Cisco Prime Cable Provisioning - What's New in Release 5.0

Product Overview

Cisco Prime™ Cable Provisioning is a distributed, highly scalable, and reliable solution for management of cable subscriber devices and automated flow-through provisioning of the subscriber services that run on those devices.

A centralized platform allows cable service providers to control and configure network devices located at the customer premises, including DOSCIS® residential home gateways, cable modems, set-top boxes, and media termination adapters (MTAs). Cisco Prime Cable Provisioning automatically recognizes devices, assigns the appropriate class of service, dynamically creates and generates device configuration files, and activates subscribers - all at extremely fast speeds. This single device management platform supports multiple technologies including DOCSIS, PacketCable™, Ethernet passive optical network (EPON), DOCSIS Provisioning of EPON (DPoE™), OpenCable™ and satellite.

The Solution Offers

- **Reliability:** Cisco Prime Cable Provisioning provides high reliability and high availability to meet business-critical needs and help ensure minimum subscriber disruption. The solution offers multiple levels of redundancy through its distributed architecture of highly available regional distribution units (RDUs), multiple distributed device provisioning engines (DPEs) (each of which includes its own data-caching repository), a Trivial File Transfer Protocol (TFTP) server, and a time-of-day (ToD) server. In addition, the solution includes support for avalanche protection to limit downtime after network outages. A single DPE can support as many as 2 million devices, and multiple DPEs can be combined into groups to provide redundancy, load sharing, and disaster recovery.
- **Scalability and high performance:** Cisco Prime Cable provisioning is the industry's most scalable cable device-provisioning system, supporting 50 million plus devices in a single customer distributed deployment. The solution uses multiple distributed device management and caching engines to balance processing of device requests and help ensure high performance. This supports rapid network expansion (hundreds of thousands of new devices a day).
- **Easy integration into existing service provider systems:** A flexible northbound interface promotes easy and secure integrations with existing service provider systems, such as billing, operations support systems (OSSs), workflow, mediation, and other customer management systems, through a Java provisioning or Web Services API.

New in Release 5.0

The newest release of Cisco Prime Cable Provisioning (formerly Cisco® Broadband Access Center) adds these significant features and benefits:

- **New standards support for DPoE:** Business customers need a fast and reliable connection, and cable service providers are bringing fiber to the premises to meet their customers' demand. With DPoE, cable service providers can provision EPON devices without having to install new provisioning infrastructure. They can now use their existing DOCSIS infrastructure to provision EPON devices.
- **New standards support for PacketCable 2.0:** Support for the latest PacketCable standard allows for complete end-to-end IP voice service provisioning.
- **Extended reliability**: Cisco Prime Cable Provisioning 5.0 adds support for RDU failover, minimizing service disruption. Note: RDU failover support is only available for Red Hat Enterprise Linux (RHEL) and CentOS based RDU deployments.
- **Enhanced security:** Fine-grained role-based access control (RBAC) helps simplify management of user privileges across complex enterprises and allows access to the critical functions to multiple users while preventing accidental changes. SSL support for northbound APIs adds an additional level of security.
- **New upgrade licensing options:** Cisco Prime Cable Provisioning 5.0 is available with the new Cisco Prime Assured Software Subscription (PASS), which allows prepayment for major upgrades for 1-, 2-, 3-, or 5-year subscription contracts.
- **Simplified licensing model:** Cisco Prime Cable Provisioning 5.0 simplifies licensing significantly. One managed device license includes support for multiprotocol devices that support DOCSIS, PacketCable, eRouter, OpenCable, and more. In addition, it supports all directly connected devices, irrespective of whether they are IPv4, IPv6, or dual stack.

Table 1 provides details on features and benefits.

Table 1. Features and Benefits

Feature	Benefit
New Standards Support	
PacketCable 2.0 support	Support for PacketCable 1.0, 1.1, 1.5, and 2.0 (IPv4 only) allows for complete end-to-end IP voice service provisioning and meets all PacketCable security specifications.
DPoE	With a single platform for DOCSIS provisioning, cable service providers can support EPON deployments and serve new business market segments.
Redundancy and Performance	
RDU failover	In addition to DPE failover, Cisco Prime Cable Provisioning 5.0 supports RDU failover for RHEL and CentOS based deployments for enhanced reliability. The RDU is the primary server in the Cisco Prime Cable Provisioning system. It performs the following functions: • Manages the generation of all configurations • Maintains the authoritative database • Represents the central point through which all API requests must pass • Supports external clients, OSSs, and other provisioning functions through the provisioning API
Enhanced support for complex extensions and improved caching	Native support for 64-bit processes allows Cisco Prime Cable Provisioning to improve memory management and provide enhanced support for complex extensions. In addition, improved caching increases the performance and reliability of the overall solution.

Feature	Benefit
Security	
Fine-grained RBAC	As the cable service provider organization evolves, more people within the organization need easy access to subscriber and device data that is present in the Cisco Prime Cable Provisioning solution; however, security considerations must be taken into account when providing access to sensitive data. With fine-grained access controls, system administrators no longer need to compromise security with the need for greater access. The new RBAC model allows administrators to create custom roles (user groups) and assign operational privileges to custom roles. Administrators can create new domains and partition data by regions (devices, classes of service, provisioning groups, and more). RBAC is supported for the RDU API user interface and DPE command-line interface (CLI).
DOCSIS 3.0 EMIC support	Support for the CableLabs® DOCSIS 3.0 Extended CMTS MIC (EMIC) standard allows operators to create a hash of configuration files such that users cannot change the configuration files themselves - for greater security.
SSL for RDU API and provisioning group communication	SSL support for the RDU API helps ensure that sensitive information remains encrypted and secure between the Cisco Prime Cable Provisioning solution and the applications with which it integrates. In addition, administrators can enable SSL encryption among the RDU, DPE and Cisco Prime Network DHCP extensions.
Integration with External Systems	
Simple Object Access Protocol (SOAP)-based web services API	In addition to a Java API, a web services API provides flexibility to integrate various OSS/BSS applications with the Cisco Prime Cable Provisioning solution.
RADIUS integration	Support for RADIUS integration for the RDU API and DPE CLI authentication helps externalize user and group management. Administrators no longer need to create users or groups within the Cisco Prime Cable Provisioning solution, and they can use central user management databases for authentication.
New Upgrade Licensing	
Cisco PASS	PASS works in conjunction with the Cisco Essential Operate Service (ESW) maintenance plan, whereby ESW provides Cisco Technical Assistance Center (TAC) support and access to minor updates and patches from the Cisco.com software download site. Upgrades are provided from Cisco Broadband Access Center through a 3- or 5-year PASS purchase, depending on the Broadband Access Center version.

About Cisco Prime

The Cisco Prime portfolio of IT and service provider management offerings empowers organizations to more effectively manage their networks and the services they deliver. Built on a service-centered foundation, Cisco Prime supports integrated lifecycle management through an intuitive workflow-oriented user experience - providing A-to-Z management for IP next-generation networks, mobility, video, and managed services.

For More Information

For more information about Cisco Prime Cable Provisioning, visit http://cisco.com/go/primecable-provisioning, contact your local account representative, or send an email to ask-cableprovisioning@cisco.com.

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