Teach Yourself Linux Virtualization And High Availability Prepare For The Lpic 3 304 Certification Exam

Third Edition: Thoroughly Updated and Expanded, with Extensive New Coverage! In just 24 sessions of one hour or less, you'll master the entire SAP project lifecycle, from planning through implementation and system administration through day-to-day operations. Using this book's straightforward, step-by-step approach, you'll gain a strong real-world foundation in both the technology and business essentials of today's SAP products and applications—from the ground up. Step-by-step instructions walk you through the most common questions, issues, and tasks you'll encounter with SAP. Case study-based exercises help you build and test your knowledge. By the Way notes present interesting pieces of information. Did You Know? tips offer advice or teach an easier way. Watch Out! cautions warn about potential problems. Learn how to… Understand SAP's newest products for enterprises and small-to-midsize businesses, and choose the right solutions for your company Discover how SAP integrates with Web services and service-oriented architecture Develop an efficient roadmap for deploying SAP in your environment Plan your SAP implementation from business, functional, technical, and project management perspectives Leverage NetWeaver 7.0 features to streamline development and integration, and reduce cost Walk through a step-by-step SAP technical installation Master basic SAP system administration and operations Perform essential tasks such as logon, session management, and printing Build SAP queries and reports Prepare for SAP upgrades and enhancements Develop your own personal career as an SAP professional Register your book at informit.com/title/9780137142842 for convenient access to updates and corrections as they become available.

Discover the essential concepts of libvirt development and see how to interface to Linux virtualization environments, such as QEMU/KVM, XEN, Virtuozzo, VMWare ESX, LXC, Bhyve, and more. This book will prepare you to set up and maintain a virtual machine environment. You'll start by reviewing virtualization in general and then move on to libvirt-specific concepts using Python, including virtualized operating systems and networks, connections, storage pools, and event and error handling. This work concludes with a comprehensive look at the XML schema definitions for domains, networks, devices, network filtering, storage, node devices, and more. The libvirt API covers the entire life cycle of virtual objects, from creation to destruction. It contains everything needed for the management of a virtual object during that life cycle. While libvirt has APIs that support many languages, Foundations of Libvirt Development concentrates on Python exclusively, and how to use the APIs to control virtual machines under the QEMU/KVM system. and more. What You'll Learn Interface Python to the libvirt library. Review the class layout and methods of the libvirt library. Install and manipulate virtual machines via Python/libvirt. Create XML to manipulate domains, networks, and devices. Write Python programs to perform libvirt functions without human intervention. Who This Book Is For?Maintainers of virtual machines in a UNIX/Linux environment ranging from managing code on a single virtual machine through an entire installation of virtual machines.

The definitive guide to administering a Red Hat EnterpriseLinux 6 network Linux professionals who need a go-to guide on version 6 of RedHat Enterprise Linux (RHEL) will find what they need in thiscomprehensive Sybex book. It covers RHEL administration in detail,including how to set up and manage web and mail services, use RHELin enterprise environments, secure it, optimize storage, configurefor virtualization and high availability, and much more. It alsoprovides a great study aid for those preparing for either the RHCSAor RHCE certification exam. Red Hat is the Linux market leader, and Red Hat administratorsare in demand This Sybex guide is a comprehensive resource on Red HatEnterprise Linux administration and useful for those preparing forone of the Red Hat certification exams Covers setting up and managing web and mail services, usingRHEL in enterprise environments, securing RHEL, and optimizingstorage to fit your environment Explores advanced RHEL configurations, including virtualizationand high availability Red Hat Enterprise Linux 6 Administration is the guideLinux professionals and Red Hat administrators need to stay currenton the newest version.

Teach Yourself Linux Virtualization and High AvailabilityLulu.com

Apache Hadoop is the technology at the heart of the Big Data revolution, and Hadoop skills are in enormous demand. Now, in just 24 lessons of one hour or less, you can learn all the skills and techniques you'll need to deploy each key component of a Hadoop platform in your local environment or in the cloud, building a fully functional Hadoop cluster and using it with real programs and datasets. Each short, easy lesson builds on all that's come before, helping you master all of Hadoop's essentials, and extend it to meet your unique challenges. Apache Hadoop in 24 Hours, Sams Teach Yourself covers all this, and much more: Understanding Hadoop and the Hadoop Distributed File System (HDFS) Importing data into Hadoop, and process it there Mastering basic MapReduce Java programming, and using advanced MapReduce API concepts Making the most of Apache Pig and Apache Hive Implementing and administering YARN Taking advantage of the full Hadoop ecosystem Managing Hadoop clusters with Apache Ambari Working with the Hadoop User Environment (HUE) Scaling, securing, and troubleshooting Hadoop environments Integrating Hadoop into the enterprise Deploying Hadoop in the cloud Getting started with Apache Spark Step-by-step instructions walk you through common questions, issues, and tasks; Q-and-As, Quizzes, and Exercises build and test your knowledge; "Did You Know?" tips offer insider advice and shortcuts; and "Watch Out!" alerts help you avoid pitfalls. By the time you're finished, you'll be comfortable using Apache Hadoop to solve a wide spectrum of Big Data problems.

Master the booting procedure of various operating systems with in-depth analysis of bootloaders and firmware. The primary focus is on the Linux booting procedure along with other popular operating systems such as Windows and Unix. Hands-on Booting begins by explaining what a bootloader is, starting with the Linux bootloader followed by bootloaders for Windows and Unix systems. Next, you'll address the BIOS and UEFI firmware by installing multiple operating systems on one machine and booting them through the Linux bootloader. Further, you'll see the kernel's role in the booting procedure of the operating system and the dependency between kernel, initramfs, and dracut. You'll also cover systemd, examining its structure and how it mounts the user root filesystem. In the final section, the book explains troubleshooting methodologies such as debugging shells followed by live images and rescue mode. On completing this book, you will understand the booting process of major operating systems such as Linux, Windows, and Unix. You will also know how to fix the Linux booting issues through various boot modes. What You Will Learn Examine the BIOS and UEFI firmware Understanding the Linux boot loader (GRUB) Work with initramfs, dracut, and systemd Fix can't-boot issues on Linux Who This Book Is For Linux users, administrators, and developers.

The official guide to making the most out of the smallest, fastest Linux distribution.

Equip today's users with the most up-to-date information to pass CompTIA's Linux+ (Powered by LPI) Certification exam successfully and excel when using Linux in the business world with Eckert's LINUX+ GUIDE TO LINUX CERTIFICATION, 4E. This complete guide provides a solid conceptual foundation and mastery of the hands-on skills necessary to work with the Linux operation system in today's network administration environment. The author does an exceptional job of maintaining a focus on quality and providing classroom usability while highlighting valuable real-world experiences. This edition's comprehensive coverage emphasizes updated information on the latest Linux distributions as well as storage technologies commonly used in server environments, such as LVM and ZFS. New, expanded material addresses key job-related networking services, including FTP, NFS, Samba, Apache, DNS, DHCP, NTP, Squid, Postfix, SSH, VNC, Postgresql, and iptables/firewalld. Readers study the latest information on current and emerging security practices and technologies. Hands-On Projects help learners practice new skills using both FedoraTM 20 and Ubuntu Server 14.04 Linux, while review questions and key terms

reinforce important concepts. Trust LINUX+ GUIDE TO LINUX CERTIFICATION, 4E for the mastery today's users need for success on the certification exam and throughout their careers. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Deploy, manage, and scale virtual instances using Kernel-based Virtual MachinesAbout This Book* Build, manage and scale virtual machines with practical step-by-step examples* Leverage the libvirt user-space tools and libraries to manage the life-cycle of KVM instances* Deploy and scale applications inside KVM virtual machines with OpenStackWho This Book Is ForIf you are a system administrator working KVM virtualization, this book will help you grow on your expertise of working with the infrastructure to manage things in a better way. You should have a knowledge of working with Linux based systems.What You Will Learn* Deploy different workloads in isolation with KVM virtualization and better utilize the available compute resources* Explore the benefits of running applications with KVM and learn to prevent the "bad-neighbor" effect* Leveraging various networking technologies in the context of virtualization with Open vSwitch and the Linux bridge.* Create KVM instances using Python and inspect running KVM instances* Understand Kernel Tuning for enhanced KVM performance and better memory utilizationIn DetailVirtualization technologies such as KVM allow for better control over the available server resources, by deploying multiple virtual instances on the same physical host, or clusters of compute resources. With KVM it is possible to run various workloads in isolation with the hypervisor layer providing better tenant isolation and higher degree of security.This book will provide a deep dive into deploying KVM virtual machines using qemu and libvirt and will demonstrate practical examples on how to run, scale, monitor, migrate and backup such instances. You will also discover real production ready recipes on deploying KVM instances with OpenStack and how to programatically manage the life cycle of KVM virtual machines using Python. You will learn numerous tips and techniques which will help you deploy & plan the KVM infrastructure. Next, you will be introduced to the working of libvirt libraries and the iPython development environment.Finally, you will be able to tune your Linux kernel for high throughput and better performance. By the end of this book, you will gain all the knowledge needed to be an expert in working with the KVM virtualization infrastructure.Style and approachThis book takes a complete practical approach with many step-by-step example recipes on how to use KVM in production. The book assumes certain level of expertise with Linux systems and virtualization in general. Some knowledge of Python programming is encouraged, to fully take advantage of the code recipes.

UNIX, UNIX LINUX & UNIX TCL/TK. Write software that makes the most effective use of the Linux system, including the kernel and core system libraries. The majority of both Unix and Linux code is still written at the system level, and this book helps you focus on everything above the kernel, where applications such as Apache, bash, cp, vim, Emacs, gcc, gdb, glibc, ls, mv, and X exist. Written primarily for engineers looking to program at the low level, this updated edition of Linux System Programming gives you an understanding of core internals that makes for better code, no matter where it appears in the stack. -- Provided by publisher.

This book offers readers an idea of what embedded Linux software and hardware architecture looks like, cross-compiling, and also presents information about the bootloader and how it can be built for a specific board. This book will go through Linux kernel features and source code, present information on how to build a kernel source, modules, and the Linux root filesystem. You'll be given an overview of the available Yocto Project components, how to set up Yocto Project Eclipse IDE, and how to use tools such as Wic and Swabber that are still under development. It will present the meta-realtime layer and the newly created meta-cgl layer, its purpose, and how it can add value to poky.

Summary Learn Linux in a Month of Lunches shows you how to install and use Linux for all the things you do with your OS, like connecting to a network, installing software, and securing your system. Whether you're just curious about Linux or have to get up and running for your job, you'll appreciate how this book concentrates on the tasks you need to know how to do in 23 easy lessons. About the Technology If you've only used Windows or Mac OS X, you may be daunted by the Linux operating system. And yet learning Linux doesn't have to be hard, and the payoff is great. Linux is secure, flexible, and free. It's less susceptible to malicious attacks, and when it is attacked, patches are available quickly. If you don't like the way it looks or behaves, you can change it. And best of all, Linux allows users access to different desktop interfaces and loads of software, almost all of it completely free. About the Book Learn Linux in a Month of Lunches shows you how to install and use Linux for all the things you do with your OS, like connecting to a network, installing software, and securing your system. Whether you're just curious about Linux or need it for your job, you'll appreciate how this book focuses on just the tasks you need to learn. In easy-to-follow lessons designed to take an hour or less, you'll learn how to use the command line, along with practical topics like installing software, customizing your desktop, printing, and even basic networking. You'll find a road map to the commands and processes you need to be instantly productive. What's Inside Master the command line Learn about file systems Understand desktop environments Go from Linux novice to expert in just one month About the Reader This book is for anyone looking to learn how to use Linux. No previous Linux experience required. About the Author Steven Ovadia is a professor and librarian at LaGuardia Community College, CUNY. He curates The Linux Setup, a large collection of interviews with desktop Linux users, and writes for assorted library science journals. Table of Contents PART 1 - GETTING LINUX UP AND RUNNING Before you begin Getting to know Linux Installing Linux Getting to know your system Desktop environments Navigating your desktop PART 2 - A HOME OFFICE IN LINUX Installing software An introduction to Linux home/office software Text files and editors Working with files and folders on the command line Working with common command-line applications, part 1 Working with common command-line applications, part 2 Using the command line productively Explaining the Linux filesystem hierarchy Windows programs in Linux Establishing a workflow PART 3 - HOME SYSTEM ADMIN ON LINUX An in-depth look at package management and maintenance Updating the operating system Linux security Connecting to other computers Printing Version control for non-programmers Never the end

If you think Linux is a sophisticated operating system that only hackers and geeks know how to use, this book will surprise you! With Learn Linux Quickly, you'll see how easy it is to get started with Linux. This book teaches you Linux in an engaging and enjoyable way, helping you to enhance your skills as you explore the power of Linux.

A guide to the open-source operating system explains how to install Calder OpenLinux, configure Internet connections, work within the K Desktop environment, and maximize the potential of StarOffice

Dive in to the cutting edge techniques of Linux KVM virtualization, and build the virtualization solutions your datacentre demands About This Book Become an expert in Linux virtualization Migrate your virtualized datacenter to the cloud Find out how to build a large scale virtualization solution that will transform your organization Who This Book Is For Linux administrators – if you want to build incredible, yet manageable virtualization solutions with KVM this is the book to get you there. It will help you apply what you already know to some tricky virtualization tasks. What You Will Learn Explore the ecosystem of tools that support Linux virtualization Find out why KVM offers you a smarter way to unlock the potential of virtualization Implement KVM virtualization using oVirt Explore the KVM architecture – so you can manage, scale and optimize it with ease Migrate your virtualized datacenter to the cloud for truly resource-efficient computing Find out how to integrate OpenStack with KVM to take full control of the cloud In Detail A robust datacenter is essential for any organization – but you don't want to waste resources. With KVM you can virtualize your datacenter, transforming a Linux operating system into a powerful hypervisor that allows you to manage multiple OS with minimal fuss. This book doesn't just show you how to virtualize with KVM – it shows you how to do it well. Written to make you an expert on KVM, you'll learn to manage the three essential pillars of scalability, performance and security – as well as some useful integrations with cloud services such as OpenStack. From the fundamentals of setting up a standalone KVM virtualization platform, and the best tools to harness it effectively, including virt-manager, and kimchi-project, everything you do is built around making KVM work for you in the real-world, helping you to interact and customize it as you need it. With further guidance on performance optimization for Microsoft Windows and RHEL virtual machines, as well as proven strategies for backup and disaster recovery, you'll can be confident that your virtualized data center is working for your organization – not hampering it. Finally, the book will empower you to unlock the full potential of cloud through KVM. Migrating your physical machines to the cloud can be challenging, but once you've mastered KVM, it's a little easie. Style and approach Combining advanced insights with practical solutions, Mastering KVM Virtualization is a vital resource for anyone that believes in the power of virtualization to help a business use resources more effectively.

Practical Linux Infrastructure teaches you how to use the best open source tools to build a new Linux infrastructure, or alter an existing infrastructure, to ensure it stands up to enterprise-level needs. Each chapter covers a key area of implementation, with clear examples and step-by-step instructions. Using this book, you'll understand why scale matters, and what considerations you need to make. You'll see how to switch to using Google Cloud Platform for your hosted solution, how to use KVM for your virtualization, how to use Git, Postfix, and MySQL for your version control, email, and database, and how to use Puppet for your configuration management. For enterprise-level fault tolerance you'll use Apache, and for load balancing and high availability, you'll use HAProxy and Keepalived. For trend analysis you'll learn how to use Cacti, and for notification you'll use Nagios. You'll also learn how to utilize BIND to implement DNS, how to use DHCP (Dynamic Host Configuration Protocol), and how to setup remote access for your infrastructure using VPN and Iptables. You will finish by looking at the various tools you will need to troubleshoot issues that may occur with your hosted infrastructure. This includes how to use CPU, network, disk and memory management tools such as top, netstat, iostat and vmstat. Author Syed Ali is a senior site reliability engineering manager, who has extensive experience with virtualization and Linux cloud based infrastructure. His previous experience as an entrepreneur in infrastructure computing offers him deep insight into how a business can leverage the power of Linux to their advantage. He brings his expert knowledge to this book to teach others how to perfect their Linux environments. Become a Linux infrastructure pro with Practical Linux Infrastructure today.

Unleash the power of Proxmox VE by setting up a dedicated virtual environment to serve both containers and virtual machines About This Book Create virtual machines and containers from the comfort of your workstation using Proxmox VE's web-based management interface Maximize performance, security, and the quality of virtual services by tailoring container and virtual machine configurations based on established best practices Put theory to practice by deploying virtual servers that promise portability, modularity, flexibility, security, and quality of service at any scale Who This Book Is For This book is intended for server and system administrators and engineers who are eager to take advantage of the potential of virtual machines and containers to manage servers more efficiently and make the best use of resources, from energy consumption to hardware utilization and physical real estate What You Will Learn Install and configure Proxmox VE Create new virtual machines and containers Import container templates and virtual appliances Optimize virtual machine performance for common use cases Apply the latest security patches to a Proxmox VE host Contrast PVE virtual machines and containers to recognize their respective use cases Secure virtual machines and containers Assess the benefits of virtualization on budgets, server real estate, maintenance, and management time In Detail Proxmox VE 4.1 provides an open source, enterprise virtualization platform on which to host virtual servers as either virtual machines or containers. This book will support your practice of the requisite skills to successfully create, tailor, and deploy virtual machines and containers with Proxmox VE 4.1. Following a survey of PVE's features and characteristics, this book will contrast containers with virtual machines and establish cases for both. It walks through the installation of Proxmox VE, explores the creation of containers and virtual machines, and suggests best practices for virtual disk creation, network configuration, and Proxmox VE host and guest security. Throughout the book, you will navigate the Proxmox VE 4.1 web interface and explore options for command-line management Style and approach This book is a practical exploration of the different processes and procedures, which are essential in beginning your journey to fluent creation and optimization

of effective containers and virtual machines.
The easy, step-by-step tutorial for developers who want to write rich mobile apps for smartphones and tablets using the new HTML5 standard * *A complete hands-on introduction to mobile HTML5 programming: helps developers master one of tomorrow's most valuable, 'in-demand' new skills. *Teaches practical skills that will be valuable for development on most contemporary mobile platforms, including iPad/iPhone (iOS), Android, and Windows Phone 7. *Especially focused on HTML5 features already supported in today's web browsers. Using HTML5, developers can build rich, robust mobile apps that run on smartphones, tablets, and other devices, and interact with users in powerful new ways. In just 24 lessons of one hour or less, this easy, practical book will help them master modern mobile development with HTML5. Building on what they already know about HTML4, CSS, and JavaScript, it covers all the basics of building web pages with HTML5, shows how to extend those pages with innovative new features, and then walks through building complete apps targeted at diverse mobile devices. Coverage includes: * *Understanding how HTML5 improves mobile development. *Detecting mobile devices and HTML5 support, and upgrading sites to support them. *Styling and building mobile pages with HTML5. *Using the canvas, typography, audio/video, and forms *Adding microformats, drag-and-drop, and other advanced features. *Designing efficient mobile apps. *Using advanced Web Application APIs and web storage. *Integrating geolocation into mobile apps Step-by-step instructions walk readers through key tasks... Q and As, Quizzes, and Exercises test their knowledge... 'Did You Know?' tips offer insider advice... 'Watch Out!' alerts help them avoid problems. By the time they're finished, readers won't just understand core HTML5 concepts: they'll be comfortable designing and writing their own new mobile apps
You’ve got a Mac. You’ve got Leopard. And you’ve got iLife, Safari, Mail, iChat…and all the rest. Now all you need to do is figure out how to get them to work together--so that you can stop thinking about your computer and start thinking about getting things done, having fun, and enjoying everything your Mac has to offer. This one book is your answer--the answer to any questions you might have today, and the answer to all the questions about Leopard and your Mac that you’re likely to have in the future. Find out how to... Get the most enjoyment out of iLife Find files and documents with Spotlight Use QuickTime and DVD Player Use Windows software on Intel Macs Work with peripheral devices Surf the Web with Safari Send email with Mail Collaborate via iChat Share your screen, files, and computer securely Recover from crashes Back up and restore files with Time Machine
Quickly learn how to use Ubuntu, the fastest growing Linux distribution, in a personal or enterprise environment Whether you’re a newcomer to Linux or an experienced system administrator, the Ubuntu Linux Bible provides what you need to get the most out of one the world’s top Linux distributions. Clear, step-by-step instructions cover everything from installing Ubuntu and creating your desktop, to writing shell scripts and setting up file sharing on your network. This up-to-date guide covers the latest Ubuntu release with long-term support (version 20.04) as well as the previous version. Throughout the book, numerous examples, figures, and review questions with answers ensure that you will fully understand each key topic. Organized into four parts, the book offers you the flexibility to master the basics in the "Getting Started with Ubuntu Linux” section, or to skip directly to more advanced tasks. "Ubuntu for Desktop Users” shows you how to setup email, surf the web, play games, and create and publish documents, spreadsheets, and presentations. “Ubuntu for System Administrators" covers user administration, system backup, device management, network configuration, and other fundamentals of Linux administration. The book’s final section, "Configuring Servers on Ubuntu," teaches you to use Ubuntu to support network servers for the web, e-mail, print services, networked file sharing, DHCP (network address management), and DNS (network name/address resolution). This comprehensive, easy-to-use guide will help you: Install Ubuntu and create the perfect Linux desktop Use the wide variety of software included with Ubuntu Linux Stay up to date on recent changes and new versions of Ubuntu Create and edit graphics, and work with consumer IoT electronic devices Add printers, disks, and other devices to your system Configure core network services and administer Ubuntu systems Ubuntu Linux Bible is a must-have for anyone looking for an accessible, step-by-step tutorial on this hugely popular Linux operating system.
Use Linux containers as an alternative virtualization technique to virtualize your operating system environment. This book will cover LXC’s unmatched flexibility with virtualization and LXD’s smooth user experience. Practical LXC and LXD begins by introducing you to Linux containers (LXC and LXD). You will then go through use cases based on LXC and LXD. Next, you will see the internal workings of LXC and LXD by considering the repositories and templates used. You will then learn how to integrate LXC and LXD with common virtualization and orchestration tools such as libvirt and SaltStack. Finally, you will dive into containerization and security. The book will explore some of the common problems in security and provide a case study on how containerization can help mitigate some of the operating system-level security issues in an IoT environment. What You Will Learn Get an introduction to Linux containers Discover the basics of LXC and LXD See use cases that can be solved with LXC and LXD – for developers, devops, and system administrators Master LXC and LXD repositories Use LXC and LXD with common virtualization and orchestration tools Consider a containerization and security in IoT case study Who This Book Is For The audience for this book should have basic knowledge of Linux and software development in general. The intended readership is primarily software developers, operations engineers, and system administrators who are interested in devops, though managers and enthusiasts will also benefit from this book.
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"

Includes one year of FREE access after activation to the online test bank and study tools: Custom practice exam 100 electronic flashcards Searchable key term glossary The Sybex™ method for teaching Linux® security concepts Understanding Linux Security is essential for administration professionals. Linux Security Fundamentals covers all the IT security basics to help active and aspiring admins respond successfully to the modern threat landscape. You'll improve your ability to combat major security threats against computer systems, networks, and services. You'll discover how to prevent and mitigate attacks against personal devices and how to encrypt secure data transfers through networks, storage devices, or the cloud. Linux Security Fundamentals teaches: Using Digital Resources Responsibly What Vulnerabilities and Threats Are Controlling Access to Your Assets Controlling Network Connections Encrypting Data, Whether at Rest or Moving Risk Assessment Configuring System Backups and Monitoring Resource Isolation Design Patterns Interactive learning environment Take your skills to the next level with Sybex's superior interactive online study tools. To access our learning environment, simply visit www.wiley.com/go/sybextestprep, register your book to receive your unique PIN, and instantly gain one year of FREE access to: Interactive test bank with a practice exam to help you identify areas where you need to expand your knowledge 100 electronic flashcards to reinforce what you've learned Comprehensive glossary in PDF format gives you instant access to key terms you use in your job

Learn how to configure, automate, orchestrate, troubleshoot, and monitor KVM-based environments capable of scaling to private and hybrid cloud models Key Features Gain expert insights into Linux virtualization and the KVM ecosystem with this comprehensive guide Learn to use various Linux tools such as QEMU, oVirt, libvirt, Cloud-Init, and Cloudbase-Init Scale, monitor, and troubleshoot your VMs on various platforms, including OpenStack and AWS Book Description Kernel-based Virtual Machine (KVM) enables you to virtualize your data center by transforming your Linux operating system into a powerful hypervisor that allows you to manage multiple operating systems with minimal fuss. With this book, you'll gain insights into configuring, troubleshooting, and fixing bugs in KVM virtualization and related software. This second edition of Mastering KVM Virtualization is updated to cover the latest developments in the core KVM components - libvirt and QEMU. Starting with the basics of Linux virtualization, you'll explore VM lifecycle management and migration techniques. You'll then learn how to use SPICE and VNC protocols while creating VMs and discover best practices for using snapshots. As you progress, you'll integrate third-party tools with Ansible for automation and orchestration. You'll also learn to scale out and monitor your environments, and will cover oVirt, OpenStack, Eucalyptus, AWS, and ELK stack. Throughout the book, you'll find out more about tools such as Cloud-Init and Cloudbase-Init. Finally, you'll be taken through the performance tuning and troubleshooting guidelines for KVM-based virtual machines and a hypervisor. By the end of this book, you'll be well-versed with KVM virtualization and the tools and technologies needed to build and manage diverse virtualization environments. What you will learn Implement KVM virtualization using libvirt and oVirt Delve into KVM storage and network Understand snapshots, templates, and live migration features Get to grips with managing, scaling, and optimizing the KVM ecosystem Discover how to tune and optimize KVM virtualization hosts Adopt best practices for KVM platform troubleshooting Who this book is for If you are a systems administrator, DevOps practitioner, or developer with Linux experience looking to sharpen your open-source virtualization skills, this virtualization book is for you. Prior understanding of the Linux command line and virtualization is required before getting started with this book.

Gain the essential skills and hands-on expertise required to pass the LPIC-3 300 certification exam. This book provides the insight for you to confidently install, manage and troubleshoot OpenLDAP, Samba, and FreeIPA. Helping you to get started from scratch, this guide is divided into three comprehensive sections covering everything you'll need to prepare for the exam. Part 1 focuses on OpenLDAP and topics including securing the directory, integration with PAM and replication. Part 2 covers Samba and teaches you about Samba architecture, using different back ends, print services, and deploying Samba as a stand-alone server, PDC, and Active Directory Domain Controller. Finally, Part 3 explains how to manage FreeIPA and how to integrate it with Active Directory. Practical LPIC-3 300 is the perfect study guide for anyone interested in the LPIC-3 300 certification exam, OpenLDAP, Samba, or FreeIPA. What You'll Learn Integrate LDAP with PAM and NSS, and with Active Directory and Kerberos Manage OpenLDAP replication and server performance tuning Use Samba as a PDC and BDC Configure Samba as a domain member server in an existing NT domain Use Samba as an AD Compatible Domain Controller Replicate, manage, and integrate FreeIPA Who This Book Is For This book is for anyone who is preparing for the LPIC-3 300 exam, or those interested in learning about OpenLDAP and Samba in general.

This hands-on guide demonstrates how the flexibility of the command line can help you become a more efficient and productive data scientist. You’ll learn how to combine small, yet powerful, command-line tools to quickly obtain, scrub, explore, and model your data. To get you started—whether you’re on Windows, OS X, or Linux—author Jeroen Janssens introduces the Data Science Toolbox, an easy-to-install virtual environment packed with over 80 command-line tools. Discover why the command line is an agile, scalable, and extensible technology. Even if you’re already comfortable processing data with, say, Python or R, you’ll greatly improve your data science workflow by also leveraging the power of the command line. Obtain data from websites, APIs, databases, and spreadsheets Perform scrub operations on plain text, CSV, HTML/XML, and JSON Explore data, compute descriptive statistics, and create visualizations Manage your data science workflow using Drake Create reusable tools from one-

liners and existing Python or R code Parallelize and distribute data-intensive pipelines using GNU Parallel Model data with dimensionality reduction, clustering, regression, and classification algorithms

Learn virtualization skills by building your own virtual machine Virtualization Essentials, Second Edition provides new and aspiring IT professionals with immersive training in working with virtualization environments. Clear, straightforward discussion simplifies complex concepts, and the hands-on tutorial approach helps you quickly get up to speed on the fundamentals. You'll begin by learning what virtualization is and how it works within the computing environment, then you'll dive right into building your own virtual machine. You'll learn how to set up the CPU, memory, storage, networking, and more as you master the skills that put you in-demand on the job market. Each chapter focuses on a specific goal, and concludes with review questions that test your understanding as well as suggested exercises that help you reinforce what you've learned. As more and more companies are leveraging virtualization, it's imperative that IT professionals have the skills and knowledge to interface with virtualization-centric infrastructures. This book takes a learning-by-doing approach to give you hands-on training and a core understanding of virtualization. Understand how virtualization works Create a virtual machine by scratch and migration Configure and manage basic components and supporting devices Develop the necessary skill set to work in today's virtual world Virtualization was initially used to build test labs, but its use has expanded to become best practice for a tremendous variety of IT solutions including high availability, business continuity, dynamic IT, and more. Cloud computing and DevOps rely on virtualization technologies, and the exponential spread of these and similar applications make virtualization proficiency a major value-add for any IT professional. Virtualization Essentials, Second Edition provides accessible, user-friendly, informative virtualization training for the forward-looking pro.

Summary Learn Amazon Web Services in a Month of Lunches guides you through the process of building a robust and secure web application using the core AWS services you really need to know. You'll be amazed by how much you can accomplish with AWS! Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Cloud computing has transformed the way we build and deliver software. With the Amazon Web Services cloud platform, you can trade expensive glass room hardware and custom infrastructure for virtual servers and easy-to-configure storage, security, and networking services. Better, because you don't own the hardware, you only pay for the computing power you need! Just learn a few key ideas and techniques and you can have applications up and running in AWS in minutes. About the Book Learn Amazon Web Services in a Month of Lunches gets you started with AWS fast. In just 21 bite-size lessons, you'll learn the concepts and practical techniques you need to deploy and manage applications. You'll learn by doing real-world labs that guide you from the core AWS tool set through setting up security and storage and planning for growth. You'll even deploy a public-facing application that's highly available, scalable, and load balanced. What's Inside First steps with AWS - no experience required Deploy web apps using EC2, RDS, S3, and Route 53 Cheap and fast system backups Setting up cloud automation About the Reader If you know your way around Windows or Linux and have a basic idea of how web applications work, you're ready to start using AWS. About the Author David Clinton is a system administrator, teacher, and writer. He has administered, written about, and created training materials for many important technology subjects including Linux systems, cloud computing (AWS in particular), and container technologies like Docker. Many of his video training courses can be found on Pluralsight.com, and links to his other books (on Linux administration and server virtualization) can be found at https://bootstrap-it.com. Table of Contents Before you begin PART 1 - THE CORE AWS TOOLS The 10-minute EC2 web server Provisioning a more robust EC2 website Databases on AWS DNS: whatâ€™s in a name? S3: cheap, fast file storage S3: cheap, fast system backups AWS security: working with IAM users, groups, and roles Managing growth Pushing back against the chaos: using resource tags CloudWatch: monitoring AWS resources for fun and profit Another way to play: the command-line interface PART 2 - THE AWS POWER USER: OPTIMIZING YOUR INFRASTRUCTURE Keeping ahead of user demand High availability: working with AWS networking tools High availability: load balancing High availability: auto scaling High availability: content-delivery networks PART 3 - FOOD FOR THOUGHT: WHAT ELSE CAN AWS DO FOR YOU? Building hybrid infrastructure Cloud automation: working with Elastic Beanstalk, Docker, and Lambda Everything else (nearly) Never the end

Innovative Techniques in Instruction Technology, E-Learning, E-Assessment and Education is a collection of world-class paper articles addressing the following topics: (1) E-Learning including development of courses and systems for technical and liberal studies programs; online laboratories; intelligent testing using fuzzy logic; evaluation of on line courses in comparison to traditional courses; mediation in virtual environments; and methods for speaker verification. (2) Instruction Technology including internet textbooks; pedagogy-oriented markup languages; graphic design possibilities; open source classroom management software; automatic email response systems; tablet-pcs; personalization using web mining technology; intelligent digital chalkboards; virtual room concepts for cooperative scientific work; and network technologies, management, and architecture. (3) Science and Engineering Research Assessment Methods including assessment of K-12 and university level programs; adaptive assessments; auto assessments; assessment of virtual environments and e-learning. (4) Engineering and Technical Education including cap stone and case study course design; virtual laboratories; bioinformatics; robotics; metallurgy; building information modeling; statistical mechanics; thermodynamics; information technology; occupational stress and stress prevention; web enhanced courses; and promoting engineering careers. (5) Pedagogy including benchmarking; group-learning; active learning; teaching of multiple subjects together; ontology; and knowledge representation. (6) Issues in K-12 Education including 3D virtual learning environment for children; e-learning tools for children; game playing and systems thinking; and tools to learn how to write foreign languages.

You need to maintain clients, servers and networks, while acquiring new skills. Foundations of Cent OS Linux: Enterprise Linux On the Cheap covers a free, unencumbered Linux operating system within the Red Hat lineage, but it does not assume you have a Red Hat Enterprise Linux license. Now you can learn CentOS Linux, the most powerful and popular of all Red Hat clones, keep maintaining your network at work, and become an Red Hat Certified Engineer, all just for the cost of this book. Introduces CentOS Linux and Fedora clients as equals to Red Hat Enterprise Linux Sets up CentOS as a secure, high–performance web services back end Prepares you for the RHCE examination, but does not assume an RHEL installation

Get a novel perspective on Linux containers and understand the world of virtualization. This book takes you down the rabbit hole to discover what lies below the API. You’ll go on a journey of virtualization and see how containers are realized in the Linux world. Linux Containers and Virtualization details the data structures within the Linux kernel which make up Linux containers. You will start with the fundamentals of virtualization including how different resources such as memory, CPU, network, and storage are virtualized. Then you will move on to hypervisors and virtualization using the Kernel virtual Machine (KVM) and Quick Emulator

(QEMU). Next, you will learn about Linux namespace, cgroups, and layered file systems, which are the essential building blocks of Linux containers. The explanation traverses the Linux kernel codebase to show how these are realized in the Linux kernel. In the final chapter, you will code your own container by applying the concepts learnt in the previous chapters. On completion of the book, you will have the knowledge to start coding a Linux container. What You Will Learn Understand the basics of virtualization Discover how the Linux kernel supports virtualization See how the evolution of the Linux kernel and CPUs led to the creation of containerization technologies Develop the ability to create your own container framework Who This Book Is For Developers working on virtualized software deployment and containers. Architects designing platforms based on a container runtime as well as DevOps professionals who want to get a microscopic view on how containers and virtualization work would find the book useful.
Use this certification to gather all the information on the topic of LPI LPIC-3 (304-200) Certification exam. The Questions will help you distinguish the type and complexity level of the questions and the Practice Exams will make you familiar with the format of an exam. You should refer this guide carefully before attempting your actual LPI LPIC-3 304 Linux Virtualization and High Availability certification exam. This certification is particularly interesting for candidates who must know and understand the general concepts, theory and terminology of virtualization. This consist of Xen, KVM and libvirt terminology. Key learning points in this certification includes: - Variations of Virtual Machine Monitors- Migration of Physical to Virtual Machines- Migration of Virtual Machines between Host systems- Cloud Computing- IaaS, PaaS, SaaS- Understand the most important cluster architectures- Understand recovery and cluster reorganization mechanisms- Design an appropriate cluster architecture for a given purpose- Application aspects of high availability- Operational considerations of high availability Preparing for the LPIC-3 304-200 Linux Virtualization and High Availability exam to become a certified LPI expert? Here we have brought Best Exam Questions for you so that you can prepare well for this Exam of LPIC-3 304-200 Linux Virtualization and High Availability. Unlike other online simulation practice tests, you get a Paperback version that is easy to read & remember these questions. You can simply rely on these questions for successfully certifying this exam.
High availability server virtualization currently powers the vast majority of public-facing compute deployments and Linux lies at the heart of nearly all of them. If you aren't already engaged in a virtualized project that touches some kind of Linux technology, you probably will be soon. What are you doing to build your skills to meet the future? The Linux Professional Institute's LPIC-3 304 certification expectations are an excellent, vendor neutral introduction to Linux server virtualization and cluster management. Even if you don't have plans to take the exam and earn the certification itself right now, using the 304 as a curriculum guide is a smart move. And, one way or another, this book is a great primary resource.
Updated for Docker Community Edition v18.09! Docker book designed for SysAdmins, SREs, Operations staff, Developers and DevOps who are interested in deploying the open source container service Docker. In this book, we'll walk you through installing, deploying, managing, and extending Docker. We're going to do that by first introducing you to the basics of Docker and its components. Then we'll start to use Docker to build containers and services to perform a variety of tasks. We're going to take you through the development lifecycle, from testing to production, and see where Docker fits in and how it can make your life easier. We'll make use of Docker to build test environments for new projects, demonstrate how to integrate Docker with continuous integration workflow, and then how to build application services and platforms. Finally, we'll show you how to use Docker's API and how to extend Docker yourself. We'll teach you how to: * Install Docker. * Take your first steps with a Docker container. * Build Docker images. * Manage and share Docker images. * Run and manage more complex Docker containers. * Deploy Docker containers as part of your testing pipeline. * Build multi-container applications and environments. * Learn about orchestration using Compose and Swarm for the orchestration of Docker containers and Consul for service discovery. * Explore the Docker API. * Getting Help and Extending Docker.
Summary Linux in Action is a task-based tutorial that will give you the skills and deep understanding you need to administer a Linux-based system. This hands-on book guides you through 12 real-world projects so you can practice as you learn. Each chapter ends with a review of best practices, new terms, and exercises. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology You can't learn anything without getting your hands dirtyÃ¢â‚¬â€ including Linux. Skills like securing files, folders, and servers, safely installing patches and applications, and managing a network are required for any serious user, including developers, administrators, and DevOps professionals. With this hands-on tutorial, you'll roll up your sleeves and learn Linux project by project. About the Book Linux in Action guides you through 12 real-world projects, including automating a backup-and-restore system, setting up a private Dropbox-style file cloud, and building your own MediaWiki server. You'll try out interesting examples as you lock in core practices like virtualization, disaster recovery, security, backup, DevOps, and system troubleshooting. Each chapter ends with a review of best practices, new terms, and exercises. What's inside Setting up a safe Linux environment Managing secure remote connectivity Building a system recovery device Patching and upgrading your system About the Reader No prior Linux admin experience is required. About the Author David Clinton is a certified Linux Server Professional, seasoned instructor, and author of Manning's bestselling Learn Amazon Web Services in a Month of Lunches. Table of Contents Welcome to Linux Linux virtualization: Building a Linux working environment Remote connectivity: Safely accessing networked machines Archive management: Backing up or copying entire file systems Automated administration: Configuring automated offsite backups Emergency tools: Building a system recovery device Web servers: Building a MediaWiki server Networked file sharing: Building a Nextcloud file-sharing server Securing your web server Securing network connections: Creating a VPN or DMZ System monitoring: Working with log files Sharing data over a private network Troubleshooting system performance issues Troubleshooting network issues Troubleshooting peripheral devices DevOps tools: Deploying a scripted server environment using Ansible
In just 24 sessions of one hour or less, learn how to use today’s key networking techniques and technologies to build, secure, and troubleshoot both wired and wireless networks. Using this book’s straightforward, step-by-step approach, you master every skill you need–from working with Ethernet and Bluetooth to spam prevention to network troubleshooting. Each lesson builds on what you’ve already learned, giving you a rock-solid foundation for real-world success! Step-by-step instructions carefully walk you through the most common networking tasks. Q&A sections at the end of each hour help you test your knowledge. By the Way notes present interesting information related to the discussion. Did You Know? tips offer advice or show you easier ways to perform tasks. Watch Out! cautions alert you to possible problems and give you advice on how to avoid them. Learn how to… Choose the right network hardware and software and use it to build efficient, reliable networks Implement secure, high-speed Internet connections Provide reliable remote access to your users Administer networks to support users of Microsoft, Linux, and UNIX environments Use low-cost Linux servers to provide file and print services to Windows PCs Protect your networks and data against today’s most dangerous threats Use virtualization to save money and improve business flexibility Utilize RAID technologies to provide flexible storage at lower cost Troubleshoot and fix network problems one step at a time Preview and prepare for the future of networking
Build virtualization solutions on Linux with this guide to KVM - learn techniques at the cutting-edge of virtualizationAbout This Book* Become an expert in Linux virtualization* Migrate your virtualized datacenter to the cloud* Find out how to build a large scale virtualization solution that

will transform your organizationWho This Book Is ForLinux administrators - if you want to build incredible, yet manageable virtualization solutions with KVM this is the book to get you there. It will help you apply what you already know to some tricky virtualization tasks.What You Will Learn* Explore the ecosystem of tools that support Linux virtualization* Find out why KVM offers you a smarter way to unlock the potential of virtualization* Implement KVM virtualization using oVirt* Explore the KVM architecture - so you can manage, scale and optimize it with ease* Migrate your virtualized datacenter to the cloud for truly resource-efficient computing* Find out how to integrate OpenStack with KVM to take full control of the cloudIn DetailA robust datacenter is essential for any organization - but you don't want to waste resources. With KVM, you can virtualize your datacenter; it transforms a Linux operating system into a hypervisor, so you can manage multiple operating systems with minimal fuss.This book doesn't just show you how to virtualize with KVM - it shows you how to do it well. It has been designed to make you an expert on KVM, demonstrating how to manage scalability, performance and security - as well as some useful integrations with cloud services such as OpenStack.From the fundamentals of setting up a standalone KVM virtualization platform, and the best tools to harness it effectively, including virt-manager, and kimchi-project, everything you do is built around making KVM work for you in the real-world, helping you to interact and customize it as you need it.With further guidance on performance optimization for Microsoft Windows and RHEL virtual machines, as well as proven strategies for backup and disaster recovery, you'll can be confident that your virtualized data center is working for your organization - not hampering it.Finally, the book will empower you to unlock the full potential of cloud through KVM - migrating your physical machines to the cloud can be challenging, but once you've mastered KVM, it's a little easier...

This book is your complete guide to studying for the Linux Professional Institute's Server Professional (LPIC-1) certification. Every concept, principle, process, and resource that might make an appearance on the exam is fully represented. You will understand every concept by rolling up your sleeves, opening up a terminal, and trying it all yourself. You will find suggestions for practical tasks along with "test-yourself" quizzes at the end of each chapter. Whether you've decided to earn the Linux Professional Institute's Server Professional certification or you simply want to learn more about Linux administration, this book is a great choice. Right now, Linux administration skills are opening doors to some of the hottest job markets. And with the ongoing explosive growth of the cloud computing world - the vast majority of which is being built with Linux - the scope of the opportunities will only increase. Whether or not you end up taking the exam, if you manage to learn this material, you'll have done yourself a real favor. What You Will Learn Basic Linux system administration and package management Device and desktop management Bash scripting Networking fundamentals Security administration Who This Book Is For Most potential readers will already have a decent idea of what Linux is and what kinds of things can be done with it, and are looking to acquire or formalize a more structured and complete ability to confidently administrate Linux systems.

Learn to set up the latest CentOS Linux network services including DNS, DHCP, SSH and VNC, Web, FTP, Mail, Firewall, and LDAP, enabling you to provide these services on your own network. CentOS continues to be a popular Linux distribution choice, and setting up your own services is a key skill for anyone maintaining a CentOS network. You will learn how to install CentOS, and manage basic administration. You’ll then move onto understanding networking, and how to set up your required services. Each chapter is written in an easy-to-digest format and teaches you how set up, manage, and troubleshoot each service. You’ll be running your own network in no time at all. What You Will Learn Install and set up the latest version of CentOS Configure and manage a wide range of network services Solve problems remotely and manage your network efficiently Who This Book Is For Anyone who wants to learn how to set up and manage CentOS Linux network services. Some previous Linux experience is beneficial, but this book is designed to be used by beginners.