CHAPTER 6

Cisco MDS SAN-OS Release 1.x Feature Lists

This chapter describes the new features that are included in the following 1.x SAN-OS release:

New Features for SAN-OS Release 1.3(5)

1.3(5) Features	Description
TL port ALPA cache	Configures manual entries in the ALPA cache for TL ports.

Release Notes for SAN-OS Release 1.3(5)

New Features for SAN-OS Release 1.3(4a)

1.3(4a) Features	Description
Banner message	Configures the message of the day (MOTD) for each switch.

Full zone set distribution	Distributes inactive, unmodified zone sets throughout the fabric.
Inter-VSAN routing (IVR)	Configures IVR interoperation with third-party switches. Adds and withdraws IVR domains to VSANs.
In-order delivery (IOD)	Enables IOD for specific VSANs.
FICON features	Configures FICON port numbering, first-available port numbers, and moves the FICON VSAN offline.
IP storage updates	Addresses the IPS-4 module inclusion, FCIP and iSCSI default changes, burst size change for iSCSI interfaces, and delay jitter estimation.
Switch summary	Provides a brief summary of the switch configuration.
Online health management system	Performs fault detection and recovery using the online health management system (system health) feature.

Release Notes for SAN-OS Release 1.3(4a)

New Features for SAN-OS Release 1.3(3)

1.3(3) Features	Description
iSCSI SACK default	Enables the TCP SACK parameter (default) for iSCSI configurations.
Essential upgrade prerequisites	Contacts customer service for recommendations before attempting an upgrade.
iSCSI name restriction	Restricts the iSCSI qualified name to a maximum name length of 223 alphanumeric characters and a minimum length of 16 characters.

Release Notes for SAN-OS Release 1.3(3)

New Features for SAN-OS Release 1.3(2a)

1.3(2a) Features	Description
Zone set import/export	Imports or exports the zone set to or from an adjacent switch connected through a VSAN.
Rolling upgrades	Uses a rolling upgrade install mechanism for the Caching Services Module (CSM) and the IP Storage Services (IPS) module.

Release Notes for SAN-OS Release 1.3(2a)

New Features for SAN-OS Release 1.3(1)

1.3(1) Features	Description
Running configuration information	Displays configurations based on a specified feature, interface, module, or VSAN.
Licensing	Accesses specified premium features on the switch.
Initial setup additions	Configures the full zone set distribution and FC ID persistence features for the entire fabric during initial setup.
Automatic image synchronization	Automatic synchronization of the running image in the standby supervisor module by the active supervisor module.
Standby state	Displays standby or HA standby when the redundancy state or the supervisor state indicate a switchover is possible.
Terminal connection options	Connects to a console terminal, a Telnet terminal, or an SSH terminal from the active supervisor module.
Standby supervisor module boot variables	Forces the standby supervisor module to run the same version as the active supervisor module.
Replacing modules	Ensures that the new module is running the same software version as the rest of the switch.
Transceiver and calibration information	Displays real-time diagnostics information.
Buffer-to-buffer credit (BB_credit) display	Displays the receive and transmit BB_credit along with other pertinent interface information.
Common Information Model (CIM) configuration	Configures the CIM server using the HTTP and HTTPS protocol.
PortChannel quiesce	Gracefully shuts down an interface without dropping any frames.
Zone membership	Assigns zone membership criteria based on the interface and domain ID, domain ID and port number, and IP address.
IVR	Accesses resources across VSANs without compromising other VSAN benefits.
Fabric-Device Management Interface (FDMI)	Enables management of devices using the FDMI feature.
AAA server groups	Configures remote AAA servers using server groups.
TACACS+ authentication	Uses the Terminal Access Controller Access Control System plus (TACACS+) protocol to communicate with remote AAA servers.
RADIUS enhancements	Configures multiple RADIUS server groups.
FC-SP DHCHAP	Configures Fibre Channel Security Protocol (FC-SP) authentication to overcome security challenges for enterprise-wide fabrics. Diffie-Hellman Challenge Handshake Authentication Protocol (DHCHAP) provides authentication between Cisco MDS switches and other devices.

FI-bre CON-nection (FICON)	Intermixes FICON and Fibre Channel Protocol (FCP) traffic on the same switch without compromising scalability, availability, manageability and network security.
Fabric binding	Prevents unauthorized switches from joining the fabric or disrupting current fabric operations.
Registered Link Incident Report (RLIR)	Uses the RLIR function to send a LIR to a registered Nx port.
Trespass support	Uses the trespass feature to enable the export of logical units (LUs) from the active to the passive port of a statically imported iSCSI target.
Internet Storage Name Service (iSNS)	Uses the iSNS services to automate the discovery and management of iSCSI devices.
Proxy initiator	Connects all iSCSI initiators through one IPS port to make it appear as one Fibre Channel port per VSAN.
FCIP write accelerator	Improves application performance using the FCIP write acceleration feature.
FCIP compression	Allows IP packets to be compressed on the FCIP link if this feature is enabled on that link.
VSAN membership for iSCSI interfaces	Configures an iSCSI host to be a member of one or more VSANs.
Call Home enhancements	Defines a Call Home destination profile, selects predefined types of Call Home alerts, or filters messages based on their level of urgency.
FC domain ID changes	Defines the default behavior to enable persistent FC IDs globally or for each VSAN.
Port rate limiting	Uses the port rate limiting feature to control ingress traffic into a Fibre Channel port.
Quality of Service (QoS)	Configures four priority levels for service differentiation.
Auto-discovery of SCSI targets	Automatically discovers SCSI targets using the show scsi-target auto-poll command.
IPS SPAN source	Assigns a Switched Port Analyzer (SPAN) source on the IP Storage Services (IPS) module.
Per VSAN time out values (TOV)	Configure different TOVs for a specified VSAN with special links like FC or IP tunnels.

New Features for SAN-OS Release 1.2(2a)

1.2(2a) Features	Description
The **install all** command	Recommends issuing the **install all** command.

Configuring unique area FC IDs	Using the FC ID persistence feature switches in the Cisco MDS 9000 Family can be manually configured with a different area to either the storage port or the HBA port FC ID.
Assigning LUNs to storage systems	Single-OS and multi-OS scenarios for LUN zoning if LUN masking is enabled on the storage system.

Release Notes for SAN-OS Release 1.2(2a)

New Features for SAN-OS Release 1.2(1a)

1.2(1a) Features	Description
Port security	Prevents unauthorized access to a switch port in the Cisco MDS 9000 Family.
Remote SPAN (RSPAN)	Remotely monitors traffic for one or more SPAN sources distributed in one or more source switches in a Fibre Channel fabric.
Logical unit number (LUN) zoning	Restricts access to specific LUNs associated with a device.
Read-only zones	Restricts zone members to read-only access to devices within the zone.
Interface-based zoning	Specifies a switch interface as a zone member for local or remote switches.
Common roles	Provides the ability to create and modify roles using CLI or SNMP.
VSAN-based roles	Creates roles that are valid in a specific VSAN.
IP access control lists (IP-ACLs)	Restricts IP-related in-band and out-of-band management traffic based on IP addresses (Layer 3 and Layer 4 information.
Incompatability check	Verifies feature compatibility during a software downgrade.
ELPD configuration	Provides ability to upgrade or downgrade ELPD images.

Release Notes for SAN-OS Release 1.2(1a)

New Features for SAN-OS Release 1.1(2)

1.1(2) Features	Description
Performance buffers	Allocates additional buffers per interface beyond the existing buffer-to-buffer credits.
Enhanced **show tech-support**	Displays the output of several common show commands for troubleshooting purposes.

Release Notes for SAN-OS Release 1.1(2)

New Features for SAN-OS Release 1.1(1)

1.1(1) Features	Description
CWPM/FSP	Supports hot-swappable Cisco coarse wavelength-division multiplexing (CWDM) small form-factor pluggables (SFPs).
iSCSI and FCIP	Extends SAN support to IP based networks using Fibre Channel over IP (FCIP) and iSCSI IP storage services.
Zones and VSANs	Restricts fabric access based on zones or virtual SANs.
Cisco Discovery Protocol (CDP)	Supports the advertisement protocol used by Cisco devices to advertise itself to other Cisco devices in the same network.

Release Notes for SAN-OS Release 1.1(1)

New Features for SAN-OS Release 1.0(5)

1.0(5) Features	Description
Standby supervisor bootup alert	Sends a Call Home message when the standby supervisor fails to boot up.

Release Notes for SAN-OS Release 1.0(5)

New Features for SAN-OS Release 1.0(3a)

1.0(3a) Features	Description
install all command	Supports upgrading all modules.

Release Notes for SAN-OS Release 1.0(3a)

New Features for SAN-OS Release 1.0(2a)

1.0(2a)Features	Description
Boot loader upgrade enhancement	Changes to the boot loader upgrade procedure for the active supervisor module.

Release Notes for SAN-OS Release 1.0(2a)