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Nota di contenuto	Designing and Developing Scalable IP Networks; Contents; List of Figures; List of Tables; About the Author; Acknowledgements; Abbreviations; Introduction; 1 Hardware Design; 1.1 Separation of Routing and Forwarding Functionality; 1.2 Building Blocks; 1.2.1 Control Module; 1.2.2 Forwarding Module; 1.2.3 Non-Stop Forwarding; 1.2.4 Stateful Failover; 1.3 To Flow or Not to Flow?; 1.4 Hardware Redundancy, Single Chassis or Multi Chassis; 2 Transport Media; 2.1 Maximum Transmission Unit (MTU); 2.1.1 Path MTU Discovery; 2.1.2 Port Density; 2.1.3 Channelized Interfaces; 2.2 Ethernet 2.2.1 Address Resolution Protocol (ARP)2.2.2 MTU; 2.3 Asynchronous Transfer Mode (ATM); 2.4 Packet Over SONET (POS); 2.5 SRP/RPR and DPT; 2.5.1 Intelligent Protection Switching; 2.6 (Fractional) E1/T1/E3/T3; 2.7 Wireless Transport; 2.7.1 Regulatory Constraints; 2.7.2 Interference; 2.7.3 Obstructions; 2.7.4 Atmospheric Conditions;

2.7.5 If it is so bad . . .; 3 Router and Network Management; 3.1 The Importance of an Out-Of-Band (OOB) Network; 3.1.1 Management Ethernet; 3.1.2 Console Port; 3.1.3 Auxiliary (Aux) Port; 3.1.4 Remote Power Management; 3.1.5 Uninterruptible Power Supplies (UPS)
3.2 Network Time Protocol (NTP)3.3 Logging; 3.4 Simple Network Management Protocol (SNMP); 3.4.1 SNMPv1, v2c and v3; 3.5 Remote Monitoring (RMON); 3.6 Network Management Systems; 3.6.1 CiscoWorks; 3.6.2 JUNOScope; 3.6.3 Non-Proprietary Systems; 3.7 Configuration Management; 3.7.1 Concurrent Version System (CVS); 3.7.2 Scripting and Other Automated Configuration Distribution and Storage Mechanisms; 3.8 To Upgrade or Not to Upgrade; 3.8.1 Software Release Cycles; 3.9 Capacity Planning Techniques; 4 Network Security; 4.1 Securing Access to Your Network Devices; 4.1.1 Physical Security
4.1.2 Authentication, Authorization and Accounting (AAA)4.2 Securing Access to the Network Infrastructure; 4.2.1 Authentication of Users, Hosts and Servers; 4.2.2 Encryption of Information; 4.2.3 Access Tools and Protocols; 4.2.4 IP Security (IPsec); 4.2.5 Access Control Lists; 4.2.6 RFC 1918 Addresses; 4.2.7 Preventing and Tracing Denial of Service (DoS) Attacks; 4.3 Protecting Your Own and Others' Network Devices; 5 Routing Protocols; 5.1 Why Different Routing Protocols?; 5.2 Interior Gateway Protocols (IGP); 5.2.1 Open Shortest Path First (OSPF); 5.2.2 Authentication of OSPF
5.2.3 Stub Areas, Not So Stubby Areas (NSSA) and Totally Stubby Areas5.2.4 OSPF Graceful Restart; 5.2.5 OSPFv3; 5.2.6 Intermediate System to Intermediate System (IS-IS); 5.2.7 Authentication of IS-IS; 5.2.8 IS-IS Graceful Restart; 5.2.9 Routing Information Protocol (RIP); 5.2.10 Interior Gateway Routing Protocol (IGRP) and Enhanced Interior Gateway Routing Protocol (EIGRP); 5.2.11 Diffusing Update Algorithm (DUAL); 5.2.12 Stuck-in-Active; 5.2.13 Why use EIGRP?; 5.3 Exterior Protocols; 5.3.1 Border Gateway Protocol (BGP); 5.3.2 Authentication of BGP; 5.3.3 BGP Graceful Restart
5.3.4 Multiprotocol BGP

Sommario/riassunto

Designing and Developing Scalable IP Networks takes a "real world" approach to the issues that it covers. The discussions within this book are rooted in actual designs and real development, not theory or pure engineering papers. It recognises and demonstrates the importance of taking a multi-vendor approach, as existing network infrastructure is rarely homogenous and its focus is upon developing existing IP networks rather than creating them from scratch. This global book based on the author's many years' experience of designing real scalable systems, is an essential reference tool