

# ABSOLUTE BEGINNER'S GUIDE

TO

## Networking

**Fourth Edition**

*No prior networking  
experience necessary!*



**que**

Joe Habraken

# **Absolute Beginner's Guide to Networking**

## **Copyright © 2004 by Que Publishing**

All rights reserved. No part of this book shall be reproduced, stored in a retrieval system, or transmitted by any means, electronic, mechanical, photocopying, recording, or otherwise, without written permission from the publisher. No patent liability is assumed with respect to the use of the information contained herein. Although every precaution has been taken in the preparation of this book, the publisher and author assume no responsibility for errors or omissions. Nor is any liability assumed for damages resulting from the use of the information contained herein.

International Standard Book Number: 0-7897-2911-3

Library of Congress Catalog Card Number: 2003103338

Printed in the United States of America

First Printing: September 2003

07 06 05 04            4 3 2

## **Trademarks**

All terms mentioned in this book that are known to be trademarks or service marks have been appropriately capitalized. Que Publishing cannot attest to the accuracy of this information. Use of a term in this book should not be regarded as affecting the validity of any trademark or service mark.

## **Warning and Disclaimer**

Every effort has been made to make this book as complete and as accurate as possible, but no warranty or fitness is implied. The information provided is on an "as is" basis. The author and the publisher shall have neither liability nor responsibility to any person or entity with respect to any loss or damages arising from the information contained in this book.

## **Bulk Sales**

Que Publishing offers excellent discounts on this book when ordered in quantity for bulk purchases or special sales. For more information, please contact

**U.S. Corporate and Government Sales**  
**1-800-382-3419**  
**corpsales@pearsontechgroup.com**

For sales outside of the U.S., please contact

**International Sales**  
**1-317-428-3341**  
**international@pearsontechgroup.com**

## **Acquisitions Editor**

Jenny Watson

## **Development Editor**

Mark Cierzniak

## **Managing Editor**

Charlotte Clapp

## **Project Editor**

Sheila Schroeder

## **Production Editor**

Benjamin Berg

## **Indexer**

Erika Millen

## **Proofreader**

Linda Seifert

## **Technical Editor**

Mark Hall

## **Team Coordinator**

Vanessa Evans

## **Interior Designer**

Anne Jones

## **Cover Designer**

Dan Armstrong

## **Page Layout**

Michelle Mitchell

**Interface Message Processor (IMP)** A hardware switch that was the precursor to the router. IMPs were used during the initial testing of ARPAnet. See also *ARPAnet*.

**interference** Signals or noise from nearby devices that interfere with a wire's ability to move a transmission signal.

**Internet** A giant, global internetwork that connects millions of computers. The current Internet evolved from government-sponsored packet-switching networks such as the ARPAnet.

**Internet access provider (IAP)** A communications company that provides a connection to the Internet backbone. IAPs typically serve larger corporations that maintain their own DNS servers and other Internet services servers, such as email servers, and only require an onramp to the Internet infrastructure.

**Internet layer (DoD)** This layer corresponds to the OSI Network layer, and is responsible for the routing of data across logical network paths, as well as providing an addressing system to the upper layers of the DoD stack. This layer also defines the packet format used for the data as it moves onto the network.

**Internet Message Access Protocol (IMAP)** An email transport program that provides an alternative to the POP3 protocol. IMAP mail servers do not immediately dump all the available mail from the server to the IMAP client when the client connects. See also *POP3*.

**Internet service provider (ISP)** A provider of Internet-based services. An ISP provides an Internet connection to users or companies in addition to other services, such as Internet email, Web browsing, FTP, and newsgroups. An ISP also typically offers space on its Web server for personal or corporate Web sites.

**internetwork** A network of networks. An internetwork is a collection of LANS that uses different internetworking devices, such as routers and switches, to expand the range of the LANS.

**InterNIC** The central authority for domain names in the United States.

**intranet** A private, internal network that uses the TCP/IP protocol stack and different Internet technologies and servers to create an Internet-like environment for the users on the network.

**IP Address** The unique logical address assigned to every computer and other devices, such as routers, on a network that uses the TCP/IP protocol.

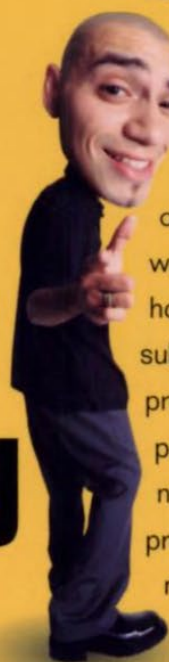
**IP Version 6 (IPv6)** A new IP addressing system that provides a greater number of bits (128 bits). IPv6 will offer billions more IP addresses than are currently available with IPv4.

**IPSec (IPSecurity)** A suite of cryptography-based protection services and security protocols that can be used to secure internal networks, networks that use WAN solutions for connectivity, and networks that take advantage of remote access solutions.

# ABSOLUTE BEGINNER'S GUIDE TO Networking

Fourth Edition

Who knew how simple  
networking could be?



## *Absolute Beginner's Guide to Networking*

explores the world of computer networking. You will learn about the standards for networking personal computers and become familiar with the leading network operating systems. You will also learn to work with networking protocols such as TCP/IP and how to work with IP addressing issues and subnetting. You will also gain insight into the process of building computer networks and providing data and print resources for your network users. Information on creating a Web presence and deploying different types of network servers is also covered. This book will take you from user to network administrator as you explore its pages.

***Absolute Beginner's Guide to Networking*** provides you with the basics of networking personal computers and helps you get your network up and running no matter the desktop or server platform.

- Learn the difference between peer-to-peer and server-based networking. Decide what kind of network works best for you.
- Learn about network architectures and the different media used to connect computers, such as copper wire and wireless radio technology.
- Become familiar with network operating systems such as Microsoft® Windows® Server 2003, Red Hat® Linux, and Novell® NetWare® 6.
- Find out how to safeguard network data and protect your network from viruses and outside attack.
- Learn the basics of troubleshooting a network and how to approach network communications problems.

**Joe Habraken** is a bestselling author, information systems professional, and educator. He is an assistant professor at the University of New England, where he teaches a variety of information technology classes that introduce undergraduate students to computer basics, software applications, Web design, and the use of personal computers in a business setting. Joe is a Microsoft Certified Professional and a Cisco Certified Network Associate. He has authored a number of books on computer and networking topics, including *Microsoft Office 2003 All-in-1*, *CCNA 2.0 640-507 Routing and Switching Cheat Sheet*, and *Practical Cisco Routers*.

**informIT**  
www.informit.com

\$18.95 USA / \$29.99 CAN / £13.99 Net UK

|            |            |
|------------|------------|
| Category   | Networking |
| User Level | Beginning  |



ISBN 0-7897-2911-3



**que**

www.quepublishing.com