



Discovering SCSI Targets

This chapter describes the SCSI LUN discovery feature provided in switches in the Cisco MDS 9000 Family. It includes the following sections:

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About SCSI LUN Discovery

Small Computer System Interface (SCSI) targets include disks, tapes, and other storage devices. These targets do not register logical unit numbers (LUNs) with the name server.

The name server requires LUN information for the following reasons:

- To display LUN storage device information so an NMS can access this information.
- To report device capacity, serial number, and device ID information.
- To register the initiator and target features with the name server.

The SCSI LUN discovery feature uses the local domain controller Fibre Channel address. It uses the local domain controller as the source FC ID, and performs SCSI INQUIRY, REPORT LUNS, and READ CAPACITY commands on SCSI devices.

The SCSI LUN discovery feature is initiated on demand, through CLI or SNMP. This information is also synchronized with neighboring switches, if those switches belong to the Cisco MDS 9000 Family.

Starting SCSI LUN Discovery

SCSI LUN discovery is done on demand.

Only Nx ports present in the name server database and that are registered as FC4 Type = SCSI_FCP are discovered.

To begin SCSI LUN discovery, follow this step:

	Command	Purpose
Step 1	switch# discover scsi-target local os all discovery started	Discovers local SCSI targets for all operating systems (OS). The operating system options are aix, all, hpux, linux, solaris, or windows
	switch# discover scsi-target remote os aix discovery started	Discovers remote SCSI targets assigned to the AIX OS.
	switch# discover scsi-target vsan 1 fcid 0x9c03d6 discover scsi-target vsan 1 fcid 0x9c03d6 VSAN: 1 FCID: 0x9c03d6 PWWN: 00:00:00:00:00:00:00:00 PRLI RSP: 0x01 SPARM: 0x0012 SCSI TYPE: 0 NLUNS: 1 Vendor: Company 4 Model: ST318203FC Rev: 0004 Other: 00:00:02:32:8b:00:50:0a	Discovers SCSI targets for the specified VSAN (1) and FC ID (0x9c03d6).
	switch# discover scsi-target custom-list os linux discovery started	Discovers SCSI targets from the customized list assigned to the Linux OS.

Configuring SCSI Target Discovery

Automatic-global SCSI target discovery is enabled by default. However, you can configure discovery so that it is triggered for specific VSANs using on-demand, name server polling, or auto-polling options. All options are on by default. Use the **no scsi-target discovery** command to turn off all discovery options.

Example 23-1 Configuring SCSI Target Discovery

```
switch# config t
switch(config)# scsi-target discovery
```

Configuring SCSI Target Auto-Polling Discovery for VSAN 1

```
switch# config t
switch(config)# scsi-target auto-poll vsan 1
```

Initiating Customized Discovery

Customized discovery consists of a list of VSAN and domain pairs that are selectively configured to initiate a discovery. Use the **custom-list** option to initiate this discovery. The domain ID is a number from 0 to 255 in decimal or a number from 0x0 to 0xFF in hex.

To initiate a customized discovery, follow this step:

	Command	Purpose
Step 1	switch# <code>discover custom-list add vsan 1 domain 0x123456</code>	Adds the specified entry to the custom list.
	switch# <code>discover custom-list delete vsan 1 domain 0x123456</code>	Deletes the specified domain ID from the custom list.

Displaying SCSI LUN Information

Use the `show scsi-target` and `show fcns database` commands to display the results of the discovery. See Examples 23-3 to 23-10.

Example 23-3 Displays the Discovered Targets

```
switch# show scsi-target status
discovery completed
```



Note

This command takes several minutes to complete, especially if the fabric is large or if several devices are slow to respond.

Example 23-4 Displays the FCNS Database

```
switch# show fcns database
172.22.91.115# show fcns database
```

VSAN 1:

FCID	TYPE	PWWN	(VENDOR)	FC4-TYPE:FEATURE
0xeb0000	N	21:01:00:e0:8b:2a:f6:54	(Qlogic)	scsi-fcp:init
0xeb0201	NL	10:00:00:00:c9:32:8d:76	(Emulex)	scsi-fcp:init

Total number of entries = 2

VSAN 7:

FCID	TYPE	PWWN	(VENDOR)	FC4-TYPE:FEATURE
0xed0001	NL	21:00:00:04:cf:fb:42:f8	(Seagate)	scsi-fcp:target

Total number of entries = 1

VSAN 2002:

FCID	TYPE	PWWN	(VENDOR)	FC4-TYPE:FEATURE
0x9c03e0	N	20:03:00:05:30:00:2a:20	(Cisco)	FICON:CUP

Total number of entries = 1

Example 23-5 Displays the Discovered Target Disks

```
switch# show scsi-target disk
```

VSAN	FCID	PWWN	VENDOR	MODEL	REV
1	0x9c03d6	21:00:00:20:37:46:78:97	Company 4	ST318203FC	0004
1	0x9c03d9	21:00:00:20:37:5b:cf:b9	Company 4	ST318203FC	0004
1	0x9c03da	21:00:00:20:37:18:6f:90	Company 4	ST318203FC	0004
1	0x9c03dc	21:00:00:20:37:5a:5b:27	Company 4	ST318203FC	0004
1	0x9c03e0	21:00:00:20:37:36:0b:4d	Company 4	ST318203FC	0004
1	0x9c03e1	21:00:00:20:37:39:90:6a	Company 4	ST318203 CLAR18	3844
1	0x9c03e2	21:00:00:20:37:18:d2:45	Company 4	ST318203 CLAR18	3844
1	0x9c03e4	21:00:00:20:37:6b:d7:18	Company 4	ST318203 CLAR18	3844
1	0x9c03e8	21:00:00:20:37:38:a7:c1	Company 4	ST318203FC	0004
1	0x9c03ef	21:00:00:20:37:18:17:d2	Company 4	ST318203FC	0004

Example 23-6 Displays the Discovered LUNs for All OSs

```
switch# show scsi-target lun os all
ST336607FC from SEAGATE (Rev 0006)
FCID is 0xed0001 in VSAN 7, PWWN is 21:00:00:04:cf:fb:42:f8
-----
OS  LUN      Capacity Status  Serial Number    Device-Id
      (MB)
-----
WIN 0x0     36704   Online  3JA1B9QA00007338 C:1 A:0 T:3 20:00:00:04:cf:fb:42:f8
AIX 0x0     36704   Online  3JA1B9QA00007338 C:1 A:0 T:3 20:00:00:04:cf:fb:42:f8
SOL 0x0     36704   Online  3JA1B9QA00007338 C:1 A:0 T:3 20:00:00:04:cf:fb:42:f8
LIN 0x0     36704   Online  3JA1B9QA00007338 C:1 A:0 T:3 20:00:00:04:cf:fb:42:f8
HP  0x0     36704   Online  3JA1B9QA00007338 C:1 A:0 T:3 20:00:00:04:cf:fb:42:f8
```

Example 23-7 Displays the Discovered LUNs for the Solaris OS

```
switch# show scsi-target lun os solaris
ST336607FC from SEAGATE (Rev 0006)
FCID is 0xed0001 in VSAN 7, PWWN is 21:00:00:04:cf:fb:42:f8
-----
OS  LUN      Capacity Status  Serial Number    Device-Id
      (MB)
-----
SOL 0x0     36704   Online  3JA1B9QA00007338 C:1 A:0 T:3 20:00:00:04:cf:fb:42:f8
```

The following command displays the port WWN that is assigned to each OS (Windows, AIX, Solaris, Linux, or HPUX)

Example 23-8 Displays the pWWNs for each OS

```
switch# show scsi-target pwwn
-----
OS      PWWN
-----
WIN     24:91:00:05:30:00:2a:1e
AIX     24:92:00:05:30:00:2a:1e
SOL     24:93:00:05:30:00:2a:1e
LIN     24:94:00:05:30:00:2a:1e
HP      24:95:00:05:30:00:2a:1e
```

Example 23-9 Displays Customized Discovered Targets

```
switch# show scsi-target custom-list
-----
VSAN    DOMAIN
-----
1       56
```

Use the **show scsi-target auto-poll** command to verify automatic discovery of SCSI targets that come online. The internal uuid number indicates that a CSM or an IPS module is in the chassis.

Example 23-10 Displays Customized Discovered Targets

```
switch# show scsi-target auto-poll
auto-polling is enabled, poll_start:0 poll_count:1 poll_type:0
USERS OF AUTO POLLING
-----
uuid:54
```

