

Cisco Data Center Network Manager 4.1

PB512105

Cisco Data Center Network Manager (DCNM) 4.1 is a comprehensive administration solution dedicated to data center network operations. The key advantages Cisco DCNM follow:

- **Multiprotocol awareness:** Manages Ethernet, IP, and network security
- **Fault, configuration, accounting, performance, and security (FCAPS) coverage:** Offers full network service lifecycle administration with emphasis on provisioning, performance and assurance
- **Data center-focused:** Manages innovative data center features
- **Open application:** Features a middleware application programming interface (API) that exposes stateful network information to third-party applications
- **Application for current and next-generation data center:** Designed for Cisco NX-OS operating system-enabled hardware platforms; Cisco NX-OS provides the foundation for the Cisco Nexus product family, including the Cisco Nexus 7000 Series

Table 1 lists application features.

Table 1. Application Features

Software Feature	Description
Discovery	Cisco DCNM features a powerful and automated discovery subsystem. Continuous resynchronization is ensured by capturing change events sent from the network, allowing for maintenance of an accurate representation of the network.
Inventory	An itemized record of network characteristics such as physical asset details and logical resource details is displayed.
Topology Views	Cisco DCNM user interface is optimized for efficiency, with multiple network views available simultaneously. An easy to read and customizable network map displays the physical network. On top of this L1 view, a L2 logical view highlighting active VLAN can be overlaid.
Configuration	Syntax checks are performed during the data entry phase. Network change requests are validated for feasibility against the current network state as well as against domain rules before deployment to the device.
Resource Management	Configuration can be archived and analyzed for differences. An advanced roll back feature facilitates the recovery to a stable configuration state. Non disruptive In Service Software Upgrade Upgrades (ISSU) can be scheduled on multiple devices simultaneously. Before the upgrade is attempted, several validation checks are performed.
Performance monitoring	Traffic statistics and their fluctuations are tracked in real time.
Fault management	Network alarms are collected and displayed in the Event Browser.
Application security	Role-based access control allows for arrangement of different levels of management privileges for different users.
General network features supported	<ul style="list-style-type: none"> • Virtual Device Contexts • Virtual PortChannel • Gateway Load Balancing Protocol (GLBP), Object Tracking, and Key Chain • HSRP • Hardware resource use with ternary content addressable memory (TCAM) statistics • Switched Port Analyzer (SPAN)

Software Feature	Description
Ethernet switching features supported	<ul style="list-style-type: none"> • Port and PortChannel • VLAN and private VLAN (PVLAN) • Spanning Tree Protocol (Rapid Spanning Tree Protocol [RSTP] and Multiple Instance Spanning Tree Protocol [MISTP])
Network security features supported	<ul style="list-style-type: none"> • Access control list (ACL) • IEEE 802.1X • Authentication, authorization, and accounting (AAA) • Dynamic Host Configuration Protocol (DHCP) Snooping • Dynamic Address Resolution Protocol (ARP) Inspection • IP Source Guard • Traffic Storm Control • Port Security
GUI	The Cisco DCNM GUI is a thin client that implements Java Web Starts, which automatically downloads, on startup, client updates from the server. This mechanism completely decouples the client from Java (Java Runtime Environment [JRE]) dependencies.
API	<p>Cisco DCNM offers two sets of APIs: Java and Web Services. Network setting and network state information is easily accessible through the well-defined and extensible Web Services (Simple Object Access Protocol [SOAP] and Extensible Markup Language [XML]) API, facilitating northbound integration with industry standard third-party applications. The use of the Web services API offers several advantages:</p> <ul style="list-style-type: none"> • Extensibility: The API helps ensure backward compatibility between releases and greatly decreases the need for sustained engineering effort. • Interoperability: Most common programming languages can be used to enable application integration.

System Compatibility

- Supported OS: Cisco NX-OS Software Release 4.1
- Supported hardware:
 - Cisco Nexus 7000 Series 10-Slot Chassis
 - Cisco Nexus 7000 Series 18-Slot Chassis

System Specifications

Cisco DCNM is a Java-based client-server software application that allows the client to be remote.

The software can be installed on a Windows Server running Windows Server 2003 or a Linux Server running Red Hat Enterprise Linux. The client requires Windows XP Professional.

Protocols

Cisco DCNM uses the following standard protocols:

- Secure Shell (SSH) Protocol and Secure Sockets Layer (SSL)
- HyperText Transport Protocol Secure (HTTPS)
- Remote Method Invocation (RMI)

Licensing

Cisco DCNM is available as one application bundle.

Ordering Information

To place an order, visit the [Cisco Ordering homepage](#). To download software, visit the [Cisco Software Center](#).

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 protect your network investment, optimize network operations, and prepare your network for new applications to extend network intelligence and the power of your business. 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 DCNM software, visit the product homepage at <http://www.cisco.com/go/dcnm> or contact your local Cisco account representative.



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