

# Cisco Prime Central for HCS Assurance

## Product Overview

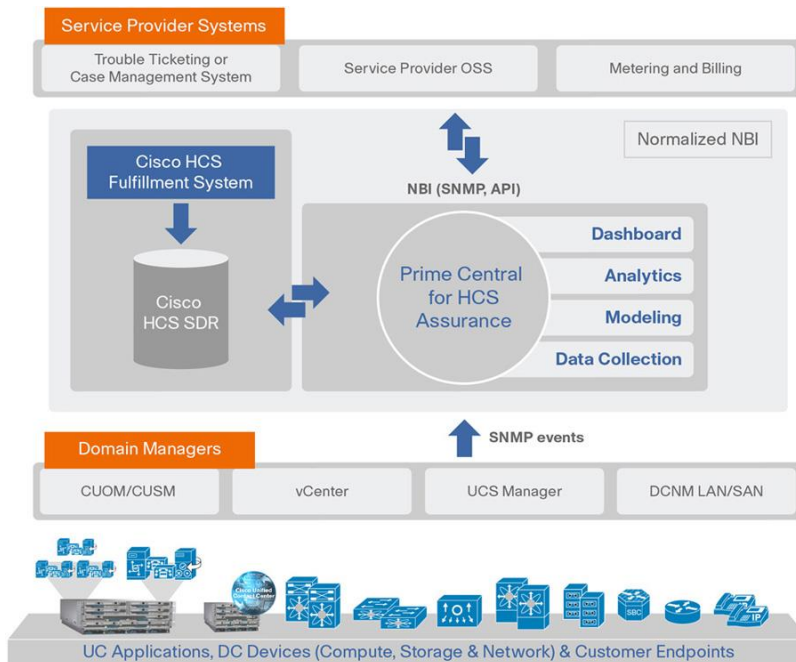
Cisco Prime™ Central for Hosted Collaboration Solution (HCS) Assurance is a carrier-grade, extensible service assurance management platform for service providers deploying “as a service” solutions composed of Cisco® Unified Communications and collaboration applications in a hosted or cloud environment.

Service providers require a solution that monitors in real time the resources and services utilized by end customers. This solution provides a dashboard for a single-pane, multi-customer view of aggregated faults from underlying domain managers that span both unified communications (UC) and data center (DC) domains. This dashboard provides real-time root-cause analysis and correlates events across multiple unified communications and data center domains with customer-related service impact analysis. These fault correlation capabilities help triage issues and reduce mean time to repair (MTTR). Network operations center (NOC) operators also can quickly get detailed, actionable information on faults by performing a contextual cross-launch from the dashboard to the underlying domain managers. All of these capabilities are key to helping service providers meet service-level agreement (SLA) requirements and provide the highest quality of experience (QoE) to the end users of cloud-based services.

Cisco Prime Central for HCS Assurance also has the capability to feed information to other systems in the service provider environment such as trouble ticketing, manager of managers, and more. The solution includes support for standard interfaces and APIs to integrate easily with the service provider's OSS/BSS. The solution's northbound interface (NBI) provides a mediation layer that shields the OSS/BSS from changes to any underlying domain manager or collaboration service and saves the service provider from having to integrate to each individual domain manager.

Cisco Prime Central for HCS Assurance is part of a comprehensive management platform for the Cisco Hosted Collaboration Solution. See Figure 1.

**Figure 1.** The Cisco Prime for HCS Assurance Component of the Cisco Hosted Collaboration Solution



Cisco HCS is a next-generation unified communications and collaboration platform for service providers who want to offer unique Cisco collaboration technologies using hosted and managed models. More information on Cisco HCS is available at <http://www.cisco.com/go/hostedcollab>.

The Cisco HCS overall management architecture (see Figure 2) includes a service assurance component, Cisco Prime Central for HCS Assurance, as well as a service fulfillment component. These two components are integrated through the Shared Data Repository (SDR).

The service assurance interface to the HCS fulfillment subsystem offers two key functions:

- Provides a source of information about services, device inventory, and relationships used by Cisco Prime Central for HCS Assurance to allow events to be “enriched” with customer information
- Allows programmable customer onboarding and provisioning of Cisco Prime Central for HCS Assurance

## Features and Benefits

The following are key features of Cisco Prime Central for HCS Assurance:

- Support for all Cisco Hosted Collaboration Solution (HCS) components including Cisco Unified Communications applications, Cisco Unified Computing System™ (Cisco UCS™) hardware and virtualization layer, data center devices, and storage devices
- Service dashboard providing:
  - Unified, multi-customer, real-time view of fault information including root-cause analysis and service impact analysis, for an overview of aggregated actionable issues
  - Single sign-on (SSO) context-sensitive access to domain managers for further impact analysis and expedited troubleshooting
- Proactive monitoring of key UC and infrastructure issues

- Northbound interface including Simple Network Management Protocol (SNMP) traps in combination with a web services API and syslogs for integration with a provider's OSS/BSS
- Seamless expansion to support hundreds of end customers and thousands of endpoints

**Figure 2.** Cisco Prime Central for HCS Assurance Dashboard

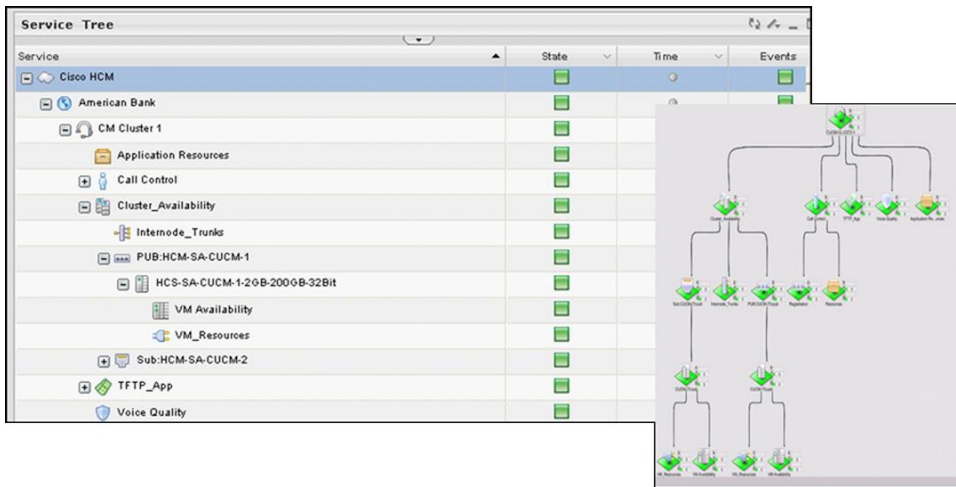


Table 1 provides additional details on features and benefits of Cisco Prime for HCS Assurance.

**Table 1.** Features and Benefits

Feature	Details	Benefits
<b>Architecture</b>		
<b>Web-based interface</b>	Intuitive interface to web-based dashboard.	<ul style="list-style-type: none"> <li>• Eliminates the need to install client applications and manage upgrades on multiple client machines.</li> <li>• Provides quick and easy access to information anywhere, any time.</li> </ul>
<b>Hardware platform</b>	<ul style="list-style-type: none"> <li>• Certified on Red Hat Enterprise Linux operating systems.</li> <li>• Ability to run on both virtualized (tested on the VMware ESXi hypervisor) and bare-metal (nonvirtualized) machines for large-scale deployments.</li> </ul>	<ul style="list-style-type: none"> <li>• Offers deployment flexibility.</li> <li>• Provides for scalability through addition of blades and/or virtual machines (VMs) to allow for more customers and endpoint devices.</li> </ul>
<b>Common User Management and Administration</b>		
<b>Single sign-on access to fully integrated domain managers</b>	<ul style="list-style-type: none"> <li>• Seamless access to the domain managers upon user authentication through the portal.</li> <li>• No requirement for further authorization to access the different domain managers.</li> <li>• Integration with external authentication servers, supporting Lightweight Directory Access Protocol (LDAP), TACACS+, and RADIUS plug-ins.</li> </ul>	<ul style="list-style-type: none"> <li>• Provides robust and simplified security through a central point of access for authentication and authorization control.</li> <li>• Accelerates service assurance tasks.</li> </ul>
<b>Common user management services with role-based access control (RBAC)</b>	Ability to assign user and group rights as well as associate roles/access rights to different components of the suite from a central location.	Helps enable efficient rollout of role-based assignments.

Feature	Details	Benefits
<b>Event/Alarm Management</b>		
<b>Common event/alarm management, de-duplication, normalization, and enrichment</b>	<ul style="list-style-type: none"> <li>Rules and policies process incoming events from the underlying domain managers and normalize them to a common format for forwarding northbound. The normalized event is enriched with customer information.</li> <li>Single dashboard view and management of full alarm/event lifecycle without the requiring the network administrator to access the specific domain manager.</li> <li>Ability to navigate to the source domain manager for advanced troubleshooting.</li> </ul>	<ul style="list-style-type: none"> <li>Helps network operators anticipate problems before the customer calls by promoting quick identification and diagnosis of the problem.</li> <li>Drastically reduces troubleshooting time and MTTR.</li> </ul>
<b>Monitoring HCS auxiliary applications including third-party products</b>	Monitors the VMs, OSs, and processes of auxiliary applications (for example, an LDAP server or other servers used for security) as well as the network management applications.	This self-monitoring capability lets the operator know the state of the system at all times.
<b>OSS Integration</b>		
<b>Standards-based NBI</b>	<ul style="list-style-type: none"> <li>The NBI saves the service provider from having to integrate to five separate domain managers.</li> <li>The NBI provides a mediation layer that shields the OSS/BSS from changes to any underlying domain manager or collaboration service.</li> <li>Cisco Prime Central for HCS provides two different types of northbound interfaces - normalized SNMP trap forwarding as well as web services APIs.</li> </ul>	<p>Extensibility promotes reduced overhead and time required for integration with BSSs/OSSs and other third-party products (for example, sending traps to ticketing systems).</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>If Cisco Prime Unified Operations Manager changes its SNMP trap format, the service provider would have to invest and make the appropriate changes in its OSS. With Cisco Prime for HCS Assurance, the service provider OSS is shielded from these changes and no additional integration work is needed.</li> <li>When HCS adds a new collaboration service and introduces a new associated domain manager, integration between the service provider OSS and the domain manager would be required. With Cisco Prime Central for HCS Assurance, there is no new integration involved. The solution automatically recognizes any new events from the new collaboration service and sends normalized events northbound.</li> </ul>
<b>Simple Network Management Protocol trap forwarder</b>	Ships with an integral SNMP gateway; simple plug-and-play integration for IBM Tivoli Netcool ("Netcool Ready").	<ul style="list-style-type: none"> <li>Simplifies integration with external OSSs by reducing the flood of alarms.</li> <li>Reduces integration costs.</li> <li>Decreased time to resolution of network/service issues.</li> <li>Traps can be simultaneously forwarded to multiple destinations (for example, a ticketing system, a reporting system) that are operated by different teams that need the same fault information.</li> </ul>
<b>Services Dashboard</b>		
<b>NOC operator and network administrator common dashboard</b>	<p>Provides detailed information on the faulty situation across all network layers of the transport network for real-time fault management across all domains.</p> <p>Fault information includes customer-centered, service-aware visualization.</p>	<ul style="list-style-type: none"> <li>Easy-to-visualize format promotes ease of use and the ability to isolate faults quickly.</li> <li>Provides predefined views for operator to quickly group, identify, and isolate faults.</li> </ul>
<b>Cross-domain root-cause analysis</b>	Provides root-cause analysis across both UC and DC domains. A rich data model, the SDR, is the basis for implementing root-cause analysis. Events from the underlying UC and DC domains are correlated based on the data model, which links the service fulfillment system with the service assurance system.	<ul style="list-style-type: none"> <li>Helps enable operators to identify barriers and the causes of problems so that permanent solutions can be found.</li> <li>Helps operators develop a logical approach to problem solving for more rapid fault correction.</li> </ul>

Feature	Details	Benefits
<b>Service impact analysis</b>	The customer service dashboard visualizes service-level impact. Events from underlying domains are translated into service impacts by the customer.	<ul style="list-style-type: none"> <li>• Prime Central for HCS Assurance rates the service impact by severity in a way that is easy for the operator to quickly determine what action to take.</li> <li>• With a wide variety of services, it becomes essential to ensure that any outage is quickly reported to NOC experts so that MTTR can be reduced.</li> </ul>
<b>Rule-based filtering</b>	Provides the ability to filter alarms by domain manager, severity, time, customers.	Expedites troubleshooting and resolution of issues.
<b>Cross-launch capability</b>	<p>All events from underlying UC and DC domains are processed and the solution analyzes all cross-domain service-affecting problems. The following domain managers are supported:</p> <ul style="list-style-type: none"> <li>• Cisco Prime Unified Operations Manager focuses on fault monitoring and diagnosis of the broad portfolio of Cisco Unified Communications applications and infrastructure devices across multiple customers and allows operators to launch phones, alarms, the service-level view, or diagnostics test pages.</li> <li>• Cisco Prime Unified Service Monitor, which is integrated with Cisco Prime Unified Operations Manager, monitors the voice-quality problems and provides call-analysis reports.</li> <li>• Cisco UCS Manager covers the fault management for the Cisco UCS chassis and blades.</li> <li>• Cisco Prime Data Center Network Manager (DCNM): DCNM-LAN monitors the data center devices such as Cisco Nexus® switches, and DCNM-SAN monitors the Cisco MDS storage switches.</li> <li>• VMware's vCenter provides virtual machine monitoring.</li> </ul>	Cisco Prime Central for HCS Assurance domain managers include industry-proven products. Each domain manager brings a comprehensive set of features that help enable more comprehensive monitoring of Cisco HCS components.
<b>Role-based access control</b>	Ability to assign admin or operator roles to users with predefined privileges	Helps control access across the network so that data security is ensured

## Licensing

Like other HCS components, Cisco Prime Central for HCS Assurance is based on a per user/subscriber pricing model.

## System Requirements

Table 2 lists system requirements for Cisco Prime Central for HCS Assurance.

Prime for HCS Installer Overview:

- Install requires Red Hat Enterprise Linux (RHEL) 5.5 64 Bit
- Cisco Prime for HCS Assurance requires five VMs, and each VM has a different role/set of software

**Table 2.** System Requirements

VM Role	RAM	Disk	CPUs
<b>Cisco Prime Central</b>	16 GB	128 GB + RAM Size (for swap)	4
<b>Event Collector</b>	4 GB	128 GB + RAM Size (for swap)	4
<b>Service Visualizer</b>	8 GB	128 GB + RAM Size (for swap)	4
<b>Infrastructure Monitoring</b>	4 GB	128 GB + RAM Size (for swap)	4
<b>Correlation Engine</b>	4 GB	128 GB + RAM Size (for swap)	2

## Ordering Information

To place an order, visit the [Cisco Ordering Homepage](#). To download software, visit the [Cisco Software Center](#). See Table 3 for ordering information.

**Table 3.** Ordering Information

Product Name	Part Number
HCS Cisco Prime Central 1.0 DVD - autoexpand one per order	HCS-CNTRL-1-DVD-K9
HCS Tier 1 Cisco Prime Central bundle for 1000 to 25,000	CENTRAL-1-HCS-T1
HCS Tier 2 Cisco Prime Central bundle for 25,000 to 100,000	CENTRAL-1-HCS-T2
HCS Tier 3 Cisco Prime Central bundle for 100,000 to 250,000	CENTRAL-1-HCS-T3
HCS Tier 4 Cisco Prime Central bundle for 250,000 to 750,000	CENTRAL-1-HCS-T4
HCS Tier 4 Cisco Prime Central bundle for 750,000 to 1.25 million	CENTRAL-1-HCS-T5
HCS Tier 6 Cisco Prime Central bundle for 1.25 million and above	CENTRAL-1-HCS-T6
HCS Cisco Prime Central 1.0 DVD LAB	HCS-CNTRL-1-K9-LAB

## About Cisco Prime

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

## Service and Support

Cisco offers a wide range of services programs to accelerate customer success. These innovative services programs are delivered through a unique combination of people, processes, tools, and partners, resulting in high levels of customer satisfaction. Cisco services help you to protect your network investment, optimize network operations, and prepare the network for new applications to extend network intelligence and the power of your business. For more information about Cisco services, see Cisco Technical Support Services or Cisco Advanced Services.

## For More Information

For more information about Cisco Prime for HCS Assurance, visit <http://www.cisco.com/go/prime-hcs>, contact your local Cisco account representative, or email [prime-hcs@cisco.com](mailto:prime-hcs@cisco.com).

For more information about Cisco Hosted Collaboration Solution, visit <http://www.cisco.com/go/hostedcollab>.




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