Managing Internetworks With Snmp The Definitive Guide To The Simple Network Management Protocol Snmp And Snmp Version 2

Network management architectures; three decades of network evolution; the challenge of distributed network management; the system being managed; elements of a network management architecture; the OSI network management architecture; the IEEE network management architecture; the open software foundation distributed management environment; the internet network management framework; supporting SNMP: agents; supporting SNMP: Managers; fitting SNMP into the role of network management; the structure of management information; managing management information; preseting management information; ASN.1 elements; details of ASN; encoding rules; object names; the concise SMI definition; management information bases; MIBs within the internet object identifier subtree; MIB development;MIB I and MIB II groups; the ethernet RMON MIB; the token ring RMON MIB; other MIBs; private MIBs; accessing a MIB; the simple network management protocol; SNMP objectives and architecture; SNMP operation; SNMPprotocol data units(PDUs); application examples; the asn.1 SNMP definition; lower-layer protocol support for SNMP; user datagram protocol(UDP); internet protocol(IP); internet addressing; internet control message protocol (ICMP); network interface procols; address translation; using SNMP with UDP and IP; case studies in implementing SNMP; verifying access control with the community name; verifying access control with the community name and IP address; verifying that a set command has been properly received and implemented; verifying that the agent transmitted, and the manager received, a trap PDU; communicating device and link stratus with traps; proper interpretation of private enterprese traps; incompatible private enterprese MIBs; proper handlingof an invalid object identifier(OID); supporting the RMON MIB with a network monitor; comparing network management alternatives: accessing remote bridbe parameters with TELNET and SNMP; SNMP version 2; the SNMPv2 structure of management information; the SNMPv2 textual conventions; the SNMPv2 MIB; the SNMPv2 manager-to-manager MIB; the SNMPv2 protocol operations; SNMPv2 transport mappings; SNMPv2 security; coexistenceof SNMPv1 and SNMPv2; surveying the future of SNMP; addresses of standards organizations; acronyms and abbreviations; selected manufactures of SNMP-related internetworking products; obtaining internet information; network management RFCs; network management parameters from RFC 1340; management information bases; SNMPv2 software; trademarks; index.

This book is the definitive guide to SNMP-based network and internetwork management for network administrators, managers, and designers. Concise, focusing on practical issues, and completely up to date, it covers SNMPv1, SNMPv2, and the most recent SNMPv3, as well as RMON 1 and RMON 2. The book provides an extensive discussion on standard MIBs (Management Information Bases), including MIB-II and the all-important Ethernet Interface MIB for Internet connections. In addition, the book presents RMON 1 and RMON 2 enhancements, looking at statistics collection, alarms, and filters, as well as the extensions to RMON 1 for RMON 2 devices.

The difinitive guide to the Simple Network Management Protocol, SMNPv2, RMON, and RMON2.

This book is the definitive guide to SNMP-based network and internetwork management for network administrators, managers, and designers. Concise, focusing on practical issues, and completely up to date, it covers SNMPv1, SNMPv2, and the most recent SNMPv3, as well as RMON1 and RMON2 - all of which are currently deployed in LANs and WANs. With this book, you will be better equipped to determine your network management needs, gain insight into design issues, and obtain the necessary understanding to evaluate available SNMP-based products. The author presents helpful background information, including an overview of network management requirements and an explanation of fundamentals such as network management architecture; performance, fault, and accounting monitoring; and configuration and security control.

Places OSS software in the context of telecommunications as a business Gives a concrete understanding of what OSS is, what it does and how it does it, avoiding deep technical details Frequently relates OSS software to business drivers of telecom service providers

Managing Internetworks with SNMPWiley

This book is supposed to serve as a comprehensive and instructive guide through the new world of digital communication. On the physical layer optical and electrical cabling technology are described as well as wireless communication technologies. On the data link layer local area networks (LANs) are introduced together with the most popular LAN technologies such as Ethernet, Token Ring, FDDI, and ATM as well as wireless LAN technologies including IEEE 802.x, Bluetooth, or ZigBee. A wide range of WAN technologies are covered including contemporary high speed technologies like PDH and SDH up to high speed wireless WANs (WiMAX) and 4th generation wireless telephone networks LTE. Routing technologies conclude the treatment of the data link layer. Next, there is the Internet layer with the Internet protocol IP that establishes a virtual uniform network out of the net of heterogeneous networks. In detail, both versions, IPv4 as well as the successor IPv6 are covered in detail as well as ICMP, NDP, and Mobile IP. In the subsequent transport layer protocol functions are provided to offer a connection-oriented and reliable transport service on the basis of the simple and unreliable IP. The basic protocols TCP and UDP are introduced as well as NAT, the network address translation. Beside transport layer security protocols like SSL and TLS are presented. On the upmost application layer popular Internet application protocols are described like DNS, SMTP, PGP, (S)FTP, NFS, SSH, DHCP, SNMP, RTP, RTCP, RTSP, and World Wide Web.

Written for both those who plan, administer, and manage networks and for software developers who work in a networked environment this reference presents all the ideas behind SNMP and clearly explains the protocols and mechanisms. Emphasizing practical network management, this is the only book to provide descriptions of what is managed using SNMP, carefully explaining the meaning of the information that is retrieved from TCP/IP systems. Ethernet, Token-Ring LAN or FDDI LAN interfaces, serial point-to-point, DS1 or DS3 interfaces, and X.25 or frame relay

interfaces. Includes SNMPV2.

No previous knowledge of data communications and related fields is required for understanding this text. It begins with the basic components of telephone and computer networks and their interaction, centralized and distributive processing networks, Local Area Networks (LANs), Metropolitan Area Networks (MANs), Wide Area Networks (WANs), the International Standards Organization (OSI) Management Model, network devices that operate at different layers of the OSI model, and the IEEE 802 Standards. This text also introduces several protocols including X.25, TCP/IP, IPX/SPX, NetBEUI, AppleTalk, and DNA. The physical topologies, bus, star, ring, and mesh are discussed, and the ARCNet, Ethernet, Token Ring, and Fiber Distributed Data Interface (FDDI) are described in detail. Wiring types and network adapters are well covered, and a detailed discussion on wired and wireless transmissions including Bluetooth and Wi-Fi is included. An entire chapter is devoted to the various types of networks that one can select and use for his needs, the hardware and software required, and tasks such as security and safeguarding data from internal and external disasters that the network administrator must perform to maintain the network(s) he is responsible for. Two chapters serve as introductions to the Simple Network Management Protocol (SNMP) and Remote Monitoring (RMON). This text includes also five appendices with very useful information on how computers use numbers to condition and distribute data from source to destination, and a design example to find the optimum path for connecting distant facilities. Each chapter includes True-False, Multiple-Choice, and problems to test the reader's understanding. Answers are also provided.

Designed as an advanced text on internetworking technologies for senior undergraduate/graduate students of computer science, this unique book provides an introduction to the key concepts related to front line areas of internetwork-specific research and development. The text would also be highly useful to professionals, who wish to keep abreast of various state-of-the-art technologies in their fields of research.

Detailed examples and case studies make this the ideal hands-on guide to implementing Juniper Networks systems. It contains something for everyone, and covers all the basics for beginners while challenging experience users with tested configuration examples throughout the book.

For more than 20 years, Network World has been the premier provider of information, intelligence and insight for network and IT executives responsible for the digital nervous systems of large organizations. Readers are responsible for designing, implementing and managing the voice, data and video systems their companies use to support everything from business critical applications to employee collaboration and electronic commerce.

For more than 40 years, Computerworld has been the leading source of technology news and information for IT influencers worldwide. Computerworld's award-winning Web site (Computerworld.com), twice-monthly publication, focused conference series and custom research form the hub of the world's largest global IT media network.

This volume provides solutions for common network management problems such as scalability and increased technology mix. The book explores the use of MPLS in network management, which is used to improve the overall quality of service.

With over 30,000 copies sold in previous editions, this fourth edition of TCP/IP Clearly Explained stands out more than ever. You still get a practical, thorough exploration of TCP/IP networking, presented in plain language, that will benefit newcomers and veterans alike. The coverage has been updated, however, to reflect new and continuing technological changes, including the Stream Control Transmission Protocol (SCTP), the Blocks architecture for application protocols, and the Transport Layer Security Protocol (TLS). The improvements go far beyond the updated material: they also include an all-new approach that examines the TCP/IP protocol stack from the top down, beginning with the applications you may already understand and only then moving deeper to the protocols that make these applications possible. You also get a helpful overview of the "life" of an Internet packet, covering all its movements from inception to final disposition. If you're looking for nothing more than information on the protocols comprising TCP/IP networking, there are plenty of books to choose from. If you want to understand TCP/IP networking - why the protocols do what they do, how they allow applications to be extended, and how changes in the environment necessitate changes to the protocols—there's only the one you hold in your hands. Explains clearly and holistically, but without oversimplification—the core protocols that make the global Internet possible Fully updated to cover emerging technologies that are critical to the present and future of the Internet Takes a top-down approach that begins with the familiar application layer, then proceeds to the protocols underlying it, devoting attention to each layer's specifics Divided into organized, easy-to-follow sections on the concepts and fundamentals of networking, Internet applications, transport protocols, the Internet layer and infrastructure, and practical internetworking

Provides a comprehensive, detailed description of thefundamental architectural principles and protocols used inATM-based networks, as well as interworking with IP and Frame Relaybased networks Begins with general coverage of ATM, but moves quickly into themost important new area of ATM--IP switching, which allowscommunications companies to combine IP routing with ATMswitching Offers the reader a clear understanding of the evolutionarytrends in the development of ATM A Wiley-IEEE Press publication

bull; Concise overviews of technologies essential to networking professionals at all levels, from novice to expert. bull; New chapters include coverage of important topics like VoIP and EAP bull; Coverage of cutting edge technologies like optical networking and storage bull; Authored by Cisco Systems, worldwide leader in networking for the Internet.