhance your understanding of Computer Vision and image processing by developing real-world projects in OpenCV 3 About This Book Get to grips with the basics of Computer Vision and image processing This is a step-by-step guide to developing several real-world Computer Vision projects using OpenCV 3 This book takes a special focus on working with Tesseract OCR, a free, open-source library to recognize text in images Who This Book Is For If you are a software developer with a basic understanding of Computer Vision and image processing and want to develop interesting Computer Vision applications with Open CV, this is the book for you. Knowledge of C++ is required. What You Will Learn Install OpenCV 3 on your operating system Create the required CMake scripts to compile the C++ application and manage its dependencies Get to grips with the Computer Vision workflows and understand the basic image matrix format and filters Understand the segmentation and feature extraction techniques Remove backgrounds from a static scene to identify moving objects for video surveillance Track different objects in a live video using various techniques Use the new OpenCV functions for text detection and recognition with Tesseract In Detail Open CV is a cross-platform, free-for-use library that is primarily used for real-time Computer Vision and image processing. It is considered to be one of the best open source libraries that helps developers focus on constructing complete projects on image processing, motion detection, and image segmentation. Whether you are completely new to the concept of Computer Vision or have a basic understanding of it, this book will be your guide to understanding the basic OpenCV concepts and algorithms through amazing real-world examples and projects. Starting from the installation of OpenCV on your system and understanding the basics of image processing, we swiftly move on to creating optical flow video analysis or text recognition in complex scenes, and will take you through the commonly used Computer Vision techniques to build your own Open CV projects from scratch. By the end of this book, you will be familiar with the basics of Open CV such as matrix operations, filters, and histograms, as well as more advanced concepts such as segmentation, machine learning, complex video analysis, and text recognition. Style and approach This book is a practical guide with lots of tips, and is closely focused on developing Computer vision applications with OpenCV. Beginning with the fundamentals, the complexity increases with each chapter. Sample applications are developed throughout the book that you can execute and use in your own projects.

Linux Phrasebook offers a concise, handy reference that, like a language phrasebook, can be used "in the street." Skipping the usually tutorial on Linux, the Linux Phrasebook goes straight to practical Linux uses, providing immediate applicable solutions for day-to-day tasks.

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. Along the way you'll learn the timeless skills handed down by generations of gray-bearded, 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. A featured resource in the Linux Foundation's "Evolution of a SysAdmin"

Over the last few years, Linux has grown both as an operating system and a tool for personal and business use. Simultaneously becoming more user friendly and more powerful as a back-end system, Linux has achieved new plateaus: the newer filesystems have solidified, new commands and tools have appeared and become standard, and the desktop—including new desktop environments—have proved to be viable, stable, and readily accessible to even those who don't consider themselves computer gurus. Whether you're using Linux for personal software projects, for a small office or home office (often termed the SOHO environment), to provide services to a small group of colleagues, or to administer a site responsible for millions of email and web connections each day, you need quick access to information on a wide range of tools. This book covers all aspects of administering and making effective use of Linux systems. Among its topics are booting, package management, and revision control. But foremost in Linux in a Nutshell are the utilities and commands that make Linux one of the most powerful and flexible systems available. Now in its fifth edition, Linux in a Nutshell brings users up-to-date with the current state of Linux. Considered by many to be the most complete and authoritative command reference for Linux available, the book covers all substantial user, programming, administration, and networking commands for the most common Linux distributions. Comprehensive but concise, the fifth edition has been updated to cover new features of major Linux distributions. Configuration information for the rapidly growing commercial network services and community update services is one of the subjects covered for the first time. But that's just the beginning. The book covers editors, shells, and LILO and GRUB boot options. There's also coverage of Apache, Samba, Postfix, sendmail, CVS, Subversion, Emacs, vi, sed, gawk, and much more. Everything that system administrators, developers, and power users need to know about Linux is referenced here, and they will turn to this book again and again.

Get up to date with the finer points of Ubuntu Server using this comprehensive guide About This Book Get well-versed with newly-added features in Ubuntu 16.04 Master the art of installing, managing, and troubleshooting Ubuntu Server A practical easy-to-understand book that will help you enhance your existing skills. Who This Book Is For This book is intended for readers with intermediate or advanced-beginner skills with Linux, who would like to learn all about setting up servers with Ubuntu Server. This book assumes that the reader knows the basics of Linux, such as editing configuration files and running basic commands. What You Will Learn Learn how to manage users, groups, and permissions Encrypt and decrypt disks with Linux Unified Key Setup /Luks Setup SSH for remote access, and connect it to other nodes Understand how to add, remove, and search for packages Use NFS and Samba to share directories with other users Get to know techniques for managing Apache and MariaDB Explore best practices and troubleshooting techniques In Detail Ubuntu is a Debian-based Linux operating system, and has various versions targeted at servers, desktops, phones, tablets and televisions. The Ubuntu Server Edition, also called Ubuntu Server, offers support for several common configurations, and also simplifies common Linux server deployment processes. With this book as their guide, readers will be able to configure and deploy Ubuntu Servers using Ubuntu Server 16.04, with all the skills necessary to manage real servers. The book begins with the concept of user management, group management, as well as file-system permissions. To manage your storage on Ubuntu Server systems, you will learn how to add and format storage and view disk usage. Later, you will also learn how to configure network interfaces, manage IP addresses, deploy Network Manager in order to connect to networks, and manage network interfaces. Furthermore, you will understand how to start and stop services so that you can manage running processes on Linux servers. The book will then demonstrate how to access and share files to or from Ubuntu Servers. You will learn how to create and manage databases using MariaDB and share web content with Apache. To virtualize hosts and applications, you will be shown how to set up KVM/Qemu and Docker and manage virtual machines with virt-manager. Lastly, you will explore best practices and troubleshooting techniques when working with Ubuntu Servers. By the end of the book, you will be an expert Ubuntu Server user well-versed in its advanced concepts. Style and Approach This book is an advanced guide that will show readers how to administer, manage, and deploy Ubuntu server and will also provide expert-level knowledge on advanced security and backup techniques.

Linux es el único sistema operativo de punto final que está creciendo globalmente. Como dijo una persona, "Linux es el Nikola Tesla de la tecnología de la información". Este sistema operativo se usa en una

gran variedad de dispositivos que incluyen teléfonos inteligentes, grabadoras de video digital, televisores, sistemas de entretenimiento de aerolíneas, señalización digital, sistemas de control de automóviles, conmutadores, enrutadores, ordenadores de escritorio, entre muchos otros. El debate del sistema operativo Microsoft Windows vs Linux no terminará pronto. Sin embargo, es muy claro que Linux está ganando. Si le cuesta creerlo, considere la influencia de Linux en dispositivos Apple basados ??en Android y UNIX. La única razón por la que Windows todavía es común es debido a su influencia en muchas aplicaciones básicas. Esto está a punto de cambiar, y Linux es, sin lugar a dudas, el futuro. Microsoft ha sido el rey de la computación del usuario final (EUC) durante aproximadamente 30 años. No obstante, hay factores como los problemas de seguridad que impulsan a EUC al centro de datos. Debido a esto, existe el deseo de reducir los costos y riesgos que se requieren para mantener Windows al límite. El sistema operativo Linux ofrece la solución perfecta para esto. Linux tiene capas y es ligero, lo que le permite funcionar muy bien en muchos tipos de dispositivos. También ofrece alta velocidad y capacidad de respuesta. Debido a que Linux tiene muchas ventajas inherentes, se prefiere para aplicaciones de punto final.

Master the skills and techniques that are required to design, deploy, and administer real Linux-based networks About This Book Master the art of using Linux and administering network services for enterprise environments Perform hands-on activities to reinforce expert-level knowledge Get full coverage of both the CentOS and Debian systems, including how networking concepts differ for each Who This Book Is For Mastering Linux Network Administration is recommended for those who already understand the basics of using Linux and networking, and would like to push those skills to a higher level through real-world Linux networking scenarios. Whether you intend to run a home office consisting of Linux nodes or a rollout of a Linux network within your organization, this book is a great fit for those that desire to learn how to manage networked systems with the power of Linux. What You Will Learn Install and configure the Debian and CentOS systems Set up and configure file servers Administer networked nodes remotely Discover how to monitor system performance for peak health Configure network services such as DNS and DHCP Host HTTP content via Apache Troubleshoot Linux networking issues In Detail Linux is everywhere. Whether you run a home office, a small business, or manage enterprise systems, Linux can empower your network to perform at its very best. Armed with the advanced tools and best practice guidance of this practical guide, you'll be able to mold Linux networks to your will, empowering your systems and their users to take advantage of all that Linux-based networks have to offer. Understand how Linux networks function and get to grips with essential tips and tricks to manage them - whether you're already managing a networks, or even just starting out. With Debian and CentOS as its source, this book will divulge all the details you need to manage a real Linux-based network. With detailed activities and instructions based on real-world scenarios, this book will be your guide to the exciting world of Linux networking. Style and approach This practical guide will walk you through all the core concepts required to manage real Linux-based networks.

A unique, full-color introduction to Linux fundamentals Serving as a low-cost, secure alternative to expensive operating systems, Linux is a UNIX-based, open source operating system. Full-color and concise, this beginner's guide takes a learning-by-doing approach to understanding the essentials of Linux. Each chapter begins by clearly identifying what you will learn in the chapter, followed by a straightforward discussion of concepts that leads you right into hands-on tutorials. Chapters conclude with additional exercises and review questions, allowing you to reinforce and measure your understanding. Offers a hands-on approach to acquiring a foundation of Linux skills, aiming to ensure Linux beginners gain a solid understanding Uses the leading Linux distribution Fedora to demonstrate tutorials and examples Addresses Linux installation, desktop configuration, management of files and filesystems, remote administration, security, and more This book is essential reading for anyone entering the world of Linux! The "Bourne Again SHell" (Bash) is a powerful command-line shell interface that lets you communicate directly with the kernel at the heart of a computer's operating system for total control. Bash is the default shell for Unix-based operating systems Linux, Mac OS X, and Raspbian on Raspberry Pi devices, and is also available to Windows users on the Windows Subsystem for Linux (WSL) . This book will show you how to use the Bash command-line interface and how to employ Bash's programming abilities. Complete examples illustrate each aspect with colorized source code and full-color screenshots depict the actual output. Bash in easy steps begins by demonstrating Bash commands for system navigation and file manipulation so you will quickly become familiar with the command-line interface. It explains all the BASH basics before moving on to describe advanced features such as command history, command-line editing, and environment customization. The book then introduces Bash programming with examples of flow control, command switches, input/output, and debugging - allowing you to create your own executable programs by copying the examples. Bash in easy steps has an easy-to-follow style that will appeal to: · Users who are completely new to Unix-based operating systems · Casual users who wish to expand their knowledge of their computer system · Those who would like to learn coding skills by writing useful shell scripts · The student who is studying programming at school or college · Those seeking a career in computing and need a fundamental understanding of the BASH interpreter on Unix-based operating systems Table of Contents: Getting Started Managing Files Handling Text Editing Commands Customizing Environment Controlling Behavior Performing Operations Directing Flow Employing Functions Handy Reference

Linux is the only endpoint OS that is growing globally. As one person put it, "Linux is the Nikola Tesla of information technology". This OS is used in a myriad of devices including smartphones, digital video recorders, televisions, airline entertainment systems, digital signage, automobile control systems, switches, routers, the desktop, among many others. The Microsoft Windows vs Linux OS debate will not end anytime soon. However, it is very clear that Linux is winning. If you have a hard time believing this, consider the influence of Linux on Android and UNIX-based Apple devices. The only reason Windows is still common is because of its influence on many core applications. This is about to change, and Linux is, without a doubt, the future. Microsoft has been the king of End User Computing (EUC) for about 30 years. Nonetheless, there are factors such as security concerns that are pushing EUC to the data center. Due to this, there is a desire to reduce the costs and risks that are required to maintain Windows on the edge. Linux OS offers the perfect solution for this. Linux is layered and lightweight which enables it to perform very well across many types of devices. It also offers high speed and responsiveness. Because Linux has so many inherent advantages, it is preferred for endpoint applications.

Benvenuti describes the relationship between the Internet's TCP/IP implementation and the Linux Kernel so that programmers and advanced administrators can modify and fine-tune their network environment.

Linux: The Textbook, Second Edition provides comprehensive coverage of the contemporary use of the Linux operating system for every level of student or practitioner, from beginners to advanced users. The text clearly illustrates system-specific commands and features using Debian-family Debian, Ubuntu, and Linux Mint, and RHEL-family CentOS, and stresses universal commands and features that are critical to all Linux distributions. The second edition of the book includes extensive updates and new chapters on system administration for desktop, stand-alone PCs, and server-class computers; API for system programming, including thread programming with pthreads; virtualization methodologies; and an extensive tutorial on systemd service management. Brand new online content on the CRC Press website includes an instructor's workbook, test bank, and In-Chapter exercise solutions, as well as full downloadable chapters on Python Version 3.5 programming, ZFS, TC shell programming, advanced system programming, and more. An author-hosted GitHub website also features updates, further references, and errata. Features New or updated coverage of file system, sorting, regular expressions, directory and file searching, file compression and encryption, shell scripting, system programming, client-server-based network programming, thread programming with pthreads, and system administration Extensive in-text pedagogy, including chapter objectives, student projects, and basic and advanced student exercises for every chapter Expansive electronic downloads offer advanced content on Python,

ZFS, TC shell scripting, advanced system programming, internetworking with Linux TCP/IP, and many more topics, all featured on the CRC Press website Downloadable test bank, work book, and solutions available for instructors on the CRC Press website Author-maintained GitHub repository provides other resources, such as live links to further references, updates, and errata

A task-oriented look at Linux Mint, using actual real-world examples to stimulate learning. Each topic is presented in an easy-to-follow order, with hands-on activities to reinforce the content. If you are starting out with Linux from a different platform or are well versed with Linux Mint and want a guide that shows you how to exploit certain functionality, this book is for you. No previous Linux experience is assumed.

This is an introduction to the use of the Linux operating system and some of the popular applications that are bundled with most Linux distributions. This book aims to be the perfect hand-holding guide for those who have some experience of the Windows operating system but now want to explore Linux for the first time. The book begins by relating the evolution of Linux and examines various popular distributions such as RedHat, Mandrake and SuSE. It advises how to prepare a computer so that Linux can be installed alongside a Windows operating system - this means that Linux need not replace the familiar Windows environment. Step-by-step instructions are provided to allow the reader to install Linux on their own computer. These include screenshots of each step together with clear explanations and useful tips.

Chapter 1: Introducing Linux  
Chapter 2: Installing Linux  
Chapter 3: Configuring hardware for Linux  
Chapter 4: Exploring the KDE desktop  
Chapter 5: Surfing the web  
Chapter 6: Touring the Linux file structure  
Chapter 7: Handling files  
Chapter 8: Working in a Linux office suite  
Chapter 9: Creating graphics  
Chapter 10: Playing sound and video  
Chapter 11: Using the Linux shell  
Chapter 12: Scripting for the shell  
Chapter 13: Extending your Linux system

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