C H A P T E R 5

Cisco MDS SAN-OS Release 2.x Feature List

This chapter describes the new features that are included in the following 2.x SAN-OS release:

New Features for SAN-OS Release 2.1(3)

2.1(3) Features

There are no new features for this release. The new features for this release are the same as those listed in the Cisco MDS 9000 Family Release Notes for Cisco MDS SAN-OS Release 2.1(2).

Release Notes for SAN-OS Release 2.1(3)

New Features for SAN-OS Release 2.1(2d)

2.1(2d) Features

There are no new features for this release. The new features for this release are the same as those listed in the Cisco MDS 9000 Family Release Notes for Cisco MDS SAN-OS Release 2.1(2).

Release Notes for SAN-OS Release 2.1(2d)

New Features for SAN-OS Release 2.1(2b)

2.1(2b) Features
There are no new features for this release. The new features for this release are the same as those listed in the Cisco MDS 9000 Family Release Notes for Cisco MDS SAN-OS Release 2.1(2).

Release Notes for SAN-OS Release 2.1(2b)

New Features for SAN-OS Release 2.1(2)

2.1(2) Features	Description
Nondisruptive Storage Services Module (SSM) image upgrade	Allows no disruption of Fibre Channel switching traffic when upgrading the SSI boot image on an SSM using the **install ssi** command
New default initial state for SSMs	SSMs initially come up in Fibre Channel switching mode by default.
VERITAS Storage Foundation for Networks (VSFN) not supported	VSFN is not supported.
Persistent FC IDs for IVR	Allows persistent FC IDs in an IVR configuration.
SCSI flow services support for interfaces	Allows the configuration of SCSI flow services on groups of four interfaces as well as the entire module.
Special characters in TACACS+ global secret keys	Allows the use of the dollar sign ($) and the percent sign (%) in TACACS+ secret global keys.
Control for SNMP notifications for linkUp/linkDown traps	Allows the user to configure which linkUp/linkDown trap notifications to enable for interfaces.
NASB storage array controller support	Allows the user to enable NASB for storage array controller devices.
NASB target rediscovery	Allows NASB to rediscover a target device.
Multiple LUNs for NASB	Allows up to 10 target LUNs for NASB.
iSCSI duplicate WWN check	Allows users to check for potential WWN conflicts in the current configuration

Release Notes for SAN-OS Release 2.1(2)

New Features for SAN-OS Release 2.1(1a)

2.1(1a) Features	Description
Inter-VSAN Routing (IVR) Network Address Translation (NAT)	Allows non-unique domain IDs in an IVR topology. This feature simplifies the deployment of IVR in an existing fabric.
IVR VSAN topology auto mode	Uses CFS configuration distribution in auto mode to learn the topology of the IVR-enabled switches in the network.
IVR service groups	Reduces the amount of traffic to non-IVR-enabled switches by restricting IVR-related traffic to the IVR-enabled switches.
Multiple autonomous fabric IDs (AFIDs) for IVR	Allows more that one VSAN in the network with the same VSAN ID.
IVR LUN zoning	Allows IVR to directly support LUN zoning.
IVZ QoS	Allows IVZ QoS to be configured separately from other zone attributes.
SANTap	Allows third-party data storage applications, such as long distance replication and continuous backup, to be integrated into the SAN.
Network-Accelerated Storage Backup (NSAB)	Supports server-free backups in the SAN.
Distributed configuration copy	Instructs the other switches in the fabric to save their configurations to their local NVRAM.
Enhanced IP compression auto mode	Allows auto mode option to use a combination of compression modes to effectively utilize the WAN bandwidth.
Zone, zone set, fcalias, and zone attribute set cloning	Allows cloning of a new zone, zone set, fcalias, or zone attribute set can be cloned from an existing zone, zone set, fcalias, or zone attribute set.
VSFN support on the SSM	Provides support for VSFN on the SSM.
File system support for log:	Allows the file system commands to support a new directory called log: for system message log files.
iSCSI cut-thru routing mode	Provides iSCSI cut-thru routing mode in addition to pass-thru and store-and-forward modes.
Disable interface bit error rate thresholds	Allows the user to disable bit error rate threshold for a Fibre Channel interface.

Release Notes for SAN-OS Release 2.1(1a)

New Features for SAN-OS Release 2.0(2b)

2.0(2b) Features	Description
Fibre Channel write acceleration	Provides support for Fibre Channel write acceleration on the ASM and SSM, which minimizes application latency or reduces transactions per second over long distances.
SCSI flow statistics	Collects statistics for SCSI flows.
FICON enhancements	Provides support for FICON on MPS-14/2 modules.
ELP enhancement	ELP is compliant with FC-SW-3.

Release Notes for SAN-OS Release 2.0(2b)

New Features for SAN-OS Release 2.0(1b)

2.0(1b) Features	Description
Extended ping command	Provides additional options to verify the connectivity of a remote host or server.
Initial setup changes	The questions in the initial set up routine and the order in which they appear is enhanced to reflect the various changes in the Cisco SAN-OS Release 2.0(1b) software
New inventory information	Displays information for the field replaceable units (FRUs) in the switch, including product IDs, serial numbers, and version IDs.
Cisco Fabric Services Infrastructure	Enables efficient database distribution and fosters device flexibility.
Dynamic VSANs	Allows you to dynamically assign VSAN membership to ports based on the device WWN.
Graceful shutdown	Allows the Cisco SAN-OS software to implicitly perform a graceful shutdown if you shut down an interface operating in the E port mode or if a Cisco SAN-OS software application executes a port shutdown as part of its function.
Extended BB_credits	Allows you to configure up to 3,500 receive BB_credits on a Fibre Channel port to facilitate BB_credits for long haul links.
Small form-factor pluggable (SFP)	Replaces the term FCOT (Fibre Channel optical transmitter) with the term SFP in the Cisco SAN-OS software and in the documentation.
PortChannel	Includes a new mode (ACTIVE) and a new protocol (autocreation).
Zone-based QoS	The zoning feature provides an additional segregation mechanism to configure the Quality of Service (QoS) priority as a zone attribute.
Enhanced zoning	Is enhanced to be compliant with FC-GS-4 and FC-SW-3. Both standards support basic zoning and enhanced zoning functionalities.

Distributed Device Alias Services	Allows you to distribute device alias names on a fabric-wide basis.
Security	Network operator default
	Administrator password must be configured
	Multiple roles support
	Advanced Encryption Standard usage
	Unified users and passwords
	Enables an error message to be displayed when a remote AAA server is unavailable
Enable SNMP trap notification	Enables a specific SNMP trap (for example, fcdomain traps) notification.
RMON configuration	Allows you to configure RMON alarms and events through the CLI.
Multicast compliance	To interoperate with other vendor switches, the Cisco SAN-OS software uses the lowest domain switch as the root to compute the multicast tree in interop mode.
IP-ACL changes	As of Cisco SAN-OS Release 2.0(1b), you can also apply IP-ACLs to Gigabit Ethernet interfaces (IPS modules) and Ethernet PortChannel interfaces.
IP storage	Tape acceleration.
	iSNS server.
	Mutual CHAP authentication.
	FCIP compression enhancements.
	Other changes (defaults).
AAA accounting log	The AAA accounting log size cannot be configured. The default size of the accounting log is increased to 250,000 bytes and cannot be changed.
IP Security (IPsec)	Provides security services at the IP layer, including protecting one or more data flows between a pair of hosts, between a pair of security gateways, or between a security gateway and a host.
Internet Key Exchange (IKE)	IPsec uses the IKE protocol to handle protocol and algorithm negotiation and to generate the encryption and authentication keys to be used by IPsec.
Call Home enhancements	Provides message throttling capabilities, periodic inventory messages, port syslog messages, and RMON alert messages.
Port tracking	Is unique to the Cisco MDS 9000 Family. It uses information about the operational state of the link to initiate a failure in the link that connects edge device.
SAN extension (SET) tuner	Is unique to the Cisco MDS 9000 Family. It helps you optimize FCIP performance by generating SCSI I/O commands and directing such traffic to a specific virtual target.
Command Scheduler	Helps you schedule configuration and maintenance jobs in any switch in the Cisco MDS 9000 Family.
WWW changes	Exchange Link Protocol (ELP) and Exchange Fabric Protocol (EFP) use WWNs during link initialization.

FC ID changes	To conserve the number of FC IDs used, Cisco MDS 9000 Family switches use a special FC ID allocation scheme.
	The persistent Fibre Channel ID (FC ID) feature is enabled by default.
Storing the last core to Flash	The last core dump (service core) is automatically saved to the Flash in the /mnt/pss/ partition before the switchover or reboot occurs.

Release Notes for SAN-OS Release 2.0(1b)