

Computer Networking Kurose And Ross 7th Edition

For courses in Networking/Communications. Motivate your students with a top-down, layered approach to computer networking Unique among computer networking texts, the Seventh Edition of the popular Computer Networking: A Top Down Approach builds on the author's long tradition of teaching this complex subject through a layered approach in a "top-down manner." The text works its way from the application layer down toward the physical layer, motivating students by exposing them to important concepts early in their study of networking. Focusing on the Internet and the fundamentally important issues of networking, this text provides an excellent foundation for students in computer science and electrical engineering, without requiring extensive knowledge of programming or mathematics. The Seventh Edition has been updated to reflect the most important and exciting recent advances in networking. MasteringComputerScience™ not included. Students, if MasteringComputerScience is a recommended/mandatory component of the course, please ask your instructor for the correct ISBN and course ID. MasteringComputerScience should only be purchased when required by an instructor. Instructors, contact your Pearson representative for more information. MasteringComputerScience is an online homework, tutorial, and assessment program designed to work with this text to engage students and improve results. Interactive, self-paced tutorials provide individualized coaching to help students stay on track. With a wide range of activities available, students can actively learn, understand, and retain even the most difficult concepts. Thoroughly revised for the new CompTIA Network+ exam, the Seventh Edition of this bestselling All-in-One Exam Guide delivers 100% coverage of the exam objectives and serves as a valuable on-the-job reference Take the latest version of the CompTIA Network+ exam with complete confidence using the fully updated information contained in this comprehensive self-study system. The book offers clear instruction and real-world examples from training expert and bestselling author Mike Meyers along with hundreds of accurate practice questions. Fulfilling the promise of the All-in-One series, this complete reference serves both as a study tool and a valuable on-the-job reference that will serve readers beyond the exam. CompTIA Network+ Certification All-in-One Exam Guide, Seventh Edition (Exam N10-007) also includes access to free video training and interactive hands-on labs and simulations that prepare you for difficult performance-based questions. A valuable pre-assessment test enables readers to gauge their familiarity with the test's objectives and tailor an effective course for study. · Contains complete coverage of every objective for the CompTIA Network+ Certification exam · Written by CompTIA training and certification guru Mike Meyers · Electronic content includes the Total Tester exam simulator with over 100 practice questions, over an hour of training videos, and a collection of Mike Meyers' favorite shareware and freeware networking utilities

For courses in computer science and software engineering The Fundamental Practice of Software Engineering Software Engineering introduces students to the overwhelmingly important subject of software programming and development. In the past few years, computer systems have come to dominate not just our technological growth, but the foundations of our world's major industries. This text seeks to lay out the fundamental concepts of this huge and continually growing subject area in a clear and comprehensive manner. The Tenth Edition contains new information that highlights various technological updates of recent years, providing students with highly relevant and current information. Sommerville's experience in system dependability and systems engineering guides the text through a traditional plan-based approach that incorporates some novel agile methods. The text strives to teach the innovators of tomorrow how to create software that will make our world a better, safer, and more advanced place to live.

Overview: Building on the successful top-down approach of previous editions, the Sixth Edition of Computer Networking continues with an early emphasis on application-layer paradigms and application programming interfaces, encouraging a hands-on experience with protocols and networking concepts. With this edition, Kurose and Ross have revised and modernized treatment of some key chapters to integrate the most current and relevant networking technologies. Networking today involves much more than standards specifying message formats and protocol behaviors-and it is far more interesting. Professors Kurose and Ross focus on describing emerging principles in a lively and engaging manner and then illustrate these principles with examples drawn from Internet architecture.

For courses in Networking/Communications. Motivate your students with a top-down, layered approach to computer networking Unique among computer networking texts, the Seventh Edition of the popular Computer Networking: A Top Down Approach builds on the author's long tradition of teaching this complex subject through a layered approach in a "top-down manner." The text works its way from the application layer down toward the physical layer, motivating students by exposing them to important concepts early in their study of networking. Focusing on the Internet and the fundamentally important issues of networking, this text provides an excellent foundation for students in computer science and electrical engineering, without requiring extensive knowledge of programming or mathematics. The Seventh Edition has been updated to reflect the most important and exciting recent advances in networking. MasteringComputerScience™ not included. Students, if MasteringComputerScience is a recommended/mandatory component of the course, please ask your instructor for the correct ISBN and course ID. MasteringComputerScience should only be purchased when required by an instructor.

TCP/IP Sockets in C: Practical Guide for Programmers, Second Edition is a quick and affordable way to gain the knowledge and skills needed to develop sophisticated and powerful web-based applications. The book's focused, tutorial-based approach enables the reader to master the tasks and techniques essential to virtually all client-server projects using sockets in C. This edition has been expanded to include new advancements such as support for IPv6 as well as detailed defensive programming strategies. If you program using Java, be sure to check out this book's companion, TCP/IP Sockets in Java: Practical Guide for Programmers, 2nd Edition. Includes completely new and expanded sections that address the IPv6 network environment, defensive programming, and the select() system call, thereby allowing the reader to program in accordance with the most current standards for internetworking. Streamlined and concise tutelage in conjunction with line-by-line code commentary allows readers to quickly program web-based applications without having to wade through unrelated and discursive networking tenets.

Appropriate for a first course on computer networking, this textbook describes the architecture and function of the application, transport, network, and link layers of the internet protocol stack, then examines audio and video networking applications, the underpinnings of encryption and network security, and the key issues of network management. Th

Becoming a master of networking has never been easier Whether you're in charge of a small network or a large network, Networking All-in-One is full of the information you'll need to set up a network and keep it functioning. Fully updated to capture the latest Windows 10 releases through Spring 2018, this is the comprehensive guide to setting up, managing, and securing a successful network. Inside, nine minibooks cover essential, up-to-date information for networking in systems such as Windows 10 and Linux, as well as best practices for security, mobile and cloud-based networking, and much more. Serves as a single source for the most-often needed network administration information Covers the latest trends in networking Get nine detailed and easy-to-understand networking minibooks in one affordable package Networking All-in-One For Dummies is the perfect beginner's guide as well as the professional's ideal reference book.

"This book is organized around three concepts fundamental to OS construction: virtualization (of CPU and memory), concurrency (locks and condition variables), and persistence (disks, RAIDS, and file systems"--Back cover.

What every electrical engineering student and technical professional needs to know about data exchange across networks While most electrical engineering students learn how the individual components that make up data communication technologies work, they rarely learn how the parts work together in complete data communication networks. In part, this is due to the fact that until now there have been no texts on data communication networking written for undergraduate electrical engineering students. Based on the author's years of classroom experience, Fundamentals of Data Communication Networks fills that gap in the pedagogical literature, providing readers with a much-needed overview of all relevant aspects of data communication networking, addressed from the perspective of the various technologies involved. The demand for information exchange in networks continues to grow at a staggering rate, and that demand will continue to mount exponentially as the number of interconnected IoT-enabled devices grows to an expected twenty-six billion by the year 2020. Never has it been more urgent for engineering students to understand the fundamental science and technology behind data communication, and this book, the first of its kind, gives them that understanding. To achieve this goal, the book: Combines signal theory, data protocols, and wireless networking concepts into one text Explores the full range of issues that affect common processes such as media downloads and online games Addresses services for the network layer, the transport layer, and the application layer Investigates multiple access schemes and local area networks with coverage of services for the physical layer and the data link layer Describes mobile communication networks and critical issues in network security Includes problem sets in each chapter to test and fine-tune readers' understanding Fundamentals of Data Communication Networks is a must-read for advanced undergraduates and graduate students in electrical and computer engineering. It is also a valuable working resource for researchers, electrical engineers, and technical professionals. Improve patient outcomes, lower costs, reduce fraud—all with healthcare analytics Healthcare Analytics for Quality and Performance Improvement walks your healthcare organization from relying on generic reports and dashboards to developing powerful analytic applications that drive effective decision-making throughout your organization. Renowned healthcare analytics leader Trevor Strome reveals in this groundbreaking volume the true potential of analytics to harness the vast amounts of data being generated in order to improve the decision-making ability of healthcare managers and improvement teams. Examines how technology has impacted healthcare delivery Discusses the challenge facing healthcare organizations: to leverage advances in both clinical and information technology to improve quality and performance while containing costs Explores the tools and techniques to analyze and extract value from healthcare data Demonstrates how the clinical, business, and technology components of healthcare organizations (HCOs) must work together to leverage analytics Other industries are already taking advantage of big data. Healthcare Analytics for Quality and Performance Improvement helps the healthcare industry make the most of the precious data already at its fingertips for long-overdue quality and performance improvement.

Computer NetworkingA Top-Down Approach, Global Edition

This Value Pack consists of Internet & World Wide Web: How to Program: International Edition by Dietel & Associates Inc. (ISBN:9781408207161) and value-added component Computer Networking: A Top-Down Approach: International Edition, 4/e by Kurose & Ross (ISBN:978032151325

DK Eyewitness Computer is a brand new topic for this bestselling reference series, covering one of technologies major inventions. Amazing photographs offer a unique "eyewitness" view to the history and science behind the technology that defines our digital world. From ancient to modern times, show your child how an ancient Greek computer was used to predict the movement of the stars and how mid-20th century computers were the size of a large room. They'll also discover how computers are used in modern inventions such as mobile phones, iPads, and artificial intelligence in the 21st-century. Great for projects or just for fun, make sure your child learns everything they need to know about Computers. Find out more and download amazing clipart images at www.dk.com/clipart.

By starting at the application-layer and working down to the protocol stack, this text provides a motivational treatment of important concepts for networking students.

For Computer Systems, Computer Organization and Architecture courses in CS, EE, and ECE departments. Few students studying computer science or computer engineering will ever have the opportunity to build a computer system. On the other hand, most students will be required to use and program computers on a near daily basis. Computer Systems: A Programmer's Perspective introduces the important and enduring concepts that underlie computer systems by showing how these ideas affect the correctness, performance, and utility of application programs. The text's hands-on approach (including a comprehensive set of labs) helps students understand the under-the-hood operation of a modern computer system and prepares them for future courses in systems topics such as compilers, computer architecture, operating systems, and networking.

Explains how to use the portable electronic device to make and receive phone calls, set up iTunes and the iPod, take and organize photographs, send and receive e-mail and instant messages, browse the Internet, and play podcasts, music, video, and photograph slideshows.

This text contains detailed worked solutions to all the end-of-chapter exercises in the textbook Organic Chemistry. Notes in tinted boxes in the page margins highlight important principles and comments.

A top-down,layered approach to computer networking. Unique among computernetworking texts, the 8th Edition, Global Edition, of thepopular Computer Networking: A Top Down Approach buildson the authors' long tradition of teaching this complex subject through alayered approach in a "top-down manner." The text works its way from theapplication layer down toward the physical layer, motivating students byexposing them to important concepts early in their study of networking.Focusing on the Internet and the fundamentally important issues of networking,this text provides an excellent foundation for students in computer science andelectrical engineering, without requiring extensive knowledge of programming ormathematics. The 8th Edition, Global Edition, has been updatedto reflect the most important and exciting recent advances in networking,including the importance of software-defined networking (SDN) and the rapidadoption of 4G/5G networks and the mobile applications they enable.

Packed with the latest information on TCP/IP standards and protocols TCP/IP is a hot topic, because it's the glue that holds the Internet and the Web together, and network administrators need to stay on top of the latest developments. TCP/IP For Dummies, 6th Edition, is both an introduction to the basics for beginners as well as the perfect go-to resource for TCP/IP veterans. The book includes the latest on Web protocols and new hardware, plus very timely information on how TCP/IP secures connectivity for blogging, vlogging, photoblogging, and social networking. Step-by-step instructions show you how to install and set up TCP/IP on clients and servers; build security with encryption, authentication, digital certificates, and signatures; handle new voice and mobile technologies, and much more. Transmission Control Protocol / Internet Protocol (TCP/IP) is the de facto standard transmission medium worldwide for computer-to-computer communications; intranets, private internets, and the Internet are all built on TCP/IP The book shows you how to install and configure TCP/IP and its applications on clients and servers; explains intranets, extranets, and virtual private networks (VPNs); provides step-by-step information on building and enforcing security; and covers all the newest protocols You'll learn how to use encryption, authentication, digital certificates, and signatures to set up a secure Internet credit card transaction Find practical security tips, a Quick Start Security Guide, and still more in this practical guide. Pick up where certification exams leave off. With this practical, in-depth guide to the entire network infrastructure, you'll learn how to deal with real Cisco networks, rather than the hypothetical situations presented on exams like the CCNA. Network Warrior takes you step by step through the world of routers, switches, firewalls, and other technologies based on the author's extensive field experience. You'll find new content for MPLS, IPv6, VoIP, and wireless in this completely revised second edition, along with examples of Cisco Nexus 5000 and 7000 switches throughout. Topics include: An in-depth view of routers and routing Switching, using Cisco Catalyst and Nexus switches as examples SOHO VoIP and SOHO wireless access point design and configuration Introduction to IPv6 with configuration examples Telecom technologies in the data-networking world, including T1, DS3, frame relay, and MPLS Security, firewall theory, and configuration, as well as ACL and authentication Quality of Service (QoS), with an emphasis on low-latency queuing (LLQ) IP address allocation, Network Time Protocol (NTP), and device failures

This book thoroughly explains how computers work. It starts by fully examining a NAND gate, then goes on to build every piece and part of a small, fully operational computer. The necessity and use of codes is presented in parallel with the appropriate pieces of hardware. The book can be easily understood by anyone whether they have a technical background or not. It could be used as a textbook.

The Internet continues to worm its way into the fabric of the world communications system with information of all types imaginable from the good to the bad to the ugly. In addition we have daily viruses, worms, spam galore and all sorts of ailments. This new book brings together the latest issues in the cyberworld, which is faster by the day, darker by the night and more elusive than ever.

Unlike some operating systems, Linux doesn't try to hide the important bits from you—it gives you full control of your computer. But to truly master Linux, you need to understand its internals, like how the system boots, how networking works, and what the kernel actually does. In this completely revised second edition of the perennial best seller How Linux Works, author Brian Ward makes the concepts behind Linux internals accessible to anyone curious about the inner workings of the operating system. Inside, you'll find the kind of knowledge that normally comes from years of experience doing things the hard way. You'll learn: –How Linux boots, from boot loaders to init implementations (systemd, Upstart, and System V) –How the kernel manages devices, device drivers, and processes –How networking, interfaces, firewalls, and servers work –How development tools work and relate to shared libraries –How to write effective shell scripts You'll also explore the kernel and examine key system tasks inside user space, including system calls, input and output, and filesystems. With its

combination of background, theory, real-world examples, and patient explanations, How Linux Works will teach you what you need to know to solve pesky problems and take control of your operating system.

Loss networks ensure that sufficient resources are available when a call arrives. However, traditional loss network models for telephone networks cannot cope with today's heterogeneous demands, the central attribute of Asynchronous Transfer Mode (ATM) networks. This requires multiservice loss models. This publication presents mathematical tools for the analysis, optimization and design of multiservice loss networks. These tools are relevant to modern broadband networks, including ATM networks.

Addressed are networks with both fixed and alternative routing, and with discrete and continuous bandwidth requirements.

Multiservice interconnection networks for switches and contiguous slot assignment for synchronous transfer mode are also presented.

On computer networks

Bill has 90 days to fix a behind-schedule IT project, or his entire department will be outsourced. Fortunately, he has the help of a prospective board member, whose "Three Ways" philosophy might just save the day.

Routing TCP/IP, Volume II: CCIE Professional Development, Second Edition The definitive guide to Cisco exterior routing protocols and advanced IP routing issues—now completely updated Praised in its first edition for its readability, breadth, and depth, Routing TCP/IP, Volume II, Second Edition will help you thoroughly understand modern exterior routing protocols and implement them with Cisco routers. Best-selling author Jeff Doyle offers crucial knowledge for every network professional who must manage routers to support growth and change. You'll find configuration and troubleshooting lessons that would cost thousands to learn in a classroom, plus up-to-date case studies, examples, exercises, and solutions. Routing TCP/IP, Volume II, Second Edition covers routing and switching techniques that form the foundation of all Cisco CCIE tracks. Its expert content and CCIE structured review makes it invaluable for anyone pursuing this elite credential. While its examples focus on Cisco IOS, the book illuminates concepts that are fundamental to virtually all modern networks and routing platforms. Therefore, it serves as an exceptionally practical reference for network designers, administrators, and engineers in any environment.

- Review core inter-domain routing concepts, and discover how exterior routing protocols have evolved
- Master BGP's modern operational components
- Effectively configure and troubleshoot BGP
- Control path attributes and selection to define better routes
- Take full advantage of NLRI and routing policies
- Provide for load balancing and improved network scalability
- Extend BGP to multiprotocol environments via MP-BGP
- Deploy, configure, manage, troubleshoot, and scale IP multicast routing
- Implement Protocol Independent Multicast (PIM): Dense Mode, Sparse Mode, and Bidirectional
- Operate, configure, and troubleshoot NAT in IPv4-IPv4 (NAT44) and IPv6-IPv4 (NAT64) environments
- Avoid policy errors and other mistakes that damage network performance

This book is part of the CCIE Professional Development series, which offers expert-level instruction on network design, deployment, and support methodologies to help networking professionals manage complex networks and prepare for the CCIE exams. Category: Networking Covers: BGP, Multicast, and NAT

The pixelated rectangle we spend most of our day staring at in silence is not the television as many long feared, but the computer—the ubiquitous portal of work and personal lives. At this point, the computer is almost so common we don't notice it in our view. It's difficult to envision that not that long ago it was a gigantic, room-sized structure only to be accessed by a few inspiring as much awe and respect as fear and mystery. Now that the machine has decreased in size and increased in popular use, the computer has become a prosaic appliance, little more noted than a toaster. These dramatic changes, from the daunting to the ordinary, are captured in *Computer by design* by design historian Paul Atkinson. Here, Atkinson chronicles the changes in physical design of the computer and shows how these changes in design are related to changes in popular attitude. Atkinson is fascinated by how the computer has been represented and promoted in advertising. For example, in contrast to ads from the 1970s and '80s, today's PC is very PC—genderless, and largely status free. *Computer* also considers the role of the computer as a cultural touchstone, as evidenced by its regular appearance in popular culture, including the iconography of the space age, HAL from *2001: A Space Odyssey*, James Bond's gadgetry, and *Star Wars* and *Star Trek*. *Computer* covers many issues ignored by other histories of computing, which have focused on technology and the economics involved in their production, but rarely on the role of fashion in the physical design and promotion of computers and their general reception. The book will appeal to professionals and students of design and technology as well as those interested in the history of computers and how they have shaped—and been shaped by—our lives.

Appropriate for Computer Networking or Introduction to Networking courses at both the undergraduate and graduate level in Computer Science, Electrical Engineering, CIS, MIS, and Business Departments. 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).

Networking For Dummies has long been the leading networking beginner book. The 7th Edition provides valuable updates on the latest tools and trends in networking, including updates to Windows XP (through Service Pack 2), Windows Server 2003, Linux, Mac OS X, and Novell Netware Server 6.5 plus the latest information on broadband technologies. A must-have reference for network administrators and novices who want to set up a network in their home or office, this covers all the bases and basics, including: Using a network printer and sharing files and printers Using Microsoft Office on a network Network operating systems Setting up a wireless network Configuring client computers Written by Doug Lowe, a seasoned *For Dummies* author who has demystified everything from Microsoft Office to networking to creating Web pages and written more than 50 computer books, including *Networking All-in-One Desk Reference For Dummies*, this guide includes whole new chapters on: Wireless networking IP addressing Common security problems Troubleshooting Indexed to help you find answers fast and written in plain English instead of technotalk, this keeps you from getting all shook up while you're getting all hooked up!

Foundations of Modern Networking is a comprehensive, unified survey of modern networking technology and applications for today's professionals, managers, and students. Dr. William Stallings offers clear and well-organized coverage of five key technologies that are transforming networks: Software-Defined Networks (SDN), Network Functions Virtualization (NFV), Quality of Experience (QoE), the Internet of Things (IoT), and cloudbased services. Dr. Stallings reviews current network ecosystems and the challenges they face—from Big Data and mobility to security and complexity. Next, he offers complete, self-contained coverage of each new set of technologies: how they work, how they are architected, and how they can be applied to solve real problems. Dr. Stallings presents a chapter-length analysis of emerging security issues in modern networks. He concludes with an up-to date discussion of networking careers, including important recent changes in roles and skill requirements. Coverage: Elements of the modern networking ecosystem: technologies, architecture, services, and applications Evolving requirements of current network environments SDN: concepts, rationale, applications, and standards across data, control, and application planes OpenFlow, OpenDaylight, and other key SDN technologies Network functions virtualization: concepts, technology, applications, and software defined infrastructure Ensuring customer Quality of Experience (QoE) with interactive video and multimedia network traffic Cloud networking: services, deployment models, architecture, and linkages to SDN and NFV IoT and fog computing in depth: key components of IoT-enabled devices, model architectures, and example implementations Securing SDN, NFV, cloud, and IoT environments Career preparation and ongoing education for tomorrow's networking careers Key Features: Strong coverage of unifying principles and practical techniques More than a hundred figures that clarify key concepts Web support at williamstallings.com/Network/ QR codes throughout, linking to the website and other resources Keyword/acronym lists, recommended readings, and glossary Margin note definitions of key words throughout the text

A text on networking theory and practice, providing information on general networking concepts, routing algorithms and protocols, addressing, and mechanics of bridges, routers, switches, and hubs. Describes all major network algorithms and protocols in use today, and explores engineering trade-offs that each different approach represents. Includes chapter homework problems and a glossary. This second edition is expanded to cover recent developments such as VLANs, Fast Ethernet, and AppleTalk. The author is a Distinguished Engineer at Sun Microsystems, Inc., and holds some 50 patents. Annotation copyrighted by Book News, Inc., Portland, OR

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

A detailed examination of interior routing protocols -- completely updated in a new edition A complete revision of the best-selling first edition--widely considered a premier text on TCP/IP routing protocols A core textbook for CCIE preparation and a practical reference for network designers, administrators, and engineers Includes configuration and troubleshooting lessons that would cost thousands to learn in a classroom and numerous real-world examples and case studies Praised in its first edition for its approachable style and wealth of information, this new edition provides readers a deep understanding of IP routing protocols, teaches how to implement these protocols using Cisco routers, and brings readers up to date protocol and implementation enhancements. Routing TCP/IP, Volume 1, Second Edition, includes protocol changes and Cisco features that enhance routing integrity, secure routers from attacks initiated through routing protocols, and provide greater control over the propagation of routing information for all the IP interior routing protocols. Routing TCP/IP, Volume 1, Second Edition, provides a detailed analysis of each of the IP interior gateway protocols (IGPs). Its structure remains the same as the best-selling first edition, though information within each section is enhanced and modified to include the new developments in routing protocols and Cisco implementations. What's New In This Edition? The first edition covers routing protocols as they existed in 1998. The new book updates all covered routing protocols and discusses new features integrated in the latest version of Cisco IOS Software. IPv6, its use with interior routing protocols, and its interoperability and integration with IPv4 are also integrated into this book. Approximately 200 pages of new information are added to the main text, with some old text removed. Additional exercise and solutions are also included.

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

This is the eBook of the printed book and may not include any media, website access codes, or print supplements that may come packaged with the bound book. Computer Networks and Internets is appropriate for all introductory-to-intermediate courses in computer networking, the Internet, or Internet applications; readers need no background in networking, operating systems, or advanced mathematics. Leading networking authority Douglas Comer presents a wide-ranging, self-contained tour of the concepts, principles, and technologies that enable today's Internet to support applications ranging from web browsing to telephony and multimedia. This Fifth Edition has been thoroughly reorganized, revised, and updated: it includes extensive new coverage of topics ranging from wireless protocols to network performance, while reducing or eliminating coverage of older protocols and technologies. Comer begins by illuminating the applications and facilities offered by today's Internet. Next, he systematically introduces the underlying network technologies and protocols that make them possible: low-level data communications; packet switching, LAN, and WAN technologies; and Internet protocols such as TCP, IP, UDP, and IPv6. With these concepts and technologies established, he introduces several of the most important contemporary issues faced by network implementers and managers, including quality of service, Internet telephony, multimedia, network security, and network management. Comer has carefully designed this book to support both top-down and bottom-up teaching approaches. Students need no background in operating systems, and no sophisticated math: Comer relies throughout on figures, drawings, examples, and analogies, not mathematical proofs.

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