

Opnet Guru Academic Edition

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.

A must-have guide for troubleshooting and analyzing TCP/IP on the Internet and corporate network. Follows a practical approach to ensure that TCP/IP stays up and running. Describes problems based on actual scenarios in the field and presents proven solutions to deal with them. Explains how to use available tools and utilities to their maximum advantage. Companion Web site includes sample scenarios and code from the book.

For fast, easy modeling, this practical guide provides the essential information you need, plus step-by-step case studies and handy hints/tips.

This comprehensive handbook brings together experts who use optimization to solve problems that arise in telecommunications. It is the first book to cover in detail the field of optimization in telecommunications. Recent optimization developments that are frequently applied to telecommunications are covered. The spectrum of topics covered includes planning and design of telecommunication networks, routing, network protection, grooming, restoration, wireless communications, network location and assignment problems, Internet protocol, World Wide Web, and stochastic issues in telecommunications. The book's objective is to provide a reference tool for the increasing number of scientists and engineers in telecommunications who depend upon optimization.

This book collects the papers presented at the 7th International Conference on Risk Analysis and Crisis Response (RACR-2019) held in Athens, Greece, on October 15-19, 2019. The overall theme of the seventh international conference on risk analysis and crisis response is Risk Analysis Based on Data and Crisis Response Beyond Knowledge, highlighting science and technology to improve risk analysis capabilities and to optimize crisis response strategy. This book contains primarily research articles of risk issues. Underlying topics include natural hazards and major (chemical) accidents prevention, disaster risk reduction and society resilience, information and communication technologies safety and cybersecurity, modern trends in crisis management, energy and resources security, critical infrastructure, nanotechnology safety and others. All topics include aspects of multidisciplinary and complexity of safety in education and research. The book should be valuable to professors, engineers, officials, businessmen and graduate students in risk analysis and risk management.

A proceedings volume from the 6th IFAC International Conference, Puebla, Mexico, 14-25 November 2005

The Second Edition of the Best Damn Firewall Book Period is completely revised and updated to include all of the most recent releases from Microsoft, Cisco, Juniper Network, and Check Point. Compiled from the best of the Syngress firewall library and authored by product experts such as Dr. Tom Shinder on ISA Server, this volume is an indispensable addition to a serious networking professional's toolkit. Coverage includes migrating to ISA Server 2006, integrating Windows Firewall and Vista security into your enterprise, successfully integrating Voice over IP applications around firewalls, and analyzing security log files. Sections are organized by major vendor, and include hardware, software and VPN configurations for each product line. New to this Edition: Microsoft firewall protection, from Windows Firewall to ISA Server 2006 Cisco PIX Version 7, including VPN configuration and IDS Analyzing Firewall Logs and Reports VoIP and Firewall Bypassing

This book presents the latest advances in computational intelligence and data analytics for sustainable future smart cities. It focuses on computational intelligence and data analytics to bring together the smart city and sustainable city endeavors. It also discusses new models, practical solutions and technological advances related to the development and the transformation of cities through machine intelligence and big data models and techniques. This book is helpful for students and researchers as well as practitioners.

Rick Gallaher's 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 networking 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.

We welcomed participants to the 1st EurAsian Conference on Advances in Information and Communication Technology (EurAsia ICT 2002) held in Iran. The aim of the conference was to serve as a forum to bring together researchers from academia and commercial developers from industry to discuss the current state of the art in ICT, mainly in Europe and Asia. Inspirations and new ideas were expected to emerge from intensive discussions during formal sessions and social events. Keynote addresses, research presentation, and discussion during the conference helped to further develop the exchange of ideas among the researchers, developers, and practitioners who attended. The conference attracted more than 300 submissions and each paper was reviewed by at least three program committee members. The program committee selected 119 papers from authors of 30 different countries for presentation and publication, a task which was not easy due to the high quality of the submitted papers. Eleven workshops were organized in parallel with the EurAsia ICT conference. The proceedings of these workshops, with more than 100 papers, were published by the Austrian Computer Society. We would like to express our thanks to our colleagues who helped with putting together the technical program: the program committee members and external reviewers for their timely and rigorous reviews of the papers, and the organizing committee for their help in administrative work and support. We owe special thanks to

Thomas Schierer for always being available when his helping hand was needed.

This book constitutes the refereed proceedings of the 9th Asia-Pacific Network Operations and Management Symposium, APNOMS 2007, held in Sapporo, Japan, October 2007. The 48 revised full papers and 30 revised short papers cover management of distributed networks, network configuration and planning, network security management, sensor and ad-hoc networks, network monitoring, routing and traffic engineering, management of wireless networks and security on wireless networks.

This book constitutes the proceedings of the 8th International ICST Conference, TridentCom 2012, held in Thessaloniki, Greece, in June 2012. Out of numerous submissions the Program Committee finally selected 51 full papers. These papers cover topics such as future Internet testbeds, wireless testbeds, federated and large scale testbeds, network and resource virtualization, overlay network testbeds, management provisioning and tools for networking research, and experimentally driven research and user experience evaluation.

The growth in the use of mobile networks has come mainly with the third generation systems and voice traffic. With the current third generation and the arrival of the 4G, the number of mobile users in the world will exceed the number of landlines users. Audio and video streaming have had a significant increase, parallel to the requirements of bandwidth and quality of service demanded by those applications. Mobile networks require that the applications and protocols that have worked successfully in fixed networks can be used with the same level of quality in mobile scenarios. Until the third generation of mobile networks, the need to ensure reliable handovers was still an important issue. On the eve of a new generation of access networks (4G) and increased connectivity between networks of different characteristics commonly called hybrid (satellite, ad-hoc, sensors, wired, WIMAX, LAN, etc.), it is necessary to transfer mechanisms of mobility to future generations of networks. In order to achieve this, it is essential to carry out a comprehensive evaluation of the performance of current protocols and the diverse topologies to suit the new mobility conditions.

The current book provides a final report of activity performed by the COST 290 Action, "Traffic and QoS Management in Wireless Multimedia Networks," which ran from March 10, 2004, until June 3, 2008. After an introduction to the COST framework and the Action's survey time-frame and activities, the main part of the book addresses a number of technical issues, which are structured into several chapters. All those issues have been carefully investigated by the COST 290 community during the course of the project – the information presented in this book can be regarded as ultimate for each particular topic; every open research issue addressed in the book is described carefully, corresponding existing studies are analyzed and results achieved by the COST 290 community are presented and compared, and further research directions are defined and analyzed. Because the book covers a wide area of research addressing issues of modern wired and wireless networking at different layers, starting from the physical layer up to the application layer, it can be recommended to be used by researchers and students to obtain a comprehensive analysis on particular research topics including related areas, to obtain broad and ultimate referencing, and to be advised on current open issues. COST 290 is one of the Actions of the European COST Program. Founded in 1971, COST is an intergovernmental framework for European Cooperation in the field of Scientific and Technical Research, allowing the coordination of nationally funded research on a European level.

The new edition of this popular book has been transformed into a hands-on textbook, focusing on the principles of wireless sensor networks (WSNs), their applications, their protocols and standards, and their analysis and test tools; a meticulous care has been accorded to the definitions and terminology. To make WSNs felt and seen, the adopted technologies as well as their manufacturers are presented in detail. In introductory computer networking books, chapters sequencing follows the bottom up or top down architecture of the seven layers protocol. This book starts some steps later, with chapters ordered based on a topic's significance to the elaboration of wireless sensor networks (WSNs) concepts and issues. With such a depth, this book is intended for a wide audience, it is meant to be a helper and motivator, for both the senior undergraduates, postgraduates, researchers, and practitioners; concepts and WSNs related applications are laid out, research and practical issues are backed by appropriate literature, and new trends are put under focus. For senior undergraduate students, it familiarizes readers with conceptual foundations, applications, and practical project implementations. For graduate students and researchers, transport layer protocols and cross-layering protocols are presented and testbeds and simulators provide a must follow emphasis on the analysis methods and tools for WSNs. For practitioners, besides applications and deployment, the manufacturers and components of WSNs at several platforms and testbeds are fully explored.

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.

Mobile ad-hoc networks must be rapidly interoperable, customizable, and quick to adapt to the latest technological advances. Technological Advancements and Applications in Mobile Ad-Hoc Networks: Research Trends offers a current look into the latest research in the field, frameworks for development, and future directions. As mobile networks become more complex, it is vital for researchers, practitioners, and academics alike to stay abreast within the ever-burgeoning field. With a wide range of applications, theories, and use across industrial, commercial, and domestic settings, mobile ad-hoc networks are a topic of vital discussion, and this volume offers the cutting edge developments with contributions from around the world.

The book provides a comprehensive guide to vehicular social networks. The book focuses on a new class of mobile ad hoc networks that exploits social aspects applied to vehicular environments. Selected topics are related to social networking techniques, social-based routing techniques applied to vehicular networks, data dissemination in VSNs, architectures for VSNs, and novel trends and challenges in VSNs. It provides significant technical and practical insights in different aspects from a basic background on social networking, the inter-related technologies and applications to vehicular ad-hoc networks, the technical challenges, implementation and future trends.

Intelligent systems are required to facilitate the use of information provided by the internet and other computer based technologies. This book describes the state-of-the-art in Intelligent Automation and Systems Engineering. Topics covered include Intelligent decision making, Automation, Robotics, Expert systems, Fuzzy systems, Knowledge-based systems, Knowledge extraction, Large database management, Data analysis tools, Computational biology, Optimization algorithms, Experimental designs, Complex system identification, Computational modeling, Systems simulation, Decision modeling, and industrial applications.

Network Simulation Experiments Manual, Third Edition, is a practical tool containing detailed, simulation-based experiments to help students and professionals learn about key concepts in computer networking. It allows the networking professional to visualize how computer networks work with the aid of a software tool called OPNET to simulate network function. OPNET provides a virtual environment for modeling, analyzing, and predicting the performance of IT infrastructures, including applications, servers, and networking technologies. It can be downloaded free of charge and is easy to install. The book's simulation approach provides a virtual environment for a wide range of desirable features, such as modeling a network based on specified criteria and analyzing its performance under different scenarios. The experiments include the basics of using OPNET IT Guru Academic Edition; operation of the Ethernet network; partitioning of a physical network into separate logical networks using virtual local area networks (VLANs); and the basics of network design. Also covered are congestion control algorithms implemented by the Transmission Control Protocol (TCP); the effects of various queuing disciplines on packet delivery and delay for different services; and the role of firewalls and virtual private networks (VPNs) in providing security to shared public networks. Each experiment in this updated edition is accompanied by review questions, a lab report, and exercises. Networking designers and professionals as well as graduate students will find this manual extremely helpful. Updated and expanded 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 and demonstrating the capability of evaluating different commercial networking products, i.e., Cisco routers. Covers the core networking topologies and includes assignments on Switched LANs, Network Design, CSMA, RIP, TCP, Queuing Disciplines, Web Caching, etc.

This work presents ad hoc networks and their characteristics. It explains a new protocol of routing with QoS as well as its implementation in a network simulator and compares it with the existing protocols. The book discusses the principle of the load balancing, treats the approaches of optimization of energy, and proposes a new approach with an analytical model that gives a better performance.

For more than 40 years, Computerworld has been the leading source of technology news and information for IT influencers worldwide. Computerworld's award-winning Web site (Computerworld.com), twice-monthly publication, focused conference series and custom research form the hub of the world's largest global IT media network.

As a final preparation tool providing a review of CCNP exam topics, the CCNP Quick Reference 2/e complements official Cisco curriculum, other books, or other exam preparatory material in a candidate's preparation for the four CCNP exams. This concise guide provides you with detailed, graphical-based information, highlighting only the key topics on the latest CCNP exams in a review-style format. This fact-filled Quick Reference allows you to get all-important information at a glance, helping you to focus your study on areas of weakness and to enhance memory retention of important concepts. This book provides a comprehensive final review for candidates taking any of the CCNP exams. It steps through exam objectives one-by-one, providing concise and accurate review for all topics. Using this book, you will be able to easily and effectively review test objectives without having to wade through numerous books and documents for relevant content for final review.

Contains the latest research, case studies, theories, and methodologies within the field of wireless technologies.

As a final exam preparation tool, the CCNP TSHOOT 642-832 Quick Reference provides a concise review of all objectives on the new CCNP TSHOOT exam (642-832). This eBook provides you with detailed, graphical-based information, highlighting only the key topics in cram-style format. With this document as your guide, you will review topics on maintaining networks, troubleshooting methodologies and tools, and troubleshooting practices for switches, routing, and security. This fact-filled Quick Reference allows you to get all-important information at a glance, helping you to focus your study on areas of weakness and to enhance memory retention of essential exam concepts.

For more than 20 years, Network World has been the premier provider of information, intelligence and insight for network and IT executives responsible for the digital nervous systems of large organizations. Readers are responsible for designing, implementing and managing the voice, data and video systems their companies use to support everything from business critical applications to employee collaboration and electronic commerce.

"This book gives a general coverage of learning management systems followed by a comparative analysis of the particular LMS products, review of technologies supporting different aspect of educational process, and, the best practices and methodologies for LMS-supported course delivery"--Provided by publisher.

This is the first book offering an in-depth and comprehensive IoT network simulation, supported by OPNET tool. Furthermore, the book presents the simulations of IoT in general, not limited by OPNET. The authors provide rich OPNET IoT simulation codes, with detailed explanation regarding the functionalities of the model. These codes can facilitate readers' fast implementation, and the shared model can guide readers through developing their own research. This book addresses various versions of Internet of Things (IoT), including human-centric IoT, green IoT, Narrow band IoT, Smart IoT, IoT-Cloud integration. The introduced OPNET IoT simulation provides a comprehensive platform to simulate above-mentioned IoT systems. Besides, this book introduces OPNET semi-physical simulation in detail. Based on this technology, simulated IoT and practical cloud are seamlessly connected with each other. On top of this "IoT-cloud-integration" semi-physical simulation environment, various smart IoT applications can be realized.

Normal 0 false false false EN-US X-NONE X-NONE CCNP Routing and Switching TSHOOT 300-135 Quick Reference provides a concise review of the objectives on the CCNP TSHOOT exam. This eBook provides you with detailed exam topic summaries, highlighting only the key topics in cram-style format, guaranteeing retention and easy recall of the key exam topics and ensuring your success on exam day. With this document as your guide, you will review the following topics: --Troubleshooting methodology --Best practices for routine maintenance --Troubleshooting tools --Troubleshooting switching technologies, including hardware, VLANs, STP, SVIs, trunking and EtherChannel, and port security --Troubleshooting IP networking, including IP address assignment, NTP, Syslog, SNMP, gateway redundancy, and NAT

--Troubleshooting OSPF, EIGRP, and BGP routing protocols --Network layer connectivity, router performance, and route redistribution This fact-filled Quick Reference enables you to get all-important information at a glance, helping you focus your study on areas of weakness and enhance memory retention of essential exam concepts.

Evaluating UTM Wireless Network Performance Using Opnet IT Guru Academic Edition 9.1 Learning Management Systems and Instructional Design Best Practices in Online Education IGI Global

This book discusses online engineering and virtual instrumentation, typical working areas for today's engineers and inseparably connected with areas such as Internet of Things, cyber-physical systems, collaborative networks and grids, cyber cloud technologies, and service architectures, to name just a few. It presents the outcomes of the 14th International Conference on Remote Engineering and Virtual Instrumentation (REV2017), held at Columbia University in New York from 15 to 17 March 2017. The conference addressed fundamentals, applications and experiences in the field of online engineering and virtual instrumentation in the light of growing interest in and need for teleworking, remote services and collaborative working environments as a result of the globalization of education. The book also discusses guidelines for education in university-level courses for these topics.

This book is composed of the Proceedings of the International Conference on Advanced Computing, Networking, and Informatics (ICACNI 2013), held at Central Institute of Technology, Raipur, Chhattisgarh, India during June 14–16, 2013. The book records current research articles in the domain of computing, networking, and informatics. The book presents original research articles, case-studies, as well as review articles in the said field of study with emphasis on their implementation and practical application. Researchers, academicians, practitioners, and industry policy makers around the globe have contributed towards formation of this book with their valuable research submissions.

The book is about all aspects of computing, communication, general sciences and educational research covered at the Second International Conference on Computer & Communication Technologies held during 24-26 July 2015 at Hyderabad. It hosted by CMR Technical Campus in association with Division – V (Education & Research) CSI, India. After a rigorous review only quality papers are selected and included in this book. The entire book is divided into three volumes. Three volumes cover a variety of topics which include medical imaging, networks, data mining, intelligent computing, software design, image processing, mobile computing, digital signals and speech processing, video surveillance and processing, web mining, wireless sensor networks, circuit analysis, fuzzy systems, antenna and communication systems, biomedical signal processing and applications, cloud computing, embedded systems applications and cyber security and digital forensic. The readers of these volumes will be highly benefited from the technical contents of the topics.

"This multiple-volume publications exhibits the most up-to-date collection of research results and recent discoveries in the transfer of knowledge access across the globe"--Provided by publisher.

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