

1. Record Nr.	UNINA9910140482603321
Titolo	Data center handbook // [edited by] Hwaiyu Geng
Pubbl/distr/stampa	Hoboken, New Jersey : , : John Wiley & Sons Inc., , 2014 ©2015
ISBN	1-118-93757-0 1-118-93756-2 1-118-93758-9
Edizione	[1st edition]
Descrizione fisica	1 recurso en línea (717 p.)
Disciplina	004.068/4
Soggetti	Electronic data processing departments - Design and construction Electronic data processing departments - Security measures
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Data Center Handbook; Copyright; Brief Contents; Contents; Contributors; Preface; Acknowledgments; Technical Advisory Board; Chapter Organization; Part I Data Center Overview and Strategic Planning; Chapter 1 Data Centers-Strategic Planning, Design, Construction, and Operations; 1.1 Introduction; 1.2 Data Center Vision and Roadmap; 1.3 Strategic Location Plan; 1.4 Sustainable Design; 1.5 Best Practices and Emerging Technologies; 1.6 Operations Management and Disaster Management; 1.7 Business Continuity and Disaster Recovery; 1.8 Conclusion; References; Further Reading Chapter 2 Energy and Sustainability in Data Centers2.1 Introduction; 2.2 Flexible Facilities-Modularity in Data Centers; 2.3 Water Use; 2.4 Proper Operating Temperature and Humidity; 2.5 Avoiding Common Planning Errors; 2.6 Cooling System Concepts; 2.7 Building Envelope and Energy Use; 2.8 Air Management and Containment Strategies; 2.9 Electrical System Efficiency; 2.10 Energy Use of IT Equipment; 2.11 Leveraging IT and Facilities; 2.12 Determining Data Center Energy Use Effectiveness; 2.13 Private Industry and Government Energy Efficiency Programs 2.14 USGBC-LEED Adaptations for Data Centers2.15 Harmonizing Global Metrics for Data Center Energy Efficiency; 2.16 Industry

Consortium-Recommendations for Measuring and Reporting Overall Data Center Efficiency; 2.17 Strategies for Operations Optimization; References; Further Reading; Chapter 3 Hosting or Colocation Data Centers; 3.1 Introduction; 3.2 Hosting; 3.3 Colocation (Wholesale); 3.4 Types of Data Centers; 3.5 Scaling Data Centers; 3.6 Selecting and Evaluating DC Hosting and Wholesale Providers; 3.7 Build versus Buy; 3.8 Future Trends; 3.9 Conclusion; Further Reading Sources for Data Center Industry News and Trends Chapter 4 Modular Data Centers: Design, Deployment, and Other Considerations; 4.1 Modular Data Center Definition; 4.2 MDC Benefits and Applications; 4.3 Modularity Scalability Planning; 4.4 MDC Anatomy; 4.5 Site Preparation, Installation, Commissioning; 4.6 How to Select an MDC Vendor; 4.7 External Factors; 4.8 Future Trend and Conclusion; Further Reading; Chapter 5 Data Center Site Search and Selection; 5.1 Introduction; 5.2 Site Searches Versus Facility Searches; 5.3 Globalization and the Speed of Light; 5.4 The Site Selection Process 5.5 Industry Trends Affecting Site Selection Further Reading; Chapter 6 Data Center Financial Analysis, ROI and TCO; 6.1 Introduction to Financial Analysis, Return on Investment, and Total Cost of Ownership; 6.2 Financial Measures of Cost and Return; 6.3 Complications and Common Problems; 6.4 A Realistic Example; 6.5 Choosing to Build, Reinvest, Lease, or Rent; Further Reading; Chapter 7 Overview of Data Centers in China; 7.1 Introduction; 7.2 Policies, Laws, Regulations, and Standards; 7.3 Standards; 7.4 Development Status of China's Data Centers; 7.5 Energy Efficiency Status 7.6 Development Tendency

Sommario/riassunto

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.
