

Migrate To Red Hat Enterprise Linux Lower The Total Cost

The leading Fedora book-over a quarter of a million copies sold of previous editions! What better way to learn Fedora 11 than with the leading Fedora book from the best-selling Linux author, Christopher Negus with Eric Foster Johnson? Whether you're new to Linux or an advanced user, this power-packed guide is loaded with what you need. Install, run, and manage the latest version of Fedora and Red Hat Enterprise Linux-then polish your system administration skills and get up to speed on the very latest in networking, desktop, and server enhancements. Master the Linux shell, file system, and text editor; how to set up users and automate system tasks; and much more in over a thousand pages of step-by-step instruction. Boot the full DVD of Fedora 11, including almost all binary code packages, or do a Live Install of the CD for rescuing, troubleshooting, or installing Fedora. Fedora is a free, open source Linux operating system sponsored by Red Hat as an open source community project; the technological innovations from the Fedora Project are then implemented in Red Hat's commercial offering, Red Hat Enterprise Linux Covers step-by-step instructions for making Linux installation simple and painless; how to take advantage of the desktop interface (including coverage of AIGLX); and how to use the Linux shell, file system, and text editor Also covers setting up users; automating system tasks; backing up and restoring files; dealing with the latest security issues and threats; using and customizing the desktop menus, icons, window manager, and xterm; and how to create and publish formatted documents with Linux applications The DVD and CD that come with the book include Fedora Linux 11 and an official Fedora 11 LiveCD (bootable and installable) This is the book you need to succeed with Fedora 11 and Red Hat Enterprise Linux. Note: CD-ROM/DVD and other supplementary materials are not included as part of eBook file.

What is this book about? Professional Red Hat Enterprise Linux 3 is a complete professional guide to setting up, configuring, and deploying Red Hat Enterprise Linux in the corporate production environment. The book focuses on Enterprise Server and Advanced Server features, including the key areas of high availability with the Red Hat Cluster Suite, Red Hat Network Control Center, and Red Hat Enterprise applications such as the Content Management System and portal server. Other key unique features include kernel tuning for various performance profiles; advanced Apache configuration; Tux installation/maintenance; building high-performance FTP servers; building high-performance mail servers (which means replacing Sendmail); Mailing list management; how to efficiently add, remove, or modify 100 users at the same time; and a discussion of disk quota management and monitoring. What does this book cover? The key features of the book include the following: How to install and setup RHEL 3 How to deploy

RHEL 3 in production environment How to manage an RHEL system using Perl and shell scripting Advanced administration tools How to use Red Hat network service Details on installation and setup of security tools Ability to use and deploy High Availability solutions provided with RHEL 3 Performance tuning How to use monitoring tools Ability to use RHEL to provide scalable infrastructure solutions. Many companies move workloads to the cloud only to encounter issues with legacy processes and organizational structures. How do you design new operating models for this environment? This practical book shows IT managers, CIOs, and CTOs how to address the hardest part of any cloud transformation: the people and the processes. Author Mike Kavis (Architecting the Cloud) explores lessons learned from enterprises in the midst of cloud transformations. You'll learn how to rethink your approach from a technology, process, and organizational standpoint to realize the promise of cost optimization, agility, and innovation that public cloud platforms provide. Learn the difference between working in a data center and operating in the cloud Explore patterns and anti-patterns for organizing cloud operating models Get best practices for making the organizational change required for a move to the cloud Understand why site reliability engineering is essential for cloud operations Improve organizational performance through value stream mapping

This edition applies to IBM® Spectrum Accelerate V11.5.4. IBM Spectrum Accelerate™, a member of IBM Spectrum Storage™, is an agile, software-defined storage solution for enterprise and cloud that builds on the customer-proven and mature IBM XIV® storage software. The key characteristic of Spectrum Accelerate is that it can be easily deployed and run on purpose-built or existing hardware that is chosen by the customer. IBM Spectrum Accelerate enables rapid deployment of high-performance and scalable block data storage infrastructure over commodity hardware on-premises or off-premises. This IBM Redbooks® publication provides a broad understanding of IBM Spectrum Accelerate. The book introduces Spectrum Accelerate and describes planning and preparation that are essential for a successful deployment of the solution. The deployment is described through a step-by-step approach, by using a graphical user interface (GUI) based method or a simple command-line interface (CLI) based procedure. Chapters in this book describe the logical configuration of the system, host support and business continuity functions, and migration. Although it makes many references to the XIV storage software, the book also emphasizes where IBM Spectrum Accelerate differs from XIV. Finally, a substantial portion of the book is dedicated to maintenance and troubleshooting to provide detailed guidance for the customer support personnel.

Get an in-depth tour of OpenShift, the container-based software deployment and management platform from Red Hat that provides a secure multi-tenant environment for the enterprise. This practical guide describes in detail how OpenShift, building on Kubernetes, enables you to automate the way you create, ship, and run applications in a containerized environment. Author Graham

Dumpleton provides the knowledge you need to make the best use of the OpenShift container platform to deploy not only your cloud-native applications, but also more traditional stateful applications. Developers and administrators will learn how to run, access, and manage containers in OpenShift, including how to orchestrate them at scale. Build application container images from source and deploy them Implement and extend application image builders Use incremental and chained builds to accelerate build times Automate builds by using a webhook to link OpenShift to a Git repository Add configuration and secrets to the container as project resources Make an application visible outside the OpenShift cluster Manage persistent storage inside an OpenShift container Monitor application health and manage the application lifecycle This book is a perfect follow-up to *OpenShift for Developers: A Guide for Impatient Beginners* (O'Reilly).

Microsoft Virtual Server 2005 allows a single server to be divided into several "virtual machines," each running its own environment and operating system, which can even be virtually networked together Written by a key member of Microsoft's Virtual Server product team, this guide shows programmers how they can use these virtual machines to keep their development environment separate from their computing environment, test software on a variety of platforms from a single machine, and test networking applications Packed with real-world examples, the book examines how to install Linux under Virtual Server, create VM libraries, tweak performances, troubleshoot installation glitches, and access the Virtual Server COM API Offers a clear explanation of how to best understand virtual devices, networks, and storage systems and handle debugging in virtual machines

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 easier. 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.

Continuous improvements in data analysis and cloud computing have allowed more opportunities to develop systems with user-focused designs. This not only leads to higher success in day-to-day usage, but it increases the overall probability of technology adoption. *Advancing Cloud Database Systems and Capacity Planning With Dynamic Applications* is a key resource on the latest innovations in cloud database systems and their impact on the daily lives of people in modern society. Highlighting multidisciplinary studies on information storage and retrieval, big data architectures, and artificial intelligence, this publication is an ideal reference source for academicians, researchers, scientists, advanced level students, technology developers and IT officials.

Cloud computing has experienced explosive growth and is expected to continue to rise in popularity as new services and applications become available. As with any new technology, security issues continue to be a concern, and developing effective methods to protect sensitive information and data on the cloud is imperative. *Cloud Security: Concepts, Methodologies, Tools, and Applications* explores the difficulties and challenges of securing user data and information on cloud platforms. It also examines the current approaches to cloud-based technologies and assesses the possibilities for future advancements in this field. Highlighting a range of topics such as cloud forensics, information privacy, and standardization and security in the cloud, this multi-volume book is ideally designed for IT specialists, web designers, computer engineers, software developers, academicians, researchers, and graduate-level students interested in cloud computing concepts and security.

For many organizations, a big part of DevOps' appeal is software automation using infrastructure-as-code techniques. This book presents developers, architects, and infra-ops engineers with a more practical option. You'll learn how a container-centric approach from OpenShift, Red Hat's cloud-based PaaS, can help your team deliver quality software through a self-service view of IT infrastructure. Three OpenShift experts at Red Hat explain how to configure Docker application containers and the Kubernetes cluster manager with OpenShift's developer- and operational-centric tools.

Discover how this infrastructure-agnostic container management platform can help companies navigate the murky area where infrastructure-as-code ends and application automation begins. Get an application-centric view of automation—and understand why it's important. Learn patterns and practical examples for managing continuous deployments such as rolling, A/B, blue-green, and canary. Implement continuous integration pipelines with OpenShift's Jenkins capability. Explore mechanisms for separating and managing configuration from static runtime software. Learn how to use and customize OpenShift's source-to-image capability. Delve into management and operational considerations when working with OpenShift-based application workloads. Install a self-contained local version of the OpenShift environment on your computer. This is a story of reinvention. Jim Whitehurst, celebrated president and CEO of one of the world's most revolutionary software companies, tells first-hand his journey from traditional manager (Delta Air Lines, Boston Consulting Group) and "chief" problem solver to CEO of one of the most open organizational environments he'd ever encountered. This challenging transition, and what Whitehurst learned in the interim, has paved the way for a new way of managing—one this modern leader sees as the only way companies will successfully function in the future. Whitehurst says beyond embracing the technology that has so far disrupted entire industries, companies must now adapt their management and organizational design to better fit the Information Age. His mantra? "Adapt or die." Indeed, the successful company Whitehurst leads—the open source giant Red Hat—has become the organizational poster child for how to reboot, redesign, and reinvent an organization for a decentralized, digital age. Based on open source principles of transparency, participation, and collaboration, "open management" challenges conventional business ideas about what companies are, how they run, and how they make money. This book provides the blueprint for putting it into practice in your own firm. He covers challenges that have been missing from the conversation to date, among them: how to scale engagement; how to have healthy debates that net progress; and how to attract and keep the "Social Generation" of workers. Through a mix of vibrant stories, candid lessons, and tested processes, Whitehurst shows how Red Hat has blown the traditional operating model to pieces by emerging out of a pure bottom up culture and learning how to execute it at scale. And he explains what other companies are, and need to be doing to bring this open style into all facets of the organization. By showing how to apply open source methods to everything from structure, management, and strategy to a firm's customer and partner relationships, leaders and teams will now have the tools needed to reach a new level of work. And with that new level of work comes unparalleled success. The Open Organization is your new resource for doing business differently. Get ready to make traditional management thinking obsolete.

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.

While containers, microservices, and distributed systems dominate discussions in the tech world, the majority of applications in use today still run monolithic architectures that follow traditional development processes. This practical book helps developers examine these long established models and demonstrates how to bring monolithic applications successfully into the future. Relying on their years of modernization experience, authors Markus Eisele and Natale Vinto walk you through the steps necessary to update your application. You'll discover how to dismantle your monolithic application and move to an up-to-date software stack that works across clouds and on-premises installations. Learn the basics of cloud native applications and assess what you need to migrate and modernize

- Understand how enterprise Java specifications can help you transition projects and teams
- Build a cloud native development platform that supports effective development without falling into buzzword traps
- Find a starting point for your migration projects by identifying and applying the correct steps for first module extractions
- Learn the necessary pieces to complement a traditional enterprise Java application with components on top of containers and Kubernetes.

InfoWorld is targeted to Senior IT professionals. Content is segmented into Channels and Topic Centers. InfoWorld also celebrates people, companies, and projects. The aim of this IBM Redbooks publication is to provide a technical reference for IT system administrators in organizations that are considering a migration from Sun Solaris to IBM AIX 5L-based systems. This book presents a system administrator view of the technical differences that exist and the methods that are necessary to complete a successful migration to AIX 5L-based systems. This book is designed primarily as a reference for experienced Sun Solaris 8 or 9 system administrators who will be working with AIX 5L. This book is not an AIX 5L administration how-to book for system

administrators who are beginners, but rather a guide for experienced administrators who have to translate a given Solaris system administration task to AIX 5L.

IBM® Intelligent Operations Center is an integrated solution, and a continually evolving platform and set of capabilities. The platform grows as the capabilities increase over time, and new interfaces and integration points are introduced in each release. The purpose of this IBM Redbooks® publication is to guide planners, architects, and implementers through the options that they have, to take advantage of the new capabilities and maximize the benefits of moving to the new release. This book considers what has already been deployed with IBM Intelligent Operations Center V1.5, the benefits of the new version (IBM Intelligent Operations Center V1.6.0.1), and the best way to take advantage of the new capabilities as you transition. IBM Intelligent Operations Center has several integration and extension points for the previous and current versions of the product, which points are documented and described in this book. This IBM Redbooks publication describes options and considerations for the best way to migrate customizations and benefit from the new architecture. Thorough details about the differences between the prior and new versions of the product are provided, to enable a clear understanding of migration choices, options, and preferred practices. This book includes descriptions of the trade-offs for each migration option, and in-depth information about data flows, available tools, and scripting changes that might affect existing IBM Intelligent Operations Center installations. This book is targeted to the following audiences: Line of business managers or stakeholders who are interested in understanding the new features in IBM Intelligent Operations Center V1.6, and who are looking for information about how to plan the migration of their current IBM Intelligent Operations Center V1.5 environments. Architects who need to understand the effect that IBM Intelligent Operations Center V1.6 will have on the architecture of IBM Intelligent Operations Center V1.5 solutions. IT specialists and product specialists who are responsible for implementing the migration of a solution based on IBM Intelligent Operations Center V1.5 to a V1.6 solution. Readers of this book will benefit from the IBM Redbooks publication IBM Intelligent Operations Center 1.6 Programming Guide, SG24-8201.

Optimized for Kubernetes, Quarkus is designed to help you create Java applications that are cloud first, container native, and serverless capable. With this cookbook, authors Alex Soto Bueno and Jason Porter from Red Hat provide detailed solutions for installing, interacting with, and using Quarkus in the development and production of microservices. The recipes in this book show midlevel to senior developers familiar with Java enterprise application development how to get started with Quarkus quickly. You'll become familiar with how Quarkus works within the wider Java ecosystem and discover ways to adapt this framework to your particular needs. You'll learn how to: Shorten the development cycle by enabling live reloading in dev mode Connect to and communicate with Kafka Develop with the reactive programming model Easily add fault tolerance to your services Build your application as a Kubernetes-ready container Ease development with OpenAPI and test a native Quarkus application This IBM® Redbooks® publication provides advice and technical information about optimizing and tuning application code to run on systems that are based on

the IBM POWER7® and POWER7+™ processors. This advice is drawn from application optimization efforts across many different types of code that runs under the IBM AIX® and Linux operating systems, focusing on the more pervasive performance opportunities that are identified, and how to capitalize on them. The technical information was developed by a set of domain experts at IBM. The focus of this book is to gather the right technical information, and lay out simple guidance for optimizing code performance on the IBM POWER7 and POWER7+ systems that run the AIX or Linux operating systems. This book contains a large amount of straightforward performance optimization that can be performed with minimal effort and without previous experience or in-depth knowledge. This optimization work can:

- Improve the performance of the application that is being optimized for the POWER7 system
- Carry over improvements to systems that are based on related processor chips
- Improve performance on other platforms

The audience of this book is those personnel who are responsible for performing migration and implementation activities on IBM POWER7-based servers, which includes system administrators, system architects, network administrators, information architects, and database administrators (DBAs).

This book will teach people how to migrate systems from Windows to Linux. It provides migration process planning, automated migration scripts, anti-virus / anti-spam solutions, and specific migration and deployment details for all relevant technologies. IT professionals who wish to maximize the value of their Windows to Linux migration services will find this book valuable. The book will help them fine-tune their migration services to make them more efficient, thorough, feature-enhanced, and cost-effective by utilizing migration scripts and best practices gleaned from the author's many years of real-world migrations in large and small companies. * The book and fully functioning scripts on the CD-ROM work for migrations from Windows NT or Windows 2000 to any Linux distribution. * David Allen has done over 25,000 user migrations from Windows to Linux. * Microsoft will stop supporting Windows NT in December 2004 forcing over 2 million enterprise customers to migrate from Windows NT to a new sever operating system. Both IBM and Dell are offering enterprise servers running Linux which will allow customers to realize a 50% reduction in TCO. In 2003 Linux servers represented the largest growth segment in the Server market, and all the major research groups indicate this trend will continue through t least 2007.

More than a quarter of a million copies sold in previous editions! Freedom is a feature With Fedora's new Online Desktop, you are free to shape your desktop environment to include the services, applications, and online friends you desire. As always, Fedora's total dedication to freedom lets you draw on thousands of free software packages to create the exact desktop or server computer you need. Fedora puts together the software (provided here on CD and DVD). This book acts as a guide to everything from playing music and writing documents to configuring many powerful Web, file, print, DHCP, and database servers.

Customize Fedora or Red Hat Enterprise Linux to: Explore your computer or the Internet from GNOME®, KDE®, or Online Desktops Manage and use documents, spreadsheets, presentations, music, and images Try the new advanced PulseAudio sound server Draw from online software repositories with Package Manager and Package Updater Build an Internet server with e-mail, Web, DNS, FTP, and database services Secure your computer with firewalls, password protection, and SELinux Try out cutting-edge Fedora 8 features: Use Codeina to get legal software to play MP3, Windows media, and other audio/video formats Organize photos, music, friends, docs, and Web favorites in the new experimental Online Desktop Explore the latest in KVM and QEMU virtualization and AIGLX 3D-desktop What's on the DVD and CD-ROM? Install Fedora 8 (8GB) from DVD Boot Fedora 8 GNOME Live CD, and then install its contents to your hard drive System Requirements: Please see the Preface and Appendix A for details and complete system requirements. Open for more! Check out the new Online Desktop Find ten cool things to do with Fedora Run a Fedora 8 quick install Add pop and power with Online Desktop and 3D acceleration Organizing the people, places, and things you need on your desktop is now easier with the new GNOME Online Desktop. Get organized, then pile on some bling with 3D-accelerated desktop effects. Put friends, photos, and fun on your new Online Desktop Your favorite people and your online favorites are totally accessible from the new GNOME Online Desktop. Play with 3D desktop animations Continued improvements in 3D software let you rotate workspaces on a 3D cube, choose 3D minimize effects, and set 3D wobble effects.

Operators are a way of packaging, deploying, and managing Kubernetes applications. A Kubernetes application doesn't just run on Kubernetes; it's composed and managed in Kubernetes terms. Operators add application-specific operational knowledge to a Kubernetes cluster, making it easier to automate complex, stateful applications and to augment the platform. Operators can coordinate application upgrades seamlessly, react to failures automatically, and streamline repetitive maintenance like backups. Think of Operators as site reliability engineers in software. They work by extending the Kubernetes control plane and API, helping systems integrators, cluster administrators, and application developers reliably deploy and manage key services and components. Using real-world examples, authors Jason Dobies and Joshua Wood demonstrate how to use Operators today and how to create Operators for your applications with the Operator Framework and SDK. Learn how to establish a Kubernetes cluster and deploy an Operator Examine a range of Operators from usage to implementation Explore the three pillars of the Operator Framework: the Operator SDK, the Operator Lifecycle Manager, and Operator Metering Build Operators from the ground up using the Operator SDK Build, package, and run an Operator in development, testing, and production phases Learn how to distribute your Operator for installation on Kubernetes clusters

Cloud technologies have revolutionized the way we store information and

perform various computing tasks. With the rise of this new technology, the ability to secure information stored on the cloud becomes a concern. The Handbook of Research on Securing Cloud-Based Databases with Biometric Applications explores the latest innovations in promoting cloud security through human authentication techniques. Exploring methods of access by identification, including the analysis of facial features, fingerprints, DNA, dental characteristics, and voice patterns, this publication is designed especially for IT professionals, academicians, and upper-level students seeking current research surrounding cloud security.

This IBM® Redbooks® publication helps you plan and execute the migration of J2EE applications developed for Oracle WebLogic Server, JBoss, GlassFish, and Apache Tomcat, so that they run on WebSphere® Application Server V7. This book provides detailed information to plan migrations, suggested approaches for developing portable applications, and migration working examples for each of the platforms from which we migrated. It is not our intention to provide a feature-by-feature comparison of these application servers versus WebSphere Application Server V7, or to argue the relative merits of the products, but to produce practical technical advice for developers who have to migrate applications from these vendors to WebSphere Application Server V7. The book is intended as a migration guide for IT specialists who are working on migrating applications written for other application servers to WebSphere Application Server V7.

LinuxONE is a portfolio of hardware, software, and solutions for an enterprise-grade Linux environment. It has been designed to run more transactions faster and with more security and reliability specifically for the open community. It fully embraces open source-based technology. Two servers are available for LinuxONE: The IBM® LinuxONE III LT1 and IBM LinuxONE III LT2. We describe these servers in "IBM LinuxONE servers" on page 5. Aside from still running SUSE Linux Enterprise Server and Red Hat Enterprise Linux Servers, LinuxONE runs Ubuntu, which is popular on x86 hardware. Ubuntu, which runs the cloud, smartphones, a computer that can remote control a planetary rover for NASA, many market-leading companies, and the Internet of Things, is now available on IBM LinuxONE servers. Together, these two technology communities deliver the perfect environment for cloud and DevOps. Ubuntu 16.04 on LinuxONE offers developers, enterprises, and Cloud Service Providers a scalable and secure platform for next generation applications that include OpenStack, KVM, Docker, and JuJu. The following are reasons why you would want to optimize your servers through virtualization using LinuxONE: Too many distributed physical servers with low utilization A lengthy provisioning process that delays the implementation of new applications Limitations in data center power and floor space High total cost of ownership (TCO) Difficulty allocating processing power for a dynamic environment This IBM Redbooks® publication provides a technical planning reference for IT organizations that are considering a migration from their x86 distributed servers to LinuxONE. This book walks you through some of the

important considerations and planning issues that you might encounter during a migration project. Within the context of a pre-existing UNIX based or x86 environment, it presents an end-to-end view of the technical challenges and methods necessary to complete a successful migration to LinuxONE.

In simple terms, the book is designed to give IT professionals an extensive idea of what cloud computing is all about, the basic fundamentals, what the different options of cloud computing are for an enterprise, and how the same can be adopted to their own enterprise. This book is exhaustive and covers almost all the top cloud computing technologies and to the lowest level of details, which will help even a junior-level IT professional to design and deploy cloud solutions based on the individual requirements. This book offers high level of details, which will help IT administrators to manage and maintain the corporate and SME IT infrastructure. This book can also be a part of an engineering curriculum, especially where information technology and computer science courses are offered.

Enterprise developers face several challenges when it comes to building serverless applications, such as integrating applications and building container images from source. With more than 60 practical recipes, this cookbook helps you solve these issues with Knative—the first serverless platform natively designed for Kubernetes. Each recipe contains detailed examples and exercises, along with a discussion of how and why it works. If you have a good understanding of serverless computing and Kubernetes core resources such as deployment, services, routes, and replicas, the recipes in this cookbook show you how to apply Knative in real enterprise application development. Authors Kamesh Sampath and Burr Sutter include chapters on autoscaling, build and eventing, observability, Knative on OpenShift, and more. With this cookbook, you'll learn how to: Efficiently build, deploy, and manage modern serverless workloads Apply Knative in real enterprise scenarios, including advanced eventing Monitor your Knative serverless applications effectively Integrate Knative with CI/CD principles, such as using pipelines for faster, more successful production deployments Deploy a rich ecosystem of enterprise integration patterns and connectors in Apache Camel K as Kubernetes and Knative components

"This book was written as a lab guide to help individuals pass the RHCSA (EX200) and RHCE (EX300) exams"--Preface.

Microservices is an architectural style that structures an application as a collection of distributed services. Microservices are certainly appealing but there are many questions that should be asked prior to diving into this architectural style: How do I deal with an unreliable network in a distributed architecture? How do I test my services? How do I monitor them? How do I package and execute them? That's when Quarkus comes into play. In this fascicle, you will learn Quarkus but also its ecosystem. You will discover Quarkus internals and how you can use it to build REST and reactive microservices, bind and process JSON or

access datastores in a transactional way. With Cloud Native and GraalVM in mind, Quarkus makes packaging and orchestrating your microservices with Docker and Kubernetes easy. This fascicle has a good mix of theory and practical examples. It is the companion book of Practising Quarkus 1.x where you learn how to develop an entire microservice architecture.

Migrating Linux to Microsoft Azure enables your organization to maximize the existing investments on Linux and become sustainable with efficient migration of existing Linux workloads to Azure.

The way developers design, build, and run software has changed significantly with the evolution of microservices and containers. These modern architectures use new primitives that require a different set of practices than most developers, tech leads, and architects are accustomed to. With this focused guide, Bilgin Ibryam and Roland Huß from Red Hat provide common reusable elements, patterns, principles, and practices for designing and implementing cloud-native applications on Kubernetes. Each pattern includes a description of the problem and a proposed solution with Kubernetes specifics. Many patterns are also backed by concrete code examples. This book is ideal for developers already familiar with basic Kubernetes concepts who want to learn common cloud native patterns. You'll learn about the following pattern categories: Foundational patterns cover the core principles and practices for building container-based cloud-native applications. Behavioral patterns explore finer-grained concepts for managing various types of container and platform interactions. Structural patterns help you organize containers within a pod, the atom of the Kubernetes platform. Configuration patterns provide insight into how application configurations can be handled in Kubernetes. Advanced patterns covers more advanced topics such as extending the platform with operators.

As a market-leading, free, open-source Linux operating system (OS), Fedora 10 is implemented in Red Hat Enterprise Linux and serves as an excellent OS for those who want more frequent updates. Bestselling author Christopher Negus offers an ideal companion resource for both new and advanced Linux users. He presents clear, thorough instructions so you can learn how to make Linux installation simple and painless, take advantage of the desktop interface, and use the Linux shell, file system, and text editor. He also describes key system administration skills, including setting up users, automating system tasks, backing up and restoring files, and understanding the latest security issues and threats. Included is both a DVD distribution of Fedora Linux 10 and a bootable Fedora LiveCD. Note: CD-ROM/DVD and other supplementary materials are not included as part of eBook file.

Keen to build web applications for the cloud? Get a quick hands-on introduction to OpenShift, the open source Platform as a Service (PaaS) offering from Red Hat. With this practical guide, you'll learn the steps necessary to build, deploy, and host a complete real-world application on OpenShift without having to slog through long, detailed explanations of the technologies involved. OpenShift

enables you to use Docker application containers and the Kubernetes cluster manager to automate the way you create, ship, and run applications. Through the course of the book, you'll learn how to use OpenShift and the Wildfly application server to build and then immediately deploy a Java application online. Learn about OpenShift's core technology, including Docker-based containers and Kubernetes Use a virtual machine with OpenShift installed and configured on your local environment Create and deploy your first application on the OpenShift platform Add language runtime dependencies and connect to a database Trigger an automatic rebuild and redeployment when you push changes to the repository Get a working environment up in minutes with application templates Use commands to check and debug your application Create and build Docker-based images for your application

Ready to build cloud native applications? Get a hands-on introduction to daily life as a developer crafting code on OpenShift, the open source container application platform from Red Hat. Creating and packaging your apps for deployment on modern distributed systems can be daunting. Too often, adding infrastructure value can complicate development. With this practical guide, you'll learn how to build, deploy, and manage a multitiered application on OpenShift. Authors Joshua Wood and Brian Tannous, principal developer advocates at Red Hat, demonstrate how OpenShift speeds application development. With the Kubernetes container orchestrator at its core, OpenShift simplifies and automates the way you build, ship, and run code. You'll learn how to use OpenShift and the Quarkus Java framework to develop and deploy apps using proven enterprise technologies and practices that you can apply to code in any language. Learn the development cycles for building and deploying on OpenShift, and the tools that drive them Use OpenShift to build, deploy, and manage the ongoing lifecycle of an n-tier application Create a continuous integration and deployment pipeline to build and deploy application source code on OpenShift Automate scaling decisions with metrics and trigger lifecycle events with webhooks

If you create, manage, operate, or configure systems running in the cloud, you're a cloud engineer--even if you work as a system administrator, software developer, data scientist, or site reliability engineer. With this book, professionals from around the world provide valuable insight into today's cloud engineering role. These concise articles explore the entire cloud computing experience, including fundamentals, architecture, and migration. You'll delve into security and compliance, operations and reliability, and software development. And examine networking, organizational culture, and more. You're sure to find 1, 2, or 97 things that inspire you to dig deeper and expand your own career. "Three Keys to Making the Right Multicloud Decisions," Brendan O'Leary "Serverless Bad Practices," Manases Jesus Galindo Bello "Failing a Cloud Migration," Lee Atchison "Treat Your Cloud Environment as If It Were On Premises," Iyana Garry "What Is Toil, and Why Are SREs Obsessed with It?", Zachary Nickens "Lean QA: The QA Evolving in the DevOps World," Theresa Neate "How Economies of Scale Work in the Cloud," Jon Moore "The Cloud Is Not About the Cloud," Ken Corless "Data Gravity: The Importance of Data Management in the Cloud," Geoff Hughes "Even in the Cloud, the Network Is the Foundation," David Murray "Cloud Engineering Is About Culture, Not Containers," Holly Cummins

Develop the skill to manage and administer Red Hat Enterprise Linux and get ready to achieve the RHCSA certification Key Features Learn the most common administration and security tasks and manage enterprise Linux infrastructures efficiently Assess your knowledge using self-assessment questions based on real-world examples Understand how to apply the concepts of core systems administration in the real world Book Description Whether in infrastructure or development, as a DevOps or site reliability engineer, Linux skills are now more relevant than ever for any IT job, forming the foundation of understanding the most basic layer of your architecture. With Red Hat Enterprise Linux (RHEL) becoming the most popular choice for enterprises worldwide, achieving the Red Hat Certified System Administrator (RHCSA) certification will validate your Linux skills to install, configure, and troubleshoot applications and services on RHEL systems. Complete with easy-to-follow tutorial-style content, self-assessment questions, tips, best practices, and practical exercises with detailed solutions, this book covers essential RHEL commands, user and group management, software management, networking fundamentals, and much more. You'll start by learning how to create an RHEL 8 virtual machine and get to grips with essential Linux commands. You'll then understand how to manage users and groups on an RHEL 8 system, install software packages, and configure your network interfaces and firewall. As you advance, the book will help you explore disk partitioning, LVM configuration, Stratis volumes, disk compression with VDO, and container management with Podman, Buildah, and Skopeo. By the end of this book, you'll have covered everything included in the RHCSA EX200 certification and be able to use this book as a handy, on-the-job desktop reference guide. This book and its contents are solely the work of Miguel Perez Colino, Pablo Iranzo Gomez, and Scott McCarty. The content does not reflect the views of their employer (Red Hat Inc.). This work has no connection to Red Hat, Inc. and is not endorsed or supported by Red Hat, Inc. What you will learn Deploy RHEL 8 in different footprints, from bare metal and virtualized to the cloud Manage users and software on local and remote systems at scale Discover how to secure a system with SELinux, OpenSCAP, and firewalld Gain an overview of storage components with LVM, Stratis, and VDO Master remote administration with passwordless SSH and tunnels Monitor your systems for resource usage and take actions to fix issues Understand the boot process, performance optimizations, and containers Who this book is for This book is for IT professionals or students who want to start a career in Linux administration and anyone who wants to take the RHCSA 8 certification exam. Basic knowledge of Linux and familiarity with the Linux command-line is necessary. More than 50 percent new and revised content for today's Linux environment gets you up and running in no time! Linux continues to be an excellent, low-cost alternative to expensive operating systems. Whether you're new to Linux or need a reliable update and reference, this is an excellent resource. Veteran bestselling author Christopher Negus provides a complete tutorial packed with major updates, revisions, and hands-on exercises so that you can confidently start using Linux today. Offers a complete restructure, complete with exercises, to make the book a better learning tool Places a strong focus on the Linux command line tools and can be used with all distributions and versions of Linux Features in-depth coverage of the tools that a power user and a Linux administrator need to get started This practical learning tool is ideal for anyone eager to set up a new Linux desktop system at home or curious to learn how to manage Linux

server systems at work.

Over 60 recipes to help you build, configure, and orchestrate RHEL 7 Server to make your everyday administration experience seamless About This Book Create fully unattended installations and deploy configurations without breaking a sweat Discover and kick-start the newest RHEL 7 configuration and management tools through an easy-to-follow, practical approach for a lazy system management Be guided by an experienced RHEL expert who is a certified Linux engineer with a passion for open source and open standards Who This Book Is For Red Hat Enterprise Linux Server Cookbook is for RHEL 7 system administrators and DevOps in need of a practical reference guide to troubleshoot common issues and quickly perform tasks. What You Will Learn Set up and configure RHEL 7 Server Use NetworkManager to configure all aspects of your network Manage virtual environments using libvirt Set up software repositories Secure and monitor your RHEL environment Configure SELinux, and create and apply its policies Create kickstart scripts to automatically deploy RHEL 7 systems Use Orchestration and configuration management tools to manage your environment In Detail Dominating the server market, the Red Hat Enterprise Linux operating system gives you the support you need to modernize your infrastructure and boost your organization's efficiency. Combining both stability and flexibility, RHEL helps you meet the challenges of today and adapt to the demands of tomorrow. This practical Cookbook guide will help you get to grips with RHEL 7 Server and automating its installation. Designed to provide targeted assistance through hands-on recipe guidance, it will introduce you to everything you need to know about KVM guests and deploying multiple standardized RHEL systems effortlessly. Get practical reference advice that will make complex networks setups look like child's play, and dive into in-depth coverage of configuring a RHEL system. Also including full recipe coverage of how to set up, configuring, and troubleshoot SELinux, you'll also discover how secure your operating system, as well as how to monitor it. Style and approach This practical guide is packed full of hands-on recipes that provide quick solutions to the problems faced when building your RHEL 7 system from scratch using orchestration tools. Each topic is explained sequentially in the process of setting up a system and binding everything together.

If you are a system administrator who is interested in implementing and managing open source virtualization infrastructures, this is the book for you. A basic knowledge of virtualization and basic Linux command line experience is needed.

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