

How To Setup Ovirt 3 4 Virtualization On Centos 6

This is the eBook version of the print title. Learn, prepare, and practice for Red Hat RHCSA 8 (EX200) exam success with this Cert Guide from Pearson IT Certification, a leader in IT Certification learning. Master Red Hat RHCSA 8 EX200 exam topics Assess your knowledge with chapter-ending quizzes Review key concepts with exam-preparation tasks Practice with four unique practice tests Learn from two full hours of video training from the author's Red Hat Certified System Administrator (RHCSA) Complete Video Course, 3rd Edition. Red Hat RHCSA 8 Cert Guide is a best-of-breed exam study guide. Leading Linux consultant, author, and instructor Sander van Vugt shares preparation hints and test-taking tips, helping you identify areas of weakness and improve both your conceptual knowledge and hands-on skills. Material is presented in a concise manner, focusing on increasing your understanding and retention of exam topics. The book presents you with an organized test-preparation routine through the use of proven series elements and techniques. Exam topic lists make referencing easy. Chapter-ending Exam Preparation Tasks help you drill on key concepts you must know thoroughly. Review questions help you assess your knowledge, and a final preparation chapter guides you through tools and resources to help you craft your final study plan. Well regarded for its level of detail, assessment features, and challenging review questions and exercises, this study guide helps you master the concepts and techniques that will enable you to succeed on the exam the first time, including Basic system management: Installation, tools, file management, text files, RHEL8 connections, user/group management, permissions, and network configuration Operating running systems: Managing software, processes, storage, and advanced storage; working with systemd; scheduling tasks; and configuring logging Advanced system administration: Managing the kernel and boot procedures, essential troubleshooting, bash shell scripting Managing network services: Configuring SSH, firewalls, and time services; managing Apache HTTP services and SE Linux; and accessing network storage

A comprehensive guide to mastering the art of preventing your Linux system from getting compromised. Key Features Leverage this guide to confidently deliver a system that reduces the risk of being hacked Perform a number of advanced Linux security techniques such as network service detection, user authentication, controlling special permissions, encrypting file systems, and much more Master the art of securing a Linux environment with this end-to-end practical guide Book Description This book has extensive coverage of techniques that will help prevent attackers from breaching your system, by building a much more secure Linux environment. You will learn various security techniques such as SSH hardening, network service detection, setting up firewalls, encrypting file systems, protecting user accounts, authentication processes, and so on. Moving forward, you will also develop hands-on skills with advanced Linux permissions, access control, special modes, and more. Lastly, this book will

also cover best practices and troubleshooting techniques to get your work done efficiently. By the end of this book, you will be confident in delivering a system that will be much harder to compromise. What you will learn Use various techniques to prevent intruders from accessing sensitive data Prevent intruders from planting malware, and detect whether malware has been planted Prevent insiders from accessing data that they aren't authorized to access Do quick checks to see whether a computer is running network services that it doesn't need to run Learn security techniques that are common to all Linux distros, and some that are distro-specific Who this book is for If you are a systems administrator or a network engineer interested in making your Linux environment more secure, then this book is for you. Security consultants wanting to enhance their Linux security skills will also benefit from this book. Prior knowledge of Linux is mandatory.

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.

Over 90 practical and highly applicable recipes to successfully deploy various OpenStack configurations in production About This Book Get a deep understanding of OpenStack's internal structure and services Learn real-world examples on how to build and configure various production grade use cases for each of OpenStack's services Use a step-by-step approach to install and configure OpenStack's services to provide Compute, Storage, and Networking as a services for cloud workloads Who This Book Is For If you have a basic understanding of Linux and Cloud computing and want to learn about configurations that OpenStack supports, this is the book for you. Knowledge of virtualization and managing Linux environments is expected. Prior knowledge or experience of OpenStack is not required, although beneficial. What You Will Learn Plan an installation of OpenStack with a basic configuration Deploy OpenStack in a highly available configuration Configure Keystone Identity services with multiple types of identity backends Configure Glance Image Store with File, NFS, Swift, or Ceph image backends and use local image caching Design Cinder to use a single storage provider such as LVM, Ceph, and NFS backends, or to use multiple storage backends simultaneously Manage and configure the OpenStack networking backend Configure OpenStack's compute hypervisor and the instance scheduling mechanism Build and customize the OpenStack dashboard In Detail OpenStack is the most popular open source cloud platform used by organizations building internal private clouds and by public cloud providers. OpenStack is designed in a fully distributed architecture to provide Infrastructure as a Service, allowing us to maintain a massively scalable cloud infrastructure. OpenStack is developed by a vibrant community of open source developers who come from the largest software companies in the world. The book provides a comprehensive and practical guide to the multiple uses cases and configurations that OpenStack supports. This book simplifies the learning process by guiding you

through how to install OpenStack in a single controller configuration. The book goes deeper into deploying OpenStack in a highly available configuration. You'll then configure Keystone Identity Services using LDAP, Active Directory, or the MySQL identity provider and configure a caching layer and SSL. After that, you will configure storage back-end providers for Glance and Cinder, which will include Ceph, NFS, Swift, and local storage. Then you will configure the Neutron networking service with provider network VLANs, and tenant network VXLAN and GRE. Also, you will configure Nova's Hypervisor with KVM, and QEMU emulation, and you will configure Nova's scheduler filters and weights. Finally, you will configure Horizon to use Apache HTTPD and SSL, and you will customize the dashboard's appearance. Style and approach This book consists of clear, concise instructions coupled with practical and applicable recipes that will enable you to use and implement the latest features of OpenStack.

Red Hat Virtualization

Linux

Proceedings of ICICC 2019, Volume 2

Building the Infrastructure for Cloud Security

Enterprise Cloud Security and Governance

Advanced Visual Interfaces. Supporting Artificial Intelligence and Big Data Applications

Pro Linux High Availability Clustering teaches you how to implement this fundamental Linux add-on into your business. Linux High Availability Clustering is needed to ensure the availability of mission critical resources. The technique is applied more and more in corporate datacenters around the world. While lots of documentation about the subject is available on the internet, it isn't always easy to build a real solution based on that scattered information, which is often oriented towards specific tasks only. Pro Linux High Availability Clustering explains essential high-availability clustering components on all Linux platforms, giving you the insight to build solutions for any specific case needed. In this book four common cases will be explained: Configuring Apache for high availability Creating an Open Source SAN based on DRBD, iSCSI and HA clustering Setting up a load-balanced web server cluster with a back-end, highly-available database Setting up a KVM virtualization platform with high-availability protection for a virtual machine. With the knowledge you'll gain from these real-world applications, you'll be able to efficiently apply Linux HA to your work situation with confidence. Author Sander Van Vugt teaches Linux high-availability clustering on training courses, uses it in his everyday

work, and now brings this knowledge to you in one place, with clear examples and cases. Make the best start with HA clustering with Pro Linux High Availability Clustering at your side.

This book constitutes the proceedings of the 2nd International Conference on Advances in Emerging Trends and Technologies (ICAETT 2020), held in Riobamba, Ecuador, on 26-30 October 2019, proudly organized by Facultad de Informática y Electrónica (FIE) at Escuela Superior Politécnica de Chimborazo and supported by GDEON. ICAETT 2020 brings together top researchers and practitioners working in different domains of computer science to share their expertise and to discuss future developments and potential collaborations. Presenting high-quality, peer-reviewed papers, the book discusses the following topics: Communicationse-Government and e-Participationone-LearningElectronicIntelligent SystemsMachine VisionSecurityTechnology Trends

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.

Build a resilient cloud architecture to tackle data disasters with ease About This Book Gain a firm grasp of Cloud data security and governance, irrespective of your Cloud platform Practical examples to ensure you secure your Cloud environment efficiently A step-by-step guide that will teach you the unique techniques and methodologies of Cloud data governance Who This Book Is For If you are a cloud security professional who wants to ensure cloud security and data governance no matter the environment, then this book is for you. A basic understanding of working on any cloud platform would be beneficial. What You Will Learn Configure your firewall and Network ACL Protect your system against DDOS and application-level attacks Explore cryptography and data security for your cloud Get to grips with configuration management tools to automate your security tasks Perform vulnerability scanning with the help of the standard tools in the industry Learn about central log management In Detail Modern day businesses and enterprises are moving to the Cloud, to improve efficiency and speed, achieve flexibility and cost effectiveness, and for on-demand Cloud services. However, enterprise Cloud security remains a major concern because migrating to the public Cloud requires transferring some control over organizational assets to the Cloud provider. There are chances these assets can be mismanaged and therefore, as a Cloud security professional, you need to be armed with techniques to help businesses minimize the risks and misuse of business data. The book starts with the basics of Cloud security and offers an understanding of various policies, governance, and compliance challenges in Cloud. This helps you build a strong foundation before you dive deep into understanding what it takes to design a secured network infrastructure and a well-architected application using various security services in the Cloud environment. Automating security tasks, such as Server Hardening with Ansible, and

other automation services, such as Monit, will monitor other security daemons and take the necessary action in case these security daemons are stopped maliciously. In short, this book has everything you need to secure your Cloud environment with. It is your ticket to obtain industry-adopted best practices for developing a secure, highly available, and fault-tolerant architecture for organizations. Style and approach This book follows a step-by-step, practical approach to secure your applications and data when they are located remotely.

From Parallel Processing to the Internet of Things

Ansible: Up and Running

Linux: Embedded Development

AVI 2020 Workshops, AVI-BDA and ITAVIS, Ischia, Italy, June 9, 2020 and September 29, 2020, Revised Selected Papers

Design Expert Data Center Virtualization Solutions with the Power of Linux KVM

Certified OpenStack Administrator Study Guide

Leverage the power of Linux to develop captivating and powerful embedded Linux projects About This Book Explore the best practices for all embedded product development stages Learn about the compelling features offered by the Yocto Project, such as customization, virtualization, and many more Minimize project costs by using open source tools and programs Who This Book Is For If you are a developer who wants to build embedded systems using Linux, this book is for you. It is the ideal guide for you if you want to become proficient and broaden your knowledge. A basic understanding of C programming and experience with systems programming is needed. Experienced embedded Yocto developers will find new insight into working methodologies and ARM specific development competence. What You Will Learn Use the Yocto Project in the embedded Linux development process Get familiar with and customize the bootloader for a board Discover more about real-time layer, security, virtualization, CGL, and LSB See development workflows for the U-Boot and the Linux kernel, including debugging and optimization Understand the open source licensing requirements and how to comply with them when cohabiting with proprietary programs Optimize your production systems by reducing the size of both the Linux kernel and root filesystems Understand device trees and make changes to accommodate new hardware on your device Design and write multi-threaded applications using POSIX threads Measure real-time latencies and tune the Linux kernel to minimize them In Detail Embedded Linux is a complete Linux distribution employed to operate embedded devices such as smartphones, tablets, PDAs, set-top boxes, and many more. An example of an embedded Linux distribution is Android, developed by Google. This learning path starts with the module Learning Embedded Linux Using the Yocto Project. It introduces embedded Linux software and hardware architecture and presents information about the bootloader. You will go through Linux kernel features and source code and get an overview of the Yocto Project components available. The next module Embedded Linux Projects Using Yocto Project Cookbook takes you through the installation of a professional embedded Yocto setup, then advises you on best practices. Finally, it explains how to quickly get hands-on with the Freescale ARM ecosystem and community layer using the affordable and open source Wandboard embedded board. Moving ahead, the final module

Mastering Embedded Linux Programming takes you through the product cycle and gives you an in-depth description of the components and options that are available at each stage. You will see how functions are split between processes and the usage of POSIX threads. By the end of this learning path, your capabilities will be enhanced to create robust and versatile embedded projects. This Learning Path combines some of the best that Packt has to offer in one complete, curated package. It includes content from the following Packt products: Learning Embedded Linux Using the Yocto Project by Alexandru Vaduva Embedded Linux Projects Using Yocto Project Cookbook by Alex Gonzalez Mastering Embedded Linux Programming by Chris Simmonds Style and approach This comprehensive, step-by-step, pragmatic guide enables you to build custom versions of Linux for new embedded systems with examples that are immediately applicable to your embedded developments. Practical examples provide an easy-to-follow way to learn Yocto project development using the best practices and working methodologies. Coupled with hints and best practices, this will help you understand embedded Linux better.

"This step-by-step guide teaches you everything you need to know in order to eliminate single points of failure for your Linux, Apache, MySQL, and PHP based web applications. This is a full blown course that demonstrates everything step-by-step. This is not just a design, though. It's an entire course complete with lessons and demonstrations on actual Linux servers. I'll be performing the demonstrations on Ubuntu servers, but the concepts are the same no matter if you're using RedHat Enterprise Linux, CentOS, or another distribution. The only real difference is the couple of commands you'll use to perform some of the software installations. The design and configurations remain the same. Even though this course is targeted directly at the LAMP stack (Linux, Apache, MySQL, PHP), the concepts and techniques presented can be reused in a variety of other situations. If you ever need a floating IP, the ability to add more storage to servers without downtime, to balance loads across multiple servers, or deploy a highly available database cluster, you can put what you learn in this course to good use."--Resource description page.

Learn how to configure, automate, orchestrate, troubleshoot, and monitor KVM-based environments capable of scaling to private and hybrid cloud models
Key FeaturesGain expert insights into Linux virtualization and the KVM ecosystem with this comprehensive guideLearn to use various Linux tools such as QEMU, oVirt, libvirt, Cloud-Init, and Cloudbase-InitScale, monitor, and troubleshoot your VMs on various platforms, including OpenStack and AWSBook 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 learnImplement KVM virtualization using libvirt and oVirtDelve into KVM storage and networkUnderstand snapshots, templates, and live migration featuresGet to grips with managing, scaling, and optimizing the KVM ecosystemDiscover how to tune and optimize KVM virtualization hostsAdopt best practices for KVM platform troubleshootingWho 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.

Among the many configuration management tools available, Ansible has some distinct advantages—it's minimal in nature, you don't need to install

anything on your nodes, and it has an easy learning curve. This practical guide shows you how to be productive with this tool quickly, whether you're a developer deploying code to production or a system administrator looking for a better automation solution. Author Lorin Hochstein shows you how to write playbooks (Ansible's configuration management scripts), manage remote servers, and explore the tool's real power: built-in declarative modules. You'll discover that Ansible has the functionality you need and the simplicity you desire. Understand how Ansible differs from other configuration management systems Use the YAML file format to write your own playbooks Learn Ansible's support for variables and facts Work with a complete example to deploy a non-trivial application Use roles to simplify and reuse playbooks Make playbooks run faster with ssh multiplexing, pipelining, and parallelism Deploy applications to Amazon EC2 and other cloud platforms Use Ansible to create Docker images and deploy Docker containers

With Red Hat Ansible, Red Hat OpenShift, and Red Hat Security Auditing

Demystifying HCI

Learning PostgreSQL 11

A Solutions View

Design expert data center virtualization solutions with the power of Linux KVM

XenServer Administration Handbook

Improve Manageability, Flexibility, Scalability, and Control with Hyperconverged Infrastructure Hyperconverged infrastructure (HCI) combines storage, compute, and networking in one unified system, managed locally or from the cloud. With HCI, you can leverage the cloud's simplicity, flexibility, and scalability without losing control or compromising your ability to scale. In Hyperconverged Infrastructure Data Centers, best-selling author Sam Halabi demystifies HCI technology, outlines its use cases, and compares solutions from a vendor-neutral perspective. He guides you through evaluation, planning, implementation, and management, helping you decide where HCI makes sense, and how to migrate legacy data centers without disrupting production systems. The author brings together all the HCI knowledge technical professionals and IT managers need, whether their background is in storage, compute, virtualization, switching/routing, automation, or public cloud platforms. He explores leading solutions including the Cisco HyperFlex platform, VMware vSAN, Nutanix Enterprise Cloud, Cisco Application-Centric Infrastructure (ACI), VMware's NSX, the open source OpenStack and Open vSwitch (OVS) / Open Virtual Network (OVN), and Cisco CloudCenter for multicloud management. As you explore discussions of automation, policy management, and other key HCI capabilities, you'll discover powerful new opportunities to improve control, security, agility, and performance. Understand and overcome key limits of traditional data center designs Discover improvements made possible by advances in compute, bus interconnect, virtualization, and software-defined storage Simplify rollouts, management, and integration with converged infrastructure (CI) based on the Cisco Unified Computing System (UCS) Explore HCI functionality, advanced capabilities, and benefits Evaluate key HCI applications, including DevOps, virtual desktops, ROBO, edge computing, Tier 1 enterprise applications, backup, and disaster recovery Simplify application deployment and policy setting by implementing a new model for provisioning, deployment, and management Plan, integrate, deploy, provision, manage, and optimize the Cisco HyperFlex hyperconverged infrastructure platform Assess alternatives such as VMware vSAN, Nutanix, open source OpenStack, and OVS/OVN, and compare architectural differences with HyperFlex Compare Cisco ACI (Application-Centric Infrastructure) and VMware NSX approaches to network automation, policies, and security This book is part of the Networking Technology Series from Cisco Press, which offers networking professionals valuable information for constructing efficient networks, understanding new technologies, and building successful careers.

The primary purpose of this book is to capture the state-of-the-art in Cloud Computing technologies and applications. The book will also aim to

identify potential research directions and technologies that will facilitate creation a global market-place of cloud computing services supporting scientific, industrial, business, and consumer applications. We expect the book to serve as a reference for larger audience such as systems architects, practitioners, developers, new researchers and graduate level students. This area of research is relatively recent, and as such has no existing reference book that addresses it. This book will be a timely contribution to a field that is gaining considerable research interest, momentum, and is expected to be of increasing interest to commercial developers. The book is targeted for professional computer science developers and graduate students especially at Masters level. As Cloud Computing is recognized as one of the top five emerging technologies that will have a major impact on the quality of science and society over the next 20 years, its knowledge will help position our readers at the forefront of the field.

For cloud users and providers alike, security is an everyday concern, yet there are very few books covering cloud security as a main subject. This book will help address this information gap from an Information Technology solution and usage-centric view of cloud infrastructure security. The book highlights the fundamental technology components necessary to build and enable trusted clouds. Here also is an explanation of the security and compliance challenges organizations face as they migrate mission-critical applications to the cloud, and how trusted clouds, that have their integrity rooted in hardware, can address these challenges. This book provides: Use cases and solution reference architectures to enable infrastructure integrity and the creation of trusted pools leveraging Intel Trusted Execution Technology (TXT). Trusted geo-location management in the cloud, enabling workload and data location compliance and boundary control usages in the cloud. OpenStack-based reference architecture of tenant-controlled virtual machine and workload protection in the cloud. A reference design to enable secure hybrid clouds for a cloud bursting use case, providing infrastructure visibility and control to organizations. "A valuable guide to the next generation of cloud security and hardware based root of trust. More than an explanation of the what and how, is the explanation of why. And why you can't afford to ignore it!" —Vince Lubsey, Vice President, Product Development, Virtustream Inc. "Raghu provides a valuable reference for the new 'inside out' approach, where trust in hardware, software, and privileged users is never assumed—but instead measured, attested, and limited according to least privilege principles." —John Skinner, Vice President, HyTrust Inc. "Traditional parameter based defenses are in sufficient in the cloud. Raghu's book addresses this problem head-on by highlighting unique usage models to enable trusted infrastructure in this open environment. A must read if you are exposed in cloud." —Nikhil Sharma, Sr. Director of Cloud Solutions, Office of CTO, EMC Corporation

Linux KVM oVirt OpenStack Docker Hadoop SDN Linux Bible

Linux Bible

RHCSA & RHCE Red Hat Enterprise Linux 7: Training and Exam Preparation Guide (EX200 and EX300), Third Edition

Terraform: Up & Running

FreeBSD Handbook

Mastering Linux Security and Hardening

Day One VSRX on KVM

The official "Fedora 15 Deployment Guide" covers deployment, configuration, and administration of Fedora 15. It is oriented towards system administrators with a basic understanding of the system.

Use Red Hat's security tools to establish a set of security strategies that work together to help protect your digital data. You will begin with the basic concepts of IT security and DevOps with topics such as CIA triage, security standards, network and system security controls and configuration, hybrid cloud infrastructure security, and the CI/CD process. Next, you will integrate and automate security into the DevOps cycle, infrastructure, and security as code. You will also learn how to automate with Red Hat Ansible Automation Platform and about hybrid cloud infrastructure. The later chapters will cover hyper-converged infrastructure and its security, Red Hat Smart Management, predictive analytics with Red Hat Insights, and Red Hat security auditing to ensure best security practices. Lastly, you will see the different types of case studies with real-world examples. Red Hat and IT Security will help you get a better understanding of IT security concepts from a network and system administration perspective. It will help you to understand how the IT infrastructure landscape can change by implementing specific security best practices and integrating Red Hat products and solutions to counter against modern cybersecurity threats. What You Will Learn ? Understand IT infrastructure security and its best practices ? Implement hybrid cloud infrastructure ? Realign DevOps process into DevSecOps, emphasizing security ? Implement automation in IT infrastructure services using Red Hat Ansible ? Explore Red Hat Smart Management, predictive analytics, and auditing Who This Book Is For IT professionals handling network/system administration or the IT infrastructure of an organization. DevOps professionals and cybersecurity analysts would find the book useful.

This book constitutes the thoroughly refereed post-workshop proceedings of the AVI 2020 Workshop on Road Mapping Infrastructures for Artificial Intelligence Supporting Advanced Visual Big Data Analysis, AVI-BDA 2020, held in Ischia, Italy, in June 2020, and the Second Italian Workshop on Visualization and Visual Analytics, held in Ischia, Italy, in September 2020. The 14 regular papers in this volume present topics such as big data collection, management and curation; big data analytics; big data interaction and perception; big data insight and effectuation; configuration and management of big data storage and compute infrastructures, services, and tools; advanced visual interaction in big data applications; user empowerment and meta design in big data applications; prediction and automation of big data analysis workflows; as well as data visualization; information visualization; visual analytics; infographics; and design.

This book constitutes the refereed proceedings of the 4th International Symposium on Ubiquitous Networking, UNet 2018, held in Hammamet, Morocco, in May 2018. The 35 full papers presented together with 5 short papers in this volume were carefully reviewed and selected from 87 submissions. The focus of UNet is on technical challenges and solutions related to such a widespread adoption of networking technologies, including broadband multimedia, machine-to-machine applications, Internet of things, security and privacy, data engineering, sensor networks and RFID technologies.

International Conference on Innovative Computing and Communications

Red Hat and IT Security

Ensuring Data Availability

National Cyber Summit (NCS) Research Track 2020

A beginner's guide to building high-performance PostgreSQL database solutions, 3rd Edition

Software Defined Networking with OpenFlow

This volume provides a comprehensive state of the art overview of a series of advanced trends and concepts that have recently been proposed in the area of green information technologies engineering as well as of design and development methodologies for models and complex systems architectures and their intelligent components. The contributions included in the volume have their roots in the authors' presentations, and vivid discussions that have followed the presentations, at a series of workshop and seminars held within the international TEMPUS-project GreenCo project in United Kingdom, Italy, Portugal, Sweden and the Ukraine, during 2013-2015 and at the 1st - 5th Workshops on Green and Safe Computing (GreenSCom) held in Russia, Slovakia and the Ukraine. The book presents a systematic exposition of research on principles, models, components and complex systems and a description of industry- and society-oriented aspects of the green IT engineering. A chapter-oriented structure has been adopted for this book following a "vertical view" of the green IT, from hardware (CPU and FPGA) and software components to complex industrial systems. The 15 chapters of the book are grouped into five sections: (1) Methodology and Principles of Green IT Engineering for Complex Systems, (2) Green Components and Programmable Systems, (3) Green Internet Computing, Cloud and Communication Systems, (4) Modeling and Assessment of Green Computer Systems and Infrastructures, and (5) Green PLC-Based Systems for Industry Applications. The chapters provide an easy to follow, comprehensive introduction to the topics that are addressed, including the most relevant references, so that anyone interested in them can start the study by being able to easily find an introduction to the topic through these references. At the same time, all of them correspond to different aspects of the work in progress being carried out by various research groups throughout the world and, therefore, provide information on the state of the art of some of these topics, challenges and perspectives.

Installing Red Hat Virtualization as a standalone Manager with local databases

This is the fundamental truth about data protection: backup is dead. Or rather, backup and recovery, as a standalone topic, no longer has relevance in IT. As a standalone topic, it's been killed off by seemingly exponential growth in storage and data, by the cloud, and by virtualization. So what is data protection? This book takes a holistic, business-based approach to data protection. It explains how data protection is a mix of proactive and reactive planning, technology and activities that allow for data continuity. It shows how truly effective data protection comes from a holistic approach considering the entire data lifecycle and all required SLAs. Data protection is neither RAID nor is it continuous availability, replication, snapshots or backups—it is all of them, combined in a considered and measured approach to suit the criticality of the data and meet all

the requirements of the business. The book also discusses how businesses seeking to creatively leverage their IT investments and to drive through cost optimization are increasingly looking at data protection as a mechanism to achieve those goals. In addition to being a type of insurance policy, data protection is becoming an enabler for new processes around data movement and data processing. This book arms readers with information critical for making decisions on how data can be protected against loss in the cloud, on-premises, or in a mix of the two. It explains the changing face of recovery in a highly virtualized data center and techniques for dealing with big data. Moreover, it presents a model for where data recovery processes can be integrated with IT governance and management in order to achieve the right focus on recoverability across the business.

Packed with practical advice, this hands-on guide provides valuable information you need to most effectively optimize and manage the XenServer open source virtualization platform. Whether you run a modest installation of a few blades or multiple global enterprise datacenters, this book focuses on the most critical issues you're likely to encounter when designing a XenServer deployment and helps you handle day-to-day management tasks. Tim Mackey and J.K. Benedict from Citrix Systems, the company that manages XenServer, show you how to design a deployment through best practices, deployment blueprints, and installation guidelines. The book's second part features concise, easy-to-implement recipes for day-to-day management, such as user rights, backup strategies, and hardware maintenance. Learn precisely what makes a XenServer work, and how it can host 1000 virtual machines Explore the core components of a production XenServer environment Investigate several options on how and where to install XenServer Examine several factors for "right sizing" your XenServer deployment to fit your needs Work with a decision tree to optimize your XenServer deployment design Understand how to accommodate guest VM virtualization modes Use recipes that help you plan for, obtain, and apply XenServer upgrades

Cloud Computing

Virtualization Essentials

Practical Recipes for Successful Deployments

EX200

Ubiquitous Networking

Pro Linux High Availability Clustering

Leverage the power of PostgreSQL 11 to build powerful database and data warehousing applications Key Features Monitor, secure, and fine-tune your PostgreSQL 11 database Learn client-side and server-side programming using SQL and PL/pgSQL Discover tips on implementing efficient database solutions Book Description PostgreSQL is one of the most popular open source database management systems in the world, and it supports advanced features included in SQL standards. This book will familiarize you with the latest features in PostgreSQL 11, and get you up and

running with building efficient PostgreSQL database solutions from scratch. Learning PostgreSQL, 11 begins by covering the concepts of relational databases and their core principles. You ' ll explore the Data Definition Language (DDL) and commonly used DDL commands supported by ANSI SQL. You ' ll also learn how to create tables, define integrity constraints, build indexes, and set up views and other schema objects. As you advance, you ' ll come to understand Data Manipulation Language (DML) and server-side programming capabilities using PL/pgSQL, giving you a robust background to develop, tune, test, and troubleshoot your database application. The book will guide you in exploring NoSQL capabilities and connecting to your database to manipulate data objects. You ' ll get to grips with using data warehousing in analytical solutions and reports, and scaling the database for high availability and performance. By the end of this book, you ' ll have gained a thorough understanding of PostgreSQL 11 and developed the necessary skills to build efficient database solutions. What you will learn

Understand the basics of relational databases, relational algebra, and data modeling
Install a PostgreSQL server, create a database, and implement your data model
Create tables and views, define indexes and stored procedures, and implement triggers
Make use of advanced data types such as Arrays, hstore, and JSONB
Connect your Python applications to PostgreSQL and work with data efficiently
Identify bottlenecks to enhance reliability and performance of database applications

Who this book is for This book is for you if you're interested in learning about PostgreSQL from scratch. Those looking to build solid database or data warehousing applications or wanting to get up to speed with the latest features of PostgreSQL 11 will also find this book useful. No prior knowledge of database programming or administration is required to get started.

A comprehensive guide to securing your Linux system against cyberattacks and intruders

Key Features

- Deliver a system that reduces the risk of being hacked
- Explore a variety of advanced Linux security techniques with the help of hands-on labs
- Master the art of securing a Linux environment with this end-to-end practical guide

Book Description

From creating networks and servers to automating the entire working environment, Linux has been extremely popular with system administrators for the last couple of decades. However, security has always been a major concern. With limited resources available in the Linux security domain, this book will be an invaluable guide in helping you get your Linux systems properly secured. Complete with in-depth explanations of essential concepts, practical examples, and self-assessment questions, this book begins by helping you set up a practice lab environment and takes you through the core functionalities of securing Linux. You'll practice various Linux hardening techniques and advance to setting up a locked-down Linux server. As you progress, you will also learn how to create user accounts with appropriate privilege levels, protect sensitive data by setting permissions and encryption, and configure a firewall. The book will help you set up mandatory access control, system auditing, security profiles, and kernel hardening, and finally cover best practices and

troubleshooting techniques to secure your Linux environment efficiently. By the end of this Linux security book, you will be able to confidently set up a Linux server that will be much harder for malicious actors to compromise. What you will learn

- Create locked-down user accounts with strong passwords
- Configure firewalls with iptables, UFW, nftables, and firewalld
- Protect your data with different encryption technologies
- Harden the secure shell service to prevent security break-ins
- Use mandatory access control to protect against system exploits
- Harden kernel parameters and set up a kernel-level auditing system
- Apply OpenSCAP security profiles and set up intrusion detection
- Configure securely the GRUB 2 bootloader and BIOS/UEFI

Who this book is for This book is for Linux administrators, system administrators, and network engineers interested in securing moderate to complex Linux environments. Security consultants looking to enhance their Linux security skills will also find this book useful. Working experience with the Linux command line and package management is necessary to understand the concepts covered in this book.

Highlights:

- > Updated to the latest version of Red Hat Enterprise Linux 7
- > Updated to cover ALL official exam objectives for the RHCSA and RHCE exams based on Red Hat Enterprise Linux 7
- > Equally good for self-study and in-class training
- > Step-by-step exercises to accomplish tasks
- > Do-It-Yourself challenge labs at the end of each chapter
- > Concepts explained with diagrams
- > Commands and options summarized in tables
- > Exam tips included
- > FOUR scenario-based sample exams (TWO for RHCSA and TWO for RHCE)
- > TWENTY-FIVE chapters (THIRTEEN for RHCSA and TWELVE for RHCE)

RHCSA Section (chapters 1 to 13): covers local and network (automated with kickstart) RHEL7 installations, general Linux concepts and basic tools, compression and archiving, text file editing, file manipulation and security, processes and task scheduling, bash shell features, software package administration, yum repository configuration, host virtualization, virtual machines, system boot, kernel management, system initialization and service management with systemd, local logging, users and groups, LVM and file systems, AutoFS, Swap, ACLs, firewall, SELinux, network interfaces, NTP/LDAP clients, SSH, and TCP Wrappers.

RHCE Section (chapters 14 to 25): covers shell scripting, interface bonding and teaming, IPv6 and routing configuration, NTP, firewalld, Kerberos authentication, kernel tuning, resource utilization reporting, network logging, block storage sharing with iSCSI, file sharing with NFS and Samba/CIFS, HTTP/HTTPS web servers and virtual hosting, Postfix mail SMTP, DNS, and MariaDB. Each chapter lists major topics and relevant exam objectives in the beginning and ends with a summary followed by review questions/answers and Do-It-Yourself challenge labs.

This book will walk the reader through the process of preparing and deploying open source host integrity monitoring software, specifically, Osiris and Samhain. From the configuration and installation to maintenance, testing, and fine-tuning, this book will cover everything needed to correctly deploy a centralized host integrity monitoring solution. The

domain includes home networks on up to large-scale enterprise environments. Throughout the book, realistic and practical configurations will be provided for common server and desktop platforms. By the end of the book, the reader will not only understand the strengths and limitations of host integrity tools, but also understand how to effectively make use of them in order to integrate them into a security policy. * Brian Wotring is the creator of Osiris. He speaks and writes frequently on Osiris for major magazines, Web sites, and trade shows. And, the book can be prominently marketed from the Osiris Web site * This is the first book published on host integrity monitoring, despite the widespread deployment of Osiris and Samhain * Host Integrity Monitoring is the only way to accurately determine if a malicious attacker has successfully compromised the security measures of your network

Fedora 15 Deployment Guide

Writing Infrastructure as Code

Comments on Nuclear and Particle Physics

Mastering KVM Virtualization

Protect your Linux systems from intruders, malware attacks, and other cyber threats, 2nd Edition

Advances in Emerging Trends and Technologies

This book gathers high-quality research papers presented at the Second International Conference on Innovative Computing and Communication (ICICC 2019), which was held at the VSB - Technical University of Ostrava, Czech Republic, on 21-22 March 2019. Highlighting innovative papers by scientists, scholars, students, and industry experts in the fields of computing and communication, the book promotes the transformation of fundamental research into institutional and industrialized research, and the translation of applied research into real-world applications.

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.

Annotation OpenFlow is an open interface for remotely controlling tables in network switches, routers, and access

points. It is considered a turning point in Software Defined Networking (SDN), data center networking and virtualization as, more secure and efficient data centers are being built using OpenFlow. It defines a protocol that lets a controller use a common set of instructions to add, modify, or delete entries in a switch's forwarding table. Starting with an introduction to SDN and OpenFlow, you will learn about the role of each building block, moving onto demonstrations of how SDN/OpenFlow can be used to provide new services and features, which will change the way that networking works and the innovative business impacts. By the end of this practical guide, you will have an insight into the Software Defined Networking and OpenFlow fundamentals. Packed with detail, this book will walk you through the essentials; you will learn about the OpenFlow protocol, switches, and controllers. Following on from this, you will be taken through a number of practical, hands-on examples on how to use a network emulation platform called OpenFlow laboratory. You will learn how to develop your innovative network application using the OpenFlow controllers API quickly, and test your network application without commissioning any OpenFlow hardware equipment. You will also be introduced to the concept of Software Defined Networking and the details of OpenFlows protocol, along with the building blocks of an OpenFlow networking deployment. This book will teach you how to setup your OpenFlow/SDN laboratory using state-of-the-art technology and open source offerings.

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 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.

Data Protection

Efficiently set data protection and privacy principles

Secure your Linux server and protect it from intruders, malware attacks, and other external threats

Getting Started with Red Hat Enterprise Virtualization

High Availability for the LAMP Stack

Principles and Paradigms

This book presents findings from the papers accepted at the Cyber Security Education Stream and Cyber Security Technology Stream of The National Cyber Summit's Research Track, reporting on the latest advances on topics ranging from software security to cyber attack detection and modelling to the use of machine learning in cyber security to legislation and policy to surveying of small businesses to cyber competition, and so on. Understanding the latest capabilities in cyber security ensures that users and organizations are best prepared for potential negative events. This book is of interest to cyber security researchers, educators, and practitioners, as well as students seeking to learn about cyber security.

Teaches you how and what to study in order to be best prepared for the Certified OpenStack Administrator exam. This fast-growing technology is creating a market that needs more qualified IT specialists with proven skills. This book covers 100% of the exam requirements for both The OpenStack Foundation and the Mirantis OpenStack Certification Exam. Each theme is taught using practical exercises and instructions for the command line and for the graphical client (Horizon). Each chapter is followed by review questions, complete with answers. Even after you have taken and passed your OpenStack exam, this book will remain a useful reference. What You Will Learn Understand the components that make up the cloud. Install and make an OpenStack

distribution from Mirantis, Red Hat or another community version. Work with OpenStack Identity Management, Dashboard, CLI, Object Storage, Block Storage, Networking, Telemetry, Orchestration, and Image Services. Learn how to troubleshoot all the main OpenStack services. Understand where to find information for future work with OpenStack. Who This Book Is For Certified OpenStack Administrator Study Guide is for Cloud and Linux engineers looking for a better understanding of how to work with the modern OpenStack IaaS Cloud, and wants to prove their knowledge by passing a Certified OpenStack Administrator Exam.

Terraform has become a key player in the DevOps world for defining, launching, and managing infrastructure as code (IaC) across a variety of cloud and virtualization platforms, including AWS, Google Cloud, Azure, and more. This hands-on second edition, expanded and thoroughly updated for Terraform version 0.12 and beyond, shows you the fastest way to get up and running. Gruntwork cofounder Yevgeniy (Jim) Brikman walks you through code examples that demonstrate Terraform's simple, declarative programming language for deploying and managing infrastructure with a few commands. Veteran sysadmins, DevOps engineers, and novice developers will quickly go from Terraform basics to running a full stack that can support a massive amount of traffic and a large team of developers. Explore changes from Terraform 0.9 through 0.12, including backends, workspaces, and first-class expressions Learn how to write production-grade Terraform modules Dive into manual and automated testing for Terraform code Compare Terraform to Chef, Puppet, Ansible, CloudFormation, and Salt Stack Deploy server clusters, load balancers, and databases Use Terraform to manage the state of your infrastructure Create reusable infrastructure with Terraform modules Use advanced Terraform syntax to achieve zero-downtime deployment Distributed and Cloud Computing: From Parallel Processing to the Internet of Things offers complete coverage of modern distributed computing technology including clusters, the grid, service-oriented architecture, massively parallel processors, peer-to-peer networking, and cloud computing. It is the first modern, up-to-date distributed systems textbook; it explains how to create high-performance, scalable, reliable systems, exposing the design principles, architecture, and innovative applications of parallel, distributed, and cloud computing systems. Topics covered by this book include: facilitating management, debugging, migration, and disaster recovery through virtualization; clustered systems for research or ecommerce applications; designing systems as web services; and social networking systems using peer-to-peer computing. The principles of cloud computing are discussed using examples from open-source and commercial

applications, along with case studies from the leading distributed computing vendors such as Amazon, Microsoft, and Google. Each chapter includes exercises and further reading, with lecture slides and more available online. This book will be ideal for students taking a distributed systems or distributed computing class, as well as for professional system designers and engineers looking for a reference to the latest distributed technologies including cloud, P2P and grid computing. Complete coverage of modern distributed computing technology including clusters, the grid, service-oriented architecture, massively parallel processors, peer-to-peer networking, and cloud computing Includes case studies from the leading distributed computing vendors: Amazon, Microsoft, Google, and more Explains how to use virtualization to facilitate management, debugging, migration, and disaster recovery Designed for undergraduate or graduate students taking a distributed systems course—each chapter includes exercises and further reading, with lecture slides and more available online

Training and Exam Preparation Guide (EX200 and EX300)

Hyperconverged Infrastructure Data Centers

Automating Configuration Management and Deployment the Easy Way

Production Ready OpenStack – Recipes for Successful Environments

4th International Symposium, UNet 2018, Hammamet, Tunisia, May 2 – 5, 2018, Revised Selected Papers

Green IT Engineering: Concepts, Models, Complex Systems Architectures

The FreeBSD Handbook is a comprehensive FreeBSD tutorial and reference. It covers installation, day-to-day use of FreeBSD, and mach more, such as the Ports collection, creating a custom kernel, security topics, the X Window System, how to use FreeBSD's Linux binary compatibility, and how to upgrade your system from source using the 'make world' command, to name a few.

Proceedings of ICAETT 2020

Host Integrity Monitoring Using Osiris and Samhain

Distributed and Cloud Computing

Red Hat RHCSA 8 Cert Guide