

1. Record Nr.	UNISALENTO991003244479707536
Autore	Vasseur, Jean-Philippe
Titolo	Network recovery [electronic resource] : protection and restoration of optical, SONET-SDH, IP and MPLS / Jean-Philippe Vasseur, Mario Pickavet, Piet Demeester
Pubbl/distr/stampa	San Francisco, Calif. : Morgan Kaufmann, c2004
ISBN	9780127150512 012715051X
Descrizione fisica	xx, 521 p. : ill. ; 24 cm.
Collana	Morgan Kaufmann series in networking
Altri autori (Persone)	Pickavet, Mario. author Demeester, Piet. author
Disciplina	004.6/2
Soggetti	Computer networks - Management Telecommunication - Traffic MPLS standard SONET (Data transmission) TCP/IP (Computer network protocol) Electronic books.
Lingua di pubblicazione	Inglese
Formato	Risorsa elettronica
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references (p. 479-489) and index.
Nota di contenuto	Chapter 1: Introduction -- 1.1 Communications networks today -- 1.2 Network reliability -- 1.3 Different phases in a recovery process -- 1.4 Performance of recovery mechanisms: criteria -- 1.5 Classification of single-layer recovery mechanisms -- 1.6 Multi-layer recovery -- 1.7 Conclusion -- Chapter 2: SONET-SDH -- 2.1 Introduction: transmission networks -- 2.2 SDH and SONET Networks -- 2.3 Operational aspects -- 2.4 Ring protection -- 2.5 Linear Protection -- 2.6 Restoration -- 2.7 Case study -- 2.8 Summary -- 2.9 Recommended reference work and research-related topics -- Chapter 3: Optical Networks -- 3.1 Evolution of the optical network layer -- 3.2. The Optical Transport Network -- 3.3 Fault detection and propagation -- 3.4 Recovery in optical networks -- 3.5 Recovery mechanisms in ring-based optical networks -- 3.6 Recovery mechanisms in mesh-based optical networks -- 3.7 Ring-based versus mesh-based recovery schemes -- 3.8 Availability -- 3.9 Som recent trends in research -- 3.10 Summary --

Chapter 4: IP Routing -- 4.1 IP routing protocols -- 4.2 Analysis of the IP recovery cycle -- 4.3 Failure profile and fault detection -- 4.4 Dampening algorithms -- 4.5 FIS propagation (LSA origination and flooding) -- 4.6 Route computation -- 4.7 Temporary loops during network states changes -- 4.8 Load balancing -- 4.9 QOS guarantees during failure -- 4.10 Non Stop Forwarding: an example with OSPF -- 4.11 A case study with IS-IS -- 4.12 Summary -- 4.13 Algorithm complexity -- 4.14 Incremental SPF -- 4.15 Interaction between fast IGP convergence and NSF -- 4.16 Research related topics -- Chapter 5: MPLS Traffic Engineering -- 5.1 MPLS Traffic Engineering refresher -- 5.2. Analysis of the recovery cycle -- 5.3. MPLS Traffic Engineering global default restoration -- 5.4 MPLS Traffic engineering global path protection -- 5.5 MPLS Traffic Engineering local protection -- 5.6. Another MPLS Traffic Engineering recovery alternative -- 5.7. Load balancing -- 5.8 Comparison of global protection and local protection -- 5.9 Revertive versus non revertive modes -- 5.10 Failure profiles and fault detection -- 5.11 Case Studies -- 5.12 Standardization -- 5.13 Summary -- 5.14 RSVP signaling extensions for MPLS TE local protection -- 5.15 Backup path computation -- 5.16 Research related topics -- Chapter 6 Multi-Layer Networks -- 6.1 ASON / GMPLS networks -- 6.2 Generic multi-layer recovery approaches -- 6.3 Case studies -- 6.4 Conclusion -- 6.5 References.

Sommario/riassunto

Network Recovery is the first book to provide detailed information on protecting and restoring communication networks, and it sets a sky-high standard for any that may follow. Inside, you'll learn specific techniques that work at each layer of the networking hierarchy including optical, SONET-SDH, IP, and MPLS as well as multi-layer escalation strategies that offer the highest level of protection. The authors begin with an incisive introduction to the issues that define the field of network protection and restoration, and as the book progresses they explain everything you need to know about the relevant protocols, providing theoretical analyses wherever appropriate. If you work for a network-dependent organization, large or small, you'll want to keep Network Recovery within reach at all times. * Shows you how to implement protection and recovery techniques that will save your organization time and money. * Documents techniques for the optical, SONET-SDH, IP, and MPLS layers, as well as multi-layer escalation strategies. * Shows you how to evaluate these techniques in relation to one another, so you can develop an optimal network recovery design. * Provides industry examples and simulation results. * Delves into the inner workings of relevant protocols and offers theoretical analyses wherever this information contributes to your practical knowledge.
