

80211 Wireless Networks The Definitive Guide

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802.11 Wireless Networks - Matthew Gast 2005
With transfer speeds up to 11 Mbps the 802.11 wireless network standard is set to revolutionize wireless LANs. Matthew Gast's definitive guide

to the standard is aimed at administrators, architects and security professionals.
802.11n: A Survival Guide - Matthew S. Gast
2012-04-02

Wireless has finally come of age. With a significant jump in throughput over previous standards, 802.11n is the first wireless technology that doesn't trade speed for mobility, and users have stormed onto wireless networks with a passion. In this concise guide, Matthew Gast—chair of the IEEE group that produced revision 802.11-2012—shows you why wireless has become the default method of connecting to a network, and provides technical details you need to plan, design, and deploy 802.11n today. Building a network for the multitude of new devices is now a strategic decision for network engineers everywhere. This book gives you an in-depth look at key parts of 802.11n, and shows you how to achieve an Ethernet-free wireless office. Learn how MIMO's multiple data streams greatly increase wireless speed Discover how 802.11n modifications improve MAC efficiency Examine advanced PHY features such as beamforming and space-time code block Use advanced MAC features to maintain

interoperability with older devices Plan an 802.11n network by determining traffic demand, key applications, power requirements, and security Choose the architecture, select hardware, and plan coverage to design and build your network

802.11 Wireless Network Site Surveying and Installation - Bruce E. Alexander 2005

"Performing a wireless LAN (WLAN) site survey before installing a wireless network is the key to any successful WLAN deployment. Yet each location and company have unique needs that must be taken into account. 802.11 Wireless Network Site Surveying and Installation helps you understand the challenges associated with any site survey, including multipath mitigation, reflection, absorption, and radio wave interference, plus the added complexity of user and application demands. This book helps you identify obstacles to a successful deployment and guides your equipment decisions to ensure that your WLAN reaches its maximum

potential."--BOOK JACKET.

Ad Hoc Wireless Networks - C. Siva Ram Murthy
2004-05-24

Practical design and performance solutions for every ad hoc wireless network Ad Hoc Wireless Networks comprise mobile devices that use wireless transmission for communication. They can be set up anywhere and any time because they eliminate the complexities of infrastructure setup and central administration-and they have enormous commercial and military potential. Now, there's a book that addresses every major issue related to their design and performance. Ad Hoc Wireless Networks: Architectures and Protocols presents state-of-the-art techniques and solutions, and supports them with easy-to-understand examples. The book starts off with the fundamentals of wireless networking (wireless PANs, LANs, MANs, WANs, and wireless Internet) and goes on to address such current topics as Wi-Fi networks, optical wireless networks, and hybrid wireless

architectures. Coverage includes: Medium access control, routing, multicasting, and transport protocols QoS provisioning, energy management, security, multihop pricing, and much more In-depth discussion of wireless sensor networks and ultra wideband technology More than 200 examples and end-of-chapter problems Ad Hoc Wireless Networks is an invaluable resource for every network engineer, technical manager, and researcher designing or building ad hoc wireless networks.

Zigbee Wireless Networking - Drew Gislason
2008-10-09

ZigBee is a standard based on the IEEE 802.15.4 standard for wireless personal networks. This standard allows for the creation of very low cost and low power networks - these applications run for years rather than months. These networks are created from sensors and actuators and can wirelessly control many electrical products such as remote controls, medical, industrial, and security sensors. Hundreds of companies are

creating applications including Mitsubishi, Motorola, Freescale, and Siemens. This book is written for engineers who plan to develop ZigBee applications and networks, to understand how they work, and to evaluate this technology to see if it is appropriate to a particular project. This book does not simply state facts but explains what ZigBee can do through detailed code examples. *Details how to plan and develop applications and networks *Zigbee sensors have many applications including industrial automation, medical sensing, remote controls, and security *Hot topic for today's electrical engineer because it is low cost and low power

Ethernet - Charles E. Spurgeon 2014
Get up to speed on the latest Ethernet capabilities for building and maintaining networks for everything from homes and offices to data centers and server machine rooms. This thoroughly revised, comprehensive guide covers a wide range of Ethernet technologies, from basic operation to network management, based

on the authors' many years of field experience. When should you upgrade to higher speed Ethernet? How do you use switches to build larger networks? How do you troubleshoot the system? This book provides the answers. If you're looking to build a scalable network with Ethernet to satisfy greater bandwidth and market requirements, this book is indeed the definitive guide. Examine the most widely used media systems, as well as advanced 40 and 100 gigabit Ethernet Learn about Ethernet's four basic elements and the IEEE standards Explore full-duplex Ethernet, Power over Ethernet, and Energy Efficient Ethernet Understand structured cabling systems and the components you need to build your Ethernet system Use Ethernet switches to expand and improve network design Delve into Ethernet performance, from specific channels to the entire network Get troubleshooting techniques for problems common to twisted-pair and fiber optic systems

802.11 Wireless Networks - Matthew Gast

2005-04-25

As we all know by now, wireless networks offer many advantages over fixed (or wired) networks. Foremost on that list is mobility, since going wireless frees you from the tether of an Ethernet cable at a desk. But that's just the tip of the cable-free iceberg. Wireless networks are also more flexible, faster and easier for you to use, and more affordable to deploy and maintain. The de facto standard for wireless networking is the 802.11 protocol, which includes Wi-Fi (the wireless standard known as 802.11b) and its faster cousin, 802.11g. With easy-to-install 802.11 network hardware available everywhere you turn, the choice seems simple, and many people dive into wireless computing with less thought and planning than they'd give to a wired network. But it's wise to be familiar with both the capabilities and risks associated with the 802.11 protocols. And *802.11 Wireless Networks: The Definitive Guide, 2nd Edition* is the perfect place to start. This updated edition

covers everything you'll ever need to know about wireless technology. Designed with the system administrator or serious home user in mind, it's a no-nonsense guide for setting up 802.11 on Windows and Linux. Among the wide range of topics covered are discussions on: deployment considerations network monitoring and performance tuning wireless security issues how to use and select access points network monitoring essentials wireless card configuration security issues unique to wireless networks With wireless technology, the advantages to its users are indeed plentiful. Companies no longer have to deal with the hassle and expense of wiring buildings, and households with several computers can avoid fights over who's online. And now, with *802.11 Wireless Networks: The Definitive Guide, 2nd Edition*, you can integrate wireless technology into your current infrastructure with the utmost confidence.

CCIE Wireless v3 Study Guide - Carlos Alcantara

2018-11-27

Thoroughly prepare for the revised Cisco CCIE Wireless v3.x certification exams Earning Cisco CCIE Wireless certification demonstrates your broad theoretical knowledge of wireless networking, your strong understanding of Cisco WLAN technologies, and the skills and technical knowledge required of an expert-level wireless network professional. This guide will help you efficiently master the knowledge and skills you'll need to succeed on both the CCIE Wireless v3.x written and lab exams. Designed to help you efficiently focus your study, achieve mastery, and build confidence, it focuses on conceptual insight, not mere memorization. Authored by five of the leading Cisco wireless network experts, it covers all areas of the CCIE Wireless exam blueprint, offering complete foundational knowledge for configuring and troubleshooting virtually any Cisco wireless deployment. Plan and design enterprise-class WLANs addressing issues ranging from RF boundaries to AP

positioning, power levels, and density Prepare and set up wireless network infrastructure, including Layer 2/3 and key network services Optimize existing wired networks to support wireless infrastructure Deploy, configure, and troubleshoot Cisco IOS Autonomous WLAN devices for wireless bridging Implement, configure, and manage AireOS Appliance, Virtual, and Mobility Express Controllers Secure wireless networks with Cisco Identity Services Engine: protocols, concepts, use cases, and configuration Set up and optimize management operations with Prime Infrastructure and MSE/CMX Design, configure, operate, and troubleshoot WLANs with real-time applications [The WiFi Networking Book](#) - Gordon Colbach
2019-06-11

'The WiFi Networking Book: WLAN Standards: IEEE 802.11 bgn, 802.11n, 802.11ac and 802.11ax' starts from the ground up for a new user and does a gradual progression into the technical details around IEEE 802.11 Wireless

Lan communications standard. The book details the 'legacy' 802.11 stack (a/b/g) and also goes into the latest wave of 802.11 standards - 802.11n, ac and ax. Introduction A wireless LAN (WLAN) is a data transmission system designed to provide location-independent network access between computing devices by using radio waves rather than a cable infrastructure . In the corporate enterprise, wireless LANs are usually implemented as the final link between the existing wired network and a group of client computers, giving these users wireless access to the full resources and services of the corporate network across a building or campus setting. The widespread acceptance of WLANs depends on industry standardization to ensure product compatibility and reliability among the various manufacturers. The 802.11 specification as a standard for wireless LANs was ratified by the Institute of Electrical and Electronics Engineers (IEEE) in the year 1997. This version of 802.11 provides for 1 Mbps and 2 Mbps data rates and a

set of fundamental signaling methods and other services. Like all IEEE 802 standards, the 802.11 standards focus on the bottom two levels the ISO model, the physical layer and link layer. Any LAN application, network operating system, protocol, including TCP/IP and Novell NetWare, will run on an 802.11-compliant WLAN as easily as they run over Ethernet. What is inside Overview on Wireless Technologies, Usage Scenarios and related Taxonomy Wireless LAN and 802.11 WiFi: Architecture, 802.11 Physical Layer, 802.11 Data Link Layer, 802.11 Security 802.11 Standards: 802.11b, 802.11a, 802.11g, 802.11n MIMO, 802.11ac - Wave 1 and Wave 2, 802.11ax WiMax Networks: Forum, WiMax Protocol, WiMax Architecture **802.11 Security** - Bruce Potter 2002-12-17 Discusses the fundamentals of wireless security and of the popular wireless LAN protocol 802.11, covering topics including station security configurations, network weaknesses, access points, and client security.

Deploying Voice Over Wireless LANs - James T. Geier 2007

Master the design, installation, management and troubleshooting of a voice network over a wireless LAN from industry leader Jim Geier.

802.11 Wireless Networks: The Definitive Guide: Enabling Mobility with Wi-Fi Networks -

Matthew S. Gast 2017-04-25

The de facto standard for wireless networking is the 802.11 protocol, which includes Wi-Fi—the wireless standard based on 802.11b, 802.11g, and 802.11n protocols. With easy-to-install 802.11 network hardware available everywhere you turn, the choice seems simple, and many people dive into wireless computing with less thought and planning than they'd give to a wired network. But it's wise to be familiar with both the capabilities and risks associated with the 802.11 protocols. And *802.11 Wireless Networks: The Definitive Guide, 3rd Edition* is the perfect place to start. This thoroughly updated edition covers everything you'll need to

know about wireless technology. Designed with system administrators and serious home users in mind, this book is a no-nonsense guide for setting up 802.11 on Windows and Linux.

How Secure is Your Wireless Network? - Lee Barken 2004

Provides instructions on ways to insure security in wireless LAN systems with information on war driving, firewalls, WPA, 802.1x, VPN, and radio frequency.

Automotive Ethernet - Colt Correa 2014-10-20

Featuring a foreword by Bob Metcalfe, inventor of Ethernet! Ethernet, the most widely-used local area networking technology in the world, is moving from the server rooms of automobile manufacturers to their vehicles. As the quantity and variety of electronic devices in cars continues to grow, Ethernet promises to improve performance and enable increasingly powerful and useful applications in vehicles. Now, from Intrepid Control Systems (www.intrepidcs.com) - a leader in the world of automotive networking

and diagnostic tools - comes the first book to describe the technology behind the biggest revolution in automotive networking since the 1980s: *Automotive Ethernet - The Definitive Guide* describes the fundamentals of networking, data link and physical layers of industry-standard Ethernet variants, as well as the new (one twisted pair 100Base Ethernet) 1TPCE or BroadR-Reach technology developed by Broadcom specifically for vehicle use. Topics covered include: in-vehicle networking requirements, comparing Ethernet to CAN and other existing networks (such as LIN, MOST, and FlexRay), TCP/UDP, IPv4/IPv6 and Diagnostics over IP (DoIP). Also covered are the Audio Video Bridging standards used to transport media over Ethernet: Stream Reservation Protocol or SRP (802.1Qat), Forward-Queueing and Time-Sensitive Streams or FQTSS (802.1Qav), Timing and Synchronization for Time-Sensitive Applications or gPTP (802.1as), and Transport Protocol for

Time-Sensitive Applications or AVTP (IEEE 1722), and more. *Automotive Ethernet: The Definitive Guide* will also be available as an ebook for your Kindle!

Next Generation Wireless LANs - Eldad Perahia
2013-05-23

If you've been searching for a way to get up to speed on IEEE 802.11n and 802.11ac WLAN standards without having to wade through the entire specification, then look no further. This comprehensive overview describes the underlying principles, implementation details and key enhancing features of 802.11n and 802.11ac. For many of these features the authors outline the motivation and history behind their adoption into the standard. A detailed discussion of key throughput, robustness, and reliability enhancing features (such as MIMO, multi-user MIMO, 40/80/160 MHz channels, transmit beamforming and packet aggregation) is given, plus clear summaries of issues surrounding legacy

interoperability and coexistence. Now updated and significantly revised, this 2nd edition contains new material on 802.11ac throughput, including revised chapters on MAC and interoperability, plus new chapters on 802.11ac PHY and multi-user MIMO. An ideal reference for designers of WLAN equipment, network managers, and researchers in the field of wireless communications.

Real 802.11 Security - Jon Edney 2004

This book describes new approaches to wireless security enabled by the recent development of new core technologies for Wi-Fi/802.11. It shows how the new approaches work and how they should be applied for maximum effect. For system administrators, product designers, or advanced home users.

Hacking Wireless Networks For Dummies -

Kevin Beaver 2011-05-09

Become a cyber-hero - know the common wireless weaknesses "Reading a book like this one is a worthy endeavor toward becoming an

experienced wireless security professional." -- Devin Akin - CTO, The Certified Wireless Network Professional(CWNP) Program Wireless networks are so convenient - not only for you, but also for those nefarious types who'd like to invade them. The only way to know if your system can be penetrated is to simulate an attack. This book shows you how, along with how to strengthen any weakspots you find in your network's armor. Discover how to: Perform ethical hacks without compromising a system Combat denial of service and WEP attacks Understand how invaders think Recognize the effects of different hacks Protect against war drivers and rogue devices

Bluetooth Low Energy - Robin Heydon

2012-10-26

The First Complete Guide to Bluetooth Low Energy: How It Works, What It Can Do, and How to Apply It A radical departure from conventional Bluetooth technology, Bluetooth low energy (BLE) enables breakthrough wireless

applications in industries ranging from healthcare to transportation. Running on a coin-sized battery, BLE can operate reliably for years, connecting and extending everything from personal area network devices to next-generation sensors. Now, one of the standard's leading developers has written the first comprehensive, accessible introduction to BLE for every system developer, designer, and engineer. Robin Heydon, a member of the Bluetooth SIG Hall of Fame, has brought together essential information previously scattered through multiple standards documents, sharing the context and expert insights needed to implement high-performance working systems. He first reviews BLE's design goals, explaining how they drove key architectural decisions, and introduces BLE's innovative usage models. Next, he thoroughly covers how the two main parts of BLE, the controller and host, work together, and then addresses key issues from security and profiles

through testing and qualification. This knowledge has enabled the creation of Bluetooth Smart and Bluetooth Smart Ready devices. This guide is an indispensable companion to the official BLE standards documents and is for every technical professional and decision-maker considering BLE, planning BLE products, or transforming plans into working systems. Topics Include BLE device types, design goals, terminology, and core concepts Architecture: controller, host, applications, and stack splits Usage models: presence detection, data broadcasting, connectionless models, and gateways Physical Layer: modulation, frequency band, radio channels, power, tolerance, and range Direct Test Mode: transceiver testing, hardware interfaces, and HCI Link Layer: state machine, packets, channels, broadcasting, encryption, and optimization HCI: physical/logical interfaces, controller setup, and connection management L2CAP: channels and packet structure, and LE signaling channels

Attributes: grouping, services, characteristics, and protocols
Security: pairing, bonding, and data signing
Generic Access Profiles: roles, modes, procedures, security modes, data advertising, and services
Applications, devices, services, profiles, and peripherals
Testing/qualification: starting projects, selecting features, planning, testing, compliance, and more

The Essential Guide to Telecommunications

- Annabel Z. Dodd 2019-03-19

“Annabel Dodd has cogently untangled the wires and switches and technobabble of the telecommunications revolution and explained how the introduction of the word ‘digital’ into our legislative and regulatory lexicon will affect consumers, companies and society into the next millennium.” - United States Senator Edward J. Markey of Massachusetts; Member, U.S. Senate Subcommittee on Communications, Technology, Innovation, and the Internet
“Annabel Dodd has a unique knack for explaining complex

technologies in understandable ways. This latest revision of her book covers the rapid changes in the fields of broadband, cellular, and streaming technologies; newly developing 5G networks; and the constant changes happening in both wired and wireless networks. This book is a must-read for anyone who wants to understand the rapidly evolving world of telecommunications in the 21st century!” - David Mash, Retired Senior Vice President for Innovation, Strategy, and Technology, Berklee College of Music
Completely updated for current trends and technologies, The Essential Guide to Telecommunications, Sixth Edition, is the world’s top-selling, accessible guide to the fast-changing global telecommunications industry. Writing in easy-to-understand language, Dodd demystifies today’s most significant technologies, standards, architectures, and trends. She introduces leading providers worldwide, explains where they fit in the marketplace, and reveals their key strategies.

New topics covered in this edition include: LTE Advanced and 5G wireless, modern security threats and countermeasures, emerging applications, and breakthrough techniques for building more scalable, manageable networks. Gain a practical understanding of modern cellular, Wi-Fi, Internet, cloud, and carrier technologies Discover how key technical, business, and regulatory innovations are changing the industry See how streaming video, social media, cloud computing, smartphones, and the Internet of Things are transforming networks Explore growing concerns about security and privacy, and review modern strategies for detecting and mitigating network breaches Learn how Software Defined Networks (SDN) and Network Function Virtualization (NFV) add intelligence to networks, enabling automation, flexible configurations, and advanced networks Preview cutting-edge, telecom-enabled applications and gear-from mobile payments to drones Whether you're an

aspiring network engineer looking for a broad understanding of the industry, or a salesperson, marketer, investor, or customer, this indispensable guide provides everything you need to know about telecommunications right now. This new edition is ideal for both self-study and classroom instruction. Register your product for convenient access to downloads, updates, and/or corrections as they become available.

Linux Kernel Networking - Rami Rosen
2014-02-28

Linux Kernel Networking takes you on a guided in-depth tour of the current Linux networking implementation and the theory behind it. Linux kernel networking is a complex topic, so the book won't burden you with topics not directly related to networking. This book will also not overload you with cumbersome line-by-line code walkthroughs not directly related to what you're searching for; you'll find just what you need, with in-depth explanations in each chapter and a quick reference at the end of each chapter.

Linux Kernel Networking is the only up-to-date reference guide to understanding how networking is implemented, and it will be indispensable in years to come since so many devices now use Linux or operating systems based on Linux, like Android, and since Linux is so prevalent in the data center arena, including Linux-based virtualization technologies like Xen and KVM.

Guide to Securing Legacy IEEE 802.11 Wireless Networks - Karen Scarfone 2008-07-31

The purpose of this document is to provide guidance to organizations in securing their legacy IEEE 802.11 wireless local area networks (WLAN) that cannot use IEEE 802.11i. Details on securing WLANs capable of IEEE 802.11i can be found in NIST Special Publication (SP) 800-97. Recommendations for securely using external WLANs, such as public wireless access points, are outside the scope of this document.

Next Generation Wireless LANs - Eldad Perahia 2008-08-28

This exciting and comprehensive overview describes the underlying principles, implementation details, and key enhancing features of the new IEEE 802.11n standard, which has been created to significantly improve network throughput. A detailed discussion of important strength and reliability enhancing features is given in addition to a clear summary of any issues. Advanced topics are also covered. With numerous examples and simulation results included to highlight the benefits of the new features, this is an ideal reference for designers of Wireless Local Area Network (LAN) equipment, and network managers whose systems adopt the new standard. It is also a useful distillation of 802.11n technology for graduate students and researchers in the field of wireless communication.

Linux Networking Cookbook - Carla Schroder 2007-11-26

This soup-to-nuts collection of recipes covers everything you need to know to perform your job

as a Linux network administrator, whether you're new to the job or have years of experience. With *Linux Networking Cookbook*, you'll dive straight into the gnarly hands-on work of building and maintaining a computer network. Running a network doesn't mean you have all the answers. Networking is a complex subject with reams of reference material that's difficult to keep straight, much less remember. If you want a book that lays out the steps for specific tasks, that clearly explains the commands and configurations, and does not tax your patience with endless ramblings and meanderings into theory and obscure RFCs, this is the book for you. You will find recipes for: Building a gateway, firewall, and wireless access point on a Linux network Building a VoIP server with Asterisk Secure remote administration with SSH Building secure VPNs with OpenVPN, and a Linux PPTP VPN server Single sign-on with Samba for mixed Linux/Windows LANs Centralized network directory with OpenLDAP

Network monitoring with Nagios or MRTG Getting acquainted with IPv6 Setting up hands-free networks installations of new systems Linux system administration via serial console And a lot more. Each recipe includes a clear, hands-on solution with tested code, plus a discussion on why it works. When you need to solve a network problem without delay, and don't have the time or patience to comb through reference books or the Web for answers, *Linux Networking Cookbook* gives you exactly what you need.

IEEE 802.11 Handbook - Bob O'Hara 2005 The first generation 802.11 wireless market, once struggling to expand, has spread from largely vertical applications such as healthcare, point of sale, and inventory management to become much more broad as a general networking technology being deployed in offices, schools, hotel guest rooms, airport departure areas, airplane cabins, entertainment venues, coffee shops, restaurants, and homes. This has led to the tremendous growth of new sources of

IEEE 802.11 devices. IEEE 802.11 equipment is now moving into its second stage, where the wireless LAN is being treated as a large wireless communication system. As a system, there is more to consider than simply the communication over the air between a single access point and the associated mobile devices. This has led to innovative changes in the equipment that makes up a wireless LAN. The IEEE 802.11 Handbook: A Designer's Companion, Second Edition is for the system network architects, hardware engineers and software engineers at the heart of this second stage in the evolution of 802.11 wireless LANs and for those designers that will take 802.11 to the next stage.

CWNA - David D. Coleman 2014-09-11

NOTE: The exam this book covered, CWNA: Certified Wireless Network Administrator: Exam CWNA-106, was retired by CWNP in 2018 and is no longer offered. For coverage of the current exam CWNA: Certified Wireless Network Administrator - Exam CWNA-107, 5th Edition,

please look for the latest edition of this guide: CWNA: Certified Wireless Network Administrator Study Guide - Exam CWNA-107, 5th Edition (9781119425786). The CWNA: Certified Wireless Network Administrator Official Study Guide: Exam CWNA-106 is the officially endorsed CWNA test prep for the leading wireless certification. Expert authors and CWNEs David D. Coleman and David A. Westcott guide readers through the skills and concepts candidates need to know for the exam, using hands-on methods to convey an in-depth understanding of wireless network administration. Readers should have a basic knowledge of Radio Frequency behavior, experience with WLAN hardware peripherals and protocols, and an interest in designing, installing, and managing wireless networks. Wireless technology is taking over the tech industry, and the demand for competent, certified professionals is far outpacing the supply. A CWNA certification denotes advanced-

level proficiency in the field, with a complete understanding of wireless LAN components, features, and function—but the only way to pass the exam is to truly understand the material, not just the talking points. The CWNA: Certified Wireless Network Administrator Official Study Guide thoroughly covers each exam objective, and includes review questions, assessment tests, and exercises to test your skills. Topics include: Radio Frequency technologies, regulations, and standards 802.11 protocols Network implementation and security 802.11 RF site surveying Readers also get access to a suite of study tools including an electronic test engine with hundreds or practice test questions, electronic flashcards, exercise peripherals, and industry White Papers, which serve as valuable backup references. In preparing for the CWNA-106 exam, the ideal study guide should cover all of the exam topics in depth—CWNA: Certified Wireless Network Administrator Official Study Guide does just that, making it an

excellent, comprehensive study guide. *Bluetooth 1.1* - Jennifer Bray 2001-12-17 The authoritative, in-depth guide to the new Bluetooth 1.1 specification Bluetooth 1.1's dramatic improvements in interoperability and reliability Includes thoroughly revised coverage of Bluetooth security and power conservation New Bluetooth profiles—including the long-awaited Personal Area Networking profile! The first complete guide to the new Bluetooth 1.1 wireless specification! The Bluetooth specification has been updated to deliver dramatic improvements in both reliability and interoperability. Bluetooth 1.1: Connect Without Cables, Second Edition updates the industry's #1 Bluetooth guide to cover these critical new enhancements—and to offer detailed guidance on every aspect of Bluetooth 1.1 development. Bluetooth SIG committee members Jennifer Bray and Charles Sturman place Bluetooth 1.1 in context, covering markets, applications, complementary technologies, key development

issues, and explaining every goal of the new release. They review the components of a Bluetooth system, explain how Bluetooth connections work, introduce essential concepts such as piconets and scatternets, and cover the Bluetooth protocol stack in detail from top to bottom. Interoperability between 1.0b and 1.1 Details of 1.1 improvements with explanations of the reasons behind each change Important changes to Bluetooth low-power modes, encryption, and authentication Bridging Ethernet and Bluetooth with Bluetooth Network Encapsulation Protocol How to use Universal Plug and Play with the Bluetooth protocol stack Profiles which will bring new products including: Human Interface Devices, Hands-Free Phone usage, Basic Printing, Basic Imaging, and Hard Copy Cable Replacement Technologies used by Bluetooth: OBEX, WAP, GSM TS07.10, UPnP, Q.931, and UUIDs Comparison of related technologies: DECT, IrDA, Home RF, HiperLAN, and 802.11 Whether you're experienced with

V.1.0 or working with Bluetooth for the first time, Bluetooth 1.1: Connect Without Cables, Second Edition is your definitive resource for building interoperable, reliable wireless applications—right now!

Wireless Network Security A Beginner's

Guide - Tyler Wrightson 2012-05-06

Security Smarts for the Self-Guided IT Professional Protect wireless networks against all real-world hacks by learning how hackers operate. Wireless Network Security: A Beginner's Guide discusses the many attack vectors that target wireless networks and clients—and explains how to identify and prevent them. Actual cases of attacks against WEP, WPA, and wireless clients and their defenses are included. This practical resource reveals how intruders exploit vulnerabilities and gain access to wireless networks. You'll learn how to securely deploy WPA2 wireless networks, including WPA2-Enterprise using digital certificates for authentication. The book

provides techniques for dealing with wireless guest access and rogue access points. Next-generation wireless networking technologies, such as lightweight access points and cloud-based wireless solutions, are also discussed. Templates, checklists, and examples give you the hands-on help you need to get started right away. *Wireless Network Security: A Beginner's Guide* features: Lingo--Common security terms defined so that you're in the know on the job IMHO--Frank and relevant opinions based on the author's years of industry experience In Actual Practice--Exceptions to the rules of security explained in real-world contexts Your Plan--Customizable checklists you can use on the job now Into Action--Tips on how, why, and when to apply new skills and techniques at work This is an excellent introduction to wireless security and their security implications. The technologies and tools are clearly presented with copious illustrations and the level of presentation will accommodate the wireless security neophyte

while not boring a mid-level expert to tears. If the reader invests the time and resources in building a lab to follow along with the text, s/he will develop a solid, basic understanding of what "wireless security" is and how it can be implemented in practice. This is definitely a recommended read for its intended audience. - Richard Austin, IEEE CIPHER, IEEE Computer Society's TC on Security and Privacy (E109, July 23, 2012)

Wi-Foo - Andrew A. Vladimirov 2004

The definitive guide to penetrating and defending wireless networks. Straight from the field, this is the definitive guide to hacking wireless networks. Authored by world-renowned wireless security auditors, this hands-on, practical guide covers everything you need to attack -- or protect -- any wireless network. The authors introduce the 'battlefield, ' exposing today's 'wide open' 802.11 wireless networks and their attackers. One step at a time, you'll master the attacker's entire arsenal of hardware

and software tools: crucial knowledge for crackers and auditors alike. Next, you'll learn systematic countermeasures for building hardened wireless 'citadels' including cryptography-based techniques, authentication, wireless VPNs, intrusion detection, and more. Coverage includes: Step-by-step walkthroughs and explanations of typical attacks Building wireless hacking/auditing toolkit: detailed recommendations, ranging from discovery tools to chipsets and antennas Wardriving: network mapping and site surveying Potential weaknesses in current and emerging standards, including 802.11i, PPTP, and IPSec Implementing strong, multilayered defenses Wireless IDS: why attackers aren't as untraceable as they think Wireless hacking and the law: what's legal, what isn't If you're a hacker or security auditor, this book will get you in. If you're a netadmin, sysadmin, consultant, or home user, it will keep everyone else out.

Emerging Wireless LANs, Wireless PANs,

and Wireless MANs - Yang Xiao 2009-03-27
A thoroughly up-to-date resource on IEEE 802 wireless standards Readers can turn to this book for complete coverage of the current and emerging IEEE 802 wireless standards/drafts, including: 802.11 Wireless LANs 802.15.1 Bluetooth and 801.15.2 802.15.3 Wireless PANs 802.15.4 and 802.15.5 Wireless PANs 802.16 Wireless MANs Emerging Wireless LANs, Wireless PANs, and Wireless MANs is a unique, convenient resource for engineers, scientists, and researchers in academia and industry. It also serves as a valuable textbook for related courses at the upper-undergraduate and graduate levels.

Networking Bible - Barrie Sosinsky 2009-08-13
Everything you need to set up and maintain large or small networks Barrie Sosinsky
Networking Bible Create a secure network for home or enterprise Learn basic building blocks and standards Set up for broadcasting, streaming, and more The book you need to

succeed! Your A-Z guide to networking essentials Whether you're setting up a global infrastructure or just networking two computers at home, understanding of every part of the process is crucial to the ultimate success of your system. This comprehensive book is your complete, step-by-step guide to networking from different architectures and hardware to security, diagnostics, Web services, and much more. Packed with practical, professional techniques and the very latest information, this is the go-to resource you need to succeed. Demystify the basics: network stacks, bus architectures, mapping, and bandwidth Get up to speed on servers, interfaces, routers, and other necessary hardware Explore LANs, WANs, Wi-Fi, TCP/IP, and other types of networks Set up domains, directory services, file services, caching, and mail protocols Enable broadcasting, multicasting, and streaming media Deploy VPNs, firewalls, encryption, and other security methods Perform diagnostics and troubleshoot your

systems

802.11ac: A Survival Guide - Matthew S. Gast
2013-07-23

The next frontier for wireless LANs is 802.11ac, a standard that increases throughput beyond one gigabit per second. This concise guide provides in-depth information to help you plan for 802.11ac, with technical details on design, network operations, deployment, and monitoring. Author Matthew Gast—an industry expert who led the development of 802.11-2012 and security task groups at the Wi-Fi Alliance—explains how 802.11ac will not only increase the speed of your network, but its capacity as well. Whether you need to serve more clients with your current level of throughput, or serve your existing client load with higher throughput, 802.11ac is the solution. This book gets you started. Understand how the 802.11ac protocol works to improve the speed and capacity of a wireless LAN Explore how beamforming increases speed capacity by

improving link margin, and lays the foundation for multi-user MIMO Learn how multi-user MIMO increases capacity by enabling an AP to send data to multiple clients simultaneously Plan when and how to upgrade your network to 802.11ac by evaluating client devices, applications, and network connections

Backtrack 5 Wireless Penetration Testing -

Vivek Ramachandran 2011-09-09

Wireless has become ubiquitous in today's world. The mobility and flexibility provided by it makes our lives more comfortable and productive. But this comes at a cost - Wireless technologies are inherently insecure and can be easily broken. BackTrack is a penetration testing and security auditing distribution that comes with a myriad of wireless networking tools used to simulate network attacks and detect security loopholes. Backtrack 5 Wireless Penetration Testing Beginner's Guide will take you through the journey of becoming a Wireless hacker. You will learn various wireless testing methodologies

taught using live examples, which you will implement throughout this book. The engaging practical sessions very gradually grow in complexity giving you enough time to ramp up before you get to advanced wireless attacks. This book will take you through the basic concepts in Wireless and creating a lab environment for your experiments to the business of different lab sessions in wireless security basics, slowly turn on the heat and move to more complicated scenarios, and finally end your journey by conducting bleeding edge wireless attacks in your lab. There are many interesting and new things that you will learn in this book - War Driving, WLAN packet sniffing, Network Scanning, Circumventing hidden SSIDs and MAC filters, bypassing Shared Authentication, Cracking WEP and WPA/WPA2 encryption, Access Point MAC spoofing, Rogue Devices, Evil Twins, Denial of Service attacks, Viral SSIDs, Honeytrap and Hotspot attacks, Caffe Latte WEP Attack, Man-in-the-Middle

attacks, Evading Wireless Intrusion Prevention systems and a bunch of other cutting edge wireless attacks. If you were ever curious about what wireless security and hacking was all about, then this book will get you started by providing you with the knowledge and practical know-how to become a wireless hacker. Hands-on practical guide with a step-by-step approach to help you get started immediately with Wireless Penetration Testing

How to Accelerate Your Internet - Rob Flickenger 2006-10-01

Designing and Deploying 802.11 Wireless Networks - Jim Geier 2015-04-29

Designing and Deploying 802.11 Wireless Networks Second Edition A Practical Guide to Implementing 802.11n and 802.11ac Wireless Networks For Enterprise-Based Applications Plan, deploy, and operate high-performance 802.11ac and 802.11n wireless networks The new 802.11ac standard enables WLANs to

deliver significantly higher performance. Network equipment manufacturers have refocused on 802.11ac- and 802.11n-compliant solutions, rapidly moving older versions of 802.11 toward “legacy” status. Now, there’s a complete guide to planning, designing, installing, testing, and supporting 802.11ac and 802.11n wireless networks in any environment, for virtually any application. Jim Geier offers practical methods, tips, and recommendations that draw on his decades of experience deploying wireless solutions and shaping wireless standards. He carefully introduces 802.11ac’s fundamentally different design, site survey, implementation, and network configuration techniques, helping you maximize performance and avoid pitfalls. Geier organizes each phase of WLAN deployment into clearly defined steps, making the entire planning and deployment process easy to understand and execute. He illuminates key concepts and methods through realistic case studies based on

current Cisco products, while offering tips and techniques you can use with any vendor's equipment. To build your skills with key tasks, you'll find several hands-on exercises relying on free or inexpensive tools. Whether you're deploying an entirely new wireless network or migrating from older equipment, this guide contains all the expert knowledge you'll need to succeed. Jim Geier has 30 years of experience planning, designing, analyzing and implementing communications, wireless, and mobile systems. Geier is founder and Principal Consultant of Wireless-Nets, Ltd., providing wireless analysis and design services to product manufacturers. He is also president, CEO, and co-founder of Health Grade Networks, providing wireless network solutions to hospitals, airports, and manufacturing facilities. His books include the first edition of *Designing and Deploying 802.11n Wireless Networks* (Cisco Press); as well as *Implementing 802.1X Security Solutions* and *Wireless Networking Handbook*. Geier has been

active in the IEEE 802.11 Working Group and Wi-Fi Alliance; has chaired the IEEE Computer Society (Dayton Section) and various conferences; and served as expert witness in patent litigation related to wireless and cellular technologies. Review key 802.11 concepts, applications, markets, and technologies Compare ad hoc, mesh, and infrastructure WLANs and their components Consider the impact of radio signal interference, security vulnerabilities, multipath propagation, roaming, and battery limitations Thoroughly understand today's 802.11 standards in the context of actual network deployment and support Plan your deployment: scoping, staffing, schedules, budgets, risks, feasibility analysis, and requirements Architect access networks and distribution system for maximum reliability, manageability, and performance Make the right tradeoffs and decisions to optimize range, performance, and roaming Secure WLANs via encryption, authentication, rogue AP detection,

RF shielding, and policies Master design and site survey tools and methods for planning 802.11ac networks and migrations Efficiently install and test any 802.11ac or 802.11n wireless network Establish specialized support for wireless networks, including help desk operations Systematically troubleshoot connectivity, performance, and roaming issues Design efficient mesh networks and city-wide deployments

Zero Configuration Networking - Stuart Cheshire 2006

It used to be that two laptops, sitting side by side, couldn't communicate with each other; they may as well have been a thousand miles apart. But that was then, before the advent of Zero Configuration Networking technology. This amazing cross-platform open source technology automatically connects electronic devices on a network, allowing them to interoperate seamlessly-without any user configuration. So now you don't have to lift a finger! Needless to

say, it has completely changed the way people connect to devices and programs for printing, file sharing, and other activities. Zero Configuration Networking: The Definitive Guide walks you through this groundbreaking network technology, with a complete description of the protocols and ways to implement network-aware applications and devices. Written by two Zero Configuration Networking experts, including one of Apple's own computer scientists, the book covers more than just file sharing and printing. Zero Configuration Networking also enables activities such as music and photo sharing and automatic buddy discovery on Instant Messaging applications. In fact, Zero Configuration Networking can be used for virtually any device that can be controlled by a computer. And this handy guide has the inside scoop on all of its capabilities-and how you can easily apply them in your own environment. For the technically advanced, Zero Configuration Networking: The Definitive Guide examines the three core

technologies that make up Zero Configuration Networking: Link-Local Addressing, Multicast DNS, and DNS Service Discovery. It also reviews a series of APIs, including C-API, Java API, CFNetServices, and Cocoa's NSNetServices. Whether you want to understand how iTunes works, or you want to network a series of laptops and other devices at your office for maximum efficiency, you'll find all the answers in this authoritative guide.

Fundamentals of Wireless Communication -

David Tse 2005-05-26

This textbook takes a unified view of the fundamentals of wireless communication and explains cutting-edge concepts in a simple and intuitive way. An abundant supply of exercises make it ideal for graduate courses in electrical and computer engineering and it will also be of great interest to practising engineers.

802.11 Wireless Networks: The Definitive Guide -

Matthew S. Gast 2005-04-25

As we all know by now, wireless networks offer

many advantages over fixed (or wired) networks. Foremost on that list is mobility, since going wireless frees you from the tether of an Ethernet cable at a desk. But that's just the tip of the cable-free iceberg. Wireless networks are also more flexible, faster and easier for you to use, and more affordable to deploy and maintain. The de facto standard for wireless networking is the 802.11 protocol, which includes Wi-Fi (the wireless standard known as 802.11b) and its faster cousin, 802.11g. With easy-to-install 802.11 network hardware available everywhere you turn, the choice seems simple, and many people dive into wireless computing with less thought and planning than they'd give to a wired network. But it's wise to be familiar with both the capabilities and risks associated with the 802.11 protocols. And 802.11 Wireless Networks: The Definitive Guide, 2nd Edition is the perfect place to start. This updated edition covers everything you'll ever need to know about wireless technology. Designed with the system

administrator or serious home user in mind, it's a no-nonsense guide for setting up 802.11 on Windows and Linux. Among the wide range of topics covered are discussions on: deployment considerations network monitoring and performance tuning wireless security issues how to use and select access points network monitoring essentials wireless card configuration security issues unique to wireless networks With wireless technology, the advantages to its users are indeed plentiful. Companies no longer have to deal with the hassle and expense of wiring buildings, and households with several computers can avoid fights over who's online. And now, with 802.11 Wireless Networks: The Definitive Guide, 2nd Edition, you can integrate wireless technology into your current infrastructure with the utmost confidence.

BEEP - Marshall T. Rose 2002

A developer's handbook for understanding the BEEP framework and how to put it to best use.

The API's for C, Java, and Tel are explored.

802.11 Wireless Networks - Matthew Gast 2002

Designed to help administrators set up and debug an 802.11 wireless network, this comprehensive handbook examines the 802.11 protocol in detail, discusses a variety of Linux networking issues, and explores wide area networking using 802.11. Original. (Advanced)

Cellular Networks: Design and Operation - A Real World Perspective - Paul Bedell

2014-08-27

Suitable as both a professional trade reference and textbook for anyone interested in cellular technology, Cellular Networks: Design and Operation A Real World Perspective is the author's continuation of the invaluable Wireless Crash Course series originally published by McGraw-Hill, written by author and telecom expert Paul Bedell. Cellular Networks includes comprehensive information about the design and operation of cellular networks. The information included in this book is relevant to anyone: ?

Teaching cellular technology classes or studying the industry Working at companies that manufacture end user devices like cell phones and tablets; such as Apple, Samsung, Blackberry, Kyocera, LG and others ? Working in the mobile application environment ? Employed by law firms that specialize in telecom and wireless ? Working for cellular carriers such as AT&T, Verizon, US Cellular, Sprint, T-Mobile, Cricket Wireless and others Working for equipment makers such as Alcatel Lucent, Ericsson, Fujitsu, Nokia Siemens, Commscope, Mobile Access, TE Written in an easily digestible

style, Bedell s Cellular Networks avoids confusing and unnecessary technical details, conveying to readers well-researched, real-world data the average person will understand and will want to read! Instead of being bombarded with theoretical jargon, readers will get a clear picture of how cellular networks are designed, how they work, what equipment and components are vital to their operation, and how these components work together to create cellular network service. The book is a must-have primer for anyone and everyone who needs or wants a solid foundation in cellular technology.