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Computer Networks *COMPUTER NETWORKS* Computer Networks Computer Networks and the Internet *Computer Networks & Communications (NetCom)* *Computer Networking* *Computer Networking: A Top-Down Approach Featuring the Internet, 3/e* Computer Networking First-step Computer Networks Computer Networks An Introduction to Computer Networks Modeling and Simulation of Computer Networks and Systems Guide to Computer Network Security *COMPUTER NETWORKS: PRINCIPLES, TECHNOLOGIES AND PROTOCOLS FOR NETWORK DESIGN* Routing, Flow, and Capacity Design in Communication and Computer Networks Optimization of Computer Networks Introduction to Computer Networking *Computer Networking* Computer Networking and Scholarly Communication in the Twenty-First-Century University Computer Networking Problems and Solutions Data Communications and Computer Networks: A Business User's Approach *Analysis of Computer Networks* Computer Network Security *Computer Networking* Computer Networks Computer Networks Computer Networks and Internets *Global Networks* Auction Theory for Computer Networks Computer Networks *Computer Networks CompTIA Network+ N10-007 Cert Guide* Data Communication And Computer Networks Computer Networks, Big Data and IoT Computer Network Architectures and Protocols Computer Networking Software-Defined Networks *Distributed Graph Algorithms for Computer Networks* *Computer Networking Essentials* *The Principles of Computer Networking*

"Computer Networking Essentials" starts with an introduction to networking concepts. Readers learn computer networking terminology and history, and then dive into the technical concepts involved in sharing data across a computer network. AN INTRODUCTION TO COMPUTER NETWORKS is a comprehensive text book which is focused and designed to elaborate the technical contents in the light of TCP/IP reference model exploring both digital and analog data communication. Various communication protocols of different layers are discussed along with their pseudo-code. This book covers the detailed and practical information about the network layer alongwith information about IP including IPV6, OSPF, and internet multicasting. It also covers TCP congestion control and emphasizes on the basic principles of fundamental importance concerning the technology and architecture and provides detailed discussion of leading edge topics of data communication, LAN & Network Layer. The goal of this textbook is to provide enough background into the inner workings of the Internet to

allow a novice to understand how the various protocols on the Internet work together to accomplish simple tasks, such as a search. By building an Internet with all the various services a person uses every day, one will gain an appreciation not only of the work that goes on unseen, but also of the choices made by designers to make life easier for the user. Each chapter consists of background information on a specific topic or Internet service, and where appropriate a final section on how to configure a Raspberry Pi to provide that service. While mainly meant as an undergraduate textbook for a course on networking or Internet protocols and services, it can also be used by anyone interested in the Internet as a step-by-step guide to building one's own Intranet, or as a reference guide as to how things work on the global Internet. Gain an understanding of internetworking basics with this reader-friendly guide, plus learn about LANs, WANs, remote access, and security. This book is an accessible, easy-to-understand introduction to the language of the Internet, featuring clear, concise explanations. Essays describe the nature and characteristics of world-wide computer networks, consider the issues which they raise, discuss various applications, and suggest future developments. *Computer Networks: A Systems Approach, Fifth Edition*, explores the key principles of computer networking, with examples drawn from the real world of network and protocol design. Using the Internet as the primary example, this best-selling and classic textbook explains various protocols and networking technologies. The systems-oriented approach encourages students to think about how individual network components fit into a larger, complex system of interactions. This book has a completely updated content with expanded coverage of the topics of utmost importance to networking professionals and students, including P2P, wireless, network security, and network applications such as e-mail and the Web, IP telephony and video streaming, and peer-to-peer file sharing. There is now increased focus on application layer issues where innovative and exciting research and design is currently the center of attention. Other topics include network design and architecture; the ways users can connect to a network; the concepts of switching, routing, and internetworking; end-to-end protocols; congestion control and resource allocation; and end-to-end data. Each chapter includes a problem statement, which introduces issues to be examined; shaded sidebars that elaborate on a topic or introduce a related advanced topic; What's Next? discussions that deal with emerging issues in research, the commercial world, or society; and exercises. This book is written for graduate or upper-division undergraduate classes in computer networking. It will also be useful for industry professionals retraining for network-related assignments, as well as for network practitioners seeking to understand the workings of network protocols and the big picture of networking. Completely

updated content with expanded coverage of the topics of utmost importance to networking professionals and students, including P2P, wireless, security, and applications Increased focus on application layer issues where innovative and exciting research and design is currently the center of attention Free downloadable network simulation software and lab experiments manual available Balancing the most technical concepts with practical everyday issues, DATABASE COMMUNICATIONS AND COMPUTER NETWORKS, 8e provides thorough coverage of the basic features, operations, and limitations of different types of computer networks--making it the ideal resource for future business managers, computer programmers, system designers, as well as home computer users. Offering a comprehensive introduction to computer networks and data communications, the book includes coverage of the language of computer networks as well as the effects of data communications on business and society. It provides full coverage of wireless technologies, industry convergence, compression techniques, network security, LAN technologies, VoIP, and error detection and correction. The Eighth Edition also offers up-to-the-minute coverage of near field communications, updated USB interface, lightning interface, and IEEE 802.11 ac and ad wireless standards, firewall updates, router security problems, the Internet of Things, cloud computing, zero-client workstations, and Internet domain names.

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routine through the use of proven series elements and techniques. Exam topic lists make referencing easy. Chapter-ending Exam Preparation Tasks help you drill on key concepts you must know thoroughly. Review questions help you assess your knowledge, and a final preparation chapter guides you through tools and resources to help you craft your final study plan. The companion website contains a host of tools to help you prepare for the exam, including: The powerful Pearson Test Prep practice test software, complete with hundreds of exam-realistic questions. The assessment engine offers you a wealth of customization options and reporting features, laying out a complete assessment of your knowledge to help you focus your study where it is needed most. More than 60 minutes of personal video mentoring 40 performance-based exercises to help you prepare for the performance-based questions on the exam The CompTIA Network+ N10-007 Hands-on Lab Simulator Lite software, complete with meaningful exercises that help you hone your hands-on skills An interactive Exam Essentials appendix that quickly recaps all major chapter topics for easy reference A key terms glossary flash card application Memory table review exercises and answers A study planner to help you organize and optimize your study time A 10% exam discount voucher (a \$27 value!) Well-regarded for its level of detail, assessment features, and challenging review questions and exercises, this CompTIA approved study guide helps you master the concepts and techniques that will enable you to succeed on the exam the first time. The CompTIA approved study guide helps you master all the topics on the Network+ exam, including: Computer networks and the OSI model Network components Ethernet IP addressing Routing traffic Wide Area Networks (WANs) Wireless Technologies Network performance Command-line utilities Network management Network policies and best practices Network security Troubleshooting Pearson Test Prep system requirements: Online: Browsers: Chrome version 40 and above; Firefox version 35 and above; Safari version 7; Internet Explorer 10, 11; Microsoft Edge; Opera. Devices: Desktop and laptop computers, tablets running on Android and iOS, smartphones with a minimum screen size of 4.7". Internet access required. Offline: Windows 10, Windows 8.1, Windows 7; Microsoft .NET Framework 4.5 Client; Pentium-class 1 GHz processor (or equivalent); 512 MB RAM; 650 MB disk space plus 50 MB for each downloaded practice exam; access to the Internet to register and download exam databases Lab Simulator Minimum System Requirements: Windows: Microsoft Windows 10, Windows 8.1, Windows 7 with SP1; Intel Pentium III or faster; 512 MB RAM (1GB recommended); 1.5 GB hard disk space; 32-bit color depth at 1024x768 resolution Mac: Apple macOS 10.13, 10.12, 10.11, 10.10; Intel Core Duo 1.83 Ghz or faster; 512 MB RAM (1 GB recommended); 1.5 GB hard disk space; 32-bit color depth at 1024x768 resolution Other applications installed during installation: Adobe AIR 3.8; Captive JRE 6 An essay

collection addressing computer networking and scholarly communication in higher education offers a broad array of insights from the technical and academic points of view. Many of the 25 contributors have been influential in establishing computer mediated communication in their universities and colleges. Their advice and experience cover on-line costs, administration, research issues, classroom networking across the curriculum, electronic library resources, and even a brief introduction to "navigating the network." Annotation copyright by Book News, Inc., Portland, OR This book constitutes the thoroughly refereed proceedings of the 21st International Conference on Computer Networks, CN 2014, held in Brunów, Poland, in June 2014. The 34 revised full papers presented were carefully reviewed and selected for inclusion in the book. The papers in these proceedings cover the following topics: computer networks, tele informatics and communications, new technologies, queueing theory, innovative applications and networked and IT-related aspects of e-business.

Modeling and Simulation of Computer Networks and Systems: Methodologies and Applications introduces you to a broad array of modeling and simulation issues related to computer networks and systems. It focuses on the theories, tools, applications and uses of modeling and simulation in order to effectively optimize networks. It describes methodologies for modeling and simulation of new generations of wireless and mobiles networks and cloud and grid computing systems. Drawing upon years of practical experience and using numerous examples and illustrative applications recognized experts in both academia and industry, discuss: Important and emerging topics in computer networks and systems including but not limited to; modeling, simulation, analysis and security of wireless and mobiles networks especially as they relate to next generation wireless networks Methodologies, strategies and tools, and strategies needed to build computer networks and systems modeling and simulation from the bottom up Different network performance metrics including, mobility, congestion, quality of service, security and more...

Modeling and Simulation of Computer Networks and Systems is a must have resource for network architects, engineers and researchers who want to gain insight into optimizing network performance through the use of modeling and simulation. Discusses important and emerging topics in computer networks and Systems including but not limited to; modeling, simulation, analysis and security of wireless and mobiles networks especially as they relate to next generation wireless networks Provides the necessary methodologies, strategies and tools needed to build computer networks and systems modeling and simulation from the bottom up Includes comprehensive review and evaluation of simulation tools and methodologies and different network performance metrics including mobility, congestion, quality of service, security and more This fully revised and updated new edition of the definitive

text/reference on computer network and information security presents a comprehensive guide to the repertoire of security tools, algorithms and best practices mandated by the technology we depend on. Topics and features: highlights the magnitude of the vulnerabilities, weaknesses and loopholes inherent in computer networks; discusses how to develop effective security solutions, protocols, and best practices for the modern computing environment; examines the role of legislation, regulation, and enforcement in securing computing and mobile systems; describes the burning security issues brought about by the advent of the Internet of Things and the eroding boundaries between enterprise and home networks (NEW); provides both quickly workable and more thought-provoking exercises at the end of each chapter, with one chapter devoted entirely to hands-on exercises; supplies additional support materials for instructors at an associated website. Computer Networks: A Systems Approach, Fifth Edition, explores the key principles of computer networking, with examples drawn from the real world of network and protocol design. Using the Internet as the primary example, this best-selling and classic textbook explains various protocols and networking technologies. The systems-oriented approach encourages students to think about how individual network components fit into a larger, complex system of interactions. This book has a completely updated content with expanded coverage of the topics of utmost importance to networking professionals and students, including P2P, wireless, network security, and network applications such as e-mail and the Web, IP telephony and video streaming, and peer-to-peer file sharing. There is now increased focus on application layer issues where innovative and exciting research and design is currently the center of attention. Other topics include network design and architecture; the ways users can connect to a network; the concepts of switching, routing, and internetworking; end-to-end protocols; congestion control and resource allocation; and end-to-end data. Each chapter includes a problem statement, which introduces issues to be examined; shaded sidebars that elaborate on a topic or introduce a related advanced topic; What's Next? discussions that deal with emerging issues in research, the commercial world, or society; and exercises. This book is written for graduate or upper-division undergraduate classes in computer networking. It will also be useful for industry professionals retraining for network-related assignments, as well as for network practitioners seeking to understand the workings of network protocols and the big picture of networking. Completely updated content with expanded coverage of the topics of utmost importance to networking professionals and students, including P2P, wireless, security, and applications Increased focus on application layer issues where innovative and exciting research and design is currently the center of attention Free downloadable network

simulation software and lab experiments manual available This book presents best selected research papers presented at the International Conference on Computer Networks, Big Data and IoT (ICCBi 2020), organized by Vaigai College Engineering, Madurai, Tamil Nadu, India, during 15–16 December 2020. The book covers original papers on computer networks, network protocols and wireless networks, data communication technologies and network security. The book is a valuable resource and reference for researchers, instructors, students, scientists, engineers, managers and industry practitioners in those important areas. Tanenbaum takes a structured approach to explaining how networks work from the inside out. He starts with an explanation of the physical layer of networking, computer hardware and transmission systems; then works his way up to network applications. Tanenbaum's in-depth application coverage includes email; the domain name system; the World Wide Web (both client- and server-side); and multimedia (including voice over IP, Internet radio video on demand, video conferencing, and streaming media. Each chapter follows a consistent approach: Tanenbaum presents key principles, then illustrates them utilizing real-world example networks that run through the entire book—the Internet, and wireless networks, including Wireless LANs, broadband wireless and Bluetooth. The Fifth Edition includes a chapter devoted exclusively to network security. The textbook is supplemented by a Solutions Manual, as well as a Website containing PowerPoint slides, art in various forms, and other tools for instruction, including a protocol simulator whereby students can develop and test their own network protocols. This textbook presents the mathematical theory and techniques necessary for analyzing and modeling high-performance global networks, such as the Internet. The three main building blocks of high-performance networks are links, switching equipment connecting the links together and software employed at the end nodes and intermediate switches. This book provides the basic techniques for modeling and analyzing these last two components. Topics covered include, but are not limited to: Markov chains and queuing analysis, traffic modeling, interconnection networks and switch architectures and buffering strategies. Market_Desc: · Undergraduate Computer Science Students · Networking Professionals Special Features: · The Website will offer Instructors and Students more than any other book for Networking courses· Expert author team with long and proven track record· Networking concepts explained plainly· Practical solutions backed up with examples and case studies· Balance of topics reflects modern environments About The Book: This undergraduate textbook covers the breadth, depth and detail necessary to cater to the various entry points to the subject, the emphasis required by teachers, and the technical background of the student or practitioner coming to this subject. The book adopts a consistent approach to covering both the

theory of basic networking technologies as well as practical solutions to networking problems. The structure of the book helps the reader to form a picture of the network as a whole. Essential and supplemental material to help both instructors and students will be made available from the book site which includes visualisations of networking problems and solutions. Hands-on networking experience, without the lab! The best way to learn about network protocols is to see them in action. But that doesn't mean that you need a lab full of networking equipment. This revolutionary text and its accompanying CD give readers realistic hands-on experience working with network protocols, without requiring all the routers, switches, hubs, and PCs of an actual network. Computer Networking: Internet Protocols in Action provides packet traces of real network activity on CD. Readers open the trace files using Ethereal, an open source network protocol analyzer, and follow the text to perform the exercises, gaining a thorough understanding of the material by seeing it in action.

Features

- * **Practicality:** Readers are able to learn by doing, without having to use actual networks. Instructors can add an active learning component to their course without the overhead of collecting the materials.
- * **Flexibility:** This approach has been used successfully with students at the graduate and undergraduate levels. Appropriate for courses regardless of whether the instructor uses a bottom-up or a top-down approach.
- * **Completeness:** The exercises take the reader from the basics of examining quiet and busy networks through application, transport, network, and link layers to the crucial issues of network security. Suitable for those with little or no background, this text offers an overview of networking and Internet technology. It provides a tour through all of networking, from the lowest level of data transmission and wiring to the highest levels of application software. An accompanying CD-ROM and Web site provide opportunities for a variety of hands on experiences. The CD contains copies of text figures, digitized images of network wiring and equipment, and files of data that can be used as input to student programs, a key search mechanism, and links to the Web site. This 1989 book provides an introduction to the immensely important area of computer networking. A comprehensive survey of computer network security concepts, methods, and practices. This authoritative volume provides an optimal description of the principles and applications of computer network security in particular, and cyberspace security in general. The book is thematically divided into three segments: Part I describes the operation and security conditions surrounding computer networks; Part II builds from there and exposes readers to the prevailing security situation based on a constant security threat; and Part III - the core - presents readers with most of the best practices and solutions currently in use. It is intended as both a teaching tool and reference. This broad-ranging text/reference

comprehensively surveys computer network security concepts, methods, and practices and covers network security tools, policies, and administrative goals in an integrated manner. It is an essential security resource for undergraduate or graduate study, practitioners in networks, and professionals who develop and maintain secure computer network systems. In network design, the gap between theory and practice is woefully broad. This book narrows it, comprehensively and critically examining current network design models and methods. You will learn where mathematical modeling and algorithmic optimization have been under-utilized. At the opposite extreme, you will learn where they tend to fail to contribute to the twin goals of network efficiency and cost-savings. Most of all, you will learn precisely how to tailor theoretical models to make them as useful as possible in practice. Throughout, the authors focus on the traffic demands encountered in the real world of network design. Their generic approach, however, allows problem formulations and solutions to be applied across the board to virtually any type of backbone communication or computer network. For beginners, this book is an excellent introduction. For seasoned professionals, it provides immediate solutions and a strong foundation for further advances in the use of mathematical modeling for network design. Written by leading researchers with a combined 40 years of industrial and academic network design experience. Considers the development of design models for different technologies, including TCP/IP, IDN, MPLS, ATM, SONET/SDH, and WDM. Discusses recent topics such as shortest path routing and fair bandwidth assignment in IP/MPLS networks. Addresses proper multi-layer modeling across network layers using different technologies—for example, IP over ATM over SONET, IP over WDM, and IDN over SONET. Covers restoration-oriented design methods that allow recovery from failures of large-capacity transport links and transit nodes. Presents, at the end of each chapter, exercises useful to both students and practitioners. Data Communication And Computer Networks Deals With Various Aspects Of The Subject Vis-À-Vis The Emerging Trends In Network-Centric Information Technology. It Provides The Reader With An In-Depth Framework Of The Fundamental Concepts. Networking Involves This book presents a comprehensive review of key distributed graph algorithms for computer network applications, with a particular emphasis on practical implementation. Topics and features: introduces a range of fundamental graph algorithms, covering spanning trees, graph traversal algorithms, routing algorithms, and self-stabilization; reviews graph-theoretical distributed approximation algorithms with applications in ad hoc wireless networks; describes in detail the implementation of each algorithm, with extensive use of supporting examples, and discusses their concrete network applications; examines key graph-theoretical algorithm concepts, such as dominating sets,

and parameters for mobility and energy levels of nodes in wireless ad hoc networks, and provides a contemporary survey of each topic; presents a simple simulator, developed to run distributed algorithms; provides practical exercises at the end of each chapter. The best guide to computer networking fundamentals; this book will give you a solid foundation if you're new to computer networking. Computer networking is a very important field in our connected world. It is essential to businesses, institutions, and individuals. Billions of devices communicate daily via computer networks, but do you know how this really works? Well, that's what this book is for; it will give you a strong foundation on which to build your computer networking knowledge. The concepts have been written in a way that is easy to read and understand, so if you're a beginner in this subject, then this is the book to read. It will put you on the right track as you delve into this valuable and ever-evolving field. It's via computer networks that we can share files, apps, and devices such as printers and scanners, as well as communicate using emails, newsgroups, video conferencing, etc. Computer networking also promises to be a good career option for many more years. With this book, master the fundamentals today. Below is a preview of what you'll learn: The fundamentals of computer networks Network architecture The OSI Model (Application Layer, Presentation Layer, Session Layer, Transport Layer, Network Layer, Data Link Layer, Physical Layer) Wireless and cellular networks Networks and multimedia Integrating and transporting multimedia using networks Fundamentals of network security Managing networks Network administration Infrastructure management And much more! Learn the fundamentals of computer networking today by clicking the BUY NOW button at the top of the page! Reflecting the technological advances made since the first edition, this book offers a tutorial on the major types of networks in use today. Each chapter provides a complete description of a major computer network technology. This edition has a new modular organization with three introductory chapters, followed by a collection of tutorials on the various key subject areas. This book gives a broad look at both fundamental networking technology and new areas that support it and use it. It is a concise introduction to the most prominent, recent technological topics in computer networking. Topics include network technology such as wired and wireless networks, enabling technologies such as data centers, software defined networking, cloud and grid computing and applications such as networks on chips, space networking and network security. The accessible writing style and non-mathematical treatment makes this a useful book for the student, network and communications engineer, computer scientist and IT professional. Master Modern Networking by Understanding and Solving Real Problems Computer Networking Problems and Solutions offers a new approach to understanding networking that

not only illuminates current systems but prepares readers for whatever comes next. Its problem-solving approach reveals why modern computer networks and protocols are designed as they are, by explaining the problems any protocol or system must overcome, considering common solutions, and showing how those solutions have been implemented in new and mature protocols. Part I considers data transport (the data plane). Part II covers protocols used to discover and use topology and reachability information (the control plane). Part III considers several common network designs and architectures, including data center fabrics, MPLS cores, and modern Software-Defined Wide Area Networks (SD-WAN). Principles that underlie technologies such as Software Defined Networks (SDNs) are considered throughout, as solutions to problems faced by all networking technologies. This guide is ideal for beginning network engineers, students of computer networking, and experienced engineers seeking a deeper understanding of the technologies they use every day. Whatever your background, this book will help you quickly recognize problems and solutions that constantly recur, and apply this knowledge to new technologies and environments. Coverage Includes · Data and networking transport · Lower- and higher-level transports and interlayer discovery · Packet switching · Quality of Service (QoS) · Virtualized networks and services · Network topology discovery · Unicast loop free routing · Reacting to topology changes · Distance vector control planes, link state, and path vector control · Control plane policies and centralization · Failure domains · Securing networks and transport · Network design patterns · Redundancy and resiliency · Troubleshooting · Network disaggregation · Automating network management · Cloud computing · Networking the Internet of Things (IoT) · Emerging trends and technologies

Original textbook (c) October 31, 2011 by Olivier Bonaventure, is licensed under a Creative Commons Attribution (CC BY) license made possible by funding from The Saylor Foundation's Open Textbook Challenge in order to be incorporated into Saylor's collection of open courses available at: <http://www.saylor.org>. Free PDF 282 pages at <https://www.textbookequity.org/bonaventure-computer-networking-principles-protocols-and-practice/> This open textbook aims to fill the gap between the open-source implementations and the open-source network specifications by providing a detailed but pedagogical description of the key principles that guide the operation of the Internet.

- 1 Preface
- 2 Introduction
- 3 The application Layer
- 4 The transport layer
- 5 The network layer
- 6 The datalink layer and the Local Area Networks
- 7 Glossary
- 8 Bibliography

Software-Defined Networks (SDN) are transforming the Internet by replacing bundled, proprietary hardware and control software. SDN is being embraced by cloud providers, telcos, and enterprises, as it enables a new era of innovation in networking. This book provides a comprehensive introduction to SDN

from the perspective of those who are developing and leveraging the technology. Book Features: Describes a complete SDN stack, illustrated with example open source software. Emphasizes underlying concepts, abstractions, and design rationale. Describes both fixed-function and programmable switching chips. Describes the P4-based toolchain for programming and controlling switches. Describes a range of SDN use cases: enterprises, datacenters, access networks. Includes hands-on programming exercises, downloadable from GitHub. This is a book about the bricks and mortar from which are built those edifices that will permeate the emerging information society of the future-computer networks. For many years such computer networks have played an indirect role in our daily lives as the hidden servants of banks, airlines, and stores. Now they are becoming more visible as they enter our offices and homes and directly become part of our work, entertainment, and daily living. The study of how computer networks function is a combined study of communication theory and computer science, two disciplines appearing to have very little in common. The modern communication scientist wishing to work in this area soon finds that solving the traditional problems of transmission, modulation, noise immunity, and error bounds in getting the signal from one point to another is just the beginning of the challenge. The communication must be in the right form to be routed properly, to be handled without congestion, and to be understood at various points in the network. As for the computer scientist, he finds that his discipline has also changed. The fraction of computers that belong to networks is increasing all the time. And for a typical single computer, the fraction of its execution load, storage occupancy, and system management problems that are involved with being part of a network is also growing. Computer Networks & Communications (NetCom) is the proceedings from the Fourth International Conference on Networks & Communications. This book covers theory, methodology and applications of computer networks, network protocols and wireless networks, data communication technologies, and network security. The proceedings will feature peer-reviewed papers that illustrate research results, projects, surveys and industrial experiences that describe significant advances in the diverse areas of computer networks & communications. This book covers the design and optimization of computer networks applying a rigorous optimization methodology, applicable to any network technology. It is organized into two parts. In Part 1 the reader will learn how to model network problems appearing in computer networks as optimization programs, and use optimization theory to give insights on them. Four problem types are addressed systematically – traffic routing, capacity dimensioning, congestion control and topology design. Part 2 targets the design of algorithms that solve network problems like the ones modeled in Part 1. Two main approaches are addressed – gradient-like

algorithms inspiring distributed network protocols that dynamically adapt to the network, or cross-layer schemes that coordinate the cooperation among protocols; and those focusing on the design of heuristic algorithms for long term static network design and planning problems. Following a hands-on approach, the reader will have access to a large set of examples in real-life technologies like IP, wireless and optical networks. Implementations of models and algorithms will be available in the open-source Net2Plan tool from which the user will be able to see how the lessons learned take real form in algorithms, and reuse or execute them to obtain numerical solutions. An accompanying link to the author's own Net2plan software enables readers to produce numerical solutions to a multitude of real-life problems in computer networks (www.net2plan.com). Acquire the tools to address emerging challenges in modern computer networks with this multidisciplinary review of the fundamentals. *** 2 Manuscripts in 1 Book *** Do you want to find out how a computer network works? Do you want to know how to keep your network safe? This book is all you need! Computers and the internet have changed this world and our lifestyle forever. We just need to touch a small button and within a fraction of a second, we can do almost anything! The major factor that lies behind this advanced technology is none other than computer network. That's why it's important to know how it works! Computers need to be connected to share resources and accomplish goals but, building these networks, requires a lot of skill: addresses must be set and approved, connections need to be sure. Whether it's the local area network for your company or the wired network in your home, this book gives you the right knowledge to get it started. In particular, you will learn: **BOOK 1: NETWORKING FOR BEGINNERS** Networking Basics - Types of computer networks and network topologies Network Hardware - The different network components (routers, hubs, switches, etc.). Network Cabling - The different cabling standards (coaxial, fiber optic cable, twisted-pair copper cable, etc.). Wireless Networking - Fundamental technicalities of wireless technology, how to set up and configure a computer for wireless connectivity. IP Addressing - Basics of IP addressing, and the different number systems (binary, decimal, and hexadecimal). IP Subnetting - Introduction to concepts of subnetting. Network Protocols - Various protocols of the TCP/IP suite. Internet Essentials - Different terminologies regarding the Internet, the worldwide web, and history of the Internet. Virtualization in cloud computing - Concept of virtualization and cloud services. Network Troubleshooting - Effective network management must address all issues pertaining to hardware, administration and end-user support, software, data management. **BOOK 2: COMPUTER NETWORKING BEGINNERS GUIDE** Introduction to Computer Networking - Components and classifications of computer networks. The Basics of Network Design - How to configure a LAN, network features

and various responsibilities of network users. Wireless Communication Systems - How a computer network can be optimized, how to enjoy the benefits of Wi-Fi technology, an introduction to CISCO Certification Guide. Network Security - The most common computer network threats and fundamental guidelines on how to steer clear of such menaces. Hacking Network - Basics of hacking in computer networking, definitions, different methods of cybercrimes and an introduction to ethical hacking. Different Hacking Methods - The concept of social engineering and various hacking methods that could put your computer at risk, such as malware, keylogger, trojan horses, ransomware, etc. Working on a DoS attack - What is and how works one of the attacks that a hacker is likely to use to help get into their target's computer. Keeping Your Information Safe - How to keep our wireless network safe and some of the things that a hacker can potentially do. *** So, what are you waiting for? Scroll to the top of the page and grab your copy! ***

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