Cisco Prime Unified Provisioning Manager 8.7

General

Q. What is Cisco Prime™ Unified Provisioning Manager (UPM)?

A. Cisco Prime Unified Provisioning Manager is part of the Cisco® Unified Communications Management Suite. Cisco Prime Unified Provisioning Manager provides a reliable and scalable web-based solution for managing a company's crucial next-generation communications services. Cisco Prime Unified Provisioning Manager 8.7 manages the following Cisco products:

- Cisco Unified Communications Manager
- Cisco Unified Communications Manager - Business Edition
- Cisco Unity®
- Cisco Unity Connection
- Cisco Unified Presence
- Cisco Unified Communications Manager Express
- Cisco Unity Express

Q. What is Cisco Prime?

A. Cisco Prime for Enterprise is an innovative strategy and portfolio of management products that empower IT departments to more effectively manage their networks and the services they deliver. Cisco Prime is built upon a network services management foundation and a set of common attributes. It delivers an intuitive workflow-oriented user experience across Cisco architectures, technologies, and networks. Cisco Prime simplifies network management, improves operations efficiency, reduces errors, and makes the delivery of network services more predictable.

Q. What are the major features of Cisco Prime Unified Provisioning Manager 8.7?

A. The Cisco Prime Unified Provisioning Manager 8.7 release contains:

- Single view of a subscriber and the subscriber's services
- Simplified management of subscribers, services, and Cisco Unified resources for day 1 and day 2 management tasks
- Web-based provisioning interface for Cisco Unified systems
- Domain-level delegation of day 2 subscriber changes and infrastructure provisioning
- Prebuilt configurations of subscriber products
- Quick Site Builder to speed building new groups (domains) and class of service templates (service areas) needed to define a new site, branch, or functional group of subscribers/users
- Tracking and reporting on subscriber assets
- Management of line numbers, phone sets (including Cisco IP Communicator and Client Services Framework [CSF]-based clients), subscribers, and related unified messaging components
- Definition and enforcement of configurable business policies for processing of subscriber requests

- Automated interaction with Cisco Unified Communications products for subscriber, phone, and line creations, modifications, or deletions
- Consolidated view and management of multiple Cisco Unified Communications systems
- Autopopulation and ongoing synchronization of data from Cisco Unified Communications Manager, Cisco Unity, Cisco Unified Presence, Cisco Unified Communications Manager Express, Cisco Unity Express, and Cisco Unity Connection for both system configuration and subscriber information
- Northbound application programming interface option to allow provisioning tasks to be created by external applications. This API can be used to interface to human resources systems, Active Directory, branded customer portals, and other OSS provisioning applications
- Template-based provisioning of Infrastructure configuration components within Cisco Unified Communications Manager, Cisco Unified Communications Manager Express, and Cisco Unity Express
- Batch order processing for add, change, or delete of subscriber services and creation of UPM service areas
- Ability to import subscribers into UPM domains from an Active Directory source, filtered by selectable criteria

Cisco Prime Unified Provisioning Manager includes an extensive inventory model that provides the capability to manage:

- Subscribers (owners of the phone and voicemail services)
- Call, message, and presence processors (Cisco Unified Communications Manager and Cisco Unity, for example)
- Voice features
- Messaging features
- Phone number management policy
- IP Phones, dual-mode wireless phones, and softphone management policy

Q. What is new in Cisco Prime Unified Provisioning Manager 8.7?

A. Cisco Prime Unified Provisioning Manager 8.7 includes all the capabilities of the 8.6 version as well as:

- Cisco Prime user interface
- Quick search by MAC, last name, user ID, or extension
- New column filters and sorting
- Hierarchical associations shown between phones, lines, and services in the subscriber record
- Updated with support for new Cisco Unified Communications 8.6.2 Solution revision changes
- Support for new Cisco phones released as part of the Cisco Unified Communications 8.6 Solution release
- Quick Site Builder to speed building new groups (domains) and class of service templates (service areas) needed to define a new site, branch, or functional group of subscribers/users
- New home page with display widgets for UPM capacity/usage, pending order status, device sync status, deployment detail, and logged-in/locked users. Quick links from these widgets for faster navigation

Q. What versions of the Cisco Unified Communications applications are supported?

A. Table 1 shows examples of the versions of applications supported in Cisco Prime Unified Provisioning Manager 8.7. Mixes of revisions can be managed within Cisco Unified Provisioning Manager.

Table 1.   Applications Supported in Cisco Prime Unified Provisioning Manager 8.7

Product	Version
Cisco Unified CallManager and Communications Manager	4.1(3), 4.2(1), 4.2(3), 4.3(2), 5.0(4), 5.1(1), 5.2(0), 6.0(1), 6.1(1), 6.1(2), 6.1(3), 6.1(4), 7.0(1), 7.0(2), 7.1(1), 7.1(2)A, 7.1(3), 7.1(5), 8.0(1), 8.0(2), 8.0(3), 8.6(1), 8.6(2)
Cisco Unified CallManager Express and Communications Manager Express	4.0, 4.1, 4.2, 7.0, 7.1, 8.0, 8.6
Cisco Unified Presence	8.0, 8.5(1), 8.6(1), 8.6(2)
Cisco Unity Software Family	4.0, 4.1, 4.2, 5.0, 7.0, 8.0
Cisco Unity Express	2.3.1, 3.0, 3.1, 3.2, 7.0, 7.1, 8.0. 8.6
Cisco Unity Connection	2.0.1, 2.1, 7.0, 7.1, 8.0, 8.0(1), 8.0(2), 8.6(1), 8.6(2)

Note: See the Cisco Prime Unified Provisioning Manager Supported Devices Table for versions that have been certified in testing at http://www.cisco.com/en/US/products/ps7125/products_device_support_tables_list.html.

Security

Q. What type of access control does Cisco Prime Unified Provisioning Manager support?

A. Cisco Prime Unified Provisioning Manager permits web login access based on having a permitted user login and associated user roles within the system. User roles define access to certain functions for that user of the system and are predefined. Many of the roles apply only within a specific IP telephony domain (Table 2).

Table 2.   User Roles

Role	Function
Ordering	User can create and place service orders for subscribers within the policy defined by the system configuration.
Advanced Ordering	User can override system-determined policies.
Infrastructure Ordering	User can be assigned infrastructure provisioning tasks within the assigned UPM domain.
Assignment	User may participate in phone assignment during service activation.
Advanced Assignment	User may specify a specific phone MAC address during the order process.
Shipping	User may participate in verifying that physical shipment of a product has occurred.
Receiving	User may participate in verifying that physical receipt of a product has occurred.
Maintenance	User can perform purging and export of certain system objects.
Approval	User is responsible for approving orders within a UPM domain.
Administration	User has all administrative access except assigning other administrators.

Q. Does Cisco Prime Unified Provisioning Manager support external authentication?

A. Cisco Prime Unified Provisioning Manager can use its internal authentication database, Lightweight Directory Access Protocol (LDAP) to Active Directory, or Cisco Secure Access Control Server (ACS) using the TACACS+ protocol. Different domains can have authentication to different authentication servers.

Q. Are secure protocols used to communicate with the managed applications?

A. Cisco Prime Unified Provisioning Manager uses the following protocols to talk to its managed devices:

- Cisco Unified Communications Manager and Cisco Unity Connection are accessible through HTTP or HTTPS.
- Cisco Unified Communications Manager Express and Cisco Unity Express are accessible through Telnet or Secure Shell (SSH) Protocol.
- Cisco Unity is accessible through Java Database Connectivity (JDBC).

Q. Can I delegate some functions to subadministrators in my organization?

A. Cisco Prime Unified Provisioning Manager uses the concept of IP telephony domains and service areas. Domains are groupings of subscribers. For each grouping, one or more system users can be permitted to order services for subscribers within that domain. In addition, rules or policies may be set on a domain; those rules and policies will apply to services for subscribers in that domain.

Service areas are groupings within an IP telephony domain that are used to structure and manage IP telephony and messaging services. The service area typically acts as a service offering location and provides a template mechanism that determines provisioning policies and values used during order processing. This allows administrative users to configure service areas and helps ensure that service orders follow company policy and best practices for subscriber service activation.

Q. How are changes to Cisco Unified Communications applications tracked?

A. Cisco Prime Unified Provisioning Manager processes changes to the underlying Cisco Unified Communications applications as service orders. An order may be for a subscriber-level change (to a phone or line, for example) or for an IP-telephony-level infrastructure change (such as provisioning a new calling search space or route pattern). All orders in the system are tracked and viewable, both across orders and by subscriber. The order records show who initiated the order, the times of various process steps, and what the order contained.

Provisioning Policy

Q. What is meant by provisioning policy?

A. Cisco Prime Unified Provisioning Manager permits predefining various settings that will ultimately be reflected in the operational services for subscribers (how a phone or its lines are configured, for example). These predefined settings are called policies. Policies can be set against various objects within Cisco Unified Provisioning Manager. The following objects can have associated policies:

- Domains
- Service areas
- Subscriber types
- Orders

The policies that are set on these objects will be applied at the time of service activation and will be applied with precedence. For example, it may be desirable that all phones in a domain be permitted to be video enabled, but one of the service areas in that domain may override that policy and not permit phones to be video enabled.

Subscribers (people in the organization who have services) are assigned one or more subscriber roles, which determine the policy related to their end services. These roles reflect a subscriber's position or purpose within an organization and determine the services to which subscribers are entitled. Users with administration privileges in the system can add new subscriber roles for a specific customer domain. They can also associate product catalog items to a given subscriber role (defined for a specific domain) determining the products that can be ordered by users who have that subscriber role. Upon installation, Cisco Prime Unified Provisioning Manager supports the following subscriber roles:

- Contractor
- Employee
- Executive
- Manager
- Operator
- Senior manager

These roles can be modified or additional roles can be created to match business requirements.

Q. Which objects and attributes in Cisco Unified Communications Manager are available to be set through Cisco Unified Provisioning Manager?

A. Cisco Prime Unified Provisioning Manager performs both day 1 and day 2 provisioning. Day 1 provisioning is typically related to implementing new devices, applications, or locations. An example would be a new Cisco Unified Communications Manager Express deployment to a new location or activating services for a new office on an existing Cisco Unified Communications Manager cluster. Day 2 provisioning involves making changes to individual subscriber services during the lifetime of the IP communications services.

Cisco Prime Unified Provisioning Manager provides a template capability, often used in day 1 rollouts, that permits configuring IP communications infrastructure objects within Cisco Unified Communications Manager. Examples of these objects are device pools; calling search spaces; route lists, groups, and patterns; and translation patterns.

Cisco Prime Unified Provisioning Manager also includes provisioning attributes. These attributes can be set and associated to domains, service areas, and subscriber types. Provisioning attributes are categorized within the following categories:

- Mobility
- Extension mobility access
- Extension mobility line
- Line
- Phone
- Unified messaging
- Voicemail
- Presence

The full list of infrastructure objects and provisioning attributes is extensive. For details, see the Cisco Prime Unified Provisioning Manager User Guide at
http://www.cisco.com/en/US/products/ps7125/tsd_products_support_series_home.html.

Platform

Q. What hardware is required to run Cisco Unified Provisioning Manager?

A. Table 3 outlines the minimum server requirements recommended for different levels of performance and scale. Consult the Cisco Prime Unified Provisioning Manager Installation Guide, http://www.cisco.com/en/US/products/ps7125/prod_installation_guides_list.html, for detailed recommendations.

Table 3. Minimum Hardware Requirements for Cisco Unified Provisioning Manager

Server Requirements	Up to 1,000 Phones	Up to 10,000 Phones	Up to 30,000 Phones	Up to 60,000 Phones
CPU	Single 3.0 GHz Intel P4 processor or equivalent	2.33 GHz or higher quad core processor or equivalent	Two-machine deployment with both: 2.33 GHz or higher quad core processor or equivalent each for the database server and the web/application server	Two-machine deployment with both: 2.33 GHz or higher quad core processor or equivalent each for the database server and the web/application server
Memory	2 GB RAM	4 GB RAM	4 GB RAM on each machine	4 GB RAM on application/web server and 8 GB RAM on the database server
Disk Space	One 30 GB hard disk	One 60 GB hard disk with SAS or SCSI drives	One 30 GB hard disk on machine for web and application servers, and One 80 GB SAS hard drive in a RAID 1+0 configuration for the database	One 30 GB hard disk on machine for web and application servers, and One 120 GB SAS hard drive in a RAID 1+0 configuration for the database
Network	100 Mbps network interface card (NIC)	100 Mbps NIC	100 Mbps NIC	1 Gbps NIC

Q. Will Cisco Prime UPM run on a Cisco Media Convergence Server (MCS) platform?

A. Yes. Cisco Prime Unified Provisioning Manager will run on an MCS. This server, however, requires a standard Windows 2003/2008 Server OS, not a Cisco customized version shipped with some versions of MCS.

Q. Will Cisco Prime UPM run in a virtual environment?

A. Yes. Cisco Prime UPM is commonly deployed on VMware ESX 3.5 to ESXi 5.0 versions.

Q. Will Cisco Prime UPM run on Cisco Unified Computing System™ (Cisco UCS™)?

A. Yes. Cisco Prime UPM has been tested on both Cisco UCS B blades and C blades, as well as on the Cisco UCS raw hardware.

Licensing

Q. How is Cisco Prime Unified Provisioning Manager priced?

A. Like all Cisco Unified Communications Management Suite products, Cisco Prime Unified Provisioning Manager is priced in a tiered manner, with tiers based on the number of managed endpoints (phones).

Q. Do all the phones need to be in the same cluster?

A. No. Cisco Prime Unified Provisioning Manager can manage up to the licensed number of phones across multiple Cisco Communications Manager clusters or Cisco Communications Manager Express devices.

Q. Is there a charge to upgrade from Cisco Unified Provisioning Manager 2.2 to Cisco Prime Unified Provisioning Manager 8.7?

A. No. UPM 8.7 is a minor upgrade from Unified Provisioning Manager 2.2 and is covered by the customer's Software Application Support (SAS) contract. UPM 8.7 can operate with any UPM 2.x license.

Q. Can Cisco Prime Unified Provisioning Manager coexist with other Cisco management offerings on the same server platform?

A. Yes. Cisco Prime UPM can be used with Cisco Unified Operations Manager, Cisco Unified Service Monitor, and Cisco Unified Service Statistics Manager for up to the 10,000-phone scale.

Q. Is a license required to enable the API function?

A. Yes.

Q. Will my Cisco Unified Provisioning Manager 2.1 database and subscriber data migrate to Cisco Prime Unified Provisioning Manager 8.7?

A. Yes.

Q. In a two-machine deployment, which machine is the license installed on?

A. In a two-machine deployment, one machine hosts the web/application server, and the other machine hosts the Unified Provisioning Manager database. The license file is installed only on the web/application server.

Product Training

Q. Is training available for Cisco Prime Unified Provisioning Manager?

A. Yes. Information on instructor-led training for Cisco Prime Unified Provisioning Manager is available at http://www.applied-concepts.net/50/3045.html. Go to the website to contact our training partner, Applied Concepts.

Q. Where can I find more information about Cisco Prime UPM?

A. For more information about Cisco Prime Unified Provisioning Manager, visit http://www.cisco.com/go/cupm, contact your local account representative, or send an email to the product marketing group at ask-ucms@cisco.com.