



New and Changed Information

Summarizes the new and changed commands for Cisco MDS SAN-OS Release 3.x, and tells you where they are documented in the *Cisco MDS 9000 Family Command Reference*.

New and Changed Commands in the Cisco MDS 9000 Family Command Reference

Feature	Description	Where Documented
New and Changed Commands for Cisco SAN-OS Release 3.4(1)		
CFS Distribution	cfs static-peers command	C Commands
	show cfs static peers command	Show Commands
	show cfs status command	
counter	counter command	C Commands
do	do command (Modified the command output).	D Commands
end	end comand (Modified the command output).	E Commands
exit	exit command (Modified the command output).	
ip-access-list	ip access-list command (Added a note information for the usage section).	I Commands
Network Time Protocol	ntp sync-retry command (Added a note information for the command section).	N Commands
Port-Monitor with RMON	port-monitor activate command	P Commands
	port-monitor enable command	
	port-monitor name command	
	show port-monitor command	Show Commands
port-type	port-type command	P Commands
rmon event	rmon event command (Modified the command output).	R Commands

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New and Changed Commands in the Cisco MDS 9000 Family Command Reference (continued)

Feature	Description	Where Documented
SANTap	show isapi tech-support santap file command	Show Commands
snmp-server user	snmp-server user command (Added engineID options).	S Commands
SNMP	snmp-server community command	S Commands
	snmp-server contact command	
	snmp-server location command	
	snmp-server enable traps fcdomain command	
	snmp-server enable traps link cisco command	
	snmp-server enable traps zone command	
	snmp-server traps entity fru command	

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New and Changed Commands in the Cisco MDS 9000 Family Command Reference (continued)

Feature	Description	Where Documented
New and Changed Commands for Cisco SAN-OS Release 3.3(1a)		
Cimserver	cimserver clearcertificate command	C Commands
	cimserver loglevel command	
	show cimserver indications command	Show Commands
	show cimserver logs command show cimserver status command	
FC-Redirect	fc-redirect version2 enable command	F Commands
	no fc-redirect version2 enable command	N Commands
	clear fc-redirect decommission-switch command	C Commands
	show fc-redirect configs command (Added the configuration mode information to the command output).	Show Commands
Format (USB Command)	format command	F Commands
Flex-Attach	flex-attach virtual-pwwn command	F Commands
	flex-attach virtual-pwwn auto command	
	flex-attach virtual-pwwn interface command	
	show flex-attach command show flex-attach info command show flex-attach merge status command show flex-attach virtual-pwwn command	Show Commands
Interface Transceiver	show interface transceiver command (Added the SFP and X2 digital monitoring information for a transceiver).	Show Commands
IVR	ivr virtual-fc-domain-add2 command	I Commands
	show ivr virtual-fc-domain-add-status2 command	Show Commands
NPV traffic-map	npv traffic-map server-interface command	N Commands
	npv auto-load-balance disruptive command	
	show npv internal info traffic-map command	Show Commands
	show npv traffic-map command	
Network Time Protocol	ntp sync-retry command	N Commands

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New and Changed Commands in the Cisco MDS 9000 Family Command Reference (continued)

Feature	Description	Where Documented
RMON	clear rmon alarms command clear rmon all-alarms command clear rmon hcalarms command clear rmon log command	C Commands
	rmon alarm command rmon event command rmon hcalarm command (Modified the syntax description)	R Commands
	show rmon command (Changed the command output format for show rmon logs and show rmon hcalarms under the show rmon command). show rmon status command	Show Commands
Span for Atlantis	span session source interface command span max-queued-packets command	S Commands
	show span drop-counters command show span max-queued-packets command show span session command	Show Commands

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New and Changed Commands in the Cisco MDS 9000 Family Command Reference (continued)

Feature	Description	Where Documented
SME	auto-volgrp command	A Commands
Included all SME Commands	cluster command	C Commands
	debug sme command	Debug Commands
	discover command	D Commands
	fabric command	F Commands
	fabric-membership command	
	interface sme command	I Commands
	interface sme (Cisco SME cluster node configuration submode) command	
	key-ontape command	K Commands
	link-state-trap (SME) command	L Commands
	load-balancing command	
	node command	N Commands
	odrt.bin command	O Commands
	rule command	R Commands
	security-mode command	S Commands
	setup command	
	shared-keymode command	
	shutdown (interface configuration submode) command	
	shutdown (Cisco SME cluster configuration submode) command	
	sme command	
	ssl command	
	show debug sme command	Show Commands
	show interface sme command	
	show role command	
show sme transport command		
show tech-support sme command		
tape-bkgrp command	T Commands	
tape compression command		
tape-device command		
tape-keyrecycle command		
tape-volgrp command		

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New and Changed Commands in the Cisco MDS 9000 Family Command Reference (continued)

Feature	Description	Where Documented
New and Changed Commands for Cisco SAN-OS Release 3.2(2c)		
System Health	Added Table 22-11 , which describes the status value for each module for the show system health command.	Show Commands
iSCSI Enable	Updated the example for iscsi enable command.	I Commands

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New and Changed Commands in the Cisco MDS 9000 Family Command Reference (continued)

Feature	Description	Where Documented
New and Changed Commands for Cisco SAN-OS Release 3.2(1)		
AAA enhancements	aaa authentication login password-aging enable command	A Commands
	show aaa authentication login password-aging command	Show Commands
FC-Redirect	clear fc-redirect config vt command	C Commands
	show fc-redirect configs command	Show Commands
	show fc-redirect peer-switches command	
	iscsi enable module command	I Commands
N Port Virtualization	debug npv command	Debug Commands
	npv enable command	N Commands
	show debug npv command	Show Commands
	show npv flogi-table command	
	show npv internal info command	
show npv status command		
SANTap	show santap module dvt brief command	Show Commands
	show isapi dpp command	
	clear ssm-nvram santap module command	C Commands
IP Network Simulator	show ips stats fabric interface command	Show Commands
	clear ips stats fabric interface command	C Commands
CFS Regions	cfs region command	C Commands
	show cfs regions command	Show Commands
zonemember	zone convert zone command	Z Commands
zoneserver	system default zone mode enhanced command	S Commands
	show system default zone command (includes the basic default zoning mode)	Show Commands

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New and Changed Commands in the Cisco MDS 9000 Family Command Reference (continued)

Feature	Description	Where Documented
New and Changed Commands for Cisco SAN-OS Release 3.1(3)		
System default port mode F	system default switchport mode F option	S Commands
	show system command	Show Commands
CompactFlash	system health module cf-crc-check option system health module cf-re-flash option system health cf-crc-check command system health cf-re-flash command	S Commands
	show system command	Show Commands
Cisco Fabric Switch for HP c-Class BladeSystem and Cisco Fabric Switch for IBM BladeCenter	Added the “ Port Names and Port Mapping ” section.	CLI Overview
	clear rlr (interface bay ext option)	C Commands
	interface (bay ext) option interface bay ext command	I Commands
	system health (Configuration mode) (interface bay ext option) system health clear-errors (interface bay ext option) system health external-loopback (interface bay ext option) system health internal-loopback (interface bay ext option) system health serdes-loopback (interface bay ext option)	S Commands
	show flex-attach info (interface bay ext option) show interface (interface bay ext option) show vsan (interface bay ext option)	Show Commands
	vsan database (interface bay ext option)	V Commands
	zone name (configuration mode) (interface bay ext option) zoneset (EXEC mode) (interface bay ext option)	Z Commands

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New and Changed Commands in the Cisco MDS 9000 Family Command Reference (continued)

Feature	Description	Where Documented
	Updated the following commands to indicate they are <i>not</i> supported on the Cisco Fabric Switch for HP c-Class BladeSystem and Cisco Fabric Switch for IBM BladeCenter: cloud-discovery enable command crypto ike enable command crypto ipsec enable command fcc enable command ficon enable fcip enable command fcrxbbcredit extended enable command fc-tunnel command iscsi enable command ivr enable command san-ext-tuner enable command zone broadcast enable vsan command	C Commands F Commands C Commands I Commands S Commands Z Commands
SAN Device Virtualization	clear sdv command	C Commands
	debug sdv command	Debug Commands
	device-alias (SDV virtual device configuration submode) command	D Commands
	link (SDV virtual device configuration submode) command	L Commands
	pwwn (SDV virtual device configuration submode) command	P Commands
	sdv abort vsan command	S Commands
	show sdv command	Show Commands
	virtual-domain (SDV virtual device configuration submode) command virtual-fcid (SDV virtual device configuration submode) command	V Commands
SNMP	link-state-trap command	L Commands
SANTap	show santap module command (tech-support option)	Show Commands
FCS	fcs virtual-device-add command	F Commands
Network Time Protocol	ntp sync-retry command	N Commands
Daylight Saving Time	clock command (updated example for setting the summer-time option)	C Commands

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New and Changed Commands in the Cisco MDS 9000 Family Command Reference (continued)

Feature	Description	Where Documented
New and Changed Commands for Cisco SAN-OS Release 3.1(1)		
Nondisruptive software upgrades	clear install failure-reason command	C Commands
	show install all failure-reason command	Show Commands
	show install all status command	
	show install all impact command	
On-demand port activation	port-license command	P Commands
	show port-license command	Show Commands
Removal of oversubscription ratio restrictions	rate-mode oversubscription-limit command	R Commands
IP Network Simulator	ips netsim enable command	I Commands
	ips netsim max-bandwidth-kbps command	
	ips netsim qsize command	
	ips netsim delay-ms command	
	ips netsim drop nth command	
	ips netsim reorder command	
	show ips netsim command	Show Commands
	show ips stats fabric interface command	
Technical support	show tech-support command (device-alias option)	Show Commands
Cisco MDS 9124 Multilayer Fabric Switch support	The following commands were updated to indicate that they are <i>not</i> supported on the Cisco MDS 9124 Fabric Switch: cloud-discovery enable command crypto ike enable command crypto ipsec enable command fcc enable command fcip enable command fcxbbcredit extended enable command fc-tunnel command ficon enable iscsi enable command ivr enable command san-ext-tuner enable command zone broadcast enable vsan command	C Commands F Commands I Commands S Commands Z Commands

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New and Changed Commands in the Cisco MDS 9000 Family Command Reference (continued)

Feature	Description	Where Documented
New and Changed Commands for Cisco SAN-OS Release 3.0(3)		
Fiber Channel	fcroute command	F Commands
Registered Link Incident Reports	rlir preferred-cond fcid command	R Commands
	show rlir command	Show Commands
Scheduler enhancements	scheduler aaa-authentication command	S Commands
Technical support	show tech-support command (acl, bootvar, cfs, name, fcip, ficon, fspf, fta, ip, iscsi, islb, license, logging, port, port-channel, prefpath, qos, snmp, sysmgr, and vrrp options)	Show Commands
New and Changed Commands for Cisco SAN-OS Release 3.0(2)		
Fibre Channel domains	fcdomain command (optimize fast-restart option)	F Commands
FICON enhancements	ficon port default-state prohibit-all command	F Commands
	show ficon command (port default-state option)	Show Commands

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New and Changed Commands in the Cisco MDS 9000 Family Command Reference (continued)

Feature	Description	Where Documented
New and Changed Commands for Cisco SAN-OS Release 3.0(1)		
AAA enhancements	aaa authentication login command (mschap option)	A Commands
	deadtime (radius group configuration) command	D Commands
	deadtime (tacacs+ group configuration) command	
	debug radius command (server-monitor and server-monitor-errors options)	Debug Commands
	debug tacacs+ command (server-monitor and server-monitor-errors options)	
	radius-server deadtime command	R Commands
	radius-server directed-request command	
	radius-server host command (<i>ipv6-address</i> argument and test option)	
	server (radius configuration) command (<i>ipv6-address</i> argument)	S Commands
	server (tacacs+ configuration) command (<i>ipv6-address</i> argument)	
	show aaa authentication command (mschap option)	Show Commands
	show radius-server command (<i>server-name</i> , <i>ipv4-address</i> , and <i>ipv6-address</i> arguments; directed-request and statistics options)	
	show tacacs-server command (<i>server-name</i> , <i>ipv4-address</i> , and <i>ipv6-address</i> arguments; directed-request and statistics options)	
	tacacs-server deadtime command	
	tacacs-server directed-request command	T Commands
	tacacs-server host command (<i>ipv6-address</i> argument and test option)	
	username command (ssh-cert-dn , dsa , and rsa options)	
boot auto-copy command enabled by default	boot command (auto-copy default state changed to enabled)	B Commands
Call Home	alert-group command	A Commands
	show callhome command (user-def-cmds option)	Show Commands

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New and Changed Commands in the Cisco MDS 9000 Family Command Reference (continued)

Feature	Description	Where Documented
Certificate authorities and digital certificates	crypto ca authenticate command	C Commands
	crypto ca crl request command	
	crypto ca enroll command	
	crypto ca export command	
	crypto ca import command	
	crypto ca test verify command	
	crypto ca trustpoint command	
	crypto key generate rsa command	
	crypto key zeroize rsa command	
	delete ca-certificate command	
delete certificate command		
debug cert-enroll command	Debug Commands	
enrollment terminal command	E Commands	
odrt.bin command	O Commands	
revocation-check command	R Commands	
rsakeypair command		
	show crypto ca certificates command	Show Commands
	show crypto ca crl command	
	show crypto ca trustpoints command	
	show crypto key mypubkey rsa command	
CFS support for allowed domain ID list	fcdomain abort vsan command	F Commands
	fcdomain commit vsan command	
	fcdomain distribute command	
	show fcdomain command (pending , pending-diff , session-status , and status options)	Show Commands
CFS over IP	cfs ipv4 distribute command	C Commands
	cfs ipv4 mcast-address command	
	cfs ipv6 distribute command	
	cfs ipv6 mcast-address command	

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New and Changed Commands in the Cisco MDS 9000 Family Command Reference (continued)

Feature	Description	Where Documented
CFS support for RSCN	clear rscn session vsan command	C Commands
	rscn abort vsan command	R Commands
	rscn commit vsan command	
	rscn distribute command	
	rscn event-tov command	
	show rscn command (event-tov , pending , and pending-diff options)	Show Commands
CLI Enhancements	cli alias name command	C Commands
	cli var name (EXEC) command	
	cli var name (configuration) command	
	show cimserver logs command	Show Commands
	show cli variables command	
	pwc command	
	rule command (added example showing user-defined variable)	R Commands
Cloud Discovery	cloud discover command	C Commands
	cloud discovery command	
	cloud-discovery enable command	
	debug cloud command	Debug Commands
	show cloud discovery command	Show Commands
	show cloud membership command	
show debug command (cloud option)		
Configuration Check	show incompatibility system command (added example showing that the command output provides the commands to disable incompatible features)	Show Commands
Crossbar graceful shutdown	out-of-service module command	O Commands
	out-of-service xbar command	
Deprecated Commands	fcid-last-byte command	F Commands
EPLD enhancements for the MDS 9513	install clock-module command	I Commands
	show version command (clock-module option)	Show Commands

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New and Changed Commands in the Cisco MDS 9000 Family Command Reference (continued)

Feature	Description	Where Documented
FICON Port Numbering	ficon enable command ficon logical-port assign port-numbers command ficon slot assign port-numbers command ficon swap command (interface option)	F Commands
	show ficon command (port-numbers and stat options; pib and portnumber keywords)	Show Commands
Generation 2 Module Support	channel-group command	C Commands
	debug port-resources command	Debug Commands
	out-of-service command	O Commands
	switchport command (fcbbscn option, ST option to mode keyword, 4000 option to speed keyword, auto max 2000 option to speed keyword, rate-mode keyword; added Gigabit Ethernet interface syntax and management interface syntax)	S Commands
	show interface command (fc capabilities option) show module command (recovery-steps and x-bar options) show npv flogi-table command show port-monitor command	Show Commands
IKE Enhancements	authentication command	A Commands
	identity command	I Commands
	keycommand (hostname keyword)	K Commands

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New and Changed Commands in the Cisco MDS 9000 Family Command Reference (continued)

Feature	Description	Where Documented	
IPv6	clear ips stats command clear ips stats fabric interface command clear ipv6 neighbors command clear vrrp command (ipv4 and ipv6 options)	C Commands	
	deny (IPv6-ACL configuration) command	D Commands	
	ipv6 access-list command ipv6 address command ipv6 address autoconfig command ipv6 enable command ipv6 nd command ipv6 route command ipv6 routing command ipv6 traffic-filter command	I Commands	
	permit (IPv6-ACL configuration) command ping command(ipv6 option)	P Commands	
	show ip arp command show ip interface command show ip traffic command show ips ipv6 command show ipv6 access-list command show ipv6 interface command show ipv6 neighbours command show ipv6 route command show ipv6 routing command show ipv6 traffic command show vrrp command (ipv6 option)	Show Commands	
	traceroute command (ipv6 option)	T Commands	
	vrrp command(ipv6 option; address and advertisement-interval options specific to IPv6)	V Commands	
	iSCSI Server Load Balancing (iSLB)	clear islb session command	C Commands
		debug ips command (iSLB and iSNS options)	Debug Commands

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New and Changed Commands in the Cisco MDS 9000 Family Command Reference (continued)

Feature	Description	Where Documented
	iscsi dynamic initiator command islb abort command islb commit command islb distribute command islb initiator command islb save-initiator command islb virtual-target name command islb vrrp command islb zoneset activate command	I Commands
	member (zone configuration and zoneset-zone configuration submode) command (<i>ipv6</i> argument) metric (iSLB initiator configuration) command mutual-chap username (iSCSI initiator configuration and iSLB initiator configuration) command (added iSLB initiator configuration submode)	M Commands
	show islb cfs-session status command show islb initiator command show islb merge status command show islb pending command show islb pending-diff command show islb session command show islb status command show islb virtual-target command show islb vrrp command	Show Commands
	static (iSCSI initiator configuration and iSLB initiator configuration) command (added iSLB initiator configuration submode)	S Commands
	target (iSLB initiator configuration) command	T Commands
	username (iSCSI initiator configuration and iSLB initiator configuration) command (added iSLB initiator configuration submode)	U Commands
	vsan (iSCSI initiator configuration and iSLB initiator configuration) command (added iSLB initiator configuration submode)	V Commands
	zonename (iSLB initiator configuration) command	Z Commands

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New and Changed Commands in the Cisco MDS 9000 Family Command Reference (continued)

Feature	Description	Where Documented
IVR	clear ivr service-group database command	C Commands
	ivr copy active-service-group user-configured-service-group command	I Commands
	ivr copy active-topology user-configured-topology command	
	ivr copy active-zoneset full-zoneset command	
	ivr service-group activate command	
	ivr zone rename command	
	ivr zoneset rename command	
	show ivr service-group command	Show Commands
	show ivr virtual-fcdomain-add-status2 command	
Lossless InOrder Delivery (IOD)	debug rib command (liod_error , liod_event , and liod_trace options)	Debug Commands
McData Interoperability Support	show wwn command (vsan-wwn option)	Show Commands
	vsan database command (increased the interop mode range to 4)	V Commands
	wwn vsan command	W Commands
Message logging	logging timestamp command	L Commands
N-port identifier virtualization (NPIV)	npiv enable command	N Commands
Onboard Failure Logging (OBFL)	clear logging command (onboard , module and session , options)	C Commands
	hw-module logging onboard command	H Commands
	show logging command (onboard logging)	Show Commands
Online Health Management System	system health (Configuration mode) command (frame-length and auto options to the loopback keyword) system health external-loopback command (source and destination keywords and the frame-count and frame-length options) system health internal-loopback command (frame-count and frame-length options) system health module command (Added note about frequency range for bootflash) system health serdes-loopback command	S Commands
SAN tuner extension	tape-bkgrp command	T Commands
	tape-volgrp command	

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New and Changed Commands in the Cisco MDS 9000 Family Command Reference (continued)

Feature	Description	Where Documented
SANTap	clear santap module command	C Commands
	santap module command (cvt-name , dvt , target-pwvn , target-vsan , dvt-name , dvt-vsan , dvt-port , lun-size-handling , and io-timeout options)	S Commands
Troubleshooting	show tech-support command (fcdomain , port-channel , and zone options)	Show Commands
Zoning	clear zone command (lock option)	C Commands
	system default zone default-zone permit command	S Commands
	system default zone distribute full command	
	show system command (zone option)	Show Commands
	show zone analysis command	
	zone compact vsan command	Z Commands
	zone default-zone command (added Usage Guidelines)	
	zoneset (configuration mode) command (added Usage Guidelines)	

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New and Changed Commands in the Cisco MDS 9000 Family Command Reference (continued)

Feature	Description	Where Documented
New and Changed Commands for Cisco SAN-OS Release 3.2(1)		
AAA enhancements	aaa authentication login password-aging enable command	A Commands
	show aaa authentication login password-aging command	Show Commands
FC-Redirect	clear fc-redirect config vt command	C Commands
	show fc-redirect configs command	Show Commands
	show fc-redirect peer-switches command	
	iscsi enable module command	I Commands
N Port Virtualization	debug npv command	Debug Commands
	npv enable command	N Commands
	show debug npv command	Show Commands
	show npv flogi-table command	
	show npv internal info command	
show npv status command		
SANTap	show santap module dvt brief command	Show Commands
	show isapi dpp command	
	clear ssm-nvram santap module command	C Commands
IP Network Simulator	show ips stats fabric interface command	Show Commands
	clear ips stats fabric interface command	C Commands
CFS Regions	cfs region command	C Commands
	show cfs regions command	Show Commands
zonemember	zone convert zone command	Z Commands
zoneserver	system default zone mode enhanced command	S Commands
	show system default zone command (includes the basic default zoning mode)	Show Commands

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New and Changed Commands in the Cisco MDS 9000 Family Command Reference (continued)

Feature	Description	Where Documented
New and Changed Commands for Cisco SAN-OS Release 3.1(3)		
System default port mode F	system default switchport mode F option show system command	S Commands Show Commands
CompactFlash	system health module cf-crc-check option system health module cf-re-flash option system health cf-crc-check command system health cf-re-flash command show system command	S Commands Show Commands
Cisco Fabric Switch for HP c-Class BladeSystem and Cisco Fabric Switch for IBM BladeCenter	Added the “Port Names and Port Mapping” section.	CLI Overview
	clear rlr (interface bay ext option)	C Commands
	interface (bay ext) option interface bay ext command	I Commands
	system health (Configuration mode) (interface bay ext option) system health clear-errors (interface bay ext option) system health external-loopback (interface bay ext option) system health internal-loopback (interface bay ext option) system health serdes-loopback (interface bay ext option)	S Commands
	show flex-attach info (interface bay ext option) show interface (interface bay ext option) show vsan (interface bay ext option)	Show Commands
	vsan database (interface bay ext option)	V Commands
	zone name (configuration mode) (interface bay ext option) zoneset (EXEC mode) (interface bay ext option)	Z Commands

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New and Changed Commands in the Cisco MDS 9000 Family Command Reference (continued)

Feature	Description	Where Documented
New and Changed Commands for Cisco SAN-OS Release 3.1(1)		
Nondisruptive software upgrades	clear install failure-reason command	C Commands
	show install all failure-reason command	Show Commands
	show install all status command	
	show install all impact command	
On-demand port activation	port-license command	P Commands
	show port-license command	Show Commands
Removal of oversubscription ratio restrictions	rate-mode oversubscription-limit command	R Commands
IP Network Simulator	ips netsim enable command	I Commands
	ips netsim max-bandwidth-kbps command	
	ips netsim qsize command	
	ips netsim delay-ms command	
	ips netsim drop nth command	
	ips netsim reorder command	
	show ips netsim command	Show Commands
	show ips stats fabric interface command	
Technical support	show tech-support command (device-alias option)	Show Commands
Cisco MDS 9124 Multilayer Fabric Switch support	The following commands were updated to indicate that they are <i>not</i> supported on the Cisco MDS 9124 Fabric Switch:	
	cloud-discovery enable command	C Commands
	crypto ike enable command	
	crypto ipsec enable command	
	fcc enable command	F Commands
	fcip enable command	
	fcrxbbcredit extended enable command	
	fc-tunnel command	
	ficon enable	
	iscsi enable command	I Commands
	ivr enable command	
	san-ext-tuner enable command	S Commands
zone broadcast enable vsan command	Z Commands	

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New and Changed Commands in the Cisco MDS 9000 Family Command Reference (continued)

Feature	Description	Where Documented
New and Changed Commands for Cisco SAN-OS Release 3.0(3)		
Fiber Channel	fcroute command	F Commands
Registered Link Incident Reports	rlir preferred-cond fcid command	R Commands
	show rlir command	Show Commands
Scheduler enhancements	scheduler aaa-authentication command	S Commands
Technical support	show tech-support command (acl, bootvar, cfs, name, fcip, ficon, fspf, fta, ip, iscsi, islb, license, logging, port, port-channel, prepath, qos, snmp, sysmgr, and vrrp options)	Show Commands
New and Changed Commands for Cisco SAN-OS Release 3.0(2)		
Fibre Channel domains	fcdomain command (optimize fast-restart option)	F Commands
FICON enhancements	ficon port default-state prohibit-all command	F Commands
	show ficon command (port default-state option)	Show Commands

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New and Changed Commands in the Cisco MDS 9000 Family Command Reference (continued)

Feature	Description	Where Documented
New and Changed Commands for Cisco SAN-OS Release 3.0(1)		
AAA enhancements	aaa authentication login command (mschap option)	A Commands
	deadtime (radius group configuration) command	D Commands
	deadtime (tacacs+ group configuration) command	
	debug radius command (server-monitor and server-monitor-errors options)	Debug Commands
	debug tacacs+ command (server-monitor and server-monitor-errors options)	
	radius-server deadtime command	R Commands
	radius-server directed-request command	
	radius-server host command (<i>ipv6-address</i> argument and test option)	
	server (radius configuration) command (<i>ipv6-address</i> argument)	S Commands
server (tacacs+ configuration) command (<i>ipv6-address</i> argument)		
show aaa authentication command (mschap option)	Show Commands	
show radius-server command (<i>server-name</i> , <i>ipv4-address</i> , and <i>ipv6-address</i> arguments; directed-request and statistics options)		
show tacacs-server command (<i>server-name</i> , <i>ipv4-address</i> , and <i>ipv6-address</i> arguments; directed-request and statistics options)		
tacacs-server deadtime command	T Commands	
tacacs-server directed-request command		
tacacs-server host command (<i>ipv6-address</i> argument and test option)		
username command (ssh-cert-dn , dsa , and rsa options)	U Commands	
boot auto-copy command enabled by default	boot command (auto-copy default state changed to enabled)	B Commands
Call Home	alert-group command	A Commands
	show callhome command (user-def-cmds option)	Show Commands

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New and Changed Commands in the Cisco MDS 9000 Family Command Reference (continued)

Feature	Description	Where Documented
Certificate authorities and digital certificates	crypto ca authenticate command	C Commands
	crypto ca crl request command	
	crypto ca enroll command	
	crypto ca export command	
	crypto ca import command	
	crypto ca test verify command	
	crypto ca trustpoint command	
	crypto key generate rsa command	
	crypto key zeroize rsa command	
	delete ca-certificate command	
delete certificate command		
debug cert-enroll command	Debug Commands	
enrollment terminal command	E Commands	
odrt.bin command	O Commands	
revocation-check command	R Commands	
rsakeypair command		
	show crypto ca certificates command	Show Commands
	show crypto ca crl command	
	show crypto ca trustpoints command	
	show crypto key mypubkey rsa command	
CFS support for allowed domain ID list	fcdomain abort vsan command	F Commands
	fcdomain commit vsan command	
	fcdomain distribute command	
	show fcdomain command (pending , pending-diff , session-status , and status options)	Show Commands
CFS over IP	cfs ipv4 distribute command	C Commands
	cfs ipv4 mcast-address command	
	cfs ipv6 distribute command	
	cfs ipv6 mcast-address command	

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New and Changed Commands in the Cisco MDS 9000 Family Command Reference (continued)

Feature	Description	Where Documented
CFS support for RSCN	clear rscn session vsan command	C Commands
	rscn abort vsan command	R Commands
	rscn commit vsan command	
	rscn distribute command	
	rscn event-tov command	
	show rscn command (event-tov , pending , and pending-diff options)	Show Commands
CLI Enhancements	cli alias name command	C Commands
	cli var name (EXEC) command	
	cli var name (configuration) command	
	show cimserver logs command	Show Commands
	show cli variables command	
	pwc command	P Commands
	rule command (added example showing user-defined variable)	R Commands
Cloud Discovery	cloud discover command	C Commands
	cloud discovery command	
	cloud-discovery enable command	
	debug cloud command	Debug Commands
	show cloud discovery command	Show Commands
	show cloud membership command	
show debug command (cloud option)		
Configuration Check	show incompatibility system command (added example showing that the command output provides the commands to disable incompatible features)	Show Commands
Crossbar graceful shutdown	out-of-service module command	O Commands
	out-of-service xbar command	
Deprecated Commands	fcid-last-byte command	F Commands
EPLD enhancements for the MDS 9513	install clock-module command	I Commands
	show version command (clock-module option)	Show Commands

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New and Changed Commands in the Cisco MDS 9000 Family Command Reference (continued)

Feature	Description	Where Documented
FICON Port Numbering	ficon enable command ficon logical-port assign port-numbers command ficon slot assign port-numbers command ficon swap command (interface option)	F Commands
	show ficon command (port-numbers and stat options; pib and portnumber keywords)	Show Commands
Generation 2 Module Support	channel-group command	C Commands
	debug port-resources command	Debug Commands
	out-of-service command	O Commands
	switchport command (fcbbscn option, ST option to mode keyword, 4000 option to speed keyword, auto max 2000 option to speed keyword, rate-mode keyword; added Gigabit Ethernet interface syntax and management interface syntax)	S Commands
	show interface command (fc capabilities option) show module command (recovery-steps and x-bar options) show npv flogi-table command show port-monitor command	Show Commands
IKE Enhancements	authentication command	A Commands
	identity command	I Commands
	keycommand (hostname keyword)	K Commands

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New and Changed Commands in the Cisco MDS 9000 Family Command Reference (continued)

Feature	Description	Where Documented	
IPv6	clear ips stats command clear ips stats fabric interface command clear ipv6 neighbors command clear vrrp command (ipv4 and ipv6 options)	C Commands	
	deny (IPv6-ACL configuration) command	D Commands	
	ipv6 access-list command ipv6 address command ipv6 address autoconfig command ipv6 enable command ipv6 nd command ipv6 route command ipv6 routing command ipv6 traffic-filter command	I Commands	
	permit (IPv6-ACL configuration) command ping command(ipv6 option)	P Commands	
	show ip arp command show ip interface command show ip traffic command show ips ipv6 command show ipv6 access-list command show ipv6 interface command show ipv6 neighbours command show ipv6 route command show ipv6 routing command show ipv6 traffic command show vrrp command (ipv6 option)	Show Commands	
	traceroute command (ipv6 option)	T Commands	
	vrrp command(ipv6 option; address and advertisement-interval options specific to IPv6)	V Commands	
	clear islb session command	C Commands	
	debug ips command (iSLB and iSNS options)	Debug Commands	
	iSCSI Server Load Balancing (iSLB)		

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New and Changed Commands in the Cisco MDS 9000 Family Command Reference (continued)

Feature	Description	Where Documented
	<p>iscsi dynamic initiator command</p> <p>islb abort command</p> <p>islb commit command</p> <p>islb distribute command</p> <p>islb initiator command</p> <p>islb save-initiator command</p> <p>islb virtual-target name command</p> <p>islb vrrp command</p> <p>islb zoneset activate command</p>	I Commands
	<p>member (zone configuration and zoneset-zone configuration submode) command (<i>ipv6</i> argument)</p> <p>metric (iSLB initiator configuration) command</p> <p>mutual-chap username (iSCSI initiator configuration and iSLB initiator configuration) command (added iSLB initiator configuration submode)</p>	M Commands
	<p>show islb cfs-session status command</p> <p>show islb initiator command</p> <p>show islb merge status command</p> <p>show islb pending command</p> <p>show islb pending-diff command</p> <p>show islb session command</p> <p>show islb status command</p> <p>show islb virtual-target command</p> <p>show islb vrrp command</p>	Show Commands
	<p>static (iSCSI initiator configuration and iSLB initiator configuration) command (added iSLB initiator configuration submode)</p>	S Commands
	<p>target (iSLB initiator configuration) command</p>	T Commands
	<p>username (iSCSI initiator configuration and iSLB initiator configuration) command (added iSLB initiator configuration submode)</p>	U Commands
	<p>vsan (iSCSI initiator configuration and iSLB initiator configuration) command (added iSLB initiator configuration submode)</p>	V Commands
	<p>zonename (iSLB initiator configuration) command</p>	Z Commands

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New and Changed Commands in the Cisco MDS 9000 Family Command Reference (continued)

Feature	Description	Where Documented
IVR	clear ivr service-group database command	C Commands
	ivr copy active-service-group user-configured-service-group command	I Commands
	ivr copy active-topology user-configured-topology command	
	ivr copy active-zoneset full-zoneset command	
	ivr service-group activate command	
	ivr zone rename command	
	ivr zoneset rename command	
	show ivr service-group command	Show Commands
	show ivr virtual-fcdomain-add-status2 command	
Lossless InOrder Delivery (IOD)	debug rib command (liod_error , liod_event , and liod_trace options)	Debug Commands
McData Interoperability Support	show wwn command (vsan-wwn option)	Show Commands
	vsan database command (increased the interop mode range to 4)	V Commands
	wwn vsan command	W Commands
Message logging	logging timestamp command	L Commands
N-port identifier virtualization (NPIV)	npiv enable command	N Commands
Onboard Failure Logging (OBFL)	clear logging command (onboard , module and session , options)	C Commands
	hw-module logging onboard command	H Commands
	show logging command (onboard logging)	Show Commands
Online Health Management System	system health (Configuration mode) command (frame-length and auto options to the loopback keyword)	S Commands
	system health external-loopback command (source and destination keywords and the frame-count and frame-length options)	
	system health internal-loopback command (frame-count and frame-length options)	
	system health module command (Added note about frequency range for bootflash)	
	system health serdes-loopback command	
SAN tuner extension	tape-bkgrp command	T Commands
	tape-volgrp command	

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New and Changed Commands in the Cisco MDS 9000 Family Command Reference (continued)

Feature	Description	Where Documented
SANTap	clear santap module command	C Commands
	santap module command (cvt-name , dvt , target-pwwn , target-vsan , dvt-name , dvt-vsan , dvt-port , lun-size-handling , and io-timeout options)	S Commands
Troubleshooting	show tech-support command (fcdomain , port-channel , and zone options)	Show Commands
Zoning	clear zone command (lock option)	C Commands
	system default zone default-zone permit command	S Commands
	system default zone distribute full command	
	show system command (zone option)	Show Commands
	show zone analysis command	
	zone compact vsan command zone default-zone command (added Usage Guidelines) zoneset (configuration mode) command (added Usage Guidelines)	Z Commands