# **CISCO NETWORK CONNECTIVITY CENTER MPLS MANAGER 1.0**

Cisco® Network Connectivity Center (NCC) Multiprotocol Label Switching (MPLS) Manager maximizes the availability of VPNs based on MPLS technology. Working with Cisco NCC Network Connectivity Monitor (NCM), it automatically pinpoints the root cause of MPLS problems, correlating events across MPLS and related domains to provide an end-to-end management solution.

## **PRODUCT OVERVIEW**

MPLS is fast becoming the technology of choice for backbone networks. The reason is clear: MPLS brings to IP the features, reliability, and predictability of traditional carrier networks while preserving the dynamic characteristics, flexibility, and cost effectiveness that have made IP the world's dominant network protocol.

Despite this growing popularity, traditional network-management tools have not been designed to manage the unique characteristics of MPLS networks, creating challenges for forward-thinking network managers seeking to incorporate MPLS in their core networks.

Cisco NCC MPLS Manager delivers automated management of MPLS VPNs in the context of the surrounding IT infrastructure. It uses patented modeling and analysis technologies to correlate topology and events across transport, MPLS, and VPN domains and isolate the service-affecting faults that impact the MPLS VPN environment.

With Cisco NCC MPLS Manager, network operations personnel can work more efficiently with unified, easy-to-navigate views that show cross-domain relationships, including customers and their relationships to MPLS-based services. In addition, Cisco NCC MPLS Manager takes on a low administrative footprint with automation replacing arduous manual analysis and ongoing maintenance.

Cisco NCC MPLS Manager features include:

- Autodiscovery and modeling of the complete MPLS VPN environment, including logical and physical objects and their relationships.
- Network visualization of the MPLS network topology with dynamically updated views of the status of network elements.
- Fault isolation to automatically pinpoint and isolate the real problems that can degrade services delivered by MPLS networks.
- Impact analysis to assess the impact of underlying network problems on MPLS VPNs and the services they deliver.
- Topology and event integration to correlate MPLS alarms and events across the surrounding IT environment.

## IMPORTANT FEATURES AND BENEFITS

## Autodiscovery and Modeling

Cisco NCC MPLS Manager uses topology information from VPN provisioning systems, Simple Network Management Protocol (SNMP) MIB instrumentation, and other sources to automatically discover the rich set of logical and physical objects and relationships across the MPLS network and related domains, including the label-switched paths (LSPs), VPNs, VPN and MPLS connectivity, VPN Routing and Forwarding (VRF) services, and LSP segments (hops). It also intelligently infers the associations between objects across domains. The results of this comprehensive autodiscovery (Figure 1) are used to populate a model of the MPLS-VPN environment.

Figure 1. Autodiscovery



Cisco NCC MPLS Manager automatically discovers and models the MPLS network environment. Robust views depict the status of MPLS components and their many relationships within and across technology and service layers.

# **Network Visualization**

To give users insight into the valuable results of autodiscovery and modeling, Cisco NCC MPLS Manager offers a variety of robust views that show the complete MPLS network topology. These views depict the status of MPLS components and their many relationships within and across both technology and service layers. In addition, Cisco NCC MPLS Manager integrates easily with other Cisco NCC solutions and third-party systems for end-to-end network visualization across IT and business. Network views are maintained and updated automatically, eliminating the need for manual intervention and simplifying administrative efficiency and accuracy.

## Fault Isolation and Impact Analysis

Cisco NCC MPLS Manager offers superior fault isolation and impact analysis. Its sophisticated root-cause analysis (Figure 2) automatically pinpoints the problems that can degrade services delivered by MPLS VPNs. Cisco NCC MPLS Manager calculates the impacts of underlying network problems on MPLS VPNs and the services they deliver. This impact analysis entails performing an extensive assessment and diagnosis to determine the status of network connectivity, including cross-domain monitoring across the following:

• Transport domain, including the traditional Layer 2 and Layer 3 elements that comprise the infrastructure in the network.

• *MPLS domain*, including the logical connections that are layered over the transport domain, their related policies, and the control entities associated with them.

• VPN and business domain, layered over MPLS, including VPN membership and VPN topology.

By intelligently managing the transport, MPLS, and VPN and business domains—both individually and in correlation with one another— Cisco NCC MPLS Manager speeds mean time to repair (MTTR) by revealing exactly what needs to be fixed to keep MPLS-based services operational.





# **Topology and Event Integration**

Cisco NCC MPLS Manager is unique in its ability to correlate MPLS VPN performance with the health of the underlying infrastructure. It processes events generated by SNMP traps, Syslogs, and other Cisco NCC solutions and correlates the information with MPLS and VPN alarms and notifications. Rather than issuing general alarms across multiple network-management systems, this process blends detailed fault isolation, impact analysis, and end-to-end network views with intelligent correlation to relate this information to actual MPLS alarms. The result is an end-to-end solution that manages MPLS VPNs not as an isolated silo but as a key component of the overall service-delivery infrastructure.

# PRODUCT SPECIFICATION

## System requirement

Solaris 2.8 and 2.9, HP-UX 11.0 and 11.11, Windows 2000, Windows XP (console only)

## Software Requirement

Cisco NCC Network Connectivity Monitor

## SERVICE AND SUPPORT

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# FOR MORE INFORMATION

For more information about the Cisco NCC MPLS Manager, visit <u>http://www.cisco.com/en/US/products/ps5934/index.html</u> or contact your local account representative or <u>cs-cncc@external.cisco.com</u>.



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