Cisco Prime Infrastructure 3.0
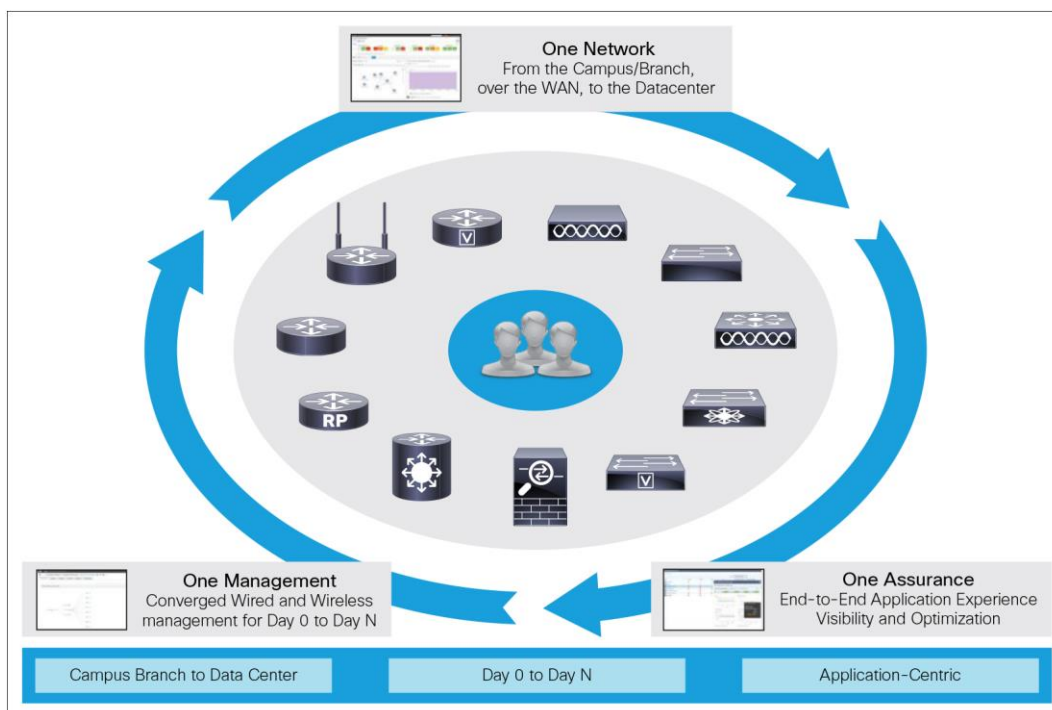
One Management and One Assurance of Enterprise Networks from Campus/Branch to the Data Center

Overview

Rapid change is the new normal. Mobile device proliferation, pervasive voice and video collaboration, and cloud and data center virtualization are transforming the network as never before. The new opportunities around a dynamic and application-centric network bring forth a host of new challenges. There's the need for enhanced network and application visibility, assured end user experience, faster troubleshooting and simplified deployment and management - all the while maintaining business continuity and holding down operational costs.

To address these challenges, IT professionals need a comprehensive solution to manage, visualize and monitor the network from a single graphical interface. Cisco Prime™ Infrastructure provides lifecycle management, assurance visibility and troubleshooting capabilities network wide - from the wireless user in the branch office, across the WAN, and to the data center. In essence it is One Management and One Assurance, for One Network (Figure 1).

Figure 1.   Cisco Prime Infrastructure

Cisco Prime Infrastructure Highlights

Cisco Prime Infrastructure lets you manage your network more efficiently and effectively so you can achieve the highest levels of wireless and wired network performance, service assurance, and application-centric end-user experience.

- **Single-pane-of-glass management:** Cisco Prime Infrastructure delivers a single, unified platform for network service provisioning, monitoring and assurance and change and compliance management. It accelerates device and services deployment and helps you rapidly resolve problems that can affect the end-user experience. It helps minimize the amount of time you spend managing the existing network so you can maximize the time you spend in supporting business growth.

- **Simplified deployment of Cisco® capabilities:** Cisco Prime Infrastructure makes the design and fulfillment of Cisco differentiated features and services fast and efficient. With out-of-the-box support for technologies such as Intelligent WAN (IWAN), Distributed Wireless with Converged Access, Application Visibility and Control (AVC), Zone-Based Firewall, and Cisco TrustSec® 2.0 Identity-Based Networking Services, it helps you get the most from the intelligence built in to your Cisco devices as quickly as possible.

- **Deep Application Visibility:** Cisco Prime Infrastructure configures and uses embedded Cisco instrumentation and industry-leading technologies for application visibility and network policy optimization. These technologies include NetFlow, Network-Based Application Recognition 2 (NBAR2), Simple Network Management Protocol (SNMP) and more. Cisco Prime Infrastructure can also trigger capture, processing and drill-down into application performance and packet diagnostics data from distributed Cisco Network Analysis Module (NAM) deployments.

- **Comprehensive coverage of enterprise mobility:** Cisco Prime Infrastructure delivers pinpoint visibility into the who, what, when, where, and how of wireless access through its own data collection and key integrations. It includes 802.11ac support; correlated wired-wireless client visibility; unified access infrastructure monitoring; spatial mapping; integrated security and policy application and troubleshooting with [Cisco Identity Services Engine](#) (ISE) integration; integrated location-based tracking of interferers, rogues, and Wi-Fi client reporting with [Cisco Mobility Services Engine](#) (MSE) and Cisco CleanAir® integration; RF prediction tools; and more.

- **Unified assurance across network and compute:** Cisco Prime Infrastructure delivers scalable management and service assurance across the breadth of enterprise infrastructure in your branch-office, campus, and data center networks including network equipment, UCS servers and virtual machines. The ability to track a user in the branch connecting via a mobile or wired device, all the way to a compute resource in the data center is essential to faster onboarding, remediation and troubleshooting.

- **Centralized visibility of distributed networks:** Large or global organizations often distribute network management by domain, region, or country. Cisco Prime Infrastructure Operations Center lets you visualize up to 10 Cisco Prime Infrastructure instances, scaling your network-management capability while maintaining centralized visibility and control. **What is new in Prime Infrastructure 3.0?**

Building on top of PI 2.2, Cisco Prime Infrastructure 3.0 offers many new capabilities and a few of these are highlighted below.

- **Platform Enhancements:**
  - **New User Interface:** Modern user interface with HTML 5.0 (and removal of flash) provides operators with a quick and easy view to isolate issues in the network and identify root cause remediation. The new interface also allows customers to have a superior experience whether they are using a tablet or a traditional PC.
  - **Alarm Customization:** Network operators have the ability to customize alarms based on the operational needs of the enterprise. Customizable syslog based alarms provides the ability to custom create new alarms and prioritize operator response.
  - **Correlated Performance Graphs:** Correlated charts enable administrators to carry out comparative troubleshooting of network KPIs. The overlay of alarms and configuration change events in the correlated graphs helps connect network change events to performance degradation/improvements.
  - **Configuration Compliance:** With the addition of a compliance engine, the product provides operators the ability to specify the golden network configuration and perform an audit of the network devices against the configuration archive or the device configuration. The audit report identifies devices that are out of compliance. Operators can remediate the devices that are out of compliance with the desired configuration. This engine also helps with generating reports for EoL/EoS/PCI for network devices.
  - **Japanese Localization Support:** Provides alternative UI support in Kanji.
- **Wireless Management:** Simplified client troubleshooting enables network operators to easily identify the root cause of client issues in a graphical format, speeding up problem identification and resolution. Rogue management and troubleshooting is simplified with enhancements to switch port tracing (SPT) to identify rogue devices on the wire in the network.
- **Routing - Intelligent WAN (IWAN) management:** Guided workflows based on Cisco Validated Designs and best practices radically simplifies deployment and management of Cisco IWAN devices and services. The workflow speeds up provisioning of services such as Dynamic Multipoint VPN (DMVPN) and Performance Routing (PfR) and simplifies quality-of-service (QoS) configuration and monitoring. The new PfR monitoring dashboard provides visibility into how application path optimization is working on alternative transport routes and aids troubleshooting of route change events driven by IWAN.
- **Data Center Management:** Prime 3.0 extends coverage to compute infrastructure management supporting inventory, fault, configuration and performance for UCS B-series blade and C-series rack servers integrated with Service Profile management. Integration with VMware vCenter supports monitoring and visualization of virtualized servers and VMware hypervisors operating on UCS underlay hosts. The release includes FCAPS support for all Nexus platforms in the data center from N2K-9K. Operators can view underlay and overlay performance characteristics for the network devices in a single user interface with the added support for VPC and VDC.
- **APIC-EM Integration:** Integration with the Enterprise SDN Controller (APIC-EM), provides the ability to automate new device deployment using Zero Touch Provisioning capabilities (https based PnP agent) in the Cisco network devices. In addition, PI can request the APIC-EM PKI (Public Key Infrastructure) Service to securely deploy a route with PKI for an IWAN deployment with DMVPN.

Ordering and Licensing Information

For details refer to the [Cisco Prime Infrastructure 3.0 Ordering and Licensing Guide](#). The ordering guide will be posted in mid-September 2015 prior to orderability. The guide also provides information about obtaining an evaluation copy of Prime Infrastructure 3.0.

Product Specifications

Table 1 below provides product specifications for the various virtual and physical appliance deployment options supported by Cisco Prime Infrastructure.

Table 1.   Product Specifications for Cisco Prime Infrastructure 3.x

VMware	VMware ESXi Version 5.1, 5.5				
Virtual appliance resource requirements	Recommended Virtual Appliance	vCPU (Virtual CPUs)	Memory (DRAM)	Minimum Hard Disk Drive Size**	Disk Input/output Bandwidth
	Express	4	12 GB	300 GB	200 MBps
	Express Plus	8	16 GB	600 GB	200 MBps
	Standard	16	16 GB	900 GB	200 MBps
	Pro	16	24 GB	1200 GB	320 MBps**
Physical appliance specifications	Physical Appliance*	CPU	Memory (DRAM)	Hard Disk Drive Size	Disk Input/output Bandwidth
	(Gen 2) Cisco Prime Appliance	10 Core Physical CPUs - 20 Threads	64 GB	4 x 900GB RAID10	320 MBps**

* Hard Disk Drive sizes mentioned above are the VM sizes for thick allocation. It is recommended to leave an additional 50% of space free in the data-store of the VM, to allow taking snapshots of the VM when required, as snapshots will take additional space.

** Customers upgrading from PI 2.2 to PI 3.0 are recommended to configure Disk I/O Bandwidth to 320 Mbps to minimize performance degradation.

Technical Services

Cisco Prime Infrastructure 3.0 is available with the new Cisco Software Support Service (SWSS), which provides reactive maintenance support in the form of technical support, access to Cisco.com, software support, and access to major and minor upgrades from the Cisco.com software download site during the service contract term. For more information, please refer to the [Cisco Software Support Service](#) description.

The Cisco Prime Appliance option comes with a Cisco 90-day hardware warranty. Adding a contract for a technical service offering to your device coverage, such as Cisco SMARTnet® Service, provides access to the Cisco TAC and can provide a variety of hardware replacement options to meet critical business needs, updates for licensed operating system software, and registered access to the extensive Cisco.com knowledge base and support tools.

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