

Preface

This guide describes Cisco Prime Network 4.0. Prime Network serves as an extensible integration platform for network and service management. At its core is a virtual network mediation model that is rich, open, and vendor-neutral, and supports the management of diverse multiservice and multivendor networks. Additionally, Prime Network provides the following mature NMS functionality:

- Network topology discovery and visualization.
- Element management, providing near real-time inventory.
- Fault management, event correlation, root cause analysis and troubleshooting.
- Network service support.

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Audience

The intended audience for this guide includes:

- Network viewers who monitor the network and perform basic (nonprivileged) system functions.
- Network operators who perform day-to-day operations such as creating business tags and maps, and managing alarms.
- Network configurators who activate services and configure network elements.
- System administrators who manage and configure users, network elements, the Prime Network system, and overall security.
- System managers or administrators who periodically review and manage the events list using Cisco Prime Network Events (Prime Network Events).
- Networking engineers who are interested in understanding how the Prime Network Events fault and root cause analysis mechanism works. These engineers should have networking knowledge at Cisco Certified Network Associate (CCNA) level, and should have received Cisco Prime Network Vision (Prime Network Vision) basic and administrative training.

Document Organization

This guide contains the following sections:

| Chapter and Title | Description |
|--|---|
| Chapter 1, "Setting Up Devices and Using the GUI Clients" | Describes the suite of GUI tools that offer an intuitive interface for managing the network and services, and for performing required system administration activities. |
| Chapter 2, "Working with the Cisco Prime Network Vision Client" | Describes the user access roles required to use Prime Network Vision, the Prime Network Vision working environment, and how to access Prime Network Vision tools and commands. |
| Chapter 3, "Viewing and Managing NE Properties" | Describes the user access roles required to use Prime Network Vision and how to view network element physical and logical properties in any mapped network. |
| Chapter 4, "Device Configurations and Software Images" | Describes the features that Change and Configuration Management provides, some initial setup tasks you must perform, and how to work with the GUI. |
| Chapter 5, "Working with Prime Network Vision Maps" | Describes how to work with the topological maps displayed in the content pane of the Prime Network Vision window. |
| Chapter 6, "Working with Links" | Describes how to view information about static and dynamic links using the Prime Network Vision user interface. |
| Chapter 7, "Labeling NEs Using Business Tags" | Describes how to manage and view Prime Network Vision business tags and business elements. |
| Chapter 8, "Tracking Faults Using Prime Network Events" | Describes how to use Prime Network Events to track faults. |
| Chapter 9, "Working with Tickets in Cisco Prime Network Vision" | Describes viewing tickets in Prime Network Vision, how to manage tickets that represent fault scenarios of selected devices or network elements, and fault impact analysis. |
| Chapter 10, "Working with Reports" | Describes how to use Prime Network Report Manager to generate, customize, view, and export a variety of reports about events, traps, tickets, syslogs, software versions, elements, and network services. |
| Chapter 11, "Using Cisco PathTracer to Diagnose Problems" | Describes how to perform end-to-end route tracing and the performance information displayed simultaneously for the multiple networking layers. |

| Chapter and Title | Description |
|---|---|
| Chapter 12, "Monitoring Carrier Ethernet Services" | Describes how to view Carrier Ethernet services in Prime Network Vision and how to work with VLANs, pseudowires, overlays, VPLS instances, and Ethernet services. |
| Chapter 13, "Monitoring Carrier Grade NAT Properties" | Describes the Carrier Grade Name Address Translation (NAT) properties available in Prime Network Vision. |
| Chapter 14, "Monitoring DWDM Properties" | Describes how to view and monitor IP over dense wavelength division multiplexing (DWDM) properties in Prime Network Vision. |
| Chapter 15, "Monitoring Ethernet Operations, Administration, and Maintenance Tool Properties" | Describes how to use Prime Network Vision to monitor Ethernet operations, administration, and maintenance (OAM) tools. |
| Chapter 16, "Monitoring Y.1731 IPSLA Configuration" | Describes how to view Y.1731 IP Service Level Agreement (SLA) configurations for the OAM functionality in Ethernet networks. |
| Chapter 18, "IPv6 and IPv6 VPN over MPLS" | Describes how to use Prime Network Vision to view IPv6 and 6PVE properties. |
| Chapter 19, "Monitoring MPLS Services" | Describes how to view and manage aspects of Multiprotocol Label Switching (MPLS) services using Prime Network Vision, including the MPLS service view, business configuration, and maps. This chapter also describes the inventory properties specific to MPLS VPNs, including routing entities, label switched entities (LSEs), BGP neighbors, Multiprotocol BGP (MP-BGP), VRF instances, pseudowires, and traffic engineering (TE) tunnels. |
| Chapter 19, "Viewing IP and MPLS Multicast Configurations" | Describes how to view multicast configurations and how Prime Network Vision supports multicast on MPLS and routing entities. |
| Chapter 20, "Monitoring MToP Services" | Describes Mobile Transport over Packet (MToP) services and how to view their properties in Prime Network Vision. |
| Chapter 22, "Viewing and Managing SBCs" | Describes the Session Border Controller (SBC) properties available in Prime Network Vision. |
| Chapter 23, "Monitoring AAA Configurations" | Describes how to view Authentication, Authorization, and Accounting (AAA) configuration, which is a security architecture for distributed systems that determines the access given to users for specific services and the amount of resources they have used. |

| Chapter and Title | Description |
|---|--|
| Chapter 23, "Monitoring IP Pools" | Describes how to view IP pool properties in Prime Network Vision. An IP pool is a sequential range of IP addresses within a certain network. Prime Network provides the flexibility of assigning IP addresses dynamically for services running on a network element. |
| Chapter 25, "Monitoring BNG Configurations" | Describes how to view Broadband Network Gateway (BNG) configuration in Prime Network Vision. |
| Chapter 25, "Monitoring Mobile Technologies" | Describes how to configure and view the mobile technologies in Prime Network Vision. |
| Chapter 26, "Monitoring Data Center Configurations" | Describes the Data Center components and how to view their configurations in Prime Network Vision. |
| Chapter 27, "Monitoring Cable Technologies" | Describes the Cable technologies and how to view the cable broadband configuration details. |
| Chapter 28, "Monitoring ADSL2+ and VDSL2 Technology Enhancements" | Describes enhancements to ADSL2+, VDSL2 and bonding groups. |
| Appendix A, "Icon and Button Reference" | Identifies the icons and buttons used in Prime Network Events and Prime Network Vision. |

Conventions

This guide uses the following conventions:

Table 1 Conventions

| Convention | Description |
|----------------------|---|
| string | A string is a nonquoted set of characters. For example, when setting an SNMP community string to public, do not use quotation marks around the string, or the string will include the quotation marks. |
| ^ or Ctrl | ^ or Ctrl represents the Control key. For example, the key combination ^D or Ctrl-D means hold down the Control key while you press the D key. Alphabetic character keys are indicated in capital letters but are not case sensitive. |
| <> | Angle brackets show nonprinting characters, such as passwords. |
| ! | An exclamation point at the beginning of a line indicates a comment line. |
| [] | Square brackets show optional elements. |
| {} | Braces group alternative, mutually exclusive elements that are part of a required choice. |
| I | A vertical bar, also known as a pipe, separates alternative, mutually exclusive elements of a choice. |
| boldface font | Button names, commands, keywords, and menu items. |
| boldface screen font | Courier bold shows an example of text that you must enter. |

Table 1 Conventions (continued)

| Convention | Description |
|------------------------------|--|
| italic font | Variables for which you supply values. |
| italic screen font | Variables you enter. |
| screen font | Courier plain shows an example of information displayed on the screen. |
| Option > Network Preferences | Choosing a menu item. |

Related Documentation



We sometimes update the documentation after original publication. Therefore, you should also review the documentation on Cisco.com for any updates.

Cisco Prime Network 4.0 Integration Developer Guide is available on the Cisco Prime Network Technology Center website. This guide describes how to use Prime Network integration interfaces.

The Prime Network Technology Center is an online resource for additional downloadable Prime Network support content, including help for integration developers who use Prime Network application programming interfaces (APIs). It provides information, guidance, and examples to help you integrate your applications with Prime Network. It also provides a platform for you to interact with subject matter experts. To view the information on the Prime Network Technology Center website, you must have a Cisco.com account with partner level access, or you must be a Prime Network licensee. You can access the Prime Network Technology Center at http://developer.cisco.com/web/prime-network/home.

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see *What's New in Cisco Product Documentation* at: http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html.

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