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Operations and Maintenance (OAM); 4.11 Security; 4.12 Conclusion; References; 5 Ethernet Protection; 5.1 Introduction; 5.2 Automatic Protection Switching (APS) Entities; 5.3 Linear Protection; 5.4 Ring Protection; 5.5 Link Aggregation; 5.6 Conclusion; References; 6 Carrier Ethernet Architectures and Services; 6.1 Introduction; 6.2 Standards; 6.3 Architecture; 6.4 Interfaces; 6.5 Services; 6.6 Conclusion; References; 7 Carrier Ethernet Traffic Management; 7.1 Introduction; 7.2 Policing; 7.3 Queuing, Scheduling, and Flow Control; 7.4 Three CoS Model; 7.5 SLAs (Service-Level Agreements); 7.6 SLAs; 7.7 Application-CoS-Priority Mapping; 7.8 Bandwidth Profile; 7.9 Conclusion; References; 8 Carrier Ethernet OAM&P (Operations, Administration, Management, and Performance); 8.1 Introduction; 8.2 Link OAM; 8.3 Service OAM; 8.4 Maintenance Entities; 8.5 Maintenance Points; 8.6 OAM Addressing and Frame Format; 8.7 Continuity Check Message (CCM); 8.8 Loopback and Reply Messages (LBM and LBR); 8.9 Link Trace and Reply Messages (LTM and LTR); 8.10 Ethernet Alarm Indication Signal (ETH-AIS); 8.11 Ethernet Remote Defective Indication (ETH-RDI); 8.12 Ethernet Locked Signal (ETH-LCK); 8.13 Performance Measurements; 8.14 Performance Monitoring; 8.15 Loss Measurements; 8.16 Availability; 8.17 Frame Delay Measurements; 8.18 Interframe Delay Variation (IFDV) Measurements; 8.19 Testing; 8.20 Security; 8.21 OAM Bandwidth; 8.22 Conclusion; References; 9 Circuit Emulation Services (CES); 9.1 Introduction; 9.2 Circuit Emulation Functions; 9.3 Adaptation Function Headers; 9.4 Synchronization; 9.5 TDM Application Signaling; 9.6 CESoETH Defects and Alarms; 9.7 Performance Monitoring of CESoETH; 9.8 CESoETH Service Configuration

Sommario/riassunto

This book provides a comprehensive understanding of current and debated future networking technologies. It gives insight into building end-to-end networks and services with Carrier Ethernet, PBT, MPLS-TP, and VPLS while also shedding light on the pros and cons of these technologies for service providers and enterprise network owners. Focusing on layer-2 networking and services, *Networks and Services* covers: The basics of Ethernet such as protocol stack, bridges, switches, and hubs; Key techniques that are being used in building carrier-class Carrier Ethernet network.
