

Introduction

System Overview

The StrataView SNMP Proxy Agent (Release 8.2) is an optional software product that enables the configuration, status and statistics of an IPX/BPX/AXIS network to be interrogated from a local or remote Simple Network Management Protocol (SNMP) management workstation.

The SNMP management workstation connects not to an BPX or IPX node itself but rather to a StrataView Plus Network Management workstation which is, in turn, connected to an BPX or IPX node. The StrataView Plus SNMP Proxy Agent co-exists with the StrataView Plus software in a StrataView Plus Network Management workstation. Once started, the proxy agent maintains a Management Information Base (MIB) of the IPX/BPX/AXIS network. The MIB provides access to the IPX/BPX/AXIS network configuration, status, and statistics based on the contents of the StrataView Plus database. Using the Simple Network Management Protocol (SNMP) the MIB can be interrogated from the SNMP Manager workstation.

The physical link between the StrataView Plus workstation and the SNMP Manager workstation must be an Ethernet LAN. A typical connection over an Ethernet network is shown in Figure 1-1.

Figure 1-1 **Typical SNMP Manager with Ethernet Connection to StrataView Plus Workstation**

Figure 1-2 shows the software and database modules involved in a IPX/BPX/AXIS network being monitored by a SNMP manager. The Proxy Agent software resides in the StrataView Plus workstation along side the StrataView Plus software with both operating under the Sun OS 4.1.3 operating system.

Figure 1-2 StrataView Plus and SNMP Proxy Agent software modules

The StrataView Plus software monitors and manages the IPX/BPX/AXIS network through its proprietary hardware and software connection to one of the BPX or IPX nodes on the network. The user interfaces with the StrataView Plus software through the workstation's keyboard and monitor. StrataView Plus maintains a current database of the network using the Informix database software system.

The Proxy Agent software consists of an SNMP engine and the Proxy Agent itself. Both programs, once started, are transparent to the StrataView Plus operator and operate entirely in the background. The Proxy Agent maintains a current Management Information Base (MIB) of the IPX/BPX/AXIS network using the data in the Informix database and which can be interrogated by SNMP Manager. Statistics are obtained by the Proxy Agent directly from StrataView Plus through the StrataView Plus Realtime Counters feature. The Proxy Agent also maintains a small database which contains local configuration data.

The link between the StrataView Plus workstation and the SNMP Manager employs the Internet Protocol (IP) using the User Datagram Protocol (UDP) feature over an Ethernet LAN.

The Advantage of Using Proxy Agents

When installed network equipment does not support SNMP, there are two ways to add SNMP capability:

- 1 Integral SNMP, which requires retrofitting each network element to be managed. Software and, in most cases, hardware must be upgraded.
- 2 A proxy agent, which provides SNMP capability for multiple network elements. The proxy agent translates between SNMP and the network elements' management protocol(s).

Installing a proxy agent is the preferable solution, not only because it eliminates the arduous task of retrofitting installed equipment, but because it simplifies future upgrades. SNMP is an evolving protocol, and periodic enhancements are to be expected. When a proxy agent is employed, a software download of the proxy agent is all that is required to upgrade the SNMP software. Without a proxy agent, each SNMP-managed device must be individually upgraded.

System Requirements

In addition to the system requirements for StrataView Plus 8.2 which are listed in the *StrataView Plus Operations Manual* and the *StrataView Plus Installation Manual*, the following requirements must be met to support the StrataView Plus SNMP Proxy Agents:

- 6 MB of disk storage on /usr/users/svplus/log.
- 2 MB of disk storage on /usr/users/svplus.
- The StrataView Plus Workstation must also include a hardware data communications path to the SNMP Manager Workstation. (A typical arrangement is shown in Figure 1.1 in which the StrataView Plus Workstation and the SNMP Manager Workstation communicate over an Ethernet LAN.)

Compatibility

The StrataView Plus SNMP Proxy Agent is compatible with IPX/BPX/AXIS system software Releases 7.2, 8.0, 8.1, 8.2, StrataView Plus software Release 8.1, and the SNMP Protocol (RFC 1157). The MIB follows the Concise MIB Standard (RFC 1212) and the TRAP definition standard (RFC 1215). However, the StrataView Plus Proxy Agent uses a custom MIB implementation and does not support MIB I and MIB II except for SNMP Group.

About this Manual

Chapter 2 provides details of how to install, configure, and start the StrataView Plus SNMP Proxy Agent.

Chapter 3 provides details of how to use the Management Information Base (MIB) files to extract and present useful StrataCom network data.

Appendix A presents a formal description of the Proxy Agent Network MIB.

Appendix B presents a formal description of the Proxy Agent Service MIB.

Appendix C presents information about Troubleshooting the Proxy Agents.

Throughout this manual, the reader is assumed to be familiar with the StrataCom switch hardware, StrataView Plus, the UNIX system and its commands, and the SNMP and MIB conventions and standards.

