

## Cisco Fabric Manager Server Package

### Package Description

The standard Cisco<sup>®</sup> Fabric Manager software that is included at no charge with the Cisco MDS 9000 Family and Cisco Nexus<sup>®</sup> 5000 Series Switches provides basic switch configuration and troubleshooting capabilities. The Cisco Fabric Manager Server (FMS) Package extends standard Cisco Fabric Manager by providing server federation, historical performance monitoring for network traffic hotspot analysis, centralized management services, and advanced application integration. All standard Cisco Fabric Manager features and functions are fully integrated with the Cisco FMS capabilities.

### Server Federation

Large-scale fabrics with an aggregate of many thousands of ports require scalability for fabric discovery, performance monitoring, and event handling processes. Cisco Fabric Manager Server federation allows data center administrators to federate up to 10 Cisco Fabric Manager Servers together. Users can select a server to discover and manage fabrics on any server in the federation. Each fabric is associated with its corresponding Cisco Fabric Manager Server. The Cisco Fabric Manager client can open fabrics that belong to the same Cisco Fabric Manager Server. All Cisco Fabric Manager Servers in the scope should have access to a shared common database during installation.

### Historical Performance Monitoring

The Cisco FMS Package includes the following historical performance monitoring features:

- **Fibre Channel statistics monitoring:** Cisco FMS continuously monitors performance statistics for Inter-Switch Links (ISLs), host and storage device connections, and traffic between specific Fibre Channel sources and destinations (flows).
- **Performance thresholds:** Up to two different event thresholds can be set for each throughput statistic monitored by Cisco FMS. Threshold values can be set with user-specified levels or with baseline values automatically calculated from performance history.
- **Reporting and graphing:** Historical performance reports and graphs over daily, weekly, monthly, and yearly intervals are available for network hotspot analysis. Top 10 and daily summary reports for all ISLs, hosts, storage connections, and flows provide fabricwide statistics.
- **Intelligent setup:** Wizards are provided to help administrators quickly select information to monitor, set up flows, and estimate performance-database storage requirements. To further simplify use, statistics are associated with host and storage devices, allowing physical connections to switches to be changed without loss of historical statistics.
- **Performance database:** The compact, integrated round-robin database (RRD) maintains a constant size by rolling up information to reduce the number of discrete samples for the oldest data points; hence, it requires no manual storage-space maintenance.

## Centralized Management Services

The Cisco FMS Package centralized management services include the following features:

- **Management server:** A server can be set up to continuously run Cisco Fabric Manager services. Up to 10 Cisco Fabric Manager Servers can be federated together. Up to 16 remote Cisco Fabric Manager user interface clients can access this management server concurrently.
- **Web-based operation view:** Historical performance statistics, SAN inventory, and fabric event information needed for day-to-day operations are accessible remotely through a web browser interface.
- **Multiple-fabrics management:** Multiple Fibre Channel fabrics can be monitored by each management server in the federation, facilitating rapid access to configuration parameters and topology maps for multiple fabrics.
- **Continuous health monitoring:** Cisco switch device health is monitored continuously by Cisco FMS using Simple Network Management Protocol (SNMP) traps and polling, instead of only while the application user interface is open.
- **Common discovery:** With Cisco FMS, Fibre Channel host bus adapter (HBA), storage device, and Fibre Channel switch discovery occurs as a background process in a centralized location for fast, efficient initialization of the Cisco Fabric Manager client-user interface.
- **Roaming user profiles:** User preference settings and topology-map layout changes are applied whenever the Cisco Fabric Manager client is opened, maintaining a consistent interface regardless of which computer is used for management.
- **Cisco FMS proxy services:** The Cisco FMS proxy services help isolate a private IP network used for Cisco MDS 9000 Family management from the LAN or WAN used for remote connectivity. These services enhance resiliency by transporting management traffic between the Cisco Fabric Manager client and server over TCP/IP.

## Advanced Application Integration

The Cisco FMS Package offers the following advanced application-integration features:

- Cisco Traffic Analyzer in-context application launch with passing of Fibre Channel device-naming information, providing transparent view to Small Computer System Interface (SCSI) I/O or Fibre Channel frame-level details
- Cisco Data Center Network Manager (DCMN; Cisco Nexus 7000 Series Switches management platform) in-context launch from the Cisco Fabric Manager topology map
- Cisco UCS Manager in-context launch from the Cisco Fabric Manager topology map
- Storage Management Initiative–Specification (SMI-S) API and web services API

## License Information

The Cisco FMS Package is licensed per switch. Licensing a single switch per Fibre Channel fabric enables only centralized management services and advanced application integration for the fabric. Historical performance monitoring features are restricted to licensed switches; every switch in a fabric must be licensed to fully utilize these features. Licensing policy is enforced by Cisco FMS.

## Ordering Information

Table 1 lists the part numbers for ordering the Cisco FMS Package.

**Table 1.** Ordering Information

| Part Number         | Description   |
|---------------------|---|
| <b>M9500FMS1K9</b>  | Cisco FMS package for one Cisco MDS 9500 Series Multilayer Director             |
| <b>M9500FMS1K9=</b> | Cisco FMS package for one Cisco MDS 9500 Series Multilayer Director; Spare      |
| <b>M9200FMS1K9</b>  | Cisco FMS package for one Cisco MDS 9200 Series Multilayer Fabric Switch        |
| <b>M9200FMS1K9=</b> | Cisco FMS package for one Cisco MDS 9200 Series Multilayer Fabric Switch; Spare |
| <b>M9100FMS1K9</b>  | Cisco FMS package for one Cisco MDS 9100 Series Multilayer Fabric Switch        |
| <b>M9100FMS1K9=</b> | Cisco FMS package for one Cisco MDS 9100 Series Multilayer Fabric Switch; Spare |
| <b>N5000FMS1K9</b>  | Cisco FMS package for one Cisco Nexus 5000 Family switch                        |
| <b>N5000FMS1K9=</b> | Cisco FMS package for one Cisco Nexus 5000 Family switch; Spare                 |

### For More Information

- For more information, please refer to the Cisco MDS 9000 Family data sheets at [http://www.cisco.com/en/US/products/hw/ps4159/ps4358/products\\_data\\_sheets\\_list.html](http://www.cisco.com/en/US/products/hw/ps4159/ps4358/products_data_sheets_list.html).
- Refer also to the Cisco Nexus 5000 Family data sheet at [http://www.cisco.com/en/US/prod/collateral/switches/ps9441/ps9670/data\\_sheet\\_c78-461802.html](http://www.cisco.com/en/US/prod/collateral/switches/ps9441/ps9670/data_sheet_c78-461802.html).



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