

StrataSphere Network Management

Introduction

StrataSphere combines embedded management intelligence distributed throughout the network elements (for fast implementation) along with centrally located NMS workstation advanced system applications and tools to provide integrated fault, performance, and configuration management functions unique to cell-based networks.

- StrataSphere
- StrataView Plus
- StrataSphere Connection Manager
- StrataSphere BILLder
- StrataSphere Modeler
- StrataSphere Optimizer

This chapter discusses the role StrataView Plus in performing network management. For further information on network management, refer to the *StrataView Plus Operations Guide*.

StrataView Plus

StrataView Plus is an integral part of StrataSphere, a standards based multi-protocol management architecture. StrataView Plus is a single unified management platform utilizing HP OpenView® to manage BPX, IPX, IGX, FastPAD, and INS devices. Regardless of the size or configuration of your network, SV+ collects extensive service statistics, tracks resource performance, and provides powerful remote diagnostic and control functions for WAN maintenance. Refer to the *StrataView Plus Operations Guide* for details.

On-line help screens, graphical displays, and easy command line mnemonics make the StrataView Plus a user-friendly system. A large amount of hard disk storage is provided to allow accumulating time of day statistics on many network parameters simultaneously. The data is accumulated by the node's controller card and transmitted to the StrataView Plus workstation where it is stored, processed, and displayed on a large color monitor.

StrataView Plus connects to the network over an Ethernet LAN connection. With Ethernet, SV+ connectivity to remote nodes can be established via frame relay over TCP/IP to the LAN connector on the local node, or via inband ILMI. Also, StrataView Plus provides in-band management of network elements via SNMP agents and MIBs embedded in each node and Interface Shelf.

StrataView Plus can also be connected over a serial interface for use temporary use as a command line terminal.

Each node contains an embedded SNMP agent interface. This agent allows a user to manage a StrataCom network or sub-network from any SNMP-based integrated network management system (INMS).

Network Topology

A map of the network is generated at system installation to graphically display all nodes, trunks, circuit lines, and access devices in the network. Various colors are used to indicate the status of each network item. An operator can zoom in to display specific network details while a small overview map continues to be displayed as a locator.

Network Performance

StrataView Plus has powerful statistics gathering capability. From data gathered throughout the network, you can quickly view the operational integrity and deployment of installed network devices and communication media by activating and invoking statistics displays.

Statistics are collected and temporarily stored by each node in the network and released to StrataView Plus when you enable polling, and in accordance with your configuration for specific information within reports. SV+ then stores statistics in a relational database; you retrieve and view these statistics by invoking a statistics display window from the SV+ GUI.

Alarm Reporting/Event Log

StrataView Plus, in addition to providing network management capabilities, displays major and minor alarm status on its topology screen for all nodes in a network. It also provides an event log with configurable filtering of the log events by node name, start time, end time, alarm type, and user specified search string.

Software Updates

System software and software updates are supplied by StrataCom on magnetic tape or floppy disk. The system software files are then loaded onto the StrataView Plus workstation where they can be downloaded to a buffer memory in each node in the network in a background mode without disturbing network operation. When the loading is complete for all nodes, a command can be issued to switch all nodes over to the new software. The previous software is preserved and can be recalled at any time.

Additionally, all configuration files for the network can be stored on the StrataView Plus workstation for backup purposes. In the event of a system update or a node failure, the configuration files can be downloaded to one or all nodes for immediate system restoration.