

## Bulletproof Ssl And Tls

An all-practical guide to the cryptography behind common tools and protocols that will help you make excellent security choices for your systems and applications. In Real-World Cryptography, you will find: Best practices for using cryptography Diagrams and explanations of cryptographic algorithms Implementing digital signatures and zero-knowledge proofs Specialized hardware for attacks and highly adversarial environments Identifying and fixing bad practices Choosing the right cryptographic tool for any problem Real-World Cryptography reveals the cryptographic techniques that drive the security of web APIs, registering and logging in users, and even the blockchain. You'll learn how these techniques power modern security, and how to apply them to your own projects. Alongside modern methods, the book also anticipates the future of cryptography, diving into emerging and cutting-edge advances such as cryptocurrencies, and post-quantum cryptography. All techniques are fully illustrated with diagrams and examples so you can easily see how to put them into practice. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Cryptography is the essential foundation of IT security. To stay ahead of the bad actors attacking your systems, you need to understand the tools, frameworks, and protocols that protect your networks and applications. This book introduces authentication, encryption, signatures, secret-keeping, and other cryptography concepts in plain language and beautiful illustrations. About the book Real-World Cryptography teaches practical techniques for day-to-day work as a developer, sysadmin, or security practitioner. There's no complex math or jargon: Modern cryptography methods are explored through clever graphics and real-world use cases. You'll learn building blocks like hash functions and signatures; cryptographic protocols like HTTPS and secure messaging; and cutting-edge advances like post-quantum cryptography and cryptocurrencies. This book is a joy to read—and it might just save your bacon the next time you're targeted by an adversary after your data. What's inside Implementing digital signatures and zero-knowledge proofs Specialized hardware for attacks and highly adversarial environments Identifying and fixing bad practices Choosing the right cryptographic tool for any problem About the reader For cryptography beginners with no previous experience in the field. About the author David Wong is a cryptography engineer. He is an active contributor to internet standards including Transport Layer Security. Table of Contents PART 1 PRIMITIVES: THE INGREDIENTS OF CRYPTOGRAPHY 1 Introduction 2 Hash functions 3 Message authentication codes 4 Authenticated encryption 5 Key exchanges 6 Asymmetric encryption and hybrid encryption 7 Signatures and zero-knowledge proofs 8 Randomness and secrets PART 2 PROTOCOLS: THE RECIPES OF CRYPTOGRAPHY 9 Secure transport 10 End-to-end encryption 11 User authentication 12 Crypto as in cryptocurrency? 13 Hardware cryptography 14 Post-quantum cryptography 15 Is this it? Next-generation cryptography 16 When and where cryptography fails

Introduces the concepts of public key infrastructure design and policy and discusses use of the technology for computer network security in the business environment.

Learn to use AWS IoT services to build your connected applications with the help of this comprehensive guide. Key Features Gets you started with AWS IoT and its functionalities Learn different modules of AWS IoT with practical use cases. Learn to secure your IoT communication Book Description The Internet of Things market increased a lot in the past few years and IoT development and its adoption have showed an upward trend. Analysis and predictions say that Enterprise IoT platforms are the future of IoT. AWS IoT is currently leading the market with its wide range of device supports and versatile management console. This book initially introduces you to the IoT platforms, and how it makes our IoT development easy. It then covers the complete AWS IoT Suite and how it can be used to develop secure communication between internet-connected things such as sensors, actuators, embedded devices, smart applications, and so on. The book also covers the various modules of AWS: AWS Greengrass, AWS device SDKs, AWS IoT Platform, AWS Button, AWS Management consoles, AWS-related CLI, and API references, all with practical use cases. Near the end, the book supplies security-related best practices to make bi-directional communication more secure. When you've finished this book, you'll be up-and-running with the AWS IoT Suite, and building IoT projects. What you will learn Implement AWS IoT on IoT projects Learn the technical capabilities of AWS IoT and IoT devices Create IoT-based AWS IoT projects Choose IoT devices and AWS IoT platforms to use based on the kind of project you need to build Deploy AWS Greengrass and AWS Lambda Develop program for AWS IoT Button Visualize IoT AWS data Build predictive analytics using AWS IoT and AWS Machine Learning Who this book is for This book is for anyone who wants to get started with the AWS IoT Suite and implement it with practical use cases. This book acts as an extensive guide, on completion of which you will be in a position to start building IoT projects using AWS IoT platform and using cloud services for your projects.

This completely revised and expanded second edition of SSL and TLS: Theory and Practice provides an overview and a comprehensive discussion of the Secure Sockets Layer (SSL), Transport Layer Security (TLS), and Datagram TLS (DTLS) protocols that are omnipresent in today's e-commerce and e-business applications and respective security solutions. It provides complete details on the theory and practice of the protocols, offering readers a solid understanding of their design principles and modes of operation. Updates to this edition include coverage of the recent attacks against the protocols, newly specified extensions and firewall traversal, as well as recent developments related to the public key certificates and respective infrastructures. This book targets software developers, security professionals, consultants, protocol designers, and chief security officers who will gain insight and perspective on the many details of the SSL, TLS, and DTLS protocols, such as cipher suites, certificate management, and alert messages. The book also comprehensively discusses the advantages and disadvantages of the protocols compared to other Internet security protocols and provides the details necessary to correctly implement the protocols while saving time on the security practitioner's side.

BULLETPROOF SSL AND TLS.

A Guide to the Most Frequently Used OpenSSL Features and Commands

Applied Computing and Information Technology

Apache Security

Guidelines for the Selection, Configuration, and Use of Transport Layer Security (TLS) Implementations: Draft (2nd) Nist Sp 800-52 R2

A Guide to Building Dependable Distributed Systems

Recipe-based guide for security, networking and PKI in Windows Server 2016

Most applications these days are at least somewhat network aware, but how do you protect those applications against common network security threats? Many developers are turning to OpenSSL, an open source version of SSL/TLS, which is the most widely used protocol for secure network communications. The OpenSSL library is seeing widespread adoption for web sites that require cryptographic functions to protect a broad range of sensitive information, such as credit card numbers and other financial transactions. The library is the only free, full-featured SSL implementation for C and C++, and it can be used programmatically or from the command line to secure most TCP-based network protocols. Network Security with OpenSSL enables developers to use this protocol much more effectively. Traditionally, getting something simple done in OpenSSL could easily take weeks. This concise book gives you the guidance you need to avoid pitfalls, while allowing you to take advantage of the library's advanced features. And, instead of bogging you down in the technical details of how SSL works under the hood, this book provides only the information that is necessary to use OpenSSL safely and effectively. In step-by-step fashion, the book details the challenges in securing network communications, and shows you how to use OpenSSL tools to best meet those challenges. As a system or network administrator, you will benefit from the thorough treatment of the OpenSSL command-line interface, as well as from step-by-step directions for obtaining certificates and setting up your own certification authority. As a developer, you will further benefit from the in-depth discussions and examples of how to use OpenSSL in your own programs. Although OpenSSL is written in C, information on how to use OpenSSL with Perl, Python and PHP is also included. OpenSSL will help answer your need to protect sensitive data. If that's the case, Network Security with OpenSSL is the only guide available on the subject.

This practical guide to modern encryption breaks down the fundamental mathematical concepts at the heart of cryptography without shying away from meaty discussions of how they work. You'll learn about authenticated encryption, secure randomness, hash functions, block ciphers, and public-key techniques such as RSA and elliptic curve cryptography. You'll also learn: - Key concepts in cryptography, such as computational security, attacker models, and forward secrecy - The strengths and limitations of the TLS protocol behind HTTPS secure websites - Quantum computation and post-quantum cryptography - About various vulnerabilities by examining numerous code examples and use cases - How to choose the best algorithm or protocol and ask vendors the right questions Each chapter includes a discussion of common implementation mistakes using real-world examples and details what could go wrong and how to avoid these pitfalls. Whether you're a seasoned practitioner or a beginner looking to dive into the field, Serious Cryptography will provide a complete survey of modern encryption and its applications.

Bulletproof SSL and TLS Understanding and Deploying SSL/TLS and PKI to Secure Servers and Web Applications Feisty Duck

This complete guide to setting up and running a TCP/IP network is essential for network administrators, and invaluable for users of home systems that access the Internet. The book starts with the fundamentals -- what protocols do and how they work, how addresses and routing are used to move data through the network, how to set up your network connection -- and then covers, in detail, everything you need to know to exchange information via the Internet. Included are discussions on advanced routing protocols (RIPv2, OSPF, and BGP) and the gated software package that implements them, a tutorial on configuring important network services -- including DNS, Apache, sendmail, Samba, PPP, and DHCP -- as well as expanded chapters on troubleshooting and security. TCP/IP Network Administration is also a command and syntax reference for important packages such as gated, pppd, named, dhcpcd, and sendmail. With coverage that includes Linux, Solaris, BSD, and System V TCP/IP implementations, the third edition contains: Overview of TCP/IP Delivering the data Network services Getting started Basic configuration Configuring the interface Configuring routing Configuring DNS Configuring network servers Configuring sendmail Configuring Apache Network security Troubleshooting Appendices include dip, ppd, and chat reference, a gated reference, a dhcpcd reference, and a sendmail reference This new edition includes ways of configuring Samba to provide file and print sharing on networks that integrate Unix and Windows, and a new chapter is dedicated to the important task of configuring the Apache web server. Coverage of network security now includes details on OpenSSH, stunnel, spp, iptables, and the access control mechanism in xinetd. Plus, the book offers updated information about DNS, including details on BIND 8 and BIND 9, the role of classless IP addressing and network prefixes, and the changing role of registrars. Without a doubt, TCP/IP Network Administration, 3rd Edition is a must-have for all network administrators and anyone who deals with a network that transmits data over the Internet.

A Practical Introduction to Modern Encryption

Serious Cryptography

Network Security with OpenSSL

Understanding PKI

Real-World Cryptography

Civil Service Exam Secrets Study Guide

TCP/IP Network Administration

CD-ROM contains: text in a searchable Adobe Acrobat file (http.pdf); Adobe Acrobat Reader 4.0 for Windows and MacOS.

Finally--a single volume guide to eavesdropping security for both voice and data wireless networks! More and more data and voice communications are going via wireless as some point between the sender and intended recipient. As a result, truly "bulletproof" wireless security is now more than a desirable feature--instead, it's a necessity to protect essential personal and business data from hackers and eavesdroppers. In this handy reference, Praphul Chandra gives you the conceptual and practical tools every RF, wireless, and network engineer needs for high-security wireless applications. Inside this book you'll find coverage of these essential topics: + Cryptographic protocols used in wireless networks. + Key-based protocols, including key exchange and authentication techniques + Various types of wireless network attacks, including reflection, session hijacks, and Fluhrer-Mantin-Shamir (FMS) attacks. - Encryption/decryption standards and methods. + Multi-layered security architectures. + Secure sockets layer (SSL) and transport layer security (TLS) protocols. + Cellular telephone network architectures and their vulnerabilities. + Modulation techniques, such as direct-sequence spread spectrum (DSSS) and orthogonal frequency division multiplexing (OFDM) And you'll also find coverage on such cutting-edge topics as security techniques for ad hoc networks and protecting Bluetooth networks. If you're serious about wireless security, then this title belongs on your reference bookshelf!

Bulletproof SSL and TLS is a complete guide to using SSL and TLS encryption to deploy secure servers and web applications. Written by Ivan Ristic, the author of the popular SSL Labs web site, this book will teach you everything you need to know to protect your systems from eavesdropping and impersonation attacks. In this book, you'll find just the right mix of theory, protocol detail, vulnerability and weakness information, and deployment advice to get your job done: - Comprehensive coverage of the ever-changing field of SSL/TLS and Internet PKI, with updates to the digital version - For IT security professionals, help to understand the risks - For system administrators, help to deploy systems securely - For developers, help to design and implement secure web applications - Practical and concise, with added depth when details are relevant - Introduction to cryptography and the latest TLS protocol version - Discussion of weaknesses at every level, covering implementation issues, HTTP and browser problems, and protocol vulnerabilities - Coverage of the latest attacks, such as BEAST, CRIME, BREACH, Lucky 13, RC4 biases, Triple Handshake Attack, and Heartbleed - Thorough deployment advice, including advanced technologies, such as Strict Transport Security, Content Security Policy, and pinning - Guide to using OpenSSL to generate keys and certificates and to create and run a private certification authority - Guide to using OpenSSL to test servers for vulnerabilities - Practical advice for secure server configuration using Apache httpd, IIS, Java, Nginx, Microsoft Windows, and Tomcat This book is available in paperback and a variety of digital formats without DRM.

Bulletproof TLS and PKI is a complete guide to using TLS encryption and PKI to deploy secure servers and web applications. Written by Ivan Ristic, author of the popular SSL Labs web site, this book will teach you everything you need to know to protect your systems from eavesdropping and impersonation attacks. In this book, you'll find just the right mix of theory, protocol detail, vulnerability and weakness information, and deployment advice to get your job done: Comprehensive coverage of the ever-changing field of SSL/TLS and Internet PKI, with updates to the digital version For IT professionals, help to understand security risks For system administrators, help to deploy systems securely For developers, help to secure web applications Practical and concise, with added depth as needed Introduction to cryptography and the Internet threat model Coverage of TLS 1.3 as well as earlier protocol versions Discussion of weaknesses at every level, covering implementation issues, HTTP and browser problems, and protocol vulnerabilities Coverage of the latest attacks, such as BEAST, CRIME, BREACH, Lucky 13, RC4 biases, Triple Handshake Attack, and Heartbleed Thorough deployment advice, including advanced technologies, such as Strict Transport Security, Content Security Policy, and pinning Guide to using OpenSSL to generate keys and certificates and to create and run a private certification authority Guide to using OpenSSL to test servers for vulnerabilities This book is also available in a variety of digital formats directly from the publisher. Visit us at www.feistyduck.com.

A Guide to Understanding SSL/TLS Cryptography

Concepts, Standards, and Deployment Considerations

Security Engineering

Mastering Linux Security and Hardening

Implementing SSL / TLS Using Cryptography and PKI

What every web developer should know about networking and web performance

Guide to Ispcc Vpns

Fiddler is a Web Debugging Proxy platform that monitors and modifies web traffic. This freeware tool enables developers, testers, and enthusiasts to inspect traffic, set breakpoints, and "fiddle" with incoming or outgoing data. Fiddler includes powerful event-based scripting, and can be extended using any .NET language. FiddlerCore, the core proxy engine underlying Fiddler, is available to integrate into any .NET application. In this book, you'll learn to fully exploit the power of Fiddler to debug traffic from virtually any web-related application, including Internet Explorer, Google Chrome, Apple Safari, Mozilla Firefox, Opera, and thousands more. You'll see how to debug HTTPS traffic, and use Fiddler with popular devices like iPhone/iPod/iPad, Windows Phone, and others. After exploring the hundreds of built-in features, you'll learn to extend Fiddler using the FiddlerScript engine or build your own applications atop the FiddlerCore class library.

Hands-on, practical guide to implementing SSL and TLS protocols for Internet security If you are a network professional who knows C programming, this practical book is for you. Focused on how to implement Secure Socket Layer (SSL) and Transport Layer Security (TLS), this book guides you through all necessary steps, whether or not you have a working knowledge of cryptography. The book covers SSLv2, TLS 1.0, and TLS 1.2, including implementations of the relevant cryptographic protocols, secure hashing, certificate parsing, certificate generation, and more. Coverage includes: Understanding Internet Security Protecting against Eavesdroppers with Symmetric Cryptography Secure Key Exchange over an Insecure Medium with Public Key Cryptography Authenticating Communications Using Digital Signatures Creating a Network of Trust Using X.509 Certificates A Usable, Secure Communications Protocol: Client-Side TLS Adding Server-Side TLS 1.0 Support Advanced SSL Topics Adding TLS 1.2 Support to Your TLS Library Other Applications of SSL A Binary Representation of Integers: A Primer Installing TCPDump and OpenSSL Understanding the Pitfalls of SSLv2 Set up and launch a working implementation of SSL with this practical guide.

A guide to the most frequently used OpenSSL features and commands, written by Ivan Ristic. Comprehensive coverage of OpenSSL installation, configuration, and key and certificate management Includes SSL/TLS Deployment Best Practices, a design and deployment guide Written by a well-known practitioner in the field and the author of SSL Labs and the SSL/TLS configuration assessment tool Available in a variety of digital formats (PDF, EPUB, Mobi/Kindle); no DRM Continuously updated OpenSSL Cookbook is built around one chapter from Bulletproof SSL/TLS and PKI, a larger work that provides complete coverage of SSL/TLS and PKI topics. To download your free copy in various formats, visit feistyduck.com/books/openssl-cookbook/

"The Antivirus Hacker's handbook shows you how to hack your own system's defenses to discover its weaknesses, so you can apply the appropriate extra protections to keep your network locked up tight."-- Back cover.

Implementing Cryptography Using Python

High Performance Browser Networking

Effective Perl Programming

ModSecurity Handbook, Second Edition

PKI Uncovered

SSL and TLS: Theory and Practice, Second Edition

Learning AWS IoT

This book contains more than 25 hands-on recipes that will equip you to build a PKI and roll out remote access capabilities via Microsoft DirectAccess and VPN. This book also contains tips and tricks for increasing the security footprint of your Windows Server infrastructure. Key Features Identify and mitigate security risks in your Windows Server 2016 infrastructure Learn how to build a PKI and use it to issue certificates within your network In-depth information for setting up Microsoft DirectAccess Book Description Windows Server 2016 is an operating system designed to run on today's highly performant servers, both on-premise and in the cloud. It supports enterprise-level data storage, communications, management, and applications. This book builds off a basic knowledge of the Windows Server operating system, and assists administrators with taking the security of their systems one step further. You will learn tips for configuring proper networking, especially on multi-homed systems, and tricks for locking down access to your servers. Then you will move onto one of the hottest security topics of the year -- certificates. You will learn how to build your own PKI, or how to better administer one that you already have. You will publish templates, issue certificates, and even configure autoenrollment in your network. When we say "networking" we don't only mean inside the LAN. To deal safely with mobile devices, you will learn about the capabilities of Windows Server 2016 for connecting these assets securely back into the corporate network, with information about DirectAccess and VPN. The material in the book has been selected from the content of Packt's Windows Server 2016 Cookbook by Jordan Krause to provide a specific focus on these key Windows Server tasks. What you will learn Implement solid networking and security practices into your Windows Server environment Design your own PKI and start issuing certificates today Connect your remote laptops back to the corporate network using Microsoft's own remote access technologies, including DirectAccess Learn to use commands that will help you with monitoring network traffic. Build and explore your first Server Core instance today! Who this book is for If you are a Windows Server administrator interested in learning the key security and networking functions available in Windows Server 2016, keep this book close at hand. If you are a server administrator setting up certificate services for the first time you will also benefit from the step-by-step instructions on implementation of a PKI.

A practical handbook for network administrators who need to develop and implement security assessment programs, exploring a variety of offensive technologies, explaining how to design and deploy networks that are immune to offensive tools and scripts, and detailing an efficient testing model. Original. (Intermediate)

How prepared are you to build fast and efficient web applications? This eloquent book provides what every web developer should know about the network, from fundamental limitations that affect performance to major innovations for building even more powerful browser applications—including HTTP 2.0 and XHR improvements, Server-Sent Events (SSE), WebSocket, and WebRTC. Author Ilya Grigorik, a web performance engineer at Google, demonstrates performance optimization best practices for TCP, UDP, and TLS protocols, and explains unique wireless and mobile network optimization requirements. You'll then dive into performance characteristics of technologies such as HTTP 2.0, client-side network scripting with XHR, real-time streaming with SSE and WebSocket, and P2P communication with WebRTC. Deliver superlative TCP, UDP, and TLS performance Speed up network performance over 3G/4G mobile networks Develop fast and energy-efficient mobile applications Address bottlenecks in HTTP 1.x and other browser protocols Plan for and deliver the best HTTP 2.0 performance Enable efficient real-time streaming in the browser Create efficient peer-to-peer videoconferencing and low-latency applications with real-time WebRTC transports The perimeter defenses guarding your network perhaps are not as secure as you think. Hosts behind the firewall have no defenses of their own, so when a host in the "trusted" zone is breached, access to your data center is not far behind. That's an all-too-familiar scenario today. With this practical book, you'll learn the principles behind zero trust architecture, along with details necessary to implement it. The Zero Trust Model treats all hosts as if they're internet-facing, and considers the entire network to be compromised and hostile. By taking this approach, you'll focus on building strong authentication, authorization, and encryption throughout, while providing compartmentalized access and better operational agility. Understand how perimeter-based defenses have evolved to become the broken model we use today Explore two case studies of zero trust in production networks on the client side (Google) and on the server side (PagerDuty) Get example configuration for open source tools that you can use to build a zero trust network Learn how to migrate from a perimeter-based network to a zero trust network in production

Security without Obscurity

GSM, UMTS, 802.11, and Ad Hoc Security

Crypto Dictionary

Cryptography for Secure Communications

Bulletproof SSL and TLS

Designing and Building Secure Systems

Effectively manage connected devices on the AWS cloud using services such as AWS Greengrass, AWS button, predictive analytics and machine learning

Cryptography is hard, but it's less hard when it's filled with adorable Japanese manga. The latest addition to the Manga Guide series, The Manga Guide to Cryptography, turns the art of encryption and decryption into plain, comic illustrated English. As you follow Inspector Jun Meguro in his quest to bring a cipher-wielding thief to justice, you'll learn how cryptographic ciphers work. (Ciphers are the secret language of spies, and the backbone of modern security.) You'll also learn how to use public key encryption technology. It also covers such digital signatures, password security, and identity fraud countermeasures. The Manga Guide to Cryptography is the perfect introduction to cryptography for programmers, security professionals, aspiring cryptographers, and anyone who finds cryptography just a little bit hard.

If you are looking for a comprehensive, soup-to-nuts resource on SSL/TLS, look no further. This book, geared towards bridging the gap between the absolute beginner and the veteran IT Professional, combines the theoretical and the practical in equal measure. The first half of our book focuses on foundational theory, covering topics such as: Symmetric vs Asymmetric cryptography One-Way Function and Context The second half encourages fledgling administrators to jump in with both feet, outlining the quirks of common tasks such as: Generating a signing request for a certificate (CSR) Generating a self-signed certificate (and when it is safe to do not do so) Converting certificates between different formats including java keystores Configuring servers to meet best practices, not in a vain, your business vertical. Are you a systems administrator just starting out? A developer looking to not just implement, but to understand? Or perhaps SSL/TLS has been a topic you've avoided over the years because it is very dense and implementation can be fraught with fidgety pitfalls. You can read this book cover to cover, crosswalk to the copiously linked RFCs, or use it as a desk reference. The choice is yours.

This publication seeks to assist organizations in mitigating the risks associated with the transmission of sensitive information across networks by providing practical guidance on implementing security services based on Internet Protocol Security (IPsec).

Learn to deploy proven cryptographic tools in your applications and services Cryptography is, quite simply, what makes security and privacy in the digital world possible. Tech professionals, including programmers, IT admins, and security analysts, need to understand how cryptography works to protect users, data, and assets. Implementing Cryptography Using Python will teach you the essentials to secure your applications and systems. Because this book uses Python, an easily accessible language that has become one of the standards for cryptography implementation, you'll be able to quickly learn how to secure applications and data of all kinds. In this easy-to-read guide, well-known cybersecurty expert Shannon Bral walks you through creating secure communications in public channels and protecting sensitive information. You'll learn how to use digital signatures to verify the integrity of messages and how to use digital signatures to verify the integrity of messages sent through your services. Learn how to implement proven cryptographic tools, using easy-to-understand examples written in Python Discover the history of cryptography and understand its critical importance in tod

Windows Server 2016 Security, Certificates, and Remote Access Cookbook Protect your Linux systems from intruders, malware attacks, and other cyber threats, 2nd Edition

Debugging with Fiddler

ModSecurity Handbook

Windows Server 2008 PKI and Certificate Security

Protocols for Secure, Scalable Web Sites

Writing Better Programs with Perl

This book presents the selected results of the 13th International Symposium on Applied Computers and Information Technology (ACIT'2013) held on August 31 – September 4, 2013 in Matsue City, Japan, which brought together researchers, scientists, engineers, industry practitioners and students to discuss all aspects of Applied Computers & Information Technology and its practical challenges. This book includes the best 12 papers presented at the conference, which were chosen based on review scores submitted by members of the program committee and underwent further rigorous rounds of review.

"This is the best book on SSL/TLS. Rescorla knows SSL/TLS as well as anyone and presents it both clearly and completely.... At times, I felt like he's been looking over my shoulder when I designed SSL v3. If network security matters to you, buy this book." -- Paul Kocher, Cryptography Research, Inc. Co-Designer of SSL v3 "Having the right crypto is necessary but not sufficient to having secure communications. If you're using SSL/TLS, you should have 'SSL and TLS sitting on your shelf' right next to 'Applied Cryptography.' Bruce Schneier, Counterpane Internet Security, Inc. Author of 'Applied Cryptography' "Everything you wanted to know about SSL/TLS in one place. It covers the protocols down to the level of packet traces. It covers how to write software that uses SSL/TLS. And it contrasts SSL with other approaches. All this while being technically sound and readable!" -- Radia Perlman, Sun Microsystems, Inc. Author of "Interconnections: Secure Sockets Layer (SSL) and its IETF Successor, Transport Layer Security (TLS), are the leading Internet security protocols, providing security for e-commerce, web services, and many other network functions. Using SSL/TLS effectively requires a firm grasp of its role in network communications, its security properties, and its performance characteristics. 'SSL and TLS' provides total coverage of the protocols from the bits on the wire up to application programming. This comprehensive book not only describes how SSL/TLS is supposed to behave but also uses the author's free sldump diagnostic tool to show the protocols in action. The author covers each protocol feature, first explaining how it works and then illustrating it in a live implementation. This unique presentation bridges the difficult gap between specification and implementation that is a common source of confusion and incompatibility. In addition to describing the protocols, 'SSL and TLS' delivers the essential details required by security architects, application developers, and software engineers. Use the practical design rules in this book to quickly design fast and secure systems using SSL/TLS. These design rules are illustrated with chapters covering the new IETF standards for HTTP and SMTP over TLS. Written by an experienced SSL implementer, 'SSL and TLS' contains detailed information on programming SSL applications. The author discusses the common problems faced by implementors and provides complete sample programs illustrating the solutions in both C and Java. The sample programs use the free OpenSSL and PureTLS toolkits so the reader can immediately run the examples. 0201615983/04062001

Get an in-depth guide for designing and implementing certificate-based security solutions—straight from PKI expert Brian Komar. No need to buy or outsource costly PKI services when you can use the robust PKI and certificate-based security services already built into Windows Server 2008! This in-depth reference teaches you how to design and implement even the most demanding certificate-based security solutions for wireless networking, smart card authentication, VPNS, secure email, Web SSL, EFS, and code-signing applications using Windows Server PKI and certificate services. A principal PKI consultant to Microsoft, Brian shows you how to incorporate best practices, avoid common design and implementation mistakes, help minimize risk, and optimize security administration. ModSecurity Handbook is the definitive guide to ModSecurity, the popular open source web application firewall. Written by Christian Folini and ModSecurity's original developer, Ivan Ristic, this book will teach you how to monitor activity on your web sites and protect them from attack. Situated between your web sites and the world, web application firewalls provide an additional security layer, monitoring everything that comes in and everything that goes out. They enable you to perform many advanced activities, such as real-time application security monitoring, access control, virtual patching, HTTP traffic logging, continuous passive security assessment, and web application hardening. They can be very effective in preventing application security attacks, such as cross-site scripting, SQL injection, remote file inclusion, and others. Considering that most web sites today suffer from one problem or another, ModSecurity Handbook will help anyone who has a web site to run. The topics covered include: - Installation and configuration of ModSecurity - Logging of complete HTTP traffic - Rule writing, in detail - IP address, session, and user tracking - Session management hardening - Whitelisting, blacklisting, and IP reputation management - Advanced blocking strategies - Integration with other Apache modules - Working with rule sets - Virtual patching - Performance considerations - Content injection - XML inspection - Writing rules in Lua - Extending ModSecurity in C The book is suitable for all reader levels; it contains step-by-step installation and configuration instructions for those just starting out, as well as detailed explanations of the internals and discussion of advanced techniques for seasoned users. The official ModSecurity Reference Manual is included in the second part of the book. A digital version is available. For more information and to access the online companion, go to www.modsecurityhandbook.com ABOUT THE AUTHOR Ivan Ristic is a respected security expert and author, known especially for his contribution to the web application firewall field and the development of ModSecurity, the open source web application firewall. He is also the author of Apache Security, a comprehensive security guide for the Apache web server. A frequent speaker at computer security conferences, Ivan is an active participant in the application security community, a member of the Open Web Application Security Project, and an officer of the Web Application Security Consortium.

Understanding and Deploying SSL/TLS and PKI to Secure Servers and Web Applications

Network Security Assessment

Governance, Risk, and Compliance for PKI Operations

HTTP Essentials

OpenSSL Cookbook

500 Tasty Tidbits for the Curious Cryptographer

Help for Unix System Administrators

Most books on public key infrastructure (PKI) seem to focus on asymmetric cryptography, X.509 certificates, certificate authority (CA) hierarchies, or certificate policy (CP), and certificate practice statements. While algorithms, certificates, and theoretical policy are all excellent discussions, the real-world issues for operating a commercial or Now that there's software in everything, how can you make anything secure? Understand how to engineer dependable systems with this newly updated classic In Security Engineering: A Guide to Building Dependable Distributed Systems, Third Edition Cambridge University professor Ross Anderson updates his classic textbook and teaches readers how to design, implement, and test systems to withstand both error and attack. This book became a best-seller in 2001 and helped establish the discipline of security engineering. By the second edition in 2008, underground dark markets had let the bad guys specialize and scale up; attacks were increasingly on users rather than on technology. The book repeated its success by showing that security engineering can do so on usability. Now the third edition brings it up to date for 2020. As people now go online from phones more than laptops, most servers are in the cloud, online advertising drives the Internet and social networks have taken over much human interaction, many patterns of crime and abuse are the same, but the methods have evolved. Ross Anderson's security engineering means in 2020, including: How the basic elements of cryptography, protocols, and access control translate to the new world of phones, cloud services, social media and the Internet of Things Who the attackers are - from nation states and business competitors through criminal gangs to stalkers and playground bullies What they do - from phishing and carding through SIM swapping and software exploits to DDoS and fake news Security psychology, from privacy through ease-of-use to deception The economics of security and dependability - why companies build vulnerable systems and governments look the other way How dozens of industries went online - well or badly How to manage security and safety engineering in a world of agile development - from reliability engineering to DevSecOps The third edition of Security Engineering ends with a grand challenge: sustainable security. As we build ever more software and connectivity into safety-critical durable goods like cars and medical devices, how do we design systems we can maintain and defend for decades? Or will everything in the world need monthly software upgrades, and become unsafe once they stop?

Pragmatically, a PKI is an operational system that employs asymmetric cryptography, information technology, operating rules, physical and logical security, and legal matters. Much like any technology, cryptography in general undergoes changes: sometimes evolutionary, sometimes dramatically, and sometimes unknowingly. This book discusses what not to do in PKI operations. Providing a no-nonsense approach and multiple case studies, the book is a straightforward, real-world guide to how to successfully operate a PKI system.

"The complete guide to securing your Apache web server"--Cover.

Building Secure Systems in Untrusted Networks

Bulletproof TLS and PKI, Second Edition: Understanding and Deploying SSL/TLS and PKI to Secure Servers and Web Applications

Recommendations of the National Institute of Standards and Technology

The Complete Reference from the Creator of the Fiddler Web Debugger

Linux Hardening in Hostile Networks

SSL and TLS

Certificate-Based Security Solutions for Next-Generation Networks

The only complete guide to designing, implementing, and supporting state-of-the-art certificate-based identity solutions with PKI Layered approach is designed to help readers with widely diverse backgrounds quickly learn what they need to know Covers the entire PKI project lifecycle, making complex PKI architectures simple to understand and deploy Brings together theory and practice, including on-the-ground implementers' knowledge, insights, best practices, design choices, and troubleshooting details PKI Uncovered brings together all the techniques IT and security professionals need to apply PKI in any environment, no matter how complex or sophisticated. At the same time, it will help them gain a deep understanding of the foundations of certificate-based identity management. Its layered and modular approach helps readers quickly get the information they need to efficiently plan, design, deploy, manage, or troubleshoot any PKI environment. The authors begin by presenting the foundations of PKI, giving readers the theoretical background they need to understand its mechanisms. Next, they move to high-level design considerations, guiding readers in making the choices most suitable for their own environments. The authors share best practices and experiences drawn from production customer deployments of all types. They organize a series of design "modules" into hierarchical models which are then applied to comprehensive solutions. Readers will be introduced to the use of PKI in multiple environments, including Cisco router-based DMVPN, ASA, and 802.1X.

The authors also cover recent innovations such as Cisco GET VPN. Throughout, troubleshooting sections help ensure smooth deployments and give readers an even deeper "under-the-hood" understanding of their implementations. Get in-depth guidance for designing and implementing certificate-based security solutions—straight from PKI expert Brian Komar. No need to buy or outsource costly PKI services when you can use the robust PKI and certificate-based security services already built into Windows Server 2008! This in-depth reference teaches you how to design and implement even the most demanding certificate-based security solutions for wireless networking, smart card authentication, VPNS, secure email, Web SSL, EFS, and code-signing applications using Windows Server PKI and certificate services. A principal PKI consultant to Microsoft, Brian shows you how to incorporate best practices, avoid common design and implementation mistakes, help minimize risk, and optimize security administration. ModSecurity Handbook is the definitive guide to ModSecurity, the popular open source web application firewall. Written by Christian Folini and ModSecurity's original developer, Ivan Ristic, this book will teach you how to monitor activity on your web sites and protect them from attack. Situated between your web sites and the world, web application firewalls provide an additional security layer, monitoring everything that comes in and everything that goes out in real time. They enable you to perform many advanced activities, such as access control, virtual patching, HTTP traffic logging, continuous passive security assessment, and web application hardening. Web application firewalls can be very effective in preventing application security attacks, such as SQL injection, cross-site scripting, remote file inclusion, and others that plague most web sites today. ModSecurity Handbook covers the following topics, which will help anyone with a web site to run: Installation and configuration of ModSecurity Detailed guide to writing rules IP address, session, and user tracking Session management hardening Whitelisting, blacklisting, and IP reputation management Anomaly scoring and advanced blocking strategies Integration with other Apache modules Working with predefined rule sets Virtual patching and content injection Performance considerations Writing rules in Lua and extending ModSecurity in C Detailed coverage of ModSecurity's numerous directives, variables, transformations, and operators The book is suitable for all reader levels: It takes newcomers by the hand

to turn them into seasoned users, while seasoned users will learn advanced techniques from the top experts on the subject and find hidden clues to master the rule language. An updated ModSecurity Reference Manual is included in the second part of the book. ABOUT THE AUTHORS Dr. Christian Folini is a twelve-year veteran of ModSecurity. He is a renowned speaker, teacher, and system engineer who has specialized in securing high-profile web servers. Christian is one of the leaders of the OWASP ModSecurity Core Rule Set project, a key member of the ModSecurity community, program chair of the Swiss Cyber Storm conference, and vice president of Swiss Cyber Experts (a public-private partnership). Ivan Ristic is a security researcher, engineer, and author, known especially for his contributions to the web application firewall field and development of ModSecurity, an open source web application firewall, and for his SSL/TLS and PKI research, tools and guides published on the SSL Labs web site. His latest project, Hardenize, is a security posture analysis service that makes security fun again. He is the author of three books, Apache Security, ModSecurity Handbook, and Bulletproof SSL and TLS.

A hands-on, problem-solving guide to Perl programming explains how to enhance one's proficiency in Perl and includes useful examples and code, as well as self-documenting, object-oriented modules available with Perl 5. Original. (Intermediate).

Your Key to Exam Success

Bulletproof Wireless Security

Server Security from TLS to Tor

The Antivirus Hacker's Handbook

Zero Trust Networks

A Guide to PKI Operations

Hardening a Linux system can make it much more difficult for an attacker to exploit it. This book will enable system administrators and network engineers to protect their Linux systems, and the sensitive data on those systems.

Implement Industrial-Strength Security on Any Linux Server In an age of mass surveillance, when advanced cyberwarfare weapons rapidly migrate into every hacker's toolkit, you can't rely on outdated security methods—especially if you're responsible for Internet-facing services. In Linux® Hardening in Hostile Networks, Kyle Rankin helps you to implement modern safeguards that provide maximum impact with minimum effort and to strip away old techniques that are no longer worth your time. Rankin provides clear, concise guidance on modern workstation, server, and network hardening, and explains how to harden specific services, such as web servers, email, DNS, and databases. Along the way, he demystifies technologies once viewed as too complex or mysterious but now essential to mainstream Linux security. He also includes a full chapter on effective incident response that both DevOps and SaaSops can use to write their own incident response plan. Each chapter begins with techniques any sysadmin can use quickly to protect against entry-level hackers and presents intermediate and advanced techniques to safeguard against sophisticated and knowledgeable attackers, perhaps even state actors. Throughout, you learn what each technique does, how it works, what it does and doesn't protect against, and whether it would be useful in your environment. Apply core security techniques including 2FA and strong passwords Protect admin workstations via lock screens, disk encryption, BIOS passwords, and other methods Use the security-focused Tails distribution as a quick path to a hardened workstation Compartmentalize workstation tasks into VMs with varying levels of trust Harden servers with SSH, use apparmor and sudo to limit the damage attackers can do, and set up remote syslog servers to track their actions Establish secure VPNs with OpenVPN, and leverage SSH to tunnel traffic when VPNs can't be used Configure a software load balancer to terminate SSL/TLS connections and initiate new ones downstream Set up standalone Tor services and hidden Tor services and relays Secure Apache and Nginx web servers, and take full advantage of HTTPS Perform advanced web server hardening with HTTPS forward secrecy and ModSecurity web application firewalls Strengthen email security with SMTP relay authentication, SMTPS, SPF records, DKIM, and DMARC Harden DNS servers, deter their use in DDoS attacks, and fully implement DNSSEC Systematically protect databases via network access control, TLS traffic encryption, and encrypted data storage Respond to a compromised server, collect evidence, and prevent future attacks Register your product at [informit.com/register](http://informit.com/register) for convenient access to downloads, updates, and corrections as they become available.

Released Oct 15, 2018 Buy the paperback from Amazon and get Kindle eBook FREE using MATCHBOOK. go to [www.usgovpub.com](http://www.usgovpub.com) to learn how Transport Layer Security (TLS) provides mechanisms to protect data during electronic dissemination across the Internet. This Special Publication provides guidance to the selection and configuration of TLS protocol implementations while making effective use of Federal Information Processing Standards (FIPS) and NIST-recommended cryptographic algorithms. It requires that TLS 1.2 configured with FIPS-based cipher suites be supported by all government TLS servers and clients and requires support of TLS 1.3 by January 1, 2024. This Special Publication also provides guidance on certificates and TLS extensions that impact security.

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Rigorous in its definitions yet easy to read, Crypto Dictionary covers the field of cryptography in an approachable, and sometimes humorous way. Expand your mind and your crypto knowledge with the ultimate desktop dictionary for all things cryptography. Written by a renowned cryptographer for experts and novices alike, Crypto Dictionary is rigorous in its definitions, yet easy to read and laced with humor. Flip to any random page to find something new, interesting, or mind-boggling, such as: • A survey of crypto algorithms both widespread and niche, from RSA and DES to the USSR's GOST cipher • Trivia from the history of cryptography, such as the MINERVA backdoor in Crypto AG's encryption algorithms • An explanation of why the reference to the Blowfish cipher in the TV show 24 makes absolutely no sense • Types of cryptographic protocols like zero-knowledge, security, and proofs of work, stake, and resource • A polemic against referring to cryptocurrency as "crypto" • Discussions of numerous cryptographic attacks, including slide and biclique The book also looks toward the future of cryptography, with discussions of the threat quantum computing poses to current cryptosystems and a nod to post-quantum algorithms, such as lattice-based cryptographic schemes. With hundreds of incisive entries organized alphabetically, Crypto Dictionary is the crypto go-to guide you'll always want within reach.

The Manga Guide to Cryptography

SSL/TLS Under Lock and Key

Know Your Network