Nortel Networks

Preside

Management Solutions
for Metro Optical Networks

Integrated solutions for edge-to-edge management of Metro Optical Networks

The demand for more powerful optical management solutions in the metro arena has become increasingly urgent as eBusiness opportunities for leased lambdas, bandwidth trading, storage networking services, and managed wavelength services continue to grow. Nortel Networks understands the market forces that are creating these demands, and is introducing Preside Management for Metro Optical Networks to help service providers increase the efficiency and profitability of their networks.

Nortel Networks is the leader in optical networking and the only company that delivers a complete, integrated, scalable solution for managing metro optical environments. The Preside solution set facilitates the seamless interaction of management software with the network infrastructure, delivering intelligent networks that provide peak application performance.
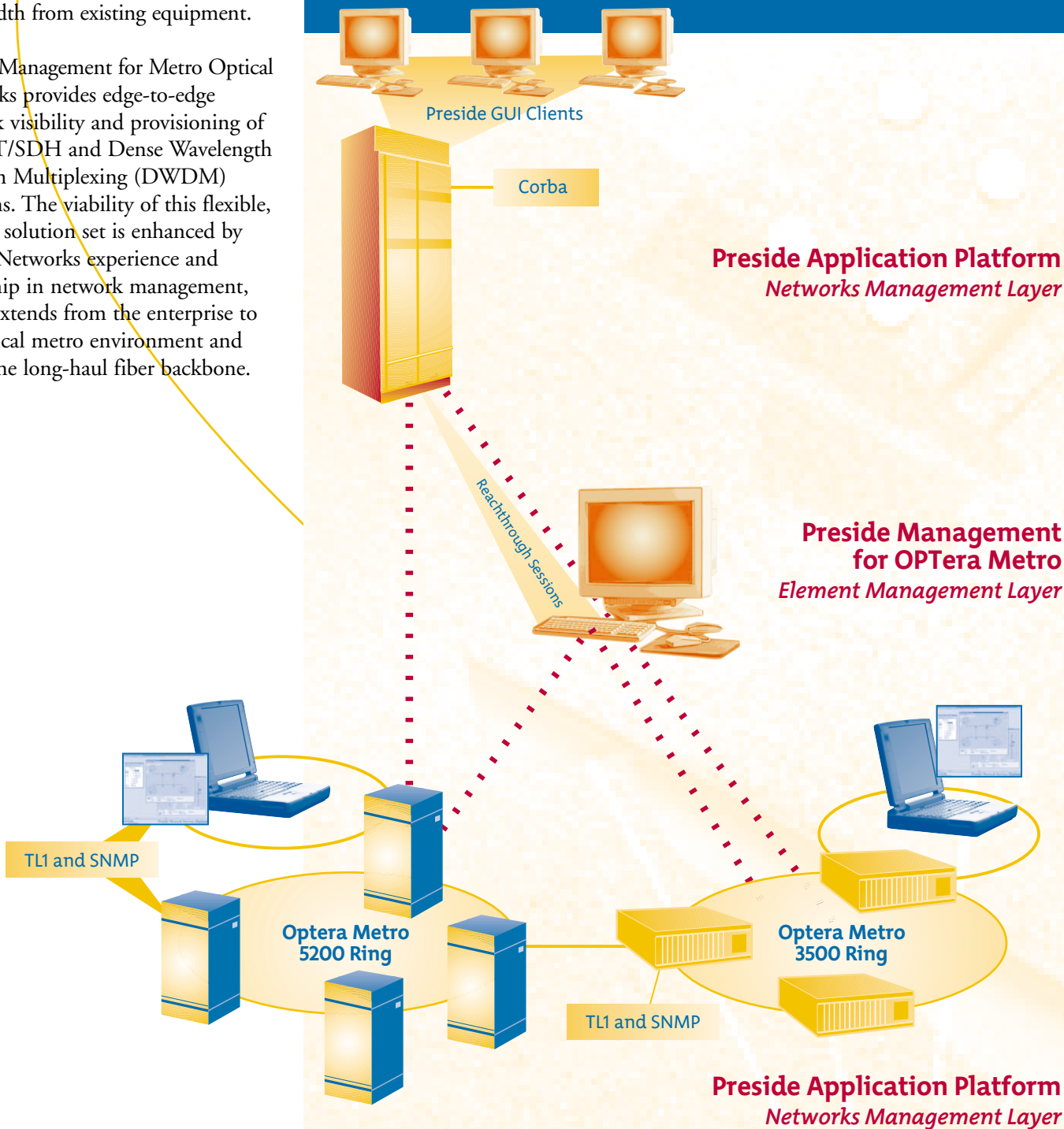
NORTEL NETWORKS™

Created for the industry-leading Nortel Networks OPTera Metro Multiservice Platforms, Preside Management for Metro Optical Networks is designed to help service providers meet the challenges posed by today's competitive metropolitan marketplace. The Preside solution delivers rapid edge-to-edge provisioning, alarm monitoring, service/fault correlation, performance management, configuration, and support for multi-vendor environments, enabling network managers to maximize available bandwidth from existing equipment.

Preside Management for Metro Optical Networks provides edge-to-edge network visibility and provisioning of SONET/SDH and Dense Wavelength Division Multiplexing (DWDM) solutions. The viability of this flexible, scalable solution set is enhanced by Nortel Networks experience and leadership in network management, which extends from the enterprise to the optical metro environment and across the long-haul fiber backbone.

Whether your company is interested in leased lambdas, bandwidth trading, storage networking services, or managed wavelength services, Nortel Networks can help you deliver next-generation networks for your enterprise customers. Preside Management for Metro Optical Networks is designed to assist you in provisioning and supporting a wide variety of advanced services that help maximize the profitability of your network investments.

Preside GUI Clients

Corba

Preside Application Platform
Networks Management Layer

Reachthrough Sessions

Preside Management for OPTera Metro
Element Management Layer

TL1 and SNMP

Optera Metro 5200 Ring

Optera Metro 3500 Ring

TL1 and SNMP

Preside Application Platform
Networks Management Layer

Flexible management strategies for metro optical environments

Preside Management Solutions for Metro Optical Networks offers an intelligent, scalable, multi-layer approach that enables you to select the management products that reflect the unique demands of your network. Three levels of management products are available. Each solution is capable of performing key management tasks including configuration, service activation, service assurance, alarm notification, and fault management.

- For complete visibility and control across the metro network and beyond, **Preside Applications Platform** delivers service assurance monitoring and context-sensitive launching of trail and performance management services. The combination of these user friendly, graphical user interface (GUI) management tools creates a carrier-grade solution that is ideal for optimizing large metro optical installations.

- For mid-size installations, **Preside Management for OPTera Metro (PMOM)** uses an intuitive GUI to streamline management of multiple OPTera Metro rings as well as point-to-point configurations.

- For smaller installations and individual devices, **Site Manager** offers an easy-to-use, GUI-based, craft-level network element management application.

Preside Management for Metro Optical Networks provides a full range of management solutions. These powerful applications are designed to simplify administrative tasks, maximize the effectiveness of management personnel, and provide cost-effective craft management tools to optimize network element utilization. Service activation, provisioning and service assurance tasks are handled quickly and efficiently by either the Site Manager, PMOM, or Preside Applications Platform products. All three solutions feature a consistent user interface that facilitates user training and reduces the possibility of operator error. In addition, automated management and system activation tools increase both efficiency and accuracy, enhancing the effectiveness of management personnel.

Streamlined provisioning through intelligent management solutions

Preside service activation solutions

In today's competitive marketing environment, the key to success is rapid provisioning—the ability to roll out customized solutions for enterprise customers without delay. Until now, provisioning medium to long-haul circuits could take weeks, as fiber patch panels at central offices were manually reconfigured. This time consuming task slowed the provisioning process, introduced human error factor, and increased the potential for customer churn.

Preside Trail Management solves the provisioning challenge by introducing a powerful tool set, complemented by a robust GUI that turbocharges service delivery. Nortel Networks has developed an advanced edge-to-edge connection management solution, delivering system-level visibility and management not only across the metro environment but across the long-haul optical backbone as well.

By using Preside Trail Management, network managers can view the network as a single, integrated system, including SONET and SDH devices from third-party vendors. The application offers a broad range of management services, including edge-to-edge provisioning, device/link autodiscovery, rules-based configuration, what-if connection simulations, and advanced scheduling capabilities.

The combination of these powerful features enables carriers and service providers to maximize the performance of their existing systems, while smoothly planning for future network expansions to meet increased demand.

Key features include:
- **Streamlined provisioning—** Preside Trail Management brings point-and-click simplicity to provisioning edge-to-edge links in metro and long-haul networks. The application supports SONET, DWDM, Optical ADM, and ATM PVC provisioning.

- **Rules-based configuration—** The application includes connection rule sets that are automatically applied when building circuits. This reduces complexity and increases accuracy during the configuration process.

- **GUI-based provisioning engine—** Preside Trail Management features an automatic routing engine that enables service providers to design and provision edge-to-edge paths in seconds. Paths can be based on either maximum link efficiency or least-cost routing, and then created by simply specifying the endpoints of the circuit. The user selects the optimum trail and the application creates the circuit.

- **Autodiscovery**—Preside Trail Management provides a wealth of information about the network, without the need to manually inspect device installations and physical connections. This maximizes the effectiveness of management personnel, enabling them to enhance the performance of existing equipment and pinpoint where network upgrades will be needed.

- **Bandwidth grooming**—Similar to defragmenting a hard drive, the grooming feature rearranges line and trunk circuits to optimize available network bandwidth. Even minimal grooming inefficiencies can adversely affect available bandwidth, causing a direct correlation to lost opportunities for maximizing profitability.

- **Scheduling services**—This feature offers service providers a way to schedule when paths will be activated and/or removed from the network. A key feature in heavily subscribed environments, scheduling services enable multiple paths to be provisioned using identical resources, but at different times. This dramatically increases the usable bandwidth of the network and maximizes efficient use of available resources.

Preside Service Assurance Solutions

Fault monitoring and fault resolution are the foundation of efficient network management. The Preside Service Assurance Solutions from Nortel Networks deliver a comprehensive suite of fault and performance monitoring applications for metro optical networks. By ensuring peak network performance to facilitate efficient, cost-effective service delivery, the Preside solutions provide a key component for network operators that provision a wide range of products for their enterprise customers.

Preside Service Assurance Solutions are designed to help service providers maximize the revenue-generating capabilities of their network while driving down operating costs. Network managers can use Preside solutions to quickly create scalable, customized service offerings and then market them to a wide variety of clients. Services can be closely monitored for compliance with service level agreements (SLAs) and usage can be tracked for efficient billing remediation. Proactive fault management empowers the IT staff to respond to alarms as specified thresholds are exceeded, providing an opportunity to correct problems before network outages occur.

The Preside Service Assurance Solutions provide powerful management capabilities in the following key areas:

- Alarm notification
- Fault management
- Historical fault database
- Service fault correlation
- Trouble ticketing

Preside Management for OPTera Metro

Comprehensive ring-wide management services are provided by Preside Management for OPTera Metro (PMOM), a scalable client/server system designed to manage multiple OPTera Metro rings from a single site. The intuitive GUI clearly displays fault and performance alerts for all OPTera Metro devices located on individual rings. Managers can easily shift views from one ring to the next to monitor the entire network.

PMOM delivers a complete management solution with redundant systems to ensure data integrity, and is capable of performing device configuration, fault management, performance monitoring, and security management on a ring-wide basis. The application stores key data in an Oracle database, enabling managers to quickly access configuration parameters, historical fault data, performance thresholds, and other information used to ensure compliance with service level agreements.

Preside Site Manager

Preside Site Manager is a craft terminal interface that provides full configuration and management services on a node-by node basis. This versatile software solution supplies device management of OPTera Metro Multiservice Platforms including configuration services, fault management, and performance monitoring. The application provides network managers with direct access to all network elements located on the fiber rings from the central site.

Key features include:

- Provisioning, channel assignment, and inventory services
- Ring-wide alarm surveillance
- Path/equipment status monitoring and control
- Performance monitoring, including threshold provisioning, threshold alerts, and performance history
- Parallel telemetry management/control
- Software downloads/upgrades

Meeting market challenges with Preside Management for Metro Optical Networks

To capitalize on the unlimited opportunities provided by the eBusiness model, you need the most advanced management solutions you can get. Nortel Networks delivers management solutions designed to meet the demands of today's metro and long-haul optical environments. In this highly competitive marketplace, where advanced service offerings are an essential component of a successful business strategy, Preside Management for Metro Optical Networks provides the edge you need to maximize market penetration and profitability.

Nortel Networks helps you create a scalable, fully integrated, multivendor management solution capable of provisioning enhanced service offerings at the click of a mouse. As the leader in both carrier-grade metro and long-haul fiber optic hardware— as well as management solutions that are a step ahead of the competition— Nortel Networks is your clear choice for building the networks of the future.

By filling the needs of automated service provisioning and auto-discovery of elements and even having the functionality to complete trail management, Nortel Networks is still one step **ahead** of the marketplace.

Managing the All Optical Network
Communications Industry
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http://**www.nortelnetworks.com/preside**

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