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NX-OS AND CISCO NEXUS SWITCHING

NEXT-GENERATION DATA CENTER ARCHITECTURES

Cisco Press Cisco® Nexus switches and the new NX-OS operating system are rapidly becoming the new de facto standards for data center distribution/aggregation layer networking. NX-OS builds on Cisco IOS to provide advanced features that will be increasingly crucial to efficient data center operations. NX-OS and Cisco Nexus Switching is the definitive guide to utilizing these powerful new capabilities in enterprise environments. In this book, three Cisco consultants cover every facet of deploying, configuring, operating, and troubleshooting NX-OS in the data center. They review the key NX-OS enhancements for high availability, virtualization, In-Service Software Upgrades (ISSU), and security. In this book, you will discover support and configuration best practices for working with Layer 2 and Layer 3 protocols and networks, implementing multicasting, maximizing serviceability, providing consistent network and storage services, and much more. The authors present multiple command-line interface (CLI) commands, screen captures, realistic configurations, and troubleshooting tips—all based on their extensive experience working with customers who have successfully deployed Nexus switches in their data centers. Learn how Cisco NX-OS builds on and differs from IOS Work with NX-OS user modes, management interfaces, and system files Configure Layer 2 networking: VLANs/private VLANs, STP, virtual port channels, and unidirectional link detection Configure Layer 3 EIGRP, OSPF, BGP, and First

Hop Redundancy Protocols (FHRPs) Set up IP multicasting with PIM, IGMP, and MSDP Secure NX-OS with SSH, Cisco TrustSec, ACLs, port security, DHCP snooping, Dynamic ARP inspection, IP Source Guard, keychains, Traffic Storm Control, and more Build high availability networks using process modularity and restart, stateful switchover, nonstop forwarding, and in-service software upgrades Utilize NX-OS embedded serviceability, including Switched Port Analyzer (SPAN), Smart Call Home, Configuration Checkpoint/Rollback, and NetFlow Use the NX-OS Unified Fabric to simplify infrastructure and provide ubiquitous network and storage services Run NX-OS on Nexus 1000V server-based software switches This book is part of the Networking Technology Series from Cisco Press®, which offers networking professionals valuable information for constructing efficient networks, understanding new technologies, and building successful careers.

OPTICAL SWITCHING IN NEXT GENERATION DATA CENTERS

Springer This book introduces the reader to the optical switching technology for its application to data centers. In addition, it takes a picture of the status of the technology and system architecture evolution and of the research in the area of optical switching in data center. The book is organized in four parts: the first part is focused on the system aspects of optical switching in intra-data center networking, the second part is dedicated to describing the recently demonstrated optical switching networks, the third part deals with the latest technologies developed to enable optical switching and, finally, the fourth part of the book outlines the future prospects and trends.

ANALYSIS AND DESIGN OF NEXT-GENERATION SOFTWARE ARCHITECTURES

5G, IOT, BLOCKCHAIN, AND QUANTUM COMPUTING

Springer Nature This book provides a detailed "how-to" guide, addressing aspects ranging from analysis and design to the implementation of applications, which need to be integrated within legacy applications and databases. The analysis and design of the next generation of software architectures must address the new requirements to accommodate the Internet of things (IoT), cybersecurity, blockchain networks, cloud, and quantum computer technologies. As 5G wireless increasingly establishes itself over the next few years, moving legacy applications into these new architectures will be critical for companies to compete in a consumer-driven and social media-based economy. Few organizations, however, understand the challenges and complexities of moving from a central database legacy architecture to a ledger and networked environment. The challenge is not limited to just designing new software applications. Indeed, the next generation needs to function more independently on

various devices, and on more diverse and wireless-centric networks. Furthermore, databases must be broken down into linked list-based blockchain architectures, which will involve analytic decisions regarding which portions of data and metadata will be processed within the chain, and which ones will be dependent on cloud systems. Finally, the collection of all data throughout these vast networks will need to be aggregated and used for predictive analysis across a variety of competitive business applications in a secured environment. Certainly not an easy task for any analyst/designer! Many organizations will continue to use packaged products and open-source applications. These third-party products will need to be integrated into the new architecture paradigms and have seamless data aggregation capabilities, while maintaining the necessary cyber compliances. The book also clearly defines the roles and responsibilities of the stakeholders involved, including the IT departments, users, executive sponsors, and third-party vendors. The book's structure also provides a step-by-step method to help ensure a higher rate of success in the context of re-engineering existing applications and databases, as well as selecting third-party products, conversion methods and cybercontrols. It was written for use by a broad audience, including IT developers, software engineers, application vendors, business line managers, and executives.

NEXT GENERATION DATABASES

NOSQLAND BIG DATA

Apress "It's not easy to find such a generous book on big data and databases. Fortunately, this book is the one." Feng Yu. Computing Reviews. June 28, 2016. This is a book for enterprise architects, database administrators, and developers who need to understand the latest developments in database technologies. It is the book to help you choose the correct database technology at a time when concepts such as Big Data, NoSQL and NewSQL are making what used to be an easy choice into a complex decision with significant implications. The relational database (RDBMS) model completely dominated database technology for over 20 years. Today this "one size fits all" stability has been disrupted by a relatively recent explosion of new database technologies. These paradigm-busting technologies are powering the "Big Data" and "NoSQL" revolutions, as well as forcing fundamental changes in databases across the board. Deciding to use a relational database was once truly a no-brainer, and the various commercial relational databases competed on price, performance, reliability, and ease of use rather than on fundamental architectures. Today we are faced with choices between radically different database technologies. Choosing the right database today is a complex undertaking, with serious economic and technological consequences. Next Generation Databases demystifies today's new database technologies. The book describes what each technology was designed to solve. It shows how each

technology can be used to solve real word application and business problems. Most importantly, this book highlights the architectural differences between technologies that are the critical factors to consider when choosing a database platform for new and upcoming projects. Introduces the new technologies that have revolutionized the database landscape Describes how each technology can be used to solve specific application or business challenges Reviews the most popular new wave databases and how they use these new database technologies

OPTICAL INTERCONNECTS FOR DATA CENTERS

Woodhead Publishing Current data centre networks, based on electronic packet switches, are experiencing an exponential increase in network traffic due to developments such as cloud computing. Optical interconnects have emerged as a promising alternative offering high throughput and reduced power consumption. Optical Interconnects for Data Centers reviews key developments in the use of optical interconnects in data centres and the current state of the art in transforming this technology into a reality. The book discusses developments in optical materials and components (such as single and multi-mode waveguides), circuit boards and ways the technology can be deployed in data centres. Optical Interconnects for Data Centers is a key reference text for electronics designers, optical engineers, communications engineers and R&D managers working in the communications and electronics industries as well as postgraduate researchers. Summarizes the state-of-the-art in this emerging field Presents a comprehensive review of all the key aspects of deploying optical interconnects in data centers, from materials and components, to circuit boards and methods for integration Contains contributions that are drawn from leading international experts on the topic

NX-OS AND CISCO NEXUS SWITCHING

NEXT-GENERATION DATA CENTER ARCHITECTURES

Cisco Press NX-OS and Cisco Nexus Switching Next-Generation Data Center Architectures Second Edition The complete guide to planning, configuring, managing, and troubleshooting NX-OS in the enterprise–updated with new technologies and examples Using Cisco Nexus switches and the NX-OS operating system, data center professionals can build unified core networks that deliver unprecedented scalability, resilience, operational continuity, flexibility, and performance. NX-OS and Cisco Nexus Switching, Second Edition, is the definitive guide to applying these breakthrough technologies in real-world environments. This extensively updated edition contains five new chapters addressing a wide range of new technologies, including FabricPath, OTV, IPv6, QoS, VSG, Multi-Hop FCoE, LISP, MPLS, Layer 3 on Nexus 5000, and Config sync. It also presents a start-to-finish,

step-by-step case study of an enterprise customer who migrated from Cisco Catalyst to a Nexus-based architecture, illuminated with insights that are applicable in virtually any enterprise data center. Drawing on decades of experience with enterprise customers, the authors cover every facet of deploying, configuring, operating, and troubleshooting NX-OS in today's data center. You'll find updated best practices for high availability, virtualization, security, L2/L3 protocol and network support, multicast, serviceability, provision of networking and storage services, and more. Best of all, the authors present all the proven commands, sample configurations, and tips you need to apply these best practices in your data center. Ron Fuller, CCIE No. 5851 (Routing and Switching/Storage Networking), Technical Marketing Engineer on Cisco's Nexus 7000 team, specializes in helping customers design end-to-end data center architectures. Ron has 21 years of industry experience, including 7 at Cisco. He has spoken at Cisco Live on VDCs, NX-OS multicast, and general design. David Jansen, CCIE No. 5952 (Routing/Switching), is a Cisco Technical Solutions Architect specializing in enterprise data center architecture. He has 20 years of industry experience, 15 of them at Cisco (6 as a solution architect); and has delivered several Cisco Live presentations on NX-OS and data center solutions. Matthew McPherson, senior systems engineer and solutions architect for the Cisco Central Select Operation, specializes in data center architectures. He has 12 years of experience working with service providers and large finance and manufacturing enterprises, and possesses deep technical knowledge of routing, switching, and security. Understand the NX-OS command line, virtualization features, and file system Utilize the NX-OS comprehensive Layer 2/Layer 3 support: vPC, Spanning Tree Protocol, Cisco FabricPath, EIGRP, OSPF, BGP, HSRP, GLBP, and VRRP Configure IP multicast with PIM, Auto-RP, and MSDP Secure your network with CTS, SGTs, ACLs, CoPP, and DAI Establish a trusted set of network devices with Cisco TrustSec Maximize availability with ISSU, stateful process restart/switchover, and non-stop forwarding Improve serviceability with SPAN, ERSPAN, configuration checkpoints/rollback, packet analysis, Smart Call Home, Python, and PoAP Unify storage and Ethernet fabrics with FCoE, NPV, and NPIV Take full advantage of Nexus 1000V in a virtualized environment Achieve superior QoS with MQ CLI, queuing, and marking Extend L2 networks across L3 infrastructure with Overlay Transport Virtualization (OTV) Deliver on SLAs by integrating MPLS application components such as L3 VPNs, traffic engineering, QoS, and mVPN Support mobility via the new Locator ID Separation Protocol (LISP) Walk step-by-step through a realistic Nexus and NX-OS data center migration

PRIVATE CLOUD COMPUTING

CONSOLIDATION, VIRTUALIZATION, AND SERVICE-ORIENTED

INFRASTRUCTURE

Elsevier Private cloud computing enables you to consolidate diverse enterprise systems into one that is cloud-based and can be accessed by end-users seamlessly, regardless of their location or changes in overall demand. Expert authors Steve Smoot and Nam K. Tan distill their years of networking experience to describe how to build enterprise networks to create a private cloud. With their techniques you'll create cost-saving designs and increase the flexibility of your enterprise, while maintaining the security and control of an internal network. Private Cloud Computing offers a complete cloud architecture for enterprise networking by synthesizing WAN optimization, next-generation data centers, and virtualization in a network-friendly way, tying them together into a complete solution that can be progressively migrated to as time and resources permit. Describes next-generation data center architectures such as the virtual access-layer, the unified data center fabric and the "rack-and-roll" deployment model Provides an overview of cloud security and cloud management from the server virtualization perspective Presents real-world case studies, configuration and examples that allow you to easily apply practical know-how to your existing enterprise environment Offers effective private cloud computing solutions to simplify the costly and problematic challenge of enterprise networking and branch server consolidation

ADVANCES IN NEXT GENERATION SERVICES AND SERVICE ARCHITECTURES

River Publishers Advances in Next Generation Services and Service Architectures presents state-of-the-art results in services and service architectures, identifies challenges including business models, technology issues, service management, and security, and describes important trends and directions. The book is intended to provide readers with a comprehensive reference for the most current developments in the field. It offers broad coverage of important topics with eighteen chapters covering both technology and applications written by international experts. The chapters are organized into the following four parts: Part 1: Emerging Services and Service Architectures - This part provides eight chapters which survey many of the important emerging categories of services, and provides details about architectures, service models, and sample applications. Part 2: IPTV and Video Services - Video content delivery to a variety of endpoints with varying capacities and network connectivity is a fundamental service. In this part, four chapters address enabling technologies including semantic support, context-awareness, QoE optimization, and support for mobile devices. Part 3: Context Awareness - User sensitive application delivery has long been viewed as an important capability to increase the value of services to users. Context awareness focuses on representing and using the immediate situation and

surroundings of the user in the delivery of the service. In this part, four chapters cover recent progress in context awareness and illustrate its use in next generation networks and IPTV. Part 4: Security - New types of services and service architectures require new security techniques. This part contains two chapters, one on security challenges and the other on the user of reputation in service management. Advances in Next Generation Services and Service Architectures is complemented by a separate volume, Future Internet Services and Service Architectures, which covers future Internet architectures, peer-to-peer service models, event based processing, and VANETs.

NEXT GENERATION AND ADVANCED NETWORK RELIABILITY ANALYSIS

USING MARKOV MODELS AND SOFTWARE RELIABILITY ENGINEERING

Springer This book covers reliability assessment and prediction of new technologies such as next generation networks that use cloud computing, Network Function Virtualization (NVF), Software Defined Network (SDN), Next Generation Transport, Evolving Wireless Systems, Digital VoIP Telephony, and Reliability Testing techniques specific to Next Generation Networks (NGN). This book introduces the technology to the reader first, followed by advanced reliability techniques applicable to both hardware and software reliability analysis. The book covers methodologies that can predict reliability using component failure rates to system level downtimes. The book's goal is to familiarize the reader with analytical techniques, tools and methods necessary for analyzing very complex networks using very different technologies. The book lets readers quickly learn technologies behind currently evolving NGN and apply advanced Markov modeling and Software Reliability Engineering (SRE) techniques for assessing their operational reliability. Covers reliability analysis of advanced networks and provides basic mathematical tools and analysis techniques and methodology for reliability and quality assessment; Develops Markov and Software Engineering Models to predict reliability; Covers both hardware and software reliability for next generation technologies.

RESEARCH ANTHOLOGY ON ARCHITECTURES, FRAMEWORKS, AND INTEGRATION STRATEGIES FOR DISTRIBUTED AND CLOUD COMPUTING

IGI Global Distributed systems intertwine with our everyday lives. The benefits and current shortcomings of the underpinning technologies are experienced by a wide range of people and their smart devices. With the rise of large-scale IoT and similar distributed systems, cloud bursting technologies, and partial outsourcing solutions, private entities are encouraged to increase their efficiency and offer unparalleled availability and reliability to their users. The Research Anthology on Architectures,

Frameworks, and Integration Strategies for Distributed and Cloud Computing is a vital reference source that provides valuable insight into current and emergent research occurring within the field of distributed computing. It also presents architectures and service frameworks to achieve highly integrated distributed systems and solutions to integration and efficient management challenges faced by current and future distributed systems. Highlighting a range of topics such as data sharing, wireless sensor networks, and scalability, this multi-volume book is ideally designed for system administrators, integrators, designers, developers, researchers, academicians, and students.

SYSTEMS, DECISION AND CONTROL IN ENERGY II

Springer Nature This book examines the problems in the field of energy and related fields (chemical, transport, aerospace, construction, metallurgy, engineering, etc.) and consists of 4 subsections: Electrical Engineering, Heat Power Engineering, Cybersecurity and Computer Science & Environmental Safety. In the first section, authors pay attention to contemporary issues related to the development of the electric power industry, electrical engineering, the physics of electrical phenomena and renewable energy sources (such as solar energy and wind energy). The second section is devoted to modern problems in heat power engineering and considers modern means and methods that increase the efficiency and reliability of the functioning of heat power facilities. The third section is devoted to issues of cybersecurity of critical facilities, in particular energy facilities, as well as the development of computer science and the introduction of modern information and measurement systems in the energy sector. The fourth subsection deals with the problems of rational use of natural resources, accounting for emissions of harmful substances, environmental issues at energy facilities, as well as the development of a methodology for environmental safety. The book includes 21 chapters. A book is for researchers, engineers, as well as lecturers and postgraduates of higher education institutions dealing with issues of control, diagnosis and monitoring of energy facilities.

NEXT GENERATION MOBILE SYSTEMS

3G AND BEYOND

John Wiley & Sons What will the future of wireless communications look like? What drives mobile communications systems beyond 3G? In Next Generation Mobile Systems the authors answer these questions and others surrounding the new technologies. The book examines the current research issues driving the wireless world and provides an inclusive overview of how established technologies will evolve to suit next generation mobile systems. While the term '4G' already dominates research in industry and academia, there are still numerous hurdles to take before this ambitious

concept can become reality. Acclaimed researchers from NTT-DoCoMo take up the debate of what type of mobile communications will emerge in the post-3G era. Next Generation Mobile Systems: Covers the evolution of IP-based systems and IP mobility. Gives a detailed overview of radio-access technologies and wireless LANs. Explains APIs for mobile systems and IP mobility. Addresses middleware and applications, including terminal platform technologies, multimedia, and wireless web services. Discusses security in future mobile networks, including sections on Cryptographic Algorithms and Protocols for XG, Authentication, Authorization, and Accounting, and Security Policy Enforcement for Downloaded Code. This valuable resource will provide communications engineers, telecommunications managers and researchers in industry and academia with a sound understanding of the future direction of mobile technology.

FIBER-WIRELESS CONVERGENCE IN NEXT-GENERATION COMMUNICATION NETWORKS

SYSTEMS, ARCHITECTURES, AND MANAGEMENT

Springer This book investigates new enabling technologies for Fi-Wi convergence. The editors discuss Fi-Wi technologies at the three major network levels involved in the path towards convergence: system level, network architecture level, and network management level. The main topics will be: a. At system level: Radio over Fiber (digitalized vs. analogic, standardization, E-band and beyond) and 5G wireless technologies; b. Network architecture level: NGPON, WDM-PON, BBU Hotelling, Cloud Radio Access Networks (C-RANs), HetNets. c. Network management level: SDN for convergence, Next-generation Point-of-Presence, Wi-Fi LTE Handover, Cooperative MultiPoint.

CLOUD COMPUTING FOR ENTERPRISE ARCHITECTURES

Springer Science & Business Media This important text provides a single point of reference for state-of-the-art cloud computing design and implementation techniques. The book examines cloud computing from the perspective of enterprise architecture, asking the question; how do we realize new business potential with our existing enterprises? Topics and features: with a Foreword by Thomas Erl; contains contributions from an international selection of preeminent experts; presents the state-of-the-art in enterprise architecture approaches with respect to cloud computing models, frameworks, technologies, and applications; discusses potential research directions, and technologies to facilitate the realization of emerging business models through enterprise architecture approaches; provides relevant theoretical frameworks, and the latest empirical research findings.

WIRELESS SYSTEMS AND NETWORK ARCHITECTURES IN NEXT GENERATION INTERNET

SECOND INTERNATIONAL WORKSHOP OF THE EURO-NGI NETWORK OF EXCELLENCE, VILLA VIGONI, ITALY, JULY 13-15, 2005, REVISED SELECTED PAPERS

Springer This book constitutes the refereed post-proceedings of the second international joint workshops on Wireless and Mobility and on New Trends in Network Architectures and Services organized by the European Network of Excellence on Next Generation Internet, EURO-NGI 2005. The 19 revised full research papers presented together with 1 invited talk are organized in topical sections on wireless solutions, QoS support in next generation networks, and peer to peer architectures and algorithms.

ADVANCES IN COMPUTER SCIENCE FOR ENGINEERING AND EDUCATION

Springer This book features high-quality, peer-reviewed research papers presented at the First International Conference on Computer Science, Engineering and Education Applications (ICCSEEA2018), held in Kiev, Ukraine on 18–20 January 2018, and organized jointly by the National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute" and the International Research Association of Modern Education and Computer Science. The state-of-the-art papers discuss topics in computer science, such as neural networks, pattern recognition, engineering techniques, genetic coding systems, deep learning with its medical applications, as well as knowledge representation and its applications in education. It is an excellent reference resource for researchers, graduate students, engineers, management practitioners, and undergraduate students interested in computer science and their applications in engineering and education.

MODELING AND PROCESSING FOR NEXT-GENERATION BIG-DATA TECHNOLOGIES

WITH APPLICATIONS AND CASE STUDIES

Springer This book covers the latest advances in Big Data technologies and provides the readers with a comprehensive review of the state-of-the-art in Big Data processing, analysis, analytics, and other related topics. It presents new models, algorithms, software solutions and methodologies, covering the full data cycle, from data gathering to their visualization and interaction, and includes a set of case studies and best practices. New research issues, challenges and opportunities shaping the future agenda in the field of Big Data are also identified and presented throughout the book, which is intended for researchers, scholars, advanced students, software developers and practitioners working at the forefront in their field.

CYBER-PHYSICAL SYSTEMS FOR NEXT-GENERATION NETWORKS

IGI Global The use of cyber-physical systems in recent computing, communication, and control methods to design and operate intelligent and autonomous systems using cutting-edge technologies has led to many advances. By studying emerging trends in these systems, programming techniques can be optimized and strengthened to create a higher level of effectiveness. Cyber-Physical Systems for Next-Generation Networks provides emerging research on using cyber-physical systems (CPS) as a method to control design and operation of intelligent systems through next-generation networks. While highlighting issues such as increasing CPS complexity due to components within physical and industrial systems, this publication explores information on real-time sensing, reasoning, and adaptation for cyber-physical systems while gaining an understanding of evolutionary computing for it. This book is a valuable resource for engineers, academicians, researchers, and graduate-level students seeking current research on CPS in cutting-edge technologies.

WORLD CONGRESS OF MEDICAL PHYSICS AND BIOMEDICAL ENGINEERING 2006

AUGUST 27 - SEPTMBER 1, 20006 COEX SEOUL, KOREA

Springer Science & Business Media These proceedings of the World Congress 2006, the fourteenth conference in this series, offer a strong scientific program covering a wide range of issues and challenges which are currently present in Medical physics and Biomedical Engineering. About 2,500 peer reviewed contributions are presented in a six volume book, comprising 25 tracks, joint conferences and symposia, and including invited contributions from well known researchers in this field.

DW 2.0: THE ARCHITECTURE FOR THE NEXT GENERATION OF DATA WAREHOUSING

Elsevier DW 2.0: The Architecture for the Next Generation of Data Warehousing is the first book on the new generation of data warehouse architecture, DW 2.0, by the father of the data warehouse. The book describes the future of data warehousing that is technologically possible today, at both an architectural level and technology level. The perspective of the book is from the top down: looking at the overall architecture and then delving into the issues underlying the components. This allows people who are building or using a data warehouse to see what lies ahead and determine what new technology to buy, how to plan extensions to the data warehouse, what can be salvaged from the current system, and how to justify the expense at the most practical level. This book gives experienced data warehouse professionals everything they need in order to implement the new generation DW 2.0. It is designed for professionals in the IT organization, including data architects, DBAs, systems design and

development professionals, as well as data warehouse and knowledge management professionals. * First book on the new generation of data warehouse architecture, DW 2.0. * Written by the "father of the data warehouse", Bill Inmon, a columnist and newsletter editor of The Bill Inmon Channel on the Business Intelligence Network. * Long overdue comprehensive coverage of the implementation of technology and tools that enable the new generation of the DW: metadata, temporal data, ETL, unstructured data, and data quality control.

IMPLEMENTING DATA ANALYTICS AND ARCHITECTURES FOR NEXT GENERATION WIRELESS COMMUNICATIONS

IGI Global Wireless communication is continuously evolving to improve and be a part of our daily communication. This leads to improved quality of services and applications supported by networking technologies. We are now able to use LTE, LTE-Advanced, and other emerging technologies due to the enormous efforts that are made to improve the quality of service in cellular networks. As the future of networking is uncertain, the use of deep learning and big data analytics is a point of focus as it can work in many capacities at a variety of levels for wireless communications. Implementing Data Analytics and Architectures for Next Generation Wireless Communications addresses the existing and emerging theoretical and practical challenges in the design, development, and implementation of big data algorithms, protocols, architectures, and applications for next generation wireless communications and their applications in smart cities. The chapters of this book bring together academics and industrial practitioners to exchange, discuss, and implement the latest innovations and applications of data analytics in advanced networks. Specific topics covered include key encryption techniques, smart home appliances, fog communication networks, and security in the internet of things. This book is valuable for technologists, data analysts, networking experts, practitioners, researchers, academicians, and students.

MODERN ORACLE ENTERPRISE ARCHITECTURE

DISCOVER ORACLE'S HIDDEN GEMS FOR NEXT GENERATION DATABASE AND APPLICATION MIGRATIONS (ENGLISH EDITION)

BPB Publications A comprehensive innovative product handbook for managers designing and deploying enterprise business solutions. KEY FEATURES ● Covers proven technical approaches in migrating your enterprise systems to Oracle Cloud Computing. ● A handbook for decision-makers on using Oracle Product Suite for digital transformation. ● Understand the Oracle product benefits and leveraging capital investment to avail great measurable ROI and TCO. DESCRIPTION The Oracle Enterprise Architecture Framework emerges from the on-site legacy to current cloud native and is called Modern Oracle Enterprise Architecture. It aims to clear

the path for critical business application workloads in the field of database and the application architecture to hybrid and cloud applications. This is a very handy book for chief decision-makers and professional cloud solution engineers. As the current cloud computing services are agile and pay-as-you-go (PAYG) based subscription including multi-year cost model thus a more agile approach is covered throughout the book. This book will help readers to achieve their database and application system solution architecture career objectives more quickly without spending years. The readers can prevent committing errors, recovering from them, and learning things the hard way. This book lists critical attributes and methods to develop, including improvement of business-friendly case formulation. It also includes the development of a solution approach in creative and innovative technological breakthroughs developed by product companies over the last three decades. WHAT YOU WILL LEARN ● 360-degree view of Oracle database and application products. ● Transition to hybrid cloud identity services via Oracle Identity Cloud platform. ● Understand and implement Oracle accessibility and architecture observability. ● Get to know the benefits of leveraging Oracle Autonomous Shared and dedicated services. ● Manage, automate, and upgrade the cloud databases using Oracle fleet management. ● Automate sitewide failover and switchover operations using Oracle siteguard. WHO THIS BOOK IS FOR This book is for decision-makers, business architects, system development teams, technological professionals and product teams who want to use the Oracle stack's hidden capabilities to develop, manage and keep enhancing enterprise systems. TABLE OF CONTENTS 01. Artificial Intelligence for Cloud Computing 02. Business Benefits of Migrating and Operating on Oracle Cloud 03. Move and Optimize the Cost for Oracle E-Business Suite on Cloud Compute 04. Contemplating IaaS, PaaS, and SaaS Migration for On-Premise Legacy Systems 05. Oracle Autonomous Dedicated for Oracle E-Business Suite Customers 06. Benefits of Oracle PeopleSoft with Autonomous Database Dedicated and Shared 07. Oracle Autonomous Dedicated for Oracle E-Business Suite Customers 08. Oracle Agile Maximum-Security Architecture (AMSA) 09. Agile Accessibility and Observability Architecture Agile AOA (AAOA) 10. Fleet Management for On-Premises and Cloud (DBaaS and IaaS) Database Stack 11. Identity transition from Identity Manager (IDM) to Universal Directory (OUD) and Identity Cloud Suite 12. Decision Analysis Resolution (DAR) for Oracle E-Business Suite on Cloud Compute 13. Hidden Jewel on Oracle Crown. Oracle Enterprise Manager Site Guard Use Cases: 14. Case Study One Oracle E-Business Suite Migration to OCI with Business Continuity Site 15. Case Study Two. Oracle E-Business Suite Migration to OCI with Business Continuity Site 16. Case Study Three. Oracle Universal Directory Installation and Configuration

NEXT GENERATION IPTV SERVICES AND TECHNOLOGIES

John Wiley & Sons With a focus on changing job tasks and knowledge requirements for professionals, this book enables readers to meet the demands of designing, implementing, and supporting end-to-end IPTV systems. Additionally, it examines IPTV technical subjects that are not included in any other single reference to date: Quality of Experience (QoE), techniques for speeding up IPTV channel changing times, IPTV CD software architecture, Whole Home Media Networking (WHMN), IP-based high-definition TV, interactive IPTV applications, and the daily management of IPTV networks.

ITS ARCHITECTURE

OPTICAL FIBER TELECOMMUNICATIONS

Academic Press Optical Fiber Telecommunications, Volume Eleven, covers the latest in optical fiber communications and their potential to penetrate and complement other forms of communication, such as wireless access, on-premises networks, interconnects and satellites. This updated edition of this classic, first published in 1979, examines opportunities for future optical fiber technology by presenting the latest advances on key topics, such as 5G wireless access, inter and intra data center communications, THz technologies, secure communications, and free space digital optical links. Topics of note include sections on foundries for widespread user access, designing photonic integrated circuits (PICs), monolithic and hybrid integration technologies, nanophotonics, and advanced and non-conventional data modulation formats. The traditional emphasis of achieving higher data rates and longer transmission distances are also addressed through chapters on space-division-multiplexing using multimode and multicore fibers, undersea cable systems, and reconfigurable networking. This book is an indispensable reference on the latest advances in key technologies for future fiber optic communications. It is suitable for university and industry researchers, graduate students, optical systems implementers, network operators, managers and investors. Updated edition presents the latest advances in optical fiber components, systems, subsystems and networks Written by leading authorities from academia and industry Gives a self-contained overview of specific technologies, covering both the state-of-the-art and future research challenges

MOBILE PEER-TO-PEER COMPUTING FOR NEXT GENERATION DISTRIBUTED ENVIRONMENTS: ADVANCING CONCEPTUAL AND ALGORITHMIC APPLICATIONS

ADVANCING CONCEPTUAL AND ALGORITHMIC APPLICATIONS

IGI Global "This book is dedicated to the coverage of research issues, findings, and approaches to Mobile P2P computing from both conceptual and algorithmic perspectives"--Provided by publisher.

BUILDING NEXT-GENERATION CONVERGED NETWORKS

THEORY AND PRACTICE

CRC Press Supplying a comprehensive introduction to next-generation networks, Building Next-Generation Converged Networks: Theory and Practice strikes a balance between how and why things work and how to make them work. It compiles recent advancements along with basic issues from the wide range of fields related to next generation networks. Containing the contributions of 56 industry experts and researchers from 16 different countries, the book presents relevant theoretical frameworks and the latest research. It investigates new technologies such as IPv6 over Low Power Wireless Personal Area Network (6LoWPAN) architectures, standards, mobility, and security. Presenting the material in a manner that entry-level readers can easily grasp the fundamentals, the book is organized into five parts: Multimedia Streaming—deals with multimedia streaming in networks of the future—from basics to more in-depth information for the experts Safety and Security in Networks—addresses the issues related to security, including fundamental Internet and cyber-security concepts that will be relevant in any future network Network Management and Traffic Engineering—includes coverage of mathematical modeling-based works Information Infrastructure and Cloud Computing—integrates information about past achievements, present conditions, and future expectations in information infrastructure-related areas Wireless Networking—touches on the various aspects of wireless networks and technologies The text includes coverage of Internet architectures and protocols, embedded systems and sensor networks, web services, Cloud technologies, and next-generation wireless networking. Reporting on the latest advancements in the field, it provides you with the understanding required to contribute towards the materialization of future networks. This book is suitable for graduate students, researchers, academics, industry practitioners working in the area of wired or wireless networking, and basically anyone who wants to improve his or her understanding of the topics related to next-generation networks.

NEXT-GENERATION INTERNET

ARCHITECTURES AND PROTOCOLS

Cambridge University Press With ever-increasing demands on capacity, quality of service, speed, and reliability, current Internet systems are under strain and under review. Combining contributions from experts in the field, this book captures the most recent and innovative designs, architectures, protocols, and mechanisms that will enable researchers to successfully build the next-generation Internet. A broad perspective is provided, with topics including innovations at the physical/transmission layer in wired and wireless media, as well as the support for new switching

and routing paradigms at the device and sub-system layer. The proposed alternatives to TCP and UDP at the data transport layer for emerging environments are also covered, as are the novel models and theoretical foundations proposed for understanding network complexity. Finally, new approaches for pricing and network economics are discussed, making this ideal for students, researchers, and practitioners who need to know about designing, constructing, and operating the next-generation Internet.

PRO MICROSOFT HDINSIGHT

HADOOP ON WINDOWS

Apress "The expert's voice in big data"--Cover.

DISTRIBUTED AND CLOUD COMPUTING

FROM PARALLEL PROCESSING TO THE INTERNET OF THINGS

Morgan Kaufmann Distributed and Cloud Computing: From Parallel Processing to the Internet of Things offers complete coverage of modern distributed computing technology including clusters, the grid, service-oriented architecture, massively parallel processors, peer-to-peer networking, and cloud computing. It is the first modern, up-to-date distributed systems textbook; it explains how to create high-performance, scalable, reliable systems, exposing the design principles, architecture, and innovative applications of parallel, distributed, and cloud computing systems. Topics covered by this book include: facilitating management, debugging, migration, and disaster recovery through virtualization; clustered systems for research or ecommerce applications; designing systems as web services; and social networking systems using peer-to-peer computing. The principles of cloud computing are discussed using examples from open-source and commercial applications, along with case studies from the leading distributed computing vendors such as Amazon, Microsoft, and Google. Each chapter includes exercises and further reading, with lecture slides and more available online. This book will be ideal for students taking a distributed systems or distributed computing class, as well as for professional system designers and engineers looking for a reference to the latest distributed technologies including cloud, P2P and grid computing. Complete coverage of modern distributed computing technology including clusters, the grid, service-oriented architecture, massively parallel processors, peer-to-peer networking, and cloud computing Includes case studies from the leading distributed computing vendors: Amazon, Microsoft, Google, and more Explains how to use virtualization to facilitate management, debugging, migration, and disaster recovery Designed for undergraduate or graduate students taking a distributed systems course—each chapter includes exercises and further reading, with lecture slides and more available online

NEXT-GENERATION APPLIED INTELLIGENCE

22ND INTERNATIONAL CONFERENCE ON INDUSTRIAL ENGINEERING AND OTHER APPLICATIONS OF APPLIED INTELLIGENT SYSTEMS, IEA/AIE 2009, TAINAN, TAIWAN, JUNE 24-27, 2009. PROCEEDINGS

Springer The International Conference on Industrial, Engineering and Other Applications of Applied Intelligent Systems (IEA/AIE), always sponsored by the International So- ety of Applied Intelligence (ISAI), emphasizes applications of applied intelligent systems to solve real-life problems in all areas. It is held every year and has become one of the biggest and most important academic activities concerning the theory and applications of intelligent systems in the world. The IEA/AIE 2009 conference was hosted by the National University of Tainan and National University of Kaohsiung in Taiwan. This was the first time that the IEA/AIE conference was held in Taiwan. We received 286 papers from all parts of the world. Only 84 papers were selected for publication in this volume of LNAI proceedings. Each paper was reviewed by at least two anonymous referees to assure the high quality. We would like to express our sincere thanks to the Program Committee members and all the reviewers for their hard work, which helped us to select the highest quality papers for the conference. These papers highlight opportunities and challenges for the next generation of applied int- ligence and reveal technological innovations in real applications.

E-BUSINESS AND DISTRIBUTED SYSTEMS HANDBOOK

OVERVIEW MODULE

nge solutions, inc This module of the handbook concentrates on solution architectures through components. Topics include the role of component-based web application architectures, architecture patterns, enterprise data architectures, implementation examples using XML Web Services, Sun's J2EE, and Microsoft's .NET.

RECONFIGURABLE COMPUTING: ARCHITECTURES, TOOLS AND APPLICATIONS

6TH INTERNATIONAL SYMPOSIUM, ARC 2010, BANGKOK, THAILAND, MARCH 17-19, 2010, PROCEEDINGS

Springer Recon?gurable computing (RC) systems have generated considerable interest in the embedded and high-performance computing communities over the past two decades, with ?eld programmable gate arrays (FPGAs) as the leading techn- ogy at the helm of innovation in this discipline. Achieving orders of magnitude performance and power improvements using FPGAs over traditional microp- cessorsis not uncommon for well-suitedapplications. But even with two decades of

research and technological advances, FPGA design still presents a substantial challenge and often necessitates hardware design expertise to exploit its true potential. Although the challenges to address the design productivity - sues are steep, the promise and the potential of the RC technology in terms of performance, power, size, and versatility continue to attract application design engineers and RC researchers alike. The International Symposium on Applied Recon?gurable Computing (ARC) aims to bring together researchers and practitioners of RC systems with an emphasis on practical applications and design methodologies of this promising technology. This year's ARC symposium (The sixth ARC symposium) was held in Bangkok, Thailand during March 17–19, 2010, and attracted papers in three primary focus areas:RC applications, RC architectures, and RC design meth- ologies.

ENABLING TECHNOLOGIES AND ARCHITECTURES FOR NEXT-GENERATION NETWORKING CAPABILITIES

IGI Global With the rise of mobile and wireless technologies, more sustainable networks are necessary to support communication. These next-generation networks can now be utilized to extend the growing era of the Internet of Things. Enabling Technologies and Architectures for Next-Generation Networking Capabilities is an essential reference source that explores the latest research and trends in large-scale 5G technologies deployment, software-defined networking, and other emerging network technologies. Featuring research on topics such as data management, heterogeneous networks, and spectrum sensing, this book is ideally designed for computer engineers, technology developers, network administrators and researchers, professionals, and graduate-level students seeking coverage on current and future network technologies.

BIG DATA ANALYTICS IN GENOMICS

Springer This contributed volume explores the emerging intersection between big data analytics and genomics. Recent sequencing technologies have enabled high-throughput sequencing data generation for genomics resulting in several international projects which have led to massive genomic data accumulation at an unprecedented pace. To reveal novel genomic insights from this data within a reasonable time frame, traditional data analysis methods may not be sufficient or scalable, forcing the need for big data analytics to be developed for genomics. The computational methods addressed in the book are intended to tackle crucial biological questions using big data, and are appropriate for either newcomers or veterans in the field.This volume offers thirteen peer-reviewed contributions, written by international leading experts from different regions, representing Argentina, Brazil, China, France, Germany, Hong Kong, India, Japan, Spain, and the USA. In particular, the book surveys three main areas: statistical analytics, computational analytics, and cancer

genome analytics. Sample topics covered include: statistical methods for integrative analysis of genomic data, computation methods for protein function prediction, and perspectives on machine learning techniques in big data mining of cancer. Self-contained and suitable for graduate students, this book is also designed for bioinformaticians, computational biologists, and researchers in communities ranging from genomics, big data, molecular genetics, data mining, biostatistics, biomedical science, cancer research, medical research, and biology to machine learning and computer science. Readers will find this volume to be an essential read for appreciating the role of big data in genomics, making this an invaluable resource for stimulating further research on the topic.

ISSUES & TRENDS OF INFORMATION TECHNOLOGY MANAGEMENT IN CONTEMPORARY ORGANIZATIONS

IGI Global As the field of information technology continues to grow and expand, it impacts more and more organizations worldwide. The leaders within these organizations are challenged on a continuous basis to develop and implement programs that successfully apply information technology applications. This is a collection of unique perspectives on the issues surrounding IT in organizations and the ways in which these issues are addressed. This valuable book is a compilation of the latest research in the area of IT utilization and management.

NEW NETWORK ARCHITECTURES

THE PATH TO THE FUTURE INTERNET

Springer Science & Business Media "Future Internet" is a worldwide hot topic. The Internet has become a critical infrastructure for business development and social interactions. However, the immense growth of the Internet has resulted in additional stresses on its architecture, resulting in a network difficult to monitor, understand, and manage due to its huge scale in terms of connected devices and actors (end users, content providers, equipment vendors, etc). This book presents and discusses the ongoing initiatives and experimental facilities for the creation of new Future Internet Architectures using alternative approaches like Clean Slate and Incremental improvements: It considers several possible internet network use scenarios that include seamless mobility, ad hoc networks, sensor networks, internet of things and new paradigms like content and user centric networks.

T BYTES IOT & AR

EGBG Services LLC This document brings together a set of latest data points and publicly available information relevant for IoT & AR Services Industry. We are very excited to share this content and believe that readers will benefit from this periodic publication immensely.

DESIGNING EMBEDDED HARDWARE

"O'Reilly Media, Inc." Intelligent readers who want to build their own embedded computer systems-- installed in everything from cell phones to cars to handheld organizers to refrigerators-- will find this book to be the most in-depth, practical, and up-to-date guide on the market. Designing Embedded Hardware carefully steers between the practical and philosophical aspects, so developers can both create their own devices and gadgets and customize and extend off-the-shelf systems. There are hundreds of books to choose from if you need to learn programming, but only a few are available if you want to learn to create hardware. Designing Embedded Hardware provides software and hardware engineers with no prior experience in embedded systems with the necessary conceptual and design building blocks to understand the architectures of embedded systems. Written to provide the depth of coverage and real-world examples developers need, Designing Embedded Hardware also provides a road-map to the pitfalls and traps to avoid in designing embedded systems. Designing Embedded Hardware covers such essential topics as: The principles of developing computer hardware Core hardware designs Assembly language concepts Parallel I/O Analog-digital conversion Timers (internal and external) UART Serial Peripheral Interface Inter-Integrated Circuit Bus Controller Area Network (CAN) Data Converter Interface (DCI) Low-power operation This invaluable and eminently useful book gives you the practical tools and skills to develop, build, and program your own application-specific computers.

CLOUD CONTROL SYSTEMS

ANALYSIS, DESIGN AND ESTIMATION

Academic Press Cloud Control Systems: Analysis, Design and Estimation introduces readers to the basic definitions and various new developments in the growing field of cloud control systems (CCS). The book begins with an overview of cloud control systems (CCS) fundamentals, which will help beginners to better understand the depth and scope of the field. It then discusses current techniques and developments in CCS, including event-triggered cloud control, predictive cloud control, fault-tolerant and diagnosis cloud control, cloud estimation methods, and secure control/estimation under cyberattacks. This book benefits all researchers including professors, postgraduate students and engineers who are interested in modern control theory, robust control, multi-agents control. Offers insights into the innovative application of cloud computing principles to control and automation systems Provides an overview of cloud control systems (CCS) fundamentals and introduces current techniques and developments in CCS Investigates distributed denial of service attacks, false data injection attacks, resilient design under cyberattacks, and safety assurance under stealthy cyberattacks