

1. Record Nr.	UNINA9910143317403321
Titolo	Management, control, and evolution of IP networks [[electronic resource] /] / edited by Guy Pujolle
Pubbl/distr/stampa	London ; ; Newport Beach, CA, : ISTE, 2007
ISBN	1-280-84775-1 9786610847754 0-470-61211-8 0-470-39474-9 1-84704-597-9
Descrizione fisica	1 online resource (662 p.)
Collana	ISTE ; ; v.109
Altri autori (Persone)	PujolleG. <1949->
Disciplina	004.6
Soggetti	Computer networks TCP/IP (Computer network protocol) Electronic books.
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 and index.
Nota di contenuto	Management, Control and Evolution of IP Networks; Table of Contents; Part 1. Control of IP Networks; Chapter 1. Introduction; 1.1. Introduction; 1.2. Signaling; 1.2.1. Signaling operation; 1.2.2. Signaling for security; 1.2.3. Signaling for mobility management; 1.2.4. Signaling for network flow management; 1.3. Flow control and management techniques; 1.3.1. Flow control techniques; 1.3.2. Congestion control methods; 1.3.3. Priority technique; 1.3.4. Reactive congestion control; 1.3.5. Rapid resource management; 1.4. Policy-based management; 1.5. Security 1.5.1. General overview of security elements 1.6. Mobile network control; 1.7. Optical network control; 1.8. Conclusion; 1.9. Bibliography; Chapter 2. Quality of Service: The Basics; 2.1. Introduction to Quality of Service; 2.1.1. Why QoS?; 2.1.2. The needs; 2.1.3. Definition; 2.1.4. The concerns; 2.2. Network parameters; 2.2.1. Availability; 2.2.2. Bandwidth; 2.2.3. Delay; 2.2.4. Jitter; 2.2.5. Loss ratio; 2.3. Overview of the basic mechanisms on IP; 2.3.1. Standard router; 2.3.2. QoS router; 2.3.3. Classification; 2.3.4. Policing and

marking; 2.3.5. Queue management; 2.3.6. Sequencing
2.4. Overview.Chapter 3. Quality of Service: Mechanisms and Protocols;
3.1. QoS and IP; 3.1.1. The stack of IP protocols; 3.1.2. The IPv4 TOS
field; 3.1.3. QoS on IPv6; 3.1.4. Processing in routers; 3.2. IntServ
(RSVP) model; 3.2.1. Principle; 3.2.2. IntServ services; 3.2.3. How an
IntServ router works; 3.2.4. The RSVP protocol; 3.2.5. The
disadvantages of IntServ; 3.3. The DiffServ model; 3.3.1. Principle;
3.3.2. Architecture; 3.3.3. Service classes; 3.3.4. DiffServ advantages
and disadvantages; 3.4. MPLS architecture; 3.4.1. Principle; 3.4.2. MPLS
label and classes; 3.4.3. MPLS routes
3.5. QoS at level 23.5.1. QoS with ATM; 3.5.2. QoS with Ethernet; 3.5.3.
QoS with wireless networks; Chapter 4. DiffServ: Differentiated Quality
of Service; 4.1. Introduction; 4.2. Principles of DiffServ; 4.3. Structure;
4.3.1. PHB (Per Hop Behavior); 4.3.2. EF Service; 4.3.3. AF Service; 4.4.
DiffServ in edge routers; 4.4.1. Data part; 4.5. Conclusion; 4.6.
Bibliography; Chapter 5. Quality of Service in Wi-Fi; 5.1. Introduction;
5.2. Packets transmission with CSMA/CA access method; 5.2.1.
Performance degradation; 5.2.2. Support for speed changes; 5.3. MAC
level QoS in IEEE 802.11
5.3.1. History5.3.2. Distributed approaches; 5.3.3. Centralized
approaches; 5.4. Summary and conclusion; 5.5. Bibliography; Chapter
6. Quality of Service: Policy-based Management; 6.1. Introduction to
policy-based management in IP networks; 6.2. Architecture and
protocols for policy-based management; 6.3. The COPS protocol; 6.4.
COPS-RSVP; 6.5. COPS-PR; 6.6. SNMP; 6.7. Conclusion; 6.8.
Bibliography; Chapter 7. Inter-domain Quality of Service; 7.1.
Introduction; 7.2. Goal; 7.3. Motivations for the use of mobile agents to
offer inter-domain QoS; 7.3.1. Control of inter-domain QoS parameters
7.4. Negotiation of inter-domain QoS

Sommario/riassunto

Internet Protocol (IP) networks have, for a number of years, provided the basis for modern communication channels. However, the control and management of these networks needs to be extended so that the required Quality of Service can be achieved.Information about new generations of IP networks is given, covering the future of pervasive networks (that is, networks that arealways present), Wi-Fi, the control of mobility and improved Quality of Service, sensor networks, inter-vehicle communication and optical networks.
