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Cisco MDS 9000 Family Release Notes for Cisco MDS SAN-OS Release 2.1(1b)

Release Date: July 25, 2005

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This document describes the caveats and limitations for switches in the Cisco MDS 9000 Family. Use this document in conjunction with documents listed in the “[Related Documentation](#)” section on page 30.



Note

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 On-Line History Change

Revision	Date	Description
A0	7/25/2005	Created release notes
B0	08/04/2005	Added DDTs CSCed57251 , CSCeh61610 , CSCeh64080 , CSCec31365 , CSCeg20932 , CSCeg53114 , CSCeh52280 , CSCeh56143 , CSCeh82490 , CSCeh83514 , CSCeh87985 , CSCeg90336 , CSCeh52973 , CSCeh87930 , CSCeh90270 , CSCeh93625 , CSCei01431 , CSCeh73101 , CSCei29086 , CSCeh39705 , CSCeh49483 , CSCeh70727 , CSCeh71865 , CSCeh73149 , CSCeh85768 , CSCeh87930 , CSCeh90270 , CSCeh91293 , CSCeh93109 , CSCeh95139 , CSCei02196 , CSCei18837 , CSCeh08307 , CSCeh79330 , CSCeh82166 , CSCei08541 , CSCei22596 , CSCei31020 , CSCei32317 , and CSCei50995 Added iSCSI information to the Limitations and Restrictions section.



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E0	08/22/2005	Removed DDTS CSCeh61610
F0	08/23/2005	Added DDTS CSCeh61610
G0	09/20/2005	Added DDTS CSCei88345
H0	11/03/2005	Added DDTS CSCeh69186
I0	12/07/2005	Added DDTS CSCsc31424
J0	12/30/2005	Added DDTS CSCei91968
J1	02/22/2006	Added DDTS CSCsc23435
K0	05/26/2006	Added DDTS: CSCed16845 , CSCeg12383 , CSCeg33121 , CSCeg37598 , CSCeg53114 , CSCeg72539 , CSCeg82721 , CSCeg84871 , CSCeh30951 , CSCeh65824 , CSCeh70232 , CSCeh92604 , CSCei10774 , CSCei19822 , CSCei32317 , CSCei36082 , CSCei79457 , CSCei91968 , CSCei48889 , CSCei57342 , CSCei58652 , CSCei67982 , CSCei86399 , CSCei91676 , CSCej08751 , CSCin92870 , CSCin95879 , CSCsb89732 , CSCsc09732 , CSCsc33788 , CSCsc48919 , CSCsc97070 , CSCsd07246 , CSCsd29338 , CSCsd30165 , CSCsd71701 , CSCsd72822 , CSCsd76429 , and CSCsd89872
L0	06/06/2006	Removed DDTS CSCed16845
M0	8/7/2006	Added DDTS CSCse84811 Removed DDTS CSCeg33121 , CSCeg84871 , CSCeh30951 , CSCei36082 , CSCec31365 , CSCeg12383 , CSCeg53114 , CSCeg55238 , CSCeh34828 , CSCei48889 , CSCei91676 , CSCej08751 , CSCin92870 , CSCin95879 , CSCsd71701 .
N0	09/05/2006	Added DDTS CSCsd78967
O0	09/13/2006	Added DDTS CSCsf21970
P0	11/07/2006	Added DDTS CSCsg15392 and CSCin95789
Q0	02/23/2007	Added DDTS CSCse99087 , CSCsg03171 , and CSCsh27840 .
R0	04/04/2007	Added the section “ Performing a Disruptive Upgrade on a Single Supervisor MDS Family Switch ”.
S0	08/24/2007	Added DDTS CSCsd83775 .

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Introduction

fabric-switching services that realize maximum performance while ensuring high reliability levels. These switches combine robust and flexible hardware architecture with multiple layers of network and storage management intelligence. This powerful combination enables highly available, scalable storage networks that provide advanced security and unified management features.

The Cisco MDS 9000 Family provides intelligent networking features such as multiprotocol and multitransport integration, virtual SANs (VSANs), advanced security, sophisticated debug analysis tools, and unified SAN management.

System Requirements

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Components Supported



Note

Cisco MDS 9000 Family Supported Software and Hardware Components (continued)

			MDS 9509 only
		for supervisor modules—SFPs ¹ sold separately).	
	DS-C9506	MDS 9506 director (6-slot modular chassis includes 4 slots for switching modules and 2 slots for supervisor modules—SFPs sold separately).	MDS 9506 only
	DS-C9216-K9	MDS 9216 16-port semi-modular fabric switch (includes 16 1-Gbps/2-Gbps Fibre Channel ports, power supply, and expansion slot—SFPs sold separately).	MDS 9216 only
	DS-C9216A-K9	MDS 9216A 16-port semi-modular fabric switch (includes 16 1-Gbps/2-Gbps Fibre Channel ports, power supply, and expansion slot—SFPs sold separately).	MDS 9216A only
	DS-C9216i-K9	MDS 9216i 16-port semi-modular fabric switch (includes 14 1-Gbps/2-Gbps Fibre Channel ports, 2 Gigabit Ethernet ports, power supply, and expansion slot—SFPs sold separately).	MDS 9216i only
	DS-C9120-K9	MDS 9120 fixed configuration, non-modular, fabric switch (includes 4 full rate ports and 16 host-optimized ports).	MDS 9120 only
	DS-C9140-K9	MDS 9140 fixed configuration (non-modular) fabric switch (includes 8 full rate ports and 32 host-optimized ports).	MDS 9140 only
Supervisor modules	DS-X9530-SF1-K9	MDS 9500 Supervisor/Fabric-I, module.	MDS 9500 Series only
Switching modules	DS-X9016	MDS 9000 16-port 1-Gbps/2-Gbps Fibre Channel module (SFPs sold separately).	MDS 9500 Series and 9200 Series
	DS-X9032	MDS 9000 32-port 1-Gbps/2-Gbps Fibre Channel module (SFPs sold separately).	
Services modules	DS-X9308-SMIP	8-port Gigabit Ethernet IP Storage Services module.	
	DS-X9304-SMIP	4-port Gigabit Ethernet IP Storage Services module.	
	DS-X9032-SMV	32-port Fibre Channel Advanced Services Module (ASM).	
	DS-X9032-SSM	MDS 9000 32-port 1-Gbps/2-Gbps Fibre Channel Storage Services Module (SSM).	
	DS-X9560-SMC	Caching Services Module (CSM).	
	DS-X9302-14K9	14-port Fibre Channel/2-port Gigabit Ethernet Multiprotocol Services (MPS-14/2) module.	

2	CWDM-SFP-xxxx-2G	Gigabit Ethernet and 1-Gbps/2-Gbps Fibre Channel SFP LC interface xxxx nm, where xxxx = 1470, 1490, 1510, 1530, 1550, 1570, 1590, or 1610 nm.	MDS 9000 Family
	CWDM-MUX-4	Add/drop multiplexer for four CWDM wavelengths.	
	CWDM-MUX-8	Add/drop multiplexer for eight CWDM wavelengths.	
	CWDM-CHASSIS-2	Two slot chassis for CWDM add/drop multiplexer(s).	
Power supplies	DS-CAC-300W	300-W ³ AC power supply.	MDS 9100 Series only
	DS-CAC-845W	845-W AC power supply.	MDS 9200 Series only
	DS-CAC-2500W	2500-W AC power supply.	MDS 9509 only
	DS-CDC-2500W	2500-W DC power supply.	
	DS-CAC-4000W-US	4000-W AC power supply for US (cable attached).	
	DS-CAC-4000W-INT	4000-W AC power supply international (cable attached).	
	DS-CAC-1900W	1900-W AC power supply.	MDS 9506 only
	DS-CDC-1900W	1900-W DC power supply.	
CompactFlash	MEM-MDS-FLD512 M	MDS 9500 supervisor CompactFlash disk, 512MB.	MDS 9500 Series only
Port analyzer adapter	DS-PAA-2	A standalone Fibre Channel-to-Ethernet adapter that allows for simple, transparent analysis of Fibre Channel traffic in a switched fabric.	MDS 9000 Family

1. SFP = small form-factor pluggable
2. CWDM = coarse wavelength division multiplexing
3. W = Watt

Determining the Software Version



Note

We strongly recommend that you use the latest available software release supported by your vendor for all Cisco MDS 9000 Family products.

To determine the version of the Cisco MDS SAN-OS software currently running on a Cisco MDS 9000 Family switch using the CLI, log into the switch and enter the **show version**

Image Upgrade

You can nondisruptively upgrade to Cisco MDS SAN-OS Release 2.1(1b) from any SAN-OS software release beginning with Release 1.3(x). If you are running an older version of the SAN-OS, upgrade to Release 1.3(x) and then Release 2.1(1b).

When downgrading from Cisco MDS SAN-OS Release 2.1(1b) to Release 1.3(x), you might need to disable new features in Release 2.1(1b) for a nondisruptive downgrade. Issuing the `show incompatibility system` command from the CLI, or using Fabric Manager to perform the downgrade enables the compatibility check. The check indicates that the downgrade is disruptive and the reason is “current running-config is not supported by new image.”

```
Compatibility check is done:
Module  bootable      Impact  Install-type  Reason
-----  -
      2      yes      disruptive    reset  Current running-config is not
supported by new image
      3      yes      disruptive    reset  Current running-config is not
supported by new image
      5      yes      disruptive    reset  Current running-config is not
supported by new image
      6      yes      disruptive    reset  Current running-config is not
supported by new image
```

```

distribute
bootflash:1.3(x)_filename
```

```

no device-alias
show incompatibility system
```



Configuration Guide

Performing a Disruptive Upgrade on a Single Supervisor MDS Family Switch

-
-
-

2005 Jul 12 12:18:29 mds-a1-ut %MODULE-2-MOD_SOMEPORTS_FAILED: Module 1 reported failure on ports 1/1-1/1 (Fibre Channel) due to System Health failure in device 6 (error 0x40730019)

Workaround

Open Caveats

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-
-
-

than 25 Mbps. There is no workaround if the throughput requirement is > 25 Mbps.

CSCeh29872

: The ICMP path-MTU discovery might not work with IPsec depending upon the SPD policy that is created and where the ICMP error message originated.

: Identify the path MTU and set it as the local interface MTU in the switch.

CSCeh39705

: iSCSI immediate and unsolicited data is not allowed to be used when the data digest is turned on.

: None.

CSCeh40138

: If an IVR-enabled fabric running Cisco MDS SAN-OS Release 2.0 is merged with an IVR-enabled fabric running Cisco MDS SAN-OS Release 2.1 in NAT mode, then the IVR process on the 2.0 fabric may restart.

: Follow the IVR NAT guideline of not mixing fabrics in IVR NAT and non-NAT modes. For example, upgrade the fabric running Cisco MDS SAN OS Release 2.0 to Cisco MDS SAN OS Release 2.1 and have NAT mode enabled on that fabric before merging with another fabric where the NAT mode is already on.

CSCeh49483

: Traffic stops flowing when a member, who is not the first member, of a non-trunking PortChannel in an IVR zone set is flapped.

: None.

CSCeh52973

: The switch appears in two VSANs when connected through ISL.

: None.

CSCeh61610

: FCIP Write Acceleration does not work with certain storage replication subsystems.

: None.

CSCeh70232

: Under certain traffic patterns, the auto compression mode in MPS-14/2 modules can cause a packet buffer leak. This might lead to a drop in FCIP performance. A low free clusters count below 40000 in the output of the **gigabitethernet x/y**

Workaround

Symptom

Workaround

Symptom

Workaround

Symptom

Workaround

Symptom

Workaround

-
-

%PORT-5-IF_DOWN_ELP_FAILURE_ISOLATION: %\$VSAN xyz%\$ Interface fcipabc is down
(Isolation due to ELP failure)
%PORT-5-IF_DOWN_OFFLINE: %\$VSAN xyz%\$ Interface fcipabc is down (Offline)
%PORT-5-IF_DOWN_NONE: %\$VSAN xyz%\$ Interface fcipabc is down (None)

module-number

module-number

- a.
- b.
- c.



Note

-

•

slot

slot

1.

2.

a.

fcdomain domain { } static vsan {*vsan id*



no ivr virtual-fcdomain-add vsan-ranges 1-4093



d.

```
switch(config)# vsan database
                vsan { vsan ID} suspend
                no vsan                suspend
```

f.

3.

4.



Note

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Cisco MDS 9000 Family SAN Volume Controller Configuration Guide

app-name

: Creating a role that has VSAN policy as "deny" requires an Enterprise License on the switch. If such a role is created on a switch that does not have the license, the switch exhibits different behavior when distribution is turned on versus when distribution is turned off.

If distribution is turned off, creation of the role is rejected.

If distribution is turned on, creation of the role succeeds but the VSAN policy continues to be "permit".

: None.

CSCeg37598

: The iSNS server might crash when iSCSI is disabled and iSNS is enabled using Fabric Manager.

: None.

CSCeg40856

: In Fabric Manager, a null pointer exception error message might result in a zone merge recovery on an already recovered fabric.

: Close the dialog box and relaunch it.

CSCeg72539

: iSNS server functionality may not restore iSCSI initiator node detail properly after a system switchover. Under this circumstance, iSNS server will not respond correctly to a DevGetNext request from an iSNS client. This problem does not happen consistently.

: None

CSCeg66225

: Password recovery might fail if you use the *config-url*

<<%ASCII-CFG-2-ACFG_CONFIGURATION_APPLY_ERROR>>

: Issue the command from the switchboot prompt.



Using the command will erase the configuration. You must reapply the configuration, if externally stored, after the switch login.

CSCeg81089

: A Windows host running Hummingbird 10 with Connectivity Secure Shell 9 cannot use SSH to connect to an MDS switch running Cisco MDS SAN-OS Releases 2.0(x) with the same host configuration used to connect to an MDS switch running 1.3(x) code. The host will display the error Authentication Failed, no more shared authentication methods

**Workaround: Issue `clear ivr session`
`ivr commit`**

Symptom: The Fabric Manager server does not filter VSANs by each client's VSAN scope.

: None.

CSCeh19639

: The alias for a down endpoint is not shown and is referenced by its pwwn in the Edit FullZoneset screen of the Fabric Manager rather than the fcalias name. This does not affect the functionality of adding those members to the zones either in Fabric Manager or in the CLI.

: None

CSCeh33448

: The `copy` command does not support the use of `modflash:`.

: Copy the image back to the supervisor to execute the `copy` command.

CSCeh33548

: Tape devices can only be accessed over an FCIP tunnel in a PortChannel with write acceleration enabled if SID/DID based load-balancing is used in the VSANs.

: Disable write acceleration or enable SID/DID based load-balancing in the VSANs if you have tape device traffic going over a FCIP tunnel in a PortChannel.

CSCeh33814

: The RMON_ALERT e-mail does not send the variable or any information about what alarm is triggered.

: None.

CSCeh34275

: iSCSI initiators do not advertise their IQN names on the interop VSAN Fibre Channel name server (FCNS). Fabric Manager will not display them.

: None.

CSCeh35859

: After a process restart or merging with several fabrics simultaneously, the IVR zone set activation process might hang in the "ready to advertise" state.

: Clear the IVR session by issuing the `clear ivr` command and then reactivate the IVR zone set by issuing the `ivr zoneset activate name ivzs-name`

vsan-id

ivzs-name

zoneset_name

name

source IP - Host IP, dest IP - MDS IP,
source port - any, dest port - 3260 (iSCSI), protocol - 6 (TCP).

[] command in configuration mode.

CSCeg90336

: A user that you create in Fabric Manager or Device Manager cannot log in from the console. Release 2.1(2) fixes this problem. However, if a third-party application creates a user using SNMP, a new MIB is required for Release 3.0.

: Third-party applications should use SSH to connect to the MDS 9000 switch, and then use CLI commands to create the user account.

CSCeh92843

: If FC data-in frames for an iSCSI read command are lost between the FC target and an MDS switch with an IPS module but the MDS receives a good SCSI status frame from the target, the MDS switch can send an iSCSI status PDU with the wrong status sequence number (StatSN) to the iSCSI host causing it to reset the TCP connection to the MDS switch.

: None.

CSCei22596

: When a special frame is enabled for FCIP and FCIP is bound to an Ethernet channel, the IPS port may fail. The failure results if FCIP TCP connections need to be migrated to the peer core and then TCP on the new peer core must be initialized properly.

: Disable the special frame in FCIP.

CSCei29086

: Following the installation of a third-party syslog server to a PC running Fabric Manager and Device Manager, the third-party syslog server takes ownership of the PC's IP address as the syslog server. As a result, the MDS switch is no longer able to act as the syslog server.

You can see the error message "java.lang.NullPointerException" if you verify syslog on the MDS switch through Device Manager by choosing **Logs > Syslog > Verify**

Logs > Syslog > Verify

Workaround

My

Computer > Manage > Services and Applications > Services

Symptom

Workaround

Symptom

Workaround

Symptom

Workaround

Symptom

Workaround

Symptom

Workaround

shut

no shut

Symptom

Workaround

Symptom

Workaround

Symptom

Workaround

Symptom

channel-group X
no interface port-channel X
no shutdown

Symptom

install all

install all

Workaround

install module

image

reload module

force-dnld

Symptom

Workaround

no system health module *ssm-module-number* loopback failure-action

kernel uptime is 137 days 3 hours 49 minute(s) 32 second(s)
Last reset at -447213060 usecs after Sun Mar 18 05:59:15 2018
Reason: Not defined
System version: Service: \$"H

```
no ssm enable feature scsi-flow force module
```

```
install all system bootflash:m9500-sf1ek9-mz.2.1.2d.bin kickstart  
bootflash:m9500-sf1ek9-kickstart-mz.2.1.2d.bin ssi  
bootflash:m9000-ek9-ssi-mz.2.1.2j.bin
```

```
switch(config)# ssm enable feature scsi-flow module
```

```
show module
```

5.

```
reload module
```

6.



Note

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Last membership update failed: port-channel: required service is not responding
(err_id 0x402B No port

SNMP: Unknown username

Cisco MDS 9000 Family Release Notes for Cisco MDS SAN-OS Releases
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 VERITAS Storage Foundation for Networks Software
Cisco MDS SAN-OS Compatibility Matrix for Storage Service Interface Images
Regulatory Compliance and Safety Information for the Cisco MDS 9000 Family
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 9000 Family Software Upgrade and Downgrade Guide
Cisco MDS 9000 Family Configuration Guide
Cisco MDS 9000 Family Command Reference
Cisco MDS 9000 Family Fabric Manager Configuration Guide
Cisco MDS 9000 Family Fabric and Device Manager Online Help
Cisco MDS 9000 Family SAN Volume Controller Configuration Guide
Cisco MDS 9000 Family MIB Quick Reference
Cisco MDS 9000 Family CIM Programming Reference
Cisco MDS 9000 Family System Messages Reference
Cisco MDS 9000 Family Troubleshooting Guide
Cisco MDS 9000 Family Port Analyzer Adapter 2 Installation and Configuration Note
Cisco MDS 9000 Family Port Analyzer Adapter Installation and Configuration Note

For information on VERITAS Storage Foundation™ for Networks for the Cisco MDS 9000 Family, refer to the VERITAS website: <http://support.veritas.com/>

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/storage/support/2062-2300/>

Cisco documentation and additional literature are available on Cisco.com. Cisco also provides several ways to obtain technical assistance and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

Cisco.com

Documentation DVD

Ordering Documentation

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Documentation Feedback

You can send comments about technical documentation to bug-doc@cisco.com.

Cisco Product Security Overview

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Reporting Security Problems in Cisco Products

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Tip

<http://pgp.mit.edu:11371/pks/lookup?search=psirt%40cisco.com&op=index&exact=on>

In an emergency, you can also reach PSIRT by telephone:

1 877 228-7302

1 408 525-6532

Obtaining Technical Assistance

Cisco Technical Support Website



Note

Tools & Resources	Cisco Product
Identification Tool	Cisco Product
Identification Tool	
or model name; by tree view; or for certain products, by copying and pasting command output. Search results show an illustration of your product with the serial number label location highlighted. Locate the serial number label on your product and record the information before placing a service call.	

Submitting a Service Request

Definitions of Service Request Severity

Obtaining Additional Publications and Information

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- *Internet Protocol Journal*

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

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