

# Cisco Data Center Network Manager Release 4.0

PB439577

Cisco Data Center Network Manager (DCNM) 4.0 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
<b>Discovery</b>	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.
<b>Inventory</b>	An itemized record of network characteristics such as physical asset details and logical resource details is displayed.
<b>Configuration</b>	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.
<b>Performance monitoring</b>	Traffic statistics and their fluctuations are tracked in real time.
<b>Fault management</b>	Network alarms are collected and displayed in the Event Browser.
<b>Application security</b>	Role-based access control allows for arrangement of different levels of management privileges for different users.
<b>General network features supported</b>	<ul style="list-style-type: none"> <li>• Virtual Device Contexts</li> <li>• Gateway Load Balancing Protocol (GLBP), Object Tracking, and Key Chain</li> <li>• Hardware resource use with ternary content addressable memory (TCAM) statistics</li> <li>• Switched Port Analyzer (SPAN)</li> </ul>
<b>Ethernet switching features supported</b>	<ul style="list-style-type: none"> <li>• Port and PortChannel</li> <li>• VLAN and private VLAN (PVLAN)</li> <li>• Spanning Tree Protocol (Rapid Spanning Tree Protocol [RSTP] and Multiple Instance Spanning Tree Protocol [MISTP])</li> </ul>

<b>Network security features supported</b>	<ul style="list-style-type: none"> <li>• Access control list (ACL)</li> <li>• IEEE 802.1X</li> <li>• Authentication, authorization, and accounting (AAA)</li> <li>• Dynamic Host Configuration Protocol (DHCP) Snooping</li> <li>• Dynamic Address Resolution Protocol (ARP) Inspection</li> <li>• IP Source Guard</li> <li>• Traffic Storm Control</li> <li>• Port Security</li> </ul>
<b>IP Routing and Multicast features supported</b>	These features are planned for a future release.
<b>GUI</b>	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.
<b>API</b>	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 third-party applications for flow-through provisioning and data mining. The Web Services API technology is self-describing and extensible, keeping operating expenses (OpEx) related to upgrade and migration to a minimum.

### System Compatibility

- Supported OS: Cisco NX-OS Software Release 4.0
- Supported hardware: Cisco Nexus 7000 Series 10-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. Detailed client and server requirements are as follows:

- Windows Server requirements:
  - OS: Windows Server 2003 Standard Edition Service Pack 1
  - RAM: 6 GB
  - Number of processors: 2
  - CPU speed: 3.45 GHz
- Linux Server requirements:
  - OS: Red Hat Enterprise Linux AS Release 4
  - RAM: 6 GB
  - Number of processors: 2
  - CPU speed: 3.40 GHz
- Client requirements:
  - OS: Microsoft Windows XP Professional Version 2002 Service Pack 2
  - RAM: 1 GB
  - CPU speed: 2.16 GHz

## Protocols

Cisco DCNM uses the following standard protocols:

- Secure Shell (SSH) Protocol
- 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 to help accelerate your success deploying and optimizing Cisco Nexus 7000 Series Switches in your data center. Our innovative services are delivered through a unique combination of people, processes, tools, and partners, and are focused on helping you increase operational efficiency and improve your data center network. Cisco Advanced Services use an architecture-led approach to help you align your data center infrastructure to your business goals and provide long-term value. Cisco SMARTnet<sup>®</sup> Service helps you resolve mission critical problems with direct access anytime to Cisco network experts and award-winning resources. With this service, you can take advantage of the Smart Call Home service capability that offers proactive diagnostics, and real-time alerts on your Cisco Nexus 7000 switches. Spanning the entire network lifecycle, Cisco Services help maximize investment protection, optimize network operations, provide migration support, and strengthen your IT expertise. For more information about Cisco Data Center Services, visit: <http://www.cisco.com/go/dcservices>.

## 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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