Cisco Prime Provisioning 6.4 Release Notes

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All documentation, including this *Cisco Prime Provisioning 6.4 Release Notes* document and any or all parts of the Cisco Prime Provisioning 6.4 documentation set, *might* be upgraded over time. Therefore, we recommend you access Prime Provisioning 6.4 documentation set online at:

http://www.cisco.com/go/provisioning

You can also navigate to this documentation set by clicking **Help** on the Home Page of the Prime Provisioning 6.4 product.

The information in this release notes provides an overview of this release and helps you understand it at a high level. After reading the *Cisco Prime Provisioning 6.4 Documentation Overview*, please read this release note prior to reading any other documentation for Prime Provisioning 6.4.

URLs for base information about Prime Provisioning 6.4, a product overview, and suggested reading order of these documents is given in Related Documentation, page 10.

Contents

This document includes the following sections:

Installing Prime Provisioning 6.4

- Prime Provisioning patches are available at:

  http://www.cisco.com/cgi-bin/tablebuild.pl/isc

- The supported Sybase and Oracle databases behave differently. All SQL queries are case-insensitive for Sybase and case-sensitive for Oracle. This behavior difference appears on search enabled tables with a 'Find' button.

For information about the installation process, see the *Cisco Prime Provisioning 6.4 Installation Guide*.

Introduction

Prime Provisioning is a management solution for network provisioning that enables the automation and scaling of complex, policy-driven network provisioning tasks to produce consistent and reliable service deployments. Prime Provisioning does this by planning, provisioning, and auditing services across core, aggregation, access, and consumer premises equipment devices.

Cisco Prime Provisioning 6.4 provides full life cycle service management including MPLS Virtual Private Networks (VPNs), MPLS Traffic Engineering (MPLS TE), MPLS Transport Profile (MPLS TP), Metro Ethernet Forum compliant Carrier Ethernet services and IPRAN backhaul services, ATM and TDM circuit emulation over MPLS.

Cisco Prime Provisioning 6.4 has a lot of new features. All the new features are listed in the following sections. Highlights include:

- IPRAN backhaul, including multisegment pseudowire for E-Line, TDM-CEM and ATM services. The point-to-point services all support.
  - Single- or multi-segment pseudowire.
  - Per-segment configuration of LDP/MPLS-TP/MPLS-TE, including pw-class selection.
  - Pseudowire redundancy, where the Z ends can be either on one device, or on a separate Z' device.
- Multivendor capable, including support for MPLS L3VPN provisioning on Juniper M-series routers, and infrastructure for Huawei router provisioning. Note that engagement with Cisco Advanced Services is mandatory for scenarios involving other vendors' devices.
- Service instance syntax for L3VPN MPLS edge (NPE) devices.
- Service instance syntax for Access Switch (UPE) for L3VPN and Carrier Ethernet.
- IPv6 support in the management connection (Prime Provisioning to the router/switch), including IPv6 in the grey management VPN.

New Features and Enhancements in Prime Provisioning 6.4

This section describes features and enhancements added or modified in Prime Provisioning 6.4.

For system recommendations, refer to the *Cisco Prime Provisioning 6.4 Installation Guide,* and for device and platform support, refer to *Cisco Prime Provisioning Supported Devices*. It includes the network devices and related software supported with Prime Provisioning 6.4. We recommend that you thoroughly review this list before even planning your installation, to be sure you have all the hardware

and software needed for a successful installation. We also recommend that you review the section Installing Prime Provisioning 6.4, page 2, in this release note in order to be aware of changes to the installation or upgrade procedure.

Prime Provisioning 6.4 is based on Cisco Prime Fulfillment 6.3.

Prime Provisioning 6.4 includes problems fixed since Cisco Prime Fulfillment 6.3. See Prime Provisioning 6.4 Resolved and Open Bugs, page 9.

Note With this release, Prime Provisioning can be used as a standalone product or as part of the Cisco Prime for IP Next Generation Network (IP NGN) Suite. When installed as part of the suite, you can launch Prime Provisioning from the Prime Central portal. For more information about Prime Central, see the documentation for Cisco Prime Central.

Items specific to Prime Provisioning 6.4 include the new and changed information as documented in the following sections:

- General New Features, page 3
- L2VPN/EVC/TDM-CEM/ATM New Features, page 4
- MPLS VPN New Features, page 5
- MPLS Transport Profile New Features, page 6
- Traffic Engineering Management New Features, page 7
- API New Features, page 7

General New Features

All the new features introduced in this release are explained in the *Cisco Prime Provisioning 6.4 User Guide*.

This section includes new system level features added in Prime Provisioning 6.4:

- Multivendor, page 3
- Usability, page 4

Multivendor

From CiscoPrime Provisioning 6.4, you can create non-cisco devices using the Create devices window.

we now provide limited support for the following non-cisco devices:

- Juniper JunOS Device.
- Alcatel-Lucent TIMOS Device.
- Huawei VRP Device.

Note This feature is disabled by default, and can be enabled by a license key. Cisco Advanced Services have to be engaged for multi-vendor management.

Usability

Prime Provisioning 6.4 introduces a number of usability enhancements.

- The Policy Manager window has been converted to XWT format. Filter fields have been added to columns to facilitate dynamic searching and ordering of rows.

- Policies can be set as "active" or "inactive" and ordered as such in the window. Only policies set as "active" will show up as available in the Service Request Manager window.

- Service request creation can be initiated from the Policy Manager window.

- Using Edit button When editing policies, the policy name is now editable. When copying policies, the new policy name is prepopulated with the name of the copied policy.

- The policy name is editable using Edit button. Similarly, using Copy button, the new policy name is prepopulated with the name of the copied policy.

- In the Service Request Manager window, a "Deploy Now" button is present, which performs an immediate Force Deploy of the service request.

- The Deploy Later button brings up the scheduler, which allows you to schedule when the service request is deployed. This performs a Force Deploy of the service request.

- The Force Deploy button is removed.

- The Simulate Deploy button is renamed to Simulate Deploy Now.

- The former Configlet Preview dropdown menu item appears now as a button and it is renamed as Preview.

L2VPN/EVC/TDM-CEM/ATM New Features

This section summarizes features that were added in Prime Provisioning 6.4:

- Multisegment pseudowire is supported for E-Line, TDM-CEM and ATM services. The point-to-point services all support.
    - Single- or multi-segment pseudowire.
    - Per-segment configuration of LDP/MPLS-TP/MPLS-TE, including pw-class selection.
    - Pseudowire redundancy, where the Z ends can be either on one device, or on a separate Z' device.

- Pseudowire classes are now supported on IOS devices and IOS XR devices.

- EVC/Service Instance Syntax supported on U-PE and PE-AGG Devices.

- EVC/service instance syntax is now supported for U-PE/PE-AGG devices within EVC Ethernet and ATM-Interworking services. It is now possible to create a new VPN from the Select VPN window in the EVC Service Request Editor window.

- Template variables have been added for FlexUNI/EVC services.

- PE interface selection has been upgraded for VPLS, Ethernet, TDM-CEM and ATM services. This provides improved searching and filtering, including the interface description field.

- Encapsulation untagged.

- Prime Provisioning shall support **RAN Backhaul** features on ASR9K and IOS-XR devices (version 4.2 onwards). This includes the creation, modification and deletion of TDM-CEM and ATM services.

- Prime Provisioning now supports the creation of a circuit emulation service **SATOP** or **CESoPSN** between devices that have E1 or T1 controllers at both ends.

MPLS VPN New Features

This section summarizes new MPLS VPN features that were added in Prime Provisioning 6.4.

Support for IOS-XR Based CE

Support is added for IOS-XR devices to provision the CE role with different management types using the required configlets via XDE customization or templates. This means that you are allowed to select an IOS XR CE device for PE-CE and PE-MVRF-CE policy types with CE present. The supported management types are Managed, Unmanaged, Managed – Management LAN, Unmanaged - Management LAN, Multi-VRF, and Unmanaged Multi-VRF. This selection can be made via both the GUI and the NBI. The routing protocols that are supported for the MVRF-CE role are Static, BGP, EIGRP and OSPF.

Service instance or EVC syntax provisioning with L3VPN

It is now possible to provision MPLS VPNs with EVC or service instance syntax on both IOS and IOS XR devices.

Setting the L3VPN topology

Prime Provisioning now enables you to specify the L3 VPN topology during policy creation. The VPN topology field has been included in the MPLS Policy Editor page and its default value is selected during policy creation. This field can be set as editable and non-editable during Service Request creation.

Ethernet pseudowire access into MPLS VPN

Prime Provisioning now supports the provisioning of Ethernet pseudowire access into MPLS VPNs. This implies that you can configure any Ethernet service that can be provisioned by Prime Provisioning (EVC blade) into MPLS VPNs.

Same VLAN on primary and backup links on dual NPE ring termination

During Service Request creation, you can now create both Primary links and Standby links within a single MPLS Service Request, allowing duplication of IP address between the links. This helps configure two interfaces (channelized T1/T3, MLPPP) on different routers or in the same router with different interface cards. One interface as the Primary which is active, and the other as a Standby, with the same configuration and IP address. The two interfaces will be configured in a single Service Request.

Multiple interfaces can be configured as Standby links. When the Primary link are deleted, the associated Standby links act as independent links. The device, interface and link attributes in the Standby link are editable.

Note There is no NBI support for this feature.

Support for IPv6 in the management plane

Prime Provisioning will support IPv6 in the management plane by enabling you to install Prime Provisioning on IPv6 enabled servers, manage supported network devices configured with IPv6 management addresses, create MPLS and L2 Service Requests on IPv6 managed devices, and more.

Support has been added for SNMPv2 and v3 over v4 and v6, and SNMPv2 and v3 communication with devices managed though IPv6 addresses.

Prime Provisioning tasks like filtering, sorting, and searching will include devices with IPv6 address. You can also install and upgrade Prime Provisioning on IPv6 servers. This includes upgrade from an IPv4 server to an IPv6 server.

You will be able to launch Prime Provisioning installed on IPv6 serve using a GUI Client browser.

Support for Telnet or SSH for terminal sessions with IPv6 addresses managed devices has been enabled.

Provisioning of L3VPN on non-Cisco devices

Prime Provisioning is highly customizable, and this enables provisioning of non-Cisco devices. Cisco Advanced services can assist with creating the customizations required. We currently have pre-built components for Juniper L3VPN provisioning. Features include:

PE interface types

- Gigabit Ethernet with untagged, dot1Q or QinQ encapsulation
- Fast Ethernet with untagged or dot1Q encapsulation
- SDH STM-1 channelized to E1, with HDLC encapsulation
- SDH STM-1 channelized to E1, with PPP encapsulation
- E1 serial with (multi-link) PPP encapsulation
- Loopback interface

PE-CE routing

- Static
- BGP
- Full mesh/Hub-and-Spoke or complex routing topologies
- Grey management VPN
- Device discovery (aka config collect)
- Templates
- Echo mode/simulate deploy

Note This feature is disabled by default, and can be enabled by a license key. Cisco Advanced Services have to be engaged for multi-vendor management.

MPLS Transport Profile New Features

This section summarizes new MPLS-TP features that were added in Prime Provisioning 6.4.

- In the MPLS-TP Service Request modification window, the Calculate Path button is updated with the following options:

  - **Working LSP**—Option to calculate and view the working path in the path diagram.

  - **Protect LSP**—Option to calculate and view the protected path in the path diagram.

  - **Both LSPs**—Option to calculate and view both the working and protected paths in the path diagram.

- In the MPLS-TP Service Request creation window, the following updates have been done:

  If the source device type is IOS, the BFD template details are mandatory or if the source device type is IOS-XR and the global template was not defined in the device, then you have to provide Source BFD min-interval and Source BFD Multiplier details.

  Based on the chosen device type, the BFD template or the BFD attributes will be disabled accordingly as follows:

  If the device type is IOS, BFD attribute fields, such as BFD min-interval, BFD min-interval Standby, BFD Multiplier will be disabled.

  If the device type is IOS-XR, BFD template picker will be disabled.

  If IOS/ IOS-XR device selected and entered the BFD template or the BFD attributes respectively, and then re-select IOS-XR/ IOS device respectively, the BFD template/ BFD attributes will be disabled without losing the values entered in the respective fields. So, if you try to re-select the device again, the BFD template/ BFD attributes will be enabled with the already entered values.

  Validation of the BFD template against the device will be performed only for the IOS device as BFD template will be disabled for IOS-XR.

Traffic Engineering Management New Features

The following new TEM feature was added in Prime Provisioning 6.4.

Recompute Backup is used to automatically recompute existing backup tunnels to update protection for specified network elements that are in either Protected, Not Fully Protected, or Unknown state. It will try to do so without affecting other tunnels or, if necessary, to do so with minimal impact.

API New Features

All Application Programming Interface (API) features are explained in detail in the *Cisco Prime Provisioning 6.4 API Programmer Guide* and the accompanying *Cisco Prime Provisioning 6.4 API Programmer Reference*.

New features added in Prime Provisioning are generally available via both the GUI and APIs. See the respective sections in this document for a description of new features under each service.

Deprecated and Removed Features

- **Discovery of devices using CDP** has been removed as of Prime Provisioning 6.4. Please use Prime Network for device existence discovery.

- The **MPLS Diagnostics Expert (MDE)** has been deprecated as of Prime Provisioning 6.4. The feature will be removed in Prime Provisioning 6.5. For service troubleshooting and diagnostics, please use Prime Network.

- The **Device Tools -> Ping** operation has been removed as of Prime Provisioning 6.4. Please use Prime Network.

- Support for the **Solaris** operating system is deprecated from Prime Provisioning 6.4. From Prime Provisioning 6.5 only **RHEL** will be supported.

- The **Device Tools -> IPSLA** operation has been removed as of Prime Provisioning 6.4. Provisioning of IPSLA probes or similar can be done using templates or other customisation.

- Support for **CatOS** is being deprecated from Prime Provisioning 6.4. CatOS has reached end-of-life, and has been replaced by **IOS**. From Prime Provisioning 6.5 there will be no support for CatOS.

- **L2VPN and VPLS** service typess are being deprecated. Note that it is still possible to provision L2VPN and VPLS services using the EVC service type. The EVC blade service type should be used for all L2 provisioning. It is recommended that all new customers use the EVC service type for all L2 provisioning. Current users of VPLS and L2VPN service types can continue to do so.

- The **Reports** feature has been deactivated and will be removed in a subsequent release. If needed, it can be reactivated using DCPL properties.

Prime Provisioning 6.4 Resolved and Open Bugs

The following bugs were resolved in Prime Provisioning 6.4:

Bug Number	Description
CSCtz22431	Speed/Duplex commands are generating in specific device platform.
CSCtz23487	Prime Provisioning config seq error when modifying AC intf same PE.
CSCua29151	NBI returns empty response when viewing a non-existing SR.
CSCua46736	Prime not generating encap command for port channel interface.
CSCua80847	UNI interfaces are improperly listed for EVC-L2 links, DOT1QTUNNEL encap.
CSCub11836	Sorting in SR window does not work when filtered by policy name.
CSCub20509	Template has more than 10 variables, the browser is unable to show it.
CSCuc36894	SR Editor screen formatting issues when using H-VPLS functionality.
CSCuc44922	Interface Picker not listing interfaces for provisioning service.
CSCuc50193	Backup Restore tool is broken.
CSCud05173	MS-PW config deployment goes to FAILED_AUDIT.
CSCud08787	Decomm removing the pw-class even if it is associated with other SR.
CSCud19789	Duplicate tunnel id used when multiple SR deploy after configlet preview.
CSCud22546	EVC-VPLS MSPW sr generates improper lables on same device under same VPN.

The following open bugs apply to Prime Provisioning 6.4:

Bug Number	Description
CSCuf71155	P-PF: deploy SR of mpls with ipv6 address failed on C7600
CSCuf56027	P-PF: deploy SR of mpls with ipv6 address failed on ASR9k
CSCuf35668	Live Backup script does not work in Linux Platform

Finding Known Problems in Prime Provisioning 6.4

To find known problems in Prime Provisioning 6.4, use the following URL:

http://tools.cisco.com/Support/Bug Tool Kit

You must log into Cisco.com.

You can search for specific bugs or search for a range by product name. This tool enables you to query for keywords, severity, range, or version.

Use the following search criteria to locate bugs for Prime Provisioning 6.4:

- Product category: **Network Management and Automation**
- Product: **Cisco IP Solution Center or Cisco Prime Fulfillment or Cisco Prime Provisioning**
- Software version: **6.4** (For a list of bugs open against all releases, choose **ANY**.)

The results display bug ID and title, found-in version, fixed-in version, and status. The bug ID is a hyperlink to detailed information for the bug ID's product, component, severity, first found-in, and release notes.

The results could be displayed in a feature matrix or spreadsheet.

Related Documentation

The entire documentation set for Prime Provisioning, can be accessed at:

http://www.cisco.com/en/US/products/ps12199/tsd_products_support_series_home.html

An overview of the Cisco Prime Provisioning product is available at:

http://www.cisco.com/go/provisioning

The following documents comprise the Prime Provisioning 6.4 documentation set:

General Documentation (in suggested reading order)
- *Cisco Prime Provisioning 6.4 Documentation Overview*
- *Cisco Prime Provisioning 6.4 Release Notes*
- *Cisco Prime Provisioning 6.4 Installation Guide*
- *Cisco Prime Provisioning 6.4 Supported Devices*
- *Cisco Prime Provisioning 6.4 User Guide*
- *Cisco Prime Provisioning 6.4 Administration Guide*
- *Cisco Prime Provisioning 6.4 Open Source*

API Documentation
- *Cisco Prime Provisioning 6.4 API Programmer Guide*
- *Cisco Prime Provisioning 6.4 API Programmer Reference*

Note All documentation *might* be upgraded over time. All upgraded documentation will be available at the same URLs specified in this document.

Other Cisco Prime Product Documentation

See also the documentation for the following Cisco Prime products:

- *Cisco Prime Central*
- *Cisco Prime Network*
- *Cisco Prime Optical*
- *Cisco Prime Performance Manager*

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html

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