

## Network Element Software (NES)



**NES**, the embedded Network Element Software suite resident in each network element provides control and management of individual network elements. Service providers can individually configure and control network elements through a simple and easy to use World Wide Web (WWW) browser interface using the widely used popular Hypertext Transfer Protocol (HTTP), without the need for a separate, host-based element management software (EMS). The popularity of HTTP implies that configuration and control can be performed through the public Internet (with the provided security management), bringing unsurpassed flexibility to service provider operations.

Optionally, NES provides Simple Network Management Protocol (SNMP) interface that enables Network Management System (NMS) to provide centralized monitoring and control of network elements in a geographically dispersed network. Since SNMP is an industry standard protocol to manage network devices and elements, provides connectivity to industry leading network management systems, including Valiant's own Network Management System (NMS).

### Fault and Alarm Management

- Alarm and event reporting
- Built-in node level fault diagnosis and reporting
- Historical alarms collection for node and link availability analysis
- Automatic management and reporting of hot-standby hardware

### Performance Management

- Collects node performance data as defined by SDH standard
- Performance monitoring for every 15 minutes interval and 24 hour interval
- Logging past performance data for trend analysis

### Configuration Management

- Software control of all functions and attributes on individual network elements.
- Easy and intuitive GUI for configuration and control
- Provides node view with ability to configure at the granularity of node, card or ports.

## Accounting Management

- Inventory report

## Security Management

- Hierarchical user rights based on privileges
- User name and password protection

# Technical Specifications

## Management Functions

### Fault

- Alarm and event collection and reporting
- Colour Coding for different alarm severity
- Event Forwarding

### Configuration

- Provisioning of cross connects, ports and other functions on individual network elements
- Configuration synchronization between database and individual network elements
- Software upgrade
- GUI for easy configuration

### Performance

- Performance data collection per port as per ITU-T G.826 standard
- Performance monitoring over every 15 minutes and 24 hour interval

### Graphical User Interface

- Automatic discovery and storage
- Detailed view of nodes, ports and cards present
- Alarm and event viewing

### NMS Interface

- SNMP
- HTTP
- CMIP

### Network Element Support

- VCL100 Multi-Service Provisioning Platform
- VCL100 Multi-Service Access Node
- VCL100 SDH Access Node

### Platforms

- Internet Explorer Version 5.0 and above
- Netscape Version 4.7 and above

## VALIANT COMMUNICATIONS LIMITED

71/1, Shivaji Marg, New Delhi - 110015, India

**Phone:** (+91-11) 2542 2215, 2542 2216, 2541 0053    **Fax:** (+91-11) 2543 4300, 2614 4888

**E-mail:** [info@valiantcom.com](mailto:info@valiantcom.com)

**Web Site:** <http://www.valiantcom.com>