

Ibm Motherboard Rev 2 6

This IBM® Redpaper™ publication describes the adapter-based virtualization capabilities that are being deployed in high-end IBM POWER7+™ processor-based servers. Peripheral Component Interconnect Express (PCIe) single root I/O virtualization (SR-IOV) is a virtualization technology on IBM Power Systems servers. SR-IOV allows multiple logical partitions (LPARs) to share a PCIe adapter with little or no run time involvement of a hypervisor or other virtualization intermediary. SR-IOV does not replace the existing virtualization capabilities that are offered as part of the IBM PowerVM® offerings. Rather, SR-IOV compliments them with additional capabilities. This paper describes many aspects of the SR-IOV technology, including: A comparison of SR-IOV with standard virtualization technology Overall benefits of SR-IOV Architectural overview of SR-IOV Planning requirements SR-IOV deployment models that use standard I/O virtualization Configuring the adapter for dedicated or shared modes Tips for maintaining and troubleshooting your system Scenarios for configuring your system This paper is directed to clients, IBM Business Partners, and system administrators who are involved with planning, deploying, configuring, and maintaining key virtualization technologies.

This is the newest comprehensive update to the world's #1 guide to PC repair and maintenance. World-renowned PC hardware expert Scott Mueller has thoroughly updated his legendary Upgrading and Repairing PCs to reflect today's latest PC technologies, and added a new DVD with more than two hours of digital video demonstrating PC maintenance and repair, which can be watched on either their DVD-equipped PCs or any DVD player. Mueller presents updated coverage of every significant PC component: processors, motherboards, memory, the BIOS, IDE and SCSI interfaces, drives, removable and optical storage, video and audio hardware, USB, FireWire, Internet connectivity, LANs, power supplies, even PC cases. This book also contains a detailed troubleshooting index designed to help readers rapidly diagnose more than 250 common PC hardware problems, as well as an extensive vendor contact guide, and a comprehensive PC technical glossary.

In a smarter planet, information-centric processes are exploding in growth. The mainframe has always been the IT industry's leading platform for transaction processing, consolidated and secure data serving, and support for available enterprise-wide applications. IBM® has extended the mainframe platform to help large enterprises reshape their client experiences through information-centric computing and to deliver on key business initiatives. IBM zEnterprise® is recognized as the most reliable and trusted system, and the most secure environment for core business operations. The new zEnterprise System consists of the IBM zEnterprise EC12 (zEC12) or IBM zEnterprise BC12 (zBC12), the IBM zEnterprise Unified Resource Manager, and the IBM zEnterprise IBM BladeCenter® Extension (zBX) Model 003. This IBM Redbooks® publication describes the zEC12 and zBC12, with their improved scalability, performance, security, resiliency, availability, and virtualization. The zEnterprise System has no peer as a trusted platform that also provides the most efficient transaction processing and database management. With efficiency at scale delivering significant cost savings on core processes, resources can be freed up to focus on developing new services to drive growth. This book provides a technical overview of the zEC12, zBC12, zBX Model 003, and Unified Resource Manager. This publication is intended for IT managers, architects, consultants, and anyone else who wants to understand the elements of the zEnterprise System. For this introduction to the zEnterprise System, readers are not expected to be familiar with current IBM System z® technology and terminology.

Maximum PC

Organizations of all sizes are faced with the challenge of managing massive volumes of increasingly valuable data. However, storing this data can be costly, and extracting value from the data is becoming more and more difficult. IT organizations have limited resources, but must stay responsive to dynamic environments and act quickly to consolidate, simplify, and optimize their IT infrastructures. The IBM® Storwize® V3700 system provides a solution that is affordable, easy to use, and self-optimizing, which enables organizations to overcome these storage challenges. Storwize V3700 delivers efficient, entry-level configurations that are specifically designed to meet the needs of small and midsize businesses. Designed to provide organizations with the ability to consolidate and share data at an affordable price, Storwize V3700 offers advanced software capabilities that are usually found in more expensive systems. Built on innovative IBM technology, Storwize V3700 addresses the block storage requirements of small and midsize organizations, Storwize V3700 is designed to accommodate the most common storage network technologies. This design enables easy implementation and management. Storwize V3700 includes the following features: Web-based GUI provides point-and-click management capabilities. Internal disk storage virtualization enables rapid, flexible provisioning and simple configuration changes. Thin provisioning enables applications to grow dynamically, but only use space they actually need. Enables simple data migration from external storage to Storwize V3700 storage (one-way from another storage device). Remote Mirror creates copies of data at remote locations for disaster recovery. IBM FlashCopy® creates instant application copies for backup or application testing. This IBM Redbooks® publication is intended for pre-sales and post-sales technical support professionals and storage administrators. The concepts in this book also relate to the IBM Storwize V3500. This book was written at a software level of version 7 release 4.

The popularity of the Internet and the affordability of IT hardware and software have resulted in an explosion of applications, architectures, and platforms. Workloads have changed. Many applications, including mission-critical ones, are deployed on various platforms, and the IBM® System z® design has adapted to this change. It takes into account a wide range of factors, including compatibility and investment protection, to match the IT requirements of an enterprise. This IBM Redbooks® publication addresses the new IBM zEnterprise® System. This system consists of the IBM zEnterprise EC12 (zEC12), an updated IBM zEnterprise Unified Resource Manager, and the IBM zEnterprise BladeCenter® Extension (zBX) Model 003. The zEC12 is designed with improved scalability, performance, security, resiliency, availability, and virtualization. The superscalar design allows the zEC12 to deliver a record level of capacity over the prior System z servers. It is powered by 120 of the world's most powerful microprocessors. These microprocessors run at 5.5 GHz and are capable of running more than 75,000 millions of instructions per second (MIPS). The zEC12 Model HA1 is estimated to provide up to 50% more total system capacity than the IBM zEnterprise 196 (z196) Model M80. The zBX Model 003 infrastructure works with the zEC12 to enhance System z virtualization and management. It does so through an integrated hardware platform that spans mainframe, IBM POWER7®, and IBM System x® technologies. Through the Unified Resource Manager, the zEnterprise System is managed as a single pool of resources, integrating system and workload management across the environment. This book provides information about the zEnterprise System and its functions, features, and associated software support. Greater detail is offered in areas relevant to technical planning. It is intended for systems engineers, consultants, planners, and anyone who wants to understand the zEnterprise System functions and plan for their usage. It is not intended as an introduction to mainframes. Readers are expected to be generally familiar with existing IBM System z® technology and terminology.

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This IBM® Redpaper™ publication is a comprehensive guide that covers the IBM Power System™ E850C (8408-44E) server that supports IBM AIX®, and Linux operating systems. The objective of this paper is to introduce the major innovative Power E850C offerings and their relevant functions. The Power E850C server (8408-44E) is the latest

enhancement to the Power Systems portfolio. It offers an improved 4-socket 4U system that delivers faster IBM POWER8® processors up to 4.22 GHz, with up to 4 TB of DDR4 memory, built-in IBM PowerVM® virtualization, and capacity on demand. It also integrates cloud management to help clients deploy scalable, mission-critical business applications in virtualized, private cloud infrastructures. Like its predecessor Power E850 server, which was launched in 2015, the new Power E850C server uses 8-core, 10-core, or 12-core POWER8 processor modules. However, the Power E850C cores are 13%-20% faster and deliver a system with up to 32 cores at 4.22 GHz, up to 40 cores at 3.95 GHz, or up to 48 cores at 3.65 GHz, and use DDR4 memory. A minimum of two processor modules must be installed in each system, with a minimum quantity of one processor module's cores activated. Cloud computing, in its many forms (public, private, or hybrid), is quickly becoming both the delivery and consumption models for IT. However, finding the correct mix between traditional IT, private cloud, and public cloud can be a challenge. The new Power E850C server and IBM Cloud PowerVC manager can enable clients to accelerate the transformation of their IT infrastructure for cloud while providing tremendous flexibility during the transition. IBM Cloud PowerVC Manager provides OpenStack-based cloud management to accelerate and simplify cloud deployment by providing fast and automated VM deployments, prebuilt image templates, and self-service capabilities all with an intuitive interface. PowerVC management upwardly integrates into various third-party hybrid cloud orchestration products, including IBM Cloud Orchestrator, VMware vRealize, and others. Clients can simply manage both their private cloud VMs and their public cloud VMs from a single, integrated management tool. IBM Power Systems is designed to provide the highest levels of reliability, availability, flexibility, and performance to bring you a world-class enterprise private and hybrid cloud infrastructure. Through enterprise-class security, efficient built-in virtualization that drives industry-leading workload density, and dynamic resource allocation and management, the server consistently delivers the highest levels of service across hundreds of virtual workloads on a single system. The Power E850C server includes the cloud management software and services to assist with clients' move to the cloud, both private and hybrid. Those additional capabilities include the following items: Private cloud management with IBM Cloud PowerVC Manager, Cloud-based HMC Apps as a service, and Open source cloud automation and configuration tooling for AIX Hybrid cloud support Hybrid infrastructure management tools Securely connect system of record workloads and data to cloud native applications IBM Cloud Starter Pack Flexible capacity on demand Power to Cloud Services 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 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 E850C system.

Provides detailed technical information about the Apple IIe personal computer, including bus structure, timing generation, the 6502 microprocessor, memory management, video generation, and the disk controller

This IBM® Redpaper™ publication is a comprehensive guide covering the IBM Power 750 and Power 755 servers supporting AIX®, IBM i, and Linux® operating systems. The goal of this paper is to introduce the major innovative Power 750 and 755 offerings and their prominent functions, including: The POWER7™ processor available at frequencies of 3.0 GHz, 3.3 GHz, and 3.55 GHz The specialized POWER7 Level 3 cache that provides greater bandwidth, capacity, and reliability The 1 Gb or 10 Gb Integrated Virtual Ethernet adapter, included with each server configuration, and providing native hardware virtualization PowerVMTM virtualization including PowerVM Live Partition Mobility and PowerVM Active Memory™ Sharing. Active Memory Expansion that provides more usable memory than what is physically installed on the system EnergyScale™ technology that provides features such as power trending, power-saving, capping of power, and thermal measurement. Professionals who want to acquire a better understanding of IBM Power Systems™ products should read this Redpaper. This Redpaper expands the current set of IBM Power Systems documentation by providing a desktop reference that offers a detailed technical description of the 750 and 755 systems. This paper does not replace the latest marketing materials and configuration tools. It is intended as an additional source of information that, together with existing sources, may be used to enhance your knowledge of IBM server solutions.

The heart of every IBM and compatible PC is the BIOS, a low-level operating environment that handles the initial boot, start up and loading of the operating system and hardware level functions, System and service technicians and professionals assembling computer systems, troubleshooting computer hardware troubleshooting, performance tuning or home hobbyists building their own computer will benefit from this book. There are over 50,000 companies focused in the computer technical service and configuration business in the United States alone. Most of these companies employ between 10-50 technicians. In addition, the target audience Key Features -- Over 6,500 hard disks covered (almost twice the number of any competitive product). -- Also covers common and unusual IDE disk controllers.

To meet today's complex and ever-changing business demands, you need a solid foundation of compute, storage, networking, and software resources. This system must be simple to deploy, and be able to quickly and automatically adapt to changing conditions. You also need to be able to take advantage of broad expertise and proven guidelines in systems management, applications, hardware maintenance, and more. The IBM® PureFlex® System combines no-compromise system designs along with built-in expertise and integrates them into complete, optimized solutions. At the heart of PureFlex System is the IBM Flex System® Enterprise Chassis. This fully integrated infrastructure platform supports a mix of compute, storage, and networking resources to meet the demands of your applications. The solution is easily scalable with the addition of another chassis with the required nodes. With the IBM Flex System Manager®, multiple chassis can be monitored from a single panel. The 14 node, 10U chassis delivers high-speed performance complete with integrated servers, storage, and networking. This flexible chassis is simple to deploy now, and to scale to meet your needs in the future. This IBM Redbooks® publication describes IBM PureFlex System and IBM Flex System available from IBM. It highlights the technology and features of the chassis, compute nodes, management features, and connectivity options. Guidance is provided about every major component, and about

networking and storage connectivity. This book is intended for customers, IBM Business Partners, and IBM employees who want to know the details about the new family of products. It assumes that you have a basic understanding of blade server concepts and general IT knowledge.

PCMag.com is a leading authority on technology, delivering Labs-based, independent reviews of the latest products and services. Our expert industry analysis and practical solutions help you make better buying decisions and get more from technology.

Maximum PC is the magazine that every computer fanatic, PC gamer or content creator must read. Each and every issue is packed with punishing product reviews, insightful and innovative how-to stories and the illuminating technical articles that enthusiasts crave.

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