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WiMAX Security and Quality of Service Seok-Yee Tang 2011-06-28 WiMAX is the first standard technology to deliver true broadband mobility at speeds that enable powerful multimedia applications such as Voice over Internet Protocol (VoIP), online gaming, mobile TV, and personalized infotainment. WiMAX Security and Quality of Service, focuses on the interdisciplinary subject of advanced Security and Quality of Service (QoS) in WiMAX wireless telecommunication systems including its models, standards, implementations, and applications. Split into 4 parts, Part A of the book is an end-to-end overview of the WiMAX architecture, protocol, and system requirements. Security is an essential element in the wireless world and Part B is fully dedicated to this topic. Part C provides an in depth analysis of QoS, including mobility management in WiMAX. Finally, Part D introduces the reader to advanced and future topics. One of the first texts to cover security, QoS and deployments of WiMAX in the same book. Introduces the primary concepts of the interdisciplinary nature of WiMAX security and QoS, and also includes discussion of hot topics in the field. Written for engineers and researchers, answering practical questions from industry and the experimental field in academia. Explains how WiMAX applications' security and QoS are interconnected and interworked among the cross layers.

An Assessment of the National Institute of Standards and Technology Measurement and Standards Laboratories National Research Council 2002-09-26 This assessment of the technical quality and relevance of the programs of the Measurement and Standards Laboratories of the National Institute of Standards and Technology is the work of the 165 members of the National Research Council's (NRC's) Board on Assessment of NIST Programs and its panels. These individuals were chosen by the NRC for their technical expertise, their practical experience in running research programs, and their knowledge of industry's needs in basic measurements and standards. This assessment addresses the following: - The technical merit of the laboratory programs relative to the state of the art worldwide; - The effectiveness with which the laboratory programs are carried out and the results disseminated to their customers; - The relevance of the laboratory programs to the needs of their customers; and - The ability of the laboratories' facilities, equipment, and human resources to enable the laboratories to fulfill their mission and meet their customers' needs.

Simulation in Computer Network Design and Modeling: Use and Analysis Al-Bahadili, Hussein 2012-02-29 "This book reviews methodologies in computer network simulation and modeling, illustrates the benefits of simulation in computer networks design, modeling, and analysis, and identifies the main issues that face efficient and effective computer network simulation"--Provided by publisher.

The Future of Accessibility in International Higher Education Alphin Jr., Henry C. 2017-05-17 Education

is the foundation to almost all successful lives, and it is important that a high level of schooling be available on a global scale. Studying the trends in accessibility in education will allow educators to improve their own teaching techniques, as well as expand their influence to more remote areas in the world. The Future of Accessibility in International Higher Education is a comprehensive reference source for the latest scholarly material on emerging methods and trends in disseminating knowledge in university settings. Featuring extensive coverage on relevant topics such as e-learning, economic perspectives, and educational technology, this publication is ideally designed for educators, academics, students, and researchers interested in expanding their knowledge of global education.

Emerging Research in Artificial Intelligence and ComputationaI Intelligence Hepu Deng 2011-09-09 This book constitutes, together with LNAI 7002, LNAI 7003, and LNAI 7004, the refereed proceedings of the International Conference on Artificial Intelligence and ComputationaI Intelligence, AICI 2011, held in Taiyuan, China, in September 2011. The 265 revised full papers presented in the four volumes were carefully reviewed and selected from 1073 submissions. The 83 papers presented in this volume are organized in topical sections on applications of artificial intelligence; applications of computational intelligence; automated problem solving; brain models/cognitive science; data mining and knowledge discovering; expert and decision support systems; fuzzy logic and soft computing; intelligent agents and systems; intelligent control; intelligent image processing; intelligent scheduling; intelligent signal processing; natural language processing; nature computation; neural computation; pattern recognition; rough set theory.

Unlocking the Power of OPNET Modeler Zheng Lu 2012-01-19 For fast, easy modeling, this practical guide provides all the essential information you need to know. A wide range of topics is covered, including custom protocols, programming in C++, External Model Access (EMA) modeling and co-simulation with external systems, giving you the guidance not provided in the OPNET documentation. A set of high-level wrapper APIs is also included to simplify programming custom OPNET models, whether you are a newcomer to OPNET or an experienced user needing to model efficiently. From the basic to the advanced, you will find topics are easy to follow with theory kept to a minimum, many practical tips and answers to frequently asked questions spread throughout the book and numerous step-by-step case studies and real-world network scenarios included.

Learning Management Systems and Instructional Design Yefim Kats 2013-04-30 The technical resources, budgets, curriculum, and profile of the student body are all factors that play in implementing course design. Learning management systems administrate these aspects for the development of new methods for course delivery and corresponding instructional design. Learning Management Systems and Instructional Design: Best Practices in Online Education provides an overview on the connection between learning management systems and the variety of instructional design models and methods of course delivery. This book is a useful source for administrators, faculty, instructional designers, course developers, and businesses interested in the technological solutions and methods of online education.

Propostas de implementação de qualidade de serviço na arquitetura VPN MPLS, utilizando linguagem de especificação formal SDL orientada a objetos e análise de desempenho utilizando o simulador OPNET 2004 Este trabalho apresenta propostas de implementação de qualidade de serviço na arquitetura VPN MPLS e analise de desempenho destas propostas. São desenvolvidos sistemas com base na arquitetura VPN MPLS e sugerido uma proposta de expansão da arquitetura VPN MPLS para mapeamento dinamico das prioridades dos clientes VPN na rede do provedor de serviço atraves da inserção do valor de prioridade de rota na tabela vrf e modificações realizadas no protocolo MP-BGP. As propostas foram especificadas utilizando a linguagem de

especificação formal SDL orientada a objetos a partir da ferramenta SDL TAU Suite. Esta ferramenta permite simular os sistemas especificados, a partir de diagramas MSC, e validar estes sistemas para detecção e correção dos erros de logica e de especificação. A analise de desempenho das propostas foi realizada com o uso do simulador Opnet Modeler.

Analysis and Design of Advanced Multiservice Networks Supporting Mobility, Multimedia, and Internetworking Jose Brazio 2006-07-02 The recent trend towards the interoperability of traditionally separate networks, such as terrestrial, wireless/cellular, and satellite, for the support of multimedia applications poses new and significantly challenging problems to network design. This book reports on the state-of-the-art work developed during the four years of operation of the COST 279 Action, Analysis and Design of Advanced Multiservice Networks supporting Mobility, Multimedia, and Internetworking, by its participating researchers, originating from over 40 research institutions from the academic, industrial, and telecom operator worlds. The work includes both fundamental, methodological, and applied aspects of network performance evaluation and design. Analysis and Design of Advanced Multiservice Networks Supporting Mobility, Multimedia, and Internetworking contains a detailed account of the work developed, supported on an extensive bibliography of material published in the peer-reviewed literature. It contains the following six chapters: IP-Based NetworksQueueing Models Traffic Measurement, Characterization, and ModelingWireless NetworksOptical NetworksPeer-to-Peer Services Analysis and Design of Advanced Multiservice Networks Supporting Mobility, Multimedia, and Internetworking will appeal to both practitioners of network design, and to researchers aiming to map future directions in networking research.

Introduction to Network Emulation Razvan Beuran 2012-11-07 Emulation is a hybrid experimentation technique intended to bridge the gap between simulation and real-world testing. The key idea of emulation is to reproduce in real time and in a controlled manner the essential functionality of a system, so that it can interact with other real systems that can thus be evaluated. This book describes the technique of network emulation and compares it with the other experimental approaches: the scholarly analytical modeling, the popular network simulation, and the demanding real-world testing. To emphasize the practical aspects related to emulation, this book presents a large number of examples of network emulators on the market, as well as provides an in-depth analysis of a case study, the wireless network emulation testbed called QOMB.

Network Simulation Experiments Manual Emad Aboelela 2003-07-10 The lab exercises contained in the network simulation experiments manual are based on the OPNET simulator (v. 9), a network simulation tool that was originally developed at M.I.T. It provides networking professionals with the option of implementing experiments from their homes or workplaces and the lab manual comes with directions for downloading the free easy-to-install software (special version to this book only--see system requirements below). These labs run through simulations closely tied to the material in the text so that you can visualize the discussions covering core network topologies. Various scenarios are presented within each topology, and review questions and a lab report exercise accompany each lab experiment. The experiments also follows the organization of Computer Networks, Third Edition, by Larry Peterson and Bruce Davie. System requirements for using the OPNET IT Guru Academic Edition release 9.1: -Intel Pentium III, 4 or compatible (500 MHz or better) -256 MB RAM -400 MB disk space -Display: 1024 x 768 or higher resolution, 256 or more colors -The English language version of the following operating systems are supported: Microsoft Windows NT (Service Pack 3, 5, or 6a) Windows 2000 (Service Pack 1 and 2 are supported but not required) Windows XP (Service Pack 1 is required) *Written by an instructor who has used OPNET simulation tools in his classroom for numerous demonstrations and real-world scenarios. *Software download based on an award-winning product

made by OPNET Technologies, Inc., whose software is used by thousands of commercial and government organizations worldwide, and by over 500 universities. *Useful experimentation for professionals in the workplace who are interested in learning & demonstrating the capability of evaluating different commercial networking products, i.e., Cisco routers. *Covers the core networking topologies and includes assignments on the ethernet, token rings, ATM, Switched LANs, Network Design, RIP, TCP, Queuing Disciplines, QoS, etc. *Instructors can download the solutions manual to the exercises in the Network Simulation Experiments Manual by clicking on the "Instructors" resource link in the upper right corner of the screen and searching for author "Aboelela."

Systems Modeling and Simulation Koji Koyamada 2007-07-05 The Asia Simulation Conference 2006 (JSST 2006) was aimed at exploring challenges in methodologies for modeling, control and computation in simu lation, and their applications in social, economic, and financial fields as well as established scientific and engineering solutions. The conference was held in Tokyo from October 30 to November 1, 2006, and included keynote speeches presented by technology and industry leaders, technical sessions, organized sessions, poster sessions, and vendor exhibits. It was the seventh annual inter national conference on system simulation and scientific computing, which is organized by the Japan Society for Simulation Technology (JSST), the Chi nese Association for System Simulation (CASS), and the Korea Society for Simulation (KSS). For the conference, all submitted papers were refereed by the international technical program committee, each paper receiving at least two independent reviews. After careful reviews by the committee, 65 papers from 143 submis sions were selected for oral presentation. This volume includes the keynote speakers' papers along with the papers presented at the oral sessions and the organized sessions. As a result, we are publishing 87 papers for the conference in this volume. In addition to the scientific tracts presented, the conference featured keynote presentations by five invited speakers. We are grateful to them for accepting our invitation and for their presentations. We also would like to express our gratitude to all contributors, reviewers, technical program conmiittee members, and organizing committee members who made the conference very successful.

Information Systems, Technology and Management Sumeet Dua 2012-03-14 This book constitutes the refereed proceedings of the 6th International Conference on Information Systems, Technology and Management, ICISTM 2012, held in Grenoble, France, in March 2012. The 38 revised papers were carefully reviewed and selected from 85 submissions. The papers are organized in topical sections on information systems; information technology; information management; business intelligence; management science and education; applications; workshop on program protection and reverse engineering.

Simulation Technologies in Networking and Communications Al-Sakib Khan Pathan 2014-11-06 Simulation is a widely used mechanism for validating the theoretical models of networking and communication systems. Although the claims made based on simulations are considered to be reliable, how reliable they really are is best determined with real-world implementation trials. Simulation Technologies in Networking and Communications: Selecting the Best Tool for the Test addresses the spectrum of issues regarding the different mechanisms related to simulation technologies in networking and communications fields. Focusing on the practice of simulation testing instead of the theory, it presents the work of more than 50 experts from around the world. Considers superefficient Monte Carlo simulations Describes how to simulate and evaluate multicast routing algorithms Covers simulation tools for cloud computing and broadband passive optical networks Reports on recent developments in simulation tools for WSNs Examines modeling and simulation of vehicular networks The book compiles expert perspectives about the simulation of various networking and communications technologies.

These experts review and evaluate popular simulation modeling tools and recommend the best tools for your specific tests. They also explain how to determine when theoretical modeling would be preferred over simulation. This book does not provide a verdict on the best suitable tool for simulation. Instead, it supplies authoritative analyses of the different kinds of networks and systems. Presenting best practices and insights from global experts, the book provides you with an understanding of what to simulate, where to simulate, whether to simulate or not, when to simulate, and how to simulate for a wide range of issues.

Information Computing and Automation

Towards Digital Optical Networks Ioannis Tomkos 2009-04-22 COST – the acronym for European COoperation in Science and Technology – is the oldest and widest European intergovernmental network for cooperation in - search. Established by the Ministerial Conference in November 1971, COST is presently used by the scientific communities of 35 European countries to coop- ate in common research projects supported by national funds. The funds provided by COST – less than 1% of the total value of the projects – support the COST cooperation networks (COST Actions) through which, with € 30 million per year, more than 30,000 European scientists are involved in - search having a total value which exceeds € 2 billion per year. This is the financial worth of the European added value which COST achieves. A “bottom up approach” (the initiative of launching a COST Action comes from the European scientists themselves), “à la carte participation” (only countries interested in the Action participate), “equality of access” (participation is open also to the scientific communities of countries not belonging to the European - ion) and “flexible structure” (easy implementation and light management of the research initiatives) are the main characteristics of COST.

Recent Advances in Modeling and Simulation Tools for Communication Networks and Services Nejat Ince 2007-11-26 This book contains a selection of papers presented at a Symposium organized under the aegis of COST Telecommunications Action 285. The main objective of the Action is to enhance existing modeling and simulation tools and to develop new tools for research in emerging multi-service telecommuncation networks in the areas of model performance improvement, multilayer traffic modeling, and the important issue of evaluation and validation of the new modeling tools. The studies related to the activities above are carried out by members of the Action Group with contributions from invited experts/scientists from non-COST countries, academia and industry (within and outside Europe). The book is a collection of important aspects of study results achieved by this distinguished group of experts/scientists from Europe and the US. The book is divided into the following six areas: - Multilayer Modeling - Wireless and Sensor Networks - Verification and Validation - High Throughput Systems - Traffic - Applications of Simulation A useful reference work for academic researchers and practitioners, this book is the third in a series of works focusing on modeling and simulation methods, techniques, and tools in telecommunications. Previous works in this series are: Modeling and Simulation Tools for Emerging Telecommunications Networks: Needs, Trends, Challenges and Solutions, by A. Nejat Ince and Ercan Topuz (editors), Springer, 2006, 510 pages, ISBN: 978-0-387-32921-5 Modeling and Simulation Environment for Satellite and Terrestrial Communications Networks, by A. Nejat Ince (Editor), Springer, 2004, 424 pages, ISBN: 978-0-7923-7547-0

Advances in Computer Science and Information Technology. Computer Science and Engineering Natarajan Meghanathan 2012-04-24 The three volume set LNICST 84 - LNICST 86 constitute the refereed proceedings ofthe Second International Conference on Computer Science and InformationTechnology, CCSIT 2012, held in Bangalore, India, in January 2012. The 70 revised full

papers presented in this volume were carefullyreviewed and selected from numerous submissions and address all major fields ofthe Computer Science and Information Technology in theoretical, methodological,and practical or applicative aspects. The papers feature cutting-edge developmentand current research in computer science and engineering.

Information Networking. Towards Ubiquitous Networking and Services Teresa Vazão 2008-11-20 This volume contains the set of revised selected papers presented at the 21st International Conference on Information Networking (ICOIN 2007), which was held in Estoril, Portugal, January 23–25, 2007. The conference series started under the name of Joint Workshop on Computer Communications, in 1986. At that time, it constituted a technical meeting for researchersand engineers on - ternet technologies in East Asian countries, where several technical networking issues were discussed. In 1993, the meeting was reorganized as an international conference known as ICOIN. Recent conferences were held in Sendai, Japan (2006),Jeju,Korea(2005),Pusan,Korea(2004),Jeju,Korea(2003),Jeju,Korea (2002), Beppu City, Japan (2001), Hsin-chu, Taiwan (2000), and Tokyo, Japan (1999). In 2007, for the ?rst time since its creation, ICOIN took place outside Asia, and we were very pleased to host it in Portugal. ICOIN 2007 was or- nized by INESC-ID and IST/Technical University of Lisbon (Portugal) with the technical co-sponsorship of IEEE Communications Society and IEEE Portugal Section-Computer Society Chapter, in cooperation with the Order of Engineers CollegeofInformaticsEngineering(Portugal),IPSJ(InformationProcessing- ciety of Japan), KISS (Korea Information Science Society), and Lecture Notes in Computer Science (LNCS), Springer, Germany. The papers presented in this volume were selected in two stages: 1) revi- ing and selection for the ICOIN program and 2) on-site presentation review by session chairs or by program committee chairs.

Unlocking the Power of OPNET Modeler Zheng Lu 2012-01-19 For fast, easy modeling, this practical guide provides the essential information you need, plus step-by-step case studies and handy hints/tips.

Modeling and Simulation Tools for Emerging Telecommunication Networks Nejat Ince 2006-09-10 This book comprises a selection of papers presented at a symposium organized under the aegis of COST Telecommunications Action 285. The main objective of the book is to enhance existing tools and develop new modeling and simulation tools for research in emerging multi-service telecommunication networks in the areas of model performance improvements, multilayer traffic modeling, and the important issue of evaluation and validation of the new modeling tools.

Future Access Enablers for Ubiquitous and Intelligent Infrastructures Dragan Perakovic 2021-06-19 This book constitutes the refereed post-conference proceedings of the 5th International Conference on Future Access Enablers for Ubiquitous and Intelligent Infrastructures, FABULOUS 2021, held in May 2021. Due to COVID-19 pandemic the conference was held virtually. This year’s conference topic covers security of innovative services and infrastructure in traffic, transport and logistic ecosystems. The 30 revised full papers were carefully reviewed and selected from 60 submissions. The papers are organized in thematic sessions on: Internet of things and smart city; smart environment applications; information and communications technology; smart health applications; sustainable communications and computing infrastructures.

Modeling and Tools for Network Simulation Klaus Wehrle 2010-09-22 A crucial step during the design and engineering of communication systems is the estimation of their performance and behavior; especially for mathematically complex or highly dynamic systems network simulation is particularly useful. This book focuses on tools, modeling principles and state-of-the art models for discrete-event

based network simulations, the standard method applied today in academia and industry for performance evaluation of new network designs and architectures. The focus of the tools part is on two distinct simulations engines: OmNet++ and ns-3, while it also deals with issues like parallelization, software integration and hardware simulations. The parts dealing with modeling and models for network simulations are split into a wireless section and a section dealing with higher layers. The wireless section covers all essential modeling principles for dealing with physical layer, link layer and wireless channel behavior. In addition, detailed models for prominent wireless systems like IEEE 802.11 and IEEE 802.16 are presented. In the part on higher layers, classical modeling approaches for the network layer, the transport layer and the application layer are presented in addition to modeling approaches for peer-to-peer networks and topologies of networks. The modeling parts are accompanied with catalogues of model implementations for a large set of different simulation engines. The book is aimed at master students and PhD students of computer science and electrical engineering as well as at researchers and practitioners from academia and industry that are dealing with network simulation at any layer of the protocol stack.

Periodica Polytechnica 2000

Modelling, Simulation and Optimization Gregorio Romero 2010-02-01 Computer-Aided Design and system analysis aim to find mathematical models that allow emulating the behaviour of components and facilities. The high competitiveness in industry, the little time available for product development and the high cost in terms of time and money of producing the initial prototypes means that the computer-aided design and analysis of products are taking on major importance. On the other hand, in most areas of engineering the components of a system are interconnected and belong to different domains of physics (mechanics, electrics, hydraulics, thermal...). When developing a complete multidisciplinary system, it needs to integrate a design procedure to ensure that it will be successfully achieved. Engineering systems require an analysis of their dynamic behaviour (evolution over time or path of their different variables). The purpose of modelling and simulating dynamic systems is to generate a set of algebraic and differential equations or a mathematical model. In order to perform rapid product optimisation iterations, the models must be formulated and evaluated in the most efficient way. Automated environments contribute to this. One of the pioneers of simulation technology in medicine defines simulation as a technique, not a technology, that replaces real experiences with guided experiences reproducing important aspects of the real world in a fully interactive fashion [iii]. In the following chapters the reader will be introduced to the world of simulation in topics of current interest such as medicine, military purposes and their use in industry for diverse applications that range from the use of networks to combining thermal, chemical or electrical aspects, among others. We hope that after reading the different sections of this book we will have succeeded in bringing across what the scientific community is doing in the field of simulation and that it will be to your interest and liking. Lastly, we would like to thank all the authors for their excellent contributions in the different areas of simulation.

Quality of Service in the Emerging Networking Panorama Josep Solé-Pareta 2004-09-24 This book constitutes the joint refereed proceedings of the 5th International Workshop on Quality of Future Internet Services, QofIS 2004, the First International Workshop on Qos Routing, WOoSR 2004, and the 4th International Workshop on Internet Charging and Qos Technology, ICQT 2004, held in Barcelona, Spain, in September/October 2004. The 38 revised full papers presented were carefully reviewed and selected from a total of around 140 submissions. The papers are organized in topical sections on Internet applications, local area and ad-hoc wireless networks, service differentiation and congestion control, traffic engineering and routing, enforcing mobility, algorithms and scalability for service routing, novel ideas and protocol enhancements, auctions and game theory, charging in mobile

networks, and QoS provisioning and monitoring.

GLOBECOM '05 IEEE Global Telecommunications Conference 2005

The Practical OPNET User Guide for Computer Network Simulation Adarshpal S. Sethi 2012-08-24 One of the first books to provide a comprehensive description of OPNET IT Guru and Modeler software, The Practical OPNET User Guide for Computer Network Simulation explains how to use this software for simulating and modeling computer networks. The included laboratory projects help readers learn different aspects of the software in a hands-on way.Q

High Performance TCP/IP Networking Mahbub Hassan 2004 Written by best selling author, Raj Jain, and his authoritative co-author, this book features leading edge issues and solutions for high performance TCP/IP networking, this easy-to-read book provides a one-stop-shop for coverage of the many changes to the TCP protocol over the last two decades and all important research results. Professionals can keep themselves up-to-date with advances in this area and learn many potential performance problems and solutions for running TCP/IP in the emerging networking environment. An international expert in the field captures state of the art topics in each chapter in the five-part organization. Part I introduces the scope of the book, Part II provides detailed coverage of the tools and techniques for performance evaluation of TCP/IP networks, Part III examines the performance concepts and issues for running TCP/IP in the emerging network environment, Part IV discusses congestion control, and Part V explores the performance issues in implementing TCP/IP in the end system. For network engineers, R&D managers, research scientists, and network administrators.

Performance Study of Mobile IPv6 Using OPNET Simulator Firas Abdullah Thweny Al-Saedi 2013 Mobile communication is increasingly oriented towards the usage of all Internet Protocol (IP) networks as fixed network components. Mobility support for Internet devices is quite important for consumer electronics and the number of the handled device is growing up quickly. However, the IP addresses are not enough for the number of the rapidly grow devices in the All-IP generation. So the Internet Protocol Version Six (IPv6) is adopted to solve these problems. Mobile IP technology is one of the important supporting technical in the construction of pervasive computing environment. This book is a study of the Mobile IPv6 issues using OPNET IPv6 model. Mobile IPv6 (MIPv6) allows Mobile Node (MN) to remain reachable while moving around in the Internet. In Mobile IPv6, each MN is always identified by its home address, regardless of its current point of attachment to the Internet. While situated away from its home, MN is also associated with a Care-of Address (CoA), which provides information about the MN's current location.

OPNET Simulation of Voice Over MPLS Keerthi Pramukh Jannu 2019-06-06

MPLS-Enabled Applications Ina Minei 2010-12-10 With a foreword by Yakov Rekhter "Here at last is a single, all encompassing resource where the myriad applications sharpen into a comprehensible text that first explains the whys and whats of each application before going on to the technical detail of the hows." —Kireeti Kompella, CTO Junos, Juniper Networks The authoritative guide to MPLS, now in its Third edition, fully updated with brand new material! MPLS is now considered the networking technology for carrying all types of network traffic, including voice telephony, real-time video, and data traffic. In MPLS-Enabled Applications, Third Edition, the authors methodically show how MPLS holds the key to network convergence by allowing operators to offer more services over a single physical infrastructure. The Third Edition contains more than 170 illustrations, new chapters, and more coverage, guiding the reader from the basics of the technology, though all its major VPN applications.

MPLS Enabled-Applications contains up-to-date coverage of: The current status and future potential of all major MPLS applications, including L2VPN, L3VPN, pseudowires and VPLS. A new chapter with up to date coverage of the MPLS transport profile, MPLS-TP. MPLS in access networks and Seamless MPLS, the new architecture for extending MPLS into the access, discussed in depth for both the unicast and the multicast case. Extensive coverage of multicast support in L3VPNs (mVPNs), explaining and comparing both the PIM/GRE and the next generation BGP/MPLS solutions, and including a new chapter on advanced topics in next generation multicast VPNs. A new chapter on advanced protection techniques, including detailed discussion of 50 ms end-to-end service restoration. Comprehensive coverage of the base technology, as well as the latest IETF drafts, including topics such as pseudowire redundancy, VPLS multihoming, IRB and P2MP pseudowires. MPLS-Enabled Applications will provide those involved in the design and deployment of MPLS systems, as well as those researching the area of MPLS networks, with a thoroughly modern view of how MPLS is transforming the networking world. "Essential new material for those trying to understand the next steps in MPLS." —Adrian Farrel, IETF Routing Area Director "MPLS-Enabled Applications takes a unique and creative approach in explaining MPLS concepts and how they are applied in practice to meet the needs of Enterprise and Service Provider networks. I consistently recommend this book to colleagues in the engineering, education and business community." —Dave Cooper, Chief IP Technologist, Global Crossing Ltd

Proceedings 2002

Intelligence in Communication Systems Roch Glitho 2006-02-25 Communication systems are now ubiquitous and making them more intelligent remains very challenging. The IFIP International Conference on Intelligence in Communication Systems is an effort to bring together researchers and practitioners who represent the latest developments in this area. This volume contains selected papers from the conference in the following focus areas: ad hoc networks / hybrid networks / WLAN; security, privacy and consumer protection; adaptive architectures and protocols; flexible QoS and QoS management; flexible service specification, validation, searching and querying; service composition and Web services; personal, terminal and node mobility; programmable and active networks.

Rick Gallahers MPLS Training Guide Syngress 2004-01-06 Rick Gallahers MPLS Training Guide introduces readers to mpls concepts, installation, migration, operation, inspection, and troubleshooting. It discusses specific router and switch platforms and includes such topics as frame-mode mpls, cell-mode mpls, label distribution protocol, tag distribution protocol, label distribution protocol migration, mpls configuration, traffic engineering, mpls vpns, mpls vpn deployment models, mpls vpn routing protocol support, multi-protocol bgp, mpls vpn configurations, mpls vpn integration, and mpls vpn management. Readers will find complete ready-to-use configurations for routers Shows how to implement MPLS traffic engineering on a core network and optimize traffic Great for users studying for Cisco's Implementing Cisco MPLS exam, 640-910 and written by a Cisco internetworking expert who knows everything about MPLS Includes coverage of Cisco Systems' newly released (October 7, 2002) Multiprotocol Label Switching (MPLS) Bandwidth Protection software package. The new architecture uses MPLS Traffic Engineering Fast Reroute and an offline application called Tunnel Builder Pro to increase resiliency at a network-wide level Includes updated coverage of MPLS and GMPLS

IoT Platforms, Use Cases, Privacy, and Business Models Carna Zivkovic 2020-07-21 This book provides a comprehensive and consistent introduction to the Internet of Things. Hot topics, including the European privacy legislation GDPR, and homomorphic encryption are explained. For each topic, the reader gets a theoretical introduction and an overview, backed by programming examples. For demonstration, the authors use the IoT platform VICINITY, which is open-source, free, and offers

leading standards for privacy. Presents readers with a coherent single-source introduction into the IoT; Introduces selected, hot-topics of IoT, including GDPR (European legislation on data protection), and homomorphic encryption; Provides coding examples for most topics that allow the reader to kick-start his own IoT applications, smart services, etc.

The Practical OPNET User Guide for Computer Network Simulation Adarshpal S. Sethi 2012-08-24 One of the first books to provide a comprehensive description of OPNET® IT Guru and Modeler software, The Practical OPNET® User Guide for Computer Network Simulation explains how to use this software for simulating and modeling computer networks. The included laboratory projects help readers learn different aspects of the software in a hands-on way. Quickly Locate Instructions for Performing a Task The book begins with a systematic introduction to the basic features of OPNET, which are necessary for performing any network simulation. The remainder of the text describes how to work with various protocol layers using a top-down approach. Every chapter explains the relevant OPNET features and includes step-by-step instructions on how to use the features during a network simulation. Gain a Better Understanding of the "Whats" and "Whys" of the Simulations Each laboratory project in the back of the book presents a complete simulation and reflects the same progression of topics found in the main text. The projects describe the overall goals of the experiment, discuss the general network topology, and give a high-level description of the system configuration required to complete the simulation. Discover the Complex Functionality Available in OPNET By providing an in-depth look at the rich features of OPNET software, this guide is an invaluable reference for IT professionals and researchers who need to create simulation models. The book also helps newcomers understand OPNET by organizing the material in a logical manner that corresponds to the protocol layers in a network.

Recent Advances in Modeling and Simulation Tools for Communication Networks and Services Nejat Ince 2007-09-20 This book contains a selection of papers presented at a symposium organized under the aegis of COST Telecommunications Action 285. COST (European Cooperation in the field of Scientific and Technical Research) is a framework for scientific and technical cooperation, allowing the coordination of national research on a European level. Action 285 sought to enhance existing tools and develop new modeling and simulation tools.

Wireless and Satellite Systems Prashant Pillai 2018-03-07 This book constitutes the proceedings of the 9th International Conference on Wireless and Satellite Services, WiSATS 2017, held in Oxford, UK, in September 2017. The conference was formerly known as the International Conference on Personal Satellite Services (PSATS) mainly covering topics in the satellite domain. The aim of this conference is to bring together researchers, developers and practitioners from around the world in the field of wireless and satellite systems. The theme of WiSATS 2017 was on the means of using the wireless and satellite services directly to the user for personal communications, multimedia and location identification.

Applied Technologies Miguel Botto-Tobar 2020-03-02 This first volume of the three-volume set (CCIS 1193, CCIS 1194, and CCIS 1195) constitutes the refereed proceedings of the First International Conference on Applied Technologies, ICAT 2019, held in Quito, Ecuador, in December 2019. The 124 full papers were carefully reviewed and selected from 328 submissions. The papers are organized according to the following topics: technology trends; computing; intelligent systems; machine vision; security; communication; electronics; e-learning; e-government; e-participation.