



Network Routing : Algorithms, Protocols, and Architectures

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Contenido: Front Cover; Network Routing; Copyright; Contents; Foreword (1st Edition); Preface (2nd Edition); Acknowledgments; Preface (1st Edition); Audience; Organization and Approach; Bonus Materials and Online Resources; Acknowledgments; About the Authors; Part 1 Routing: Basics and Foundations; 1 Networking and Network Routing: An Introduction; 1.1 Addressing and Internet Service: An Overview; 1.2 Network Routing: An Overview; 1.3 IPv4 Addressing; 1.3.1 Classful IPv4 Addressing Scheme; 1.3.2 Subnetting/Netmask in IPv4; 1.3.3 Classless Inter-Domain Routing (CIDR); 1.4 IPv6 Addressing 1.5 On Architectures 1.6 Service Architecture; 1.7 Protocol Stack Architecture; 1.7.1 OSI Reference Model; 1.7.2 IP Protocol Stack Architecture; 1.8 Router Architecture; 1.9 Network Topology Architecture; 1.10 Network Management Architecture; 1.11 Global Telephone Network; 1.12 Communication Technologies; 1.13 Standards Committees; 1.13.1 Internet Engineering Task Force; 1.13.2 International Telecommunication Union; 1.14 Last Two Bits; 1.14.1 Type-Length-Value (TLV); 1.14.2 Network Protocol Analyzer; 1.15 Summary; Further Lookup; Exercises 2 Routing Algorithms: Shortest Path, Widest Path, and Spanning Tree 2.1 Background; 2.2 Bellman-Ford Algorithm and the Distance Vector Approach; 2.2.1 Centralized View: Bellman-Ford Algorithm; 2.2.2 Distributed View: A Distance Vector Approach; 2.3 Dijkstra's Algorithm; 2.3.1 Centralized Approach; 2.3.2 Distributed Approach; 2.4 Comparison of the Bellman-Ford Algorithm and Dijkstra's Algorithm; 2.5 Shortest Path Computation with Candidate Path Caching; 2.6 Widest Path Computation with Candidate Path Caching; 2.7 Widest Path Algorithm; 2.7.1 Dijkstra-Based Approach 2.7.2 Distance Vector-Based Approach 2.8 Shortest Widest Path and Widest Shortest Path; 2.9 Tree, Spanning Tree, and Steiner Tree Algorithms; 2.9.1 Spanning Tree: Breadth First Search and Depth First Search; 2.9.2 Minimum

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