



Release Notes for Cisco MDS 9000 Family Fabric Manager Release 4.1(3b)

Release Date: June 1, 2009

Part Number: OL-17675-06 B0

This document describes the new features, limitations, and caveats for Cisco MDS 9000 Family Fabric Manager Release 4.1(3b). Use this document in conjunction with documents listed in the “[Related Documentation](#)” section on page 10.



Note

Release notes are sometimes updated with new information on restrictions and caveats. Refer to the following website for the most recent version of the *Cisco MDS 9000 Family Release Notes*:
http://www.cisco.com/en/US/products/hw/ps4159/ps4358/prod_release_notes_list.html

[Table 1](#) shows the on-line change history for this document.

Table 1 Online History Change

Revision	Date	Description
A0	06/01/2009	Created release notes.
B0	08/31/2009	Added a Note to the “ Installing Fabric Manager on Windows ” section on page -6 about the effect of a Group Policy Object (GPO) in Windows on Fabric Manager Server when used with the PostgreSQL database.

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Introduction

The Cisco Fabric Manager provides an alternative to the command-line interface (CLI) for most switch configuration commands. Fabric Manager provides powerful Fibre Channel troubleshooting tools such as advanced monitoring features and sophisticated debug analysis tools. These in-depth health and configuration analysis capabilities leverage unique MDS 9000 switch capabilities including the Fibre Channel Ping and Traceroute utilities.

The Cisco Fabric Manager includes these management applications:

- Fabric Manager (client and server)
- Device Manager
- Performance Manager
- Fabric Manager Web Services

For detailed information on using Cisco Fabric Manager to configure a Cisco MDS 9000 Family switch, refer to the *Cisco MDS 9000 Family Fabric Manager Configuration Guide*. For information on using the CLI to configure a Cisco MDS 9000 Family switch, refer to the *Cisco MDS 9000 Family CLI Configuration Guide* or the *Cisco MDS 9020 Switch Configuration Guide and Command Reference*.

Version Compatibility

As the features and capabilities of Cisco Fabric Manager continue to evolve, it is important to be aware of the following software version compatibility information:

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- Cisco Family Fabric Manager Release 4.1(3b) can manage switches that are running any MDS 9000 NX-OS 4.x release and switches that are running any SAN-OS 3.x release.
- Any Fabric Manager 3.x release cannot fully manage switches that are running any MDS 9000 NX-OS 4.x release because Fabric Manager Release 3.x cannot manage features that are specific to the MDS 9000 NX-OS 4.x release series. Fabric Manager Release 3.3(x) can manage all legacy features in any SAN-OS 3.x, 2.x, and 1.x release.
- In terms of testing and support, future releases of Cisco Fabric Manager 4.x will be backwards compatible with the two previous releases of MDS NX-OS 4.x and with the two highest releases in the SAN-OS 3.x release series.
- Fabric Manager Release 4.1(3b) offers backwards compatibility support for the releases shown in [Table 2](#).

Table 2 **Software Version Compatibility**

Current Software Version	Tested with and Supports:
MDS Fabric Manager Release 4.1(3b)	MDS NX-OS 4.1(3a), 4.1(1c), 4.1(1b)
	SAN-OS 3.3(3), 3.3(2), 3.3(1c)

Upgrading Your Version of Cisco Fabric Manager

As of Cisco SAN-OS Release 3.2(1), Cisco Fabric Manager is no longer packaged with a Cisco MDS 9000 Family switch. It is included on the CD-ROM that ships with the switch. You can install Fabric Manager from the CD-ROM or from files that you download.

Installing Cisco Fabric Manager is a multi-step process that involves installing a database, as well as Fabric Manager. The complete installation instructions are provided in the “Installation of Cisco MDS SAN-OS and Fabric Manager” section in the [Cisco MDS 9000 Family Fabric Manager Configuration Guide](#), and are available on-screen once you launch the Fabric Manager installer from the CD-ROM.



Note

When upgrading Fabric Manager, refer to the supported upgrade path shown in [Table 3](#). For example, when upgrading from SAN-OS Release 3.1(x) to Release 4.1(3b), you will need to upgrade from Release 3.1(x) to Release 3.2(x) and then upgrade to Release 4.1(3b).

Table 3 **Supported Fabric Manager Upgrade Paths**

Current	Upgrade Path
3.0.x	3.1.x
3.1.x (HSQL)	3.2.x (Oracle)
3.1.x (HSQL)	3.2.x PostgreSQL
3.1.x (Oracle)	3.2.x (Oracle)
3.2.x (Oracle)	3.3.x (Oracle)
3.2.x (PostgreSQL)	3.3.x (PostgreSQL)

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The Fabric Manager Installation Process Overview

The following section presents the flow of the installation process at a high level. Review these guidelines before you begin the installation process.

1. Verify supported software. Cisco Fabric Manager has been tested with the following software:

- Windows 2003 SP2, XP SP2, Windows Vista
- Red Hat Enterprise Linux AS Release 4 (Nahant Update 6)
- Solaris (SPARC) 8, 9, and 10
- VMWare ESX 3.5:
- Virtual Operating System: Windows 2003 SP2
- Java Sun JRE and JDK 1.5(x) and JRE 1.6(x) are supported



Note Do not use Java 1.6 Update 13.

- Java Web Start 1.2, 1.0.1, 1.5, 1.6
 - Firefox 1.5 and 2.0
 - Internet Explorer 6.x, and 7.0
 - Oracle 11g Enterprise Edition
 - Oracle 10g Enterprise Edition
 - Oracle Database 10g Express
 - PostgreSQL 8.2 (Windows and Linux)
 - PostgreSQL 8.1 (Solaris)
 - Cisco ACS 3.1 and 4.0
 - PIX Firewall
 - IP Tables
 - SSH v2
 - Global Enforce SNMP Privacy Encryption
- HTTPS
 2. Ensure data migration when upgrading Cisco Fabric Manager from Cisco SAN-OS Releases 3.1(2b) and later.

If you are upgrading Cisco Fabric Manager in Cisco SAN-OS Releases 3.1(2b) and later, be aware that data is migrated from the Hypersonic HSQL database to either the PostgreSQL database or Oracle Database 10g Express during the installation. Data is also migrated from Oracle Database 10g Express to Oracle Database 10g Express. If you migrate the database from Oracle to Oracle, the schema is updated. Refer to [Table 3](#) for information on the supported upgrade path.

3. Ensure data migration when upgrading Cisco Fabric Manager from releases prior to Cisco SAN-OS Releases 3.1(2b).

If you are upgrading Fabric Manager in a Cisco SAN-OS Release prior to 3.1(2b), be aware that data is migrated from the Hypersonic HSQL database to either the PostgreSQL database or the Oracle Database 10g Express during the installation. The Fabric Manager Installer installs the PostgreSQL

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database on Windows. If you want to install the PostgreSQL database on Solaris or Linux, or if you want to install the Oracle Database 10g Express database, follow the instructions in the “Installation of Cisco MDS SAN-OS and Fabric Manager” section in the *Cisco MDS 9000 Family Fabric Manager Configuration Guide*. Refer to [Table 5](#) for information on the supported upgrade path.

4. If you are upgrading a previous installation of Fabric Manager, make sure the previous installation is installed and running. Do not uninstall the previous version. If the previous version is uninstalled, the database will not be migrated and your server settings will not be preserved.
5. Select the database.

If you want to use the Oracle Database 10g Express, you must install the database and create a user name and password before continuing with the Fabric Manager installation. We recommend the Oracle Database 10g Express option for all users who are running Performance Manager on large fabrics (1000 or more end devices).

If you want to install the PostgreSQL database, you must disable any security software you are running as PostgreSQL may not install certain folders or users. You must also log in as a Superuser before you start the installation.

6. Install Fabric Manager from the CD-ROM or from files that you download from Cisco.com at the following website:

<http://cisco.com/cgi-bin/tablebuild.pl/mds-fm>



Note

From NX-OS Release 4.1(3a) and later, Fabric Manager Web Client and Device Manager are automatically installed during the Fabric Manager installation process. They are installed only on the host where the Fabric Manager Server is installed.

If you want to use Fabric Manager Web Client and Device Manager on a remote machine, use this procedure described in the “[Downloading Cisco Device Manager](#)” section on [page 8](#) to download Device Manager using Fabric Manager Web Client. Cisco recommends using the Fabric Manager Web Client on a different host than the Fabric Manager Server for increased scalability.

Installing Fabric Manager on Solaris

This section includes guidelines on installing Fabric Manager Server on Solaris from the Fabric Manager Installation CD.

- Turn off security software before installing PostGreSQL.
- If you are installing the Fabric Manager Server on a Solaris 9 host, to avoid memory allocation issues during the PostGreSQL installation process, make these changes to the system parameters file `/etc/system`. You may need to increase these values depending on what applications are installed on your host.

```
set shmsys:shminfo_shmmax=252993536
set shmsys:shminfo_shmmin=1
set shmsys:shminfo_shmmni=256
set shmsys:shminfo_shmseg=256

set semsys:seminfo_semmap=256
set semsys:seminfo_semmni=512
set semsys:seminfo_semmns=512
set semsys:seminfo_semm1=32
```

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- Make sure a supported Java version is installed and that JavaScript is enabled in your browser.
- On Solaris 9, the supported web browser is Mozilla 1.7. You can download Mozilla from the following website: <http://www.sun.com/software/solaris/browser/getmozilla17.xml>.
- On Solaris 10, the supported web browser is FireFox 2.0. You can download FireFox from the following website: <http://www.mozilla.com/en-US/firefox/>.
- On Solaris 9, you may need to manually set the Java Web Start MIME type for **.jnlp** files. Follow these steps to make the required changes:
 1. Open the Mozilla web browser.
 2. Select **Edit > Preferences > Navigator > Helper Applications**.
 3. Click **New Type** and then enter the following information to set the MIME type in the respective fields:
 MIME Type: **application/x-java-jnlp-file**
 Description: **Java Web Start**
 Extension: **jnlp**
 4. Choose **Open these files using the default application** under **When a file of this type is encountered:**, and then click **OK**.

After reviewing the guidelines listed in this section, follow these steps to install Fabric Manager on Solaris:

-
- Step 1** Set Java 1.5 or 1.6 to the path that is to be used for installing Fabric Manager.
 - Step 2** Install the database that is to be used with Fabric Manager.
 - Step 3** Copy the Fabric Manager jar file **m9000-fm-4.3.1b.jar** from the CD-ROM to a folder on the Solaris workstation.
 - Step 4** Launch the installer using the following command:

```
java -Xms512m -Xmx512m -jar m9000-fm-4.3.1b.jar
```
 - Step 5** Follow the onscreen instructions provided in the Fabric Manager management software setup wizard.
-

Installing Fabric Manager on Windows

To install Fabric Manager on Windows, follow these steps:

-
- Step 1** Click the **Install Management Software** link.
 - Step 2** Choose **Management Software > Cisco Fabric Manager**.
 - Step 3** Click the **Installing Fabric Manager** link.
 - Step 4** Select the drive for your CD-ROM.
 - Step 5** Click the **FM Installer** link.
 - Step 6** Follow the onscreen instructions provided in the Fabric Manager Installer 4.1(3b).
-

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Note

If you are running Fabric Manager Server on Windows and using the PostgreSQL database, you should examine your Windows Active Directory environment for organizational units (OUs) and make the change recommended below to ensure that Fabric Manager Server does not periodically stop working.

On a Windows system, the Microsoft Active Directory applies a Group Policy Object (GPO) to the Fabric Manager Server. The GPO does not recognize the local user PostgreSQL because it is not in the GPO allow list. As a result, the GPO removes it, and the PostgreSQL database stops working.

To avoid this situation, you should move the Fabric Manager Server to its own OU and apply the same feature settings as the original OU, but remove the local user account to log in as a service.

To install Device Manager on your workstation, follow these steps:

-
- Step 1** Enter the IP address of the switch in the Address field of your browser.
 - Step 2** Click the **Cisco Device Manager** link in the Device Manager installation window.
 - Step 3** Click **Next** to begin the installation.
 - Step 4** Follow the onscreen instructions to complete the installation of Device Manager.
-



Note

If you use a Java JDK instead of a JRE on Solaris, you might encounter a problem trying to install the Device Manager from a web browser. This can happen because the installer heap limit of 256 MB is not sufficient. If you have this problem, save the `jnl` link as file, increase the heap limit to 512 MB, and run `javaws element-manager.jnl` at the shell prompt.

New Features in Cisco MDS Fabric Manager Release 4.1(3b)

This section briefly describes the new Fabric Manager features introduced in this release.

Cisco Fabric Manager Release 4.1(3b) supports managing delayed traps in the e-mail home feature in multiple code families (SAN-OS 3.x and NX-OS 4.x) where the feature is available)

For detailed information about this feature, refer to the [Cisco MDS 9000 Family CLI Configuration Guide, Release 3.x](#). The “New and Changed Information” section of the book includes a link to the feature description.



Note

These release notes are specific to this release. For the complete Release 4.x documentation set, see the “[Related Documentation](#)” section.

Resource Requirements

[Table 4](#) lists the minimum amount of resources (disk, memory, and CPU) required for both the server and client, for Fabric Manager to operate satisfactorily.

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Table 4 **Resource Requirements**

Size	Port Count		
Small	< 2000		
Medium	< 5000		
Large	<15000		
	Small	Medium	Large
Disk Space (includes Performance Manager RRD files)			
Client	100 MB	100 MB	100 MB
Server (+ PostgreSQL)	1 GB	10 GB	20 GB
Server (+ Oracle Express Edition)	3 GB	15 GB	30 GB
Memory			
Client	500 MB	1 GB	2 GB
Server (+ PostgreSQL)	2 GB	4 GB	8 GB
Server (+ Oracle)	2 GB	4 GB	8 GB
CPU - Client			
Windows	2.0-GHz processor	2.0-GHz processor	2.0-GHz processor
Linux	2.0-GHz processor	2.0-GHz processor	2.0-GHz processor
Solaris	Ultra 45 1.6 GHZ	Ultra 45 1.6 GHZ	Ultra 45 1.6 GHZ
CPU - Server			
Windows	2.0-GHz processor	Dual Processor 2.0-GHz processor	Dual Processor 2.0-GHz processor
Linux	2.0-GHz processor	Dual Processor 2.0-GHz processor	Dual Processor 2.0-GHz processor
Solaris	SunFire v240 2x 1.6 GHZ	SunFire v440 4x 1.6 GHZ	SunFire v440 4x 1.6 GHZ

Limitations and Restrictions

This section lists the limitations and restrictions for this release.

Downloading Cisco Device Manager

If you wish to use Fabric Manager Web Client and Device Manager Release 4.1(3b), you must download the software from the Cisco Fabric Manager Server Release 4.1(3b).

To download Cisco Device Manager, follow these steps:

- Step 1** Open your browser and enter the IP address where you installed Fabric Manager Server, or enter localhost if you installed Fabric Manager Server on your local workstation.
- Step 2** Enter your user name and password and click **Login**. You see the Fabric Manager Web Server Summary page.

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- Step 3** Click the **Download** link in the upper right corner of the page. You see the Download page for Fabric Manager and Device Manager.
- Step 4** Click the link for **Device Manager**.
-

For additional steps that you might need to take, depending on if this is the first time you are launching Fabric Manager Client, see the “Launching Fabric Manager Client in Cisco SAN-OS Release 3.2(1) and Later” section in the *[Cisco MDS 9000 Family Fabric Manager Configuration Guide, Release 4.x](#)*.

Caveats

There are no caveats associated with Cisco MDS Fabric Manager Release 4.1(3b).

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Related Documentation

The documentation set for the Cisco MDS 9000 Family includes the following documents. To find a document online, use the Cisco MDS SAN-OS Documentation Locator at:

http://www.cisco.com/en/US/products/ps5989/products_documentation_roadmap09186a00804500c1.html.

For information on IBM TotalStorage SAN Volume Controller Storage Software for the Cisco MDS 9000 Family, refer to the IBM TotalStorage Support website: <http://www.ibm.com>

Release Notes

- *Cisco MDS 9000 Family Release Notes for Cisco MDS SAN-OS Releases*
- *Cisco MDS 9000 Family Release Notes for Storage Services Interface Images*
- *Cisco MDS 9000 Family Release Notes for Cisco MDS 9000 EPLD Images*

Compatibility Information

- *Cisco MDS 9000 SAN-OS Hardware and Software Compatibility Information*
- *Cisco MDS 9000 Family Interoperability Support Matrix*
- *Cisco MDS SAN-OS Release Compatibility Matrix for IBM SAN Volume Controller Software for Cisco MDS 9000*
- *Cisco MDS SAN-OS Release Compatibility Matrix for Storage Service Interface Images*

Regulatory Compliance and Safety Information

- *Regulatory Compliance and Safety Information for the Cisco MDS 9000 Family*

Hardware Installation

- *Cisco MDS 9500 Series Hardware Installation Guide*
- *Cisco MDS 9200 Series Hardware Installation Guide*
- *Cisco MDS 9216 Switch Hardware Installation Guide*
- *Cisco MDS 9100 Series Hardware Installation Guide*
- *Cisco MDS 9124 Multilayer Fabric Switch Quick Start Guide*
- *Cisco MDS 9020 Fabric Switch Hardware Installation Guide*

Cisco Fabric Manager

- *Cisco MDS 9000 Family Fabric Manager Quick Configuration Guide*
- *Cisco MDS 9000 Family Fabric Manager Configuration Guide*
- *Cisco MDS 9000 Fabric Manager Online Help*
- *Cisco MDS 9000 Fabric Manager Web Services Online Help*

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Command-Line Interface

- *Cisco MDS 9000 Family Software Upgrade and Downgrade Guide*
- *Cisco MDS 9000 Family CLI Quick Configuration Guide*
- *Cisco MDS 9000 Family CLI Configuration Guide*
- *Cisco MDS 9000 Family Command Reference*
- *Cisco MDS 9000 Family Quick Command Reference*
- *Cisco MDS 9020 Fabric Switch Configuration Guide and Command Reference*
- *Cisco MDS 9000 Family SAN Volume Controller Configuration Guide*

Intelligent Storage Networking Services

- *Cisco MDS 9000 Family Data Mobility Manager Configuration Guide*
- *Cisco MDS 9000 Family Storage Media Encryption Configuration Guide*
- *Cisco MDS 9000 Family Secure Erase Configuration Guide - For Cisco MDS 9500 and 9200 Series*

Troubleshooting and Reference

- *Cisco MDS 9000 Family Troubleshooting Guide*
- *Cisco MDS 9000 Family MIB Quick Reference*
- *Cisco MDS 9020 Fabric Switch MIB Quick Reference*
- *Cisco MDS 9000 Family SMI-S Programming Reference*
- *Cisco MDS 9000 Family System Messages Reference*
- *Cisco MDS 9020 Fabric Switch System Messages Reference*

Installation and Configuration Note

- *Cisco MDS 9000 Family SSM Configuration Note*
- *Cisco MDS 9000 Family Port Analyzer Adapter Installation and Configuration Note*

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

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You can access the Cisco website at this URL:

<http://www.cisco.com>

You can access MDS SAN-OS documentation at this URL:

http://www.cisco.com/en/US/products/ps5989/tsd_products_support_series_home.html

You can access international Cisco websites at this URL:

http://www.cisco.com/public/countries_languages.shtml

This document is to be used in conjunction with the documents listed in the “[Related Documentation](#)” section.

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