

Max Power Check Point Firewall Performance Optimization

(Indeni) Max Power: Check Point Firewall Performance Optimization

This is an indeni-branded version of the \"Max Power: Check Point Firewall Performance Optimization\" book by Timothy C. Hall. Only employees of indeni should order this book; non-indeni personnel can order a regular copy of the book here: <http://www.maxpowerfirewalls.com> The interior content of the indeni-branded book and original book are identical; only the front and back covers look slightly different.

Max Power 2020: Check Point Firewall Performance Optimization

<http://www.maxpowerfirewalls.com> Typical causes of performance-related issues on Check Point (R) firewalls are explored in this book through a process of discovery, analysis, and remediation. This Third Edition has been fully updated for version R80.30 and Gaia kernel 3.10. You will learn about: Common OSI Layer 1-3 Performance Issues Gaia OS Optimization ClusterXL Health Assessment CoreXL & SecureXL Tuning Access Control Policy Optimization IPSec VPN Performance Enhancement Threat Prevention Policy Optimization Active Streaming & HTTPS Inspection Elephant Flows/Heavy Connections & DoS Attack Mitigation Diagnosing Intermittent Performance Issues Setting Up Proactive Performance-related Alerting Includes an index of all commands referenced throughout the text. This book has everything you need to get the most out of your R80.30+ firewall with Gaia kernel 3.10.

Max Power: Check Point Firewall Performance Optimization

<http://www.maxpowerfirewalls.com> \"Like Tim's previous edition of Max Power, if you maintain Check Point Security Gateways, you need this book. The advice provided herein is sound, field tested, and updated for Check Point's latest Security Gateway release: R80.10!\" -- Dameon D. Welch-Abernathy, Author, Essential Check Point Firewall-1 \"Wow! Tim has been able to add significantly to an already amazing wealth of knowledge. By adding comprehensive coverage of R80.10, and expanding significantly on the topics of the first edition, this edition is now even more essential than the first. If you maintain Check Point firewalls, read it.\" -- Eric Anderson CCSM, CCSI, and Operator of CPUG.org Typical causes of performance-related issues on Check Point (R) firewalls are explored in this book through a process of discovery, analysis, and remediation. This second edition has been fully updated for release R80.10 and you will learn about: Common OSI Layer 1-3 issues and how to fix them Gaia OS Optimization Access Control Policy Layer Tuning CoreXL

Tuning & Recommendations Threat Prevention Policy Optimization IPSec VPN Performance Enhancement SecureXL Acceleration Tuning Multi-Queue and SMT/Hyperthreading Firewall Process Space Trips Diagnosing Intermittent Performance Issues Includes an alphabetical index of all CLI commands utilized throughout the text. This book has everything you need to get the most out of your Check Point firewall. ABOUT THE AUTHOR Timothy C. Hall CISSP, CCSM, CCSI, CCNA Security Mr. Hall has been performing computer security work for over 20 years and has worked with Check Point products since 1997. Mr. Hall holds a B.S. in Computer Science from Colorado State University and has been teaching Check Point firewall classes continuously since 2004. As a perennial Top 3 contributor at the CheckMates User Community (community.checkpoint.com) as well as the Check Point User Group (cpug.org) with over 2,000 posts, Mr. Hall frequently lends his expertise to solving problems posted by Check Point users all over the world. Links to first edition of this book and its customer reviews: <https://www.amazon.com/Max-Power-Firewall-Performance-Optimization/dp/1511474092>
<https://www.amazon.co.uk/Max-Power-Firewall-Performance-Optimization/dp/1511474092>

IBM Business Process Manager V8.5 Performance Tuning and Best Practices

This IBM® Redbooks® publication provides performance tuning tips and best practices for IBM Business Process Manager (IBM BPM) V8.5.5 (all editions) and IBM Business Monitor V8.5.5. These products represent an integrated development and runtime environment based on a key set of service-oriented architecture (SOA) and business process management (BPM) technologies. Such technologies include Service Component Architecture (SCA), Service Data Object (SDO), Business Process Execution Language (BPEL) for web services, and Business Processing Modeling Notation (BPMN). Both IBM Business Process Manager and Business Monitor build on the core capabilities of the IBM WebSphere® Application Server infrastructure. As a result, Business Process Manager solutions benefit from tuning, configuration, and best practices information for WebSphere Application Server and the corresponding platform Java virtual machines (JVMs). This book targets a wide variety of groups, both within IBM (development, services, technical sales, and others) and customers. For customers who are either considering or are in the early stages of implementing a solution incorporating Business Process Manager and Business Monitor, this document proves a useful reference. The book is useful both in terms of best practices during application development and deployment and as a reference for setup, tuning, and configuration information. This book talks about many issues that can influence performance of each product and can serve as a guide for making rational first choices in terms of configuration and performance settings. Similarly, customers who already implemented a solution with these products can use the information presented here to gain insight into how their overall integrated solution performance can be improved.

IBM Power Systems Performance Guide: Implementing and Optimizing

This IBM® Redbooks® publication addresses performance tuning topics to help leverage the virtualization strengths of the POWER® platform to solve clients' system resource utilization challenges, and maximize system throughput and capacity. We examine the performance monitoring tools, utilities, documentation, and other resources available to help technical teams provide optimized business solutions and support for applications running on IBM POWER systems' virtualized environments. The book offers application performance examples deployed on IBM Power Systems™ utilizing performance monitoring tools to leverage the comprehensive set of POWER virtualization features: Logical

Partitions (LPARs), micro-partitioning, active memory sharing, workload partitions, and more. We provide a well-defined and documented performance tuning model in a POWER system virtualized environment to help you plan a foundation for scaling, capacity, and optimization . This book targets technical professionals (technical consultants, technical support staff, IT Architects, and IT Specialists) responsible for providing solutions and support on IBM POWER systems, including performance tuning.

IBM Power Systems SR-IOV: Technical Overview and Introduction

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.

Deployment Guide for InfoSphere Guardium

IBM® InfoSphere® Guardium® provides the simplest, most robust solution for data security and data privacy by assuring the integrity of trusted information in your data center. InfoSphere Guardium helps you reduce support costs by automating the entire compliance auditing process across heterogeneous environments. InfoSphere Guardium offers a flexible and scalable solution to support varying customer architecture requirements. This IBM Redbooks® publication provides a guide for deploying the Guardium solutions. This book also provides a roadmap process for implementing an InfoSphere Guardium solution that is based on years of experience and best practices that were collected from various Guardium experts. We describe planning, installation, configuration, monitoring, and administrating an InfoSphere Guardium environment. We also describe use cases and how InfoSphere Guardium integrates with other IBM products. The guidance can help you successfully deploy and manage an IBM InfoSphere Guardium system. This book is intended for the system administrators and support staff who are responsible for deploying or supporting an InfoSphere Guardium environment.

IBM PowerVM Best Practices

This IBM® Redbooks® publication provides best practices for planning, installing, maintaining, and monitoring the IBM PowerVM® Enterprise Edition virtualization features on

IBM POWER7® processor technology-based servers. PowerVM is a combination of hardware, PowerVM Hypervisor, and software, which includes other virtualization features, such as the Virtual I/O Server. This publication is intended for experienced IT specialists and IT architects who want to learn about PowerVM best practices, and focuses on the following topics: Planning and general best practices Installation, migration, and configuration Administration and maintenance Storage and networking Performance monitoring Security PowerVM advanced features This publication is written by a group of seven PowerVM experts from different countries around the world. These experts came together to bring their broad IT skills, depth of knowledge, and experiences from thousands of installations and configurations in different IBM client sites.

IBM FlashSystem 5200 Product Guide

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

How to Accelerate Your Internet

The superabundance of data that is created by today's businesses is making storage a strategic investment priority for companies of all sizes. As storage takes precedence, the following major initiatives emerge: Flatten and converge your network: IBM® takes an open, standards-based approach to implement the latest advances in the flat, converged data center network designs of today. IBM Storage solutions enable clients to deploy a high-speed, low-latency Unified Fabric Architecture. Optimize and automate virtualization: Advanced virtualization awareness reduces the cost and complexity of deploying physical and virtual data center infrastructure. Simplify management: IBM data center networks are easy to deploy, maintain, scale, and virtualize, delivering the foundation of consolidated operations for dynamic infrastructure management. Storage is no longer an

afterthought. Too much is at stake. Companies are searching for more ways to efficiently manage expanding volumes of data, and to make that data accessible throughout the enterprise. This demand is propelling the move of storage into the network. Also, the increasing complexity of managing large numbers of storage devices and vast amounts of data is driving greater business value into software and services. With current estimates of the amount of data to be managed and made available increasing at 60% each year, this outlook is where a storage area network (SAN) enters the arena. SANs are the leading storage infrastructure for the global economy of today. SANs offer simplified storage management, scalability, flexibility, and availability; and improved data access, movement, and backup. Welcome to the cognitive era. The smarter data center with the improved economics of IT can be achieved by connecting servers and storage with a high-speed and intelligent network fabric. A smarter data center that hosts IBM Storage solutions can provide an environment that is smarter, faster, greener, open, and easy to manage. This IBM® Redbooks® publication provides an introduction to SAN and Ethernet networking, and how these networks help to achieve a smarter data center. This book is intended for people who are not very familiar with IT, or who are just starting out in the IT world.

Introduction to Storage Area Networks

Part of a series of specialized guides on System Center, this book focuses on Microsoft System Center Operations Manager. For the seasoned professional, it covers the role of the Operations Manager product, the best practices for working with management packs, how to use the reporting feature to simplify managing the product, how to thoroughly troubleshoot, and how to use and install Operations Manager in the Microsoft Azure Public Cloud environment.

Microsoft System Center Operations Manager Field Experience

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.

IBM FlashSystem 9100 Architecture, Performance, and Implementation

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 support 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.

IBM Power E1080 Technical Overview and Introduction

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.

IBM Power System E980: Technical Overview and Introduction

Go beyond layer 2 broadcast domains with this in-depth tour of advanced link and internetwork layer protocols, and learn how they enable you to expand to larger topologies. An ideal follow-up to Packet Guide to Core Network Protocols, this concise guide dissects several of these protocols to explain their structure and operation. This isn't a book on

packet theory. Author Bruce Hartpence built topologies in a lab as he wrote this guide, and each chapter includes several packet captures. You'll learn about protocol classification, static vs. dynamic topologies, and reasons for installing a particular route. This guide covers: Host routing—Process a routing table and learn how traffic starts out across a network Static routing—Build router routing tables and understand how forwarding decisions are made and processed Spanning Tree Protocol—Learn how this protocol is an integral part of every network containing switches Virtual Local Area Networks—Use VLANs to address the limitations of layer 2 networks Trunking—Get an indepth look at VLAN tagging and the 802.1Q protocol Routing Information Protocol—Understand how this distance vector protocol works in small, modern communication networks Open Shortest Path First—Discover why convergence times of OSPF and other link state protocols are improved over distance vectors

Packet Guide to Routing and Switching

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.

IBM Power System E950: Technical Overview and Introduction

This book is an open access book. This book provides an overview of the ERIGrid validation methodology for validating CPES, a holistic power system testing method. It introduces readers to corresponding simulation and laboratory-based tools, including co-simulation, real-time simulation, and hardware-in-the-loop. Selected test cases and validation examples are provided, in order to support the theory discussed. The book begins with an introduction to current power system testing methods and an overview of the ERIGrid system-level validation approach. It then moves on to discuss various validation methods, concepts and tools, including simulation and laboratory-based assessment methods. The book presents test cases and validation examples of the proposed methodologies and summarises the lessons learned from the holistic validation approach. In the final section of the book, the educational aspects of these methods, the outlook for the future, and overall conclusions are discussed. Given its scope, the book will be of interest to researchers,

engineers, and laboratory personnel in the fields of power systems and smart grids, as well as undergraduate and graduate students studying related engineering topics.

European Guide to Power System Testing

This comprehensive resource contains a detailed methodology for assessing, analyzing and optimizing End-to-End Service Performance under different cellular technologies (GPRS, EDGE, WCDMA and CDMA2000). It includes guidelines for analyzing numerous different services, including FTP, WEB streaming and POC, including examples of analysis and troubleshooting from a user point-of-view. Focuses on the end-user perspective, with a detailed analysis of the main sources of service performance degradation and a comprehensive description of mobile data services Includes a detailed presentation of generic key performance indicators (KPIs) which can be re-defined to comply with each particular network Provides service performance benchmarking for different technologies from real networks Explores a new approach to service management known as customer experience management, including the reasons why it is overcoming traditional service management and its impact on revenues and customer satisfaction Illustrates all points throughout using real world examples gleaned from cutting-edge research This book draws together findings from authoritative sources that will appeal to cellular network operators and vendors. The theory-based, practical approach will be of interest to postgraduate students and telecommunication and consulting companies working in the field of cellular technologies.

End-to-End Quality of Service over Cellular Networks

This IBM® Redbooks® publication demonstrates and documents that IBM Power Systems™ high-performance computing and technical computing solutions deliver faster time to value with powerful solutions. Configurable into highly scalable Linux clusters, Power Systems offer extreme performance for demanding workloads such as genomics, finance, computational chemistry, oil and gas exploration, and high-performance data analytics. This book delivers a high-performance computing solution implemented on the IBM Power System S822LC. The solution delivers high application performance and throughput based on its built-for-big-data architecture that incorporates IBM POWER8® processors, tightly coupled Field Programmable Gate Arrays (FPGAs) and accelerators, and faster I/O by using Coherent Accelerator Processor Interface (CAPI). This solution is ideal for clients that need more processing power while simultaneously increasing workload density and reducing datacenter floor space requirements. The Power S822LC offers a modular design to scale from a single rack to hundreds, simplicity of ordering, and a strong innovation roadmap for graphics processing units (GPUs). This publication is targeted toward technical professionals (consultants, technical support staff, IT Architects, and IT Specialists) responsible for delivering cost effective high-performance computing (HPC) solutions that help uncover insights from their data so they can optimize business results, product development, and scientific discoveries

Implementing an IBM High-Performance Computing Solution on IBM Power System S822LC

This IBM® Redbooks® publication is a guide to IBM Power Systems Private Cloud with Shared Utility Capacity featuring Power Enterprise Pools (PEP) 2.0. This technology enables multiple servers in an to share base processor and memory resources and draw on pre-paid credits when the base is exceeded. Previously, the Shared Utility Capacity feature supported IBM Power E950 (9040-MR9) and IBM Power E980 (9080-M9S). The feature was extended in August 2020 to include the scale-out IBM Power servers that were announced on 14 July 2020, and it received dedicated processor support later in the year. The IBM Power S922 (9009-22G), and IBM Power S924 (9009-42G) servers, which use the latest IBM POWER9™ processor-based technology and support the IBM AIX®, IBM i, and Linux operating systems (OSs), are now supported. The previous scale-out models of Power S922 (9009-22A), and Power S924 (9009-42A) servers cannot be added to an enterprise pool. With the availability of the IBM Power E1080 (9080-HEX) in September 2021, support for this system as part of a Shared Utility Pool has become available. The goal of this book is to provide an overview of the solution's environment and guidance for planning a deployment of it. The book also covers how to configure IBM Power Systems Private Cloud with Shared Utility Capacity. There are also chapters about migrating from PEP 1.0 to PEP 2.0 and various use cases. This publication is for professionals who want to acquire a better understanding of IBM Power Systems Private Cloud, and Shared Utility Capacity. The intended audience includes: Clients Sales and marketing professionals Technical support professionals IBM Business Partners This book expands the set of IBM Power documentation by providing a desktop reference that offers a detailed technical description of IBM Power Systems Private Cloud with Shared Utility Capacity.

IBM Power Systems Private Cloud with Shared Utility Capacity: Featuring Power Enterprise Pools 2.0

This IBM® Redbooks® publication documents and addresses topics to provide step-by-step customizable application and programming solutions to tune application and workloads to use IBM Power Systems™ hardware architecture. This publication explores, tests, and documents the solution to use the architectural technologies and the software solutions that are available from IBM to help solve challenging technical and business problems. This publication also demonstrates and documents that the combination of IBM high-performance computing (HPC) solutions (hardware and software) delivers significant value to technical computing clients who are in need of cost-effective, highly scalable, and robust solutions. First, the book provides a high-level overview of the HPC solution, including all of the components that makes the HPC cluster: IBM Power System S822LC (8335-GTB), software components, interconnect switches, and the IBM Spectrum™ Scale parallel file system. Then, the publication is divided in three parts: Part 1 focuses on the developers, Part 2 focuses on the administrators, and Part 3 focuses on the evaluators and planners of the solution. The IBM Redbooks publication is targeted toward technical professionals (consultants, technical support staff, IT Architects, and IT Specialists) who are responsible for delivering cost-effective HPC solutions that help uncover insights from vast amounts of client's data so they can optimize business results, product development, and scientific discoveries.

POWER8 High-performance Computing Guide IBM Power System S822LC (8335-GTB) Edition

This updated report provides an overview of firewall technology, and helps organizations plan for and implement effective firewalls. It explains the technical features of firewalls,

the types of firewalls that are available for implementation by organizations, and their security capabilities. Organizations are advised on the placement of firewalls within the network architecture, and on the selection, implementation, testing, and management of firewalls. Other issues covered in detail are the development of firewall policies, and recommendations on the types of network traffic that should be prohibited. The appendices contain helpful supporting material, including a glossary and lists of acronyms and abbreviations; and listings of in-print and online resources. Illus.

Guidelines on Firewalls and Firewall Policy

Big data has incredible business value, and Splunk is the best tool for unlocking that value. Exploring Splunk shows you how to pinpoint answers and find patterns obscured by the flood of machinegenerated data. This book uses an engaging, visual presentation style that quickly familiarizes you with how to use Splunk. You'll move from mastering Splunk basics to creatively solving real-world problems, finding the gems hidden in big data.

Exploring Splunk

Until the late 1980s, information processing was associated with large mainframe computers and huge tape drives. During the 1990s, this trend shifted toward information processing with personal computers, or PCs. The trend toward miniaturization continues and in the future the majority of information processing systems will be small mobile computers, many of which will be embedded into larger products and interfaced to the physical environment. Hence, these kinds of systems are called embedded systems. Embedded systems together with their physical environment are called cyber-physical systems. Examples include systems such as transportation and fabrication equipment. It is expected that the total market volume of embedded systems will be significantly larger than that of traditional information processing systems such as PCs and mainframes. Embedded systems share a number of common characteristics. For example, they must be dependable, efficient, meet real-time constraints and require customized user interfaces (instead of generic keyboard and mouse interfaces). Therefore, it makes sense to consider common principles of embedded system design. Embedded System Design starts with an introduction into the area and a survey of specification models and languages for embedded and cyber-physical systems. It provides a brief overview of hardware devices used for such systems and presents the essentials of system software for embedded systems, like real-time operating systems. The book also discusses evaluation and validation techniques for embedded systems. Furthermore, the book presents an overview of techniques for mapping applications to execution platforms. Due to the importance of resource efficiency, the book also contains a selected set of optimization techniques for embedded systems, including special compilation techniques. The book closes with a brief survey on testing. Embedded System Design can be used as a text book for courses on embedded systems and as a source which provides pointers to relevant material in the area for PhD students and teachers. It assumes a basic knowledge of information processing hardware and software. Courseware related to this book is available at <http://ls12-www.cs.tu-dortmund.de/~marwedel>.

Embedded System Design

How prepared are you to build fast and efficient web applications? This eloquent book provides what every web developer should know about the network, from fundamental limitations that affect performance to major innovations for building even more powerful browser applications—including HTTP 2.0 and XHR improvements, Server-Sent Events (SSE), WebSocket, and WebRTC. Author Ilya Grigorik, a web performance engineer at Google, demonstrates performance optimization best practices for TCP, UDP, and TLS protocols, and explains unique wireless and mobile network optimization requirements. You'll then dive into performance characteristics of technologies such as HTTP 2.0, client-side network scripting with XHR, real-time streaming with SSE and WebSocket, and P2P communication with WebRTC. Deliver superlative TCP, UDP, and TLS performance Speed up network performance over 3G/4G mobile networks Develop fast and energy-efficient mobile applications Address bottlenecks in HTTP 1.x and other browser protocols Plan for and deliver the best HTTP 2.0 performance Enable efficient real-time streaming in the browser Create efficient peer-to-peer videoconferencing and low-latency applications with real-time WebRTC transports

High Performance Browser Networking

In today's fast and competitive world, a program's performance is just as important to customers as the features it provides. This practical guide teaches developers performance-tuning principles that enable optimization in C++. You'll learn how to make code that already embodies best practices of C++ design run faster and consume fewer resources on any computer—whether it's a watch, phone, workstation, supercomputer, or globe-spanning network of servers. Author Kurt Guntheroth provides several running examples that demonstrate how to apply these principles incrementally to improve existing code so it meets customer requirements for responsiveness and throughput. The advice in this book will prove itself the first time you hear a colleague exclaim, "Wow, that was fast. Who fixed something?" Locate performance hot spots using the profiler and software timers Learn to perform repeatable experiments to measure performance of code changes Optimize use of dynamically allocated variables Improve performance of hot loops and functions Speed up string handling functions Recognize efficient algorithms and optimization patterns Learn the strengths—and weaknesses—of C++ container classes View searching and sorting through an optimizer's eye Make efficient use of C++ streaming I/O functions Use C++ thread-based concurrency features effectively

Optimized C++

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

SAN, and IBM SAN Volume Controller administrators and technicians. Understanding this book requires advanced knowledge of the IBM SAN Volume Controller, IBM FlashSystem, and SAN environments.

IBM SAN Volume Controller Best Practices and Performance Guidelines

This IBM® Redpaper™ publication is a comprehensive guide covering the IBM Power System S822 (8284-22A) server that supports the IBM AIX® and Linux operating systems (OSes) running on bare metal, and the IBM i OS running under the VIOS. The objective of this paper is to introduce the major innovative Power S822 offerings and their relevant functions: The new IBM POWER8™ processor, which is available at frequencies of 3.42 GHz, and 3.89 GHz Significantly strengthened cores and larger caches Two integrated memory controllers with improved latency and bandwidth Integrated I/O subsystem and hot-pluggable PCIe Gen3 I/O slots Improved reliability, serviceability, and availability (RAS) functions IBM EnergyScale™ technology that provides features such as power trending, power-saving, capping of power, and thermal measurement This publication is for professionals who want to acquire a better understanding of IBM Power Systems™ products. 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 S822 system. 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, can be used to enhance your knowledge of IBM server solutions.

IBM Power System S822 Technical Overview and Introduction

This book provides an overview of modern boot firmware, including the Unified Extensible Firmware Interface (UEFI) and its associated EFI Developer Kit II (EDKII) firmware. The authors have each made significant contributions to developments in these areas. The reader will learn to use the latest developments in UEFI on modern hardware, including open source firmware and open hardware designs. The book begins with an exploration of interfaces exposed to higher-level software and operating systems, and commences to the left of the boot timeline, describing the flow of typical systems, beginning with the machine restart event. Software engineers working with UEFI will benefit greatly from this book, while specific sections of the book address topics relevant for a general audience: system architects, pre-operating-system application developers, operating system vendors (loader, kernel), independent hardware vendors (such as for plug-in adapters), and developers of end-user applications. As a secondary audience, project technical leaders or managers may be interested in this book to get a feel for what their engineers are doing. The reader will find: An overview of UEFI and underlying Platform Initialization (PI) specifications How to create UEFI applications and drivers Workflow to design the firmware solution for a modern platform Advanced usages of UEFI firmware for security and manageability

Beyond BIOS

The insider's guide on how to build, implement, and maintain Checkpoint Firewall 1, the number one bestselling firewall in the world. This book covers all the essentials of the product and step-by-step configuration instructions for many of the features people use most.

Essential Check Point FireWall-1

This book features cutting-edge research presented at the second international conference on Artificial Intelligence in Renewable Energetic Systems, IC-AIRES2018, held on 24-26 November 2018, at the High School of Commerce, ESC-Koléa in Tipaza, Algeria. Today, the fundamental challenge of integrating renewable energies into the design of smart cities is more relevant than ever. While based on the advent of big data and the use of information and communication technologies, smart cities must now respond to cross-cutting issues involving urban development, energy and environmental constraints; further, these cities must also explore how they can integrate more sustainable energies. Sustainable energies are a major determinant of smart cities' longevity. From an environmental and technological standpoint, these energies offer an optimal power supply to the electric network while creating significantly less pollution. This requires flexibility, i.e., the availability of supply and demand. The end goal of any smart city is to improve the quality of life for all citizens (both in the city and in the countryside) in a way that is sustainable and respectful of the environment. This book encourages the reader to engage in the preservation of our environment, every moment, every day, so as to help build a clean and healthy future, and to think of the future generations who will one day inherit our planet. Further, it equips those whose work involves energy systems and those engaged in modelling artificial intelligence to combine their expertise for the benefit of the scientific community and humanity as a whole.

Renewable Energy for Smart and Sustainable Cities

A gentle introduction to genetic algorithms. Genetic algorithms revisited: mathematical foundations. Computer implementation of a genetic algorithm. Some applications of genetic algorithms. Advanced operators and techniques in genetic search. Introduction to genetics-based machine learning. Applications of genetics-based machine learning. A look back, a glance ahead. A review of combinatorics and elementary probability. Pascal with random number generation for fortran, basic, and cobol programmers. A simple genetic algorithm (SGA) in pascal. A simple classifier system(SCS) in pascal. Partition coefficient transforms for problem-coding analysis.

Genetic Algorithms in Search, Optimization, and Machine Learning

This IBM Redbooks publication provides IMS performance monitoring and tuning information. This book differs from previous IMS performance and tuning IBM Redbooks in that

there is less emphasis on the internal workings of IMS and more information about why and how certain options can affect the performance of IMS. Most of the information in the previous book *IMS Version 7 Performance Monitoring and Tuning Update*, SG24-6404, is still valid, and in most cases, continues to be valid in any future versions of IMS. This book is not an update or rewrite but instead attempts to be more of a guide than a reference. As such, the team gathered experiences and data from actual production environments as well as from IBM benchmarks and solicited input from experts in as many areas as possible. You should be able to find valuable new information and perhaps validate things you might have questioned. Hardware and software characteristics are constantly changing, but hopefully the information that you find here provides a basis to help you react to change and to keep your IMS running efficiently. In this book, we introduce methods and tools for monitoring and tuning IMS systems, and in addition to IMS TM and DB system-wide performance considerations, we dedicate separate chapters for application considerations, IMS and DB2 interoperability, the Parallel Sysplex environment, and On Demand considerations.

IMS Performance and Tuning Guide

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.

IBM zEnterprise EC12 Technical Guide

This book is a collection of papers presented at the International Conference on Intelligent Computing, Information and Control Systems (ICICCS 2020). It encompasses various research works that help to develop and advance the next-generation intelligent computing and control systems. The book integrates the computational intelligence and intelligent

control systems to provide a powerful methodology for a wide range of data analytics issues in industries and societal applications. The book also presents the new algorithms and methodologies for promoting advances in common intelligent computing and control methodologies including evolutionary computation, artificial life, virtual infrastructures, fuzzy logic, artificial immune systems, neural networks and various neuro-hybrid methodologies. This book is pragmatic for researchers, academicians and students dealing with mathematically intransigent problems.

Proceedings of International Conference on Intelligent Computing, Information and Control Systems

Expert Oracle RAC Performance Diagnostics and Tuning provides comprehensive coverage of the features, technology and principles for testing and tuning RAC databases. The book takes a deep look at optimizing RAC databases by following a methodical approach based on scientific analysis rather than using a speculative approach, twisting and turning knobs and gambling on the system. The book starts with the basic concepts of tuning methodology, capacity planning, and architecture. Author Murali Vallath then dissects the various tiers of the testing implementation, including the operating system, the network, the application, the storage, the instance, the database, and the grid infrastructure. He also introduces tools for performance optimization and thoroughly covers each aspect of the tuning process, using many real-world examples, analyses, and solutions from the field that provide you with a solid, practical, and replicable approach to tuning a RAC environment. The book concludes with troubleshooting guidance and quick reference of all the scripts used in the book. Expert Oracle RAC Performance Diagnostics and Tuning covers scenarios and details never discussed before in any other performance tuning books. If you have a RAC database, this book is a requirement. Get your copy today. Takes you through optimizing the various tiers of the RAC environment. Provides real life case studies, analysis and solutions from the field. Maps a methodical approach to testing, tuning and diagnosing the cluster

Expert Oracle RAC Performance Diagnostics and Tuning

The auto industry is facing tough competition and severe economic constraints. Their products need to be designed \"right the first time\" with the right combinations of features that not only satisfy the customers but continually please and delight them by providing increased functionality, comfort, convenience, safety, and craftsmanship. Based on t

Ergonomics in the Automotive Design Process

Take your application to the next level of high performance using the extensive capabilities of Node.js About This Book Analyze, benchmark, and profile your Node.js application to find slow spots, and push it to the limit by eliminating performance bottlenecks Learn the basis of performance analysis using Node.js Explore the high performance capabilities of Node.js, along with best practices In Detail Node.js is a tool written in C, which allows you to use JavaScript on the server-side. High performance on a platform like Node.js is knowing how to take advantage of every aspect of your hardware, helping memory management act at its best, and correctly deciding how to architect a complex application. Do

not panic if your applications start consuming a lot of memory; instead spot the leak and solve it fast with Node.js by monitoring and stopping it before it becomes an issue. This book will provide you with the skills you need to analyze the performance of your application and monitor the aspects that can and should be. Starting with performance analysis concepts and their importance in helping Node.js developers eliminate performance bottlenecks, this book will take you through development patterns to avoid performance penalties. You will learn the importance of garbage collection and its behaviour, and discover how to profile your processor, allowing better performance and scalability. You will then learn about the different types of data storage methods. Moving on, you will get to grips with testing and benchmarking applications to avoid unknown application test zones. Lastly, you will explore the limits that external components can impose in your application in the form of bottlenecks. By following the examples in each chapter, you will discover tips to getting better performing applications by avoiding anti-patterns and stretching the limits of your environment as much as possible.

What You Will Learn

- Develop applications using well-defined and well-tested development patterns
- Explore memory management and garbage collection to improve performance
- Monitor memory changes and analyze heap snapshots
- Profile the CPU and improve your code to avoid patterns that force intensive processor usage
- Understand the importance of data and when you should cache information.
- Learn to always test your code and benchmark when needed
- Extend your application's scope and know what other elements can influence performance

Who This Book Is For

This book is for Node.js developers who want a more in-depth knowledge of the platform to improve the performance of their applications. Whether you have a base Node.js background or you are an expert who knows the garbage collector and wants to leverage it to make applications more robust, the examples in this book will benefit you.

Style and approach

This is a practical guide to learning high performance, which even the least experienced developer will comprehend. Small and simple examples help you test concepts yourself and easily adapt them to any application, boosting its performance and preparing it for the real-world.

Node.js High Performance

Learn how to write, tune, and port SQL queries and other statements for a Big Data environment, using Impala—the massively parallel processing SQL query engine for Apache Hadoop. The best practices in this practical guide help you design database schemas that not only interoperate with other Hadoop components, and are convenient for administrators to manage and monitor, but also accommodate future expansion in data size and evolution of software capabilities. Written by John Russell, documentation lead for the Cloudera Impala project, this book gets you working with the most recent Impala releases quickly. Ideal for database developers and business analysts, the latest revision covers analytics functions, complex types, incremental statistics, subqueries, and submission to the Apache incubator. Getting Started with Impala includes advice from Cloudera's development team, as well as insights from its consulting engagements with customers. Learn how Impala integrates with a wide range of Hadoop components

Attain high performance and scalability for huge data sets on production clusters

- Explore common developer tasks, such as porting code to Impala and optimizing performance
- Use tutorials for working with billion-row tables, date- and time-based values, and other techniques
- Learn how to transition from rigid schemas to a flexible model that evolves as needs change
- Take a deep dive into joins and the roles of statistics

Getting Started with Impala

http://development.digicelgroup.com/ITUNE/290926/92561OL740/marimar__capitulos_completos__telenovela-marimar_online.pdf
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