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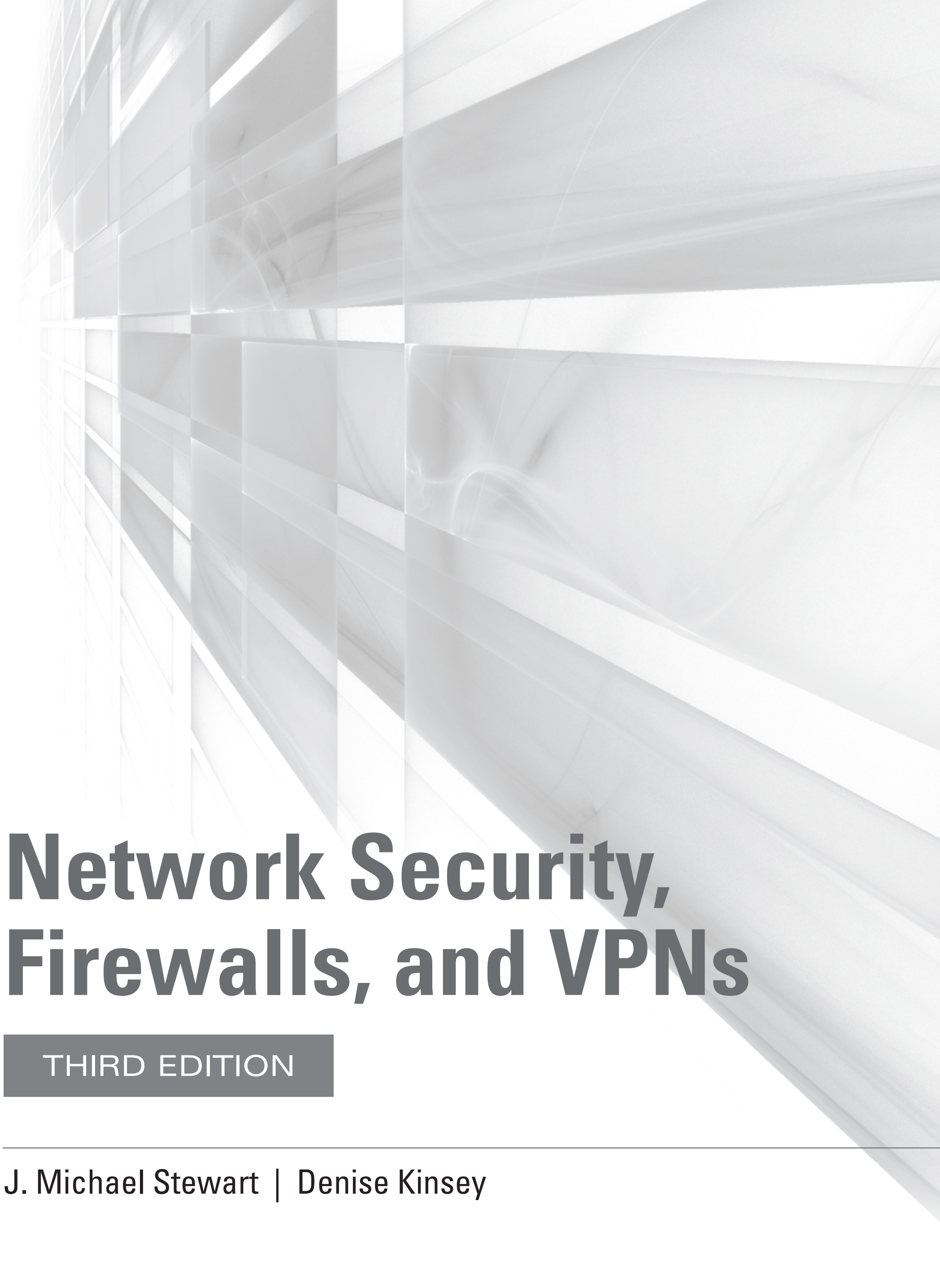

Network Security, Firewalls, and VPNs

THIRD EDITION

J. Michael Stewart | Denise Kinsey

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This book is dedicated to all who desire to learn more about network security, firewalls, and VPNs. May you gain foundational knowledge with this resource.

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Preface

Purpose of This Text

This text is part of the Information Systems Security & Assurance Series from Jones & Bartlett Learning (*www.jblearning.com*). Designed for courses and curricula in IT Security, Cybersecurity, Information Assurance, and Information Systems Security, this series features a comprehensive, consistent treatment of the most current research and trends in this critical subject area. These titles deliver fundamental information security principles packed with real-world applications and examples. Authored by Certified Information Systems Security Professionals (CISSPs), they deliver comprehensive information on all aspects of information security. Reviewed word for word by leading technical experts in the field, these texts are not just current, but forward-thinking—putting you in the position to solve the cybersecurity challenges not just of today, but of tomorrow as well.

The first part of this text focuses on common network security topics and the business challenges and threats that you face as soon as you physically connect your organization's network to the public Internet. It presents key concepts and terms and reveals what hackers do when trying to access your network, thus providing you with the necessary foundation in network security for the discussions that follow.

Part 2 defines firewalls, providing you with an understanding of how to use these tools as security countermeasures to solve business challenges. It discusses how to select and deploy firewalls and the tools for managing and monitoring them. It focuses on the practical, giving concrete, step-by-step examples of how to implement a firewall.

Part 3 focuses on virtual private networks (VPNs) and reviews implementing a VPN, the technologies involved, and VPN-management best practices. It also discusses what challenges the future holds for information security professionals involved in network security. It covers the tools and resources available to the professional and scans the horizon of emerging technologies.

Learning Features

The writing style of this text is practical and conversational. Step-by-step examples of information security concepts and procedures are presented throughout. Each chapter begins with a statement of learning objectives. Illustrations are used both to clarify the material and to vary the presentation. The text is sprinkled with Notes, Tips, FYIs, Warnings, and sidebars to alert the reader to additional and helpful information related to the subject under discussion.

Chapter Assessments appear at the end of each chapter, with solutions provided in the back of the text. Chapter summaries are included in the text to provide a rapid review or

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preview of the material and to help students understand the relative importance of the concepts presented.

Audience

The material is suitable for undergraduate or graduate students in computer science majors, information science majors, cybersecurity majors, students at a two-year technical college or community college who have a basic technical background, or readers who have a basic understanding of IT principles and want to expand their knowledge.

New to this Edition

This edition provides an improved format, where each major topic (network security, firewalls, VPNs) is examined from introduction through advanced topics before moving to a different topic and includes better integration among the topics. This edition also reflects the latest software versions and technology. The final chapters introduce encompassing best practices for network security and consider the future of technology, regulatory considerations, and people and process management.

Cloud Labs

This text is accompanied by Cybersecurity Cloud Labs. These hands-on virtual labs provide immersive mock IT infrastructures where students can learn and practice foundational cybersecurity skills as an extension of the lessons in this text. For more information or to purchase the labs, visit go.jblearning.com/stewart3e.

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James Michael Stewart has been working with computers and technology for more than 25 years. His work focuses on security, certification, and various operating systems. Recently, Michael has been teaching job-skill and certification courses such as CISSP, CEH, and Security+. He is the primary author of the *CISSP Study Guide, 4th Edition* and the *Security+ 2008 Review Guide*. In addition, Michael has written numerous texts on other security and Microsoft certification and administration topics. He has developed certification courseware and training materials as well as presented these materials in the classroom. Michael holds the following certifications: CISSP, ISSAP, SSCP, MCT, CEI, CEH, TICSA, CIW SA, Security+, MCSE+Security: Windows 2000, MCSA Windows Server 2003, MCDST, MCSE NT & W2K, MCP+I, Network+, iNet+. He graduated in 1992 from the University of Texas at Austin with a bachelor's degree in philosophy.

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