

Booting From An Nvme Pcie Intel Solid State Drive

The Emily Post Institute, the most trusted brand in etiquette, tackles the latest issues regarding how we interact along with classic etiquette and manners advice in this updated and gorgeously packaged edition. Today's world is in a state of constant change. But one thing remains year after year: the necessity for good etiquette. This 19th edition of Emily Post's Etiquette offers insight and wisdom on a variety of new topics and fresh advice on classic conundrums, including: Social media Living with neighbors Networking and job seeking Office issues Sports and recreation Entertaining at home and celebrations Weddings Invitations Loss, grieving, and condolences Table manners While they offer useful information on the practical—from table settings and introductions to thank-you notes and condolences—the Posts make it clear why good etiquette matters. Etiquette is a sensitive awareness of the feelings of others, they remind us. Ultimately, being considerate, respectful, and honest is what's really important in building positive relationships. "Please" and "thank you" do go a long way, and whether it's a handshake, a hug, or a friend request, it's the underlying sincerity and good intentions behind any action that matter most.

The Fibre Channel Association is a group of companies involved in developing devices and technologies used with Fibre Channel, a very high-speed bus technology capable of bi-directional data transfer at rates in excess of one gigabit per second. Describes how to use Fibre Channel technology to connect between storage devices and network servers for maximum data transfer Authoring association is a group of companies involved in developing devices and technologies used with Fibre Channel Discusses cutting edge technology capable of bi-directional data transfer at rates in excess of one gigabit per second This IBM® Redbooks® publication introduces and describes the IBM Elastic Storage® Server 5000 (ESS 5000) as a scalable, high-performance data and file management solution. The solution is built on proven IBM Spectrum® Scale technology, formerly IBM General Parallel File System (IBM GPFS). ESS is a modern implementation of software-defined storage, making it easier for you to deploy fast, highly scalable storage for AI and big data. With the lightning-fast NVMe storage technology and industry-leading file management capabilities of IBM Spectrum Scale, the ESS 3000 and ESS 5000 nodes can grow to over YB scalability and can be integrated into a federated global storage system. By consolidating storage requirements from the edge to the core data center — including kubernetes and Red Hat OpenShift — IBM ESS can reduce inefficiency, lower acquisition costs, simplify storage management, eliminate data silos, support multiple demanding workloads, and deliver high performance throughout your organization. This book provides a technical overview of the ESS 5000 solution and helps you to plan the installation of the environment. We also explain the use cases where we believe it fits best. Our goal is to position this book as the starting point document for customers that would use the ESS 5000

as part of their IBM Spectrum Scale setups. This book is targeted toward technical professionals (consultants, technical support staff, IT Architects, and IT Specialists) who are responsible for delivering cost-effective storage solutions with ESS 5000.

Embedded Firmware Solutions is the perfect introduction and daily-use field guide--for the thousands of firmware designers, hardware engineers, architects, managers, and developers--to Intel's new firmware direction (including Quark coverage), showing how to integrate Intel® Architecture designs into their plans. Featuring hands-on examples and exercises using Open Source codebases, like Coreboot and EFI Development Kit (tianocore) and Chromebook, this is the first book that combines a timely and thorough overview of firmware solutions for the rapidly evolving embedded ecosystem with in-depth coverage of requirements and optimization.

IBM® FlashSystem 9100 combines the performance of flash and Non-Volatile Memory Express (NVMe) with the reliability and innovation of IBM FlashCore® technology and the rich features of IBM Spectrum™ Virtualize — all in a powerful 2U storage system. Providing intensive data driven multi-cloud storage capacity, FlashSystem 9100 is deeply integrated with the software-defined capabilities of IBM Spectrum Storage™, which allows you to easily add the multi-cloud solutions that best support your business. In this IBM Redbooks® publication, we discuss the product's features and planning steps, architecture, installation, configuration, and hints and tips.

The revised second edition of this respected text provides a state-of-the-art overview of the main topics relating to solid state drives (SSDs), covering NAND flash memories, memory controllers (including both hardware and software), I/O interfaces (PCIe/SAS/SATA), reliability, error correction codes (BCH and LDPC), encryption, flash signal processing and hybrid storage. Updated throughout to include all recent work in the field, significant changes for the new edition include: A new chapter on flash memory errors and data recovery procedures in SSDs for reliability and lifetime improvement Updated coverage of SSD Architecture and PCI Express Interfaces moving from PCIe Gen3 to PCIe Gen4 and including a section on NVMe over fabric (NVMe over Fabrics) An additional section on 3D flash memories An update on standard reliability procedures for SSDs Expanded coverage of BCH for SSDs, with a specific section on detection A new section on non-binary Low-Density Parity-Check (LDPC) codes, the most recent advancement in the field A description of randomization in the protection of SSD data against attacks, particularly relevant to 3D architectures The SSD market is booming, with many industries placing a huge effort in this space, spending billions of dollars in R&D and product development. Moreover, flash manufacturers are now moving to 3D architectures, thus enabling an even higher level of storage capacity. This book takes the reader through the fundamentals and brings them up to speed with the most recent developments in the field, and is suitable for advanced students, researchers and engineers alike.

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

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

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

Expert Oracle Exadata, 2nd Edition opens up the internals of Oracle's Exadata platform so that you can fully benefit from the most performant and scalable database hardware appliance capable of running Oracle Database. This edition is fully-updated to cover Exadata 5-2 and Oracle Database 12c. If you're new to Exadata, you'll soon learn that it embodies a change in how you think about and manage relational databases. A key part of that change lies in the concept of offloading SQL processing to the storage layer. In addition there is Oracle's engineering effort in creating a powerful platform for both consolidation and transaction processing. The resulting value proposition in the form of Exadata has truly been a game-changer. Expert Oracle Exadata, 2nd Edition provides a look at the internals and how the combination of hardware and software that comprise Exadata actually work. Authors include Martin Bach, Andy Colvin, and Frits Hoogland, with contributions from Karl Arao, and built on the foundation laid by Kerry Osborne, Randy Johnson, and Tanel Poder in the first edition. They share their real-world experience gained through a great many Exadata implementations, possibly more than any other group of experts today. Always their goal is toward helping you advance your career through success with Exadata in your own environment. This book is intended for readers who want to understand what makes the platform tick and for whom—"how" it does what it is does is as important as what it does. By being exposed to the features that are unique to Exadata, you will gain an understanding of the mechanics that will allow you to fully benefit from the advantages that the platform provides. This book changes how you think about managing SQL performance and processing.

It provides a roadmap to successful Exadata implementation. And it removes the "black box" mystique. You'll learn how Exadata actually works and be better able to manage your Exadata engineered systems in support of your business. This book: Changes the way you think about managing SQL performance and processing Provides a roadmap to successful Exadata implementation Removes the "black box" mystique, showing how Exadata actually works

This IBM® Redbooks publication introduces and describes the IBM Elastic Storage® Server 3000 (ESS 3000) as a scalable, high-performance data and file management solution. The solution is built on proven IBM Spectrum® Scale technology, formerly IBM General Parallel File System (IBM GPFS). IBM Elastic Storage System 3000 is an all-Flash array platform. This storage platform uses NVMe-attached drives in ESS 3000 to provide significant performance improvements as compared to SAS-attached flash drives. This book provides a technical overview of the ESS 3000 solution and helps you to plan the installation of the environment. We also explain the use cases where we believe it fits best. Our goal is to position this book as the starting point document for customers that would use ESS 3000 as part of their IBM Spectrum Scale setups. This book is targeted toward technical professionals (consultants, technical support staff, IT Architects, and IT Specialists) who are responsible for delivering cost-effective storage solutions with ESS 3000.

This IBM® Redpaper™ publication is a comprehensive guide that covers the IBM Power Systems™ LC921 and LC922 (9006-12P and 9006-22P) servers that use the current IBM POWER9™ processor-based technology and supports Linux operating systems (OSes). The objective of this paper is to introduce the offerings and their capacities and available features. These new Linux scale-out systems provide differentiated performance, scalability, and low acquisition cost, and include the following features: Superior throughput and performance for high-value Linux workloads. Low acquisition cost through system optimization (industry-standard memory and industry-standard three-year warranty). Rich I/O options in the system unit. There are 12 large form factor (LFF)/small form factor (SFF) bays for 12 SAS/SATA hard disk drives (HDDs) or solid-state drives (SSDs), and four bays that are available for Non-Volatile Memory Express (NVMe) Gen3 adapters. Includes Trusted Platform Module (TPM) 2.0 Nuvoton NPCT650ABAWX through I2C (for secure boot and trusted boot). Integrated MicroSemi PM8069 SAS/SATA 16-port Internal Storage Controller Peripheral Component Interconnect Express (PCIe) 3.0 x8 with RAID 0, 1, 5, and 10 support (no write cache). Integrated Intel XL710 Quad Port 10 GBase-T PCIe 3.0 x8 UIO built-in local area network (LAN) (one shared management port). Dedicated 1 Gb Intelligent Platform Management Interface (IPMI) port. This publication is for professionals who want to acquire a better understanding of IBM Power Systems products. The intended audience includes: Clients Sales and marketing professionals Technical support professionals IBM Business Partners Independent software vendors (ISVs)

This IBM® Redpaper publication describes practical experiences to run SAP workloads to take advantage of IBM Power Systems I/O capabilities. With IBM POWER® processor-based servers, you have the flexibility to fit seamlessly new applications and workloads into a single data center, and even consolidate them into a single server. This approach highlights all viable options and describes the pros and cons of each one

to select the correct option for a specific data center. The target audiences of this book are architects, IT specialists, and systems administrators deploying SAP workloads, who spend much time and effort managing, provisioning, and monitoring SAP software systems and landscapes on IBM Power Systems servers.

This IBM® Redpaper™ publication provides a broad understanding of a new architecture of the IBM Power System E980 (9080-M9S) server that supports IBM AIX®, IBM i, and Linux operating systems (OSes). The objective of this paper is to introduce the major innovative Power E980 offerings and relevant functions: The IBM POWER9™ processor, which is available at frequencies of 3.55 - 4.0 GHz. Significantly strengthened cores and larger caches. Supports up to 64 TB memory. Integrated I/O subsystem and hot-pluggable Peripheral Component Interconnect Express (PCIe) Gen4 slots, double the bandwidth of Gen3 I/O slots. Supports EXP12SX and ESP24SX external disk drawers, which have 12 Gb SAS interfaces and double the existing EXP24S drawer bandwidth. New IBM EnergyScale™ technology offers new variable processor frequency modes that provide a significant performance boost beyond the static nominal frequency. This publication is for professionals who want to acquire a better understanding of IBM Power Systems™ products. The intended audience includes the following roles: Clients Sales and marketing professionals Technical support professionals IBM Business Partners Independent software vendors (ISVs) This paper expands the current set of IBM Power Systems documentation by providing a desktop reference that offers a detailed technical description of the Power E980 server. This paper does not replace the current marketing materials and configuration tools. It is intended as an extra source of information that, together with existing sources, can be used to enhance your knowledge of IBM server solutions.

This book focuses on the core question of the necessary architectural support provided by hardware to efficiently run virtual machines, and of the corresponding design of the hypervisors that run them. Virtualization is still possible when the instruction set architecture lacks such support, but the hypervisor remains more complex and must rely on additional techniques. Despite the focus on architectural support in current architectures, some historical perspective is necessary to appropriately frame the problem. The first half of the book provides the historical perspective of the theoretical framework developed four decades ago by Popek and Goldberg. It also describes earlier systems that enabled virtualization despite the lack of architectural support in hardware. As is often the case, theory defines a necessary—but not sufficient—set of features, and modern architectures are the result of the combination of the theoretical framework with insights derived from practical systems. The second half of the book describes state-of-the-art support for virtualization in both x86-64 and ARM processors. This book includes an in-depth description of the CPU, memory, and I/O virtualization of these two processor architectures, as well as case studies on the Linux/KVM, VMware, and Xen hypervisors. It concludes with a performance comparison of virtualization on current-generation x86- and ARM-based systems across multiple hypervisors.

Forensic image acquisition is an important part of postmortem incident response and evidence collection. Digital forensic investigators acquire, preserve, and manage digital evidence to support civil and criminal cases; examine organizational policy violations; resolve disputes; and analyze cyber attacks. Practical Forensic Imaging takes a

detailed look at how to secure and manage digital evidence using Linux-based command line tools. This essential guide walks you through the entire forensic acquisition process and covers a wide range of practical scenarios and situations related to the imaging of storage media. You'll learn how to: –Perform forensic imaging of magnetic hard disks, SSDs and flash drives, optical discs, magnetic tapes, and legacy technologies –Protect attached evidence media from accidental modification –Manage large forensic image files, storage capacity, image format conversion, compression, splitting, duplication, secure transfer and storage, and secure disposal –Preserve and verify evidence integrity with cryptographic and piecewise hashing, public key signatures, and RFC-3161 timestamping –Work with newer drive and interface technologies like NVME, SATA Express, 4K-native sector drives, SSHDs, SAS, UASP/USB3x, and Thunderbolt –Manage drive security such as ATA passwords; encrypted thumb drives; Opal self-encrypting drives; OS-encrypted drives using BitLocker, FileVault, and TrueCrypt; and others –Acquire usable images from more complex or challenging situations such as RAID systems, virtual machine images, and damaged media With its unique focus on digital forensic acquisition and evidence preservation, Practical Forensic Imaging is a valuable resource for experienced digital forensic investigators wanting to advance their Linux skills and experienced Linux administrators wanting to learn digital forensics. This is a must-have reference for every digital forensics lab.

Data centers consume roughly 1% of the total electricity demand, while ICT as a whole consumes around 10%. Demand is growing exponentially and, left unchecked, will grow to an estimated increase of 20% or more by 2030. This book covers the energy consumption and minimization of the different data center components when running real workloads, taking into account the types of instructions executed by the servers. It presents the different air- and liquid-cooled technologies for servers and data centers with some real examples, including waste heat reuse through adsorption chillers, as well as the hardware and software used to measure, model and control energy. It computes and compares the Power Usage Effectiveness and the Total Cost of Ownership of new and existing data centers with different cooling designs, including free cooling and waste heat reuse leading to the Energy Reuse Effectiveness. The book concludes by demonstrating how a well-designed data center reusing waste heat to produce chilled water can reduce energy consumption by roughly 50%, and how renewable energy can be used to create net-zero energy data centers.

This IBM® Redpaper™ publication gives a broad understanding of a new architecture of the IBM Power System E950 (9040-MR9) server that supports IBM AIX®, and Linux operating systems. The objective of this paper is to introduce the major innovative Power E950 offerings and relevant functions: The IBM POWER9™ processor, which is available at frequencies of 2.8 - 3.4 GHz. Significantly strengthened cores and larger caches. Supports up to 16 TB of memory, which is four times more than the IBM POWER8® processor-based IBM Power System E850 server. Integrated I/O subsystem and hot-pluggable Peripheral Component Interconnect Express (PCIe) Gen4 slots, which have double the bandwidth of Gen3 I/O slots. Supports EXP12SX and ESP24SX external disk drawers, which have 12 Gb Serial Attached SCSI (SAS) interfaces and support Active Optical Cables (AOCs) for greater distances and less cable bulk. New IBM EnergyScale™ technology offers new variable processor

frequency modes that provide a significant performance boost beyond the static nominal frequency. This publication is for professionals who want to acquire a better understanding of IBM Power Systems™ products. The intended audience includes the following roles: Clients Sales and marketing professionals Technical support professionals IBM Business Partners Independent software vendors (ISVs) This paper expands the current set of Power Systems documentation by providing a desktop reference that offers a detailed technical description of the Power E950 server. This paper does not replace the current marketing materials and configuration tools. It is intended as an extra source of information that, together with existing sources, can be used to enhance your knowledge of IBM server solutions.

The CompTIA Linux+/LPIC-1 Training and Exam Preparation Guide, First Edition is a comprehensive resource designed and written with one fundamental goal in mind: teach Linux in an easy and practical manner while preparing for the Linux+/LPIC-1 exams. This book provides an in-depth coverage of all official exam objectives. This book is organized in two parts: Part One covers LX0-103/101-400 exam objectives and Part Two covers LX0-104/102-400 exam objectives. The book includes hands-on examples, step-by-step exercises, chapter-end review of concepts, files, and commands learned, and 790 challenging practice questions. This book uses "learn-by-doing" methodology. It begins with guidance on how to download a virtualization software and two Linux distribution versions and then provides instructions on how to create VMs and install Linux in them to set up a lab environment for hands-on learning.

Throughout the book, appropriate command prompts are employed to identify the lab system and user to run a command. Each command and task presented in the book was actually performed and tested on lab systems. Followed by the lab environment setup in Part One, the book presents the essentials of Linux incl. interaction with Linux, basic commands, file management (permissions, ownership, linking, searching, special permissions, editing), filter programs, regex, shell features, and process handling. Subsequent topics focus on system administration incl. shared libraries, Debian and RPM package management, system boot and initialization, hardware management, kernel modules, storage partitioning, file system creation and repairs, quota handling, and swap space administration. This brings Part One to an end and you should be able to take the quiz in Appendix A to test your readiness for the LX0-103/101-400 exam. Part Two covers all the objectives for the LX0-104/102-400 exam. It covers shell scripts with a presentation and line-by-line analysis of several scripts. Building a simple SQL database and performing queries comes next. A detailed comprehension of local authentication files, user creation, password aging, and shell startup files follows. The book covers networking concepts, reference models, and terms that accompany exercises on interface configuration, hostname change, and route management. A discussion of network testing and debugging tools is furnished and their usage is demonstrated, followed by topics on internationalization, localization, time synchronization, name resolution, X

Window, display/desktop managers, accessibility options, printer and print queue administration, task scheduling, system logging, system and service access controls, emailing and email aliasing, searching for special files, and so on. This brings Part Two to an end and you should be able to take the quiz in Appendix C to test your readiness for the LX0-104/102-400 exam. Highlights: * 100% coverage of ALL official exam objectives (version 4.0) * Enumerated and descriptive knowledge areas (under exam objectives) to assist in identifying and locating them * A summarized and convenient view showing exam objectives, chapters they are discussed in, associated weights, the number of questions to expect on the real exam, and other useful information * Separate section on each exam * 15 chapters in total (8 for LX0-103/101-400 and 7 for LX0-104/102-400) * Detailed guidance on building lab environment * 49 tested, hands-on exercises with explanation * Numerous tested, practical examples for clarity and understanding * Chapter-end one-sentence review of key topics * 790 single-response, multiple-response, and fill-in-the-blank practice questions/answers to test your knowledge of the material and exam readiness * Equally good for self-study and in-class training

Software-Defined Data Infrastructures Essentials provides fundamental coverage of physical, cloud, converged, and virtual server storage I/O networking technologies, trends, tools, techniques, and tradecraft skills. From webscale, software-defined, containers, database, key-value store, cloud, and enterprise to small or medium-size business, the book is filled with techniques, and tips to help develop or refine your server storage I/O hardware, software, and services skills. Whether you are new to data infrastructures or a seasoned pro, you will find this comprehensive reference indispensable for gaining as well as expanding experience with technologies, tools, techniques, and trends. We had a front row seat watching Greg present live in our education workshop seminar sessions for ITC professionals in the Netherlands material that is in this book. We recommend this amazing book to expand your converged and data infrastructure knowledge from beginners to industry veterans. —Gert and Frank Brouwer, Brouwer Storage Consultancy Software-Defined Data Infrastructures Essentials provides the foundational building blocks to improve your craft in several areas including applications, clouds, legacy, and more. IT professionals, as well as sales professionals and support personnel, stand to gain a great deal by reading this book.—Mark McSherry, Oracle Regional Sales Manager Looking to expand your data infrastructure IQ? From CIOS to operations, sales to engineering, this book is a comprehensive reference, a must read for IT infrastructure professionals, beginners to seasoned experts.—Tom Becchetti, Advisory Systems Engineer Greg Schulz has provided a complete ‘toolkit’ for storage management along with the background and framework for the storage or data infrastructure professional or those aspiring to become one.—Greg Brunton, Experienced Storage and Data Management Professional

This IBM® Redpaper® publication provides a broad understanding of a new

architecture of the IBM Power® E1080 (also known as the Power E1080) server that supports IBM AIX®, IBM i, and selected distributions of Linux operating systems. The objective of this paper is to introduce the Power E1080, the most powerful and scalable server of the IBM Power portfolio, and its offerings and relevant functions: Designed to support up to four system nodes and up to 240 IBM Power10™ processor cores The Power E1080 can be initially ordered with a single system node or two system nodes configuration, which provides up to 60 Power10 processor cores with a single node configuration or up to 120 Power10 processor cores with a two system nodes configuration. More support for a three or four system nodes configuration is to be added on December 10, 2021, which provides support for up to 240 Power10 processor cores with a full combined four system nodes server. Designed to supports up to 64 TB memory The Power E1080 can be initially ordered with the total memory RAM capacity up to 8 TB. More support is to be added on December 10, 2021 to support up to 64 TB in a full combined four system nodes server. Designed to support up to 32 Peripheral Component Interconnect® (PCIe) Gen 5 slots in a full combined four system nodes server and up to 192 PCIe Gen 3 slots with expansion I/O drawers The Power E1080 supports initially a maximum of two system nodes; therefore, up to 16 PCIe Gen 5 slots, and up to 96 PCIe Gen 3 slots with expansion I/O drawer. More support is to be added on December 10, 2021, to support up to 192 PCIe Gen 3 slots with expansion I/O drawers. Up to over 4,000 directly attached serial-attached SCSI (SAS) disks or solid-state drives (SSDs) Up to 1,000 virtual machines (VMs) with logical partitions (LPARs) per system System control unit, providing redundant system master Flexible Service Processor (FSP) Supports IBM Power System Private Cloud Solution with Dynamic Capacity This publication is for professionals who want to acquire a better understanding of Power servers. The intended audience includes the following roles: Customers Sales and marketing professionals Technical support professionals IBM Business Partners Independent software vendors (ISVs) This paper does not replace the current marketing materials and configuration tools. It is intended as an extra source of information that, together with existing sources, can be used to enhance your knowledge of IBM server solutions.

Quick Boot is designed to give developers a background in the basic architecture and details of a typical boot sequence. More specifically, this book describes the basic initialization sequence that allows developers the freedom to boot an OS without a fully featured system BIOS. Various specifications provide the basics of both the code bases and the standards. This book also provides insights into optimization techniques for more advanced developers. With proper background information, the required specifications on hand, and diligence, many developers can create quality boot solutions using this text. Pete Dice is Engineering Director of Verifone, where he manages OS Engineering teams in Dublin, Ireland and Riga Latvia. Dice successfully launched Intel(R) Quark(TM), Intel's first generation SoC as well as invented the Intel(R) Galileo(TM) development board

of cores per socket More performance by using industry-leading Peripheral Component Interconnect Express (PCIe) Gen 4 slots Enhanced internal disk scalability and performance with up to 11 NVMe adapters Introduction of a competitive Power S922 server with a 1-socket configuration that is targeted at IBM i customers This publication is for professionals who want to acquire a better understanding of IBM Power Systems™ products. The intended audience includes the following roles: Clients Sales and marketing professionals Technical support professionals IBM Business Partners Independent software vendors (ISVs) This paper expands the current set of IBM Power Systems documentation by providing a desktop reference that offers a detailed technical description of the Power S914, Power S922, and Power S924 systems. This paper does not replace the current marketing materials and configuration tools. It is intended as an extra source of information that, together with existing sources, can be used to enhance your knowledge of IBM server solutions.

Discover the foundations and nuances of electrical connectors in this comprehensive and insightful resource *Electrical Connectors: Design, Manufacture, Test, and Selection* delivers a comprehensive discussion of electrical connectors, from the components and materials that comprise them to their classifications and underwater, power, and high-speed signal applications. Accomplished engineer and author Michael G. Pecht offers readers a thorough explanation of the key performance and reliability concerns and trade-offs involved in electrical connector selection. Readers, both at introductory and advanced levels, will discover the latest industry standards for performance, reliability, and safety assurance. The book discusses everything a student or practicing engineer might require to design, manufacture, or select a connector for any targeted application. The science of contact physics, contact finishes, housing materials, and the full connector assembly process are all discussed at length, as are test methods, performance, and guidelines for various applications. *Electrical Connectors* covers a wide variety of other relevant and current topics, like: A comprehensive description of all electrical connectors, including their materials, components, applications, and classifications A discussion of the design and manufacture of all parts of a connector Application-specific criteria for contact resistance, signal quality, and temperature rise An examination of key suppliers, materials used, and the different types of data provided A presentation of guidelines for end-users involved in connector selection and design Perfect for connector manufacturers who select, design, and assemble connectors for their products or the end users who concern themselves with operational reliability of the system in which they're installed, *Electrical Connectors* also belongs on the bookshelves of students learning the basics of electrical contacts and those who seek a general reference with best-practice advice on how to choose and test connectors for targeted applications.

Take your forensic abilities and investigation skills to the next level using powerful tools that cater to all aspects of digital forensic investigations, right from hashing to reporting Key

Features Perform evidence acquisition, preservation, and analysis using a variety of Kali Linux tools Use PcapXray to perform timeline analysis of malware and network activity Implement the concept of cryptographic hashing and imaging using Kali Linux Book Description Kali Linux is a Linux-based distribution that's widely used for penetration testing and digital forensics. It has a wide range of tools to help for digital forensics investigations and incident response mechanisms. This updated second edition of Digital Forensics with Kali Linux covers the latest version of Kali Linux and The Sleuth Kit. You'll get to grips with modern techniques for analysis, extraction, and reporting using advanced tools such as FTK Imager, hex editor, and Axiom. Updated to cover digital forensics basics and advancements in the world of modern forensics, this book will also delve into the domain of operating systems. Progressing through the chapters, you'll explore various formats for file storage, including secret hiding places unseen by the end user or even the operating system. The book will also show you how to create forensic images of data and maintain integrity using hashing tools. Finally, you'll cover advanced topics such as autopsies and acquiring investigation data from networks, operating system memory, and quantum cryptography. By the end of this book, you'll have gained hands-on experience of implementing all the pillars of digital forensics: acquisition, extraction, analysis, and presentation, all using Kali Linux tools. What you will learn Get up and running with powerful Kali Linux tools for digital investigation and analysis Perform internet and memory forensics with Volatility and Xplico Understand filesystems, storage, and data fundamentals Become well-versed with incident response procedures and best practices Perform ransomware analysis using labs involving actual ransomware Carry out network forensics and analysis using NetworkMiner and other tools Who this book is for This Kali Linux book is for forensics and digital investigators, security analysts, or anyone interested in learning digital forensics using Kali Linux. Basic knowledge of Kali Linux will be helpful to gain a better understanding of the concepts covered.

This trusted training and exam quick review guide has been fully revised to cover 100% of the latest CompTIA A+ exam objectives Thoroughly updated to cover 2015 exam objectives, Mike Meyers' CompTIA A+ Certification Passport, Sixth Edition teaches the skills necessary to take the exams with complete confidence. You will get full details on hardware and OS technologies, including installation, configuration, diagnostics, and preventive maintenance. New topics include managing and maintaining mobile devices, including tablets; configuring operating systems, including Windows 8, Android, and iOS; and enhanced security and troubleshooting procedures. Written by certification guru Mike Meyers, this focused study guide offers a proven program for delivering the key information readers need to pass the exams. Additionally, this guide is an ideal entry point for almost any career in IT, highlighting technologies that you will use every day on the job. Staying true to the best-selling Passport series format, this volume uses "Itinerary," "ETA," "Warnings," and "Checkpoints" sections to reinforce important facts. Includes a coupon for 10% off of the exam fee—a \$37 value Presented in the easy-to-follow and engaging style Meyers has made famous Electronic content includes: Practice exams download for both exam 901 and 902 with hundreds of accurate practice exam questions More than an hour of online video training featuring Mike Meyers Online performance-based simulations that prepare you for the performance-based exam questions A link to Mike's favorite PC tools A PDF copy of the book

Appendix Answers to Review Questions -- Chapter 1: Starting a System -- Chapter 2: Maintaining the System -- Chapter 3: Mastering the Kernel -- Chapter 4: Managing the Filesystem -- Chapter 5: Administering Advanced Storage Devices -- Chapter 6: Navigating Network Services -- Chapter 7: Organizing Email Services -- Chapter 8: Directing DNS -- Chapter 9: Offering Web Services -- Chapter 10: Sharing Files -- Chapter 11: Managing Network Clients -- Chapter 12: Setting Up System Security -- Advert -- EULA

Comic novelist and critic, Paul McDonald, provides an accessible, revealing guide to Joseph

Heller's seminal anti-war novel, *Catch-22*. In order to help readers deepen their understanding of this perplexing comedy, McDonald succinctly contextualises it both in relation to the author's life, and key developments in modern American literature. The book offers a thorough summary and analysis of the plot of *Catch-22*, addresses important characters such as Colonel Cathcart, Lieutenant Scheisskopf, Milo Minderbinder, Major Major, and Doc Daneeka, and explains the various ways in which Yossarian's hilarious predicament has been interpreted. Among other things it considers Yossarian's status as a mythic hero, an individualist hero, and a postmodern hero, assessing his relevance to contemporary America, and his re-emergence in the sequel to *Catch-22*, *Closing Time*, published in 1994. It also offers a descriptive bibliography of important secondary sources, and links to useful online texts.

••PCI EXPRESS is considered to be the most general purpose bus so it should appeal to a wide audience in this arena. •Today's buses are becoming more specialized to meet the needs of the particular system applications, building the need for this book. •Mindshare and their only competitor in this space, Solari, team up in this new book.

Fast data ingestion, serving, and analytics in the Hadoop ecosystem have forced developers and architects to choose solutions using the least common denominator—either fast analytics at the cost of slow data ingestion or fast data ingestion at the cost of slow analytics. There is an answer to this problem. With the Apache Kudu column-oriented data store, you can easily perform fast analytics on fast data. This practical guide shows you how. Begun as an internal project at Cloudera, Kudu is an open source solution compatible with many data processing frameworks in the Hadoop environment. In this book, current and former solutions professionals from Cloudera provide use cases, examples, best practices, and sample code to help you get up to speed with Kudu. Explore Kudu's high-level design, including how it spreads data across servers Fully administer a Kudu cluster, enable security, and add or remove nodes Learn Kudu's client-side APIs, including how to integrate Apache Impala, Spark, and other frameworks for data manipulation Examine Kudu's schema design, including basic concepts and primitives necessary to make your project successful Explore case studies for using Kudu for real-time IoT analytics, predictive modeling, and in combination with another storage engine

Access to 3 hours of troubleshooting videos as well as PDFs of previous editions are available through product registration—see instructions in back pages of your eBook. For more than 25 years, *Upgrading and Repairing PCs* has been the world's #1 guide to PC hardware: The single source for reliable information on how PCs work, troubleshooting and fixing problems, adding hardware, optimizing performance, and building new PCs. This 22nd edition offers beefed-up coverage of the newest hardware innovations and maintenance techniques, plus more than two hours of new video. Scott Mueller delivers practical answers about PC processors, mother-boards, buses, BIOSes, memory, SSD and HDD storage, video, audio, networks, Internet connectivity, power, and much more. You'll find the industry's best coverage of diagnostics, testing, and repair—plus cutting-edge discussions of improving PC performance via overclocking and other techniques. Mueller has taught thousands of professionals in person and millions more through his books and videos—nobody knows more about keeping PCs running perfectly. Whether you're a professional technician, a small business owner trying to save money, or a home PC enthusiast, this is the only PC hardware book you need! **NEW IN THIS EDITION** The newest processors, including Intel's latest Core i Haswell processors and AMD's Kaveri core processors. Everything you need to know about the latest GPU technology from NVIDIA and AMD, including developments in OpenGL, DirectX, and Mantle. New firmware innovations like the InSyde BIOS, Back to BIOS buttons, and all the updated settings available for the newest processors and chipsets. The latest in updated home networking standards, from blazing fast 802.11ac Wi-Fi to HomeGrid and G.hn powerline networking. Ever larger storage, thanks to new technologies like helium-filled hard

disks, shingled magnetic recording, and Cfast and XQD for flash memory. Emerging interfaces such as mSATA, USB 3.1, and M.2 Updated coverage of building PCs from scratch—from choosing and assembling hardware through BIOS setup and troubleshooting

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

This IBM® Redpaper™ publication is a comprehensive guide covering the IBM Power System L922 (9008-22L) server, which was designed for data-intensive workloads such as databases and analytics in the Linux operating system. The objective of this paper is to introduce the major innovative Power L922 offering and its relevant functions: The new IBM POWER9™ processor, available at frequencies of 2.7 - 3.8 GHz, 2.9 - 3.8 GHz, and 3.4 - 3.9 GHz.

Significantly strengthened cores and larger caches. Two integrated memory controllers that allow double the memory footprint of IBM POWER8® processor-based servers. An integrated I/O subsystem and hot-pluggable Peripheral Component Interconnect Express (PCIe) Gen4 and Gen3 I/O slots. I/O drawer expansion options offer greater flexibility. Support for Coherent Accelerator Processor Interface (CAPI) 2.0. New feature IBM EnergyScale™ technology provides new variable processor frequency modes that provide a significant performance boost beyond the static nominal frequency. This publication is for professionals who want to acquire a better understanding of IBM Power Systems™ products. The intended audience includes the following roles: Clients Sales and marketing professionals Technical support professionals IBM Business Partners Independent software vendors (ISVs) This paper expands the current set of IBM Power Systems documentation by providing a desktop reference that offers a detailed technical description of the Power L922 system. This paper does not replace the current marketing materials and configuration tools. It is intended as an extra source of information that, together with existing sources, can be used to enhance your knowledge of IBM server solutions.

Mit dem Ryzen hat AMD bei PC-Prozessoren nach einigen recht ruhigen Jahren wieder Schwung ins Spiel gebracht: Jetzt gibt es schnelle Sechskern-Prozessoren für unter 200 Euro von AMD und Intel. In unserem Sonderheft c't Hardware Aufrüsten stellen wir die aktuellen Generationen beider Hersteller inklusive passender Mainboards vor. Auch viele weitere Komponenten, die sich zum Aufrüsten eines vorhandenen PCs eignen, mussten sich auf unseren Prüfständen beweisen. Die Grafikkarten-Kaufberatung erleichtert die Auswahl eines 3D-Beschleunigers, der optimal zu Ihren Ansprüchen passt. SSD-Testberichte helfen Ihnen dabei, den richtigen Massenspeicher zu finden. Weshalb Sie sich über die Lebensdauer einer neuen SSD kaum Gedanken machen müssen, verraten unsere Experimente: Wir haben einige Exemplare "totgeschrieben", mit interessanten Ergebnissen. Spoiler: Ein Backup ist empfehlenswert! Falls Ihnen eine SSD zu wenig Platz bietet, stellt unser Festplatten-"Rundumschlag" die meisten aktuellen Baureihen vor. Die Kombination aus SSD für Betriebssystem und Software sowie einer großen Festplatte für Datenmassen wie die Foto- und Videosammlung ist weit verbreitet. Außerdem erfahren Sie, was es mit USB Typ C – auch USB-C genannt – auf sich hat.

This document brings together a set of latest data points and publicly available information relevant for Hybrid Cloud Infrastructure Technology. We are very excited to share this content and believe that readers will benefit from this periodic publication immensely.

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

The definitive Sybex guide to A+ certification, fully updated for the latest exams The CompTIA A+ Complete Study Guide, Fourth Edition is your ultimate preparation guide for Exams 220-1001 and 220-1002. Covering 100 percent of the objectives for both exams, this book gets you up to speed on essential A+ knowledge and skills. Master the critical competencies associated with hardware and software, system maintenance, troubleshooting, connectivity, and more—with practical examples drawn from real-world experience, you'll develop the skill set employers demand in today's IT environment. End-of-chapter reviews help you gauge your progress and stay on track for success, while exam highlights give you a sneak preview of what to expect on the big day. You also get access to the Sybex online test bank, featuring electronic flashcards, a searchable glossary, and 4 practice exams to help you study from anywhere, any time—track your progress and test your understanding with interactive study tools. CompTIA A+ certification is the industry-leading standard for IT professionals. Hundreds of companies require their computer technicians to hold this valuable credential. Now in its fourth edition, this revised and updated study guide includes expanded coverage of virtualization and cloud computing, mobile hardware installation, network security, and more, to reflect the latest changes in the A+ exam. Providing all the information you need to earn your A+ certification, this invaluable resource will help you: Master the basics of hardware, software, and peripherals Understand and troubleshoot network connectivity issues Install and configure Windows, iOS, Android, Apple OSX, and Linux operating systems The CompTIA A+ Complete Study Guide, Fourth Edition arms you with the tools and knowledge necessary to take your skills to the next level. Whether a first-time candidate or IT professional in need of recertification, this essential study guide will help you prepare, practice, and pass with minimal burden and maximum results.

Basé sur le référentiel du BTS Audiovisuel, il est organisé en cours complets, suivis de QCM et de nombreux exercices de difficultés progressives (3 niveaux). L'objectif est d'apporter une aide précieuse aux étudiants des formations initiales et aux candidats libres qui se présente au

BTS audiovisuel ou à un examen présentant des exigences scientifiques en rapport avec l'image et le son. Le contenu de cet ouvrage s'adresse également aux techniciens en formation continue ainsi qu'à tous les acteurs des réalisations audiovisuelles. Sommaire Le premier volume rassemble les 8 thématiques généralement enseignées en première année du BTS Audiovisuel Signal audio analogique Chaîne audio : micro, amplis, enceintes, table de mixage Interface et mesure audio Perception visuelle Caractéristiques d'une d'image Signal vidéo analogique (signaux noir et blanc, signaux composites et composantes) Numérisation et compression vidéo Formats (formats natifs, formats de fichiers, transcodage)

This book looks at various application and data demand drivers, along with data infrastructure options from legacy on premise, public cloud, hybrid, software-defined data center (SDDC), software data infrastructure (SDI), container as well as serverless along with infrastructure as a Service (IaaS), IT as a Service (ITaaS) along with related technology, trends, tools, techniques and strategies. Filled with example scenarios, tips and strategy considerations, the book covers frequently asked questions and answers to aid strategy as well as decision-making.

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