

NetAtlas™

Element Management System

The telecommunications industry is changing rapidly. Data networking and telecommunications providers have recognized that they must make customer service and responsiveness to customers' needs a top priority. This awareness stems from increased competition to deliver the most advanced, flexible and useful services possible. As network complexity increases, management systems are becoming more and more important to the daily operations of service providers.

ZyXEL's NetAtlas is an Element Management System (EMS) that supports a full suite of features for managing ZyXEL's IP DSLAM solutions. The EMS supports features for system management, network configuration, performance monitoring, fault detection, and security control. Remotely managing thousands of DSL lines becomes simple, efficient, and cost-effective through the point-and-click feature of the centralized EMS Graphic User Interface (GUI). Not only does this simplify the complexity of network management and provisioning, but it also shortens the time for failure recovery, and thus increases network availability for revenue generation.

Benefits

Better Network Management at Lower Operating Costs

The powerful design of the NetAtlas simplifies network management tasks. Networks and systems can be configured, monitored and managed easily without visits from technical personnel. The advanced features provide operators with better network management and lower daily operating costs.

Network-wide Visibility

The NetAtlas offers real-time display of devices and network topology, from which a clear network status can be presented to system administrators. This is very useful when devices are scattered across various locations. It not only saves time but also expense, thus minimizing network maintenance costs.

Simplified One-touch Design for Daily Operations

There are a number of simplified functions performed by the NetAtlas. For example, Firmware upgrades now take just a click of a button to accomplish, whereas previously they took several steps. Other one-touch functions include collection of performance statistics and service provisioning.

Proactive Management to Achieve Better Performance

A variety of parameters can be monitored to keep track of the network and system. The NetAtlas provides performance monitoring that enables service providers to analyze both network and system throughput as well as error rate. The statistical data can be displayed in a graphical format, and consequently, better network performance can be planned and achieved through superior error prevention.

Shortened System Recovery Time

During daily operations, one important task for service providers is to shorten the time of system recovery. The NetAtlas provides real-time panel display, loopback tests, and alarm report schemes, so when something goes wrong with the system, errors can be detected easily and managed in a timely fashion.

Event Notifications for Immediate Corrections

Service providers can specify events according to operational requirements. For example, the system generates traps when the temperature is too high. Upon receiving these traps, the NetAtlas can instantly notify operators, and immediate action can be taken.

Features

Network Configuration

Whether reconfiguring existing services or provisioning for new customers, it is easy to use EMS for service provisioning. By a simple click of a mouse you can display or configure a wide range of parameters such as:

- DSL profiles
- STP, priority and GARP as defined in IEEE 802.1D.
- VLAN
- Static Route
- Switching

Pre-defined settings, or profiles, can be applied to a specific port or group of ports immediately. Multiple profiles can be maintained to support different levels of QoS (quality of service).



Profile Management



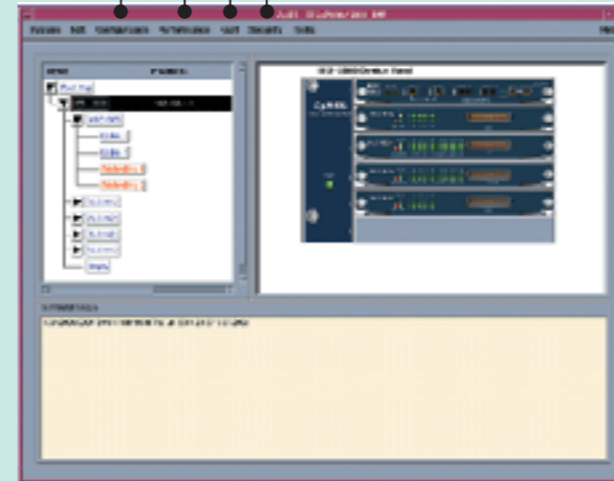
Applying DSL Profiles to Ports.



EMS allows displays and changes of the current status of available VLAN groups.



Line Setup



System Management

The EMS is a convenient tool for system administrators to remotely monitor the current status of a port on any device over the network. The status of such devices is shown in different colors. Inventory data, such as different hardware and software versions, give better overview and control of network resources, and as a result, network maintenance is greatly enhanced due to simplified procedures for upgrading firmware. It takes just a click of a button to accomplish what previously took multiple steps.

Security Control

Security is always a critical concern of network administrators. User Names and Passwords give network administrators the exclusive ability to manage resources; thus, allowing only authorized personnel to perform network management tasks. The EMS supports different levels of privileges designed for different operational requirements. For added security access logs are maintained for future tracking.



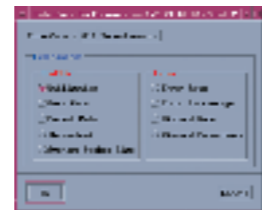
Access Control



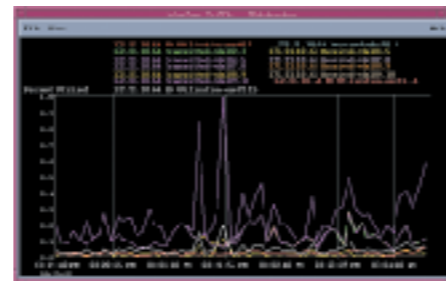
Access Log

Performance Monitoring

The EMS gives a clear view of trends on system performance, availability and abnormality. It greatly improves a system administrators' ability to detect and analyze system errors and network congestion. This is especially important for growing networks. Advanced actions or planning can be done to ensure better service support. To better understand existing data, performance statistics can be displayed in a table or graphical format.



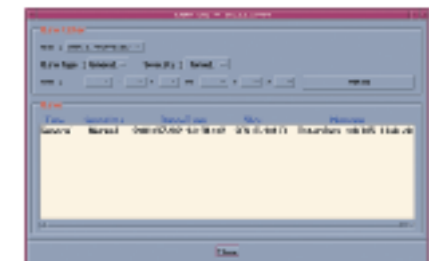
Interface Performance Monitoring



Showing the Interface Performance in Graphic Format

Fault Detection

When competition for customers increases, reliable network service becomes the principal criteria for maintaining customer loyalty. In order to facilitate system administrators in fault management, both local and remote loopback tests are included to promote fault isolation. Efficient and cost-effective trouble identification minimizes failure-recovery time, greatly improving network reliability, and thus ensuring better customer service.

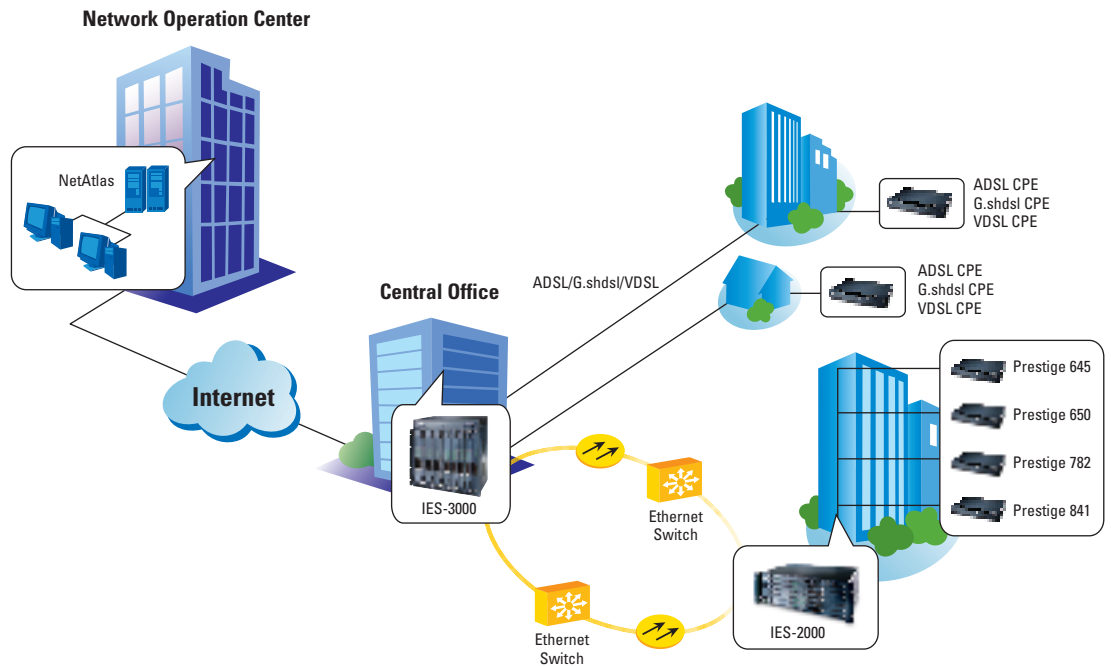


Alarm Surveillance



Loopback Testing

Application Diagram



Operational Requirements

Unix Version

Hardware

- Sun UltraSPARC Workstation
- 256 MB RAM
- 10 GB Hard Disk
- 1024 x 768 Graphical Adapter
- 10/100 Mbps Ethernet Adapter

Software

- Solaris 2.8
- X11R6/Motif 2.2
- HP OpenView Network Node Manager 6.2
- MySQL or Oracle Database System (optional)

Windows Version

Hardware

- CPU: Intel Pentium III
- 256 MB RAM
- 10GB Hard Disk
- 1024 x 768 Graphical Adapter
- 10/100 Mbps Ethernet Adapter

Software

- Windows 2000 or NT 4.0
- CastleRock SNMPc Network Manager v 5.1 (Enterprise or WorkGroup Edition)
- MS Access 2000

ZyXEL

TOTAL INTERNET ACCESS SOLUTION



Corporate Headquarters
ZyXEL Communications Co.
 Tel: +886-3-578-3942
 Fax: +886-3-578-2439
 Email: sales@zyxel.com.tw
<http://www.zyxel.com>
<http://www.zyxel.com.tw>

North America
ZyXEL Communications Inc.
 Tel: +1-714-632-0882
 Fax: +1-714-632-0858
 Email: sales@zyxel.com
<http://www.zyxel.com>

Germany
ZyXEL Deutschland GmbH.
 Tel: +49 2405 6909 0
 Fax: +49 2405 6909 99
 Email: sales@zyxel.de
<http://www.zyxel.de>

Denmark
ZyXEL Communications A/S
 Tel: +45 39 55 07 00
 Fax: +45 39 55 07 07
 Email: sales@zyxel.dk
<http://www.zyxel.dk>

Norway
ZyXEL Communications A/S
 Tel: +47 22 80 61 80
 Fax: +47 22 80 61 81
 Email: sales@zyxel.no
<http://www.zyxel.no>

Sweden
ZyXEL Communications A/S
 Tel: +46 (0) 31 744 3810
 Fax: +46 (0) 31 744 3811
 Email: sales@zyxel.se
<http://www.zyxel.se>