

# TCP IP Sockets In Java Practical Guide For Programmers The Practical Guides

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*Pure Java 2* - Kenneth Litwak 1999

A certified Java instructor at Sun Microsystems offers a premium code-intensive reference for professional Java programmers that is a perfect companion to Pure JFC Swing.

*Introduction to Programming Using Java* - David Eck 2009-09-01

*Computer Networking* - Olivier Bonaventure 2016-06-10

Original textbook (c) October 31, 2011 by Olivier Bonaventure, is licensed under a Creative Commons Attribution (CC BY) license made possible by funding from The Saylor Foundation's Open Textbook Challenge in order to be incorporated into Saylor's collection of open courses available at: <http://www.saylor.org>. Free PDF 282 pages at <https://www.textbookequity.org/bonaventure-computer-networking-principles-protocols-and-practice/> This open textbook aims to fill the gap between the open-source implementations and the open-source network specifications by providing a detailed but pedagogical description of the key principles that guide the operation of the Internet. 1 Preface 2 Introduction 3 The application Layer 4 The transport layer 5 The network

layer 6 The datalink layer and the Local Area Networks 7 Glossary 8 Bibliography

**TCP/IP Sockets in Java** - Kenneth L. Calvert 2011-08-29

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`, `InterfaceAddress`, `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.

[Beginning Linux?Programming](#) - Neil Matthew 2004-01-02

Describes the concepts of programming with Linux, covering such topics as shell programming, file structure, managing memory, using MySQL, debugging, processes and signals, and GNOME.

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

**Python Network Programming Cookbook** - Pradeeban Kathiravelu 2017-08-09

Discover practical solutions for a wide range of real-world network programming tasks About This Book Solve real-world tasks in the area of network programming, system/networking administration, network monitoring, and more. Familiarize yourself with the fundamentals and

functionalities of SDN Improve your skills to become the next-gen network engineer by learning the various facets of Python programming Who This Book Is For This book is for network engineers, system/network administrators, network programmers, and even web application developers who want to solve everyday network-related problems. If you are a novice, you will develop an understanding of the concepts as you progress with this book. What You Will Learn Develop TCP/IP networking client/server applications Administer local machines' IPv4/IPv6 network interfaces Write multi-purpose efficient web clients for HTTP and HTTPS protocols Perform remote system administration tasks over Telnet and SSH connections Interact with popular websites via web services such as XML-RPC, SOAP, and REST APIs Monitor and analyze major common network security vulnerabilities Develop Software-Defined Networks with Ryu, OpenDaylight, Floodlight, ONOS, and POX Controllers Emulate simple and complex networks with Mininet and its extensions for network and systems emulations Learn to configure and build network systems and Virtual Network Functions (VNF) in heterogeneous deployment environments Explore various Python modules to program the Internet In Detail Python Network Programming Cookbook - Second Edition highlights the major aspects of network programming in Python, starting from writing simple networking clients to developing and deploying complex Software-Defined Networking (SDN) and Network Functions Virtualization (NFV) systems. It creates the building blocks for many practical web and networking applications that rely on various networking protocols. It presents the power and beauty of Python to solve numerous real-world tasks in the area of network programming, network and system administration, network monitoring, and web-application development. In this edition, you will also be introduced to network modelling to build your own cloud network. You will learn about the concepts and fundamentals of SDN and then extend your network with Mininet. Next, you'll find recipes on Authentication, Authorization, and Accounting (AAA) and open and proprietary SDN approaches and frameworks. You will also learn to configure the Linux Foundation networking ecosystem

and deploy and automate your networks with Python in the cloud and the Internet scale. By the end of this book, you will be able to analyze your network security vulnerabilities using advanced network packet capture and analysis techniques. Style and approach This book follows a practical approach and covers major aspects of network programming in Python. It provides hands-on recipes combined with short and concise explanations on code snippets. This book will serve as a supplementary material to develop hands-on skills in any academic course on network programming. This book further elaborates network softwarization, including Software-Defined Networking (SDN), Network Functions Virtualization (NFV), and orchestration. We learn to configure and deploy enterprise network platforms, develop applications on top of them with Python.

*Hands-On Network Programming with C* - Lewis Van Winkle 2019-05-13

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.

*Bluetooth Essentials for Programmers* - Albert S. Huang 2007-09-03

This book provides an introduction to Bluetooth programming, with a specific focus on developing real code. The authors discuss the major concepts and techniques involved in Bluetooth programming, with special emphasis on how they relate to other networking technologies. They provide specific descriptions and examples for creating applications in a number of programming languages and environments including Python, C, Java, GNU/Linux, Windows XP, Symbian Series 60, and Mac OS X. No previous experience with Bluetooth is assumed, and the material is suitable for anyone with some programming background. The authors place special emphasis on the essential concepts and techniques of Bluetooth programming, starting simply and allowing the reader to quickly master the basic concepts before addressing advanced features.

**Java NIO** - Ron Hitchens 2002-08-27

The java New I/O (NIO) packages in J2SE 1.4 introduce many new, indispensable features previously unavailable to Java programmers. These include APIs for high-performance I/O operations, regular expression processing, and character set coding. These new libraries are a treasure trove for java developers. The NIO APIs are especially

valuable where high-performance I/O is a requirement, but they can also be useful in a wide range of scenarios. The new APIs let you work directly with I/O buffers, multiplex nonblocking streams, do scattering reads and gathering writes, do channel-to-channel transfers, work with memory-mapped files, manage file locks, and much more. The new high-performance Regular Expression Library provides sophisticated, Perl-like regex-processing features such as pattern matching, search and replace, capture groups, look ahead assertions, and many others. The Charset API gives you complete control over character set encoding and decoding, which are vital for properly managing the exchange of documents on the Web, for localization, or for other purposes. You can also create and install your own custom character sets. Staying current with the latent java technology is never easy. NIO, new in Java 1.4, is quite possibly the most important new java feature since Swing. Understanding it thoroughly is essential for any serious Java developer. NIO closes the gap between java and natively compiled languages and enables java applications to achieve maximum I/O performance by effectively leveraging operating-system services in a portable way. Java NIO is a comprehensive guide to the java New I/O facilities. It lets you take full advantage of NIO features and shows you how they work, what they can do for you, and when you should use them. This book brings you up to speed on NIO and shows you how to bring your I/O-bound Java applications up to speed as well. Java NIO is an essential part of any Java professional's library.

*TCP/IP Sockets in C#* - David Makofske 2004-05-25

"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

C++ Network Programming, Volume I - Douglas Schmidt 2001-12-10

As networks, devices, and systems continue to evolve, software engineers face the unique challenge of creating reliable distributed applications within frequently changing environments. C++ Network Programming,

Volume 1, provides practical solutions for developing and optimizing complex distributed systems using the ADAPTIVE Communication Environment (ACE), a revolutionary open-source framework that runs on dozens of hardware platforms and operating systems. This book guides software professionals through the traps and pitfalls of developing efficient, portable, and flexible networked applications. It explores the inherent design complexities of concurrent networked applications and the tradeoffs that must be considered when working to master them. C++ Network Programming begins with an overview of the issues and tools involved in writing distributed concurrent applications. The book then provides the essential design dimensions, patterns, and principles needed to develop flexible and efficient concurrent networked applications. The book's expert author team shows you how to enhance design skills while applying C++ and patterns effectively to develop object-oriented networked applications. Readers will find coverage of: C++ network programming, including an overview and strategies for addressing common development challenges The ACE Toolkit Connection protocols, message exchange, and message-passing versus shared memory Implementation methods for reusable networked application services Concurrency in object-oriented network programming Design principles and patterns for ACE wrapper facades With this book, C++ developers have at their disposal the most complete toolkit available for developing successful, multiplatform, concurrent networked applications with ease and efficiency.

*An Introduction to Network Programming with Java* - Jan Graba  
2006-12-11

The 1st edition of this book was equally useful as an undergraduate textbook and as the lucid, no-nonsense guide required by IT professionals, featuring many code examples, screenshots and exercises. The new 2nd edition adds revised language reflecting significant changes in J2SE 5.0; update of support software; non-blocking servers; DataSource interface and Data Access Objects for connecting to remote databases.

[HTTP: The Definitive Guide](#) - David Gourley 2002-09-27

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

*C++ Network Programming, Volume 2* - Douglas Schmidt 2002-10-29

Do you need to develop flexible software that can be customized quickly? Do you need to add the power and efficiency of frameworks to your software? The ADAPTIVE Communication Environment (ACE) is an open-source toolkit for building high-performance networked applications and next-generation middleware. ACE's power and flexibility arise from object-oriented frameworks, used to achieve the systematic reuse of networked application software. ACE frameworks handle common network programming tasks and can be customized using C++ language features to produce complete distributed applications. C++ Network Programming, Volume 2, focuses on ACE frameworks, providing thorough coverage of the concepts, patterns, and usage rules that form their structure. This book is a practical guide to designing object-oriented frameworks and shows developers how to apply frameworks to concurrent networked applications. C++ Networking, Volume 1, introduced ACE and the wrapper facades, which are basic network computing ingredients. Volume 2 explains how frameworks build on wrapper facades to provide higher-level communication services. Written by two experts in the ACE community, this book contains: An overview of ACE frameworks Design dimensions for networked services Descriptions of the key capabilities of the most important ACE frameworks Numerous C++ code examples that demonstrate how to use ACE frameworks C++ Network Programming, Volume 2, teaches how to use frameworks to write networked applications quickly, reducing development effort and overhead. It will be an invaluable asset to any C++ developer working on networked applications.

[Head First Java](#) - Kathy Sierra 2005-02-09

Learning a complex new language is no easy task especially when it's an object-oriented computer programming language like Java. You might think the problem is your brain. It seems to have a mind of its own, a mind that doesn't always want to take in the dry, technical stuff you're

forced to study. The fact is your brain craves novelty. It's constantly searching, scanning, waiting for something unusual to happen. After all, that's the way it was built to help you stay alive. It takes all the routine, ordinary, dull stuff and filters it to the background so it won't interfere with your brain's real work--recording things that matter. How does your brain know what matters? It's like the creators of the Head First approach say, suppose you're out for a hike and a tiger jumps in front of you, what happens in your brain? Neurons fire. Emotions crank up. Chemicals surge. That's how your brain knows. And that's how your brain will learn Java. Head First Java combines puzzles, strong visuals, mysteries, and soul-searching interviews with famous Java objects to engage you in many different ways. It's fast, it's fun, and it's effective. And, despite its playful appearance, Head First Java is serious stuff: a complete introduction to object-oriented programming and Java. You'll learn everything from the fundamentals to advanced topics, including threads, network sockets, and distributed programming with RMI. And the new, second edition focuses on Java 5.0, the latest version of the Java language and development platform. Because Java 5.0 is a major update to the platform, with deep, code-level changes, even more careful study and implementation is required. So learning the Head First way is more important than ever. If you've read a Head First book, you know what to expect--a visually rich format designed for the way your brain works. If you haven't, you're in for a treat. You'll see why people say it's unlike any other Java book you've ever read. By exploiting how your brain works, Head First Java compresses the time it takes to learn and retain--complex information. Its unique approach not only shows you what you need to know about Java syntax, it teaches you to think like a Java programmer. If you want to be bored, buy some other book. But if you want to understand Java, this book's for you.

[The Complete Guide to CICS Transaction Gateway Volume 1 Configuration and Administration](#) - Rufus Credle 2014-08-08

In this IBM® Redbooks® publication, you will gain an appreciation of the IBM CICS® Transaction Gateway (CICS TG) product suite, based on key criteria, such as capabilities, scalability, platform, CICS server

support, application language support, and licensing model. Matching the requirements to available infrastructure and hardware choices requires an appreciation of the choices available. In this book, you will gain an understanding of those choices, and will be capable of choosing the appropriate CICS connection protocol, APIs for the applications, and security options. You will understand the services available to the application developer when using a chosen protocol. You will then learn about how to implement CICS TG solutions, taking advantage of the latest capabilities, such as IPIC connectivity, high availability, and Dynamic Server Selection. Specific scenarios illustrate the usage of CICS TG for IBM z/OS®, and CICS TG for Multiplatforms, with CICS Transaction Server for z/OS and IBM WebSphere® Application Server, including connections in CICS, configuring simple end-to-end connectivity (all platforms) with verification for remote and local mode applications, and adding security, XA support, and high availability.

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

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

[C# Network Programming](#) - Richard Blum 2006-02-20

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.

#### **Effective TCP/IP Programming** - Jon C. Snader 2000-05-04

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.

#### **Fundamentals of Computer Programming with C#** - Svetlin Nakov 2013-09-01

The free book "Fundamentals of Computer Programming with C#" is a comprehensive computer programming tutorial that teaches programming, logical thinking, data structures and algorithms, problem solving and high quality code with lots of examples in C#. It starts with the first steps in programming and software development like variables, data types, conditional statements, loops and arrays and continues with other basic topics like methods, numeral systems, strings and string processing, exceptions, classes and objects. After the basics this fundamental programming book enters into more advanced programming topics like recursion, data structures (lists, trees, hash-tables and graphs), high-quality code, unit testing and refactoring, object-oriented principles (inheritance, abstraction, encapsulation and polymorphism) and their implementation the C# language. It also covers fundamental topics that each good developer should know like algorithm design, complexity of algorithms and problem solving. The book uses C# language and Visual Studio to illustrate the programming concepts and explains some C# / .NET specific technologies like lambda expressions, extension methods and LINQ. The book is written by a team of developers lead by Svetlin Nakov who has 20+ years practical software development experience. It teaches the major programming concepts

and way of thinking needed to become a good software engineer and the C# language in the meantime. It is a great start for anyone who wants to become a skillful software engineer. The books does not teach technologies like databases, mobile and web development, but shows the true way to master the basics of programming regardless of the languages, technologies and tools. It is good for beginners and intermediate developers who want to put a solid base for a successful career in the software engineering industry. The book is accompanied by free video lessons, presentation slides and mind maps, as well as hundreds of exercises and live examples. Download the free C# programming book, videos, presentations and other resources from <http://introprogramming.info>. Title: Fundamentals of Computer Programming with C# (The Bulgarian C# Programming Book) ISBN: 9789544007737 ISBN-13: 978-954-400-773-7 (9789544007737) ISBN-10: 954-400-773-3 (9544007733) Author: Svetlin Nakov & Co. Pages: 1132 Language: English Published: Sofia, 2013 Publisher: Faber Publishing, Bulgaria Web site: <http://www.introprogramming.info> License: CC-Attribution-Share-Alike Tags: free, programming, book, computer programming, programming fundamentals, ebook, book programming, C#, CSharp, C# book, tutorial, C# tutorial; programming concepts, programming fundamentals, compiler, Visual Studio, .NET, .NET Framework, data types, variables, expressions, statements, console, conditional statements, control-flow logic, loops, arrays, numeral systems, methods, strings, text processing, StringBuilder, exceptions, exception handling, stack trace, streams, files, text files, linear data structures, list, linked list, stack, queue, tree, balanced tree, graph, depth-first search, DFS, breadth-first search, BFS, dictionaries, hash tables, associative arrays, sets, algorithms, sorting algorithm, searching algorithms, recursion, combinatorial algorithms, algorithm complexity, OOP, object-oriented programming, classes, objects, constructors, fields, properties, static members, abstraction, interfaces, encapsulation, inheritance, virtual methods, polymorphism, cohesion, coupling, enumerations, generics, namespaces, UML, design patterns, extension methods, anonymous types, lambda expressions, LINQ, code quality,

high-quality code, high-quality classes, high-quality methods, code formatting, self-documenting code, code refactoring, problem solving, problem solving methodology, 9789544007737, 9544007733

**Java Network Programming and Distributed Computing** - David Reilly 2002

Java's rich, comprehensive networking interfaces make it an ideal platform for building today's networked, Internet-centered applications, components, and Web services. Now, two Java networking experts demystify Java's complex networking API, giving developers practical insight into the key techniques of network development, and providing extensive code examples that show exactly how it's done. David and Michael Reilly begin by reviewing fundamental Internet architecture and TCP/IP protocol concepts all network programmers need to understand, as well as general Java features and techniques that are especially important in network programming, such as exception handling and input/output. Using practical examples, they show how to write clients and servers using UDP and TCP; how to build multithreaded network applications; and how to utilize HTTP and access the Web using Java. The book includes detailed coverage of server-side application development; distributed computing development with RMI and CORBA; and email-enabling applications with the powerful JavaMail API. For all beginning to intermediate Java programmers, network programmers who need to learn to work with Java.

**JDBC** - Gregory D. Speegle 2002

1 -- Introduction to JDBC -- 2 -- Presenting Information to Users -- 3 -- Querying the Database -- 4 -- Updating the Database -- 5 -- Advanced JDBC Topics -- 6 -- An eCommerce Example -- 7 -- How to Stay Current with JDBC -- 8 -- Appendix.

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

*TCP/IP Sockets in C: Practical Guide for Programmers, Second Edition* is a quick and affordable way to gain the knowledge and skills needed to develop sophisticated and powerful web-based applications. The book's focused, tutorial-based approach enables the reader to master the tasks and techniques essential to virtually all client-server projects using

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

[TCP/IP Sockets in C#](#) - David Makofske 2004-04-29

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.

**Linux Socket Programming** - Sean Walton 2001

"Linux Socket Programming" provides thorough, authoritative coverage of the sockets API, the defacto standard for all network programming. It gives real-world examples that demonstrate effective techniques to make code more robust and versatile. This book contains the only complete reference for all calls and functions needed to program sockets.

**Network Analysis, Architecture, and Design** - James D. McCabe 2010-07-26

Traditionally, networking has had little or no basis in analysis or architectural development, with designers relying on technologies they are most familiar with or being influenced by vendors or consultants. However, the landscape of networking has changed so that network services have now become one of the most important factors to the success of many third generation networks. It has become an important feature of the designer's job to define the problems that exist in his network, choose and analyze several optimization parameters during the

analysis process, and then prioritize and evaluate these parameters in the architecture and design of the system. *Network Analysis, Architecture, and Design*, Third Edition, uses a systems methodology approach to teaching these concepts, which views the network (and the environment it impacts) as part of the larger system, looking at interactions and dependencies between the network and its users, applications, and devices. This approach matches the new business climate where customers drive the development of new services and the book discusses how networks can be architected and designed to provide many different types of services to customers. With a number of examples, analogies, instructor tips, and exercises, this book works through the processes of analysis, architecture, and design step by step, giving designers a solid resource for making good design decisions. With examples, guidelines, and general principles McCabe illuminates how a network begins as a concept, is built with addressing protocol, routing, and management, and harmonizes with the interconnected technology around it. Other topics covered in the book are learning to recognize problems in initial design, analyzing optimization parameters, and then prioritizing these parameters and incorporating them into the architecture and design of the system. This is an essential book for any professional that will be designing or working with a network on a routine basis. Substantially updated design content includes ad hoc networks, GMPLS, IPv6, and mobile networking. Written by an expert in the field that has designed several large-scale networks for government agencies, universities, and corporations. Incorporates real-life ideas and experiences of many expert designers along with case studies and end-of-chapter exercises.

**TCP/IP Architecture, Design, and Implementation in Linux** - Sameer Seth 2009-01-23

This book provides thorough knowledge of Linux TCP/IP stack and kernel framework for its network stack, including complete knowledge of design and implementation. Starting with simple client-server socket programs and progressing to complex design and implementation of TCP/IP protocol in linux, this book provides different aspects of socket

programming and major TCP/IP related algorithms. In addition, the text features netfilter hook framework, a complete explanation of routing subsystem, IP QOS implementation, and Network Soft IRQ. This book further contains elements on TCP state machine implementation, TCP timer implementation on Linux, TCP memory management on Linux, and debugging TCP/IP stack using lcrash

**IBM HiperSockets Implementation Guide** - Mike Ebbers 2014-06-10

This IBM® Redbooks® publication provides information about the IBM System z® HiperSockets™ function. It offers a broad description of the architecture, functions, and operating systems support. This publication will help you plan and implement HiperSockets. It provides information about the definitions needed to configure HiperSockets for the supported operating systems. This book is intended for system programmers, network planners, and systems engineers who want to plan and install HiperSockets. A solid background in network and Transmission Control Protocol/Internet Protocol (TCP/IP) is assumed.

[Attacking Network Protocols](#) - James Forshaw 2018-01-02

Attacking Network Protocols is a deep dive into network protocol security from James Forshaw, one of the world's leading bug hunters. This comprehensive guide looks at networking from an attacker's perspective to help you discover, exploit, and ultimately protect vulnerabilities. You'll start with a rundown of networking basics and protocol traffic capture before moving on to static and dynamic protocol analysis, common protocol structures, cryptography, and protocol security. Then you'll turn your focus to finding and exploiting vulnerabilities, with an overview of common bug classes, fuzzing, debugging, and exhaustion attacks. Learn how to: - Capture, manipulate, and replay packets - Develop tools to dissect traffic and reverse engineer code to understand the inner workings of a network protocol - Discover and exploit vulnerabilities such as memory corruptions, authentication bypasses, and denials of service - Use capture and analysis tools like - Wireshark and develop your own custom network proxies to manipulate - network traffic Attacking Network Protocols is a must-have for any penetration tester, bug hunter, or developer looking to understand and

discover network vulnerabilities.

[Multicast Sockets](#) - David Makofske 2002-11-21

Multicast Sockets: Practical Guide for Programmers is a hands-on, application-centric approach to multicasting (as opposed to a network-centric one) that is filled with examples, ideas, and experimentation. Each example builds on the last to introduce multicast concepts, frameworks, and APIs in an engaging manner that does not burden the reader with lots of theory and jargon. The book is an introduction to multicasting but assumes that the reader has a background in network programming and is proficient in C or Java. After reading the book, you will have a firm grasp on how to write a multicast program. Author team of instructor and application programmer is reflected in this rich instructional and practical approach to the subject material Only book available that provides a clear, concise, application-centric approach to programming multicast applications and covers several languages—C, Java, and C# on the .NET platform Covers important topics like service models, testing reachability, and addressing and scoping Includes numerous examples and exercises for programmers and students to test what they have learned

**Learning Network Programming with Java** - Richard M Reese 2015-12-22

Harness the hidden power of Java to build network-enabled applications with lower network traffic and faster processes About This Book Learn to deliver superior server-to-server communication through the networking channels Gain expertise of the networking features of your own applications to support various network architectures such as client/server and peer-to-peer Explore the issues that impact scalability, affect security, and allow applications to work in a heterogeneous environment Who This Book Is For Learning Network Programming with Java is oriented to developers who wish to use network technologies to enhance the utility of their applications. You should have a working knowledge of Java and an interest in learning the latest in network programming techniques using Java. No prior experience with network development or special software beyond the Java SDK is needed. Upon

completion of the book, beginner and experienced developers will be able to use Java to access resources across a network and the Internet. What You Will Learn Connect to other applications using sockets Use channels and buffers to enhance communication between applications Access network services and develop client/server applications Explore the critical elements of peer-to-peer applications and current technologies available Use UDP to perform multicasting Address scalability through the use of core and advanced threading techniques Incorporate techniques into an application to make it more secure Configure and address interoperability issues to enable your applications to work in a heterogeneous environment In Detail Network-aware applications are becoming more prevalent and play an ever-increasing role in the world today. Connecting and using an Internet-based service is a frequent requirement for many applications. Java provides numerous classes that have evolved over the years to meet evolving network needs. These range from low-level socket and IP-based approaches to those encapsulated in software services. This book explores how Java supports networks, starting with the basics and then advancing to more complex topics. An overview of each relevant network technology is presented followed by detailed examples of how to use Java to support these technologies. We start with the basics of networking and then explore how Java supports the development of client/server and peer-to-peer applications. The NIO packages are examined as well as multitasking and how network applications can address practical issues such as security. A discussion on networking concepts will put many network issues into perspective and let you focus on the appropriate technology for the problem at hand. The examples used will provide a good starting point to develop similar capabilities for many of your network needs. Style and approach Each network technology's terms and concepts are introduced first. This is followed up with code examples to explain these technologies. Many of the examples are supplemented with alternate Java 8 solutions when appropriate. Knowledge of Java 8 is not necessary but these examples will help you better understand the power of Java 8.

**Java Network Programming** - Elliott Rusty Harold 2000

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.

**The Definitive Guide to Linux Network Programming** - Nathan Yocom 2004-08-05

\* Clear and abundant examples, using real-world code, written by three experienced developers who write networking code for a living. \* Describes how to build clients and servers, explains how TCP, UDP, and IP work, and shows how to debug networking applications via packet sniffing and deconstruction. \* Well suited for Windows developer looking to expand to Linux, or for the proficient Linux developer looking to incorporate client-server programming into their application.

**Advanced Java Networking** - Dick Steflik 2000

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**Beej's Guide to Network Programming** - Brian "beej" Jorgensen" Hall 2019-12-12

Back in the mid 90s, Beej got tired of all his friends asking him how to do this stuff with networking programming in C, so he put pen to paper on the early World Wide Web and wrote down everything he knew just to get them off his back. Since then, the Guide has expanded significantly, with plenty of examples, and covers IPv6. Inside you'll find such diverse topics as: Sockets programming in the C programming language, client/server, IPv4 and IPv6, data encoding, lots of manual pages rewritten in a friendlier format with examples, and goats! Actually no goats, but goats will be with you in spirit! Beej's Guide to Network Programming is also freely available for PDF download online in US Letter and A4 sizes, in its entirety, and always will be--Google for it. The bound version here is provided as a service to those who still prefer the analog printed word. (And to those who want to kick back a few bucks to the author.)

[The Pocket Guide to TCP/IP Sockets](#) - Michael J. Donahoo 2001

The Pocket Guide to TCP/IP Sockets 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.

**Software Modeling and Design** - Hassan Gomaa 2011-02-21

This book covers all you need to know to model and design software applications from use cases to software architectures in UML and shows how to apply the COMET UML-based modeling and design method to real-world problems. The author describes architectural patterns for various architectures, such as broker, discovery, and transaction patterns for service-oriented architectures, and addresses software quality attributes including maintainability, modifiability, testability, traceability, scalability, reusability, performance, availability, and security. Complete case studies illustrate design issues for different software architectures: a banking system for client/server architecture, an online shopping system for service-oriented architecture, an emergency monitoring system for component-based software architecture, and an automated guided vehicle for real-time software architecture. Organized as an introduction followed by several short, self-contained chapters, the book is perfect for senior undergraduate or graduate courses in software engineering and design, and for experienced software engineers wanting a quick reference at each stage of the analysis, design, and development of large-scale software systems.

ABCs of z/OS System Programming: - Paul Rogers 2011-02-10

This IBM® Redbooks® publication describes the functions of z/OS® Communications Server. z/OS Communications Server provides a set of communications protocols that support peer-to-peer connectivity functions for both local and wide-area networks, including the most popular wide-area network, the Internet. z/OS Communications Server also provides performance enhancements that can benefit a variety of TCP/IP applications. z/OS Communications Server provides both SNA and TCP/IP networking protocols for z/OS. The SNA protocols are

provided by VTAM® and include Subarea, Advanced Peer-to-Peer Networking, and High Performance Routing protocols. z/OS Communications Server exploits z/OS UNIX® services even for traditional MVSTM environments and applications. Prior to utilizing TCP/IP services, therefore, a full-function mode z/OS UNIX environment including a Data Facility Storage Management Subsystem (DFSMSdftp), a z/OS UNIX file system, and a security product (such as Resource Access Control Facility, or RACF®) must be defined and active before z/OS Communications Server can be started successfully. The ABCs of z/OS System Programming is a 13-volume collection that provides an introduction to the z/OS operating system and the hardware architecture. Whether you are a beginner or an experienced system programmer, the ABCs collection provides the information that you need to start your research into z/OS and related subjects. If you want to become more familiar with z/OS in your current environment, or if you are evaluating platforms to consolidate your e-business applications, the ABCs collection will serve as a powerful technical tool. The contents of the volumes are as follows: Volume 1: Introduction to z/OS and storage concepts, TSO/E, ISPF, JCL, SDSF, and z/OS delivery and installation Volume 2: z/OS implementation and daily maintenance, defining subsystems, JES2 and JES3, LPA, LNKLST, authorized libraries, SMP/E, Language Environment® Volume 3: Introduction to DFSMS, data set basics storage management hardware and software, catalogs, and DFSMSdtps Volume 4: Communication Server, TCP/IP, and VTAM Volume 5: Base and Parallel Sysplex®, System Logger, Resource Recovery Services (RRS), global resource serialization (GRS), z/OS system operations, automatic restart management (ARM), Geographically Dispersed Parallel Sysplex™ (GDPS®) Volume 6: Introduction to security, RACF, Digital certificates and PKI, Kerberos, cryptography and z990 integrated cryptography, zSeries® firewall technologies, LDAP, and Enterprise identity mapping (EIM) Volume 7: Printing in a z/OS environment, Infoprint Server and Infoprint Central Volume 8: An introduction to z/OS problem diagnosis Volume 9: z/OS UNIX System Services Volume 10: Introduction to z/Architecture®, zSeries processor

design, zSeries connectivity, LPAR concepts, HCD, and HMC Volume 11: Capacity planning, performance management, RMFTM, and SMF Volume 12: WLM Volume 13: JES3

*Network Programming with Perl* - Lincoln D. Stein 2001

A text focusing on the methods and alternatives for designed TCP/IP-based client/server systems and advanced techniques for specialized applications with Perl. A guide examining a collection of the best third

party modules in the Comprehensive Perl Archive Network. Topics covered: Perl function libraries and techniques that allow programs to interact with resources over a network. IO: Socket library ; Net: FTP library -- Telnet library -- SMTP library ; Chat problems ; Internet Message Access Protocol (IMAP) issues ; Markup-language parsing ; Internet Protocol (IP) broadcasting and multicasting.