

Prisma IP™ Element Management System

Description

Management solution for Prisma IP™ optical Ethernet platform

Scientific-Atlanta's Prisma IP is an optical networking platform that handles the growth of IP-based traffic in Metropolitan Area Networks (MANs). The Prisma IP family of optical access switches is based on Resilient Packet Transport (RPT) technology, Scientific-Atlanta's version of the emerging Resilient Packet Ring (RPR) protocol for MANs. The Scientific-Atlanta Element Management System (EMS) is a comprehensive operational and management system for all facets of the Prisma IP solution – user interfaces, ring operations, and DWDM optical wavelengths.

The EMS offers tools to provision and manage the next-generation packet-based optical network based on the Prisma IP family of optical packet switches. This comprehensive management system maximizes the operational efficiency of service providers by providing a full suite of provisioning and monitoring tools to improve service velocity, reduce maintenance overhead, and provide pro-active fault management.

Features

- Point-and-click GUI, real-time or CLI provisioning for voice and IP services
- Service Level Agreement (SLA) monitoring
- Comprehensive alarm management and monitoring
- Highly-scalable, modular software design
- Open CORBA API for integration into third-party solutions
- Standards-based SNMPv2c, Java
- Sun Solaris, Windows NT/2000 platforms

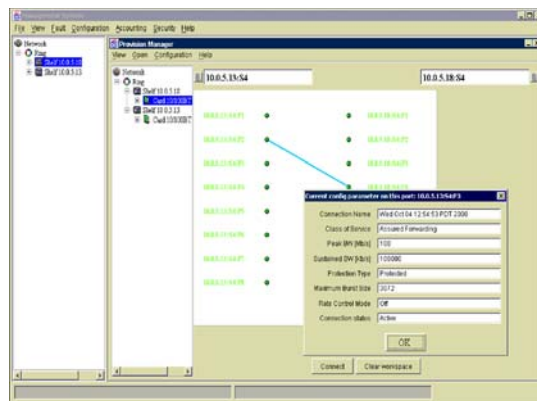


Prisma IP Element Management System

Features - Powerful Management Tools

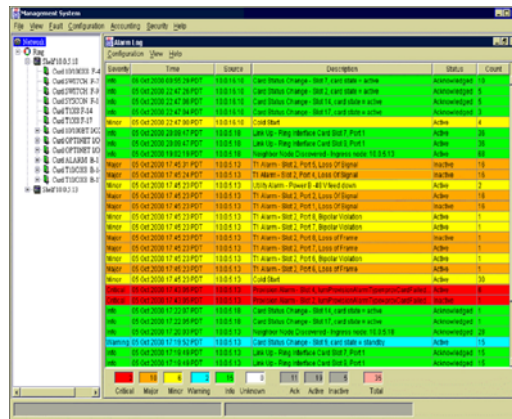
Provisioning Tool

- Single provisioning interface, with simple point-and-click, end-to-end provisioning and service mappings for all services from TDM (E1, T1, DS3, etc.) to data (10/100/1000 Ethernet, TLS, VLL, etc.)
- Data bandwidth provisioning on demand with 64-Kbps granularity. Includes Committed Information Rate (CIR), Peak Information Rate (PIR), and Maximum Burst Size (MBS).
- Up to three Classes of Service, including Expedited Forwarding (EF), Assured Forwarding (AF), and Best Effort (BE). Includes over-subscribed traffic classes.
- Pre-provisioning of user card slots and nodes. Cross-connect set up and tear down.
- Auto-provisioning throughout the Prisma IP ring



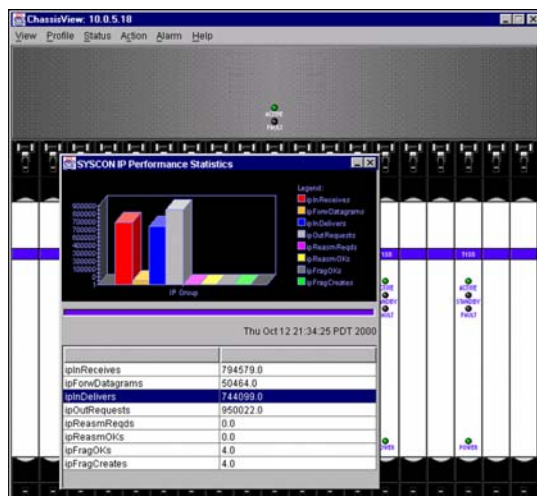
Fault Management Tool

- Alarm severity classes
- Alarm notification engine
- Alarm correlation and history for rapid analysis
- Auto-pruning prior to alarm archiving
- Service impact analysis feature
- Color-coded alarms for easy identification with prioritization feature
- Views based on predefined and user definable filters



Performance Management Tool

- Performance statistics data for IP, ICMP, TCP, UDP, and SNMP
- Statistics for shelf, card, and port
- RFC1213 and RFC2495 compliant
- Configurable data collection intervals
- Graphical display of performance statistics for easy analysis
- Carrier configurable trending data feature for third-party software integration



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Features - Powerful Management Tools

Full FCAPS Support

The EMS supports full Fault, Configuration, Accounting, performance, and Security (FCAPS) functionality with powerful Graphical User Interface (GUI) tools.

- Fault management
- Configuration management
- Accounting management
- Performance management
- Security management

These tools enable service providers to manage a Prisma IP network with per-port granularity for on-demand service delivery and proactive SLA monitoring.

Fault Management

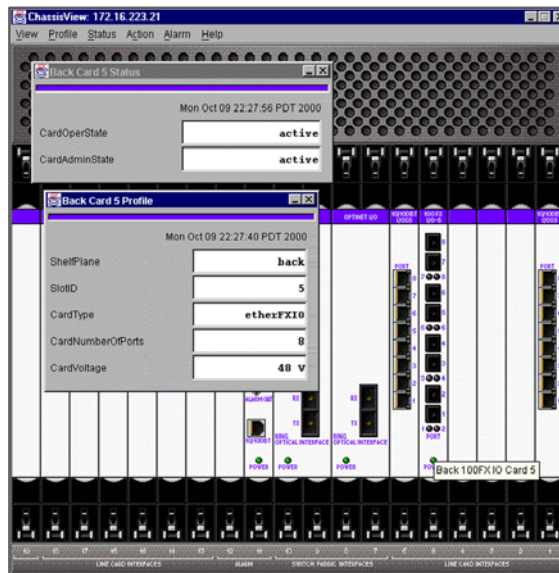
Fault management is provided via a full set of alarm monitoring tools. Convenient color-coded alarm banners are provided for individual severity classes. Threshold parameters are used for proactive network management with trigger actions. Alarm correlation tools are available to assist with fault investigations and analysis. EMS also integrates with the complete suite of Micromuse's Netcool fault management and service assurance software.

Configuration Management

EMS provides a rich set of configuration tools including real-time inventory of all cards and elements. Key configuration features include:

- Auto-topology discovery and definition
- End-to-end testing (inter and intra-card)
- Chassis view feature for all elements
- Configuration data collection for analysis
- Software downloads
- Trap receiver table set up

The chassis view tool enables front and rear graphical views of any network element. Cards can be disabled and parameters can be set with a simple point-and-click. The operator can immediately determine available card inventory on the element. Topology configuration views include dynamic bandwidth utilization for each span in the network.



Chassis view with card summary

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Accounting Management

Accounting is a critical function for the service provider. The EMS provides complete traffic collection and billing capabilities. The system supports billing models that are time-based, usage-based, source-based, destination-based, and Class of Service (CoS). EMS also provides integration with third-party billing systems, including Portal's Infranet.

Performance Management

One of the key capabilities of the EMS is its ability to collect detailed performance measurements on user traffic and card operations. Traffic performance parameters can be established on a per-customer, per-class, and per-port basis to support stringent Service Level Agreements (SLAs). Performance statistics are monitored for all data types including IP, TCP, UDP, ICMP, and SNMP. Results can be displayed via graphical presentation provided to third-party management systems via EMS.

Security Management

The EMS solution provides multiple layers of security to prevent service interruptions, such as unauthorized operators bringing the network down. The system provides access restrictions based on user profiles, and other safeguards. The EMS provides the customer multi-level access to objects—path, port, cross-connects, etc.—with only the alarms and events related to that specific network view forwarded.

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Specifications

Element Management System Specifications		
Requirement	EMS Server	EMS Client
<u>Windows-based</u>		
Hardware	Intel Pentium III PC 1 GHz processor or above CD-ROM drive 4 MB video card Color monitor recommended	Intel Pentium III PC 600 MHz processor or above 21" color monitor CD-ROM drive 1.44 MB, 3.5" diskette drive 4 MB video card with 1027 x 768 resolution (min.)
Operating Environment	Windows NT Server	Windows NT/2000
RAM	256 MB minimum 512 MB recommended	128 MB minimum 256 MB recommended
Disk Space	1 GB free space	500 MB free space
<u>Solaris-based</u>		
Hardware	SUN Ultra 10 440 MHz processor CD-ROM drive 4 MB video card Color monitor recommended	SUN Ultra 5 330 MHz processor 21" color monitor CD-ROM drive 4 MB video card with 1027 x 768 resolution (min.)
Operating Environment	Solaris 2.7	Solaris 2.7
RAM	256 MB minimum 512 MB recommended	128 MB minimum 256 MB recommended
Disk Space	1 GB free space	500 MB free space



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