

HP OpenView Reporting and Network Solutions

Release Notes for MPLS VPN Smart Plug-in to Network Node Manager

Software Version: 2.0

for HP-UX, Solaris, and Windows® operating systems



Manufacturing Part Number: **None**

April 2004

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Welcome to the 2.0 release of the MPLS VPN Smart Plug-in to Network Node Manager of HP OpenView Reporting and Network Solutions. This document explains the software's new features, system requirements, documentation, and support options, and known problems, limitations, and suggested workarounds.

New In This Version

The MPLS VPN Smart Plug-in (SPI) provides almost real-time monitoring of the MPLS VPN provider edge (PE) and customer edge (CE) routers by detecting node down and interface down traps and enriching them to show higher-level VPN service-affecting events. The MPLS VPN SPI configures reachability tests using the Service Assurance Agent (SAA) functionality on Cisco routers to verify the connectivity between two PE routers. Users can further refine these PE-PE SAA tests and can configure tests of the CE connectivity into the MPLS VPN network. The MPLS VPN SPI receives SAA time-out traps and enriches them to show which VPNs they affect. This release includes MPLS VPN views, several windows that display a representation of the MPLS VPN network and related information.

Functionality

In a nutshell, this release of the MPLS VPN SPI performs the following functions:

- Fully integrated with NNM extended topology architecture.
- Discovers the MPLS VPN edge routers, VRF-enabled interfaces, as well as PE-PE and PE-CE neighbor relationships for a given VPN context.
- Detects an IF Down event for a managed edge router and, if the interface is taking part in a VPN, enriches the IF Down event into a VPN service-affecting event.
- Detects a Node Down event for a managed edge router and, if the node is taking part in one or more VPNs, enriches the Node Down event into a VPN service-affecting event.
- Detects an Address Down event for an interface within a managed VPN and enriches the Address Down event into a VPN service-affecting event.
- Detects a Connection Down event for a connection between two interfaces within a managed VPN and enriches the Connection Down event into a VPN service-affecting event.
- Correlates the corresponding Node Up, IF Up, Address Up, or Connection Up event with the enriched VPN service-affecting event by clearing the latter.
- This release offers a user interface that displays the MPLS VPN topology. The following views are supported:
 - VPN inventory view showing list of VPNs and their current state
 - Router inventory view showing the list of edge routers taking part in the MPLS VPN network
 - VPN details view, both in graph and table format
 - PE details view showing the list of VRFs and their statuses
 - VRF details view showing all the interfaces, VRF export and import details, CE IF details, and connection status between PE-CE
- Configures VRF-unaware SAA tests between PE routers .

- Configures VRF-aware SAA tests between PE routers with user assistance (both VRF-aware and VRF-unaware tests).
- Configures CE SAA tests with user assistance. In this release, you can configure the following CE specific SAA tests:
 - PE-CE SAA tests
 - CE-CE SAA tests
- Detects SAA test timeout traps and enriches them into VPN service-affecting events.
- Allows users to configure SAA tests and VPN names.

System Requirements

Hardware Requirements

On UNIX operating systems, the `/opt/ov/` directory must have at least 1.5 MB of disk space available prior to installation of the MPLS VPN SPI.

Supported Operating Systems

The following operating systems are supported:

- HP-UX 11.0 or 11i
- Solaris 2.8 or 2.9
- Microsoft® Windows® 2000 with service pack 3.0 or Windows® XP

Supported OpenView Software

The MPLS VPN Smart Plug-in requires the following HP OpenView software:

- HP OpenView Network Node Manager Advanced Edition version 7.01 consolidated patch.1 (CP1)

Ensure that all these prerequisites and patches are installed on all systems in the management environment prior to installing the MPLS VPN SPI.

NOTE: On the Windows operating system, the Typical NNM installation option does not load the Cisco SMI MIB file listed below. You can choose the Custom NNM installation option and specify to load the SNMP MIBs. Alternatively, you can load this MIB using NNM's `xnmloadmib` functionality.

Required MIBs

The MPLS VPN SPI requires the following MIBs:

- Cisco RTTMON MIB (`CISCO-RTTMON-MIB.my`)
- Cisco SMI MIB (`CISCO-SMI-MIB.my`)

Ensure that all prerequisite MIBs are loaded on all systems in the management environment prior to running the MPLS VPN SPI.

NOTE: If the Cisco SMI MIB is loaded on the NNM management station prior to the installation of the MPLS VPN SPI, the MPLS VPN SPI installation process loads the other two required MIBs.

Required IOS Version for PE Routers

The MPLS VPN SPI requires Cisco IOS version 12.2(15T) or newer.

Required Pre-Installation Step

If you are using an Oracle database for the NNM data warehouse, configure Oracle for the MPLS VPN SPI before installing the MPLS VPN SPI as described in the *MPLS VPN Smart Plug-in to Network Node Manager User's Guide*.

Documentation

The user manual for the MPLS VPN Smart Plug-in, *MPLS VPN Smart Plug-in to Network Node Manager User's Guide*, is available in PDF format on the Reporting and Network Solutions CD-ROM in the `DOCS` directory. It is also available under the “Reporting and Network Solutions” product category in PDF format on the Web at:

http://ovweb.external.hp.com/lpe/doc_serv

Support

Visit the HP OpenView support web site at:

<http://support.openview.hp.com/>

There you will find contact information and details about the support that HP OpenView offers.

The support site includes:

- Downloadable documentation
- Troubleshooting information
- Patches and updates
- Problem reporting
- Training information
- Support program information

Known Problems, Limitations, and Workarounds

Incremental Discovery Loses CE Information

The incremental discovery feature of NNM Extended Topology is not supported for this release. If you rediscover a zone, the subnet information will not be created and, therefore, the CE information will be lost if that subnet contains a PE and CE. It is therefore recommended to do a full discovery.

SAA Traps Not Received by MPLS VPN SPI

Configure each PE and CE router that acts as a source for one or more SAA tests to include the NNM management station as one of the SNMP trap recipients. For information about how to perform this configuration, see the documentation that came with your routers.

MPLS VPN Views Online Help Not Available

In the MPLS VPN SPI version 2.0 release, the MPLS VPN views online help is not context sensitive. To reach the MPLS VPN views online help, follow these steps:

1. In any MPLS VPN view, click the question mark button.
2. In the dynamic views help, click the Solutions button (third from the left).
3. In the Solutions scoping pane, click the link for MPLS VPN views.
4. On the MPLS VPN views page, click the link for the specific view.

Troubleshooting Tips

PE Routers Don't Respond to the MPLS VPN SPI

PE routers must support the MPLS VPN MIBs. To test a router's support of the MPLS VPN MIBs, do the following:

```
snmpwalk <RouterName or IPAddress> 1.3.6.1.3.118.1
```

If this command returns with “no MIB objects contained under subtree,” the router does not support the MPLS VPN MIBs. Upgrade this router to a supported version of Cisco IOS. (See “System Requirements.”)

If the command output shows data in the MIBs, the router supports the MPLS MIBs and should work with this version of the MPLS VPN SPI.

For troubleshooting tips, see the “Troubleshooting” chapter of the *MPLS VPN Smart Plug-in to Network Node Manager User's Guide*.