Hard Partitioning And Virtualization With Oracle Virtual

What exactly is virtualization? As this concise book explains, virtualization is a smorgasbord of technologies that offer organizations many advantages, whether you're managing extremely large stores of rapidly changing data, scaling out an application, or harnessing huge amounts of computational power. With this guide, you get an overview of the five main types of virtualization technology, along with information on security, management, and modern use cases. Topics include: Access virtualization—Allows access to any application from any device Application virtualization—Enables applications to run on many different operating systems and hardware platforms Processing virtualization—Makes one system seem like many, or many seem like one Network virtualization—Presents an artificial view of the network that differs from the physical reality Storage virtualization—Allows many systems to share the same storage devices, enables concealing the location of storage systems, and more

SAP BW/4HANA has introduced a new era in data warehousing at SAP. Further steps towards simplification, flexibility, and performance are now possible with SAP HANA as the proven technological basis. SAP BW/4HANA offers modern concepts for data management, operation, and modeling and thus opens the door for fully innovative application scenarios. This book will show you how the SAP HANA database influences the Business Warehouse and how you can optimize your system. As a practical guide, the book is aimed at experienced SAP BW experts as well as decision makers who need a well-grounded overview. The authors address the versions SAP BW/4HANA 1.0 and SAP BW 7.5 in equal measure, highlighting new functions and differences. The book also focuses on the migration options and conversion tools for moving to SAP BW/4HANA. Use this reference book to enter the world of SAP BW with SAP HANA as the database platform! - Migration, sizing, operation, data management with SAP BW/4HANA and SAP BW 7.5 on HANA - The new central source Systems SAP HANA and ODP - New modeling options, mixed scenarios, LSA++, and differences compared to SAP BW 7.5 - The role of BW in operational SAP reporting

Complete Coverage of Xen, Including Version 3.2 Virtualization with Xen is the first book to demonstrate to readers how to install, administer, and maintain a virtual infrastructure based on XenSource’s latest release, Xen 3.2. It discusses best practices for setting up a Xen environment correctly the first time, maximizing the utilization of server assets while taking advantage of the fastest and most secure enterprise-grade paravirtualization architecture. It covers both basic and advanced topics, such as planning and installation, physical-to-virtual migrations, virtual machine provisioning, resource management, and monitoring and troubleshooting guests and Xen hosts. * Explore Xen’s Virtualization Model Find a complete overview of the architecture model as well of all products: Xen 3.0 , Xen Express, XenServer, and Xen Enterprise. * Deploy Xen Understand the system requirements, learn installation methods, and see how to install Xen on a free Linux distribution. * Master the Administrator Console Learn how to use the command-line tools and the remote Java-based consoler that manages the configuration and operations of XenServer hosts and VMs. * Manage Xen with Third-Party Tools Use products like openQRM, Enomalism, and Project ConVirt to manage the VMM. * Deploy a Virtual Machine in Xen Learn about workload planning and installing modified guests, unmodified guests, and Windows guests. * Explore Advanced Xen Concepts Build a Xen Cluster, complete a XenVM migration, and discover XenVM backup and recovery solutions. * See the Future of Virtualization See the unofficial Xen road map and what virtual infrastructure holds for tomorrow’s data center. * See Other Virtualization Technologies and How They Compare with Xen Take a look

at the different types of server virtualization, other virtual machine software available, and how they compare with Xen. Xen has the lead in the open-source community; now distributed as a standard kernel package for Novell's SLES 10 and Red Hat's RHEL 5 and Fedora Core 6 Linux distributions Covers installation, administration, management, monitoring, and deployment planning and strategies

A Concise, Up-to-Date Guide to Oracle Virtualization Technologies, Including Oracle Solaris Zones, Oracle VM Server for SPARC, Physical Domains, and Oracle VM Virtual Box Oracle® Solaris 11 System Virtualization Essentials, Second Edition, has been fully updated for Oracle 11 and is a complete, practical, and up-to-date guide to selecting, implementing, and applying today's Oracle virtualization technologies to real-world business problems. Four Oracle experts thoroughly cover current Oracle Solaris virtualization options. They help you understand key use cases, including consolidation, asynchronous workloads, software development, testing/staging, workload mobility, legacy OS support, provisioning, scalability, fine-grained OS changes, and security. They also compare and address each leading approach to virtualization: OS virtualization, hypervisor-based virtual machines, and hardware partitioning. The authors illuminate the use of virtualization with many Oracle software applications and engineered systems, including SuperCluster, Secure Enterprise Cloud Infrastructure, Exalytics, Oracle Database, and security hardening scenarios. Bringing together case study examples and in-the-trenches experience, this guide explains how to Leverage Oracle Solaris Zones to improve security, deployment, resource usage, and management Use Logical Domains to deploy different versions of Oracle Solaris on SPARC systems Maximize workload isolation on SPARC systems with Physical Domains Use Oracle Solaris Zones to optimize workload efficiency and scalability Improve data center flexibility with live migration Develop and test software in heterogeneous environments with Oracle VM Virtual Box Mix virtualization technologies to maximize workload density Migrate Solaris 10 workloads to new hardware via Solaris Zones Register your product at informit.com/register for convenient access to downloads, updates, and corrections as they become available.

This book describes a cross-domain architecture and design tools for networked complex systems where application subsystems of different criticality coexist and interact on networked multi-core chips. The architecture leverages multi-core platforms for a hierarchical system perspective of mixed-criticality applications. This system perspective is realized by virtualization to establish security, safety and real-time performance. The impact further includes a reduction of time-to-market, decreased development, deployment and maintenance cost, and the exploitation of the economies of scale through cross-domain components and tools. Describes an end-to-end architecture for hypervisor-level, chip-level, and cluster level. Offers a solution for different types of resources including processors, on-chip communication, off-chip communication, and I/O. Provides a cross-domain approach with examples for wind-power, health-care, and avionics. Introduces hierarchical adaptation strategies for mixed-criticality systems Provides modular verification and certification methods for the seamless integration of mixed-criticality systems. Covers platform technologies, along with a methodology for the development process. Presents an experimental evaluation of technological results in cooperation with industrial partners. The information in this book will be extremely useful to industry leaders who design and manufacture products with distributed embedded systems in mixed-criticality use-cases. It will also benefit suppliers of embedded components or development tools used in this area. As an educational tool, this material can be used to teach students and working professionals in areas including embedded systems, computer networks, system architecture, dependability, real-time systems, and avionics, wind-power and health-care systems.

For more than 20 years, Network World has been the premier provider of information, intelligence and insight for network and IT executives responsible for the digital nervous systems of large organizations. Readers are responsible for designing, implementing and managing the

voice, data and video systems their companies use to support everything from business critical applications to employee collaboration and electronic commerce.

This SpringerBriefs is an overview of the emerging field of wireless access and mobile network virtualization. It provides a clear and relevant picture of the current virtualization trends in wireless technologies by summarizing and comparing different architectures, techniques and technologies applicable to a future virtualized wireless network infrastructure. The readers are exposed to a short walkthrough of the future Internet initiative and network virtualization technologies in order to understand the potential role of wireless virtualization in the broader context of next-generation ubiquitous networks. Three main wireless virtualization perspectives are explored, along with the potential challenges and requirements of a sustainable wireless virtualization framework. Finally, it presents an example of a multi-perspective wireless virtualization framework. The readers learn the latest concepts in the application of wireless virtualization as well as its relationship with cutting-edge wireless technologies such as software-defined radio (SDR) and cognitive radio.

Successfully meeting the challenges of combining VMware and Oracle, this comprehensive reference provides a broad spectrum of technological recommendations that demonstrate how to reliably and consistently achieve optimal configuration and maximum performance for any virtualized Oracle database scenario. The guide includes the best practices for virtualized servers, suggested virtualization server configuration, and recommendations for client operating system configuration for Oracle in a virtualized world. With real-world examples and highly applicable advice, this handbook also details the complexities of designing, configuring, maintaining, and tuning Oracle database deployments, making it a complete compendium for keeping virtualized Oracle databases in top form.

Master SDDC Operations with proven best practices About This Book Understand the drawbacks of the traditional paradigm and management that make operations difficult in SDDC Master performance and capacity management in Software-Defined Data Center Operationalize performance and capacity monitoring with proven dashboards Who This Book Is For This book is primarily for any system administrator or cloud infrastructure specialist who is interested in performance management and capacity management using VMware technologies. This book will also help IT professionals whose area of responsibility is not VMware, but who work with the VMware team. You can be Windows, Linux, Storage, or Network team; or application architects. Note that prior exposure to the VMware platform of data-center and cloud-based solutions is expected. What You Will Learn Simplify the task of performance and capacity management Master the counters in vCenter and vRealize Operations and understand their dependency on one another Educate your peers and management on SDDC Operations Complete your SDDC monitoring to include non-VMware components Perform SDDC performance troubleshooting Explore real-life examples of how super metric and advanced dashboards Introduce and implement a Performance SLA Accomplish your Capacity Management by taking into service tiering and performance SLA In Detail Performance management and capacity management are the two top-most issues faced by enterprise IT when doing virtualization. Until the first edition of the book, there was no in-depth coverage on the topic to tackle the issues systematically. The second edition expands the first edition, with added information and reorganizing the book into three logical parts. The first part provides the technical foundation of SDDC Management. It explains the difference between a software-defined data center and a classic physical data center, and how it impacts both architecture and operations. From this strategic view, it zooms into the most common challenges—performance management and capacity management. It introduces a new concept called Performance SLA and also a new way of doing capacity management. The next part provides the actual solution that you can implement in your environment. It puts the theories together and provides real-life examples created together with customers. It provides the reasons behind

each dashboard, so that you get the understanding on why it is required and what problem it solves. The last part acts as a reference section. It provides a complete reference to vSphere and vRealize Operations counters, explaining their dependencies and providing practical guidance on the values you should expect in a healthy environment. Style and approach This book covers the complex topic of managing performance and capacity in an easy-to-follow style. It relates real-world scenarios to topics in order to help you implement the book's teachings on the go.

Mastering KVM VirtualizationPackt Publishing Ltd

This IBM Redbooks publication discusses z/VM and Linux operations from the perspective of the z/OS programmer or system programmer. Although other books have been written about many of these topics, this book gives enough information about each topic to describe z/VM and Linux on IBM System z operations to somebody who is new to both environments. This book is intended for z/OS programmers and system programmers who are transitioning to the z/VM and Linux on System z environments and who want a translation guide for assistance. We base this book on our experiences using System z10 Enterprise Edition, z/VM version 5.3 RSU 0701, and Novell SUSE Linux Enterprise Server (SLES) 10 on System z.

This book contains 36 chapters and is structured to facilitate readers to grasp concepts, understand implementation procedures, learn command syntax, configuration files and daemons involved, and understand basic troubleshooting. The 36 chapters are divided into three key areas: UNIX Fundamentals, HP-UX System Administration and HP-UX Network Administration. These chapters cover topics that are on HP’s recommended certification courses – UNIX Fundamentals, System and Network Administration I, System and Network Administration II, and HP-UX for Experienced UNIX System Administrators – as well as on official exam objectives list. 1. UNIX Fundamentals (chapters 1 to 6, and 22) covers the basics of UNIX and HP-UX. Most information is not specific to a particular UNIX flavor, rather, includes general UNIX concepts, file manipulation and security techniques, vi editor, shell and awk programming, basic commands and other essential topics. Unlike many other similar books, a chapter on shell scripting is presented after covering HP-UX System Administration area. This is done purposely to provide readers with practical examples based on the knowledge they gain from UNIX Fundamentals and HP-UX System Administration chapters. 2. HP-UX System Administration (chapters 7 to 21) covers the HP-UX-specific system administration concepts and topics including server hardware information and mass storage stack; virtualization technologies and HP-UX installation; software and patch management; user and group administration; LVM and file system administration; EVFS and swap management; system shutdown and startup procedures; kernel configuration and management techniques; backup and restore functions; printer and print request management, job automation and process control; and system logging and performance monitoring. 3. HP-UX Network Administration (chapters 23 to 36) covers HP-UX network and security administration concepts and topics such as OSI and TCP/IP reference models; network hardware overview and LAN interface administration; IP subnetting and routing techniques; basic network testing and troubleshooting; internet services and sendmail; time synchronization (NTP) and resource sharing (NFS, AutoFS and CIFS) services; naming (DNS, NIS and LDAP) services and automated installation techniques; and high-availability concepts and system security tools and practices. Throughout the book figures, tables, screen shots and examples are given for explanation purposes. The book includes 863 exam review questions with answers.

This book constitutes the refereed proceedings of the 9th International Conference on Algorithms and Architectures for Parallel Processing, ICA3PP 2009, held in Taipei, Taiwan, in June 2009. The 80 revised full papers were carefully reviewed and selected from 243 submissions. The papers are organized in topical sections on bioinformatics in parallel computing; cluster, grid and fault-tolerant computing; cluster

distributed parallel operating systems; dependability issues in computer networks and communications; dependability issues in distributed and parallel systems; distributed scheduling and load balancing, industrial applications; information security internet; multi-core programming software tools; multimedia in parallel computing; parallel distributed databases; parallel algorithms; parallel architectures; parallel IO systems and storage systems; performance of parallel ditributed computing systems; scientific applications; self-healing, self-protecting and fault-tolerant systems; tools and environments for parallel and distributed software development; and Web service.

This IBM® Redbooks® publication highlights TS7700 Virtualization Engine Release 2.0. It is intended for system architects who want to integrate their storage systems for smoother operation. The IBM Virtualization Engine TS7700 offers a modular, scalable, and high-performing architecture for mainframe tape virtualization for the IBM System z® environment. It integrates 3592 Tape Drives, high-performance disks, and the new IBM System p® server into a storage hierarchy. This storage hierarchy is managed by robust storage management firmware with extensive self-management capability. It includes the following advanced functions: Policy management to control physical volume pooling Cache management Dual copy, including across a grid network Copy mode control The TS7700 Virtualization Engine offers enhanced statistical reporting. It also includes a standards-based management interface for TS7700 Virtualization Engine management. The new IBM Virtualization Engine TS7700 Release 2.0 introduces the next generation of TS7700 Virtualization Engine servers for System z tape: IBM Virtualization Engine TS7720 Server Model VEB IBM Virtualization Engine TS7740 Server Model V07 These Virtualization Engines are based on IBM POWER7® technology. They offer improved performance for most System z tape workloads compared to the first generation of TS7700 Virtualization Engine servers.

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

believes in the power of virtualization to help a business use resources more effectively.

"This book addresses the development of reconfigurable embedded control systems and describes various problems in this important research area, which include static and dynamic (manual or automatic) reconfigurations, multi-agent architectures, modeling and verification, component-based approaches, architecture description languages, distributed reconfigurable architectures, real-time and low power scheduling, execution models, and the implementation of such systems"--

If you love Essbase and hate seeing it misused, then this is the book for you. Written by 12 Essbase professionals that are either acknowledged Essbase gurus or certified Oracle ACEs, Developing Essbase Applications: Advanced Techniques for Finance and IT Professionals provides an unparalleled investigation and explanation of Essbase theory and best practices. Detailing the hows and the whys of successful Essbase implementation, the book arms you with simple yet powerful tools to meet your immediate needs, as well as the theoretical knowledge to proceed to the next level with Essbase. Infrastructure, data sourcing and transformation, database design, calculations, automation, APIs, reporting, and project implementation are covered by subject matter experts who work with the tools and techniques on a daily basis. In addition to practical cases that illustrate valuable lessons learned, the book offers: Undocumented Secrets—Dan Pressman describes the previously unpublished and undocumented inner workings of the ASO Essbase engine. Authoritative Experts—If you have questions that no one else can solve, these 12 Essbase professionals are the ones who can answer them. Unpublished—Includes the only third-party guide to infrastructure. Infrastructure is easy to get wrong and can doom any Essbase project. Comprehensive—Let there never again be a question on how to create blocks or design BSO databases for performance—Dave Farnsworth provides the answers within. Innovative—Cameron Lackpour and Joe Aultman bring new and exciting solutions to persistent Essbase problems. With a list of contributors as impressive as the program of presenters at a leading Essbase conference, this book offers unprecedented access to the insights and experiences of those at the forefront of the field. The previously unpublished material presented in these pages will give you the practical knowledge needed to use this powerful and intuitive tool to build highly useful analytical models, reporting systems, and forecasting applications.

This IBM® Redbooks® publication provides an introduction to PowerVMTM virtualization technologies on Power System servers. PowerVM is a combination of hardware, firmware, and software that provides CPU, network, and disk virtualization. These are the main virtualization technologies: POWER7, POWER6, and POWER5 hardware POWER Hypervisor Virtual I/O Server Though the PowerVM brand includes partitioning, management software, and other offerings, this publication focuses on the virtualization technologies that are part of the PowerVM Standard and Enterprise Editions. This publication is also designed to be an introduction guide for system administrators, providing instructions for these tasks: Configuration and creation of partitions and resources on the HMC Installation and configuration of the Virtual I/O Server Creation and installation of virtualized partitions Examples using AIX, IBM i, and Linux This edition has been updated with the latest updates available and an improved content organization.

The book Cloud Computing Fundamentals is intended for both undergraduate and graduate students who seek a quick overview of cloud computing technologies without the need to go into complex technical details. Each chapter is written to provide enough information for students to have a broad picture of the different concepts underlying cloud computing and its applications in the real world. Students will find that attention has been given to keep notes on each topic discussed as concise and precise as possible to impart the necessary knowledge required for a basic understanding of cloud computing. At the end of each chapter, students will also find a summary and review questions that help focus on key points covered. This book can be used as supplementary material for a course in cloud computing.

If a network is not secure, how valuable is it? Introduction to Computer Networks and Cybersecurity takes an integrated approach to networking and cybersecurity, highlighting the interconnections so that you quickly understand the complex design issues in modern networks. This full-color book uses a wealth of examples and illustrations to effective

This book is a collection of accepted papers that were presented at the International Conference on Communication and Computing Systems (ICCCS-2016), Dronacharya College of Engineering, Gurgaon, September 9–11, 2016. The purpose of the conference was to provide a platform for interaction between scientists from industry, academia and other areas of society to discuss the current advancements in the field of communication and computing systems. The papers submitted to the proceedings were peer-reviewed by 2-3 expert referees. This volume contains 5 main subject areas: 1. Signal and Image Processing, 2. Communication & Computer Networks, 3. Soft Computing, Intelligent System, Machine Vision and Artificial Neural Network, 4. VLSI & Embedded System, 5. Software Engineering and Emerging Technologies.

Server virtualization technologies are becoming more popular to help efficiently utilize resources by consolidating servers. IBM® , the first company that developed and made available the virtual technology in 1966, offers advanced, powerful, reliable, and cost-saving virtualization technologies in various hardware and software products including DB2® for Linux, UNIX, and Windows. This IBM Redbooks® publication describes using IBM DB2 9 with server virtualization. We start with a general overview of virtualization and describe specific server virtualization technologies to highlight how the server virtualization technologies have been implemented. With this introduction anyone new to virtualization will have a better understanding of server virtualization and the industry server virtualization technologies available in the market. Following the virtualization concept, we describe in detail the setup, configuration, and managing of DB2 with three leading server virtualization technologies: IBM Power SystemsTM with PowerVMTM VMware Hyper-V We discuss the virtual machine setup with DB2 in mind to help IT support understand the effective ways of setting up a virtual environment specific for DB2. We explain the architecture and components of these three server virtualization technologies to allow DBAs to understand how a database environment using DB2 can benefit from using the server virtualization technologies. In addition, we discuss the DB2 features and functions that can take advantage of using server virtualization. These features are put into practice when describing how to set up DB2 with the three virtualization technologies discussed in this book. This book also includes a list of best practices from the various tests performed while using these

virtualization technologies. These best practices can be used as a guideline or a reference when setting up DB2 using these virtualization technologies.

Implementing Citrix XenServer Quick Starter is a practical, hands-on guide that will help you get started with the Citrix XenServer Virtualization technology with easy-to-follow instructions.Implementing Citrix XenServer Quick Starter is for system administrators who have little to no information on virtualization and specifically Citrix XenServer Virtualization. If you're managing a lot of physical servers and are tired of installing, deploying, updating, and managing physical machines on a daily basis over and over again, then you should probably explore your option of XenServer Virtualization. This book will be your best friend to make you a better systems engineer.

Virtualization and related technologies like hypervisors, which create virtual machines on a single hardware machine, and containers (also known as zones), which create virtual operating systems running on a single operating system, are a totally new area for many system administrators. Oracle® Solaris™ 10 System Virtualization Essentials provides an accessible introduction to computer virtualization, specifically the system virtualization technologies that use the Oracle Solaris or OpenSolaris operating systems. This accessible guide covers the key concepts system administrators need to understand and explains how to Use Dynamic Domains to maximize workload isolation on Sun SPARC systems Use Oracle VM Server for SPARC to deploy different Oracle Solaris 10 and OpenSolaris environments on SPARC CMT (chip multithreading) systems Use Oracle VM Server for x86 or xVM hypervisor to deploy a server with heterogeneous operating systems Use Oracle VM VirtualBox to develop and test software in heterogeneous environments Use Oracle Solaris Containers to maximize efficiency and scalability of workloads Use Oracle Solaris Containers to migrate Solaris 8 and Solaris 9 workloads to new hardware systems Mix virtualization technologies to maximize workload density Starting with a discussion of system virtualization in general terms—the needs of consolidation, the benefits of virtualization, and a description of the most common types of computer virtualization—this book also covers many of the concepts, features, and methods shared by many implementations of system virtualization. Oracle’s computer virtualization technologies that are directly related to the Oracle Solaris OS are described in detail along with a discussion of the factors that should be considered when choosing a virtualization technology. Finally, several examples of these technologies and an overview of virtualization management software are provided, as well as a history of virtualization.

The multicore revolution has reached the deployment stage in embedded systems ranging from small ultramobile devices to large telecommunication servers. The transition from single to multicore processors, motivated by the need to increase performance while conserving power, has placed great responsibility on the shoulders of software engineers. In this new embedded multicore era, the toughest task is the development of code to support more sophisticated systems. This book provides embedded engineers with solid grounding in the skills required to develop software targeting multicore processors. Within the text, the author undertakes an in-depth exploration of performance analysis, and a close-up look at the tools of the trade. Both general multicore design principles and processor-specific optimization techniques are revealed. Detailed coverage of critical issues for multicore

employment within embedded systems is provided, including the Threading Development Cycle, with discussions of analysis, design, development, debugging, and performance tuning of threaded applications. Software development techniques engendering optimal mobility and energy efficiency are highlighted through multiple case studies, which provide practical “how-to advice on implementing the latest multicore processors. Finally, future trends are discussed, including terascale, speculative multithreading, transactional memory, interconnects, and the software-specific implications of these looming architectural developments. Table of Contents Chapter 1 - Introduction Chapter 2 – Basic System and Processor Architecture Chapter 3 – Multi-core Processors & Embedded Chapter 4 –Moving To Multi-core Intel Architecture Chapter 5 – Scalar Optimization & Usability Chapter 6 – Parallel Optimization Using Threads Chapter 7 - Case Study: Data Decomposition Chapter 8 - Case Study: Functional Decomposition Chapter 9 – Virtualization & Partitioning Chapter 10 – Getting Ready For Low Power Intel Architecture Chapter 11 - Summary, Trends, and Conclusions Appendix I Glossary References *This is the only book to explain software optimization for embedded multi-core systems *Helpful tips, tricks and design secrets from an Intel programming expert, with detailed examples using the popular X86 architecture *Covers hot topics, including ultramobile devices, low-power designs, Pthreads vs. OpenMP, and heterogeneous cores

This book is based on Red Hat® Enterprise Linux 5 (RHEL 5) and is intended for individuals who plan to take the new Red Hat® Certified Technician (RH202) and/or Red Hat® Certified Engineer (RH302) exams and pass them, want to use it as a quick on-the-job resource or like to learn RHEL from the beginning in an easy-to-understand way. The book has 31 chapters and facilitates readers to grasp concepts, understand implementation procedures, learn command syntax, configuration files and daemons involved, and comprehend troubleshooting. The chapters are divided into four areas: Linux Essentials, RHEL System Administration, RHEL Network and Security Administration, and RHEL Troubleshooting. 01. Linux Essentials (Chapters 1 to 7) covers the basics of Linux. Information provided includes general Linux concepts, basic commands, file manipulation and file security techniques, text file editors, shell features, basic shell and awk programming and other essential topics. These chapters are good for gaining an overall understanding of Linux and cover common skills useful for both exams. 02. RHEL System Administration (Chapters 8 to 19) covers system administration concepts and topics including hardware management, local installation, X Window and desktop managers, software and user/group account administration, disk partitioning using standard, RAID and LVM, file system and swap management, system shutdown and boot procedures, kernel management, backup, restore and compression functions, print services administration, and automation and system logging. These chapters cover objectives outlined for the RH202 exam. 03. RHEL Network and Security Administration (Chapters 20 to 30) covers network and security administration concepts and topics such as OSI and TCP/IP reference models, subnetting and IP aliasing, network interface administration, routing, basic network testing and troubleshooting tools, naming services (DNS, NIS, LDAP) and DHCP; Internet services and electronic mail management, time synchronization with NTP, resource sharing with NFS, AutoFS and Samba, network-based and hands-free automated installation, Apache web server and Squid caching/proxy server, secure shell, PAM,

TCP Wrappers, IPTables, NATting, SELinux and recommendations for system hardening. These chapters cover objectives set for the RH302 exam. 04. RHEL Troubleshooting (Chapter 31) covers a number of sample system, network and security troubleshooting scenarios. This chapter covers objectives related to diagnoses and troubleshooting for both exams. The book covers ALL official exam objectives and includes several exercises for exam practice. This book is not a replacement for RHCT®/RHCE® training courses offered by Red Hat, Inc., but may be used to prepare for both the exams. The information contained in this book is not endorsed by Red Hat, Inc. Good Luck on the exams .....

Choose the right combination of public, private, and datacenter resources to empower your business Hybrid clouds are transforming the way that organizations dobusiness. This handy guide helps you find out what this new clouddeployment model is all about. You'll get down- to-earthinformation about cloud technology, questions to consider, and howto plan and deliver your move to a hybrid environment. Constructing the cloud — learn the basic concepts of thehybrid cloud from both a technical and business perspective Delivering cloud services — dive deeper into the actualfoundational elements of the hybrid cloud Identifying business value — determine your hybrid cloudneeds based on your business objectives Unified hybrid environments — find out what it means tocreate a computing environment that brings elements of the datacenter together with public and private cloud services Making it work — examine the steps you need to take tomake this new architectural approach work — includingsecurity, governance, data, integration, monitoring, and more Get your ticket to the cloud — tips on how to talk tocloud providers and plan for the service you choose Open the book and find: Different cloud deployment models and what differentiates ahybrid cloud from other cloud models The impact of the hybrid cloud on cloud delivery models Why service orientation matters in a hybrid cloud Ways to develop and deploy applications in a hybrid world Guidance in finding the right hybrid cloud service providers Security and governance in a hybrid model The role of workload optimization in hybrid environments Learn to: Recognize the benefits and challenges of a hybrid cloud Efficiently deliver and manage cloud services Understand the impact of emerging cloud standards Protect customer data with sound security practices

This book provides system architects, technical consultants, and IT management the tools to design a system architectures to deploy SAP applications on SAP HANA. Explore production and non-production systems, deployment options, backup and recovery, data replication, high-availability, and virtualization in detail. Dive into on-premise deployment options and data provisioning scenarios. Walk through scale-up and scale-out options and data partitioning considerations. Review the advantages and disadvantages of storage and system replication options and when to use each. Clarify how to leverage HANA for single node and distributed systems. Dive into a discussion on software and hardware virtualization. Compare the options available and guide your decision using flowcharts your organization can leverage to choose the proper technology for your environment and specific needs. This book enables readers to carefully evaluate and implement a well-considered SAP HANA scenario. - SAP HANA sizing, capacity planning guidelines, and data tiering - Deployment options and data provisioning scenarios - Backup and recovery options and procedures - Software and hardware virtualization in SAP HANA

COMMUNICATION NETWORKS AND SERVICE MANAGEMENT IN THE ERA OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING Discover the impact that new technologies are having on communication systems with this up-to-date and one-stop resource Communication Networks and Service Management in the Era of Artificial Intelligence and Machine Learning delivers a comprehensive overview of the impact of artificial intelligence (AI) and machine learning (ML) on service and network management. Beginning with a fulsome description of ML and AI, the book moves on to discuss management models, architectures, and frameworks. The authors also explore how AI and ML can be used in service management functions like the generation of workload profiles, service provisioning, and more. The book includes a handpicked selection of applications and case studies, as well as a treatment of emerging technologies the authors predict could have a significant impact on network and service management in the future. Statistical analysis and data mining are also discussed, particularly with respect to how they allow for an improvement of the management and security of IT systems and networks. Readers will also enjoy topics like: A thorough introduction to network and service management, machine learning, and artificial intelligence An exploration of artificial intelligence and machine learning for management models, including autonomic management, policy-based management, intent based management, and network virtualization-based management Discussions of AI and ML for architectures and frameworks, including cloud systems, software defined networks, 5G and 6G networks, and Edge/Fog networks An examination of AI and ML for service management, including the automatic generation of workload profiles using unsupervised learning Perfect for information and communications technology educators, Communication Networks and Service Management in the Era of Artificial Intelligence and Machine Learning will also earn a place in the libraries of engineers and professionals who seek a structured reference on how the emergence of artificial intelligence and machine learning techniques is affecting service and network management.

This IBM® Redbooks® publication documents the strength and value of the IBM security strategy with IBM System z® hardware and software. In an age of increasing security consciousness, IBM System z provides the capabilities to address the needs of today's business security challenges. This publication explores how System z hardware is designed to provide integrity, process isolation, and cryptographic capability to help address security requirements. This book highlights the features of IBM z/OS® and other operating systems, which offer various customizable security elements under the Security Server and Communication Server components. This book describes z/OS and other operating systems and additional software that leverage the building blocks of System z hardware to provide solutions to business security needs. This publication's intended audience is technical architects, planners, and managers who are interested in exploring how the security design and features of System z, the z/OS operating system, and associated software address current issues, such as data encryption, authentication, authorization, network security, auditing, ease of security administration, and monitoring.

Network Function Virtualization provides an architectural, vendor-neutral level overview of the issues surrounding the large levels of data storage and transmission requirements needed for today's companies, also enumerating the benefits of NFV for the

enterprise. Drawing upon years of practical experience, and using numerous examples and an easy-to-understand framework, authors Tom Nadeau and Ken Gary discuss the relevancy of NFV and how it can be effectively used to create and deploy new services. Readers will learn how to determine if network function virtualization is right for their enterprise network, be able to use hands-on, step-by-step guides to design, deploy, and manage NFV in an enterprise, and learn how to evaluate all relevant NFV standards, including ETSI, IETF, Openstack, and Open Daylight. Provides a comprehensive overview of Network Function Virtualization (NFV) Discusses how to determine if network function virtualization is right for an enterprise network Presents an ideal reference for those interested in NFV Network Service Chaining, NSC network address translation (NAT), firewalling, intrusion detection, domain name service (DNS), caching, and software defined networks Includes hands-on, step-by-step guides for designing, deploying, and managing NFV in the enterprise Explains, and contrasts, all relevant NFV standards, including ETSI, IETF, Openstack, and Open Daylight

Server Sprawl and escalating IT costs have managers and system administrators scrambling to find ways to cut costs and reduce Total Cost of Ownership of their physical infrastructure. Combining software applications onto a single server, even if those applications are from the same software vendor, can be dangerous and problems hard to troubleshoot. Virtualization allows you to consolidate many servers onto a single physical server reducing hardware, electrical, cooling, and administrative costs. These virtual servers run completely independent of each other so if one crashes the other are not affected. Planning and implementing a server consolidation is a complex process. This book details the requirements for such a project, includes sample forms and templates, and delivers several physical to virtual migration strategies which will save both time and costs. Readers of this book will easily be able to plan and deploy VMware, Microsoft Virtual Server, and Xen. Create a virtual network to exchange information or provide a service to other virtual machines or computers Use virtualization to support removable media such as CD or DVD optical disks Reduce server costs, administration overhead, and complexity

This textbook provides students with the background knowledge and skills necessary to begin using the basic functions and features of z/VM Version 5, Release 3. It is part of a series of textbooks designed to introduce students to mainframe concepts and help prepare them for a career in large systems computing. For optimal learning, students are assumed to be literate in personal computing and have some computer science or information systems background. Others who will benefit from this textbook include z/OS professionals who would like to expand their knowledge of other aspects of the mainframe computing environment. This course can be used as a prerequisite to understanding Linux on System z. After reading this textbook and working through the exercises, the student will have received a basic understanding of the following topics: The Series z Hardware concept and the history of the mainframe Virtualization technology in general and how it is exploited by z/VM Operating systems that can run as guest systems under z/VM z/VM components The z/VM control program and commands The interactive environment under z/VM, CMS and its commands z/VM planning and administration Implementing the networking capabilities of z/VM Tools to monitor the performance of z/VM systems and guest operating systems The REXX programming language and CMS pipelines Security issues when running z/VM

Executives of IT organizations are compelled to quickly implement server virtualization solutions because of significant cost savings.

However, most IT professionals tasked with deploying virtualization solutions have little or no experience with the technology. This creates a high demand for information on virtualization and how to properly implement it in a datacenter. Advanced Server Virtualization: VMware® and Microsoft® Platforms in the Virtual Data Center focuses on the core knowledge needed to evaluate, implement, and maintain an environment that is using server virtualization. This book emphasizes the design, implementation and management of server virtualization from both a technical and a consultative point of view. It provides practical guides and examples, demonstrating how to properly size and evaluate virtualization technologies. This volume is not based upon theory, but instead on real world experience in the implementation and management of large scale projects and environments. Currently, there are few experts in this relatively new field, making this book a valuable resource The book is divided into major sections making it both a step-by-step guide for learning and implementing server virtualization as well as a quick reference. The chapter organization focuses first on introducing concepts and background, and then provides real-world scenarios.

A virtual evolution in IT shops large and small has begun. Microsoft's Virtal Server is the enterprise tool to free an infrastructure from its physical limitations providing the transformation into a virtual environment--this book shows you how. This book will detail the default and custom installation of Microsoft's Virtual Server 2005, as well as basic and advanced virtual machine configurations. It will also discuss the requirements for a server virtualization and consolidation project and the cost savings surrounding such an effort. Furthermore, the book will provide a thorough understanding of the benefits of a virtual infrastructure and a comprehensive examination of how Virtual Server can ease administration and lower overall IT costs. Lastly, the book delivers a thorough understanding of the virtual evolution which is underway in many IT organizations and how the reader will benefit from shifting from the physical to a virtual world. * Examines in detail the default and custom installation of Microsoft's Virtual Server 2005 * Addresses th important topics of server requirements and the cost implications involved * Looks at addressing IT costs and the benefits to the organisation

OpenSolaris is a rapidly evolving operating system with roots in Solaris 10, suitable for deployment on laptops, desktop workstations, storage appliances, and data center servers from the smallest single–purpose systems to the largest enterprise–class systems. The growing OpenSolaris community now has hundreds of thousands of participants and users in government agencies, commercial businesses, and universities, with more than 100 user groups around the world contributing to the use and advancement of OpenSolaris. New releases of OpenSolaris become available every six months, with contributions from both Sun engineers and OpenSolaris community members; this book covers the OpenSolaris 2008.11 release. Pro OpenSolaris was written to demonstrate that you can host your open source applications and solutions on OpenSolaris, taking advantage of its advanced features such as containers and other forms of virtualization, the ZFS file system, and DTrace. It's assumed that you are already fairly knowledgeable about developing on Linux systems, so the authors give an overview of the similarities and differences between Linux and OpenSolaris, and then present details on how to use the Service Management Facility (SMF), ZFS, zones, and even a bit of DTrace. They also provide pointers to the many project communities associated with new OpenSolaris features. Special focus is given to web development using familiar applications such as Apache, Tomcat, and MySQL, along with the NetBeans IDE, and showing you how to exploit some of OpenSolaris's unique technologies.

Memory management, hardware management, process administration and interprocess communication are central areas of operating systems. The concepts and principles on which classical and modern operating systems are based are explained by the author using relevant tasks and solutions. The work thus provides a comprehensible introduction to the architecture of operating systems and is therefore also

suitable for teaching in the bachelor's program. Uniquely, the book presents all content bilingually: in two columns, the German and English texts appear side by side, so that readers can improve their language skills and vocabulary at the same time. Speicherverwaltung, Hardwareverwaltung, Prozessadministration und Interprozesskommunikation sind zentrale Bereiche von Betriebssystemen. Die Konzepte und Prinzipien, auf denen klassische und moderne Betriebssysteme basieren, erläutert der Autor anhand von einschlägigen Aufgabenstellungen und Lösungen. Das Werk gibt damit eine verständliche Einführung in die Architektur von Betriebssystemen und eignet sich deshalb auch für die Lehre im Bachelorstudium. Memory management, hardware management, process administration and interprocess communication are central areas of operating systems. The concepts and principles on which classical and modern operating systems are based are explained by the author using relevant tasks and solutions. The work thus provides a comprehensible introduction to the architecture of operating systems and is therefore also suitable for teaching in the bachelor's program.