Cisco Prime Cable Provisioning 5.0 Release Notes

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These release notes provide an overview of the new features of Prime Cable Provisioning 5.0 and lists the open bugs for this release.

Note You can access the most current Prime Cable Provisioning documentation, including these release notes, online at http://www.cisco.com/en/US/products/ps11754/tsd_products_support_series_home.html.

Contents

Introduction

Cisco Prime Cable Provisioning, referred to as Prime Cable Provisioning throughout this document, automates the tasks of provisioning and managing customer premises equipment (CPE) in a broadband service-provider network. The application provides a simple and easy way to deploy high-speed data, voice technology, and home networking devices.

Prime Cable Provisioning can be scaled to suit networks of virtually any size, even those deploying millions of devices. It also offers high availability, made possible by its distributed architecture with centralized management.

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Prime Cable Provisioning incorporates support for many technologies to provide provisioning services for your network. These technologies include:

- DOCSIS high-speed data
- DPoE devices
- PacketCable voice service, both Secure and Basic workflows
- Non-secure CableHome
- OpenCable Set-top box

For detailed information about Prime Cable Provisioning features, see the *Cisco Prime Cable Provisioning 5.0 User Guide*.

Functionality Changes in Prime Cable Provisioning 5.0

Here are the main functionality changes between Prime Cable Provisioning 5.0 and its earlier versions (referred to as Cisco BAC):

- To access Prime Cable Provisioning 5.0, you must procure a new 5.0 license. You cannot use any old licenses of any earlier releases.
- In Prime Cable Provisioning 5.0, the licensing scheme only counts the DOCSIS IP devices irrespective of whether the device is a stand-alone CM or an embedded eCM, each DOCSIS IP device consumes one license. Apart from the DOCSIS IP device, all other device types consume no license.
- Prime Cable Provisioning 5.0 can be installed only on 64-bit servers.
- User management is completely changed in Prime Cable Provisioning 5.0. With the introduction of RBAC, various fine-grained privileges are grouped into roles. These roles are assigned to users either directly or through user groups.
- The API client library is now packaged in the bpr.jar, bacbase.jar, and bac-common.jar files, located at BPR_HOME/lib, where BPR_HOME refers to the home directory on which you install Prime Cable Provisioning.

New Features and Enhancements

Prime Cable Provisioning 5.0 consists of many new features and this section describes the most important changes made in this version.

New Prime Admin UI

The Prime Cable Provisioning has a new Prime Admin UI with a new look and feel. It also includes new RDU features like RBAC. The Prime Admin UI has similar look and feel as other Cisco Prime products.

Note The Admin UI of Prime Cable Provisioning, has a session timeout of ten minutes.

Role Based Access Control

For better user management and security, Prime Cable Provisioning introduces Role Based Access Control (RBAC) that constitutes of privileges, roles, and user groups. RBAC provides an admin role as well as a set of fine grain roles with focused responsibilities. Roles are composed of fine grain privileges. A privilege is a base unit of enforcement. A role groups a set of privileges into a logical job function to enable the customization of authorization policies. User groups are used to associate a number of users with the same set of responsibilities.

Prime Cable Provisioning provides four levels of checks for better security management:

- URL access check - Enforcement done by web facing components such as the Admin UI or web services.
- Operation/Method level check - Enforcement done by the components protecting access to operations. This type of access check is primarily performed in the RDU and DPE CLI. It is meant to ensure that the user has the correct privileges to invoke operations.
- Instance level check - Enforcement to ensure that the user has access to a specific object. This enforcement is performed in the RDU and leverage database capabilities.
- Property level check - Enforcement to ensure that the user has write access to a specific property. This enforcement is performed in the RDU.

High Availability: RDU Redundancy

RDU redundancy facilitates setting up RDU in high availability (HA) environment with a two node failover pair. The RDU redundancy is supported on RHEL 6.3 servers only, and not on Solaris servers. If the primary RDU node fails or becomes unresponsive, the secondary RDU node controls the provisioning service. This helps you to achieve an error-free and continued provisioning service. The HA environment involves setting up the critical components in a failover pair. This ensures that the service continuity is maintained even if a critical component fails to respond, and also helps in disaster recovery. For a medium or large scale setup, it is required to have a redundant service to adhere to the Service Level Agreements (SLAs) and Service Level Objectives (SLOs).

Provisioning Web Services

The Provisioning Web Services (PWS) component exposes a SOAP 1.2 based web service interface as an external integration interface. The web service is a layer above the RDU and can be deployed in the same server as the RDU or as a remote server. The service maps SOAP requests and internally constructs RDU API requests. The service will be capable of interacting with one or more RDUs. The provisioning service is described using a Web Service Description Language (WSDL) v1.1. The WSDL is a contract describing the operations and all request and reply objects and their data types. You can use the PWS WSDL to generate client language bindings for any specific language.

For detailed information about PWS, see the *Cisco Prime Cable Provisioning 5.0 User Guide* and *Cisco Prime Cable Provisioning 5.0 Integration Developers Guide.*

64-bit Support

In earlier versions of Prime Cable Provisioning, the RDU and DPE servers were shipped with 32-bit processing capabilities with reliability and scalability limitations. A 32-bit application could address only a 4-GB address process space. To mitigate this performance issue, Prime Cable Provisioning is now enhanced to 64-bit processing capabilities, which also includes 64-bit JVM migration. With RDU and DPE servers supporting 64-bit mode, JRE can have expanded heap sizes that allows better leverage of existing resources. Prime Cable Provisioning supports migration of 32-bit RDU and DPE to 64-bit. Also, 64-bit RDU is backward compatible with 32-bit DPE and other components. The CPNR-EP continues to be in 32-bit.

Secure Mode of Connection Using SSL

Prime Cable Provisioning secures all TCP based interactions through the use of Secure Socket Layer (SSL) protocol. SSL is a standard based protocol that enables secure communication. Prime Cable Provisioning supports both SSL 3.0 and TLS 1.0 with TLS 1.0 being the default.

SSL protects the following interactions:

- Clients using the Prime Cable Provisioning API to interact with the RDU.
- Client interaction with the new web services interface.
- RDU and DPE interactions.
- CPNR-EP and RDU interactions.

CableLab Enhancements

Prime Cable Provisioning supports new CableLab standards such as DPoE 1.0 and PacketCable 2.0.

DPoE 1.0

The DOCSIS Provisioning of Ethernet Passive Optical Network (DPoE) 1.0 is a standard for provisioning of EPON access technology using existing DOCSIS provisioning flow. DPoE network offers IP high speed data services equivalent to DOCSIS networks, where the DPoE system acts like a DOCSIS CMTS. The DPoE system and DPoE Optical Network Unit appear to act like a DOCSIS CM also known as virtual CM (vCM). Prime Cable Provisioning uses the existing DOCSIS device type for DPoE vCM devices. DPoE configuration files contain a mixture of DOCSIS and DPoE-specific TLVs.

PacketCable 2.0

PacketCable 2.0 supports the convergence of voice, video, data, and mobility technologies. It is based on Session Initiation Protocol (SIP) and IP multimedia system (IMS) and supports configuration and management of Non-Embedded User Equipment (UE) as well as Embedded User Equipment (E-UE). Prime Cable Provisioning supports only the UEs that are embedded with a DOCSIS Cable Modem and are called as E-UE or Embedded Digital Voice Adapter (E-DVA) in IPv4 mode only. E-DVA supports Residential SIP Telephony (RST).

MIB Updates

Some of the existing MIBs have been modified in Prime Cable Provisioning. Here are the details about the changed MIB.

New MIBs added in this release

- PKTC-IETF-SIG-MIB
- PKTC-IETF-MTA-MIB
- CL-PKTC-EUE-PRS-MIB

Updates to latest MIB revision

- CL-PKTC-EUE-TC-MIB
- CL-PKTC-EUE-USER-MIB
- DOCS-IF3-MIB
- DOCS-IFEXT2-MIB
- DOCS-QOS3-MIB
- DSG-IF-MIB
- DSG-IF-STD-MIB

MIBs changed for product rebranding

- CISCO-BACC-DPE-MIB.my
- CISCO-BACC-RDU-MIB.my
- CISCO-BACC-SERVER-MIB.my

Cosmetic formatting enhancements

- CL-PKTC-EUE-DEV-MIB
- CL-PKTC-EUE-EDVA-MIB
- CL-PKTC-EUE-EVENT-MIB
- CL-PKTC-EUE-PROV-MGMT-MIB
- CL-PKTC-EUE-RST-MIB
- CL-PKTC-EUE-PRS-MIB
- CLAB-TOPO-MIB
- DOCS-DRF-MIB
- DOCS-IF-M-CMTS-MIB
- DOCS-L2VPN-MIB
- DOCS-LOADBAL3-MIB
- DOCS-MCAST-AUTH-MIB
- DOCS-MCAST-MIB
- DOCS-SEC-MIB
- DOCS-SUBMGT3-MIB
- DTI-MIB
- ESAFE-MIB
- OC-HOME-NETWORK-MIB
- OC-STB-HOST-MIB
- PKTC-EN-SIG-MIB
- PKTC-ES-IPTAP-MIB
- PKTC-ES-TAP-MIB
- PKTC-EVENT-MIB
- SLED-MIB

Dynamic Configuration File Generation TLV Updates

Table 1 lists the new Dynamic Configuration File Generation (DCFG) TLVs introduced in Prime Cable Provisioning 5.0.

Table 1 New DCFG TLVs

Option	Version	Description
[22/23].14	3.0	IEEE 802.1ad S-VLAN and C-VLAN Frame Classification Encodings
[22/23].14.1	3.0	IEEE 802.1ad S-VLAN TPID
[22/23].14.2	3.0	IEEE 802.1ad S-VLAN VID
[22/23].14.5	3.0	IEEE 802.1ad C-VLAN TPID
[22/23].14.6	3.0	IEEE 802.1ad C-VLAN VID

Table 1 New DCFG TLVs (continued)

Option	Version	Description
[22/23].15	3.0	IEEE 802.1ah I-TAG Packet Classification Encodings
[22/23].15.1	3.0	IEEE 802.1ah I-TAG I-TPID
[22/23].15.2	3.0	IEEE 802.1ah I-TAG I-SID
[22/23/60].16	3.0	ICMPv4/ICMPv6 Packet Classification Encodings
[22/23/60].16.1	3.0	ICMPv4/ICMPv6 Type Start
[22/23/60].16.2	3.0	ICMPv4/ICMPv6 Type End
[22/24].43.5.43.8	2.0	Vendor ID
[23/24].43.4	2.0	VPN Route Distinguisher
23.43.5.43.35	2.0	Traffic Class for MPLS Disposition Packets (MPLS-TC-RANGE)
24.35	3.0	Upstream Buffer Control
[24/25].35.1	3.0	Minimum Buffer
[24/25].35.2	3.0	Target Buffer
[24/25].35.3	3.0	Maximum Buffer
24.43.5.43.34	2.0	Traffic Class for MPLS Imposition Packets (MPLS-TC-SET)
25.35	3.0	Downstream Buffer Control
43.5.43.8	2.0	Vendor ID
43.13	2.0	Dynamic Flow VPN Route Distinguisher
67	3.0	Subscriber Management CPE IPv6 List
68	3.0	Default Upstream Target Buffer Configuration
69	3.0	MAC Address Learning Control Encoding
69.1	3.0	MAC Address Learning Control
69.2	3.0	MAC Address Learning Holdoff Timer
217.39	1.1	Home Network Prefix Validation
217.39.1	1.1	Instance Number
217.39.2	1.1	Prefix Usage
217.39.3	1.1	IP Address Version
217.39.4	1.1	IPv4 Prefix Length
217.39.5	1.1	IPv4 Subnet Address
217.39.6	1.1	IPv6 Prefix Length
217.39.7	1.1	IPv6 Network Address
217.40	1.1	SEB Server Enable TLS Cipher Suites
221	1.1	eSG Configuration

Table 2 lists the DCFG TLVs updated in the Prime Cable Provisioning 5.0.

Table 2 Updated DCFG TLVs

Option	Version	Description	Change
24.16	1.1	Request/Transmission Policy	Validation value changed from *less-than 512* to *less-than 2048*
63	2.0	Subscriber Management Control Max CPE IPv6 Addresses	Description of the TLV changed to *Subscriber Management Control Max CPE IPv6 Addresses*
201	1.1	ePS Configuration	Changed multivalue from *false* to *true*
202	1.1	eRouter Configuration	Changed multivalue from *false* to *true*
216	1.1	eMTA Configuration	Changed multivalue from *false* to *true*
217	1.1	eSTB Configuration	Changed multivalue from *false* to *true*
219	1.1	eTEA Configuration	Changed multivalue from *false* to *true*
220	1.1	eDVA Configuration	Changed multivalue from *false* to *true*

Prime Cable Provisioning 5.0 Bugs

This section lists issues that are either resolved in this release or are still open in Cisco Prime Cable Provisioning 5.0.

Note To obtain more information about known problems, access the Cisco Software Bug Toolkit at http://www.cisco.com/pcgi-bin/Support/Bugtool/home.pl. (You will be prompted to log into cisco.com).

Resolved Issues

Table 3 lists the resolved bugs in the Prime Cable Provisioning 5.0 release.

Table 3 Resolved Issues

Bug ID	Description
CSCsm43002	captureConfiguration.sh does not archive agent/conf files.
CSCth16781	runCfgUtil.sh fails to generate PacketCable 2.0 dial plan TLV.
CSCtn38815	Unable to restart KDC when it is in backoff mode due to license failure.
CSCtq51693	Space validation needs to be done on DPE FQDN details entered during KDC installation. The empty space in DPE FQDN information should not be supported.
CSCtq77295	Warning messages displayed while uninstalling 4.2 Linux.
CSCtr87133	Force login attempt of RADIUS user always fails when maximum session reached.
CSCts08631	Error contains wrong CPNR version while installing CPNR_EP without CPNR.
CSCtx94934	JAR files added are not shown in RDU Defaults page.
CSCty33176	DPE with removed IPv6 interface causes port is already used statement.

Known Issues

Table 4 lists the known bugs in the Prime Cable Provisioning 5.0 release.

Table 4 Known Issues

Bug ID	Description
CSCub63596	WS-I Compliance checking needed.
CSCub67891	Access denied exception is not thrown when using getAllMatchingFiles.
CSCue80652	Keytool error is displayed when double quote is used for certificate value.
CSCue66152	RDU shows high CPU utilization from SSL client.
CSCue88789	NullPointerException in RDU log when certificate expires/keystore value empty.
CSCuc32208	Fine grain privilege level check is not done for RDU Events.
CSCtz25409	The generated template/Groovy file needs manual editing to make it work.
CSCud81568	Invalid Property error is displayed when RDU is misconfigured.
CSCub87431	User with child domain access is able to create user with RootDomain.
CSCue70770	PWS does not connect to RDUs added in both secure and nonsecure mode.
CSCud40680	Async Support of get operation is required for pollOperation.
CSCth16251	CPNR extensions expect relay agent information in DHCPINFORM messages.
CSCti60751	Many PCs behind one modem cause DPE to drop RDU connection.
CSCtj03983	BAC RDU CM dual-stack support enhancement.
CSCtj25387	Illegal argument exception is thrown in DPE logs for EMIC configurations.
CSCtj30159	RunRecoveryException is thrown while restoring database using relative path.
CSCtl44226	Stack Trace is present in RDU/DPE log after rebooting server.
CSCtq15061	MTA FQDN auto generate doesn't require domain for some API calls.
CSCtq90931	While accessing the -help option for DPE scripts; createDbTar.sh, extractDbTar.sh and compareDpeCaches.sh, the exceptions or improper functionalities are returned and the help is not avalable.
CSCtr85371	Deletion of env folder from temp directory is required for installation.
CSCtr93324	Upgrade/Add Components fails if the current directory has no write permission.

Using the Bug Toolkit

This section explains how to use the Bug Toolkit to search for a specific bug or to search for all bugs in a release.

Step 1 Go to http://tools.cisco.com/Support/BugToolKit.

Step 2 At the Log In screen, enter your registered Cisco.com username and password; then, click **Log In**. The Bug Toolkit page opens.

Note If you do not have a Cisco.com username and password, you can register for them at http://tools.cisco.com/RPF/register/register.do.

Step 3 To search for a specific bug, click the **Search Bugs** tab, enter the bug ID in the Search for Bug ID field, and click **Go**.

Step 4 To search for bugs in the current release, click the **Search Bugs** tab and specify the following criteria:

- Select Product Category—**Cloud and Systems Management**
- Select Products—**Prime Cable Provisioning**.

Note Do not enter *Cisco Prime Cable Provisioning*. *Cisco Prime Cable Provisioning* is the new product name for the former *Cisco Broadband Access Center*. At this time, the Bug Toolkit does not accept *Cisco Prime Cable Provisioning* as the product name.

- Software Version—[**Product Version].**
- Search for Keyword(s)—Separate search phrases with boolean expressions (AND, NOT, OR) to search within the bug title and details.
- Advanced Options—You can either perform a search using the default search criteria or define custom criteria for an advanced search. To customize the advanced search, click **Use custom settings for severity, status, and others** and specify the following information:
  - Severity—Choose the severity level.
  - Status—Choose **Terminated**, **Open**, or **Fixed**.

    Choose **Terminated** to view terminated bugs. To filter terminated bugs, uncheck the Terminated check box and select the appropriate suboption (Closed, Junked, or Unreproducible) that appears below the Terminated check box. Select multiple options as required.

    Choose **Open** to view all open bugs. To filter the open bugs, uncheck the Open check box and select the appropriate suboptions that appear below the Open check box. For example, if you want to view only new bugs in Prime Optical 9.5, choose only **New**.

    Choose **Fixed** to view fixed bugs. To filter fixed bugs, uncheck the Fixed check box and select the appropriate suboption (Resolved or Verified) that appears below the Fixed check box.
  - Advanced—Check the **Show only bugs containing bug details** check box to view only those bugs that contain detailed information, such as symptoms and workarounds.
  - Modified Date—Choose this option to filter bugs based on the date when the bugs were last modified.
  - Results Displayed Per Page—Specify the number of bugs to display per page.

Step 5 Click **Search**. The Bug Toolkit displays the list of bugs based on the specified search criteria.

Note In the search results, the headlines and Release-note enclosures might contain both *Cisco Prime Cable Provisioning* and *Cisco Broadband Access Center* product names. For example, if a bug applies to both *Cisco Prime Cable Provisioning* 5.0 and *Cisco Broadband Access Center* 4.2, the headline and Release-note enclosure contain the earlier BAC product terminology.

Step 6 To export the results to a spreadsheet:

a. In the Search Bugs tab, click **Export All to Spreadsheet**.

b. Specify the filename and location at which to save the spreadsheet.

c. Click **Save**. All bugs retrieved by the search are exported.

If you cannot export the spreadsheet, log into the Technical Support website at http://www.cisco.com/cisco/web/support/index.html or contact the Cisco Technical Assistance Center (TAC).

Product Documentation

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

See the *Cisco Prime Cable Provisioning 5.0 Documentation Overview* for the list of Prime Cable Provisioning guides.

Related Documentation

See the *Cisco Prime Network Registrar 8.x Documentation Overview* for the list of Cisco Prime Network Registrar guides.

Accessibility Features in Prime Cable Provisioning 5.0

For a list of accessibility features in Prime Cable Provisioning, see the Voluntary Product Accessibility Template (VPAT) on the Cisco website, or contact accessibility@cisco.com.

All product documents are accessible except for images, graphics, and some charts. If you would like to receive the product documentation in audio format, braille, or large print, contact accessibility@cisco.com.

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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