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Nota di contenuto	Multimedia Multicast on the Internet; Table of Contents; Preface; Chapter 1. Multicast Routing on the Internet; 1.1. Introduction and definitions; 1.2. Multicast addressing; 1.2.1. Limited scope addressing; 1.2.2. GLOP global addressing; 1.2.3. Dynamic addressing: MALLOC; 1.3. Structure of a multicast router; 1.3.1. The unicast routing base for multicasting (MRIB); 1.3.2. Tree information base (TIB); 1.3.3. Multicast forwarding information base (MFIB); 1.4. Relationship with the other protocol layers; 1.4.1. Relationship with the lower layer; 1.4.2. Relationship with the upper layers 1.5. Belonging to groups: IGMP1.5.1. IGMP version 1; 1.5.2. IGMP version 2; 1.5.3. IGMP version 3; 1.6. Routing in flood-and-prune mode and the RPF; 1.6.1. Reverse path forwarding or RPF check; 1.6.2. Pruning; 1.6.3. Protocol cost; 1.6.4. DVMRP; 1.6.5. Mbone; 1.6.6. PIM dense mode: PIM-DM; 1.7. Link-state routing and MOSPF; 1.7.1. MOSPF principle; 1.7.2. MOSPF inter-areas; 1.7.3. Cost of MOSPF; 1.8. Routing with explicit construction: PIM-SM and CBT; 1.8.1. PIM sparse-mode principles: PIM-SM; 1.8.2. Discovery of RPs: boot strap routers (BSR);

1.8.3. Maintenance of the PIM-SM tree
1.8.4. Core based trees: CBT1.8.5. Bidirectional PIM; 1.8.6. Cost of explicit methods; 1.9. Inter-domain multicast routing; 1.9.1. MASC/BGMP architecture; 1.9.2. BGP multiprotocol extensions; 1.9.3. Interaction with intra-domain routing; 1.9.4. BGMP; 1.9.5. PIM-SM and MSDP solution; 1.10. Model of multicasting with a single source: SSM; 1.10.1. Express; 1.10.2. The SSM and PIM-SM model; 1.10.3. Limitations of PIM-SSM; 1.11. Multicasting and IPv6; 1.11.1. IPv6 multicast addressing; 1.11.2. Protocol for group subscription: MLD; 1.11.3. RP-embedded mechanism
1.12. Other multicast routing proposals1.12.1. Simple multicast; 1.12.2. Logical addressing and routing: LAR; 1.12.3. Reunite; 1.12.4. Hop by hop multicast routing: HBH; 1.13. Comparison of various protocols; 1.13.1. Quality of the broadcast trees; 1.13.2. Cost of protocols; 1.14. Alternatives to multicast routing; 1.14.1. Multiple unicast connections; 1.14.2. Multicasting for small groups; 1.14.3. Application level multicast; 1.15. Conclusion; 1.16. Bibliography; 1.17. Glossary of acronyms; Chapter 2. Hierarchical Multicast Protocols with Quality of Service; 2.1. Introduction
2.2. Multicast principle2.2.1. Advantage of multicasting; 2.2.2. Technological constraints; 2.2.3. Main types of trees; 2.2.3.1. Shared tree/specific tree; 2.2.3.2. Shortest path tree (SPT); 2.2.3.3. Steiner tree; 2.2.3.4. Centered tree (CBT); 2.2.3.5. Summary; 2.3. Multicast routing protocols; 2.3.1. DVMRP; 2.3.2. PIM; 2.3.3. MOSPF; 2.3.4. IP multicast; 2.3.5. Limitations of the current multicast routing protocols; 2.3.5.1. DVMRP; 2.3.5.2. PIM; 2.4. Quality of service in multicast routing; 2.4.1. SJP; 2.4.2. QoSMIC; 2.4.3. QMRP; 2.4.4. Conclusion; 2.5. Hierarchical multicasting
2.5.1. HDVMRP

Sommario/riassunto

This book examines multicast technology and will be a key text for undergraduate engineering students and master students in networks and telecoms. However, it will be equally useful for a wide range of professionals in this research field. Multicast routing was introduced with the advent of multiparty applications (for example, videoconferencing on the Internet) and collaborative work (for example, distributed simulations). It is related to the concept of group communication, a technique introduced to reduce communication costs. The various problems of multicast routing on the Internet ar