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BXPLQY - BURCH HAMMOND

Updated with the latest advances from the field, **GUIDE TO COMPUTER FORENSICS AND INVESTIGATIONS**, Fifth Edition combines all-encompassing topic coverage and authoritative information from seasoned experts to deliver the most comprehensive forensics resource available. This proven author team's wide ranging areas of expertise mirror the breadth of coverage provided in the book, which focuses on techniques and practices for gathering and analyzing evidence used to solve crimes involving computers. Providing clear instruction on the tools and techniques of the trade, it introduces readers to every step of the computer forensics investigation—from lab set-up to testifying in court. It also details step-by-step guidance on how to use current forensics software. Appropriate for learners new to the field, it is also an excellent refresher and technology update for professionals in law enforcement, investigations, or computer security. Important Notice: Media content referenced within the product description or

the product text may not be available in the ebook version.

Today's networks are required to support an increasing array of real-time communication methods. Video chat and live resources put demands on networks that were previously unimagined. Written to be accessible to all, **Fundamentals of Communications and Networking**, Third Edition helps readers better understand today's networks and the way they support the evolving requirements of different types of organizations. While displaying technical depth, this new edition presents an evolutionary perspective of data networking from the early years to the local area networking boom, to advanced IP data networks that support multimedia and real-time applications. The Third Edition is loaded with real-world examples, network designs, and network scenarios that provide the reader with a wealth of data networking information and practical implementation tips. Labs: Lab 1: Assessing the Physical and Logical Network Infrastructure Lab 2: Analyzing Data Link and Network Layer Traffic with Wireshark Lab 3: Analyz-

ing Transport and Application Layer Traffic with Wireshark Lab 4: Configuring a Layer 2 Network with the Spanning Tree Protocol Lab 5: Configuring a Layer 3 Network with Dynamic Routing Protocols Lab 6: Designing a Network Topology with GNS3 Lab 7: Configuring an SNMP Manager and Alerts Lab 8: Monitoring and Auditing Network Activity Lab 9: Implementing a Layered Security Solution on the Network Lab 10: Troubleshooting Common Network Issue

This is the eBook version of the print title. Note that the eBook may not provide access to the practice test software that accompanies the print book. Access to the companion files are available through product registration at Pearson IT Certification, or see the instructions in the back pages of your eBook. Learn, prepare, and practice for CompTIA Security+ SY0-501 exam success with this CompTIA approved Cert Guide from Pearson IT Certification, a leader in IT certification learning and a CompTIA Authorized Platinum Partner. · Master CompTIA Security+ SY0-501 exam topics · Assess your knowledge with chapter-ending quizzes · Review key concepts with exam preparation tasks · Practice with realistic exam questions CompTIA Security+ SY0-501 Cert Guide is a best-of-breed exam study guide. Best-selling author and expert instructor David L. Prowse shares preparation hints and test-taking tips, helping you identify areas of weakness and improve both your conceptual knowledge and hands-on skills. Material is presented in a concise manner, focusing on increasing your understanding and retention of exam topics. The book presents you with an organized test-preparation routine through the use of proven series elements and techniques. Exam topic lists make referencing easy. Chapter-ending chapter review activities help you

drill on key concepts you must know thoroughly. Review questions help you assess your knowledge, and a final preparation chapter guides you through tools and resources to help you craft your final study plan. Well regarded for its level of detail, assessment features, and challenging review questions and exercises, this CompTIA approved study guide helps you master the concepts and techniques that will enable you to succeed on the exam the first time. The CompTIA approved study guide helps you master all the topics on the Security+ exam, including · Core computer system security · OS hardening and virtualization · Application security · Network design elements · Networking ports, protocols, and threats · Network perimeter security · Physical security and authentication models · Access control · Vulnerability and risk assessment · Monitoring and auditing · Cryptography, including PKI · Redundancy and disaster recovery · Social Engineering · Policies and procedures

MQ Telemetry Transport (MQTT) is a messaging protocol that is lightweight enough to be supported by the smallest devices, yet robust enough to ensure that important messages get to their destinations every time. With MQTT devices such as smart energy meters, cars, trains, satellite receivers, and personal health care devices can communicate with each other and with other systems or applications. This IBM® Redbooks® publication introduces MQTT and takes a scenario-based approach to demonstrate its capabilities. It provides a quick guide to getting started and then shows how to grow to an enterprise scale MQTT server using IBM WebSphere® MQ Telemetry. Scenarios demonstrate how to integrate MQTT with other IBM products, including WebSphere Message Broker. This book also provides typical usage patterns and

guidance on scaling a solution. The intended audience for this book ranges from new users of MQTT and telemetry to those readers who are looking for in-depth knowledge and advanced topics.

Leverage the power of Wireshark to troubleshoot your networking issues by using effective packet analysis techniques and performing improved protocol analysis

About This Book Gain hands-on experience of troubleshooting errors in TCP/IP and SSL protocols through practical use cases

Identify and overcome security flaws in your network to get a deeper insight into security analysis

This is a fast-paced book that focuses on quick and effective packet captures through practical examples and exercises

Who This Book Is For If you are a network or system administrator who wants to effectively capture packets, a security consultant who wants to audit packet flows, or a white hat hacker who wants to view sensitive information and remediate it, this book is for you. This book requires decoding skills and a basic understanding of networking.

What You Will Learn Utilize Wireshark's advanced features to analyze packet captures

Locate the vulnerabilities in an application server

Get to know more about protocols such as DHCPv6, DHCP, DNS, SNMP, and HTTP with Wireshark

Capture network packets with tcpdump and snoop with examples

Find out about security aspects such as OS-level ARP scanning

Set up 802.11 WLAN captures and discover more about the WAN protocol

Enhance your troubleshooting skills by understanding practical TCP/IP handshake and state diagrams

In Detail Wireshark provides a very useful way to decode an RFC and examine it. The packet captures displayed in Wireshark give you an insight into the security and flaws of different

protocols, which will help you perform the security research and protocol debugging. The book starts by introducing you to various packet analyzers and helping you find out which one best suits your needs. You will learn how to use the command line and the Wireshark GUI to capture packets by employing filters. Moving on, you will acquire knowledge about TCP/IP communication and its use cases. You will then get an understanding of the SSL/TLS flow with Wireshark and tackle the associated problems with it. Next, you will perform analysis on application-related protocols. We follow this with some best practices to analyze wireless traffic. By the end of the book, you will have developed the skills needed for you to identify packets for malicious attacks, intrusions, and other malware attacks.

Style and approach This is an easy-to-follow guide packed with illustrations and equipped with lab exercises to help you reproduce scenarios using a sample program and command lines.

Penetration testers simulate cyber attacks to find security weaknesses in networks, operating systems, and applications. Information security experts worldwide use penetration techniques to evaluate enterprise defenses. In *Penetration Testing*, security expert, researcher, and trainer Georgia Weidman introduces you to the core skills and techniques that every pentester needs. Using a virtual machine-based lab that includes Kali Linux and vulnerable operating systems, you'll run through a series of practical lessons with tools like Wireshark, Nmap, and Burp Suite. As you follow along with the labs and launch attacks, you'll experience the key stages of an actual assessment—including information gathering, finding exploitable vulnerabilities, gaining access to systems, post exploitation, and more. Learn how to:

- Crack pass-

words and wireless network keys with brute-forcing and wordlists -Test web applications for vulnerabilities -Use the Metasploit Framework to launch exploits and write your own Metasploit modules -Automate social-engineering attacks -Bypass antivirus software -Turn access to one machine into total control of the enterprise in the post exploitation phase You'll even explore writing your own exploits. Then it's on to mobile hacking—Weidman's particular area of research—with her tool, the Smartphone Pentest Framework. With its collection of hands-on lessons that cover key tools and strategies, Penetration Testing is the introduction that every aspiring hacker needs.

Based on over 20 years of analyzing networks and teaching key analysis skills, this Second Edition covers the key features and functions of Wireshark version 2. This book includes 46 Labs and end-of-chapter Challenges to help you master Wireshark for troubleshooting, security, optimization, application analysis, and more.

The Internet of Things is a technological revolution that represents the future of computing and communications. Even though efforts have been made to standardize Internet of Things devices and how they communicate with the web, a uniform architecture is not followed. This inconsistency directly impacts and limits security standards that need to be put in place to secure the data being exchanged across networks. Cryptographic Security Solutions for the Internet of Things is an essential reference source that discusses novel designs and recent developments in cryptographic security control procedures to improve the efficiency of existing security mechanisms that can help in securing sensors, devices, networks, communication,

and data in the Internet of Things. With discussions on cryptographic algorithms, encryption techniques, and authentication procedures, this book is ideally designed for managers, IT consultants, startup companies, ICT procurement managers, systems and network integrators, infrastructure service providers, students, researchers, and academic professionals.

Provides information on ways to use Wireshark to capture and analyze packets, covering such topics as building customized capture and display filters, graphing traffic patterns, and building statistics and reports.

An accessible introduction to cybersecurity concepts and practices Cybersecurity Essentials provides a comprehensive introduction to the field, with expert coverage of essential topics required for entry-level cybersecurity certifications. An effective defense consists of four distinct challenges: securing the infrastructure, securing devices, securing local networks, and securing the perimeter. Overcoming these challenges requires a detailed understanding of the concepts and practices within each realm. This book covers each challenge individually for greater depth of information, with real-world scenarios that show what vulnerabilities look like in everyday computing scenarios. Each part concludes with a summary of key concepts, review questions, and hands-on exercises, allowing you to test your understanding while exercising your new critical skills. Cybersecurity jobs range from basic configuration to advanced systems analysis and defense assessment. This book provides the foundational information you need to understand the basics of the field, identify your place within it, and start down the security certification path. Learn se-

curity and surveillance fundamentals Secure and protect remote access and devices Understand network topologies, protocols, and strategies Identify threats and mount an effective defense Cybersecurity Essentials gives you the building blocks for an entry level security certification and provides a foundation of cybersecurity knowledge

This fully revised and updated second edition provides a unique, in-depth look at the major business challenges and threats that are introduced when an organization's network is connected to the public Internet. It provides a comprehensive explanation of network security basics, including how hackers access online networks and the use of Firewalls and VPNs to provide security countermeasures. Using examples and exercises, this book incorporates hands-on activities to prepare the reader to disarm threats and prepare for emerging technologies and future attacks. Topics covered include: the basics of network security--exploring the details of firewall security and how VPNs operate; how to plan proper network security to combat hackers and outside threats; firewall configuration and deployment and managing firewall security; and how to secure local and internet communications with a VP. -

Malware analysis is big business, and attacks can cost a company dearly. When malware breaches your defenses, you need to act quickly to cure current infections and prevent future ones from occurring. For those who want to stay ahead of the latest malware, Practical Malware Analysis will teach you the tools and techniques used by professional analysts. With this book as your guide, you'll be able to safely analyze, debug, and disassemble any malicious software that comes your way. You'll learn how to:

- Set up a safe virtual environment to analyze malware
- Quickly extract network signatures and host-based indicators
- Use key analysis tools like IDA Pro, OllyDbg, and WinDbg
- Overcome malware tricks like obfuscation, anti-disassembly, anti-debugging, and anti-virtual machine techniques
- Use your newfound knowledge of Windows internals for malware analysis
- Develop a methodology for unpacking malware and get practical experience with five of the most popular packers
- Analyze special cases of malware with shellcode, C++, and 64-bit code

Hands-on labs throughout the book challenge you to practice and synthesize your skills as you dissect real malware samples, and pages of detailed dissections offer an over-the-shoulder look at how the pros do it. You'll learn how to crack open malware to see how it really works, determine what damage it has done, thoroughly clean your network, and ensure that the malware never comes back. Malware analysis is a cat-and-mouse game with rules that are constantly changing, so make sure you have the fundamentals. Whether you're tasked with securing one network or a thousand networks, or you're making a living as a malware analyst, you'll find what you need to succeed in Practical Malware Analysis.

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. Master Wireshark to solve real-world security problems If you don't already use Wireshark for a wide range of information security tasks, you will after this book. Mature and powerful, Wireshark is commonly used to find root cause of challenging network issues. This book extends that power to information security professionals, complete with a downloadable, virtual lab environment. Wireshark

for Security Professionals covers both offensive and defensive concepts that can be applied to essentially any InfoSec role. Whether into network security, malware analysis, intrusion detection, or penetration testing, this book demonstrates Wireshark through relevant and useful examples. Master Wireshark through both lab scenarios and exercises. Early in the book, a virtual lab environment is provided for the purpose of getting hands-on experience with Wireshark. Wireshark is combined with two popular platforms: Kali, the security-focused Linux distribution, and the Metasploit Framework, the open-source framework for security testing. Lab-based virtual systems generate network traffic for analysis, investigation and demonstration. In addition to following along with the labs you will be challenged with end-of-chapter exercises to expand on covered material. Lastly, this book explores Wireshark with Lua, the light-weight programming language. Lua allows you to extend and customize Wireshark's features for your needs as a security professional. Lua source code is available both in the book and online. Lua code and lab source code are available online through GitHub, which the book also introduces. The book's final two chapters greatly draw on Lua and TShark, the command-line interface of Wireshark. By the end of the book you will gain the following: Master the basics of Wireshark Explore the virtual w4sp-lab environment that mimics a real-world network Gain experience using the Debian-based Kali OS among other systems Understand the technical details behind network attacks Execute exploitation and grasp offensive and defensive activities, exploring them through Wireshark Employ Lua to extend Wireshark features and create useful scripts To sum up, the book content, labs

and online material, coupled with many referenced sources of PCAP traces, together present a dynamic and robust manual for information security professionals seeking to leverage Wireshark.

Publisher's Note: Products purchased from Third Party sellers are not guaranteed by the publisher for quality, authenticity, or access to any online entitlements included with the product. Manage your own robust, inexpensive cybersecurity testing environment This hands-on guide shows clearly how to administer an effective cybersecurity testing lab using affordable technologies and cloud resources. Build Your Own Cybersecurity Testing Lab: Low-cost Solutions for Testing in Virtual and Cloud-based Environments fully explains multiple techniques for developing lab systems, including the use of Infrastructure-as-Code, meaning you can write programs to create your labs quickly, without manual steps that could lead to costly and frustrating mistakes. Written by a seasoned IT security professional and academic, this book offers complete coverage of cloud and virtual environments as well as physical networks and automation. Included with the book is access to videos that demystify difficult concepts. Inside, you will discover how to:

- Gather network requirements and build your cybersecurity testing lab
- Set up virtual machines and physical systems from inexpensive components
- Select and configure the necessary operating systems
- Gain remote access through SSH, RDP, and other remote access protocols
- Efficiently isolate subnets with physical switches, routers, and VLANs
- Analyze the vulnerabilities and challenges of cloud-based infrastructures
- Handle implementation of systems on Amazon Web Services, Microsoft Azure, and Google Cloud Engine
- Maximize consistency and repeatability

using the latest automation tools

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

This book constitutes the thoroughly refereed post-conference proceedings of the 8th International Conference on Security for Information Technology and Communications, SECITC 2015, held in Bucharest, Romania, in June 2015. The 17 revised full papers were carefully reviewed and selected from 36 submissions. In addition with 5 invited talks the papers cover topics such as Cryptographic Algorithms and Protocols, Security Technologies for IT&C, Information Security Management, Cyber Defense, and Digital Forensics.

Prepare to take the Cisco Certified Network Associate (200-301 CCNA) exam and get to grips with the essentials of networking, security, and automation Key FeaturesSecure your future in network engineering with this intensive boot camp-style certification guideGain knowledge of the latest trends in Cisco networking and security and boost your career prospectsDesign and implement a wide range of networking technologies and services using Cisco solutionsBook Description In the dynamic technology landscape, staying on top of the latest technology trends is a must, especially if you want to build a career in network administration. Achieving CCNA 200-301 certification will validate your knowledge of networking concepts, and this book will help you to do just that. This exam guide focuses on the fundamentals to help you gain a high-level understanding

of networking, security, IP connectivity, IP services, programmability, and automation. Starting with the functions of various networking components, you'll discover how they are used to build and improve an enterprise network. You'll then delve into configuring networking devices using a command-line interface (CLI) to provide network access, services, security, connectivity, and management. The book covers important aspects of network engineering using a variety of hands-on labs and real-world scenarios that will help you gain essential practical skills. As you make progress, this CCNA certification study guide will help you get to grips with the solutions and technologies that you need to implement and administer a broad range of modern networks and IT infrastructures. By the end of this book, you'll have gained the confidence to pass the Cisco CCNA 200-301 exam on the first attempt and be well-versed in a variety of network administration and security engineering solutions. What you will learn

Understand the benefits of creating an optimal network
 Create and implement IP schemes in an enterprise network
 Design and implement virtual local area networks (VLANs)
 Administer dynamic routing protocols, network security, and automation
 Get to grips with various IP services that are essential to every network
 Discover how to troubleshoot networking devices

Who this book is for
 This guide is for IT professionals looking to boost their network engineering and security administration career prospects. If you want to gain a Cisco CCNA certification and start a career as a network security professional, you'll find this book useful. Although no knowledge about Cisco technologies is expected, a basic understanding of industry-level network fundamentals will help you grasp the topics

covered easily.

101 Labs - Book Series Experts agree that we retain only 10% of what we read but 90% of what we do. Perhaps this explains why the global pass rate for most IT exams is a ghastly 40%. This is where the 101 Labs book series can help. We are revolutionizing how IT people train for their exams and the real world with our Learn - By - Doing teaching method. 101 Labs' mission is to turn you into an IT expert by doing instead of reading. Using free software and free trials, our experts take you by the hand and walk you through every aspect of the protocols and technologies you will encounter in your IT career. We share our configuration tips and tricks with you as well as how to avoid the common mistakes many novice engineers make, which can quickly become career-ending. 101 Labs - CompTIA Network] This book is designed to help you pass the new N10-007 exam. It now features Performance-based questions (PBQs). These questions test your configuration and troubleshooting skills and add a new level of complexity to the exam. The only way to answer these types of questions is to have hands-on experience with the protocols and technology listed in the exam syllabus. The Network+ exam is probably the most useful exam in the IT industry. It equips you with all the necessary knowledge you need in order to work with other IT professionals and work in the IT industry. You learn TCP/IP, security, networking protocols and standards, best practices, subnetting and IP addressing, IPv6, troubleshooting tools and software, security, wireless, routing protocol basics, and much more. CompTIA presumes around 9-12 months of on-the-job experience for all of its exams, but of course, most of the students who take the exam don't have this. Even if

they are working in IT roles, such as in helpdesk or server support, they will have been exposed to only a tiny number of the skills tested in the exam. Doing all the labs in this book will give you that experience. Please use the free resources at www.101labs.net/resources which will help you with the labs. About the Author Paul Browning left behind a career in law enforcement in 2000 and started an IT consulting and training company. He's written over 15 best selling IT books and through his books, classroom courses, and websites he's trained tens of thousands of people from all walks of life. He's spent the last 16 years dedicated to training and teaching IT students from all walks of life to pass their exams and enjoy a rewarding career.

Instructor manual (for instructors only)

A clear and concise resource on Windows networking, perfect for IT beginners Did you know that nearly 85% of IT support roles require a good understanding of networking concepts? If you are looking to advance your IT career, you will need a foundational understanding of Windows networking. Network Fundamentals covers everything you need to know about network infrastructures, hardware, protocols, and services. You will learn everything you need to gain the highly in-demand Networking Fundamentals MTA Certification. This entry-level credential could be your first step into a rewarding, stable and lucrative IT career. This new Sybex guide covers the basics of networking starting from the "ground level," so no previous IT knowledge is required. Each chapter features approachable discussion of the latest networking technologies and concepts, closing with a quiz so you can test your knowledge before moving to the next section. Even if you are brand new to

computers, Network Fundamentals will guide you to confidence and mastery. Understand wired and wireless networks in every detail Learn everything you need to attain the Networking Fundamentals MTA Certification Test your knowledge with end-of-chapter quiz questions Understand internet protocol (IP) and categorize IPv4 addresses Work with networking services and area networks Define network infrastructures and network security, including intranets, extranets, and VPNs Beginning and established IT professionals looking to understand more about networking will gain the knowledge to create a network diagram and confidently explain basic networking concepts. Thanks to the features in this book, you will be able to apply your new networking skills in real world situations and feel confident when taking the certification test.

PART OF THE NEW JONES & BARTLETT LEARNING INFORMATION SYSTEMS SECURITY & ASSURANCE SERIES! Network Security, Firewalls, and VPNs provides a unique, in-depth look at the major business challenges and threats that are introduced when an organization's network is connected to the public Internet. Written by an industry expert, this book provides a comprehensive explanation of network security basics, including how hackers access online networks and the use of Firewalls and VPNs to provide security countermeasures. Using examples and exercises, this book incorporates hands-on activities to prepare the reader to disarm threats and prepare for emerging technologies and future attacks.

Take an in-depth tour of core Internet protocols and learn how they work together to move data packets from one network to another. With this concise book, you'll delve into the aspects of each protocol, including operation basics

and security risks, and learn the function of network hardware such as switches and routers. Ideal for beginning network engineers, each chapter in this book includes a set of review questions, as well as practical, hands-on lab exercises. Understand basic network architecture, and how protocols and functions fit together. Learn the structure and operation of the Eth.

Guide to TCP/IP: IPv6 and IPv4 introduces students to the concepts, terminology, protocols, and services that the Transmission Control Protocol/Internet Protocol (TCP/IP) suite uses to make the Internet work. This text stimulates hands-on skills development by not only describing TCP/IP capabilities, but also by encouraging students to interact with protocols. It provides the troubleshooting knowledge and tools that network administrators and analysts need to keep their systems running smoothly. Guide to TCP/IP covers topics ranging from traffic analysis and characterization, to error detection, security analysis and more. Both IPv6 and IPv4 are covered in detail. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Network analysis using Wireshark Cookbook contains more than 100 practical recipes for analyzing your network and troubleshooting problems in the network. This book provides you with simple and practical recipes on how to solve networking problems with a step-by-step approach. This book is aimed at research and development professionals, engineering and technical support, and IT and communications managers who are using Wireshark for network analysis and troubleshooting. This book requires a basic understanding of networking con-

cepts, but does not require specific and detailed technical knowledge of protocols or vendor implementations.

The Laboratory Manual is a valuable tool designed to enhance your lab experience. Lab activities, objectives, materials lists, step-by-step procedures, illustrations, and review questions are commonly found in a Lab Manual. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

"A system administrator's guide to VoIP technologies"--Cover.

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. For undergraduate and graduate networking and telecommunications courses that use hands-on labs. This text is also appropriate for anyone interested in understanding the installation and basic operation of software used in the field of networking. Gain hands-on experience working with networking tools Applied Networking Labs guides readers through the installation and basic operation of software used in the field of networking. Using this book in conjunction with a traditional Networking textbook will greatly reduce the time and effort required to prepare a course. It will also get students excited about the course and give them hands-on experience using various real-world networking tools. Teaching and Learning Experience This program presents a better teaching and learning experience—for you and your students. It will help: Make the connections: The Chapter Map aligns chapters in Applied Networking Labs to chapters from several popular networking textbooks so instructors and students can see which projects correlate to the con-

tent being presented in class. Gain real-world experience: Approximately 80 hands-on projects give students real-world experience using actual software that may not be presented in a traditional textbook. Get the picture: Project Screenshots will be unique due to who is taking it and when it is taken—any sharing or cheating will be obvious. Access further resources: The Website for this book contains useful resources, links, and files. Keep your course up-to-date: This edition is Microsoft Windows 7® Professional compliant, contains a Microsoft Windows Server 2012® chapter, expanded Linux coverage, and updated software versions for all projects.

An authoritative guide to investigating high-technology crimes Internet crime is seemingly ever on the rise, making the need for a comprehensive resource on how to investigate these crimes even more dire. This professional-level book—aimed at law enforcement personnel, prosecutors, and corporate investigators—provides you with the training you need in order to acquire the sophisticated skills and software solutions to stay one step ahead of computer criminals. Specifies the techniques needed to investigate, analyze, and document a criminal act on a Windows computer or network Places a special emphasis on how to thoroughly investigate criminal activity and now just perform the initial response Walks you through ways to present technically complicated material in simple terms that will hold up in court Features content fully updated for Windows Server 2008 R2 and Windows 7 Covers the emerging field of Windows Mobile forensics Also included is a classroom support package to ensure academic adoption, Mastering Windows Network Forensics and Investigation, 2nd Edition offers help

for investigating high-technology crimes. Go beyond layer 2 broadcast domains with this in-depth tour of advanced link and internetwork layer protocols, and learn how they enable you to expand to larger topologies. An ideal follow-up to Packet Guide to Core Network Protocols, this concise guide dissects several of these protocols to explain their structure and operation. This isn't a book on packet theory. Author Bruce Hartpence built topologies in a lab as he wrote this guide, and each chapter includes several packet captures. You'll learn about protocol classification, static vs. dynamic topologies, and reasons for installing a particular route. This guide covers: Host routing—Process a routing table and learn how traffic starts out across a network Static routing—Build router routing tables and understand how forwarding decisions are made and processed Spanning Tree Protocol—Learn how this protocol is an integral part of every network containing switches Virtual Local Area Networks—Use VLANs to address the limitations of layer 2 networks Trunking—Get an in-depth look at VLAN tagging and the 802.1Q protocol Routing Information Protocol—Understand how this distance vector protocol works in small, modern communication networks Open Shortest Path First—Discover why convergence times of OSPF and other link state protocols are improved over distance vectors

The ultimate hands-on guide to IT security and proactive defense The Network Security Test Lab is a hands-on, step-by-step guide to ultimate IT security implementation. Covering the full complement of malware, viruses, and other attack technologies, this essential guide walks you through the security assessment and penetration testing process, and provides the set-up guidance you need to

build your own security-testing lab. You'll look inside the actual attacks to decode their methods, and learn how to run attacks in an isolated sandbox to better understand how attacker-target systems, and how to build the defenses that stop them. You'll be introduced to tools like Wireshark, Networkminer, Nmap, Metasploit, and more as you discover techniques for defending against network attacks, social networking bugs, malware, and the most prevalent malicious traffic. You also get access to open source tools, demo software, and a bootable version of Linux to facilitate hands-on learning and help you implement your new skills. Security technology continues to evolve, and yet not a week goes by without news of a new security breach or a new exploit being released. The Network Security Test Lab is the ultimate guide when you are on the front lines of defense, providing the most up-to-date methods of thwarting would-be attackers. Get acquainted with your hardware, gear, and test platform. Learn how attackers penetrate existing security systems. Detect malicious activity and build effective defenses. Investigate and analyze attacks to inform defense strategy. The Network Security Test Lab is your complete, essential guide.

"Network analysis is the process of listening to and analyzing network traffic. Network analysis offers an insight into network communications to identify performance problems, locate security breaches, analyze application behavior, and perform capacity planning. Network analysis (aka "protocol analysis") is a process used by IT professionals who are responsible for network performance and security." -- p. 2.

Wireshark is the world's most popular network analyzer solution. Used for net-

work troubleshooting, forensics, optimization and more, Wireshark is considered one of the most successful open source projects of all time. Laura Chappell has been involved in the Wireshark project since its infancy (when it was called Ethernal) and is considered the foremost authority on network protocol analysis and forensics using Wireshark. This book consists of 16 labs and is based on the format Laura introduced to trade show audiences over ten years ago through her highly acclaimed "Packet Challenges." This book gives you a chance to test your knowledge of Wireshark and TCP/IP communications analysis by posing a series of questions related to a trace file and then providing Laura's highly detailed step-by-step instructions showing how Laura arrived at the answers to the labs. Book trace files and blank Answer Sheets can be downloaded from this book's supplement page (see <https://www.chappell-university.com/books>). Lab 1: Wireshark Warm-Up Objective: Get Comfortable with the Lab Process. Completion of this lab requires many of the skills you will use throughout this lab book. If you are a bit shaky on any answer, take time when reviewing the answers to this lab to ensure you have mastered the necessary skill(s). Lab 2: Proxy Problem Objective: Examine issues that relate to a web proxy connection problem. Lab 3: HTTP vs. HTTPS Objective: Analyze and compare HTTP and HTTPS communications and errors using inclusion and field existence filters. Lab 4: TCP SYN Analysis Objective: Filter on and analyze TCP SYN and SYN/ACK packets to determine the capabilities of TCP peers and their connections. Lab 5: TCP SEQ/ACK Analysis Objective: Examine and analyze TCP sequence and acknowledgment numbering and Wireshark's interpretation of non-sequential number-

ing patterns. Lab 6: You're Out of Order! Objective: Examine Wireshark's process of distinguishing between out-of-order packets and retransmissions and identify mis-identifications. Lab 7: Sky High Objective: Examine and analyze traffic captured as a host was redirected to a malicious site. Lab 8: DNS Warm-Up Objective: Examine and analyze DNS name resolution traffic that contains canonical name and multiple IP address responses. Lab 9: Hacker Watch Objective: Analyze TCP connections and FTP command and data channels between hosts. Lab 10: Timing is Everything Objective: Analyze and compare path latency, name resolution, and server response times. Lab 11: The News Objective: Analyze capture location, path latency, response times, and keepalive intervals between an HTTP client and server. Lab 12: Selective ACKs Objective: Analyze the process of establishing Selective acknowledgment (SACK) and using SACK during packet loss recovery. Lab 13: Just DNS Objective: Analyze, compare, and contrast various DNS queries and responses to identify errors, cache times, and CNAME (alias) information. Lab 14: Movie Time Objective: Use various display filter types, including regular expressions (regex), to analyze HTTP redirections, end-of-field values, object download times, errors, response times and more. Lab 15: Crafty Objective: Practice your display filter skills using "contains" operators, ASCII filters, and inclusion/exclusion filters, while analyzing TCP and HTTP performance parameters. Lab 16: Pattern Recognition Objective: Focus on TCP conversations and endpoints while analyzing TCP sequence numbers, Window Scaling, keep-alive, and Selective Acknowledgment capabilities. Convert Android to a powerful pentesting platform. Key Features Get up and run-

ing with Kali Linux NetHunter Connect your Android device and gain full control over Windows, OSX, or Linux devices Crack Wi-Fi passwords and gain access to devices connected over the same network collecting intellectual data Book Description Kali NetHunter is a version of the popular and powerful Kali Linux pentesting platform, designed to be installed on mobile devices. Hands-On Penetration Testing with Kali NetHunter will teach you the components of NetHunter and how to install the software. You'll also learn about the different tools included and how to optimize and use a package, obtain desired results, perform tests, and make your environment more secure. Starting with an introduction to Kali NetHunter, you will delve into different phases of the pentesting process. This book will show you how to build your penetration testing environment and set up your lab. You will gain insight into gathering intellectual data, exploiting vulnerable areas, and gaining control over target systems. As you progress through the book, you will explore the NetHunter tools available for exploiting wired and wireless devices. You will work through new ways to deploy existing tools designed to reduce the chances of detection. In the concluding chapters, you will discover tips and best practices for integrating security hardening into your Android ecosystem. By the end of this book, you will have learned to successfully use a mobile penetration testing device based on Kali NetHunter and Android to accomplish the same tasks you would traditionally, but in a smaller and more mobile form factor. What you will learn Choose and configure a hardware device to use Kali NetHunter Use various tools during pentests Understand NetHunter suite components Discover tips to effectively use a compact mobile

platform Create your own Kali NetHunter-enabled device and configure it for optimal results Learn to scan and gather information from a target Explore hardware adapters for testing and auditing wireless networks and Bluetooth devices Who this book is for Hands-On Penetration Testing with Kali NetHunter is for pentesters, ethical hackers, and security professionals who want to learn to use Kali NetHunter for complete mobile penetration testing and are interested in venturing into the mobile domain. Some prior understanding of networking assessment and Kali Linux will be helpful.

If your job is to design or implement IT security solutions or if you're studying for any security certification, this is the how-to guide you've been looking for. Here's how to assess your needs, gather the tools, and create a controlled environment in which you can experiment, test, and develop the solutions that work. With liberal examples from real-world scenarios, it tells you exactly how to implement a strategy to secure your systems now and in the future. Note: CD-ROM/DVD and other supplementary materials are not included as part of eBook file.

A hands-on guide to hacking computer systems from the ground up, from capturing traffic to crafting sneaky, successful trojans. A crash course in modern hacking techniques, Ethical Hacking is already being used to prepare the next generation of offensive security experts. In its many hands-on labs, you'll explore crucial skills for any aspiring penetration tester, security researcher, or malware analyst. You'll begin with the basics: capturing a victim's network traffic with an ARP spoofing attack and then viewing it

in Wireshark. From there, you'll deploy reverse shells that let you remotely run commands on a victim's computer, encrypt files by writing your own ransomware in Python, and fake emails like the ones used in phishing attacks. In advanced chapters, you'll learn how to fuzz for new vulnerabilities, craft trojans and rootkits, exploit websites with SQL injection, and escalate your privileges to extract credentials, which you'll use to traverse a private network. You'll work with a wide range of professional penetration testing tools—and learn to write your own tools in Python—as you practice tasks like:

- Deploying the Metasploit framework's reverse shells and embedding them in innocent-seeming files
- Capturing passwords in a corporate Windows network using Mimikatz
- Scanning (almost) every device on the internet to find potential victims
- Installing Linux rootkits that modify a victim's operating system
- Performing advanced Cross-Site Scripting (XSS) attacks that execute sophisticated JavaScript payloads

Along the way, you'll gain a foundation in the relevant computing technologies. Discover how advanced fuzzers work behind the scenes, learn how internet traffic gets encrypted, explore the inner mechanisms of nation-state malware like Drovorub, and much more. Developed with feedback from cybersecurity students, Ethical Hacking addresses contemporary issues in the field not often covered in other books and will prepare you for a career in penetration testing. Most importantly, you'll be able to think like an ethical hacker: someone who can carefully analyze systems and creatively gain access to them.