

Kib Micro Monitor Troubleshooting

With more than 60 practical and creative hacks, this book helps you turn Raspberry Pi into the centerpiece of some cool electronics projects. Want to create a controller for a camera or a robot? Set up Linux distributions for media centers or PBX phone systems? That’s just the beginning of what you’ll find inside Raspberry Pi Hacks. If you’re looking to build either a software or hardware project with more computing power than Arduino alone can provide, Raspberry Pi is just the ticket. And the hacks in this book will give you lots of great ideas. Use configuration hacks to get more out of your Pi Build your own web server or remote print server Take the Pi outdoors to monitor your garden or control holiday lights Connect with SETI or construct an awesome Halloween costume Hack the Pi’s Linux OS to support more complex projects Decode audio/video formats or make your own music player Achieve a low-weight payload for aerial photography Build a Pi computer cluster or a solar-powered lab

This IBM® Redbooks® publication captures several of the preferred practices and describes the performance gains that can be achieved by implementing the IBM FlashSystem products. These practices are based on field experience. This book highlights configuration guidelines and preferred practices for the storage area network (SAN) topology, clustered system, back-end storage, storage pools and managed disks, volumes, remote copy services, and hosts. It explains how you can optimize disk performance with the IBM System Storage® Easy Tier® function. It also provides preferred practices for monitoring, maintaining, and troubleshooting. This book is intended for experienced storage, SAN, IBM FlashSystem, SAN Volume Controller (SVC), and IBM Storwize® administrators and technicians. Understanding this book requires advanced knowledge of these environments.

Most applications today are distributed in some fashion. Monitoring the health and performance of these distributed architectures requires a new approach. Enter distributed tracing, a method of profiling and monitoring applications—especially those that use microservice architectures. There’s just one problem: distributed tracing can be hard. But it doesn’t have to be. With this practical guide, you’ll learn what distributed tracing is and how to use it to understand the performance and operation of your software. Key players at Lightstep walk you through instrumenting your code for tracing, collecting the data that your instrumentation produces, and turning it into useful, operational insights. If you want to start implementing distributed tracing, this book tells you what you need to know. You’ll learn: The pieces of a distributed tracing deployment: Instrumentation, data collection, and delivering value Best practices for instrumentation (the methods for generating trace data from your service) How to deal with or avoid overhead, costs, and sampling How to work with spans (the building blocks of request-based distributed traces) and choose span characteristics that lead to valuable traces Where distributed tracing is headed in the future

Imagine what you could do if scalability wasn’t a problem. With this hands-on guide, you’ll learn how the Cassandra database management system handles hundreds of terabytes of data while remaining highly available across multiple data centers. This expanded second edition—updated for Cassandra 3.0—provides the technical details and practical examples you need to put this database to work in a production environment. Authors Jeff Carpenter and Eben Hewitt demonstrate the advantages of Cassandra’s non-relational design, with special attention to data modeling. If you’re a developer, DBA, or application architect looking to solve a database scaling issue or future-proof your application, this guide helps you harness Cassandra’s speed and flexibility. Understand Cassandra’s distributed and decentralized structure Use the Cassandra Query Language (CQL) and cqlsh—the CQL shell Create a working data model and compare it with an equivalent relational model Develop sample applications using client drivers for languages including Java, Python, and Node.js Explore cluster topology and learn how nodes exchange data Maintain a high level of performance in your cluster Deploy Cassandra on site, in the Cloud, or with Docker Integrate Cassandra with Spark, Hadoop, Elasticsearch, Solr, and Lucene

Cassandra: The Definitive Guide

Linux Essentials

Learn Raspberry Pi with Linux

Raspberry Pi Hacks

Tips & Tools for Making Things with the Inexpensive Linux Computer

Mastering the Penetration Testing Distribution

The IBM® Hardware Management Console (HMC) provides to systems administrators a tool for planning, deploying, and managing IBM Power Systems™ servers. This IBM Redbooks® publication is an extension of IBM Power Systems HMC Implementation and Usage Guide, SG24-7491 and also merges updated information from IBM Power Systems Hardware Management Console: Version 8 Release 8.1.0 Enhancements, SG24-8232. It explains the new features of IBM Power Systems Hardware Management Console Version V8.8.1.0 through V8.8.4.0. The major functions that the HMC provides are Power Systems server hardware management and virtualization (partition) management. Further information about virtualization management is in the following publications: IBM PowerVM Virtualization Managing and Monitoring, SG24-7590 IBM PowerVM Virtualization Introduction and Configuration, SG24-7940 IBM PowerVM Enhancements What is New in 2013, SG24-8198 IBM Power Systems SR-IOV: Technical Overview and Introduction, REDP-5065 The following features of HMC V8.8.1.0 through HMC V8.8.4.0 are described in this book: HMC V8.8.1.0 enhancements HMC V8.8.4.0 enhancements System and Partition Templates HMC and IBM PowerVM® Simplification Enhancement Manage Partition Enhancement Performance and Capacity Monitoring HMC V8.8.4.0 upgrade changes

A resource to help forensic investigators locate, analyze, and understand digital evidence found on modern Linux systems after a crime, security incident or cyber attack. Practical Linux Forensics dives into the technical details of analyzing postmortem forensic images of Linux systems which have been misused, abused, or the target of malicious attacks. It helps forensic investigators locate and analyze digital evidence found on Linux desktops, servers, and IoT devices. Throughout the book, you learn how to identify digital artifacts which may be of interest to an investigation, draw logical conclusions, and reconstruct past activity from incidents. You’ll learn how Linux works from a digital forensics and investigation perspective, and how to interpret evidence from Linux environments. The techniques shown are intended to be independent of the forensic analysis platforms and tools used. Learn how to:

- Extract evidence from storage devices and analyze partition tables, volume managers, popular Linux filesystems (Ext4, Btrfs, and Xfs), and encryption
- Investigate evidence from Linux logs, including traditional syslog, the systemd journal, kernel and audit logs, and logs from daemons and applications
- Reconstruct the Linux startup process, from boot loaders (UEFI and Grub) and kernel initialization, to systemd unit files and targets leading up to a graphical login
- Perform analysis of power, temperature, and the physical environment of a Linux machine, and find evidence of sleep, hibernation, shutdowns, reboots, and crashes
- Examine installed software, including distro installers, package formats, and package management systems from Debian, Fedora, SUSE, Arch, and other distros
- Perform analysis of time and Locale settings, internationalization including language and keyboard settings, and geolocation on a Linux system
- Reconstruct user login sessions (shell, X11 and Wayland), desktops (Gnome, KDE, and others) and analyze keyrings, wallets, trash cans, clipboards, thumbnails, recent files and other desktop artifacts
- Analyze network configuration, including interfaces, addresses, network managers, DNS, wireless artifacts (Wi-Fi, Bluetooth, WWAN), VPNs (including WireGuard), firewalls, and proxy settings
- Identify traces of attached peripheral devices (PCI, USB, Thunderbolt, Bluetooth) including external storage, cameras, and mobiles, and reconstruct printing and scanning activity

Master IT hardware and software installation, configuration, repair, maintenance, and troubleshooting and fully prepare for the CompTIA® A+ Core 1 (220-1001) and Core 2 (220-1002) exams. This is your all-in-one, real-world, full-color guide to connecting, managing, and troubleshooting modern devices and systems in authentic IT scenarios. Its thorough instruction built on the CompTIA A+ Core 1 (220-1001) and Core 2 (220-1002) exam objectives includes coverage of Windows 10, Mac, Linux, Chrome OS, Android, iOS, cloud-based software, mobile and IoT devices, security, Active Directory, scripting, and other modern techniques and best practices for IT management. Award-winning instructor Cheryl Schmidt also addresses widely-used legacy technologies—making this the definitive resource for mastering the tools and technologies you’ll encounter in real IT and business environments. Schmidt’s emphasis on both technical and soft skills will help you rapidly become a well-qualified, professional, and customer-friendly technician. LEARN MORE QUICKLY AND THOROUGHLY WITH THESE STUDY AND REVIEW TOOLS: Learning Objectives and chapter opening lists of CompTIA A+ Certification Exam Objectives make sure you know exactly what you’ll be learning, and you cover all you need to know Hundreds of photos, figures, and tables present information in a visually compelling full-color design Practical Tech Tips provide real-world IT tech support knowledge Soft Skills best-practice advice and team-building activities in every chapter cover key tools and skills for becoming a professional, customer-friendly technician. REVIEW QUESTIONS—Including true/false, multiple choice, matching, fill-in-the-blank, and open-ended questions—carefully assess your knowledge of each learning objective Thought-provoking activities help students apply and reinforce chapter content, and allow instructors to “flip” the classroom if they choose Key Terms identify exam words and phrases associated with each topic Detailed Glossary clearly defines every key term Dozens of Critical Thinking Activities take you beyond the facts to deeper understanding Chapter Summaries recap key concepts for more efficient studying Certification Exam Tips provide insight into the certification exam and preparation process

Learn Azure in a Month of Lunches, Second Edition, is a tutorial on writing, deploying, and running applications in Azure. In it, you’ll work through 21 short lessons that give you real-world experience. Each lesson includes a hands-on lab so you can try out and lock in your new skills. Summary You can be incredibly productive with Azure without mastering every feature, function, and service. Learn Azure in a Month of Lunches, Second Edition gets you up and running quickly, teaching you the most important concepts and tasks in 21 practical bite-sized lessons. As you explore the examples, exercises, and labs, you’ll pick up valuable skills immediately and take your first steps to Azure mastery! This fully revised new edition covers core changes to the Azure UI, new Azure features, Azure containers, and the upgraded Azure Kubernetes Service. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Microsoft Azure is vast and powerful, offering virtual servers, application templates, and prebuilt services for everything from data storage to AI. To navigate it all, you need a trustworthy guide. In this book, Microsoft engineer and Azure trainer Iain Foulds focuses on core skills for creating cloud-based applications. About the book Learn Azure in a Month of Lunches, Second Edition, is a tutorial on writing, deploying, and running applications in Azure. In it, you’ll work through 21 short lessons that give you real-world experience. Each lesson includes a hands-on lab so you can try out and lock in your new skills. What’s inside Understanding Azure beyond point-and-click Securing applications and data Automating your environment Azure services for machine learning, containers, and more About the reader This book is for readers who can write and deploy simple web or client/server applications. About the author Iain Foulds is an engineer and senior content developer with Microsoft. Table of Contents PART 1 - AZURE CORE SERVICES 1 Before you begin 2 Creating a virtual machine 3 Azure Web Apps 4 Introduction to Azure Storage 5 Azure Networking basics PART 2 - HIGH AVAILABILITY AND SCALE 6 Azure Resource Manager 7 High availability and redundancy 8 Load-balancing applications 9 Applications that scale 10 Global databases with Cosmos DB 11 Managing network traffic and routing 12 Monitoring and troubleshooting PART 3 - SECURE BY DEFAULT 13 Backup, recovery, and replication 14 Data encryption 15 Securing information with Azure Key Vault 16 Azure Security Center and updates PART 4 - THE COOL STUFF 17 Machine learning and artificial intelligence 18 Azure Automation 19 Azure containers 20 Azure and the Internet of Things 21 Serverless computing

Reactive Programming with RxJava

IBM FlashSystem 5200 Product Guide

IBM System Storage DS8000 Performance Monitoring and Tuning

Distributed Tracing in Practice

Kubernetes for Full-Stack Developers

Kali Linux Revealed

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

Explains how to maintain or enhance systems running the Linux operating system

This IBM® Redbooks® publication provides guidance about how to configure, monitor, and manage your IBM DS8880 storage systems to achieve optimum performance, and it also covers the IBM DS8870 storage system. It describes the DS8880 performance features and characteristics, including hardware-related performance features, synergy items for certain operating systems, and other functions, such as IBM Easy Tier® and the DS8000® I/O Priority Manager. The book also describes specific performance considerations that apply to particular host environments, including database applications. This book also outlines the various tools that are available for monitoring and measuring I/O performance for different server environments, and it describes how to monitor the performance of the entire DS8000 storage system. This book is intended for individuals who want to maximize the performance of their DS8880 and DS8870 storage systems and investigate the planning and monitoring tools that are available. The IBM DS8880 storage system features, as described in this book, are available for the DS8880 model family with R8.0 release bundles (Licensed Machine Code (LMC) level 7.8.0).

An effective guide to becoming an AWS Certified Developer About This Book This fast-paced guide will help you clear the exam with confidence Learn to design, develop, and deploy cloud-based solutions using AWS Enhance your AWS skills with practice questions and mock tests Who This Book Is For This book is for IT professionals and developers looking to clear the AWS Certified Developer - Associate 2017 exam. Developers looking to develop and manage their applications on the AWS platform will also find this book useful. No prior AWS experience is needed. What You Will Learn Create and manage users, groups, and permissions using AWS Identity and Access Management services Create a secured Virtual Private Cloud (VPC) with Public and Private Subnets, Network Access Control, and Security groups Get started with Elastic Compute Cloud (EC2), launching your first EC2 instance, and working with it Handle application traffic with Elastic Load Balancing (ELB) and monitor AWS resources with CloudWatch Work with AWS storage services such as Simple Storage Service (S3), Glacier, and CloudFront Get acquainted with AWS DynamoDB - A NoSQL database service Coordinate work across distributed application components using Simple Workflow Service (SWF) In Detail AWS Certified Developer - Associate Guide starts with a quick introduction to AWS and the prerequisites to get you started. Then, this book gives you a fair understanding of core AWS services and basic architecture. Next, this book will describe about getting familiar with Identity and Access Management (IAM) along with Virtual private cloud (VPC). Moving ahead you will learn about Elastic Compute cloud (EC2) and handling application traffic with Elastic Load Balancing (ELB). Going ahead you we will talk about Monitoring with CloudWatch, Simple storage service (S3) and Glacier and CloudFront along with other AWS storage options. Next we will take you through AWS DynamoDB - A NoSQL Database Service, Amazon Simple Queue Service (SQS) and CloudFormation Overview. Finally, this book covers understanding Elastic Beanstalk and overview of AWS lambda. At the end of this book, we will cover enough topics, tips and tricks along with mock tests for you to be able to pass the AWS Certified Developer - Associate exam and develop as well as manage your applications on the AWS platform. Style and approach This step-by-step guide includes exercises and mock tests to clear the AWS certification exam and become a successful AWS developer.

IBM FlashSystem 9200 Product Guide

Upgrading and Repairing PCs

IBM Power Systems HMC Implementation and Usage Guide

Microservices: Up and Running

Red Hat RHCSA 8 Cert Guide

Real-Time Data and Stream Processing at Scale

In today’s app-driven era, when programs are asynchronous and responsiveness is so vital, reactive programming can help you write code that’s more reliable, easier to scale, and better-performing. With this practical book, Java developers will first learn how to view problems in the reactive way, and then build programs that leverage the best features of this exciting new programming paradigm. Authors Tomasz Nurkiewicz and Ben Christensen include concrete examples that use the RxJava library to solve real-world performance issues on Android devices as well as the server. You’ll learn how RxJava leverages parallelism and concurrency to help you solve today’s problems. This book also provides a preview of the upcoming 2.0 release. Write programs that react to multiple asynchronous sources of input without descending into “callback hell” Get to that aha! moment when you understand how to solve problems in the reactive way Cope with Observables that produce data too quickly to be consumed Explore strategies to debug and to test programs written in the reactive style Efficiently exploit parallelism and concurrency in your programs Learn about the transition to RxJava version 2

Whether you’re a veteran or an absolute n00b, this is the best place to start with Kali Linux, the security professional’s platform of choice, and a truly industrial-grade, and world-class operating system distribution—mature, secure, and enterprise-ready.

Learn Raspberry Pi with Linux will tell you everything you need to know about the Raspberry Pi’s GUI and command line so you can get started doing amazing things. You’ll learn how to set up your new Raspberry Pi with a monitor, keyboard and mouse, and you’ll discover that what may look unfamiliar in Linux is really very familiar. You’ll find out how to connect to the internet, change your desktop settings, and you’ll get a tour of installed applications. Next, you’ll take your first steps toward being a Raspberry Pi expert by learning how to get around at the Linux command line. You’ll learn about different shells, including the bash shell, and commands that will make you a true power user. Finally, you’ll learn how to create your first Raspberry Pi projects: Making a Pi web server: run LAMP on your own network Making your Pi wireless: remove all the cables and retain all the functionality Making a Raspberry Pi-based security cam and messenger service: find out who’s dropping by Making a Pi media center: stream videos and music from your Pi Raspberry Pi is awesome, and it’s Linux. And it’s awesome because it’s Linux. But if you’ve never used Linux or worked at the Linux command line before, it can be a bit daunting. Raspberry Pi is an amazing little computer with tons of potential. And Learn Raspberry Pi with Linux can be your first step in unlocking that potential.

This book is a printed edition of the Special Issue “Trends in GPR and other NDTs for Transport Infrastructure Assessment” that was published in Remote Sensing. This compilation of papers has been published to offer an extensive up-to-date overview of the state-of-the-art research activities in the challenging field of applying Ground-Penetrating Radar (GPR) and other nondestructive testing (NDT) methods for the assessment of transport infrastructure. New findings are addressed in 12 original research papers and 1 review paper, including various subjects such as pavements, railways, bridges, tunnels, and retaining walls. The best practices, troubleshooting, and future perspectives of the method for infrastructure inspection are also discussed in this reprint.

AA CompTIA A+ Core 1 (220-1001) & CompTIA A+ Core 2 (220-1002) Textbook

Oracle on LinuxONE

Instrumenting, Analyzing, and Debugging Microservices

Red Hat Enterprise Linux 7 (EX200 and EX300)

Cloud Native DevOps with Kubernetes

Practical Linux Forensics

Microservices architectures offer faster change speeds, better scalability, and cleaner, evolvable system designs. But implementing your first microservices architecture is difficult. How do you make myriad choices, educate your team on all the technical details, and navigate the organization to a successful execution to maximize your chance of success? With this book, authors Ronnie Mitra and Irakli Nadareishvili provide step-by-step guidance for building an effective microservices architecture. Architects and engineers will follow an implementation journey based on techniques and architectures that have proven to work for microservices systems. You’ll build an operating model, a microservices design, an infrastructure foundation, and two working microservices, then put those pieces together as a single implementation. For anyone tasked with building microservices or a microservices architecture, this guide is invaluable. Learn an effective and explicit end-to-end microservices system design Define teams, their responsibilities, and guidelines for working together Understand how to slice a big application into a collection of microservices Examine how to isolate and embed data into corresponding microservices Build a simple yet powerful CI/CD pipeline for infrastructure changes Write code for sample microservices Deploy a working microservices application on Amazon Web Services

Test your knowledge and know what to expect on A+ exam day CompTIA A+ Complete Practice Tests, Second Edition enables you to hone your test-taking skills, focus on challenging areas, and be thoroughly prepared to ace the exam and earn your A+ certification. This essential component of your overall study plan presents nine unique practice tests—and two 90-question bonus tests—covering 100% of the objective domains for both the 220-1001 and 220-1002 exams. Comprehensive coverage of every essential exam topic ensures that you will know what to expect on exam day and maximize your chances for success. Over 1200 practice questions on topics including hardware, networking, mobile devices, operating systems and procedures, troubleshooting, and more, lets you assess your performance and gain the confidence you need to pass the exam with flying colors. This second edition has been fully updated to reflect the latest best practices and updated exam objectives you will see on the big day. A+ certification is a crucial step in your IT career. Many businesses require this accreditation when hiring computer technicians or validating the skills of current employees. This collection of practice tests allows you to: Access the test bank in the Sybex interactive learning environment Understand the subject matter through clear and accurate answers and explanations of exam objectives Evaluate your exam knowledge and concentrate on problem areas Integrate practice tests with other Sybex review and study guides, including the CompTIA A+ Complete Study Guide and the CompTIA A+ Complete Deluxe Study Guide Practice tests are an effective way to increase comprehension, strengthen retention, and measure overall knowledge. The CompTIA A+ Complete Practice Tests, Second Edition is an indispensable part of any study plan for A+ certification.

Businesses of all sizes are faced with the challenge of managing huge volumes of data that are becoming increasingly valuable. But storing this data can be costly, and extracting value from the data is becoming more and more difficult. IT organizations have limited resources and cannot afford to make investment mistakes. The IBM® Storwize® V3500 system provides a smarter solution that is affordable, simple, and efficient, which enables businesses to overcome their storage challenges. IBM Storwize V3500 is the most recent addition to the IBM Storwize family of disk systems. It delivers

easy-to-use, entry-level configurations that are specifically designed to meet the modest budgets of small and medium-sized businesses. IBM Storwize V3500 features the following highlights: - Consolidate and share data with low cost iSCSI storage networking. - Deploy storage in minutes and perform storage management tasks quickly and easily through a breakthrough graphical user interface. - Experience peace of mind with proven IBM Storwize family high-availability data protection with snapshot technology and IBM warranty support. - Optimize efficiency by allocating only the amount of disk space needed at the time it is required with high performance, thin-provisioning capabilities.

Master every topic on Red Hat's new RHCSA™ and RHCE® exams. Assess your knowledge and focus your learning. Get the practical workplace knowledge you need! Start-to-finish RHCSA™ and RHCE® preparation from leading Linux system administrator, IT trainer, and certification expert Damian Tommasino! Master every RHCSA™ and RHCE® topic! Red Hat Enterprise Linux 6 local and network installation System services, runlevels, and bootup Disks, partitions, and file systems, including LUKS encryption Networking Package management User administration Logging, monitoring, and automation Kernel updates and tuning Security, including SELinux, firewalls, and policies Remote access, including SSH Apache, Squid, DNS, DHCP, NTP, and email NFS and Samba Client and network troubleshooting KVM virtualization Test your knowledge, build your confidence, and succeed! 22 hands-on RHCSA™ and RHCE® Labs, each with multiple real-world tasks Downloadable troubleshooting scripts Practical tutorials and real-world tips Exam tips Red Hat Enterprise Linux 6 Command Quick Reference Exclusive Red Hat exam prep advice and task lists Two full length lab-based practice exams Damian Tommasino (RHCE, RHCSA, MCSA, CCNA, CCENT, MCP, Security+, Network+, A+) is a Linux system administrator at TradeCard and CEO of Modular Learning Inc., an online IT training company. He blogs on Red Hat, Linux, and security at Security Nut (<http://secnut.blogspot.com>), and actively contributes to the popular IT exam certification forums at techexams.net.

IBM FlashSystem Best Practices and Performance Guidelines

The Protocols

Learn Azure in a Month of Lunches, Second Edition

HBase

Building, Deploying, and Scaling Modern Applications in the Cloud

Implementing the IBM Storwize V3500

This IBM® Redbooks® Product Guide publication describes the IBM FlashSystem® 5200 solution, which is a next-generation IBM FlashSystem control enclosure. It is an NVMe end-to-end platform that is targeted at the entry and midrange market and delivers the full capabilities of IBM FlashCore® technology. It also provides a rich set of software-defined storage (SDS) features that are delivered by IBM Spectrum® Virtualize, including the following features: Data reduction and deduplication Dynamic tiering Thin provisioning Snapshots Cloning Replication Data copy services Transparent Cloud Tiering IBM HyperSwap® including 3-site replication for high availability (HA) Scale-out and scale-up configurations further enhance capacity and throughput for better availability. The IBM FlashSystem 5200 is a high-performance storage solution that is based on a revolutionary 1U form factor. It consists of 12 NVMe Flash Devices in a 1U storage enclosure drawer with full redundant canister components and no single point of failure. It is designed for businesses of all sizes, including small, remote, branch offices and regional clients. It is a smarter, self-optimizing solution that requires less management, which enables organizations to overcome their storage challenges. Flash has come of age and price point reductions mean that lower parts of the storage market are seeing the value of moving over to flash and NVMe--based solutions. The IBM FlashSystem 5200 advances this transition by providing incredibly dense tiers of flash in a more affordable package. With the benefit of IBM FlashCore Module compression and new QLC flash-based technology becoming available, a compelling argument exists to move away from Nearline SAS storage and on to NVMe. With the release of IBM FlashSystem 5200 Software V8.4, extra functions and features are available, including support for new Distributed RAID1 (DRAID1) features, GUI enhancements, Redirect-on-write for Data Reduction Pool (DRP) snapshots, and 3-site replication capabilities. This book is aimed at pre-sales and post-sales technical support and marketing and storage administrators.

Every enterprise application creates data, whether it's log messages, metrics, user activity, outgoing messages, or something else. And how to move all of this data becomes nearly as important as the data itself. If you're an application architect, developer, or production engineer new to Apache Kafka, this practical guide shows you how to use this open source streaming platform to handle real-time data feeds. Engineers from Confluent and LinkedIn who are responsible for developing Kafka explain how to deploy production Kafka clusters, write reliable event-driven microservices, and build scalable stream-processing applications with this platform. Through detailed examples, you'll learn Kafka's design principles, reliability guarantees, key APIs, and architecture details, including the replication protocol, the controller, and the storage layer. Understand publish-subscribe messaging and how it fits in the big data ecosystem. Explore Kafka producers and consumers for writing and reading messages Understand Kafka patterns and use-case requirements to ensure reliable data delivery Get best practices for building data pipelines and applications with Kafka Manage Kafka in production, and learn to perform monitoring, tuning, and maintenance tasks Learn the most critical metrics among Kafka's operational measurements Explore how Kafka's stream delivery capabilities make it a perfect source for stream processing systems

Oracle Database 12c running on Linux is available for deployment on IBM® LinuxONE. The enterprise-grade Linux on LinuxONE solution is designed to add value to Oracle Database solutions, including the new functions that are introduced in Oracle Database 12c. In this IBM Redbooks® publication, we explore the IBM and Oracle Alliance and describe how Oracle Database benefits from LinuxONE. We then explain how to set up Linux guests to install Oracle Database 12c. We also describe how to use the Oracle Enterprise Manager Cloud Control Agent to manage Oracle Database 12c Release 1. Additionally, we discuss encryption for Oracle using Oracle Transparent Data Encryption (TDE) on Oracle 12c Release 2. We also describe a successful consolidation project from sizing to migration, performance management topics, and high availability. Finally, we end with a chapter about surrounding Oracle with Open Source software. The audience for this publication includes database consultants, installers, administrators, and system programmers. This publication is not meant to replace Oracle documentation, but to supplement it with our experiences while installing and using Oracle products.

IBM® Cloud Private is an application platform for developing and managing containerized applications across hybrid cloud environments, on-premises and public clouds. It is an integrated environment for managing containers that includes the container orchestrator Kubernetes, a private image registry, a management console, and monitoring frameworks. This IBM Redbooks covers tasks performed by IBM Cloud Private system administrators such as installation for high availability, configuration, backup and restore, using persistent volumes, networking, security, logging and monitoring. Istio integration, troubleshooting and so on. As part of this project we also developed several code examples and you can download those from the IBM Redbooks GitHub location: <https://github.com/IBMRedbooks>. The authors team has many years of experience in implementing IBM Cloud Private and other cloud solutions in production environments, so throughout this document we took the approach of providing you the recommended practices in those areas. If you are an IBM Cloud Private system administrator, this book is for you. If you are developing applications on IBM Cloud Private, you can see the IBM Redbooks publication IBM Cloud Private Application Developer's Guide, SG24-8441.

Kafka: The Definitive Guide

Building Embedded Linux Systems

Exam Core 1 220-1001 and Exam Core 2 220-1002

Troubleshooting and Repair of Radio Equipment

RHCSA and RHCE Cert Guide and Lab Manual

Microtimes

Docker is a next-generation platform for simplifying application containerization life-cycle. Docker allows you to create a robust and resilient environment in which you can generate portable, composable, scalable, and stable application containers. This book is a step-by-step guide that will walk you through the various features of Docker from Docker software installation to the impenetrable security of containers. The book starts off by elucidating the installation procedure for Docker and a few troubleshooting techniques. You will be introduced to the process of downloading Docker images and running them as containers. You'll learn how to run containers as a service (CaaS) and also discover how to share data among containers. Later on, you'll explore how to establish the link between containers and orchestrate containers using Docker Compose. You will also come across relevant details about application testing inside a container. You will discover how to debug a container using the docker exec command and the nsenter tool. Finally, you will learn how to secure your containers with SELinux and other proven methods.

If your organization is looking for a storage solution to accommodate a virtually endless amount of data, this book will show you how Apache HBase can fulfill your needs. As the open source implementation of Google's BigTable architecture, HBase scales to billions of rows and millions of columns, while ensuring that write and read performance remain constant.HBase: The Definitive Guideprovides the details you require, whether you simply want to evaluate this high-performance, non-relational database, or put it into practice right away. HBase's adoption rate is beginning to climb, and several IT executives are asking pointed questions about this high-capacity database. This is the only book available to give you meaningful answers. Learn how to distribute large datasets across an inexpensive cluster of commodity servers Develop HBase clients in many programming languages, including Java, Python, and Ruby Get details on HBase's primary storage system, HDFS:Hadoop's distributed and replicated filesystem Learn how HBase's native interface to Hadoop's MapReduce framework enables easy development and execution of batch jobs that can scan entire tables Discover the integration between HBase and other facets of the Apache Hadoop project

This IBM® Redbooks® Product Guide publication describes the IBM FlashSystem® 7200 solution, which is a comprehensive, all-flash, and NVMe-enabled enterprise storage solution that delivers the full capabilities of IBM FlashCore® technology. In addition, it provides a rich set of software-defined storage (SDS) features, including data reduction and de-duplication, dynamic tiering, thin-provisioning, snapshots, cloning, replication, data copy services, and IBM HyperSwap® for high availability (HA). Scale-out and scale-up configurations further enhance capacity and throughput for better availability

Kubernetes is the operating system of the cloud native world, providing a reliable and scalable platform for running containerized workloads. In this friendly, pragmatic book, cloud experts John Arundel and Justin Dominguz show you what Kubernetes can do and what you can do with it. You'll learn all about the Kubernetes ecosystem, and use battle-tested solutions to everyday problems. You'll build, step by step, an example cloud native application and its supporting infrastructure, along with a development environment and continuous deployment pipeline that you can use for your own applications. Understand containers and Kubernetes from first principles; no experience necessary Run your own clusters or choose a managed Kubernetes service from Amazon, Google, and others Use Kubernetes to manage resource usage and the container lifecycle Optimize clusters for cost, performance, resilience, capacity, and scalability Learn the best tools for developing, testing, and deploying your applications Apply the latest industry practices for security, observability, and monitoring Adopt DevOps principles to help make your development teams lean, fast, and effective

AWS Certified Developer - Associate Guide

IBM Cloud Private System Administrator's Guide

Learning Docker

Cambridge IGCSE Computer Science

Creating Asynchronous, Event-Based Applications

The Definitive Guide

Trust the best-selling Cert Guide series from Pearson IT Certification to help you learn, prepare, and practice for exam success. Cert Guides are built with the objective of providing assessment, review, and practice to help ensure you are fully prepared for your certification exam. Master Red Hat RHCSA (EX200) and RHCE (EX300) exam topics Assess your knowledge with chapter-opening quizzes Review key concepts with exam preparation tasks Test yourself with 4 practice exams (2 RHCSA and 2 RHCE) Gain expertise and knowledge using the companion website, which contains over 40 interactive exercises, 4 advanced CLI simulations, 40 interactive quizzes and glossary quizzes (one for each chapter), 3 virtual machines and more. Red Hat RHCSA/RHCE 7 Cert Guide presents you with an organized test preparation routine through the use of proven series elements and techniques. “Do I Know This Already?” quizzes open each chapter and allow you to decide how much time you need to spend on each section. Exam topic lists make referencing easy. Chapter-ending labs help you drill on key concepts you must know thoroughly. Red Hat RHCSA/RHCE 7, Premium Edition eBook and Practice Test focuses specifically on the objectives for the newest Red Hat RHCSA (EX200) and RHCE (EX300) exams reflecting Red Hat Enterprise Linux 7. Expert Linux trainer and consultant 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. Well-regarded for its level of detail, assessment features, comprehensive design scenarios, and challenging review questions and exercises, this study guide helps you master the concepts and techniques that will allow you to succeed on the exam the first time. This study guide helps you master all the topics on the new RHCSA (EX200) and RHCE (EX300) exams, including Part 1: RHCSA Basic System Management: Installation, tools, text files, server connections; user, group, and permissions management; network configuration Operating Running Systems: Process management, VMs, package installation, task scheduling, logging, managing partitions and LVM logical volumes Advanced System Administration: Basic kernel management, basic Apache server configuration, boot procedures/troubleshooting Managing Network Services: Using Kickstart; managing SELinux; configuring firewalls, remote mounts, FTP, and time services Part 2: RHCE System Configuration/Management: External authentication/authorization, iSCSI SANs, performance reporting, optimization, logging, routing/advanced networking, Bash scripting System Security: Configuring firewalls, advanced Apache services, DNS, MariaDB, NFS, Samba, SMTP, SSH, and time synchronization

This IBM® Redbooks® Product Guide publication describes the IBM FlashSystem® 9200 solution, which is a comprehensive, all-flash, and NVMe-enabled enterprise storage solution that delivers the full capabilities of IBM FlashCore® technology. In addition, it provides a rich set of software-defined storage (SDS) features, including data reduction and de-duplication, dynamic tiering, thin-provisioning, snapshots, cloning, replication, data copy services, and IBM HyperSwap® for high availability (HA). Scale-out and scale-up configurations further enhance capacity and throughput for better availability.

Linux® is being adopted by an increasing number of embedded systems developers, who have been won over by its sophisticated scheduling and networking, its cost-free license, its open development model, and the support offered by rich and powerful programming tools. While there is a great deal of hype surrounding the use of Linux in embedded systems, there is not a lot of practical information. Building Embedded Linux Systems is the first in-depth, hard-core guide to putting together an embedded system based on the Linux kernel. This indispensable book features arcane and previously undocumented procedures for: Building your own GNU development toolchain Using an efficient embedded development framework Selecting, configuring, building, and installing a target-specific kernel Creating a complete target root filesystem Setting up, manipulating, and using solid-state storage devices Installing and configuring a bootloader for the target Cross-compiling a slew of utilities and packages Debugging your embedded system using a plethora of tools and techniques Details are provided for various target architectures and hardware configurations, including a thorough review of Linux's support for embedded hardware. All explanations rely on the use of open source and free software packages. By presenting how to build the operating system components from pristine sources and how to find more documentation or help, this book greatly simplifies the task of keeping complete control over one's embedded operating system, whether it be for technical or sound financial reasons.Author Karim Yaghmour, a well-known designer and speaker who is responsible for the Linux Trace Toolkit, starts by discussing the strengths and weaknesses of Linux as an embedded operating system. Licensing issues are included, followed by a discussion of the basics of building embedded Linux systems. The configuration, setup, and use of over forty different open source and free software packages commonly used in embedded Linux systems are also covered. uClibc, BusyBox, U-Boot, OpensSH, tftpd, tftp, strace, and gdb are among the packages discussed.

This book is designed to help newcomers and experienced users alike learn about Kubernetes. Its chapters are designed to introduce core Kubernetes concepts and to build on them to a level where running an application on a production cluster is a familiar, repeatable, and automated process. From there, more advanced topics are introduced, like how to manage a Kubernetes cluster itself.

IBM FlashSystem 7200 Product Guide

EX200

Red Hat RHCSA/RHCE 7 Cert Guide

Complete A+ Guide to IT Hardware and Software

Distributed Data at Web Scale

A Guide for Digital Investigators

Endorsed by Cambridge International Examinations. Develop your students computational thinking and programming skills with complete coverage of the latest syllabus from experienced examiners and teachers. - Follows the order of the syllabus exactly, ensuring complete coverage - Introduces students to self-learning exercises, helping them learn how to use their knowledge in new scenarios Accompanying animation files of the key concepts are available to download for free online. See the Quick Links to the left to access. This book covers the IGCSE (0478), O Level (2210) and US IGCSE entry (0473) syllabuses, which are for first examination 2015. It may also be a useful reference for students taking the new Computer Science AS level course (9608).

Master building and integrating secure private networks using OpenVPN About This Book Discover how to configure and set up a secure OpenVPN Enhance user experience by using multiple authentication methods Delve into better reporting, monitoring, logging, and control with OpenVPN Who

This Book Is For If you are familiar with TCP/IP networking and general system administration, then this book is ideal for you. Some knowledge and understanding of core elements and applications related to Virtual Private Networking is assumed. What You Will Learn Identify different VPN protocols (IPSec, PPTP, OpenVPN) Build your own PKI and manage certificates Deploy your VPN on various devices like PCs, mobile phones, tablets, and more Differentiate between the routed and bridged network Enhance your VPN with monitoring and logging Authenticate against third-party databases like LDAP or the Unix password file Troubleshoot an OpenVPN setup that is not performing correctly In Detail Security on the internet is increasingly vital to both businesses and individuals. Encrypting network traffic using Virtual Private Networks is one method to enhance security. The internet, corporate, and “free internet” networks grow more hostile every day. OpenVPN, the most widely used open source VPN package, allows you to create a secure network across these systems, keeping your private data secure. The main advantage of using OpenVPN is its portability, which allows it to be embedded into several systems. This book is an advanced guide that will help you build secure Virtual Private Networks using OpenVPN. You will begin your journey with an exploration of OpenVPN, while discussing its modes of operation, its clients, its secret keys, and their format types. You will explore PKI: its setting up and working, PAM authentication, and MTU troubleshooting. Next, client-server mode is discussed, the most commonly used deployment model, and you will learn about the two modes of operation using “tun” and “tap” devices. The book then progresses to more advanced concepts, such as deployment scenarios in tun devices which will include integration with back-end authentication, and securing your OpenVPN server using iptables, scripting, plugins, and using OpenVPN on mobile devices and networks. Finally, you will discover the strengths and weaknesses of the current OpenVPN implementation, understand the future directions of OpenVPN, and delve into the troubleshooting techniques for OpenVPN. By the end of the book, you will be able to build secure private networks across the internet and hostile networks with confidence. Style and approach An easy-to-follow yet comprehensive guide to building secure Virtual Private Networks using OpenVPN. A progressively complex VPN design is developed with the help of examples. More advanced topics are covered in each chapter, with subjects grouped according to their complexity, as well as their utility.

This IBM® Redbooks® publication describes several of the preferred practices and describes the performance gains that can be achieved by implementing the IBM SAN Volume Controller powered by IBM Spectrum® Virtualize V8.4. These practices are based on field experience. This book highlights configuration guidelines and preferred practices for the storage area network (SAN) topology, clustered system, back-end storage, storage pools, and managed disks, volumes, Remote Copy services, and hosts. Then, it provides performance guidelines for IBM SAN Volume Controller, back-end storage, and applications. It explains how you can optimize disk performance with the IBM System Storage Easy Tier® function. It also provides preferred practices for monitoring, maintaining, and troubleshooting IBM SAN Volume Controller. This book is intended for experienced storage, SAN, and IBM SAN Volume Controller administrators and technicians. Understanding this book requires advanced knowledge of the IBM SAN Volume Controller, IBM FlashSystem, and SAN environments.

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

Hands-on Guide to the Red Hat Exams

IBM SAN Volume Controller Best Practices and Performance Guidelines

CompTIA A+ Complete Practice Tests

TCP/IP Illustrated, Volume 1

Mastering OpenVPN

The Art and Science of Protective Relaying

“For an engineer determined to refine and secure Internet operation or to explore alternative solutions to persistent problems, the insights provided by this book will be invaluable.” —Vint Cerf, Internet pioneer

TCP/IP Illustrated, Volume 1, Second Edition, is a detailed and visual guide to today's TCP/IP protocol suite. Fully updated for the newest innovations, it demonstrates each protocol in action through realistic examples from modern Linux, Windows, and Mac OS environments. There's no better way to discover why TCP/IP works as it does, how it reacts to common conditions, and how to apply it in your own applications and networks. Building on the late W. Richard Stevens' classic first edition, author Kevin R. Fall adds his cutting-edge experience as a leader in TCP/IP protocol research, updating the book to fully reflect the latest protocols and best practices. He first introduces TCP/IP's core goals and architectural concepts, showing how they can robustly connect diverse networks and support multiple services running concurrently. Next, he carefully explains Internet addressing in both IPv4 and IPv6 networks. Then, he walks through TCP/IP's structure and function from the bottom up: from link layer protocols—such as Ethernet and Wi-Fi—through network, transport, and application layers. Fall thoroughly introduces ARP, DHCP, NAT, firewalls, ICMPv4/ICMPv6, broadcasting, multicasting, UDP, DNS, and much more. He offers extensive coverage of reliable transport and TCP, including connection management, timeout, retransmission, interactive data flow, and congestion control. Finally, he introduces the basics of security and cryptography, and illuminates the crucial modern protocols for protecting security and privacy, including EAP, IPsec, TLS, DNSSEC, and DKIM. Whatever your TCP/IP experience, this book will help you gain a deeper, more intuitive understanding of the entire protocol suite so you can build better applications and run more reliable, efficient networks.

Trends in GPR and Other NDTs for Transport Infrastructure Assessment
Your one-stop solution to pass the AWS developer's certification