

# Metropolis<sup>®</sup> Wavelength Services Manager (WSM) for Service Providers



Speeds delivery of converged next-generation services.  
Cuts costs and complexity by deploying a common optical platform across access, metro, regional and core networks.

## Benefits

- Offers a compact footprint and low power consumption
- Helps reduce startup costs and operating expenses
- Simplifies administration and troubleshooting
- Speeds rollouts of revenue-generating services
- Works seamlessly across all network topologies
- Enables real-time configuration and inventory management

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The Metropolis® Wavelength Services Manager (WSM) is a compact, highly scalable Coarse/Dense Wavelength Division Multiplexer (C/DWDM) that helps speed rollouts of revenue-generating applications—decreasing time to market while increasing customer satisfaction. Equally at home in access, metro, regional and core networks, the Metropolis® WSM system gives service providers a common platform across their entire infrastructure. This reduces network complexity, simplifies management and expedites troubleshooting—all of which contribute to lower operating expenses (OPEX).

## Offers a compact footprint and low power consumption

The Metropolis® WSM offers the functionality found in a larger system with the benefits of a very dense design: an extremely small footprint for space savings plus low power consumption.

## Helps reduce startup costs and operating expenses

The highly modular Metropolis® WSM system adds capacity to any network by enabling channels to be added (and dropped), in increments of one channel, up to a maximum of 40 DWDM or 8 CWDM channels. These upgrades can be made without interrupting wavelengths already in service, helping to ensure high network availability in support of mission-critical traffic. Adding to its flexibility, the platform can be deployed in a multitude of startup configurations affording service providers complete control over network economics. The system helps provide a low startup cost through a modular architecture that uses cost-optimized transponders and amplifiers for each application space.

## Simplifies administration and troubleshooting

The Metropolis® WSM can be deployed end to end in a network, enabling technical personnel to work with a consistent set of hardware and software. This single-platform approach simplifies administration and troubleshooting, allowing problems to be traced to root causes quickly and cost effectively.

The Metropolis® WSM can deliver any-to-any connectivity across the network without engineering involvement through the use of its Reconfigurable Optical Add/Drop Module (ROADM). This helps lower operating expenses by letting service providers dynamically add/drop wavelengths where and when they want, giving them complete control essentially from a keyboard.

## Speeds rollouts of revenue-generating services

The Metropolis® WSM offers a multitude of multi-rate, multifunction data interfaces that support high-speed connections across central offices, co-location sites, carrier hotels, data/storage centers, and customer premises. Those capabilities let service providers deliver a broad range of revenue-generating applications quickly and cost-effectively, including:

- Wavelength services
- Fiber conservation
- LAN and SAN interconnection
- Converged voice, data and video

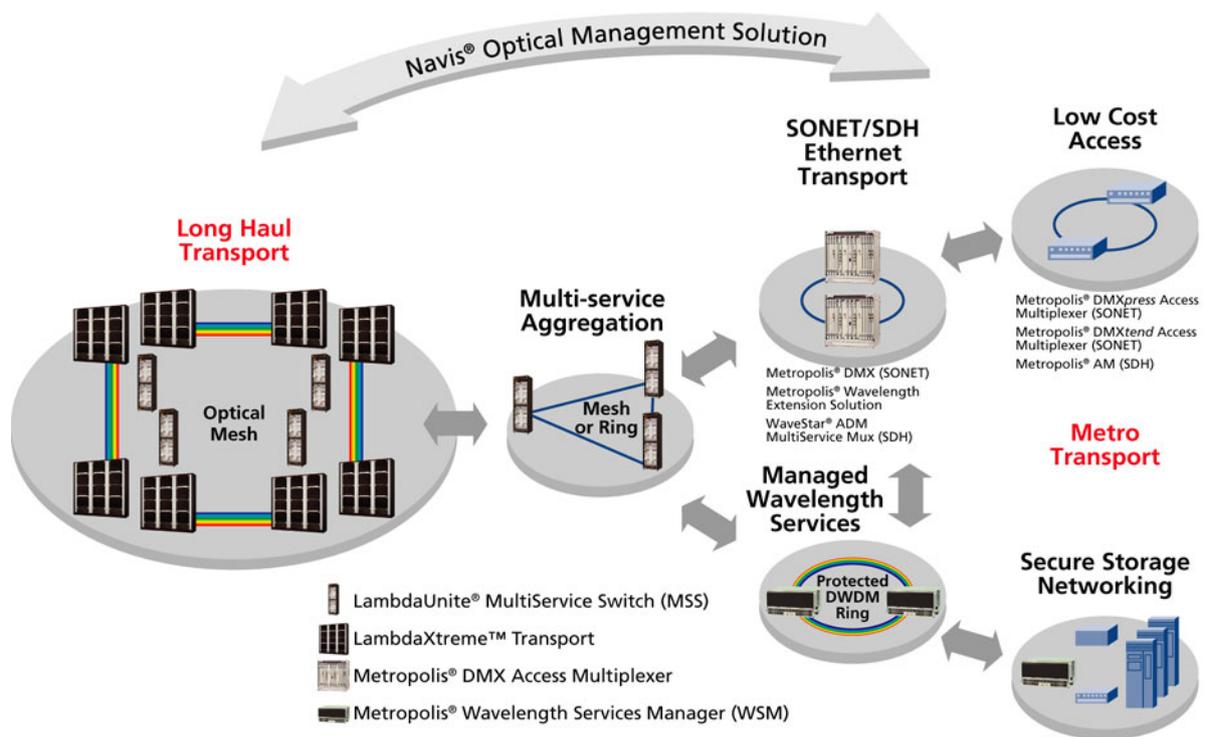
The Metropolis® WSM delivers several varieties of Gigabit Ethernet (GbE) transparent LAN services (TLSs) right out of the box. Service providers can start by offering 1 GbE transport and then increase capacity to two GbE connections aggregated over a 2.5 Gb wavelength. Ultimately, the platform can aggregate up to 12 GbE ports for transport over a 10 Gb wavelength. Also, the ability to pick and choose and upgrade as needed makes it easy for providers to control costs and closely manage network economics.



**The highly modular Metropolis® WSM system supports revenue-generating features in a compact footprint.**

## Works seamlessly across all network topologies

The versatility of the Metropolis® WSM gives service providers the freedom to provision next-generation applications where and when they make the most economic sense. The platform provides service-independent transport over any network topology: point-to-point, ring and mesh using a combination of coarse and dense wavelength division multiplexing.



The Metropolis® WSM system is part of the end-to-end, integrated optical networking solution supporting a variety of wavelength services.

Versatility also is evident in the variety of applications supported. For example, the platform delivers high-capacity data center connectivity over IP; ISP switch and router interconnects; all-optical enterprise campuses; and SONET aggregation. It's equally adept when capacity requirements aren't as rigorous and distances are shorter such as through the use of coarse wavelengths for low-demand edge applications.

### Enables real-time configuration and inventory management

The Metropolis® WSM system enables the network to automatically control power levels in reaction to changing numbers of channels, variations in power, and changes arising from rerouting of channels as in the case of restoration schemes. This helps service providers scale their network operationally and drive down costs. Furthermore, the Metropolis® WSM supports dynamic network reconfigurations through its ROADM, which includes adaptive per wavelength power control capabilities. This allows service providers to engineer their network for optimum performance without the need for truck rolls and system adjustments in the future.

Adding to the system's capabilities is the intelligent control plane, which helps to provision services in real time. This GMPLS-based software dynamically sets up, maintains and tears down connections, simplifying management and resource allocation. The control plane is also responsible for discovering and advertising network resources, managing links and correlating and propagating alarms. It enables efficient network resource management by keeping accurate and synchronized databases and increased network reliability through enhanced protections and restoration schemes.

The Metropolis® Wavelength Services Manager (WSM) is a next-generation platform that lets service providers deliver revenue-generating applications quickly and cost effectively. Modular by design, the platform keeps startup costs low by letting providers rollout new services as needed. It also uses a common platform across access, metro, regional and core networks, contributing to lower OPEX by reducing network complexity, speeding provisioning and simplifying management.

# Metropolis® Wavelength Services Manager (WSM) for Service Providers

## Features

- Supports real-time optical provisioning and link recovery for faster rollouts of revenue-generating services and increased network availability
- Comes equipped with multi-rate/multifunction high-speed data interfaces for fast, flexible delivery of a broad range of services
- Dynamically adds/drops wavelengths at any site via ROADMs, reducing truck rolls and driving down OPEX
- Scales from 1 to 40 wavelengths per fiber, allowing providers to add capacity as needed and better meet customer requirements
- Supports point-to-point, ring and mesh topologies for cost efficient support of a wide range of applications

To learn more about our comprehensive portfolio, please contact your Lucent Technologies Sales Representative or visit our web site at <http://www.lucent.com>.

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