

# **Cisco DMM CLI Commands**

The Cisco MDS DMM feature provides a CLI suitable for scripting and advanced operations.

This appendix contains an alphabetical listing of commands that are unique to the Cisco MDS DMM feature.

For information about other commands that apply to the Cisco MDS 9000 Family of multilayer directors and fabric switches, refer to Related Documentation on page -x.

# attributes (DMM job configuration submode)

To set the attributes of a data migration job, use the **attributes** command in DMM job configuration submode. To remove the attributes of a data migration job, use the no form of the command.

attributes job\_type {1 | 2} job\_mode {1 | 2} job\_rate {1 | 2 | 3 | 4} job\_method {1|2}

no attributes job\_type  $\{1 \mid 2\}$  job\_mode  $\{1 \mid 2\}$  job\_rate  $\{1 \mid 2 \mid 3 \mid 4\}$  job\_method  $\{1 \mid 2\}$ 

Syntax Description	job_type {1   2}	Specifies the job type. Specify 1 for a server type job and 2 for a storage type job.
	job_mode {1   2}	Specifies the job mode. Specify 1 for an online job and 2 for an offline job.
	job_rate {1   2   3   4}	Specifies the job rate. Specify 1 for the default rate, 2 for a slow rate, 3 for a medium rate, and 4 for a fast rate.
	job_method {1 2}	Specifies the job method. Specify 1 for Method 1 and 2 for Method 2.
Defaults	None.	
Command Modes	DMM job configuration	submode.
Command History	Release	Modification
	3.3(1a)	This command was introduced.
Usage Guidelines	None.	
Examples	The following example s	sets the job type to storage, the job mode to online, and the job rate to fast.
	Enter configuration c switch(config)# <b>dmm m</b> Started New DMM Job C Do not exit sub-mode switch(config-dmm-job switch(config-dmm-job	ommands, one per line. End with CNTL/Z. odule 3 job 1 create onfiguration. until configuration is complete and committed )# attributes job_type 2 job_mode 1 job_rate 4 job_method 1 )#
Related Commands	Command	Description
	show dmm job	Displays job information.
	show dmm srvr-vt-logi	in Displays server VT login information.

# commit (DMM job configuration submode)

To commit a DMM job, use the **commit** command in DMM job configuration submode. To remove the DMM job, use the **no** form of the command.

commit

no commit

Syntax Description	This command ha	as no arguments	or keywords.
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Defaults None.

**Command Modes** DMM job configuration submode.

Command History	Release	Modification
	3.2(1)	This command was introduced.

**Usage Guidelines** You need to configure server HBA ports, storage ports, and job attributes before you commit the job.

Examples The following example shows how to commit a data migration job: switch# config t Enter configuration commands, one per line. End with CNTL/Z. switch(config)# dmm module 3 job 1 destroy switch(config-dmm-job)#

Related Commands	Command	Description
	show dmm job	Displays job information.
	show dmm srvr-vt-login	Enables DMM.

# debug dmm-debug

To enable debugging for DMM, use the **debug dmm-debug** command.

debug dmm-debug {all | common-err | common-ev | fsm | init | itl-err | itl-ev | job-err | job-ev | msghndlr-err | msghndlr-ev | p2p-err | p2p-ev | timer | vi-lun-err | vi-lun-ev | vi-tgt-err | vi-tgt-ev}

Syntax Description	all	Enables all DMM debug options.
	common-err	Enables debugging for DMM common errors.
	common-ev	Enables debugging for DMM common events.
	fsm	Enables debugging for DMM FSM.
	init	Enables debugging for DMM initialization.
	itl-err	Enables debugging for DMM initiator-target-LUN-triplet (ITL) errors.
	itl-ev	Enables debugging for DMM ITL events.
	job-err	Enables debugging for DMM job errors.
	job-ev	Enables debugging for DMM job events.
	msghndlr-err	Enables debugging for DMM message handler errors.
	msghndlr-ev	Enables debugging for DMM message handler events.
	p2p-err	Enables debugging for DMM peer-to-peer (P2P )errors.
	p2p-ev	Enables debugging for DMM P2P events.
	timer	Enables debugging for the DMM timer.
	vi-lun-err	Enables debugging for VI LUN errors.
	vi-lun-ev	Enables debugging for VI LUN events.
	vi-tgt-err	Enables debugging for VI and target errors.
	vi-tgt-ev	Enables debugging for VI and target events.
	D: 11.1	
Defaults	Disabled.	
Command Modes	EXEC mode.	
Command History	Release	Modification
	3.2(1)	This command was introduced.
Usage Guidelines	You must connect to command to determ connect to the SSM.	o an SSM on your switch to execute DMM debug commands. Use the <b>show module</b> ine the slot number of an SSM on your switch. Use the <b>attach module</b> command to

Examples

The following example enables all the DMM debug options: switch# debug dmm-debug all

Related Commands Command

S	Command	Description
	dmm module	Configures DMM.
	show dmm srvr-vt-login	Enables the DMM feature.

## dmm module

To specify default DMM values for migration block size, number of migration blocks and fast migration speed, use the **dmm module** command in configuration mode.

**dmm module** *mod-id* **rate-of-migration fast** *migration-rate* **medium** *migration-rate* **slow** *migration-rate* 

Syntax Description	mod-id	Specifies the module ID.		
	rate-of-migration	Migration rate can be configured as slow, medium or fast.		
	fast migration-rate	Specifies the rate for fast migration. Units are megabytes per second (MB/s).		
	medium migration-rate	Specifies the rate for medium migration. Units are MB/s.		
	slow migration-rate	Specifies the rate for slow migration. Units are MB/s.		
Defaults	None.			
Command Modes	Configuration mode.			
Command History	Release Modification			
	3.2(1)	This command was introduced.		
Usage Guidelines	None.			
Examples	The following example s to 50 MB/s, and slow mi	hows how to set the fast migration rate to 100 MB/s, the medium migration rate gration rate to 10 MB/s.		
	switch# <b>config t</b> Enter configuration commands, one per line. End with CNTL/Z.			
	switch(config) <b>dmm moo</b>	dule 3 rate_of_migration fast 100 medium 50 slow 10		
Related Commands	Command	Description		
	show dmm job	Displays job information.		
	shpw dmm ip-peer	Displays a DMM port's IP peer.		

# dmm module job

To configure a data migration job, use the **dmm module** *mod-id* job command in configuration mode.

dmm module mod-id job job-id {create | destroy | finish | get-vi vsan vsan-id | modify rate | schedule {{hour hour min minute day day month month year year | now |reset}} | session | set-vi portwwn nodewwn vsan vsan-id | start | stop | validate | verify}

Syntax Description	module mod-id	Specifies the module ID.
	job job-id	Specifies the job ID. The range is 0 to18446744073709551615.
	create	Creates the job and enters DMM job configuration submode.
	destroy	Deletes the DMM job.
	finish	Moves the Method 2 data migration job to completed state.
	get-vi	Retrieves the virtual initiator (VI) for the DMM job.
	vsan vsan-id	Specifies the VSAN ID. The range is 1 to 4093.
	modify	Modifies the DMM job attributes.
	rate	Specifies the rate of the job attribute. The range is from 1 to 4. Specify 1 for a default value, 2 for slow, 3 for medium and 4 for fast rates.
	schedule	Schedules the DMM job.
	hour hour	Specifies the hour the DMM job starts. The range is 0 to 23.
	min minute	Specifies the minute the DMM job starts. The range is 0 to 59.
	day day	Specifies the day the DMM job starts. The range is 1 to 31.
	month month	Specifies the month the DMM job starts. The range is 1 to 12.
	year year	Specifies the year the DMM job starts. The range is 2000 to 2030.
	session	Enables the Session Configuration submode.
	now	Resets the schedule to start the DMM job immediately.
	reset	Resets the DMM job to unscheduled.
	set-vi	Sets the VI for the storage based job.
	portwwn	Specifies the port WWN. The format is <i>hh:hh:hh:hh:hh:hh:hh:hh</i> , where <i>h</i> is a hexadecimal number.
	nodewwn	Specifies the node WWN. The format is <i>hh:hh:hh:hh:hh:hh:hh</i> , where <i>h</i> is a hexadecimal number.
	vsan vsan-id	Specifies the VSAN ID. The range is 1 to 4093.
	start	Starts the DMM job session.
	stop	Stops the DMM job.
	validate	Validates the DMM job data.
	verify	Verifies the data migration for the specified job.

Defaults

None.

**Command Modes** Configuration mode.

Command History	Release	Modification		
	3.3(1a)	The <b>finish</b> keyword is introduced.		
	4.1.(1b)	The set-vi and modify rate keywords were introduced.		
Usage Guidelines	DMM must be enable to enable DMM.	ed before you can create DMM jobs. Use the ssm enable feature dmm command		
	The data migration job stops executing if it encounters any errors. To restart the migration, enter the <b>validate</b> command to validate the job configuration, then enter the <b>restart</b> command to restart the job.			
	Before creating a stor choose the VI for mig	rage based data migration job, use the <b>show dmm module vi-list</b> command to grating the data and then use the <b>set-vi</b> command to specify the VI.		
Examples	The following examp Sunday, January 6, 20	le shows how to create a job with a schedule. The job is scheduled to start on 008 at 11:00 P.M.		
	switch# <b>config t</b> Enter configuration switch(config)# <b>dmm</b>	n commands, one per line. End with CNTL/Z. n module 3 job 1 schedule hour 23 min 0 day 6 month 1 year 2008		
Related Commands	Command	Description		
	show dmm job	Displays DMM job information.		

Displays the IP peers that the DMM port is connected to.

### Send documentation comments to mdsfeedback-doc@cisco.com

show dmm module vi-list Displays the list of VIs.

show dmm ip-peer

# peer (DMM job configuration submode)

To add peer SSM information to a job, use the **peer** command in DMM job configuration submode. To remove the peer SSM information from a job, use the **no** form of the command.

**peer** *ip*-address

show dmm ip-peer

no peer ip-address

Syntax Description	ip-address	Specifies the peer SSM IP address. The format for the IP address is <i>A.B.C.D</i> .		
Defaults	None.			
Command Modes	DMM job configu	iration submode.		
Command History	Release	Modification		
	3.2(1)	This command was introduced.		
Fxamples	The following exa	ample shows how to add neer SSM information to a job.		
Examples	The following exa	ample shows how to add peer SSM information to a job:		
	switch# config t			
	Enter configuration commands, one per line. End with CNTL/Z. switch(config)# <b>dmm module 3 job 1 create</b>			
	Started New DMM	Job Configuration.		
	Do not exit sub-mode until configuration is complete and committed switch(config-dmm-job)# <b>peer 224.2.1.2</b> switch(config-dmm-job)#			
Related Commands	Command	Description		
	show dmm job	Displays job information.		

Displays the IP peer of a DMM port.

# server (configure session submode)

To configure a data migration session, use the server command in session configuration submode. To remove the data migration session, use then **no** form of the command.

server pwwn src\_tgt pw-wn src\_lun src-lun dst\_tgt pwwn dst\_lun dst-lun

no server pwwn src\_tgt pw-wn src\_lun src-lun dst\_tgt pwwn dst\_lun dst-lun

Syntax Description	pwwn	Specifies the pWWN of the server. The format is <i>hh:hh:hh:hh:hh:hh:hh:hh</i> , where <i>h</i> is a hexadecimal number.
	<pre>src_tgt pwwn</pre>	Specifies the pWWN of the source target. The format is <i>hh:hh:hh:hh:hh:hh:hh</i> , where <i>h</i> is a hexadecimal number.
	<pre>src_lun src-lun</pre>	Specifies the source LUN number in hex notation. The range is 0x0 to 0xfff.
	dst_tgt pwwn	Specifies the pWWNof the destination target. The format is <i>hh:hh:hh:hh:hh:hh:hh</i> , where <i>h</i> is a hexadecimal number.
	dst_lun dst-lun	Specifies the destination LUN in hex notation. The range is 0x0 to 0xfff.
Defaults	None.	
Command Modes	Configure session sub	mode.
Command History	Release	Modification
	3.2(1)	This command was introduced.
Usage Guidelines	None.	
Examples	The following example destination LUN in a s	e shows how to configure a source target, source LUN, destination target, and session:
	<pre>switch# config t Enter configuration switch(config)# dmm switch(config-sessic src_lun 0x1 dst_tgt</pre>	commands, one per line. End with CNTL/Z. module 3 job 1 session on)# server 12:13:1d:1c:2d:2d:3f:3a src_tgt 12:13:1d:1c:2d:2d:3f:3a 12:13:1d:1c:2d:2d:3f:3a dst_lun 0x5
Related Commands	Command	Description
	show dmm ip-peer	Displays job information.
	show dmm srvr-vt-lo	gin Displays server VT login information.

# server (DMM job configuration submode)

To add a server HBA port to the DMM job, use the **server** command in DMM job configuration submode. To remove the server HBA port, use the **no** form of the command.

server vsan vsan-id pwwn port-wwn

no server vsan vsan-id pwwn port-wwn

Syntax Description	vsan vsan-id	Specifies the VSAN ID. The range is 1 to 4093.		
	pwwn port-wwn	Specifies the port worldwide name of the server HBA port. The format is		
		<i>hh:hh:hh:hh:hh:hh:hh</i> , where <i>h</i> is a hexadecimal number.		
Defaults	None.			
Command Modes	DMM job configurati	on submode.		
Command History	Release	Modification		
	3.2(1)	This command was introduced.		
Fxamples	The following examp	le shows how to add server information to a DMM job.		
Examples	The following example shows how to add server information to a DMM job:			
	switch# <b>config t</b> Enter configuration	commands, one per line. End with $CNTL/Z$ .		
	switch(config)# dmm	module 3 job 1 create		
	Started New DMM Job Do not exit sub-mod	O Configuration. Le until configuration is complete and committed		
	switch(config-dmm-j switch(config-dmm-j	ob)# server vsan 3 pwwn 1d:22:3a:21:3c:44:3b:51 ob)#		
Related Commands	Command	Description		
	show dmm ip-peer	Displays job information.		
	show dmm srvr-vt-le	ogin Displays server VT login information.		

# show dmm discovery-log

To display SCSI device discovery logs, use the show dmm discovery-log command in EXEC mode.

show dmm discovery-log {all | error}

Syntax Description	all	Displays all entries in the device discovery SCSI log.	
	error	Displays error entries in the device discovery SCSI log.	
Defaults	None.		
Command Modes	EXEC mode.		
Command History	Release	Modification	
	3.2(1)	This command was introduced.	
Usage Guidelines	You must connect command to detern connect to the SSM	to an SSM on your switch to execute DMM <b>show</b> commands. Use the <b>show module</b> mine the slot number of an SSM on your switch. Use the <b>attach module</b> command to <i>A</i> .	
Examples	The following exa	mple displays error entries:	
	<pre>switch# attach m Attaching to mod To exit type 'ex Bad terminal typ module-3# show d 005 State: 3 CDB: 00 00 00 00 Sts:0x02 SnsKey: Time: 5(ms)</pre>	odule 3         ule 3         it', to abort type '\$.'         e: "ansi". Will assume vt100.         mm discovery-log error         00 00 00 00 00 00 00 00 00 00 00 00 00         00 00 00 00 00 00 00 00 00 00 00 00         0x02 AscAscq:0x0403	
	LogIndex:26 HostPWWN:2c:fc:00:05:30:01:9e:88 TargetPWWN:50:06:01:62:30:60:36:64 OPC: 0x00 Lun:0x00000000000006 State: 3 CDB: 00 00 00 00 00 00 00 00 00 00 00 00 00		
Related Commands	Command	Description	
	dmm module	Enables DMM configuration on a module.	
	show dmm srvr-v	vt-login Enables the DMM feature.	

# show dmm fp-port

To display front panel ports on a line card, use the **show dmm fp-port** command in EXEC mode.

show dmm fp-port

Syntax Description	This con	nmand has r	no arguments or	· keywords.	
Defaults	None.				
Command Modes	EXEC m	iode.			
Command History	Release		Modificat	tion	
	3.2(1)		This com	mand was in	troduced.
Usage Guidelines	You mus comman to conne	t connect to d to determi ct to the SS	an SSM on you ne the slot num M.	ur switch to e ber of an SSM	xecute DMM <b>show</b> commands. Use the <b>show module</b> I on your switch. Use the <b>attach module</b> <i>slot</i> command
Examples	The following example displays front panel ports: switch# attach module 3 Attaching to module 3 To exit type 'exit', to abort type '\$.' Bad terminal type: "ansi". Will assume vt100. module-3# show dmm fp-port				
	Port	Index	 Mirage Id	DPP Id	
	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	1 1 2 2 2 2 3 3 3 3 4 4 4 4 4	2 2 2 3 3 3 3 6 6 6 6 7 7 7 7 7 7	
	17 18	16 17	1	1 1	

19	18	1	1
20	19	1	1
21	20	2	4
22	21	2	4
23	22	2	4
24	23	2	4
25	24	3	5
26	25	3	5
27	26	3	5
28	27	3	5
29	28	4	8
30	29	4	8
31	30	4	8
32	31	4	8

### Related Commands Command

ıds	Command	Description
	dmm module	Enables DMM configuration on a module.
	show dmm srvr-vt-login	Enables the DMM feature.

# show dmm ip-peer

To display information about the IP peers the DMM interface is connected to, use the **show dmm ip-peer** command in EXEC mode.

show dmm ip-peer

Syntax Description	This co	mmand has no argun	nents o	r keywords.		
Defaults	None.					
Command Modes	EXEC	mode.				
Command History	Releas	e M	lodifica	ation		
	3.2(1)	Т	his cor	nmand was introd	uced.	
Examples	to conn	ect to the SSM.	lavs D	MM IP peer infor	mation:	
	switch Attach To exit Bad ter module	# attach module 3 ing to module 3 t type 'exit', to a rminal type: "ansi -3# show dmm ip-peo	abort ". Wil	type '\$.' l assume vt100.		
		Cisco I	OMM IP	Peer Table		
	No	Туре	SD	IP Address	TCP State	
	1 2 3	CONFIG_STATION PEER_SSM CONFIG STATION	23 22 19	10.100.2.1 10.100.1.20 10.100.2.1	DOWN UP DOWN	

# show dmm job

To display DMM job information, use the **show dmm job** command in EXEC mode.

show dmm job job-id {detail | job-fsm-eventlog | job-infra-fsm-eventlog | lun\_tokens token
 tok-pwwn | session | [session\_id sess-id] [session-event-log] | storage [tgt-pwwn tgt-pwwn]
 {vi-pwwn vi-pwwn} [lun-event-log lun-id | tgt-event-log]}

Syntax Description	job-id	Specifies the job ID. The range is 0 to 18446744073709551615.		
	detail	Displays detailed job information.		
	job-fsm-eventlog	Displays the job FSM Event Log.		
	job-infra-fsm-eventlog	Displays the job Infra FSM Event Log.		
	lun_tokens	Displays a list of job LUN tokens.		
	token tok-pwwn	Specifies the storage port worldwide name.		
	session	Displays job session information.		
	session_id sess-id	Specifies the job session. The range is 0 to 255.		
	session-event-log	Displays the Session FSM event log.		
	storage	Displays the storage ports discovered by DMM.		
	tgt-pwwn tgt-pwwn	Specifies the storage port worldwide name. The format is <i>hh:hh:hh:hh:hh:hh:hh</i> , where <i>h</i> is a hexadecimal number.		
	vi-pwwn vi-pwwn	Specifies the VI port worldwide name. The format is <i>hh:hh:hh:hh:hh:hh:hh</i> , where <i>h</i> is a hexadecimal number.		
	lun-event-log lun-id	Displays the VI and target LUN FSM event log and specifies the LUN ID.		
	tgt-event-log	Displays the VI and target FSM event log.		
Defaults	None.			
Command Modes	EXEC mode.			
Command History	Release	Modification		
	3.2(1)	This command was introduced.		
Usage Guidelines	You must connect to an S command to determine the to connect to the SSM.	SM on your switch to execute DMM <b>show</b> commands. Use the <b>show module</b> e slot number of an SSM on your switch. Use the <b>attach module</b> <i>slot</i> command		
Examples	The following example sl switch# <b>show dmm job</b>	nows how to display a summary of all the jobs: job-id 1205450497 detail		

Data Mo	bility Manager 3	Job Details	
Job Identifier	: 1205450497		
Job Name :	admin_2008/03/1	13-16:21	
Job Type	: SERVER		
Job Rate	: Default, no ra	ate limiting	
Job Mode	: ONLINE		
Job Method	: METHOD-2		
Job DPP	: 7		
Peer SSM IP	: NOT_APPLICABL	E	
DMM GUI IP	: 10.1.0.25		
Job FSM	: READY		
Job Infra FSM	: DONE		
Job Schedul	e Information		
Date	: 0/ 0/0 [Month	h/Day/Year]	
Time	: 0:0 [Hour	r:Min]	
Server Por	t List (Num Port	ts :1)	
Num VSAN Server	 DWWN	Virtual Initiator pWWN	
1 100 21:01:	00:e0:8b:28:5e:3	3e 20:40:00:0d:ec:0e:f4:03	
Storage Po	ort List (Num Po		
Num VSAN Storad	re pWWN	Type Virtual Target pWWN	
1 100 50:06: 2 100 50:06:	0e:80:04:2c:5c:5 0e:80:04:2c:5c:5	54 NS 20:44:00:0d:ec:0e:f4:03 74 ES 20:42:00:0d:ec:0e:f4:03	
	DMM GUI PI	DU History	
Num PDU Opcode		GUI IP Rx Tx	
1 DM JOB CRE	ATE REO	10.1.0.25 Thu Mar 13 23:21:39 2008 Thu Mar 13 23:	21.30
2008	1110_1(000	10.1.0.25 find har 15 25.21.55 2000 find har 15 25.	<b>J1</b> .J.
2 DM JOB INF	RA CREATE REO	10.1.0.25 Thu Mar 13 23:21:40 2008 Thu Mar 13 23:	21:44
2008 – –	~		
3 DM_JOB_LUN	MAP_REQ	10.1.0.25 Thu Mar 13 23:21:45 2008 Thu Mar 13 23:	21:45
2008			
4 DM_JOB_SES	SION_ADD_REQ	10.1.0.25 Thu Mar 13 23:21:52 2008 Thu Mar 13 23:	21:52
2008			
5 DM_JOB_SES	SION_ADD_REQ	10.1.0.25 Thu Mar 13 23:21:53 2008 Thu Mar 13 23:	21:53
2008			
6 DM_JOB_SES	SION_ADD_REQ	10.1.0.25 Thu Mar 13 23:21:54 2008 Thu Mar 13 23:	21:54
2008	GTON ADD DDO	10 1 0 05 mlu Mars 12 02 01 55 0000 mlu Mars 12 02	01 EI
/ DM_JOB_SES	SION_ADD_REQ	10.1.0.25 Thu Mar 13 23:21:55 2008 Thu Mar 13 23:	21:5:
8 DM TOB OTH	RV RFO	10 1 0 25 Thu Mar 13 23.21.59 2008 Thu Mar 13 23.	21.50
2008	IKT_KEQ	10.1.0.25 fild mar 15 25.21.55 2000 fild mar 15 25.	21.3.
Job Timing	Intormation [s:	<pre>ince the last start operation]</pre>	
	. mk	2 22 21 20 2000	
Create Time	:Thu Mar 1.	2 23:21:37 2008	
Scheduled Time	:Not Applic	caple	
Finish-romost "	me .Not Appli	cable	
I INTER TEQUESC II	INOC APPIIC	CADIC	

Completed Time	:Not	Applicable
Failed Time	:Not	Applicable
Stopped Time	:Not	Applicable
Verify Start Time	:Not	Applicable
Verify Completed Time	:Not	Applicable
Verify Failed Time	:Not	Applicable

Related Commands	Command	Description
	dmm module	Enables DMM configuration on a module.
	show dmm srvr-vt-login	Enables the DMM feature.

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## show dmm module

To display DMM module information use the show dmm module command.

show dmm module module-id vi-list

Syntax Description	module-id	Specifies the module ID. The range is 1 to 13.			
	vi-list	Displays the VI list.			
Defaults	None.				
Command Modes	EXEC mode.				
Command History	Release	Modification			
	3.2(1)	This command was introduced.			
Usage Guidelines	The show dmm module constorage based data migrat the <b>dmm module job set</b>	ommand displays the list of VIs assigned to each data movement engine. A ion job uses one of these VIs. Use the command to choose the VI and then use <b>-vi</b> command to specify the VI.			
Examples	The following example sh	nows how to display a summary of all the jobs:			
	switch# attach module 3				
	To exit type 'exit', t Bad terminal type: "an module-3# <b>show dmm vt</b>	o abort type '\$.' si". Will assume vt100.			
	Data Mobility Manager VT Information				
	Id Job Id VT pWWN VSAN FCID IF-IDX PORT STATE				
	1 1177009472 2f:00:00: 2 1177009472 2c:fe:00: Number of VTs :2	05:30:01:9e:88 3 0xee00a0 0x1110000 0x10 VT_UP 05:30:01:9e:88 3 0xee00a1 0x1110000 0x10 VT_UP			
Related Commands	Command	Description			
	dmm module	Enables DMM configuration on a module.			
	dmm module job set-vi	Specifies the VI for the storage based job.			
	show dmm srvr-vt-login	Enables the DMM feature.			

# show dmm srvr-vt-login

To display server virtual target login information, use the **show dmm srvr-vt-login** command in EXEC mode.

show dmm srvr-vt-login [job-id job-id] server-pwwn srvr-pwwn vt-pwwn
{fc\_rdrt-fsm-eventlog | login-fsm-eventlog}

Syntax Description	job-id job-id	Specifies the job ID. The range is 0 to 184467440737095516	515.		
	<b>server-pwwn</b> srvr-pwwn	Specifies the server port world-wide name. The format is <i>hh:hh:hh:hh:hh:hh:hh</i> , where <i>h</i> is a hexadecimal number			
	vt-pwwn vt-pwwn	Specifies the VT port worldwide name. The format is <i>hh:hh:hh:hh:hh:hh:hh</i> , where <i>h</i> is a hexadecimal number.			
	fc_rdrt-fsm-eventlog	Displays the server VT FC-Redirect FSM event log.			
	login-fsm-eventlog	Displays the server VT FSM event log.			
Defaults	None.				
Command Modes	EXEC mode.				
Command History	Release	Modification			
	3.2(1)	This command was introduced.			
Usage Guidelines	You must connect to an command to determine t connect to the SSM.	SSM on your switch to execute DMM <b>show</b> commands. Use th he slot number of an SSM on your switch. Use the <b>attach mod</b>	e show module ule command to		
Examples	The following example s	shows how to display the server VT login summary:			
	switch# show dmm srvr	-vt-login			
	========== Data Mobil	ity Manager Server VT Login Information	================		
	Id Job Id VSAN S State (FC Redirect/Lo	rvr pWWN Srvr FCID VT pWWN gin)	VT FCID		
	1 1187978941 1 0x660003 (READY/WA 2 1187978941 1 0x66000a (READY/WA	21:32:00:0d:ec:02:2d:82 0x660000 21:36:00:0d:ec:02 ITING_PLOGI) 21:32:00:0d:ec:02:2d:82 0x660000 21:34:00:0d:ec:02 ITING_PLOGI)	:2d:82 :2d:82		
	Number of Logins :2				

The following example shows how to display the event log for a specified VT:

```
switch# show dmm srvr-vt-login job-id 1187978941 server-pwwn 21:32:00:0d:ec:02:2d:82
vt-pwwn 21:36:00:0d:ec:02:2d:82 login-fsm-e
Server/VT Login FSM Event Log -> Job Id : 1187978941 Server : 21:32:00:0d:ec:02:2d:82 VT
: 21:36:00:0d:ec:02:2d:82
Log Entry: 1 time: Fri Aug 24 11:09:19 2007
Curr state: DMM_SRVR_VT_LOGIN_S_NULL
Triggered event: DMM_SRVR_VT_LOGIN_E_START_ACTION
Log Entry: 2 time: Fri Aug 24 11:09:19 2007
Curr state: DMM_SRVR_VT_LOGIN_S_WAITING_PLOGI
Triggered event: DMM_SRVR_VT_LOGIN_S_NAITING_PLOGI
Triggered event: DMM_SRVR_VT_LOGIN_E_LOGIN_DONE_OK
```

Related Commands	Command Description	
	dmm module	Enables DMM configuration on a module.
	show dmm srvr-vt-login	Enables the DMM feature.

## show dmm vt

To display virtual target information, use the show dmm vt command in EXEC mode.

show dmm vt vt-job-id job-id pwwn vt-pwwn vt-fsm-eventlog

Syntax Description	vt-job-id job-id	Specifies the virtual ta 184467440737095516	arget job ID. Tl 515.	he range is 0 to		
	<b>pwwn</b> <i>vt-pwwn</i> Specifies the virtual target port worldwide name. The format is <i>hh:hh:hh:hh:hh:hh:hh;hh:hh;hh;hh</i> , where <i>h</i> is a hexadecimal number.					
	vt-fsm-eventlog	Displays the VT FSM	event log.			
Defaults	None.					
Command Modes	EXEC mode.					
Command History	Release	Modification				
	3.2(1)	This command was in	troduced.			
Examples	The following examp	le shows how to display the	e virtual target	information:		
Examples	The following example shows how to display the virtual target information: switch# attach module 3 Attaching to module 3 To exit type 'exit', to abort type '\$.' Bad terminal type: "ansi". Will assume vt100.					
	module-3# <b>show dmm</b>	vt			========	
		Data Mobility Manage	r VT Informat	ion		
	Id Job Id VI	2 pWWN	VSAN FCID	IF-IDX	PORT	STATE
	1 1177009472 2f 2 1177009472 2c Number of VTs :2	E:00:00:05:30:01:9e:88 2:fe:00:05:30:01:9e:88	3 0xee00 3 0xee00	a0 0x1110000 a1 0x1110000	0x10 0x10 0x10	VT_UP VT_UP VT_UP
Related Commands	Command	Description				
	dmm module     Enables DMM configuration on a module.					
	show dmm srvr-vt-login Enables the DMM feature.					

### ssm enable feature dmm

To enable DMM, use the **ssm enable feature dmm** command in configuration mode. To disable DMM, use the **no** form of the command.

- ssm enable feature dmm {force {interface fc slot/port | module slot} | interface fc slot/port |
  module slot}
- **no ssm enable feature dmm {force {interface fc** *slot/port* | **module** *slot*} | **interface fc** *slot/port* | **module** *slot*}

Syntax Description	force	Forces a switching module reload.		
	interface	Specifies the interface.		
	fc slot/port	Specifies the Fiber Channel slot and port numbers.		
	module <i>slot</i>	Specifies the SSM module slot number.		
Defaults	Disabled.			
Command Modes	Configuration mode	2.		
Command History	Release	Modification		
	3.2(1)	This command was introduced.		
Usage Guidelines	Starting with NX-C before using the SL	OS 4.1(1b), DMM must be enabled using the <b>ssm enable feature dmm</b> command .D tool.		
Examples	The following exam	nple shows how to enable DMM on a module:		
	switch# <b>config t</b> Enter configuration commands, one per line. End with CNTL/Z. switch(config)# <b>ssm enable feature dmm module 1</b>			
	The following example shows how to enable DMM on an interface:			
	switch# <b>config t</b> Enter configuration commands, one per line. End with CNTL/Z. switch(config)# <b>ssm enable feature dmm interface fc 1/1 - 4</b>			
	The following example shows how to force a reload on some of the ports on a module:			
	switch# <b>config t</b> Enter configurati switch(config)# <b>s</b>	on commands, one per line. End with CNTL/Z. sm enable feature dmm force interface fc 1/1 - 8, fc 1/13 - 16		

Related Commands	Command	Description
	show dmm ip-peer	Displays DMM job information.
	show ssm provisioning	Displays information about features provisioned on the SSM.

# storage (DMM job configuration submode)

To add a storage port to a DMM job, use the storage command in DMM job configuration submode.

storage vsan vsan-id pwwn port-wwn {existing | new}

Syntax Description	vsan vsan-id	Specifies the VSAN ID. The range is 1 to 4093.		
	pwwn port-wwn	Specifies the world-wide name of the storage port. The format is		
		hh:hh:hh:hh:hh:hh;hh, where h is a hexadecimal number.		
	existing	Specifies a port on the existing storage.		
	new	Specifies a port on the new storage.		
	N.			
Detaults	None.			
Command Modes	DMM job configuration so	ubmode.		
Command History	Release	Modification		
	3.2(1)	This command was introduced.		
Usage Guidelines	None.			
Examples	The following example sh	ows how to add storage information to a DMM job:		
	switch# config t			
	Enter configuration commands, one per line. End with CNTL/Z.			
	Started New DMM Job Configuration.			
	Do not exit sub-mode until configuration is complete and committed switch(config-dmm-job)# <b>storage vsan 3 pwwn 1d:22:3a:21:3c:44:3b:51 existing</b> switch(config-dmm-job)#			
Related Commands	Command	Description		
	show dmm ip-peer	Displays job information.		
	show dmm srvr-vt-login	Enables DMM.		