

1. Record Nr.	UNINA9910971515003321
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Titolo	The illustrated network : how TCP/IP works in a modern network / / Walter Goralski
Pubbl/distr/stampa	Amsterdam ; ; Boston, : Morgan Kaufmann Publishers/Elsevier, c2009
ISBN	9786612168840 9781282168848 1282168843 9780080923222 0080923224
Edizione	[1st edition]
Descrizione fisica	1 online resource (828 p.)
Collana	The Morgan Kaufmann series in networking
Disciplina	004.6/2 22 004.62
Soggetti	TCP/IP (Computer network protocol) Computer networks
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references (p. [767]-768) and index.
Nota di contenuto	Front Cover; The Illustrated Network: How TCP/IP Works in a Modern Network; Copyright Page; Contents; Foreword; Preface; About the Author; Part I: Networking Basics; CHAPTER 1. Protocols and Layers; The Illustrated Network; Protocols; Internet Administration; Layers; The TCP/IP Protocol Suite; The Layers of TCP/IP; The TCP/IP Protocol Suite; Questions for Readers; CHAPTER 2. TCP/IP Protocols and Devices; Protocol Stacks on the Illustrated Network; Layers, Protocols, Ports, and Sockets; The TCP/IP Protocol Stack; The Client-Server Model; TCP/IP Layers and Client-Server; The IP Layer The Transport LayerThe Application Layer; Bridges, Routers, and Switches; Questions for Readers; CHAPTER 3. Network Link Technologies; Illustrated Network Connections; The Data Link Layer; The Evolution of Ethernet; The Evolution of DSL; The Evolution of SONET; Wireless LANS and IEEE 802.11; Questions for Readers; Part II: Core Protocols; CHAPTER 4. IPv4 and IPv6 Addressing; IP Addressing; The Network/Host Boundary; The IPv4 Address; The IPv6 Address; Subnetting and Supernetting; IPv6 Addressing Details; Questions for

Readers; CHAPTER 5. Address Resolution Protocol; ARP and LANs; ARP Packets
Example ARP Operation; ARP Variations; ARP and IPv6; Questions for Readers; CHAPTER 6. IPv4 and IPv6 Headers; Packet Headers and Addresses; The IPv4 Packet Header; Fragmentation and IPv4; A Fragmentation Example; IPv4 and IPv6 Headers Compared; IPv6 and Fragmentation; Questions for Readers; CHAPTER 7. Internet Control Message Protocol; ICMP and Ping; The ICMP Message Format; Sending ICMP Messages; Ping; Traceroute; Path MTU; ICMPv6; Questions for Readers; CHAPTER 8. Routing; Routers and Routing Tables; Hosts and Routing Tables; Direct and Indirect Delivery; Questions for Readers
CHAPTER 9. Forwarding IP Packets; Router Architectures; Router Access; Forwarding Table Lookups; Dual Stacks, Tunneling, and IPv6; Tunneling Mechanisms; Transition Considerations; Questions for Readers; CHAPTER 10. User Datagram Protocol; UDP Ports and Sockets; What UDP Is For; The UDP Header; IPv4 and IPv6 Notes; Port Numbers; UDP Operation; UDP Overflows; Questions for Readers; CHAPTER 11. Transmission Control Protocol; TCP and Connections; The TCP Header; TCP Mechanisms; Connections and the Three-Way Handshake; Flow Control; Performance Algorithms; TCP and FTP; Questions for Readers
CHAPTER 12. Multiplexing and Sockets; Layers and Applications; The Socket Interface; The Socket Interface: Good or Bad?; The Windows Socket Interface; Sockets on Linux; Questions for Readers; Part III: Routing and Routing Protocols; CHAPTER 13. Routing and Peering; Network Layer Routing and Switching; Connection-Oriented and Connectionless Networks; Host Routing Tables; The Internet and the Autonomous System; The Internet Today; The Role of Routing Policies; Peering; Picking a Peer; Questions for Readers; CHAPTER 14. IGPs: RIP, OSPF, and IS-IS; Interior Routing Protocols; The Three Major IGPs
Routing Information Protocol

Sommario/riassunto

In 1994, W. Richard Stevens and Addison-Wesley published a networking classic: TCP/IP Illustrated. The model for that book was a brilliant, unfettered approach to networking concepts that has proven itself over time to be popular with readers of beginning to intermediate networking knowledge. The Illustrated Network takes this time-honored approach and modernizes it by creating not only a much larger and more complicated network, but also by incorporating all the networking advancements that have taken place since the mid-1990s, which are many. This book takes the popular Stevens appro
