

Technical Operation 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 a variety of platforms, and the 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 discusses the IBM zEnterprise System, an IBM scalable mainframe server. IBM is taking a revolutionary approach by integrating separate platforms under the well-proven System z hardware management capabilities, while extending System z qualities of service to those platforms. The zEnterprise System consists of the IBM zEnterprise 114 central processor complex, the IBM zEnterprise Unified Resource Manager, and the IBM zEnterprise BladeCenter® Extension. The z114 is designed with improved scalability, performance, security, resiliency, availability, and virtualization. The z114 provides up to 18% improvement in uniprocessor speed and up to a 12% increase in total system capacity for z/OS®, z/VM®, and Linux on System z over the z10TM Business Class (BC). The zBX infrastructure works with the z114 to enhance System z virtualization and management through an integrated hardware platform that spans mainframe, POWER7™, and System x technologies. The federated capacity from multiple architectures of the zEnterprise System is managed as a single pool of resources, integrating system and workload management across the environment through the Unified Resource Manager. This book provides an overview of the zEnterprise System and its functions, features, and associated software support. Greater detail is offered in areas relevant to technical planning. This book is intended for systems engineers, consultants, planners, and anyone wanting 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.

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 a variety of platforms, and the 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. The zEnterprise System consists of the IBM zEnterprise 196 central processor complex, the IBM zEnterprise Unified Resource Manager, and the IBM zEnterprise BladeCenter® Extension. The z196 is designed with improved scalability, performance, security, resiliency, availability, and virtualization. The z196 Model M80 provides up to 1.6 times the total system capacity of the z10TM EC Model E64, and all z196 models provide up to twice the available memory of the z10 EC. The zBX infrastructure works with the z196 to enhance System z virtualization and management through an integrated hardware platform that spans mainframe, POWER7™, and 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 IBM® Redbooks® publication provides an overview of the zEnterprise System and its functions, features, and associated software support. Greater detail is offered in areas relevant to technical planning. This book is intended for systems engineers, consultants, planners, and anyone wanting 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. The changes to this edition are based on the System z hardware announcement dated July 12, 2011.

Lists citations with abstracts for aerospace related reports obtained from world wide sources and announces documents that have recently been entered into the NASA Scientific and Technical Information Database.

Containing a wealth of practical activities and materials that provide excellent opportunities to analyse learning and performance within Design and Technology, this book also includes case studies and examples of existing good practice and a range of tried-and-tested strategies. Specially designed to be written in directly it provides a useful record of progress and is accompanied by a Companion Website. Designed to be used by student teachers, NQTs and beginning teachers, this workbook covers each main specialist area of Design Technology: electronics and communications technology (ECT), food technology, materials technology and textiles technology. Topics covered include: design and technology in the school curriculum the importance of health and safety the use of ICT in the teaching of design and technology planning lessons managing the classroom assessment issues the integration of literacy, numeracy, citizenship and sustainability into design and technology your own professional development. This book complements the market-leading textbook Learning to Teach Design and Technology in the Secondary School (also published by Routledge), but can also be used equally successfully on its own.

Every complex product needs to be explained to its users, and technical writers, also known as technical communicators, are the ones who do that job. A growing field, technical writing requires multiple skills, including an understanding of technology, writing ability, and great people skills. Whether you're thinking of becoming a technical writer, just starting out, or you've been working for a while and feel the need to take your skills to the next level, The Insider's Guide to Technical Writing can help you be a successful technical writer and build a satisfying career. Inside the Book Is This Job for Me? What does it take to be a technical writer? Building the Foundation: What skills and tools do you need to get started? The Best Laid Plans: How do you create a schedule that won't make you go crazy? How do you manage different development processes, including Agile methodologies? On the Job: What does it take to walk into a job and be productive right away? The Tech Writer Toolkit: How do you create style guides, indexes, templates and layouts? How do you manage localization and translation and all the other non-writing parts of the job? I Love My Job: How do you handle the ups and downs of being a technical writer? Appendixes: References to websites, books, and other resources to keep you learning. Index

The popularity of the Internet and the affordability of information technology (IT) hardware and software have resulted in an explosion dramatic increase in the number of applications, architectures, and platforms. Workloads have changed. Many applications, including mission-critical ones, are deployed on a variety of 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 provides information about the IBM zEnterprise® BC12 (zBC12), an IBM scalable mainframe server. IBM is taking a revolutionary approach by integrating separate platforms under the well-proven System z hardware management capabilities, while extending System z qualities of service to those platforms. The zEnterprise System consists of the zBC12 central processor complex, the IBM zEnterprise Unified Resource Manager, and the IBM zEnterprise BladeCenter® Extension (zBX). The zBC12 is designed with improved scalability, performance, security, resiliency, availability, and virtualization. The zBC12 provides the following improvements over its predecessor, the IBM zEnterprise 114 (z114): Up to a 36% performance boost per core running at 4.2 GHz Up to 58% more capacity for traditional workloads Up to 62% more capacity for Linux workloads The zBX infrastructure works with the zBC12 to enhance System z

virtualization and management through an integrated hardware platform that spans mainframe, IBM POWER7®, and IBM System x® technologies. The federated capacity from multiple architectures of the zEnterprise System is managed as a single pool of resources, integrating system and workload management across the environment through the Unified Resource Manager. This book provides an overview of the zBC12 and its functions, features, and associated software support. Greater detail is offered in areas relevant to technical planning. This book is intended for systems engineers, consultants, planners, and anyone who wants to understand 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.

What is IPsec? What's a VPN? Why do they need each other? Virtual Private Network (VPN) has become one of the most recognized terms in our industry, yet there continuously seems to be different impressions of what VPNs really are and can become. A Technical Guide to IPsec Virtual Private Networks provides a single point of information that represents hundreds of resources and years of experience with IPsec VPN solutions. It cuts through the complexity surrounding IPsec and the idiosyncrasies of design, implementation, operations, and security. Starting with a primer on the IP protocol suite, the book travels layer by layer through the protocols and the technologies that make VPNs possible. It includes security theory, cryptography, RAS, authentication, IKE, IPsec, encapsulation, keys, and policies. After explaining the technologies and their interrelationships, the book provides sections on implementation and product evaluation. A Technical Guide to IPsec Virtual Private Networks arms information security, network, and system engineers and administrators with the knowledge and the methodologies to design and deploy VPNs in the real world for real companies.

Digital business has been driving the transformation of underlying information technology (IT) infrastructure to be more efficient, secure, adaptive, and integrated. IT must be able to handle the explosive growth of mobile clients and employees. It also must be able to process enormous amounts of data to provide deep and real-time insights to help achieve the greatest business impact. This IBM® Redbooks® publication addresses the new IBM z Systems™ single frame, the IBM z13s server. IBM z Systems servers are the trusted enterprise platform for integrating data, transactions, and insight. A data-centric infrastructure must always be available with a 99.999% or better availability, have flawless data integrity, and be secured from misuse. It needs to be an integrated infrastructure that can support new applications. It also needs to have integrated capabilities that can provide new mobile capabilities with real-time analytics delivered by a secure cloud infrastructure. IBM z13s servers are designed with improved scalability, performance, security, resiliency, availability, and virtualization. The superscalar design allows z13s servers to deliver a record level of capacity over the prior single frame z Systems server. In its maximum configuration, the z13s server is powered by up to 20 client characterizable microprocessors (cores) running at 4.3 GHz. This configuration can run more than 18,000 millions of instructions per second (MIPS) and up to 4 TB of client memory. The IBM z13s Model N20 is estimated to provide up to 100% more total system capacity than the IBM zEnterprise® BC12 Model H13. This book provides information about the IBM z13s server 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 IBM z Systems™ 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 z Systems technology and terminology.

User's Guide to Technical Library Services A Technical Guide to IPsec Virtual Private Networks CRC Press

A Strategic Guide to Technical Communication incorporates useful and specific strategies for writers to create aesthetically appealing and usable technical documentation. These strategies have been developed and tested on a thousand students from a number of different disciplines over twelve years and three institutions. The second edition adds a chapter on business communication, reworks the discussion on technical style, and expands the information on visual communication and ethics into free-standing chapters. Particular attention is paid throughout to the needs of Canadian students.

U.S. Navy Diving Manual The U.S. Navy Diving Manual has long been regarded the ultimate resource for recreational, commercial and military divers and is widely considered to be the technical standard for diving information and procedures. Revision 7 Change A is the latest version released in April 2018 and includes major updates and changes from the previous versions. This extensive manual is just under 1000 pages spread over 5 Volumes with 18 Chapters and is unsurpassed in technical detail and depth. Contents: U.S. Navy Diving Manual Volume 1 - Diving Principles and Policy Chapter 1 - History of Diving Chapter 2 - Underwater Physics Chapter 3 - Underwater Physiology and Diving Disorders Chapter 4 - Dive Systems Chapter 5 - Dive Program Administration Appendix 1A - Safe Diving Distances From Transmitting Sonar Appendix 1B - References Appendix 1C - Telephone Numbers Appendix 1D - List of Acronyms Volume 2 - Air Diving Operations Chapter 6 - Operational Planning and Risk Management Chapter 7 - Scuba Air Diving Operations Chapter 8 - Surface Supplied Air Diving Operations Chapter 9 - Air Decompression Chapter 10 - Nitrogen-Oxygen Diving Operations Chapter 11 - Ice and Cold Water Diving Operations Appendix 2A - Optional Shallow Water Diving Tables Appendix 2B - U.S. Navy Dive Computer Appendix 2C - Environmental and Operational Hazards Appendix 2D - Guidance for U.S. Navy Diving on a Dynamic Positioning Vessel Volume 3 - Mixed Gas Surface Supplied Diving Operations Chapter 12 - Surface Supplied Mixed Gas Diving Procedures Chapter 13 - Saturation Diving Chapter 14 - Breathing Gas Mixing Procedures Volume 4 - Closed Circuit and Semiclosed Circuit Diving Operations Chapter 15 - Electronically Controlled Closed-Circuit Underwater Breathing Apparatus (EC-UBA) Diving Chapter 16 - Closed-Circuit Oxygen UBA Diving Volume 5 - Diving Medicine and Recompression Chamber Operations Chapter 17 - Diagnosis and Treatment of Decompression Sickness and Arterial Gas Embolism Chapter 18 - Recompression Chamber Operation Appendix 5A - Neurological Examination Appendix 5B - First Aid Appendix 5C - Dangerous Marine Animals

Single-use technology (SUT) is now available for all processing operations within the biopharmaceutical industry. It has the potential to reduce capital costs, improve plant throughput and reduce the risk of cross-contamination. However, there are no clear guidelines to aid the end-user on implementation of these technologies into a validated, good manufacturing practice (GMP) environment. This book is the first comprehensive publication of practical considerations for each stage of the implementation process of SUT, and covers the selection, specification, design and qualification of systems to meet end-user requirements. Serving as an introduction and practical reference to this growing area of application within the biopharmaceutical industry, this handbook presents: An approach for SUT implementation within an end-user's facility with examples for bioreactors, tangential-flow filtration and fill-finish systems; SUT within the context of regulatory guidance, such as ICH Q8, Q9, Q10 and GMP; Strategy for standardisation of single-use bag

systems and assessment of extractables and leachables; Specifications of user requirements and design of specific SUT alongside process descriptions and flow diagrams; Strategies and tools to evaluate risk with examples of risk assessments applicable to design, processing and product quality; and Qualification approach for different SUT types. With the information presented in this book, engineers, researchers and professionals involved in biopharmaceuticals will be better prepared to plan and make effective decisions to design and implement SUT.

A Strategic Guide to Technical Communication incorporates useful and specific strategies for writers, to enable them to create aesthetically appealing and usable technical documentation. These strategies have been developed and tested on a thousand students from a number of different disciplines over twelve years and three institutions. The second edition adds a chapter on business communication, reworks the discussion on technical style, and expands the information on visual communication and ethics into free-standing chapters. The text is accompanied by a passcode-protected website containing materials for instructors (PowerPoint lectures, lesson plans, sample student work, and helpful links).

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