Cisco Configuration Engine 3.5

Product Overview

Deployment of the network and services to remote offices and branch offices is a major challenge to large network operations. Typically, this process involves a manual staging process in a central distribution site to preconfigure the devices—and often requires technical personnel to be at the remote site to set up the network and services. The requirement for staging and presence of technical expertise in the remote site significantly increases the time, coordination, and costs of deployment. Further, as services are becoming more dynamic, the speed of configuration changes, and device image upgrades increase, the ongoing costs of service additions and tune-ups can significantly increase operating expenses (OpEx).

The Cisco® Configuration Engine is a network management software application that runs on RHAT Linux, Solaris, or VMware. The Cisco Configuration Engine provides a highly scalable, secure, and reliable solution for remote deployment. By taking advantage of intelligent agents inside Cisco IOS® Software, the Cisco Configuration Engine enables the “call-home” architecture, where a new device—with minimal and identical bootstrap configuration to identify where the Cisco Configuration Engine is—can automatically connect with the Cisco Configuration Engine and ask for the correct configuration. Using the embedded features in Cisco IOS Software, a Cisco Configuration Engine -enabled solution can even achieve a true zero-touch deployment (ZTD) where no configuration is needed to set up the network. This true or near-ZTD solution can dramatically lower the OpEx. Many existing customers have achieved an order of magnitude savings on time and costs for setting up remote sites.

Further, after the connections between the Cisco Configuration Engine and the remote devices are established, these connections form a highly distributive delivery system for configuration updates and device image upgrades, enabling the remote network to be managed and updated efficiently.

What Is New for Cisco Configuration Engine 3.5

The Cisco Configuration Engine Version 3.5 includes the following important new features:

- Operating-system support:
  - Solaris 10
  - Red Hat Linux 4.0 and 5.0
- VMware support
- Automated port assignment: This enhancement simplifies the bootstrap configuration process by allowing the Cisco Configuration Engine to dynamically assign the port number for device to Cisco Configuration Engine connections. With this feature, the bootstrap configuration is the same across all remote devices, regardless of the number of devices being managed.
- External user authentication with Microsoft Active Directory: This feature provides the flexibility of user authentication using an external Active Directory in addition to server-based local authentication.
- Dual-zone support: This feature allows the separation of different network zones between device access and the Cisco Configuration Engine application, providing more flexibility for security zoning requirements.
- Support of Cisco Unique Device Identifier (UDI) as device identification: This feature allows use of the Cisco product UDI as the unique device identification.
- Secure FTP support: With this feature, you can securely import and export configuration templates using Secure FTP.

Table 1 lists the features and benefits of Cisco Configuration Engine 3.5, Table 2 lists the devices supported by the application, and Table 3 lists system requirements.

Table 1. Features and Benefits

Features	Benefits
Zero-touch deployment	Zero-touch deployment significantly reduces time and costs of securely deploying remote devices without the need for device staging or sending technical personnel onsite.
Highly scalable configuration services	Scalable configuration services allow for mass-scale configuration changes. You can deliver configuration changes to thousands of devices in minutes rather than hours. You can flexibly schedule the configuration changes to ensure minimal effect on network and service availability.
Highly scalable image services	Cisco Configuration Engine provides a highly scalable solution for device software image upgrade. You can upgrade images in an order-of-magnitude less time than with Telnet-based network management applications. You can flexibly schedule the image upgrades to ensure minimal effect on network and service availability.
Flexible-velocity template engine	The flexible-velocity template engine allows for highly customizable template management to meet your business and operation requirements. You can easily import individual remote parameters to generate configuration for the remote devices. The Cisco Configuration Engine also supports scripting languages such as Java and Perl for flexible workflow control.
Web-based GUI	The feature-rich web GUI allows for a simple yet powerful all-in-one solution for deploying and managing tens of thousands of devices.
Flexible integration with other operations support systems/business support systems (OSSs/BSSs)	The flexible Software Development Kit (SDK) allows integrations between Cisco Configuration Engine and other OSSs and BSSs. Using XML and Simple Object Access Protocol (SOAP) Web Service Definition Language (WSDL), you can streamline your entire deployment process. The Cisco Configuration Engine also allows administrator and user login using external Active Directory authentication servers.
Device-module development for nonagent devices	Southbound application programming interfaces (APIs) support your scripts to communicate to devices, allowing the Cisco Configuration Engine to be the single management application for all your devices.

Table 2. Devices Supported by Cisco Configuration Engine 3.5

Cisco IOS Software Platform	
Access routers	• Cisco 1900, 2900, and 3900 Integrated Services Routers Generation 2 (ISR G2) routers • Cisco 800 Series Integrated Services Routers • Cisco 1800 Series Integrated Services Routers • Cisco 2800 Series Integrated Services Routers • Cisco 3200 Series Rugged Integrated Services Routers • Cisco 3800 Series Integrated Services Routers • Cisco SOHO 70 and SOHO 90 Series Routers • Cisco 1700 Series Modular Access Routers • Cisco 2600 Series Multiservice Platforms • Cisco 3600 Series Multiservice Platforms • Cisco 3700 Series Multiservice Access Routers • Cisco Unified Communications 500 Series for Small Business • Cisco SR 500 Series Secure Routers
Gateways	• Cisco AS5300 Series Universal Gateways • Cisco AS5400 Series Universal Gateways • Cisco AS5800 Series Universal Gateways • Cisco IAD2400 Series Integrated Access Devices • Cisco IAD880 Series Integrated Access Devices

Cisco IOS Software Platform	
Access and metropolitan switches	• Cisco Catalyst® 2950 Series Switches • Cisco Catalyst 2960 Series Switches • Cisco Catalyst 3550 Series Switches • Cisco Catalyst 3560 Series Switches • Cisco Catalyst 3560-E Series Switches • Cisco Catalyst 3750 Series Switches • Cisco Catalyst 3750-E Series Switches • Cisco Catalyst 4500 Series Switches • Cisco ME 3400 Series Ethernet Access Switches • Cisco ME 3400E Series Ethernet Access Switches • Cisco ME 3750 Metro Series Switches • Cisco ME 4900 Series Ethernet Switches • Cisco Catalyst 6500 Series Switches
Aggregation and core routers	• Cisco 7200 Series Routers • Cisco 7300 Series Routers • Cisco 7500 Series Routers • Cisco ASR 1000 Series Aggregation Services Routers • Cisco ASR 900 Series Aggregation Services Routers • Cisco 7600 Series Routers • Cisco 10000 Series Routers • Cisco 10700 Series Routers • Cisco 12000 Series Routers
Mobile wireless routers	• Cisco MWR 1900 Mobile Wireless Routers • Cisco MWR 2900 Mobile Wireless Routers

The Cisco Configuration Engine also supports the following platforms through the Secure Shell (SSH) Protocol:

- Cisco IOS Software devices that do not support IOS deployment agents
- Cisco Catalyst OS devices that do not support CNS agents
- Cisco CSS 11000 Series Content Services Switches
- Cisco VPN 3000 Series Concentrators
- Cisco access points
- Cisco PIX® devices

Note: For ZTD of Cisco IOS Software devices using the Cisco Configuration Engine, you must order the devices without any configuration. For Cisco ISR and ISR G2 routers, please use the ISR-CCP-EXP-NOCONF or ISR-CCP-CD-NOCONF option when ordering Cisco 1900, 2900, and 3900 routers, and use the CCP-EXPRESS-NOCF or CCP-CD-NOCF option when ordering Cisco 800, 1800, 2800, and 3800 routers.

Table 3. System Requirements

Linux Platform (Red Hat v4.0 and v5.0)	Solaris Platform (Solaris 10)
Recommended hardware for 20,000 devices: • Intel Xeon processors: Four 2.33-GHz processors • 4-GB RAM • Hard drive: 72-GB	**Recommended hardware for 30,000 devices:** • Sun T1000, 8-core, 1.0-GHz UltraSPARC T1 processor • 16-GB RAM • Hard drive: 146-GB, 10,000 revolutions per minute (RPM) serial attached SCSI (SAS) drive
Minimum hardware for 5,000 devices: • CPU: Intel Pentium III • 1-GB RAM • Hard drive: 40-GB	**Minimum hardware for 10,000 devices:** • CPU: Sun Sparc • 1-GB RAM • Hard drive: 40-GB

Note: VMware guest OS system requirements are the same as for the Linux requirement given in the table.

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For more information about Cisco services, refer to Cisco Technical Support Services or Cisco Advanced Services.

For More Information

For more information about the Cisco Configuration Engine, visit http://www.cisco.com/en/US/products/sw/netmgtsw/ps4617/index.html or contact your local Cisco account representative.

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