

## Tcp Ip Socket Programming Web Services Overview

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

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

"TCP/IP sockets in C# is an excellent book for anyone interested in writing network applications using Microsoft .Net frameworks. It is a unique combination of well written concise text and rich carefully selected set of working examples. For the beginner of network programming, it's a good starting book; on the other hand professionals could also take advantage of excellent handy sample code snippets and material on topics like message parsing and asynchronous programming." Adarsh Khare, SDT, .Net Frameworks Team, Microsoft Corporation The popularity of the C# language and the .NET framework is ever rising due to its ease of use, the extensive class libraries available in the .NET Framework, and the ubiquity of the Microsoft Windows operating system, to name a few advantages. TCP/IP Sockets in C# focuses on the Sockets API, the de facto standard for writing network applications in any programming language. Starting with simple client and server programs that use TCP/IP (the Internet protocol suite), students and practitioners quickly learn the basics and move on to firsthand experience with advanced topics including non-blocking sockets, multiplexing, threads, asynchronous programming, and multicasting. Key network programming concepts such as framing, performance and deadlocks are illustrated through hands-on examples. Using a detailed yet clear, concise approach, this book includes numerous code examples and focused discussions to provide a solid understanding of programming TCP/IP sockets in C#. Features \*Tutorial-based instruction in key sockets programming techniques complemented by numerous code examples throughout \*Discussion moves quickly into the C# Sockets API definition and code examples, desirable for those who want to get up-to-speed quickly \*Important coverage of "under the hood" details that developers will find useful when creating and using a socket or a higher level TCP class that

utilizes sockets \*Includes end-of-chapter exercises to facilitate learning, as well as sample code available for download at the book's companion web site \*Tutorial-based instruction in key sockets programming techniques complemented by numerous code examples throughout \*Discussion moves quickly into the C# Sockets API definition and code examples, desirable for those who want to get up-to-speed quickly \*Important coverage of "under the hood" details that developers will find useful when creating and using a socket or a higher level TCP class that utilizes sockets \*Includes end-of-chapter exercises to facilitate learning, as well as sample code available for download at the book's companion web site

The enormous growth in the field of biotechnology necessitates the utilization of information technology for the management, flow and organization of data. The field continues to evolve with the development of new applications to fit the needs of the biomedicine. From molecular imaging to healthcare knowledge management, the storage, access and analysis of data contributes significantly to biomedical research and practice. All biomedical professionals can benefit from a greater understanding of how data can be efficiently managed and utilized through data compression, modelling, processing, registration, visualization, communication, and large-scale biological computing. In addition Biomedical Information Technology contains practical integrated clinical applications for disease detection, diagnosis, surgery, therapy, and biomedical knowledge discovery, including the latest advances in the field, such as ubiquitous M-Health systems and molecular imaging applications. The world's most recognized authorities give their "best practices" ready for implementation Provides professionals with the most up to date and mission critical tools to evaluate the latest advances in the field and current integrated clinical applications Gives new staff the technological fundamentals and updates experienced professionals with the latest practical integrated clinical applications

A Practical Introduction to Python 3

TCP/IP Sockets in C#

HTTP

Beginning Java Programming

Python Basics

*Java For Artists: The Art, Philosophy, and Science of Object-Oriented Programming is a Java programming language text/tradebook that targets beginner and intermediate Java programmers. Special Edition Using Visual C++.NET is a comprehensive resource to help readers leverage the exciting new features of Visual C++.NET as well as port their existing skills to the new .NET development environment. The book shows how both Win32 and .NET applications work, not only instructing the reader in the use of Microsoft's Visual C++ wizards, but also showing what the wizards create. A variety of programming tasks from simple dialog boxes to database and Internet programming are included. Because of the new .NET platform developers in any of 17 languages (including Visual C++) will use the same class libraries to construct high-performance applications. SE Using Visual C++.NET will not only cover the new version of the software but also how to get maximum programming results from combining several languages into one project. Related technologies such as XML and XSLT are also covered, along with integrating Visual C++ code with Visual Basic and C# code.*

*This second edition of Foundations of Python Network Programming targets Python 2.5 through Python 2.7, the most popular production versions of the language. Python has made great strides since Apress released the first edition of this book back in the days of Python 2.3. The advances required new chapters to be written from the ground up, and others to be extensively revised. You will learn fundamentals like IP, TCP, DNS and SSL by using working Python programs; you will also be able to familiarize yourself with infrastructure components like memcached and message queues. You can also delve into network server designs, and compare threaded approaches with*

*asynchronous event-based solutions. But the biggest change is this edition's expanded treatment of the web. The HTTP protocol is covered in extensive detail, with each feature accompanied by sample Python code. You can use your HTTP protocol expertise by studying an entire chapter on screen scraping and you can then test lxml and BeautifulSoup against a real-world web site. The chapter on web application programming now covers both the WSGI standard for component interoperability, as well as modern web frameworks like Django. Finally, all of the old favorites from the first edition are back: E-mail protocols like SMTP, POP, and IMAP get full treatment, as does XML-RPC. You can still learn how to code Python network programs using the Telnet and FTP protocols, but you are likely to appreciate the power of more modern alternatives like the paramiko SSH2 library. If you are a Python programmer who needs to learn the network, this is the book that you want by your side.*

*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. Master the Powerful Python 3 Standard Library through Real Code Examples "The genius of Doug's approach is that with 15 minutes per week, any motivated programmer can learn the Python Standard Library. Doug's guided tour will help you flip the switch to fully power-up Python's batteries." –Raymond Hettinger, Distinguished Python Core Developer The Python 3 Standard Library contains hundreds of modules for interacting with the operating system, interpreter, and Internet—all extensively tested and ready to jump-start application development. Now, Python expert Doug Hellmann introduces every major area of the Python 3.x library through concise source code and output examples. Hellmann's examples fully demonstrate each feature and are designed for easy learning and reuse. You'll find practical code for working with text, data structures, algorithms, dates/times, math, the file system, persistence, data exchange, compression, archiving, crypto, processes/threads, networking, Internet capabilities, email, developer and language tools, the runtime, packages, and more. Each section fully covers one module, with links to additional resources, making this book an ideal tutorial and reference. The Python 3 Standard Library by Example introduces Python 3.x's new libraries, significant functionality changes, and new layout and naming conventions. Hellmann also provides expert porting guidance for moving code from 2.x Python standard library modules to their Python 3.x equivalents. Manipulate text with string, textwrap, re (regular expressions), and difflib Use data structures: enum, collections, array, heapq, queue, struct, copy, and more Implement algorithms elegantly and concisely with functools, itertools, and contextlib Handle dates/times and advanced mathematical tasks Archive and data compression Understand data exchange and persistence, including json, dbm, and sqlite Sign and verify messages cryptographically Manage concurrent operations with processes and threads Test, debug, compile, profile, language, import, and package tools Control interaction at runtime with interpreters or the environment*

*Learn socket programming in C and write secure and optimized network code*

*The Object-Oriented Approach*

*CGI Programming on the World Wide Web*

*Practical Guide for Programmers*

*Hands-On Network Programming with C*

*Demonstrates socket programming fundamentals, including writing servers, creating secure applications, address conversion functions, socket types, and TCP/IP protocols and options*

*Make the Leap From Beginner to Intermediate in Python... Python Basics: A Practical Introduction to Python 3 Your Complete Python Curriculum-With Exercises, Interactive Quizzes, and Sample Projects What should you learn about Python in the beginning to get a strong foundation? With Python Basics, you'll not only cover the core concepts you really need to know, but you'll also learn*

them in the most efficient order with the help of practical exercises and interactive quizzes. You'll know enough to be dangerous with Python, fast! Who Should Read This Book If you're new to Python, you'll get a practical, step-by-step roadmap on developing your foundational skills. You'll be introduced to each concept and language feature in a logical order. Every step in this curriculum is explained and illustrated with short, clear code samples. Our goal with this book is to educate, not to impress or intimidate. If you're familiar with some basic programming concepts, you'll get a clear and well-tested introduction to Python. This is a practical introduction to Python that jumps right into the meat and potatoes without sacrificing substance. If you have prior experience with languages like VBA, PowerShell, R, Perl, C, C++, C#, Java, or Swift the numerous exercises within each chapter will fast-track your progress. If you're a seasoned developer, you'll get a Python 3 crash course that brings you up to speed with modern Python programming. Mix and match the chapters that interest you the most and use the interactive quizzes and review exercises to check your learning progress as you go along. If you're a self-starter completely new to coding, you'll get practical and motivating examples. You'll begin by installing Python and setting up a coding environment on your computer from scratch, and then continue from there. We'll get you coding right away so that you become competent and knowledgeable enough to solve real-world problems, fast. Develop a passion for programming by solving interesting problems with Python every day! If you're looking to break into a coding or data-science career, you'll pick up the practical foundations with this book. We won't just dump a boat load of theoretical information on you so you can "sink or swim"-instead you'll learn from hands-on, practical examples one step at a time. Each concept is broken down for you so you'll always know what you can do with it in practical terms. If you're interested in teaching others "how to Python," this will be your guidebook. If you're looking to stoke the coding flame in your coworkers, kids, or relatives-use our material to teach them. All the sequencing has been done for you so you'll always know what to cover next and how to explain it. What Python Developers Say About The Book: "Go forth and learn this amazing language using this great book." - Michael Kennedy, Talk Python "The wording is casual, easy to understand, and makes the information flow well." - Thomas Wong, Pythonista "I floundered for a long time trying to teach myself. I slogged through dozens of incomplete online tutorials. I snoozed through hours of boring screencasts. I gave up on countless cruffy books from big-time publishers. And then I found Real Python. The easy-to-follow, step-by-step instructions break the big concepts down into bite-sized chunks written in plain English. The authors never forget their audience and are consistently thorough and detailed in their explanations. I'm up and running now, but I constantly refer to the material for guidance." - Jared Nielsen, Pythonista

This volume focuses on the underlying sockets class, one of the basis for learning about networks in any programming language. By learning to write simple client and server programs that use TCP/IP, readers can then realize network routing, framing, error detection and correction, and performance. To build today's highly distributed, networked applications and services, you need deep mastery of sockets and other key networking APIs. One book delivers comprehensive, start-to-finish guidance for building robust, high-performance networked systems in any environment: UNIX Network Programming, Volume 1, Third Edition.

Help for Unix System Administrators

InfoWorld

Object-Oriented Interfaces and Databases

Strategy Game Programming with DirectX 9.0

The Python 3 Standard Library by Example

**Covering all the essential components of Unix/Linux, including process**

management, concurrent programming, timer and time service, file systems and network programming, this textbook emphasizes programming practice in the Unix/Linux environment. Systems Programming in Unix/Linux is intended as a textbook for systems programming courses in technically-oriented Computer Science/Engineering curricula that emphasize both theory and programming practice. The book contains many detailed working example programs with complete source code. It is also suitable for self-study by advanced programmers and computer enthusiasts. Systems programming is an indispensable part of Computer Science/Engineering education. After taking an introductory programming course, this book is meant to further knowledge by detailing how dynamic data structures are used in practice, using programming exercises and programming projects on such topics as C structures, pointers, link lists and trees. This book provides a wide range of knowledge about computer system software and advanced programming skills, allowing readers to interface with operating system kernel, make efficient use of system resources and develop application software. It also prepares readers with the needed background to pursue advanced studies in Computer Science/Engineering, such as operating systems, embedded systems, database systems, data mining, artificial intelligence, computer networks, network security, distributed and parallel computing.

**Sams Teach Yourself TCP/IP in 24 Hours, Sixth Edition** is a practical guide to the simple yet illusive protocol system that powers the Internet. A step-by-step approach reveals how the protocols of the TCP/IP stack really work and explores the rich array of services available on the Internet today. You'll learn about configuring and managing real-world networks, and you'll gain the deep understanding you'll need to troubleshoot new problems when they arise. **Sams Teach Yourself TCP/IP in 24 Hours** is the only single-volume introduction to TCP/IP that receives regular updates to incorporate new technologies of the ever-changing Internet. This latest edition includes up-to-date material on recent topics such as tracking and privacy, cloud computing, mobile networks, and the Internet of Things. Each chapter also comes with: Practical, hands-on examples, showing you how to apply what you learn Quizzes and exercises that test your knowledge and stretch your skills Notes and tips with shortcuts, solutions, and workarounds If you're looking for a smart, concise introduction to the TCP/IP protocols, start your clock and look inside. Learn how to... Understand TCP/IP's role, how it works, and how it continues to evolve Work with TCP/IP's Network Access, Internet, Transport, and Application layers Design modern networks that will scale and resist attack Address security and privacy issues with encryption, digital signatures, VPNs, Kerberos, web tracking, cookies, anonymity networks, and firewalls Discover how IPv6 differs from IPv4, and how to migrate or coexist with IPv6 Configure dynamic addressing, DHCP, NAT, and Zeroconf Establish efficient and reliable routing, subnetting, and name resolution Use TCP/IP in modern cloud-based environments Integrate IoT devices into your TCP/IP network Improve your efficiency with the latest TCP/IP tools and utilities Support high-performance media streaming and webcasting Troubleshoot problems with connectivity, protocols, name resolution, and performance Walk through TCP/IP network implementation, from start to finish

A guide to developing network programs covers networking fundamentals as well as TCP and UDP sockets, multicasting protocol, content handlers, servlets, I/O, parsing, Java Mail API, and Java Secure Sockets Extension.

**8 mini books chock full of Linux! Inside, over 800 pages of Linux topics are organized into eight task-oriented mini books that help you understand all aspects of the latest OS distributions of the most popular open-source operating system in use today. Topics include getting up and running with basics, desktops, networking, internet services, administration, security, scripting, Linux certification, and more. This new edition of Linux All-in-One For Dummies has a unique focus on Ubuntu, while still including coverage of Debian, Red Hat, SuSE, and others. The market is looking for administrators, and part of the qualifications needed for job openings is the authentication of skills by vendor-neutral third parties (CompTIA/Linux Professional Institute)—and that's something other books out there don't address. Install and configure peripherals, software packages, and keep everything current Connect to the internet, set up a local area network (including a primer on TCP/IP, and managing a local area network using configuration tools and files) Browse the web securely and anonymously Get everything you need to pass your entry-level Linux certification exams This book is for anyone getting familiar with the Linux OS, and those looking for test-prep content as they study for the level-1 Linux certification! Special Edition Using Visual C++.NET**

**TCP/IP in 24 Hours, Sams Teach Yourself**

**C# Network Programming**

**Hands-On Network Programming with C# and .NET Core**

**UNIX Network Programming: The sockets networking API**

On its own, C# simplifies network programming. Combine it with the precise instruction found in C# Network Programming, and you'll find that building network applications is easier and quicker than ever. This book helps newcomers get started with a look at the basics of network programming as they relate to C#, including the language's network classes, the Winsock interface, and DNS resolution. Spend as much time here as you need, then dig into the core topics of the network layer. You'll learn to make socket connections via TCP and "connectionless" connections via UDP. You'll also discover just how much help C# gives you with some of your toughest chores, such as asynchronous socket programming, multithreading, and multicasting. Network-layer techniques are just a means to an end, of course, and so this book keeps going, providing a series of detailed application-layer programming examples that show you how to work with real protocols and real network environments to build and implement a variety of applications. Use SNMP to manage network devices, SMTP to communicate with remote mail servers, and HTTP to Web-enable your applications. And use classes native to C# to query and modify Active Directory entries. Rounding it all out is plenty of advanced coverage to push your C# network programming skills to the limit. For example, you'll learn two ways to share application methods across the network: using Web services and remoting. You'll also master the security features intrinsic to C# and .NET--features that stand to benefit all of your programming projects.

InfoWorld is targeted to Senior IT professionals. Content is segmented into Channels and Topic Centers. InfoWorld also celebrates people, companies, and projects.

This book gives hobbyists and professional programmers the knowledge necessary to create a real time strategy game of their own.

Most Internet applications use sockets to implement network communication protocols. TCP/IP Sockets in Java: Practical Guide for Programmers, with its focused, tutorial-based coverage, helps you master the tasks and techniques essential to virtually all client-server projects using sockets in Java. Later chapters teach you to implement more specialized functionality; incisive discussions of programming constructs and protocol implementations equip you with a deeper understanding that is invaluable for meeting future challenges. No other resource presents so concisely or so effectively the exact material you need to get up and running with Java sockets programming right away. For those who program using the C language, be sure to check out this book's companion, TCP/IP Sockets in C: Practical Guide for Programmers. For example code from the text, sample programming exercises, Powerpoint slides, and more, click on the grey "Companion Site" button to the right. \*Concise, no-nonsense explanations of issues often troublesome for students, including message construction and parsing, underlying mechanisms and Java I/O \*Comprehensive example-based coverage of the most important TCP/IP techniques-including iterative and threaded servers, timeouts and asynchronous message processing \*Includes a detailed, easy-to-use reference to the relevant JAVA class libraries \*A companion Web site provides online code for all the example programs given in the book \*Provides a guide to common errors and a reference offering detailed documentation of the sockets interface \*Perfect for a practitioner who may even want just to "look into" this technology. \*Provides tutorial-based instruction in key sockets programming techniques, focusing exclusively on Jva and complemented by example code. \*Covers challenging sockets programming issues: message construction and parsing, underlying TCP/IP protocol mechanisms, Java I/O, iterate and threaded servers, and timeouts. \*Includes references to the relevant Java class libraries that often go beyond the "official" Java documentation in clarity and explanation. \*Provides code for all example programs, along with additional exercises, via companion Web site.

Essential Skills for Using and Securing Networks

TCP/IP Sockets in Java

Java for Artists

44 Tips to Improve Your Network Programs

TCP/IP Sockets in C, 2nd Edition

*The Internet Encyclopedia in a 3-volume reference work on the internet as a business tool, IT platform, and communications and commerce medium.*

*This book contains everything you need to make your application program support IPv6. IPv6 socket APIs (RFC2553) are fully described with real-world examples. It covers security, a great concern these days. To secure the Internet infrastructure, every developer has to take a security stance - to audit every line of code, to use proper API and write correct and secure code as much as possible. To achieve this goal, the examples presented in this book are implemented with a security stance. Also, the book leads you to write secure programs. For instance, the book recommends against the use of some of the IPv6 standard APIs - unfortunately, there are some IPv6 APIs that are inherently insecure, so the book tries to avoid (and discourage) the use of such APIs. Another key issue is portability. The examples in the book should be applicable to any of UNIX based operating systems, MacOS X, and Windows XP. \* Covers the new protocol just adopted by the Dept of Defense for future systems \* Deals with security concerns, including*

*spam and email, by presenting the best programming standards \* Fully describes IPv6 socket APIs (RFC2553) using real-world examples \* Allows for portability to UNIX-based operating systems, MacOS X, and Windows XP*

*Computer Systems Organization -- Computer-Communication Networks.*

*Dive into key topics in network architecture and Go, such as data serialization, application level protocols, character sets and encodings. This book covers network architecture and gives an overview of the Go language as a primer, covering the latest Go release. Beyond the fundamentals, Network Programming with Go covers key networking and security issues such as HTTP and HTTPS, templates, remote procedure call (RPC), web sockets including HTML5 web sockets, and more. Additionally, author Jan Newmarch guides you in building and connecting to a complete web server based on Go. This book can serve as both as an essential learning guide and reference on Go networking. What You Will Learn Master network programming with Go Carry out data serialization Use application-level protocols Manage character sets and encodings Deal with HTTP(S) Build a complete Go-based web server Work with RPC, web sockets, and more Who This Book Is For Experienced Go programmers and other programmers with some experience with the Go language.*

*Linux All-in-One For Dummies*

*Foundations of Python Network Programming*

*Pyth 3 Stan Libr Exam \_2*

*The Internet Encyclopedia, Volume 3 (P - Z)*

*Network Programming with Go*

Nowadays, configuring a network and automating security protocols are quite difficult to implement. However, using Python makes it easy to automate this whole process. This book explains the process of using Python for building networks, detecting network errors, and performing different security protocols using Python Scripting.

A comprehensive guide to understanding network architecture, communication protocols, and network analysis to build secure applications compatible with the latest versions of C# 8 and .NET Core 3.0 Key FeaturesExplore various network architectures that make distributed programming possibleLearn how to make reliable software by writing secure interactions between clients and serversUse .NET Core for network device automation, DevOps, and software-defined networkingBook Description The C# language and the .NET Core application framework provide the tools and patterns required to make the discipline of network programming as intuitive and enjoyable as any other aspect of C# programming. With the help of this book, you will discover how the C# language and the .NET Core framework make this possible. The book begins by introducing the core concepts of network programming, and what distinguishes this field of programming from other disciplines. After this, you will gain insights into concepts such as transport protocols, sockets and ports, and remote data streams, which will provide you with a holistic understanding of how network software fits into larger distributed systems. The book will also explore the intricacies of how network software is implemented in a more explicit context, by covering sockets, connection strategies such as Transmission Control Protocol (TCP) and User Datagram Protocol (UDP), asynchronous processing, and threads. You will then be able to work through code examples

for TCP servers, web APIs served over HTTP, and a Secure Shell (SSH) client. By the end of this book, you will have a good understanding of the Open Systems Interconnection (OSI) network stack, the various communication protocols for that stack, and the skills that are essential to implement those protocols using the C# programming language and the .NET Core framework. What you will learn

Understand the breadth of C#'s network programming utility classes  
Utilize network-layer architecture and organizational strategies  
Implement various communication and transport protocols within C#  
Discover hands-on examples of distributed application development  
Gain hands-on experience with asynchronous socket programming and streams  
Learn how C# and the .NET Core runtime interact with a hosting network  
Understand a full suite of network programming tools and features

Who this book is for  
If you're a .NET developer or a system administrator with .NET experience and are looking to get started with network programming, then this book is for you. Basic knowledge of C# and .NET is assumed, in addition to a basic understanding of common web protocols and some high-level distributed system designs.

For example code from the text, Winsock adaptations of text code, sample programming exercises and more, click on the grey "COMPANION SITE" button to the right. Note: This title was formerly known as Pocket Guide to TCP/IP Socket Programming in C, ISBN 1-55860-686-6. TCP/IP Sockets in C: Practical Guide for Programmers is a quick and affordable way to gain the knowledge and skills you need to develop sophisticated and powerful networked-based programs using sockets. Written by two experienced networking instructors, this book provides a series of examples that demonstrate basic sockets techniques for clients and servers. Using plenty of real-world examples, this book is a complete beginner's guide to socket programming and a springboard to more advanced networking topics, including multimedia protocols. \*Concise, no-nonsense explanations of issues often troublesome for beginners, including message construction and parsing. \*Comprehensive example-based coverage of the most important TCP/IP techniques-including iterative and concurrent servers, timeouts, and asynchronous message processing. \*Includes a detailed, easy-to-use reference to the system calls and auxiliary routines that comprise the sockets interface. \*A companion Web site provides source code for all example programs in both C and WinSock versions, as well as guidance on running the code on various platforms.

Covers topics including HTTP methods and status codes, optimizing proxies, designing web crawlers, content negotiation, and load-balancing strategies.

Internet Protocols—Advances in Research and Application: 2013 Edition

Mastering Python for Networking and Security

Power Programming with RPC

Linux Socket Programming by Example

TCP/IP Sockets in C

TCP/IP Sockets in C: Practical Guide for Programmers, Second Edition is a quick

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

A comprehensive Java guide, with samples, exercises, casestudies, and step-by-step instruction *Beginning Java Programming: The Object Oriented Approach* is a straightforward resource for getting started with one of the world's most enduringly popular programming languages. Based on classes taught by the authors, the book starts with the basics and gradually builds into more advanced concepts. The approach utilizes an integrated development environment that allows readers to immediately apply what they learn, and includes step-by-step instruction with plenty of sample programs. Each chapter contains exercises based on real-world business and educational scenarios, and the final chapter uses case studies to combine several concepts and put readers' new skills to the test. *Beginning Java Programming: The Object Oriented Approach* provides both the information and the tools beginners need to develop Java skills, from the general concepts of object-oriented programming. Learn to:

- Understand the Java language and object-oriented concept implementation
- Use Java to access and manipulate external data
- Make applications accessible to users with GUIs
- Streamline workflow with object-oriented patterns

The book is geared for those who want to use Java in an applied environment while learning at the same time. Useful as either a course text or a stand-alone self-study program, *Beginning Java Programming* is a thorough, comprehensive guide.

A comprehensive guide to programming with network sockets, implementing Internet protocols, designing IoT devices, and much more with C

**Key Features**

- Leverage your C or C++ programming skills to build powerful network applications
- Get to grips with a variety of network protocols that allow you to load web pages, send emails, and do much more
- Write portable network code for operating systems such as Windows, Linux, and macOS

**Book Description**

Network programming, a challenging topic in C, is made easy to understand with a careful exposition of socket programming APIs. This book gets you started with modern network programming in C and the right use of relevant

operating system APIs. This book covers core concepts, such as hostname resolution with DNS, that are crucial to the functioning of the modern web. You'll delve into the fundamental network protocols, TCP and UDP. Essential techniques for networking paradigms such as client-server and peer-to-peer models are explained with the help of practical examples. You'll also study HTTP and HTTPS (the protocols responsible for web pages) from both the client and server perspective. To keep up with current trends, you'll apply the concepts covered in this book to gain insights into web programming for IoT. You'll even get to grips with network monitoring and implementing security best practices. By the end of this book, you'll have experience of working with client-server applications, and be able to implement new network programs in C. The code in this book is compatible with the older C99 version as well as the latest C18 and C++17 standards. Special consideration is given to writing robust, reliable, and secure code that is portable across operating systems, including Winsock sockets for Windows and POSIX sockets for Linux and macOS. What you will learn

- Uncover cross-platform socket programming APIs
- Implement techniques for supporting IPv4 and IPv6
- Understand how TCP and UDP connections work over IP
- Discover how hostname resolution and DNS work
- Interface with web APIs using HTTP and HTTPS
- Acquire hands-on experience with Simple Mail Transfer Protocol (SMTP)
- Apply network programming to the Internet of Things (IoT)

Who this book is for If you're a developer or a system administrator who wants to enter the world of network programming, this book is for you. Basic knowledge of C programming is assumed.

This text provides an explanation of CGI and related techniques for people who want to provide their own information servers on the Web. It explains the value of CGI and how it works, and looks at the subtle details of programming. The accompanying CD-ROM

Leverage Python scripts and libraries to overcome networking and security issues

Biomedical Information Technology

Systems Programming in Unix/Linux

TCP/IP Network Administration

The TCP/IP Guide

Programming in TCP/IP can seem deceptively simple. Nonetheless, many network programmers recognize that their applications could be much more robust. Effective TCP/IP Programming is designed to boost programmers to a higher level of competence by focusing on the protocol suite's more subtle features and techniques. It gives you the know-how you need to produce highly effective TCP/IP programs. In forty-four concise, self-contained lessons, this book offers experience-based tips, practices, and rules of thumb for learning high-performance TCP/IP programming techniques. Moreover, it shows you how to avoid many of TCP/IP's most common trouble spots. Effective TCP/IP

Programming offers valuable advice on such topics as: Exploring IP addressing, subnets, and CIDR Preferring the sockets interface over XTI/TLI Using two TCP connections Making your applications event-driven Using one large write instead of multiple small writes Avoiding data copying Understanding what TCP reliability really means Recognizing the effects of buffer sizes Using tcpdump, traceroute, netstat, and ping effectively Numerous examples demonstrate essential ideas and concepts. Skeleton code and a library of common functions allow you to write applications without having to worry about routine chores. Through individual tips and explanations, you will acquire an overall understanding of TCP/IP's inner workings and the practical knowledge needed to put it to work. Using Effective TCP/IP Programming, you'll speed through the learning process and quickly achieve the programming capabilities of a seasoned pro.

The networking capabilities of the Java platform have been extended considerably since the first edition of the book. This new edition covers version 1.5-1.7, the most current iterations, as well as making the following improvements: The API (application programming interface) reference sections in each chapter, which describe the relevant parts of each class, have been replaced with (i) a summary section that lists the classes and methods used in the code, and (ii) a "gotchas" section that mentions nonobvious or poorly-documented aspects of the objects. In addition, the book covers several new classes and capabilities introduced in the last few revisions of the Java platform. New abstractions to be covered include NetworkInterface, InetAddress, Inet4/6Address, SocketAddress/InetSocketAddress, Executor, and others; extended access to low-level network information; support for IPv6; more complete access to socket options; and scalable I/O. The example code is also modified to take advantage of new language features such as annotations, enumerations, as well as generics and implicit iterators where appropriate. Most Internet applications use sockets to implement network communication protocols. This book's focused, tutorial-based approach helps the reader master the tasks and techniques essential to virtually all client-server projects using sockets in Java. Chapter 1 provides a general overview of networking concepts to allow readers to synchronize the concepts with terminology. Chapter 2 introduces the mechanics of simple clients and servers. Chapter 3 covers basic message construction and parsing. Chapter 4 then deals with techniques used to build more robust clients and servers. Chapter 5 (NEW) introduces the scalable interface facilities which were introduced in Java 1.5, including the buffer and channel abstractions. Chapter 6 discusses the relationship between the programming constructs and the underlying protocol implementations in more detail. Programming concepts are introduced through simple program examples accompanied by line-by-line code commentary that describes the purpose of every part of the program. No other resource presents so concisely or so effectively the material necessary to get up and running with Java sockets programming. Focused, tutorial-based instruction in key sockets programming techniques allows reader to quickly come up to

speed on Java applications. Concise and up-to-date coverage of the most recent platform (1.7) for Java applications in networking technology.

Internet Protocols—Advances in Research and Application: 2013 Edition is a ScholarlyEditions™ book that delivers timely, authoritative, and comprehensive information about File Transfer Protocol. The editors have built Internet Protocols—Advances in Research and Application: 2013 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about File Transfer Protocol in this book to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Internet Protocols—Advances in Research and Application: 2013 Edition has been produced by the world's leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence, and credibility. More information is available at <http://www.ScholarlyEditions.com/>.

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A Comprehensive, Illustrated Internet Protocols Reference

Build robust network applications with C# and .NET Core

Effective TCP/IP Programming

Java Network Programming

The Art, Philosophy, and Science of Object-oriented Programming

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, dhcpd, 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 startedM Basic configuration Configuring the interface Configuring routing Configuring DNS Configuring network servers Configuring sendmail Configuring Apache Network security Troubleshooting Appendices include dip, pppd, and chat reference, a gated reference, a dhcpd 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, gpg, 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.

IPv6 Network Programming

The Definitive Guide

The comprehensive guide to building network applications with Python

Sams Teach Yourself TCP/IP in 24 Hours