Introduction to Prime Collaboration

Cisco Prime Collaboration is a comprehensive video and voice service assurance and management system with a set of monitoring, troubleshooting, and reporting capabilities that help ensure end users receive a consistent, high-quality video and voice collaboration experience.

Prime Collaboration:

- Provides provisioning, monitoring, diagnostics, and reporting capabilities for Unified Communications Systems.

- Supports timely, end-to-end visibility and isolates voice and video-related issues for sessions (calls), endpoints, and the network.

- Reduces time to troubleshoot and recover from service-affecting problems.

- Provides detailed analysis of the media (voice and video) path with critical fault and performance statistics that enable you to isolate network devices that cause service degradation.

- Validates large-scale deployments through comprehensive inventory, health, and status of Cisco Collaboration systems, as well as service and network infrastructure devices.

- Delivers reports that allow operators to track usage and problem history.

Prime Collaboration is delivered in two different software packages, Prime Collaboration Assurance and Prime Collaboration Provisioning, which must be deployed on two different virtual servers.

Prime Collaboration Assurance

Prime Collaboration Assurance enables you to monitor your network and perform diagnostics. In addition, you can run reports that help you identify the source of problems.

Voice and Video Unified Dashboard

The Prime Collaboration dashboards enable end-to-end monitoring of your voice and video collaboration network. They provide quick summaries of the following:

- End-User Impact: Phone status; locations with poor voice quality and call failures; TelePresence endpoints with alarms and call quality events; in-progress video sessions with alarms.

- Endpoint Utilization: Top 10 most and least utilized endpoints; number of TelePresence sessions for one day, one week, and four weeks.

- Infrastructure: Health and status of management devices, conferencing devices, and call and session control devices. You can also view the number of infrastructure devices, with and without alarms, utilized video ports, and trunks.

See *Cisco Prime Collaboration 9.0 Network Monitoring, Reporting, and Diagnostics Guide* to learn how the dashlets are populated after deploying the Prime Collaboration servers.

Device Inventory Management

You can discover and manage all endpoints that are registered to Cisco Unified Communications Manager (phones and TelePresence), Cisco VCS (TelePresence), CTS-Manager (TelePresence) and Cisco TMS (TelePresence). In addition to managing the endpoints, you call also manage multipoint switches, application managers, call processors, routers, and switches that are part of your video collaboration network.

As part of the discovery, the device interface and peripheral details are also retrieved and stored in the Prime Collaboration database.

If you are using the Cisco Unified Management solution, you can import the managed devices from the Cisco Prime Unified Operations Manager.

After the discovery is complete, you can perform the following device management tasks:

- Group devices into predefined and user defined groups.
- Edit visibility settings for managed devices.
- Customize event settings for devices.
- Rediscover devices.
- Update inventory for managed devices.
- Suspend and resume the management of a managed device.
- Add or remove devices from a group.
- Manage device access credentials.
- Export managed devices.

See *Cisco Prime Collaboration 9.0 Device Management Guide* to learn how to collect the endpoints inventory data and how to manage them.

Voice and Video Endpoint Monitoring

Service operators need to quickly isolate the source of any service degradation in the network for all voice and video sessions in an enterprise. Prime Collaboration provides a detailed analysis of the end-to-end media path, including specifics about endpoints, service infrastructure, and network-related issues.

For video endpoints, Prime Collaboration enables you to monitor all point-to-point, multisite, and multipoint video collaboration sessions. These sessions can be ad hoc, static, or scheduled with one of the following statuses:

- In-progress
- Scheduled
- Completed
- No Show

Prime Collaboration periodically imports information from:

- The management applications (CTS-Manager and Cisco TMS) and conferencing devices (CTMS, Cisco MCU, and Cisco TS) on the scheduled sessions.

- The call and session control devices (Cisco Unified CM and Cisco VCS) shown on the registration and call status of the endpoints.

For voice endpoints, Prime Collaboration provides the current operational status of the Cisco Unified Communications system. The Unified Communication (UC) Topology View displays a logical, top-level view of the IP telephony implementations. This logical view focuses on call control relationships.

The UC Topology View shows Cisco Unified Communications Manager (Unified CM) and Unity Connection clusters, devices, route groups, and route lists in the cluster. The relationships are displayed in a graphical view.

You can use the UC Topology View to:

- Display a logical or neighbor UC Topology View of your IP telephony deployment.

- Search for phones and view a summary of the IP Communications devices displayed in the UC Topology View.

- View and act on device events.

- Run other Cisco Prime Collaboration tools.

- Launch administration pages for devices.

- Open a separate window using the Detach option to view maps at the cluster level.

In addition, Prime Collaboration continuously monitors active calls supported by the Cisco Unified Communications system and provides near real-time notification when the voice quality of a call fails to meet a user-defined quality threshold. Prime Collaboration also allows you to perform call classification based on a local dial plan.

See *Cisco Prime Collaboration 9.0 Network Monitoring, Reporting, and Diagnostics Guide* to understand how to monitor IP Phones and TelePresence.

Diagnostics

Prime Collaboration uses Cisco Medianet technology to identify and isolate video issues. It provides media path computation, statistics collection, and synthetic traffic generation.

When network devices are medianet-enabled, Prime Collaboration provides:

- Flow-related information along the video path using Mediatrace

- Snapshot views of all traffic at network hot spots using Performance Monitor

- The ability to initiate synthetic video traffic from network devices using the IP Service Level Agreement (IP SLA) and Video Service Level Agreement Agent (VSAA) to assess video performance on a network.

In addition, for IP phones, Prime Collaboration uses the IP SLA to monitor the reachability of key phones in the network. A phone status test consists of:

- A list of IP phones to test.

- A configurable test schedule.

- IP SLA-based pings from an IP SLA-capable device (for example, a switch, a router, or a voice router) to the IP phones. Optionally, it also pings from the Prime Collaboration server to IP phones.

See *Cisco Prime Collaboration 9.0 Network Monitoring, Reporting, and Diagnostics Guide* to learn how to troubleshoot the video and voice network.

Fault Management

Prime Collaboration ensures near real-time quick and accurate fault detection. After identifying an event, Prime Collaboration groups it with related events and performs fault analysis to determine the root cause of the fault.

Prime Collaboration allows to monitor the events that are of importance to you. You can customize the event severity and enable to receive notifications from Prime Collaboration, based on the severity.

Prime Collaboration generate traps for alarms and events and sends notifications to the trap receiver. These traps are based on events and alarms that are generated by the Prime Collaboration server. The traps are converted into SNMPv2c notifications and are formatted according to the CISCO-EPM-NOTIFICATION-MIB.

See *Cisco Prime Collaboration 9.0 Fault Management Guide* to learn how Prime Collaboration monitors faults.

Reports

Prime Collaboration provides the following predefined reports and customizable reports:

- Inventory Reports—Provide IP phone, audio phone, video phone, SRST phone, audio SIP phone, and IP communicator inventory details. Inventory reports also provide information about CTI applications, ATA devices, and the Cisco 1040 Sensor.

- Call Quality Event History Reports—Provide the history of call quality events. Event History reports can display information for both devices and clusters. You can use Event History to generate customized reports of specific events, specific dates, and specific device groups.

- Call Quality Reports—Enables you to examine voice transmission quality in the parts of your network that Prime USM has monitored. Prime USM reports show the times when MOS has been below configured thresholds, the codec in use, and the endpoints on which violations have occurred.

- TelePresence Reports—Provide details on completed and in-progress sessions, endpoint utilization, and No Show endpoints. TelePresence reports also provide a list of conferencing devices and their average and peak utilization in your network..

- Activity Reports—Provide information about IP phones and video phones that have undergone a status change during the previous 1 to 30 days.

See *Cisco Prime Collaboration 9.0 Network Monitoring, Reporting, and Diagnostics Guide* to learn the different types of reports and how to generate them.

Prime Collaboration Provisioning

Prime Collaboration Provisioning provides provisioning support for Cisco Unified Communications initial deployments and implementations. With automated processes for initial deployment and day-2 additions and changes. It also provides ongoing operational provisioning and activation services for individual subscriber changes.

Prime Collaboration Provisioning enables you to do the following:

- Order standard services (for example a phone, line, or voicemail) for a subscriber

- Create an order for a subscriber-level change (to a phone, a line, and so on) or an IP communications-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 name or ID. The order records show who initiated the order, the times of various process steps, and what the order contained.

- Delegate the order management capability so that requests for service additions, changes, or deletions can be made without underlying knowledge of the voice applications that deliver those services.

See *Cisco Prime Collaboration 9.0 Provisioning Guide* to learn how to provision the Cisco Unified Communication applications.