

Cisco Prime Data Center Network Manager 6.3

Product Overview

Modern data centers are becoming increasingly massive and complex. Proliferation of new technologies such as virtualization is adding yet another level of complexity while enabling higher workloads to be placed on the network. Innovations such as Cisco® Unified Fabric unify storage and data networking to deliver convergence, scalability, and intelligence with reduced total cost of ownership (TCO) and faster return on investment (ROI). IT departments today are challenged to look beyond traditional silos of networking and storage to manage this converged, virtualized data center as a service. Meeting this challenge calls for unification of the management plane to enable holistic management of the data center infrastructure.

Cisco Prime™ Data Center Network Manager (DCNM) provides centralized management of both Ethernet and Fibre Channel networks in context of compute and storage array devices (Figure 1). This converged view enables network and storage administrators to analyze health and performance, regardless of the protocol used, across platforms running the Cisco NX-OS Software operating system, which is used by the Cisco Nexus® and Cisco MDS 9000 Families. The supported protocols and overlays include Fibre Channel, Fibre Channel over Ethernet (FCoE), Ethernet, IBM Fibre Connection (FICON), Small Computer System over IP (iSCSI), Cisco FabricPath, and Cisco Overlay Transport Virtualization (OTV). Cisco Prime DCNM simplifies deployment of SAN and LAN components through wizard- and template-based provisioning and configuration. Role-based access control (RBAC) helps separate configuration of LAN and SAN networks on converged network switches. Cisco Prime DCNM supports TACACS+, RADIUS, and Lightweight Directory Access Protocol (LDAP) remote authentication protocols to help manage user access to the network and provide an audit trail of the changes made by the user.

Figure 1. Converged View of Ethernet and Fibre Channel Networks in the Context of Compute and Storage



Summary of New Features and Enhancements

The following lists provide an overview of the new features and enhancements in Cisco Prime DCNM 6.3(1).

New features include:

- JBoss middleware upgrade
- Enhanced topology
- Custom port groups
- LAN scalability enhancement
- IBM FICON support, introduced in Cisco Prime DCNM 6.2(5a)
- Breakout cable support
- Red Hat Enterprise Linux (RHEL) 6.4 support

New hardware support includes:

- Cisco Nexus 9300 platform switches
- Cisco Nexus 9500 platform switches in Cisco Prime DCNM 6.2(5)
- Cisco Nexus 7000 F3-Series modules
- Cisco Nexus 7000 Series Switches breakout cable support
- Cisco MDS 9700 Series Multilayer Directors FCoE module
- Cisco Nexus 5600 platform switches in Cisco Prime DCNM 6.2(5)
- Cisco MDS 9250i Multiservice Fabric Switch in Cisco Prime DCNM 6.2(5)
- Hitachi Data Systems (HDS) storage array support, added to existing EMC and NetApp support

Product changes include:

- Cisco Prime DCNM LAN client clustering has been deprecated in Cisco Prime DCNM 6.3(1).
- Cisco Prime DCNM LAN client Link Layer Discovery Protocol (LLDP) host tracking has been deprecated in Cisco Prime DCNM 6.3(1).
- Support for Cisco Prime DCNM virtual service blade (VSB) on the Cisco Nexus 1010 appliance will be available in DCNM 6.3(2) release. This will be the last release supporting DCNM VSB on Nexus 1010. DCNM VSB support will move to Nexus 1110 starting with Cisco Prime DCNM 7.1 release.
- Cisco Prime DCNM is no longer being tested with the Microsoft Windows 2003 operating system.
- Cisco Prime DCNM is no longer being tested on 32-bit Windows and Linux operating systems
- The Cisco Prime DCNM LAN client no longer limits discovery to 50 switches and can now support up to 150 switches or 5000 ports, whichever comes first.

Main New Features and Enhancements

The main new features and enhancements in Cisco Prime DCNM 6.3 include:

- Enhanced topology in the web client:
 - Capability to filter by VSAN and VLAN
 - Identification of hot spots on the links and switches
 - Enhanced switch icons and Inter-Switch Link (ISL) and trunk breakout
 - Zoom-in and zoom-out feature and selection
- JBoss middleware upgrade to address security vulnerabilities and move from 32-bit to 64-bit for enhanced application performance
- Capability to create custom port groups related to tenants, applications, or organizations for performance reporting
- Capability to create custom port groups based on priority of application and severity level and apply rule-based event forwarding to notify the event management system or user of traps and syslog events
- Snooze events based on custom port definition
- Enhanced LAN scalability

Upgrade Paths

Customers can upgrade their Cisco Prime DCNM server software as shown in Table 1.

Table 1. Cisco Prime DCNM Server Upgrade Paths

Customer Type	Upgrade Path
Customers using Cisco Prime DCNM 6.0 releases with Cisco Prime DCNM switch licenses under valid service contract	Users can upgrade to Cisco Prime DCNM 6.3 at no additional cost by downloading the release software image. Cisco Prime DCNM switch licenses are installed on the Cisco Prime DCNM server.
Customers using Cisco Prime DCNM 5.2 or earlier servers with Cisco Prime DCNM switch licenses under valid service contract	Users can upgrade to Cisco Prime DCNM 6.3 at no additional cost by downloading the release software image. To retain existing data, this upgrade may require intermediate upgrades as described in Cisco DCNM Installation and Licensing Guide, Release 6.0 . Cisco Prime DCNM switch licenses are installed on the Cisco Prime DCNM server.
Customers using Cisco Fabric Manager server software with Cisco Fabric Manager licenses under valid service contract	Users can upgrade to Cisco Prime DCNM 6.2 at no additional cost by downloading the release software image. To retain existing data, this upgrade may require intermediate upgrades to the latest edition of Cisco Fabric Manager and then to Cisco Prime DCNM 5.2 prior to the upgrade to Cisco Prime DCNM 6.3, as described in Cisco DCNM Installation and Licensing Guide, Release 6.0 . Cisco Fabric Manager switch licenses are installed on the managed switches, not on the Cisco Prime DCNM server.

Customers with the Cisco Prime DCNM NXACC switch license under a valid service contract should follow the additional guidance in Table 2.

Table 2. Customers with Cisco Nexus Access Switch License

Customer Type	Upgrade Path
Customers with promotional Cisco Prime DCNM NXACC switch licenses under valid service contract: <ul style="list-style-type: none"> • DCNM-L-NXACC9 • DCNM-NXACC-100-K9 • DCNM-NXACC-250-K9 	The Cisco Prime DCNM NXACC advanced feature licenses are neither recognized nor supported by Cisco Prime DCNM Release 6.0. The end-of-sale for Cisco Prime DCNM NXACC licenses was effective as of March 15, 2014. Customers must now purchase licenses for managing Cisco Nexus 5000 Series Switches. Customers who want to transfer to new Cisco Prime DCNM licenses should contact Cisco licensing through September 15, 2014; after this date, these promotional licenses will no longer be upgraded free of charge. Please refer to the following end-of-life and end-of-sale notices: Cisco Prime DCNM 5.0: http://www.cisco.com/c/en/us/products/collateral/cloud-systems-management/prime-data-center-network-manager/end_of_life_notice_c51-729550.html Cisco Prime DCNM 4.0: http://www.cisco.com/c/en/us/products/collateral/cloud-systems-management/prime-data-center-network-manager/end_of_life_notice_c51-729551.html

Ordering Information

Cisco Prime DCNM can be licensed for SAN and LAN environments separately or together. Most Cisco Prime DCNM features used for provisioning and discovery are available for free with the base image (Essentials Edition); advanced features require a license to unlock them (Table 3). Cisco Prime DCNM is priced by switch platform and licensed according to the number of switches on the platform. In addition, a yearly service contract is required to upgrade from one major release to another. For information about free and licensed features, please see the Cisco Prime DCNM Installation and Licensing Guide, Release 6.0 at http://www.cisco.com/en/US/products/ps9369/prod_installation_guides_list.html.

Table 3. Cisco Prime DCNM Ordering Information

Product Name	Electronic Part Numbers	Physical Part Numbers	Chassis Part Numbers
DCNM for SAN Advanced Edition for MDS 9100	L-DCNM-S-M91-K9=	DCNM-SAN-M91-K9=	DCNM-SAN-M91-K9
DCNM for SAN Advanced Edition for MDS 9200	L-DCNM-S-M92-K9=	DCNM-SAN-M92-K9=	DCNM-SAN-M92-K9
DCNM for SAN Advanced Edition for MDS 9500	L-DCNM-S-M95-K9=	DCNM-SAN-M95-K9=	DCNM-SAN-M95-K9
DCNM for SAN Advanced Edition for MDS 9700	L-DCNM-S-M97-K9=	DCNM-SAN-M97-K9=	DCNM-SAN-M97-K9
DCNM for SAN Advanced Edition for Nexus 5000	L-DCNM-S-N5K-K9=	DCNM-SAN-N5K-K9=	DCNM-SAN-N5K-K9
DCNM for SAN Advanced Edition for Nexus 6001	L-DCNM-S-N61-K9=	DCNM-SAN-N61-K9=	DCNM-SAN-N61-K9
DCNM for SAN Advanced Edition for Nexus 6004	L-DCNM-S-N64-K9=	DCNM-SAN-N64-K9=	DCNM-SAN-N64-K9
DCNM for SAN Advanced Edition for Nexus 7000	L-DCNM-S-N7K-K9=	DCNM-SAN-N7K-K9=	DCNM-SAN-N7K-K9
DCNM for SAN Advanced Edition for Nexus 7700	L-DCNM-S-N77-K9=	DCNM-SAN-N77-K9=	DCNM-SAN-N77-K9
DCNM for LAN Advanced Edition for Nexus 3000	L-DCNM-L-N3K-K9=	DCNM-LAN-N3K-K9=	DCNM-LAN-N3K-K9
DCNM for LAN Advanced Edition for Nexus 5000	L-DCNM-L-N5K-K9=	DCNM-LAN-N5K-K9=	DCNM-LAN-N5K-K9
DCNM for LAN Advanced Edition for Nexus 6001	L-DCNM-L-N61-K9=	DCNM-LAN-N61-K9=	DCNM-LAN-N61-K9
DCNM for LAN Advanced Edition for Nexus 6004	L-DCNM-L-N64-K9=	DCNM-LAN-N64-K9=	DCNM-LAN-N64-K9
DCNM for LAN Advanced Edition for Nexus 7000	L-DCNM-L-N7K-K9=	DCNM-LAN-N7K-K9=	DCNM-LAN-N7K-K9
DCNM for LAN Advanced Edition for Nexus 9300 [new]	L-DCNM-L-N93-K9=	DCNM-LAN-N93-K9=	DCNM-LAN-N93-K9
DCNM for LAN Advanced Edition for Nexus 9500 [new]	L-DCNM-L-N95-K9=	DCNM-LAN-N95-K9=	DCNM-LAN-N95-K9
DCNM SAN & LAN Advanced Edition for Nexus 5000	NA	DCNM-LS-N5K-K9=	DCNM-LS-N5K-K9
DCNM SAN & LAN Advanced Edition for Nexus 6001	L-DCNM-LS-N61-K9=	DCNM-LS-N61-K9=	DCNM-LS-N61-K9
DCNM SAN & LAN Advanced Edition for Nexus 6004	L-DCNM-LS-N64-K9=	DCNM-LS-N64-K9=	DCNM-LS-N64-K9
DCNM SAN & LAN Advanced Edition for Nexus 7700	L-DCNM-LS-N77-K9=	DCNM-LS-N77-K9=	DCNM-LS-N77-K9

Supported Technologies and Platforms

Cisco Prime DCNM is designed to help customers efficiently implement and manage next-generation virtualized data centers. Cisco Prime DCNM provides support for Cisco Nexus and Cisco MDS 9000 Family hardware and the common operating system, Cisco NX-OS. Please see the computability matrix for more detailed information about Cisco NX-OS and platform support

(http://www.cisco.com/c/en/us/td/docs/switches/datacenter/sw/6_x/dcnm/compmatrix/compatability_matrix.html).

Service and Support

Using the Cisco Lifecycle Services approach, Cisco and its partners provide a broad portfolio of end-to-end services and support that can help increase your network's business value and ROI. This approach defines the minimum set of activities needed, by technology and by network complexity, to help you successfully deploy and operate Cisco technologies and optimize their performance throughout the lifecycle of your network.

For More Information

For more information about the Cisco Prime DCNM software, send an email to ask-dcnm@cisco.com, visit the product homepage at <http://www.cisco.com/go/dcnm>, or contact your local account representative.



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