

Data Cool Precision Air Control Solutions

Cloud computing—accessing computing resources over the Internet—is rapidly changing the landscape of information technology. Its primary benefits compared to on-premise computing models are reduced costs and increased agility and scalability. Hence, cloud computing is receiving considerable interest among several stakeholders—businesses, the IT industry, application developers, researchers, and students. To successfully embrace this new computing model, these stakeholders need to acquire new cloud computing skills and knowledge. This book is designed to provide readers with a clear and thorough understanding of the key aspects of cloud computing. Presented in an easy-to-understand style, *Essentials of Cloud Computing* begins with an introduction to basic cloud computing concepts. It then covers cloud computing architecture, deployment models, programming models, and cloud service types, such as Software as a Service (SaaS) and Infrastructure as a Service (IaaS). It also discusses the cloud's networking aspects, major service providers, open source support, and security issues. The book concludes with a discussion of several advanced topics, such as mobile clouds, media clouds, and green clouds. This book is intended for beginners as well as experienced practitioners who want to learn more about cloud computing. It includes many case studies, programming examples, and industry-based applications. Each chapter concludes with review questions that help readers check their understanding of the presented topics. *Essentials of Cloud Computing* will help readers understand the issues and challenges of cloud computing and will give them the tools needed to develop and deploy applications in clouds.

Witnesses: Robert Gates, Sec. of Def., and Tina Jonas, Under Sec. of Defense-Comptroller; Michael Mullen, Chmn, Joint Chiefs of Staff; Preston Geren, Sec. of the Army; George Casey, Chief of Staff, Army; Donald Winter, Sec. of the Navy; Gary Roughead, Chief of Naval Oper.; James Conway, USMC, Commandant of the Marine Corps; William Fallon, U.S. Central Command; Eric Olson, Commander, U.S. Special Oper. Command; Michael Wynne, Sec. of the Air Force; Michael Moseley, U.S. Air Force; Victor Renuart, Jr., N. Amer. Aerospace Defense Command; James Stavridis, Commander, U.S. Southern Command; Timothy Keating, Commander, U.S. Pacific Command; Burwell Bell, III, U.N. Command and Commander, U.S. Forces Korea. Illus.

This book presents selected papers from the 11th International Symposium on Heating, Ventilation and Air Conditioning (ISHVAC 2019), with a focus on HVAC techniques for improving indoor environment quality and the energy efficiency of heating and cooling systems. Presenting inspiration for implementing more efficient and safer HVAC systems, the book is a valuable resource for academic researchers, engineers in industry, and government regulators.

Provides the fundamentals, technologies, and best practices in designing, constructing and managing mission critical,

energy efficient data centers Organizations in need of high-speed connectivity and nonstop systems operations depend upon data centers for a range of deployment solutions. A data center is a facility used to house computer systems and associated components, such as telecommunications and storage systems. It generally includes multiple power sources, redundant data communications connections, environmental controls (e.g., air conditioning, fire suppression) and security devices. With contributions from an international list of experts, The Data Center Handbook instructs readers to: Prepare strategic plan that includes location plan, site selection, roadmap and capacity planning Design and build "green" data centers, with mission critical and energy-efficient infrastructure Apply best practices to reduce energy consumption and carbon emissions Apply IT technologies such as cloud and virtualization Manage data centers in order to sustain operations with minimum costs Prepare and practice disaster recovery and business continuity plan The book imparts essential knowledge needed to implement data center design and construction, apply IT technologies, and continually improve data center operations.

In recent years, socio-political trends toward environmental responsibility and the pressing need to reduce Run-the-Engine (RTE) costs have resulted in the concept of Green IT. Although a significant amount of energy is used to operate routing, switching, and transmission equipment, comparatively less attention has been paid to Green Networking. A

We are delighted to introduce The Proceedings of the International Conference on Environmental Science and Sustainable Development in 2019. This conference has taken place with the theme "The Strengthening of Sustainable Development Goals (SDGs) in Southeast Asia". Environmental problems are dynamics and complex that needs the analytical and decision making instruments which can accommodate these characteristics. Environmental science is an interdisciplinary science that delivered to understand complex and dynamic interactions in environmental systems. Studies in Environmental Sciences involves various fields of science which enable the formulation of efforts to solve environmental problems in a holistic and comprehensive way for its sustainability. Sustainable development is a dynamic process in environmental science that includes the process of utilizing natural resources, the direction of investment, the orientation of technological development and institutional change to address the environmental problems. The conference brought together a number of environmental experts from various disciplines, as well as practitioners, students and lecturers. Meanwhile, with a total of 38 papers, then all papers in this proceeding are divided into several sub-topics, i.e.: Ecosystem And Biodiversity Conservation; Environmental Planning And Management; Water And Waste Management; Governance, Culture, and Politics; Sustainable Energy And Renewable Energy; Spatial Planning And Regional Analysis; Community Engagement; Social Movement And Environmental; and Strengthening Of Sustainable Development Goals. We hope that the valuable work and discussion during this proceedings will lead to the initiatives and innovations in getting the Strengthening sustainable development goals, especially in solving environmental problems.

Ho> For CEOs, CIOs, CFOs, and IT leaders: The green IT business case and best practices for making it happen Timely help for companies facing rising energy costs, new government rules, and growing public concern Powerful new insights from IBM's breakthrough \$1 billion green computing initiative Chances are your enterprise IT organization has a significant carbon footprint. In an era of unpredictable energy costs, reducing energy usage throughout your data centers and IT infrastructure represents a powerful cost-cutting opportunity. Now, a top

green IT expert shows business and IT leaders how to drive powerful business value by improving IT's environmental performance. Drawing on leading-edge experience, John Lamb helps you realistically assess the business case for green IT, set priorities, and overcome the internal and external challenges to making it work. He offers proven solutions for issues ranging from organizational obstacles to executive motivation and discusses crucial issues ranging from utility rate incentives to metrics. Along the way, you'll discover energy-saving opportunities—from virtualization and consolidation to cloud and grid computing—and solutions that will improve business flexibility as they reduce environmental impact. Lamb presents case studies, checklists, and more—all the practical guidance you need to drive maximum bottom-line value from your green IT initiative.

If you're a candidate for Server+ certification, which measures essential competencies in advanced PC hardware issues such as RAID, SCSI, multiple CPUs, SANs, and much more, the Training Guide has what you need to pass. We have partnered with Elton Jernigan, a Subject Matter Expert (SME) of the initial Focus Group for development of the Server+ exam. He brings you an excellent resource that not only will help you pass the exam, but will also prove to be a handy, concise reference for managers and technicians who must select and implement hardware for network servers. You will benefit from Elton's insight as a 27-year veteran of the IT industry, including his experience as Director of Technology for the College of Business at Florida State University and as a senior computer trainer for the Beacon Institute for Learning. We make the most of your Server+ Certification study time by providing: Content that is organized according to each job dimension and exam objective Exam objectives that are clearly detailed and explained Study strategies to optimize your learning Exam tips that provide specific exam-related advice Step-by-step instructions that walk you through a task and help you learn faster Additional content sections with in-depth reference material Chapter summaries that review key concepts Key terms you'll need to understand Resource URLs that list web sites you can access for additional information on topics in each chapter Exercises that provide concrete experiences to reinforce learning Review questions and answers to assess your comprehension Sample exam questions that include answers and detailed explanations

This Book of Abstracts is the main publication of the 68th Annual Meeting of the European Federation of Animal Science (EAAP). It contains abstracts of the invited papers and contributed presentations of the sessions of EAAP's eleven Commissions: Animal Genetics, Animal Nutrition, Animal Management and Health, Animal Physiology, Cattle Production, Sheep and Goat Production, Pig Production, Horse Production and Livestock Farming Systems, Insects and Precision Livestock Farming.

This book describes the use of free air cooling to improve the efficiency of, and cooling of, equipment for use in telecom infrastructures. Discussed at length is the cooling of communication installation rooms such as data centers or base stations, and this is intended as a valuable tool for the people designing and manufacturing key parts of communication networks. This book provides an introduction to current cooling methods used for energy reduction, and also compares present cooling methods in use in the field. The qualification methods and standard reliability assessments are reviewed, and their inability to assess the risks of free air cooling is discussed. The method of identifying the risks associated with free air cooling on equipment performance and reliability is introduced. A novel method of assessment for free air cooling

is also proposed that utilizes prognostics and health management (PHM). This book also: Describes how the implementation of free air cooling can save energy for cooling within the telecommunications infrastructure. Analyzes the potential risks and failures of mechanisms possible in the implementation of free air cooling, which benefits manufacturers and equipment designers. Presents prognostics-based assessments to identify and mitigate the risks of telecommunications equipment under free air cooling conditions, which can provide the early warning of equipment failures at operation stage without disturbing the data centers' service. Optimum Cooling for Data Centers is an ideal book for researchers and engineers interested in designing and manufacturing equipment for use in telecom infrastructures.

This book presents new methods for and approaches to real-world problems as well as exploratory research describing novel mathematics and cybernetics applications in intelligent systems. It focuses on modern trends in selected fields of technological systems and automation control theory. It also introduces new algorithms, methods and applications of intelligent systems in automation, technological and industrial applications. This book constitutes the refereed proceedings of the Cybernetics and Mathematics Applications in Intelligent Systems Section of the 6th Computer Science On-line Conference 2017 (CSOC 2017), held in April 2017.

Green buildings have become common in India and other countries in Asia. However, there is a concern regarding the performance of green buildings failing to meet the expectations of clients during the operation. One of the key reasons for this is poorly commissioned HVAC systems. In this publication we provide tools and knowhow for more efficient HVAC commissioning. It gives answers for four major questions: why commissioning is needed, how to perform proper commissioning, which key performance issues of common HVAC equipment need to be considered, and what kind of checklists are used during commissioning? It covers the entire commissioning process beginning with the owner's project requirements and commissioning design reviews. Then, it explains procedures during installation and start-up of equipment followed by the functional performance testing, seasonal commissioning and 10 months' operation review. This publication is developed by Indian Society of Heating, Refrigeration and Air Conditioning Engineers ISHRAE for Indian and Asian requirements in conjunction with the Federation of European HVAC Associations REHVA. The process steps described in this publication are in line with all major international building standards and green building certification schemes. Note: T&F does not sell or distribute the Hardback in India, Pakistan, Nepal, Bhutan, Bangladesh and Sri Lanka.

Every year, nearly one in five businesses suffers a major disruption to its data or voice networks or communications systems. Since 9/11 it has become increasingly important for companies to implement a plan for disaster recovery. This comprehensive book addresses the

operational and day-to-day security management requirements of business stability and disaster recovery planning specifically tailored for the needs and requirements of an Information Security Officer. This book has been written by battle tested security consultants who have based all the material, processes and problem- solving on real-world planning and recovery events in enterprise environments world wide. John has over 25 years experience in the IT and security sector. He is an often sought management consultant for large enterprise and is currently a member of the Federal Communication Commission's Homeland Security Network Reliability and Interoperability Council Focus Group on Cybersecurity, working in the Voice over Internet Protocol workgroup. James has over 30 years experience in security operations and technology assessment as a corporate security executive and positions within the intelligence, DoD, and federal law enforcement communities. He has a Ph.D. in information systems specializing in information security and is a member of Upsilon Pi Epsilon (UPE), the International Honor Society for the Computing and Information Disciplines. He is currently an Independent Consultant. · Provides critical strategies for maintaining basic business functions when and if systems are shut down · Establishes up to date methods and techniques for maintaining second site back up and recovery · Gives managers viable and efficient processes that meet new government rules for saving and protecting data in the event of disasters

"This book covers a wide spectrum of topics relevant to implementing and managing a modern data center. The chapters are comprehensive and the flow of concepts is easy to understand." -Cisco reviewer Gain a practical knowledge of data center concepts To create a well-designed data center (including storage and network architecture, VoIP implementation, and server consolidation) you must understand a variety of key concepts and technologies. This book explains those factors in a way that smoothes the path to implementation and management. Whether you need an introduction to the technologies, a refresher course for IT managers and data center personnel, or an additional resource for advanced study, you'll find these guidelines and solutions provide a solid foundation for building reliable designs and secure data center policies. * Understand the common causes and high costs of service outages * Learn how to measure high availability and achieve maximum levels * Design a data center using optimum physical, environmental, and technological elements * Explore a modular design for cabling, Points of Distribution, and WAN connections from ISPs * See what must be considered when consolidating data center resources * Expand your knowledge of best practices and security * Create a data center environment that is user- and manager-friendly * Learn how high availability, clustering, and disaster recovery solutions can be deployed to protect critical information * Find out how to use a single network infrastructure for IP data, voice, and storage

"This study examines the evolution of near real-time intelligence support to air operations in three wars: Eighth Air Force operations during World War II, support to U.S. aircraft operating in "MiG Alley" over North Korea during the Korean War 1950-1954, and the "Teaball" weapons control center support to U.S. aircraft operating over North Vietnam during Linebacker II in 1972"--Introduction, P. 1.

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