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Data Communications and Networking - Behrouz A. Forouzan 2007
Annotation As one of the fastest growing technologies in our culture today, data communications and networking presents a unique challenge for instructors. As both the number and types of students are increasing, it is essential to have a textbook that provides coverage of the latest advances, while presenting the material in a way that is accessible to students with little or no background in the field. Using a bottom-up approach, Data Communications and Networking presents this highly technical subject matter without relying on complex formulas by using a strong pedagogical approach supported by more than 700 figures. Now in its Fourth Edition, this textbook brings the beginning student right to the forefront of the latest advances in the field, while presenting the fundamentals in a clear, straightforward manner. Students will find better coverage, improved figures and better explanations on cutting-edge material. The "bottom-up" approach allows instructors to cover the material in one course, rather than having separate courses on data communications and networking

Computer Networking - James F. Kurose 2014
Revised to reflect the rapid changes in the field of networking, Computer Networking provides a top-down approach to this study by beginning with application-level protocols and then working down the protocol

stack. An early emphasis is placed on application-layer paradigms and application programming interfaces to allow readers to get their "hands dirty" with protocols and networking concepts in the context of applications they will use in the industry. Networking today is much more (and far more interesting) than standards specifying message formats and protocol behaviors. 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."

Internetworking - Christoph Meinel 2013-10-16

This book is supposed to serve as a comprehensive and instructive guide through the new world of digital communication. On the physical layer optical and electrical cabling technology are described as well as wireless communication technologies. On the data link layer local area networks (LANs) are introduced together with the most popular LAN technologies such as Ethernet, Token Ring, FDDI, and ATM as well as wireless LAN technologies including IEEE 802.x, Bluetooth, or ZigBee. A wide range of WAN technologies are covered including contemporary high speed technologies like PDH and SDH up to high speed wireless WANs (WiMAX) and 4th generation wireless telephone networks LTE. Routing technologies conclude the treatment of the data link layer. Next,

there is the Internet layer with the Internet protocol IP that establishes a virtual uniform network out of the net of heterogeneous networks. In detail, both versions, IPv4 as well as the successor IPv6 are covered in detail as well as ICMP, NDP, and Mobile IP. In the subsequent transport layer protocol functions are provided to offer a connection-oriented and reliable transport service on the basis of the simple and unreliable IP. The basic protocols TCP and UDP are introduced as well as NAT, the network address translation. Beside transport layer security protocols like SSL and TLS are presented. On the upmost application layer popular Internet application protocols are described like DNS, SMTP, PGP, (S)FTP, NFS, SSH, DHCP, SNMP, RTP, RTCP, RTSP, and World Wide Web.

Health Information Exchange - Brian Dixon 2022-06-01

Health Information Exchange: Navigating and Managing a Network of Health Information Systems, Second Edition, now fully updated, is a practical guide on how to understand, manage and make use of a health information exchange infrastructure, which moves patient-centered information within the health care system. The book informs and guides the development of new infrastructures as well as the management of existing and expanding infrastructures across the globe. Sections explore the reasons for the health information exchange (HIE) infrastructures, how to manage them, examines the key drivers of HIE, and barriers to their widespread use. In addition, the book explains the underlying technologies and methods for conducting HIE across communities as well as nations. Finally, the book explains the principles of governing an organization that chiefly moves protected health information around. The text unravels the complexities of HIE and provides guidance for those who need to access HIE data and support operations. Encompasses comprehensive knowledge on the technology and governance of health information exchanges (HIEs) Presents business school style case studies that explore why a given HIE has or hasn't been successful Discusses the kinds of data and practical examples of the infrastructure required to exchange clinical data to support modern medicine in a world of disparate EHR systems

Multiservice Loss Models for Broadband Telecommunication Networks - Keith W. Ross 2012-12-06

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.

Operating Systems - Remzi H. Arpaci-Dusseau 2018-09

"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.

Web Application Security - Andrew Hoffman 2020-03-02

While many resources for network and IT security are available, detailed knowledge regarding modern web application security has been lacking—until now. This practical guide provides both offensive and defensive security concepts that software engineers can easily learn and apply. Andrew Hoffman, a senior security engineer at Salesforce, introduces three pillars of web application security: recon, offense, and defense. You'll learn methods for effectively researching and analyzing modern web applications—including those you don't have direct access to. You'll also learn how to break into web applications using the latest hacking techniques. Finally, you'll learn how to develop mitigations for use in your own web applications to protect against hackers. Explore common vulnerabilities plaguing today's web applications Learn essential hacking techniques attackers use to exploit applications Map and document web applications for which you don't have direct access Develop and deploy customized exploits that can bypass common

defenses Develop and deploy mitigations to protect your applications against hackers Integrate secure coding best practices into your development lifecycle Get practical tips to help you improve the overall security of your web applications

Measurement, Modelling, and Evaluation of Computing Systems and Dependability in Fault Tolerance - Erwin Rathgeb 2010-03-05

This book constitutes the refereed proceedings of the 15th International GI/ITG Conference on "Measurement, Modelling and Evaluation of Computing Systems" and "Dependability and Fault Tolerance", held in Essen, Germany, in March 2010. The 19 revised full papers presented together with 5 tool papers and 2 invited lectures were carefully reviewed and selected from 42 initial submissions. The papers cover all aspects of performance and dependability evaluation of systems including networks, computer architectures, distributed systems, software, fault-tolerant and secure systems.

TCP/IP Sockets in C - Michael J. Donahoo 2009-03-02

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.

Computer Networks - Andrew S. Tanenbaum 2003

Details descriptions of the principles associated with each layer and presents many examples drawn the Internet and wireless networks.

Software Engineering - Ian Sommerville 2011-11-21

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. Intended for introductory and advanced courses in software engineering. The ninth edition of Software Engineering presents a broad perspective of software engineering, focusing on the processes and techniques fundamental to the creation of reliable, software systems. Increased coverage of agile methods and software reuse, along with coverage of 'traditional' plan-driven software engineering, gives readers the most up-to-date view of the field currently available. Practical case studies, a full set of easy-to-access supplements, and extensive web resources make teaching the course easier than ever. The book is now structured into four parts: 1: Introduction to Software Engineering 2: Dependability and Security 3: Advanced Software Engineering 4: Software Engineering Management

Security in Computing - Charles P. Pfleeger 2009

American Beetles, Volume I - Ross H. Arnett, Jr. 2000-12-28

A thorough update of Arnett's The Beetles of the United States, American Beetles, Volumes I and II cover the genera of beetles that occur in Alaska, Canada, and the contiguous United States. Built on the foundation of the original work and almost completely rewritten with contributions from more than 60 coleopterists, these volumes describe each family with separate paragraphs for head, thorax, abdomen, genitalia, eggs, larvae, and pupae. This bestselling first volume covers the suborders Archostemata, Myxophaga, and Adephaga, plus the series Staphyliniformia of the suborder Polyphaga. Arnett and Thomas offer the most sweeping text available on the subject of North American beetles. Each section is presented in the same concise format, and the organization of the information is by family. The editors have chosen the most respected of specialists to contribute the entries.

An Engineering Approach to Computer Networking - Srinivasan

Keshav 1997

Taking a unique "engineering" approach that will help readers gain a grasp of not just how but also why networks work the way they do, this book includes the very latest network technology--including the first practical treatment of Asynchronous Transfer Mode (ATM). The CD-ROM contains an invaluable network simulator.

Data Communications and Networking - Behrouz A. Forouzan 2001-07

Computer Networks - Andrew S. Tanenbaum 1996

Computer Networks is the ideal introduction to today's and tomorrow's networks. This classic best-seller has been totally rewritten to reflect the networks of the late 1990s and beyond. Author, educator, and researcher Andrew S. Tanenbaum, winner of the ACM Karl V. Karlstrom Outstanding Educator Award, carefully explains how networks work inside, from the hardware technology up through the most popular network applications. The book takes a structured approach to networking, starting at the bottom (the physical layer) and gradually working up to the top (the application layer). The topics covered include:

- *Physical layer (e.g., copper, fiber, radio, and satellite communication)
- *Data link layer (e.g., protocol principles, HDLC, SLIP, and PPP)
- *MAC Sublayer (e.g., IEEE 802 LANs, bridges, new high-speed LANs)
- *Network layer (e.g., routing, congestion control, internetworking, IPv6)
- *Transport layer (e.g., transport protocol principles, TCP, network performance)
- *Application layer (e.g., cryptography, email, news, the Web, Java, multimedia)

In each chapter, the necessary principles are described in detail, followed by extensive examples taken from the Internet, ATM networks, and wireless

TCP/IP Illustrated, Volume 1 - Kevin R. Fall 2011-11-08

"For an engineer determined to refine and secure Internet operation or to explore alternative solutions to persistent problems, the insights provided by this book will be invaluable." —Vint Cerf, Internet pioneer

TCP/IP Illustrated, Volume 1, Second Edition, is a detailed and visual guide to today's TCP/IP protocol suite. Fully updated for the newest innovations, it demonstrates each protocol in action through realistic

examples from modern Linux, Windows, and Mac OS environments. There's no better way to discover why TCP/IP works as it does, how it reacts to common conditions, and how to apply it in your own applications and networks. Building on the late W. Richard Stevens' classic first edition, author Kevin R. Fall adds his cutting-edge experience as a leader in TCP/IP protocol research, updating the book to fully reflect the latest protocols and best practices. He first introduces TCP/IP's core goals and architectural concepts, showing how they can robustly connect diverse networks and support multiple services running concurrently. Next, he carefully explains Internet addressing in both IPv4 and IPv6 networks. Then, he walks through TCP/IP's structure and function from the bottom up: from link layer protocols—such as Ethernet and Wi-Fi—through network, transport, and application layers. Fall thoroughly introduces ARP, DHCP, NAT, firewalls, ICMPv4/ICMPv6, broadcasting, multicasting, UDP, DNS, and much more. He offers extensive coverage of reliable transport and TCP, including connection management, timeout, retransmission, interactive data flow, and congestion control. Finally, he introduces the basics of security and cryptography, and illuminates the crucial modern protocols for protecting security and privacy, including EAP, IPsec, TLS, DNSSEC, and DKIM. Whatever your TCP/IP experience, this book will help you gain a deeper, more intuitive understanding of the entire protocol suite so you can build better applications and run more reliable, efficient networks.

Computer Networks and Internets - Douglas Comer 2001

Appropriate for introductory computer networking courses at both the undergraduate and graduate level in Computer Science, Electrical Engineering, CIS, MIS, and Business Departments. Written by a best-selling author and leading computer networking authority, *Computer Networks and Internets, Third Edition* builds a comprehensive picture of the technologies behind Internet applications. Ideal for those with little or no background in the subject, the text answers the basic question "how do computer networks and Internets operate?" in the broadest sense and now includes an early optional introduction to network programming and applications. The text provides a comprehensive, self-

contained tour through all of networking from the lowest levels of data transmission and wiring to the highest levels of application software, explaining how underlying technologies provide services and how Internet applications use those services. At each level, it shows how the facilities and services provided by lower levels are used and extended in the next level. For instructors who want to emphasize Internet technologies and applications, the book provides substantial sections on Internetworking and Network Applications that can serve as a focus for a course. An accompanying multimedia CD-ROM and Website provide opportunities for a variety of hands-on experiences.

Crafting Interpreters - Robert Nystrom 2021-07-27

Despite using them every day, most software engineers know little about how programming languages are designed and implemented. For many, their only experience with that corner of computer science was a terrifying "compilers" class that they suffered through in undergrad and tried to blot from their memory as soon as they had scribbled their last NFA to DFA conversion on the final exam. That fearsome reputation belies a field that is rich with useful techniques and not so difficult as some of its practitioners might have you believe. A better understanding of how programming languages are built will make you a stronger software engineer and teach you concepts and data structures you'll use the rest of your coding days. You might even have fun. This book teaches you everything you need to know to implement a full-featured, efficient scripting language. You'll learn both high-level concepts around parsing and semantics and gritty details like bytecode representation and garbage collection. Your brain will light up with new ideas, and your hands will get dirty and calloused. Starting from `main()`, you will build a language that features rich syntax, dynamic typing, garbage collection, lexical scope, first-class functions, closures, classes, and inheritance. All packed into a few thousand lines of clean, fast code that you thoroughly understand because you wrote each one yourself.

Structure and Interpretation of Computer Programs, second edition - Harold Abelson 1996-07-25

Structure and Interpretation of Computer Programs has had a dramatic

impact on computer science curricula over the past decade. This long-awaited revision contains changes throughout the text. There are new implementations of most of the major programming systems in the book, including the interpreters and compilers, and the authors have incorporated many small changes that reflect their experience teaching the course at MIT since the first edition was published. A new theme has been introduced that emphasizes the central role played by different approaches to dealing with time in computational models: objects with state, concurrent programming, functional programming and lazy evaluation, and nondeterministic programming. There are new example sections on higher-order procedures in graphics and on applications of stream processing in numerical programming, and many new exercises. In addition, all the programs have been reworked to run in any Scheme implementation that adheres to the IEEE standard.

TCP / IP For Dummies - Candace Leiden 2009-07-15

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.

FUNDAMENTALS OF COMPUTERS - V. RAJARAMAN 2014-12-15

The sixth edition of the highly acclaimed "Fundamentals of Computers" lucidly presents how a computer system functions. Both hardware and software aspects of computers are covered. The book begins with how numeric and character data are represented in a computer, how various input and output units function, how different types of memory units are organized, and how data is processed by the processor. The interconnection and communication between the I/O units, the memory, and the processor is explained clearly and concisely. Software concepts such as programming languages, operating systems, and communication protocols are discussed. With growing use of wireless to access computer networks, cellular wireless communication systems, WiFi (Wireless high fidelity), and WiMAX have become important. Thus it has now become part of "fundamental knowledge" of computers and has been included. Besides this, use of computers in multimedia processing has become commonplace and hence is discussed. With the increase in speed of networks and consequently the Internet, new computing environments such as peer to peer, grid, and cloud computing have emerged and will change the future of computing. Hence a new chapter on this topic has been included in this edition. This book is an ideal text for undergraduate and postgraduate students of Computer Applications (BCA and MCA), undergraduate students of engineering and computer science who study fundamentals of computers as a core course, and students of management who should all know the basics of computer hardware and software. It is ideally suited for working professionals who want to update their knowledge of fundamentals of computers. Key features • Fully updated retaining the style and all contents of the fifth edition. • In-depth discussion of both wired and wireless computer networks. • Extensive discussion of analog and digital communications. • Advanced topics such as multiprogramming, virtual memory, DMA, RISC, DSP, RFID, Smart Cards, WiGig, GSM, CDMA, novel I/O devices, and

multimedia compression (MP3, MPEG) are described from first principles. • A new chapter on Emerging Computing Environments, namely, peer to peer, grid, and cloud computing, has been added for the first time in an entry level book. • Each chapter begins with learning goals and ends with a summary to aid self-study. • Includes an updated glossary of over 340 technical terms used in the book.

TCP/IP Protocol Suite - Behrouz A. Forouzan 2003

Networking technologies have become an integral part of everyday life, which has led to a dramatic increase in the number of professions where it is important to understand network technologies. TCP/IP Protocol Suite teaches students and professionals, with no prior knowledge of TCP/IP, everything they need to know about the subject. This comprehensive book uses hundreds of figures to make technical concepts easy to grasp, as well as many examples, which help tie the material to the real-world. The second edition of TCP/IP Protocol Suite has been fully updated to include all of the recent technology changes in the field. Many new chapters have been added such as one on Mobile IP, Multimedia and Internet, Network Security, and IP over ATM. Additionally, out-of-date material has been overhauled to reflect recent changes in technology.

Computer Networking - Olivier Bonaventure 2016-06-10

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

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

Fundamentals of Data Communication Networks - Oliver C. Ibe
2017-12-20

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.

Computer Networks and the Internet - Gerry Howser 2019-12-23

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

Computer Networking - James F. Kurose 2008

Computer Networking: A Top Down Approach.

Basic Biostatistics - Gerstman 2014-02-07

Basic Biostatistics is a concise, introductory text that covers biostatistical principles and focuses on the common types of data encountered in public health and biomedical fields. The text puts equal emphasis on exploratory and confirmatory statistical methods. Sampling, exploratory data analysis, estimation, hypothesis testing, and power and precision are covered through detailed, illustrative examples. The book is organized into three parts: Part I addresses basic concepts and techniques; Part II covers analytic techniques for quantitative response variables; and Part III covers techniques for categorical responses. The Second Edition offers many new exercises as well as an all new chapter on "Poisson Random Variables and the Analysis of Rates." With language, examples, and exercises that are accessible to students with modest mathematical backgrounds, this is the perfect introductory biostatistics text for undergraduates and graduates in various fields of public health. Features: Illustrative, relevant examples and exercises incorporated throughout the book. Answers to odd-numbered exercises provided in the

back of the book. (Instructors may request answers to even-numbered exercises from the publisher. Chapters are intentionally brief and limited in scope to allow for flexibility in the order of coverage. Equal attention is given to manual calculations as well as the use of statistical software such as StaTable, SPSS, and WinPepi. Comprehensive Companion Website with Student and Instructor's Resources.

Computer Networks - Andrew S. Tanenbaum 2013-07-23

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.

Computer Networking: A Top-Down Approach Featuring the Internet, 3/e - James F. Kurose 2005

Computer Networking - James F. Kurose 2013

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.

Computer Networks - Larry L. Peterson 2000

Designing Data-Intensive Applications - Martin Kleppmann 2017-03-16
Data is at the center of many challenges in system design today. Difficult issues need to be figured out, such as scalability, consistency, reliability, efficiency, and maintainability. In addition, we have an overwhelming variety of tools, including relational databases, NoSQL datastores, stream or batch processors, and message brokers. What are the right choices for your application? How do you make sense of all these buzzwords? In this practical and comprehensive guide, author Martin Kleppmann helps you navigate this diverse landscape by examining the pros and cons of various technologies for processing and storing data. Software keeps changing, but the fundamental principles remain the same. With this book, software engineers and architects will learn how to apply those ideas in practice, and how to make full use of data in modern applications. Peer under the hood of the systems you already use, and learn how to use and operate them more effectively Make informed decisions by identifying the strengths and weaknesses of different tools Navigate the trade-offs around consistency, scalability, fault tolerance, and complexity Understand the distributed systems research upon which modern databases are built Peek behind the scenes of major online services, and learn from their architectures

Networking 2004 - Nikolas Mitrou 2004-04-28

This book constitutes the refereed proceedings of the Third IFIP-TC6 Networking Conference, NETWORKING 2004, held in Athens, Greece, in May 2004. The 103 revised full papers and 40 revised short papers were carefully reviewed and selected from 539 submissions. The papers are organized in topical sections on network security; TCP performance; ad-hoc networks; wavelength management; multicast; wireless network performance; inter-domain routing; packet classification and scheduling; services and monitoring; admission control; competition in networks; 3G/4G wireless systems; MPLS and related technologies; flow and congestion control; performance of IEEE 802.11; optical networks; TCP and congestion; key management; authentication and DOS prevention;

energy aspects of wireless networks; optical network access; routing in ad-hoc networks; fault detection, restoration, and tolerance; QoS metrics, algorithms, and architecture; content distribution, caching, and replication; and routing theory and path computation.

Computer Networks - Larry L. Peterson 2011-03-02

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.

Cornerstones for Community College Success, Books a la Carte Edition Plus New MyStudentSuccessLab 2012 Update -- Access Card Package - Robert M. Sherfield 2013-08-04

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consists of 0321943252 / 9780321943255 NEW MyStudentSuccessLab 2013 Update -- Value Pack Access Card 0321860594 / 9780321860590 Cornerstones for Community College Success The Books A La Carte (aka "Student Value Edition" or "Loose Leaf") is a three-hole-punched, full-color version of the premium textbook that's available at 35% less than the traditional bound text. Students can lighten their load and carry just what they need!

The TCP/IP Guide - Charles M. Kozierok 2005-10-01

From Charles M. Kozierok, the creator of the highly regarded www.pcguides.com, comes The TCP/IP Guide. This completely up-to-date, encyclopedic reference on the TCP/IP protocol suite will appeal to newcomers and the seasoned professional alike. Kozierok details the core protocols that make TCP/IP internetworks function and the most important classic TCP/IP applications, integrating IPv6 coverage throughout. Over 350 illustrations and hundreds of tables help to explain the finer points of this complex topic. The book's personal, user-friendly writing style lets readers of all levels understand the dozens of protocols and technologies that run the Internet, with full coverage of PPP, ARP, IP, IPv6, IP NAT, IPSec, Mobile IP, ICMP, RIP, BGP, TCP, UDP, DNS, DHCP, SNMP, FTP, SMTP, NNTP, HTTP, Telnet, and much more. The TCP/IP Guide is a must-have addition to the libraries of internetworking students, educators, networking professionals, and those working toward certification.

Network Warrior - Gary A. Donahue 2011-05-13

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
Networking All-in-One For Dummies - Doug Lowe 2021-04-06

Your ultimate one-stop networking reference Designed to replace that groaning shelf-load of dull networking books you'd otherwise have to buy and house, Networking All-in-One For Dummies covers all the basic and not-so-basic information you need to get a network up and running. It also helps you keep it running as it grows more complicated, develops bugs, and encounters all the fun sorts of trouble you expect from a complex system. Ideal both as a starter for newbie administrators and as a handy quick reference for pros, this book is built for speed, allowing you to get past all the basics—like installing and configuring hardware and software, planning your network design, and managing cloud services—so you can get on with what your network is actually intended to do. In a friendly, jargon-free style, Doug Lowe—an experienced IT Director and prolific tech author—covers the essential, up-to-date information for networking in systems such as Linux and Windows 10 and clues you in on best practices for security, mobile, and more. Each of the nine minibooks demystifies the basics of one key area of network management. Plan and administrate your network Implement virtualization Get your head around networking in the Cloud Lock down your security protocols The best thing about this book? You don't have to read it all at once to get things done; once you've solved the specific issue at hand, you can put it down again and get on with your life. And the next time you need it, it'll have you covered.

Wired/Wireless Internet Communications - Evgeny Osipov 2010-05-21

This book constitutes the refereed proceedings of the 8th International Conference on Wired/Wireless Internet Communications, WWIC 2010, held in Luleå, Sweden, in June 2010. The 17 revised full papers were

carefully reviewed and selected from 45 submissions. The papers are thematically grouped into 5 technical sessions such as cooperation and

multimedia traffic management in WN, advances to IEEE 802.11, routing and performance optimization, security, control and signalling, as well as wireless sensor networks.