

Ocean Engineering (ICOE2018) Tuning IBM System X Servers for Performance IBM Real-time Compression in IBM SAN Volume Controller and IBM Storwize

IBM® Spectrum Protect Plus is a data protection solution that provides near-instant recovery, replication, retention management, and reuse for virtual machines, databases, and applications backups in hybrid multicloud environments. IBM Knowledge Center for IBM Spectrum® Protect Plus provides extensive documentation for installation, deployment, and usage. In addition, build and size an IBM Spectrum Protect Plus solution. The goal of this IBM Redpaper® publication is to summarize and complement the available information by providing useful hints and tips that are based on the authors' practical experience in installing and supporting IBM Spectrum Protect Plus in customer environments. Over time, our aim is to compile a set of best practices that cover all aspects of the product, from planning and installation to tuning, maintenance, and troubleshooting. To help researchers from different areas of science understand and unlock the potential of the Polish Grid Infrastructure and to define their requirements and expectations, the following 13 pilot communities have been organized and involved in the PLGrid Plus project: Acoustics, AstroGrid-PL, Bioinformatics, Ecology, Energy Sector, Health Sciences, HEPGrid, Life Science, Materials, Metallurgy, Nanotechnologies, Quantum Chemistry and Molecular Physics, and SynchroGrid. The book describes the experience and scientific results achieved by the project partners. Chapters 1 to 8 provide a general overview of research and development activities in the framework of the project with emphasis on services for different scientific areas and an update on the status of the PL-Grid infrastructure, describing new developments in security and middleware. Chapters 9 to 13 discuss new environments and services which may be applied by all scientific communities. Chapters 14 to 36 present how the PLGrid Plus environments, tools and services are used in advanced domain specific computer simulations; these chapters present computational models, new algorithms, and ways in which they

are implemented. The book also provides a glossary of terms and concepts. This book may serve as a resource for researchers, developers and system administrators working on efficient exploitation of available e-infrastructures, promoting collaboration and exchange of ideas in the process of constructing a common European e-infrastructure. This book constitutes the proceedings of the 4th Latin American Conference on High Performance Computing, CARLA 2017, held in Buenos Aires, Argentina, and Colonia del Sacramento, Uruguay, in September 2017. The 29 papers presented in this volume were carefully reviewed and selected from 50 submissions. They are organized in topical sections named: HPC infrastructures and datacenters; HPC industry and education; GPU, multicores, accelerators; HPC applications and tools; big data and data management; parallel and distributed algorithms; Grid, cloud and federations. This IBM® Redbooks® publication demonstrates and documents that the combination of IBM System x®, IBM GPFSTM, IBM GPFS-FPO, IBM Platform Symphony®, IBM Platform HPC, IBM Platform LSF®, IBM Platform Cluster Manager Standard Edition, and IBM Platform Cluster Manager Advanced Edition deliver significant value to clients in need of cost-effective, highly scalable, and robust solutions. IBM depth of solutions can help the clients plan a foundation to face challenges in how to manage, maintain, enhance, and provision computing environments to, for example, analyze the growing volumes of data within their organizations. This IBM Redbooks publication addresses topics to educate, reiterate, confirm, and strengthen the widely held opinion of IBM Platform Computing as the systems software platform of choice within an IBM System x environment for deploying and managing environments that help clients solve challenging technical and business problems. This IBM Redbooks publication addresses topics to that help answer customer's complex challenge requirements to manage, maintain, and analyze the growing volumes of data within their organizations and provide expert-level documentation to transfer the how-to-skills to the worldwide support teams. This IBM Redbooks publication is targeted toward technical professionals

(consultants, technical support staff, IT Architects, and IT Specialists) who are responsible for delivering cost-effective computing solutions that help optimize business results, product development, and scientific discoveries. This book provides a comprehensive overview of the practice of sustainability through a diverse range of case studies spanning across varied fields and areas of expertise. It provides a clear indication as to the contemporary state of sustainability in a time faced by issues such as global climate change, challenges of environmental justice, economic globalization and environmental contamination. The Palgrave Handbook of Sustainability explores three broad themes: Environmental Sustainability, Social Sustainability and Economic Sustainability. The authors critically explore these themes and provide insight into their linkages with one another to demonstrate the substantial efforts currently underway to address the sustainability of our planet. This handbook is an important contribution to the best practises on sustainability, drawn from many different examples across the fields of engineering, geology, anthropology, sociology, biology, chemistry and religion. Data is the new currency of business, the most critical asset of the modern organization. In fact, enterprises that can gain business insights from their data are twice as likely to outperform their competitors; yet, 72 percent of them have not started or are only planning big data activities. In addition, organizations often spend too much money and time managing where their data is stored. The average firm purchases 24% more storage every year, but uses less than half of the capacity it already has. A member of the IBM® Storwize® family, IBM SAN Volume Controller (SVC) Data Platform is a storage virtualization system that enables a single point of control for storage resources to help support improved business application availability and greater resource utilization. The objective is to manage storage resources in your IT infrastructure and to make sure they are used to the advantage of your business, and do it quickly, efficiently, and in real time, while avoiding increases in administrative costs. Virtualizing storage with SVC Data Platform helps make new and existing storage more effective. SVC Data Platform includes many

functions traditionally deployed separately in disk systems. By including these in a virtualization system, SVC Data Platform standardizes functions across virtualized storage for greater flexibility and potentially lower costs. SVC Data Platform functions benefit all virtualized storage. For example, IBM Easy Tier® optimizes use of flash storage. And IBM Real-time Compression™ enhances efficiency even further by enabling the storage of up to five times as much active primary data in the same physical disk space. Finally, high-performance thin provisioning helps automate provisioning. These benefits can help extend the useful life of existing storage assets, reducing costs. Integrating these functions into SVC Data Platform also means that they are designed to operate smoothly together, reducing management effort. In this IBM Redbooks® publication, we discuss the latest features and functions of the SVC 2145-DH8 and software version 7.3, implementation, architectural improvements, and Easy Tier. Lenovo System x® and BladeCenter® servers and Lenovo Flex System™ compute nodes help to deliver a dynamic infrastructure that provides leadership quality and service that you can trust. This document (simply known as xREF) is a quick reference guide to the specifications of the currently available models of each System x and BladeCenter server. Each page can be used in a stand-alone format and provides a dense and comprehensive summary of the features of that particular server model. Links to the related Product Guide are also provided for more information. An easy-to-remember link you can use to share this guide: <http://lenovopress.com/xref> Also available is xREF for Products Withdrawn Prior to 2012, a document that contains xREF sheets of System x, BladeCenter, and xSeries servers, and IntelliStation workstations that were withdrawn from marketing prior to 2012. Changes in the May 18 update: Added the Flex System Carrier-Grade Chassis See the Summary of changes in the document for a complete change history. In today's 24 x 7 world, there is likely not a business on this planet, IBM® Smarter Planet® or not, that finds that their storage requirements are growing too fast and demand is starting to outpace supply. Not only this, but in this cost-conscious environment of today,

the costs of managing this growth are likely to be eating into the IT budget. One way to make better use of existing storage without adding more complexity to the infrastructure is the IBM System Storage® SAN Volume Controller (SVC). For many years now this has helped business become more flexible, agile, and introduced an extremely efficient storage environment. SAN Volume Controller is designed to deliver the benefits of storage virtualization in environments from large enterprises to small businesses and midmarket companies. Virtualizing storage with SAN Volume Controller helps make new and existing storage more effective. SAN Volume Controller includes many functions that are traditionally deployed separately in disk systems. By including these in a virtualization system, SAN Volume Controller standardizes functions across virtualized storage for greater flexibility and potentially lower costs. Now, with IBM FlashSystem™ storage, SAN Volume Controller is enabled to extend its reach and benefit all virtualized storage. For example, IBM Easy Tier® optimizes use of flash storage. And IBM Real-time Compression™ enhances efficiency even further by enabling the storage of up to five times as much active primary data in the same physical disk space. In this IBM Redbooks® publication, we show how to integrate the IBM FlashSystem 820 to provide storage to the SAN Volume Controller, and show how they are designed to operate seamlessly together, reducing management effort. In this book, which is aimed at pre- and post-sales support, storage administrators, and people that want to get an overview of this new and exciting technology, we show the steps required to implement the IBM FlashSystem 820 in an existing SAN Volume Controller environment. We also highlight some of the new features in SAN Volume Controller that increase performance. If you are not already familiar with the SAN Volume Controller, it is beneficial to read the following IBM Redbooks publications: - Implementing the IBM System Storage SAN Volume Controller V6.3, SG24-7933 - Implementing the IBM Storwize V7000 V6.3, SG24-7938 - Real-time Compression in SAN Volume Controller and Storwize V7000, REDP-4859 - IBM SAN Volume Controller and IBM FlashSystem 820: Best Practices and Performance Capabilities,

REDP-5027 - IBM FlashSystem 710 and IBM FlashSystem 810,
TIPS1002 - IBM FlashSystem 720 and IBM FlashSystem 820,
TIPS1003 - Flash or SSD: Why and When to Use IBM FlashSystem,
REDP-5020 This book constitutes the proceedings of the 5th Latin American Conference, CARLA 2018, held in Bucaramanga, Colombia, in September 2018. The 24 papers presented in this volume were carefully reviewed and selected from 38 submissions. They are organized in topical sections on: Artificial Intelligence; Accelerators; Applications; Performance Evaluation; Platforms and Infrastructures; Cloud Computing. This book comprises selected proceedings of the Fourth International Conference in Ocean Engineering (ICOE2018), focusing on emerging opportunities and challenges in the field of ocean engineering and offshore structures. It includes state-of-the-art content from leading international experts, making it a valuable resource for researchers and practicing engineers alike. Continuing its commitment to developing and delivering industry-leading storage technologies, IBM is introducing the IBM Real-time Compression Appliances for NAS, an innovative new storage offering that delivers essential storage efficiency technologies, combined with exceptional ease of use and performance. In an era when the amount of information, particularly in unstructured files, is exploding, but budgets for storing that information are stagnant, IBM Real-time Compression technology offers a powerful tool for better information management, protection, and access. IBM Real-time Compression can help slow the growth of storage acquisition, reducing storage costs while simplifying both operations and management. It also enables organizations to keep more data available for use rather than storing it offsite or on harder-to-access tape, so they can support improved analytics and decision making. IBM Real-time Compression Appliances provide on-line storage optimization through real-time data compression, delivering dramatic cost reduction without performance degradation. This IBM® Redbooks® publication is an easy-to-follow guide that describes how to design solutions successfully using IBM Real-time Compression Appliances (IBM RTCAs). It provides practical installation examples, ease of use, remote management, high

availability, and administration techniques. Furthermore, it explains best practices for RTCA solution design, application integration, and practical RTCA use cases. 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. Nowadays, energy production increase has been proven a globally contentious issue, as it counts variable stakeholders of competitive interests. Such indicative competitive interests are land use for energy crops against maximizing agricultural production yields, as well as the gradually localized trend of energy production from renewables, compared to the central overexploitation of fossil-fuelled energy sources in mainland grids of energy production. In response to this multi-parametric contradiction on traditional and novel approaches of energy production, this Special Issue aims at attracting researchers whose scientific interest resides in the electrical energy storage (EES) systems in a wide range of applicability: Technological advancements, environmental impacts, economies of scale achievement, active involvement of renewables in EES technologies,

socio-economic impacts upon EES diffusion in regional and globalized contexts of analysis. The main limitations and the challenges derived from these scientific approaches will formulate a fresher scientific viewpoint of novel insights upon EES applicability in developed and developing economies, accordingly. Papers selected for this Special Issue are subject to a rigorous peer review procedure, enabling an integrated manner of dissemination upon research advancements and multi-disciplinary dynamics, accordingly.

IBM® Real-time Compression™ software that is embedded in IBM SAN Volume Controller (SVC) and IBM Storwize® V7000 solution addresses all the requirements of primary storage data reduction, including performance, by using a purpose-built technology called . This IBM Redpaper™ publication addresses the key requirements for primary storage data reduction and gives real world examples of savings that can be made by using compression. SVC and Storwize V7000 is designed to improve storage efficiency by compressing data by as much as 80% through supported real-time compression for block storage. This process enables up to five times as much data to be stored in the same physical disk space. Unlike other approaches to compression, IBM Real-time Compression is used with active primary data, such as production databases and email systems. This configuration dramatically expands the range of candidate data that can benefit from compression. As its name implies, IBM Real-time Compression operates as data is written to disk, avoiding the need to store data that is awaiting compression. This IBM® Redbooks® publication highlights IBM Technical Computing as a flexible infrastructure for clients looking to reduce capital and operational expenditures, optimize energy usage, or re-use the infrastructure. This book strengthens IBM SmartCloud® solutions, in particular IBM Technical Computing clouds, with a well-defined and documented deployment model within an IBM System x® or an IBM Flex System™. This provides clients with a cost-effective, highly scalable, robust solution with a planned foundation for scaling, capacity, resilience, optimization, automation, and monitoring. This book is targeted toward technical professionals (consultants, technical support

staff, IT Architects, and IT Specialists) responsible for providing cloud-computing solutions and support. This book constitutes the refereed proceedings of the 11th International Conference on Service-Oriented Computing, ICSOC 2012, held in Berlin, Germany, in December 2013. The 29 full papers and 27 short papers presented were carefully reviewed and selected from 205 submissions. The papers are organized in topical sections on service engineering, service operations and management; services in the cloud; and service applications and implementations. *Plan and Implement Hadoop Virtualization for Maximum Performance, Scalability, and Business Agility* Enterprises running Hadoop must absorb rapid changes in big data ecosystems, frameworks, products, and workloads. Virtualized approaches can offer important advantages in speed, flexibility, and elasticity. Now, a world-class team of enterprise virtualization and big data experts guide you through the choices, considerations, and tradeoffs surrounding Hadoop virtualization. The authors help you decide whether to virtualize Hadoop, deploy Hadoop in the cloud, or integrate conventional and virtualized approaches in a blended solution. First, *Virtualizing Hadoop* reviews big data and Hadoop from the standpoint of the virtualization specialist. The authors demystify MapReduce, YARN, and HDFS and guide you through each stage of Hadoop data management. Next, they turn the tables, introducing big data experts to modern virtualization concepts and best practices. Finally, they bring Hadoop and virtualization together, guiding you through the decisions you'll face in planning, deploying, provisioning, and managing virtualized Hadoop. From security to multitenancy to day-to-day management, you'll find reliable answers for choosing your best Hadoop strategy and executing it. Coverage includes the following:

- Reviewing the frameworks, products, distributions, use cases, and roles associated with Hadoop
- Understanding YARN resource management, HDFS storage, and I/O
- Designing data ingestion, movement, and organization for modern enterprise data platforms
- Defining SQL engine strategies to meet strict SLAs
- Considering security, data isolation, and scheduling for multitenant environments
- Deploying Hadoop as a service in the cloud

• Reviewing the essential concepts, capabilities, and terminology of virtualization • Applying current best practices, guidelines, and key metrics for Hadoop virtualization • Managing multiple Hadoop frameworks and products as one unified system • Virtualizing master and worker nodes to maximize availability and performance • Installing and configuring Linux for a Hadoop environment

Along with servers and networking infrastructure, networked storage is one of the fundamental components of a modern data center. Because storage networking has evolved over the past two decades, the industry has settled on the basic storage networking technologies. These technologies are Fibre Channel (FC) storage area networks (SANs), Internet Small Computer System Interface (iSCSI)-based Ethernet attachment, and Ethernet-based network-attached storage (NAS). Today, lossless, low-latency, high-speed FC SANs are viewed as the high-performance option for networked storage. iSCSI and NAS are viewed as lower cost, lower performance technologies. The advent of the 100 Gbps Ethernet and Data Center Bridging (DCB) standards for lossless Ethernet give Ethernet technology many of the desirable characteristics that make FC the preferred storage networking technology. These characteristics include comparable speed, low latency, and lossless behavior. Coupled with an ongoing industry drive toward better asset utilization and lower total cost of ownership, these advances open the door for organizations to consider consolidating and converging their networked storage infrastructures with their Ethernet data networks. Fibre Channel over Ethernet (FCoE) is one approach to this convergence, but 10-Gbps-enabled iSCSI also offers compelling options for many organizations with the hope that their performance can now rival that of FC. This IBM® Redbooks® publication is written for experienced systems, storage, and network administrators who want to integrate the IBM System Networking and Storage technology successfully into new and existing networks. This book provides an overview of today's options for storage networking convergence. It reviews the technology background for each of these options and then examines detailed scenarios for them by using IBM and IBM Business Partner convergence products.

This book constitutes the proceedings of the 19th International Conference on Computer Information Systems and Industrial Management Applications, CISIM 2020, held in Bialystok, Poland, in October 2020. Due to the COVID-19 pandemic the conference has been postponed to October 2020. The 40 full papers presented together with 5 abstracts of keynotes were carefully reviewed and selected from 62 submissions. The main topics covered by the chapters in this book are biometrics, security systems, multimedia, classification and clustering, industrial management. Besides these, the reader will find interesting papers on computer information systems as applied to wireless networks, computer graphics, and intelligent systems. The papers are organized in the following topical sections: biometrics and pattern recognition applications; computer information systems and security; industrial management and other applications; machine learning and high performance computing; modelling and optimization. This book constitutes the refereed proceedings of the 25th Australasian Conference on Information Security and Privacy, ACISP 2020, held in Perth, WA, Australia, in November 2020. The 31 revised full papers and 5 short papers presented were carefully revised and selected from 151 submissions. The papers present and discuss the latest research, trends, breakthroughs, and challenges in the domain of information security, privacy and cybersecurity on a variety of topics such as post-quantum cryptography; symmetric cipher; signature; network security and blockchain; cryptographic primitives; mathematical foundation; machine learning security, among others. *The conference was held virtually due to COVID-19 pandemic.*

В номере: SDS: назад в будущее Ведущие производители систем хранения данных рассматривают программно определяемые СХД как стратегическое направление развития отрасли и один из важнейших компонентов

программно определяемых ЦОД. Ключевые преимущества SDS состоят в гибкости, автоматизации управления и экономичности. Но по сути это очередной этап эволюции давно известной технологии – виртуализации систем хранения. Перспективные технологии хранения Для хранения данных предприятиям требуются хорошо масштабируемые модернизируемые решения, но вовсе не обязательно приобретать дорогостоящие системы SAN. В качестве экономически выгодного хранилища неструктурированных или полуструктурированных данных подходят и программно определяемые решения, которые к тому же обладают преимуществами в плане обеспечения линейной масштабируемости емкости и производительности. Видеонаблюдение без проводов KVM в контексте виртуализации Ethernet в авто: надежда на унификацию Защита периметра и «сеть без границ» Пожароопасность в ЦОД СИУ: будущее за смешанными средами и многое другое The IBM HyperSwap® high availability (HA) function allows business continuity in a hardware failure, power failure, connectivity failure, or disasters, such as fire or flooding. It is available on the IBM SAN Volume Controller and IBM FlashSystem products. This IBM Redbooks publication covers the preferred practices for implementing Cisco VersaStack with IBM HyperSwap. The following are some of the topics covered in this book: Cisco Application Centric Infrastructure to showcase Cisco's ACI with Nexus 9Ks Cisco Fabric Interconnects and Unified Computing System (UCS) management capabilities Cisco Multilayer Director Switch (MDS) to showcase fabric channel connectivity Overall IBM HyperSwap solution architecture Differences between HyperSwap and Metro Mirroring, Volume Mirroring, and Stretch Cluster Multisite IBM SAN Volume Controller (SVC) deployment to showcase HyperSwap configuration and capabilities This book is intended for pre-sales and post-sales technical support professionals and storage administrators who are tasked with deploying a VersaStack solution with IBM HyperSwap. This book constitutes the proceedings of the 8th International ICST Conference, TridentCom 2012, held in Thessaloniki, Greece, in June 2012. Out of

numerous submissions the Program Committee finally selected 51 full papers. These papers cover topics such as future Internet testbeds, wireless testbeds, federated and large scale testbeds, network and resource virtualization, overlay network testbeds, management provisioning and tools for networking research, and experimentally driven research and user experience evaluation. This IBM® Redbooks® publication introduces the IBM Software Defined Environment (SDE) solution, which helps to optimize the entire computing infrastructure--compute, storage, and network resources--so that it can adapt to the type of work required. In today's environment, resources are assigned manually to workloads, but that happens automatically in a SDE. In an SDE, workloads are dynamically assigned to IT resources based on application characteristics, best-available resources, and service level policies so that they deliver continuous, dynamic optimization and reconfiguration to address infrastructure issues. Underlying all of this are policy-based compliance checks and updates in a centrally managed environment. Readers get a broad introduction to the new architecture. Think integration, automation, and optimization. Those are enablers of cloud delivery and analytics. SDE can accelerate business success by matching workloads and resources so that you have a responsive, adaptive environment. With the IBM Software Defined Environment, infrastructure is fully programmable to rapidly deploy workloads on optimal resources and to instantly respond to changing business demands. This information is intended for IBM sales representatives, IBM software architects, IBM Systems Technology Group brand specialists, distributors, resellers, and anyone who is developing or implementing SDE. This IBM® Redbooks® publication provides information about aspects of performing infrastructure health checks, such as checking the configuration and verifying the functionality of the common subsystems (nodes or servers, switch fabric, parallel file system, job management, problem areas, and so on). This IBM Redbooks publication documents how to monitor the overall health check of the cluster infrastructure, to deliver technical computing clients cost-effective, highly scalable, and robust solutions.

This IBM Redbooks publication is targeted toward technical professionals (consultants, technical support staff, IT Architects, and IT Specialists) responsible for delivering cost-effective Technical Computing and IBM High Performance Computing (HPC) solutions to optimize business results, product development, and scientific discoveries. This book provides a broad understanding of a new architecture. Continuing its commitment to developing and delivering industry-leading storage technologies, IBM is introducing the IBM Real-time Compression Appliance for NAS, an innovative new storage offering that delivers essential storage efficiency technologies, combined with exceptional ease of use and performance. In an era when the amount of information, particularly in unstructured files, is exploding, but budgets for storing that information are stagnant, IBM Real-time Compression technology offers a powerful tool for better information management, protection and access. IBM Real-time Compression can help slow the growth of storage acquisition, reducing storage costs while simplifying both operations and management. It also enables organizations to keep more data available for use rather than storing it offsite or on tape that is more difficult to access, so they can support improved analytics and decision-making. IBM Real-time Compression Appliance provides online storage optimization through real-time data compression, delivering dramatic cost reduction without performance degradation. This IBM Redbooks publication is for system administrators and IT architects. It describes the enhancements made in version 4.1 of the Real-time Compression Appliance as compared to previous releases. This book is a companion to the publication Introduction to IBM Real-time Compression Appliances, SG24-7953. IBM® SmartCloud™ Entry provides a fully integrated software stack for transforming a virtualized environment to a cloud environment. The intuitive self-service portal allows users to get up and running quickly. Built-in workload metering and additional tools enable tight controls and planning. The IBM Reference Configuration for VMware on IBM System x® with SmartCloud Entry provides an affordable, easy to deploy, private cloud architecture with configurations based on leading-edge

technology from IBM, VMware, and Juniper Networks. The reference configuration is for midsized companies that need simpler and affordable IT solutions, without compromising on functionality. IBM and VMware, world leaders in enterprise-class IT solutions, are now bringing IT solutions tailored to the midmarket. This IBM Redpaper™ publication provides setup, configuration, and deployment details for the reference configuration and is intended for IT professionals who are familiar with software and hardware setup and configuration.

La presente obra reúne las experiencias del trabajo que desempeñan instituciones con el propósito de preservar, registrar y dar acceso a la memoria de la humanidad, lo cual es un objetivo común de las bibliotecas, archivos y museos del mundo. El intercambio de experiencias entre estas instituciones coadyuvan a diseñar estrategias colaborativas y de impacto a nivel internacional. Uno de los mayores desafíos identificados por los autores ha sido la incorporación de tecnologías útiles a nuestro quehacer y su progresivo reemplazo. A largo de los capítulos, se refleja el interés de hacer investigaciones colegiadas y de establecer plataformas digitales que interactúen como nodos en red. La obra está dividida en tres secciones que agrupan capítulos de acuerdo a su afinidad. La primera sección está dedicada a las iniciativas de colaboración y aparecen incluidos los resultados obtenidos en proyectos como el Repositorio Digital de la Secretaría de Cultura; así como del Archivo Digital de Lenguas y Culturas Originarias de México, o del acervo histórico del Instituto de Biología de la UNAM como parte del proyecto Biodiversity Heritage Library (BHL). La segunda sección se ha nombrado: "Experiencias de preservación" y se han incorporado propuestas que establecen los modelos de preservación de acuerdo al

tipo de colecciones. Se aborda la situación de instituciones como: *Phonothèque de la Maison méditerranèe des sciences de l'homme* (Francia); los fondos audiovisuales de la Universidad Autónoma de San Luis Potosí (México); el acervo fílmico de la Dirección de Actividades Cinematográficas de la UNAM; así como del Centro de Investigación, Documentación e Información Museológica de la Coordinación Nacional de Museos y Exposiciones del Instituto Nacional de Antropología e Historia. Por último, la tercera sección trata los problemas comunes, y se incluye una mirada crítica a las soluciones adoptadas ante el problema de la gestión documental, por parte de instituciones como la Biblioteca de Catalunya, el acervo sonoro de Radio difusión Nacional del Uruguay, así como el Archivo Histórico Municipal de Morelia. This IBM® Redbooks® publication provides deployment guidelines, workload estimates, and preferred practices for clients who want a proven IBM technology stack for virtualized VMware and Microsoft environments. The result is a Reference Architecture for Virtualized Environments (RAVE) that uses VMware vSphere or Microsoft Hypervisor, IBM System x® or IBM BladeCenter® server, IBM System Networking, and IBM System Storage® N series with Clustered Data ONTAP as a storage foundation. The reference architecture can be used as a foundation to create dynamic cloud solutions and make full use of underlying storage features and functions. This book provides a blueprint that illustrates how clients can create a virtualized infrastructure and storage cloud to help address current and future data storage business requirements. It explores the solutions that IBM offers to create a storage cloud solution addressing client needs. This book also shows how the Reference Architecture for Virtualized Environments and the extensive experience of IBM in cloud computing, services, proven technologies, and products support a Smart Storage Cloud solution that is designed for your storage optimization efforts. This book is for anyone who wants to learn how to successfully deploy a virtualized environment. It is also written for anyone who wants to understand how IBM addresses data storage and compute challenges with IBM System Storage N series solutions with IBM servers and

networking solutions. This book is suitable for IT architects, business partners, IBM clients, storage solution integrators, and IBM sales representatives. HPC is used to solve a number of complex questions in computational and data-intensive sciences. These questions include the simulation and modeling of physical phenomena, such as climate change, energy production, drug design, global security, and materials design; the analysis of large data sets such as those in genome sequencing, astronomical observation, and cybersecurity; and the intricate design of engineered products, such as airplanes and automobiles. This second volume of *Contemporary High Performance Computing: From Petascale toward Exascale* continues to document international HPC ecosystems, including the sponsors and sites that host them. Each chapter is punctuated with a site's flagship system and:

- Presents highlights of applications, workloads, and benchmarks
- Describes hardware architectures, system software, and programming systems
- Explores storage, visualization, and analytics
- Examines the data center/facility as well as system statistics

Featuring pictures of buildings and systems in production, floorplans, and many block diagrams and charts to illustrate system design and performance, *Contemporary High Performance Computing: From Petascale toward Exascale, Volume Two* delivers a detailed snapshot of the rich history of practice in modern HPC. This book provides a valuable reference for researchers in HPC and computational science. This IBM® Redpaper Redbook publication provides an overview of the IBM Elastic Storage® Server (IBM ESS) and IBM Elastic Storage System (also IBM ESS). These scalable, high-performance data and file management solution, are built on IBM Spectrum® Scale technology. Providing reliability, performance, and scalability, IBM ESS can be implemented for a range of diverse requirements. The latest IBM ESS 3500 is the most innovative system that provides investment protection to expand or build a new Global Data Platform and use current storage. The system allows enhanced, non-disruptive upgrades to grow from flash to hybrid or from hard disk drives (HDDs) to hybrid. IBM ESS can scale up or out with two different storage mediums in the environment, and it is ready

for technologies like 200 Gb Ethernet or InfiniBand NDR-200 connectivity. This publication helps you to understand the solution and its architecture. It describes ordering the best solution for your environment, planning the installation and integration of the solution into your environment, and correctly maintaining your solution. The solution is created from the following combination of physical and logical components: Hardware Operating system Storage Network Applications Knowledge of the IBM Elastic Storage Server and IBM Elastic Storage System components is key for planning an environment. This paper is targeted toward technical professionals (consultants, technical support staff, IT Architects, and IT specialists) who are responsible for delivering cost-effective cloud services and big data solutions. The content of this paper can help you to uncover insights among client's data so that you can take appropriate actions to optimize business results, product development, and scientific discoveries. This two-volume set of LNICST 414 and 415 constitutes the refereed post-conference proceedings of the 2nd International Conference on IoT and Big Data Technologies for Health Care, IoT CARE 2021, which took place in October 2021. Due to COVID-19 pandemic the conference was held virtually. The 79 revised full papers were carefully reviewed and selected from 165 submissions. The papers are arranged thematically as follows: Integrating healthcare with IoT; Information fusion for the devices of IoT; AI-based internet of medical things.

- [Mcgraw Hill Mathematics With Business Applications Answers](#)
- [Biochemistry Test Bank Questions 5th Edition](#)
- [Gradpoint Answers Algebra 2](#)
- [Go Math 5th Grade Teacher Edition](#)
- [Texas Write Source Skills Book Answers Grade 6](#)

- [Servsafe Coursebook 7th Edition](#)
- [Management Accounting Langfield Smith 5th Edition Solutions](#)
- [Deaf Like Me Thomas S Spradley](#)
- [Sisters In The Wilderness Lives Of Susanna Moosie And Catharine Parr Traill Charlotte Gray](#)
- [The 66 Laws Of The Illuminati Secrets Of Success](#)
- [Mcgraw Hill Answers For Civics And Economics](#)
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