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| Nota di contenuto       | Advanced Internet Protocols, Services, and Applications; CONTENTS;<br>Preface; Acknowledgments; About the Authors; 1 Transmission Control<br>Protocol/Internet Protocol Overview; 1.1 Fundamental Architecture; 1.2<br>Internet Protocol Basics; 1.2.1 Packet Header; 1.2.2 Internet Protocol<br>Address; 1.2.3 Internet Protocol Classification; 1.2.4 Subnet and its<br>Masking; 1.2.5 Subnet Calculation; 1.3 Routing; 1.3.1 Routing across<br>Providers; 1.3.2 Routing within Edge Networks; 1.3.3 Routing<br>Scalability; References; 2 Transport-Layer Protocols; 2.1 Transmission<br>Control Protocol<br>2.1.1 Transmission Control Protocol Header Structure2.1.2 Three-Way<br>Handshake; 2.1.3 Transmission Control Protocol Flow Control and<br>Congestion Control; 2.1.4 Port Number; 2.2 User Datagram Protocol;<br>2.2.1 User Datagram Protocol Header Structure; 2.3 Stream Control<br>Transmission Protocol; 2.3.1 Stream Control Transmission Protocol<br>Packet Structure; 2.3.2 Security: Prevention of SYN Attacks; 2.4 Real-<br>Time Transport Protocol; 2.4.1 Real-Time Transport Protocol Header |

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|                    | <ul> <li>Structure; References; 3 Internet Architecture; 3.1 Internet Exchange<br/>Point; 3.2 History of Internet Exchange Points</li> <li>3.3 Internet Service Provider Interconnection Relationships3.4 Peering<br/>and Transit; References; 4 IP Routing Protocols; 4.1 Overview of<br/>Routing Protocols; 4.1.1 Interior Gateway Protocol; 4.1.2 Exterior<br/>Gateway Protocol; 4.2 Routing Information Protocol; 4.2.1 Routing<br/>Information Protocol Header Format; 4.2.2 Update of Routing Table in<br/>Routing Information Protocol; 4.2.3 Maintenance of Routing Table in<br/>Routing Information Protocol; 4.2.4 Split Horizon; 4.2.5 Limitations of<br/>Routing Information Protocol; 4.3 Open Shortest Path First; 4.3.1<br/>Shortest-Path Algorithm; 4.3.2 Hierarchical Routing</li> <li>4.3.3 Open Shortest Path First Packet Format4.3.4 Comparison of<br/>Routing Information Protocol and Open Shortest Path First; 4.4 Border<br/>Gateway Protocol; 4.4.1 Border Gateway Protocol Message Flows; 4.4.2<br/>Border Gateway Protocol Policy Selection Attributes; References; 5<br/>Multiprotocol Label Switching; 5.1 Overview; 5.2 Functions and<br/>Mechanisms; 5.3 Applicabilities; References; 6 IP Quality Of Service; 6.1<br/>Introduction; 6.2 Quality of Service in IP Version 4; 6.3 Integrated<br/>Services; 6.3.1 Packet Scheduler; 6.3.2 Packet Classifier; 6.3.3<br/>Admission Control</li> <li>6.3.4 Resource Reservation Protocol (RSVP)6.4 Differentiated Services;<br/>6.5 Quality Of Service with Nested Differentiated Services Levels; 6.5.1<br/>Drawbacks of Explicit Endpoint Admission Control with Path Selection;<br/>6.5.2 OSPF-Based Adaptive and Flexible Quality of Service Provisioning;<br/>6.5.3 Combination of Security and Quality of Service; 6.5.4 Path<br/>Selection Algorithm Analysis; References; 7 IP Multicast and Anycast;<br/>7.1 Addressing; 7.1.1 Multicast Addressing; 7.1.2 Differences between<br/>Multicasting and Multiple Unicasting; 7.2 Multicast Routing; 7.2.1<br/>Optimal Routing: Shortest-Path Trees<br/>7.2.2 Unicast Routing</li> </ul> |  |
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| Sommario/riassunto | Today, the internet and computer networking are essential parts of<br>business, learning, and personal communications and entertainment.<br>Virtually all messages or transactions sent over the internet are carried<br>using internet infrastructure- based on advanced internet protocols.<br>Advanced internet protocols ensure that both public and private<br>networks operate with maximum performance, security, and flexibility.<br>This book is intended to provide a comprehensive technical overview<br>and survey of advanced internet protocols, first providing a solid<br>introduction and going on to discuss internetworking  |  |