CHAPTER 23

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:

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.

To begin SCSI LUN discovery, follow this step:

	Command	Purpose
Step 1	`switch# discover scsi-target local` `discovery started`	Discovers local SCSI targets.
	`switch# discover scsi-target remote` `discovery started`	Discovers remote SCSI targets.

	`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` `discovery started`	Discovers SCSI targets from the customized list.

Only Nx ports present in the name server database and which have registered a FC4 Type = SCSI_FCP are discovered.

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# discover custom-list add vsan 1 domain 0X123456` `switch#`	Adds the specified entry to the custom list.
	`switch# discover custom-list delete vsan 1 domain 0X123456` `switch#`	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 23-1 to 23-5.

Example 23-1 Displays the Discovered Targets

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

Note The discovery can take several minutes to complete, especially if the fabric is large fabric or if several devices are slow to respond.

Example 23-2 Displays the FCNS Database

```
switch# show fcns database
VSAN 1:
--------------------------------------------------------------------------
FCID        TYPE  PWWN                    (VENDOR)        FC4-TYPE:FEATURE
--------------------------------------------------------------------------
0x9c0000    N     21:00:00:e0:8b:08:96:22 (Company 1)        scsi-fcp:init
0x9c0100    N     10:00:00:05:30:00:59:1f (Company 2)       ipfc
0x9c0200    N     21:00:00:e0:8b:07:91:36 (Company 3)        scsi-fcp:init
0x9c03d6    NL    21:00:00:20:37:46:78:97 (Company 4)       scsi-fcp:target
0x9c03d9    NL    21:00:00:20:37:5b:cf:b9 (Company 4)       scsi-fcp:target
0x9c03da    NL    21:00:00:20:37:18:6f:90 (Company 4)       scsi-fcp:target
0x9c03dc    NL    21:00:00:20:37:5a:5b:27 (Company 4)       scsi-fcp:target
0x9c03e0    NL    21:00:00:20:37:36:0b:4d (Company 4)       scsi-fcp:target
0x9c03e1    NL    21:00:00:20:37:39:90:6a (Company 4)       scsi-fcp:target
0x9c03e2    NL    21:00:00:20:37:18:d2:45 (Company 4)       scsi-fcp:target
0x9c03e4    NL    21:00:00:20:37:6b:d7:18 (Company 4)       scsi-fcp:target
0x9c03e8    NL    21:00:00:20:37:38:a7:c1 (Company 4)       scsi-fcp:target
0x9c03ef    NL    21:00:00:20:37:18:17:d2 (Company 4)       scsi-fcp:target

Total number of entries = 13
```

Example 23-3 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 23-4 Displays the Discovered LUNs

```
switch# show scsi-target lun
- ST318203FC       from Company 4  (Rev 0004)
  FCID is 0x9c03d6 in VSAN 1, PWWN is 21:00:00:20:37:46:78:97
  ------------------------------------------------------------------------------
  LUN     Capacity   Status Serial Number    Device-Id
          (MB)
  ------------------------------------------------------------------------------
  0x0     18210      Online LRA2510000007027 C:1 A:0 T:3 20:00:00:20:37:46:78:97
- ST318203FC       from Company 4  (Rev 0004)
  FCID is 0x9c03d9 in VSAN 1, PWWN is 21:00:00:20:37:5b:cf:b9
  ------------------------------------------------------------------------------
  LUN     Capacity   Status Serial Number    Device-Id
          (MB)
  ------------------------------------------------------------------------------
```

```
  0x0     18210      Online LR94873000007029 C:1 A:0 T:3 20:00:00:20:37:5b:cf:b9
- ST318203FC       from Company 4  (Rev 0004)
  FCID is 0x9c03da in VSAN 1, PWWN is 21:00:00:20:37:18:6f:90
  --------------------------------------------------------------------------------
  LUN     Capacity   Status Serial Number    Device-Id
          (MB)
  --------------------------------------------------------------------------------
  0x0     18210      Online LR18591800001004 C:1 A:0 T:3 20:00:00:20:37:18:6f:90
- ST318203FC       from Company 4  (Rev 0004)
  FCID is 0x9c03dc in VSAN 1, PWWN is 21:00:00:20:37:5a:5b:27
  --------------------------------------------------------------------------------
  LUN     Capacity   Status Serial Number    Device-Id
          (MB)
  --------------------------------------------------------------------------------
  0x0     18210      Online LRC4498200007031 C:1 A:0 T:3 20:00:00:20:37:5a:5b:27
- ST318203FC       from Company 4  (Rev 0004)
  FCID is 0x9c03e0 in VSAN 1, PWWN is 21:00:00:20:37:36:0b:4d
  --------------------------------------------------------------------------------
  LUN     Capacity   Status Serial Number    Device-Id
          (MB)
  --------------------------------------------------------------------------------
  0x0     18210      Online LR18184700007024 C:1 A:0 T:3 20:00:00:20:37:36:0b:4d
- ST318203 CLAR18  from Company 4  (Rev 3844)
  FCID is 0x9c03e1 in VSAN 1, PWWN is 21:00:00:20:37:39:90:6a
  --------------------------------------------------------------------------------
  LUN     Capacity   Status Serial Number    Device-Id
          (MB)
  --------------------------------------------------------------------------------
  0x0     18200      Online LR64147100001017 C:1 A:0 T:3 20:00:00:20:37:39:90:6a
- ST318203 CLAR18  from Company 2  (Rev 3844)
  FCID is 0x9c03e2 in VSAN 1, PWWN is 21:00:00:20:37:18:d2:45
  --------------------------------------------------------------------------------
  LUN     Capacity   Status Serial Number    Device-Id
          (MB)
  --------------------------------------------------------------------------------
  0x0     18200      Online LR28349500001952 C:1 A:0 T:3 20:00:00:20:37:18:d2:45
- ST318203 CLAR18  from Company 2  (Rev 3844)
  FCID is 0x9c03e4 in VSAN 1, PWWN is 21:00:00:20:37:6b:d7:18
  --------------------------------------------------------------------------------
  LUN     Capacity   Status Serial Number    Device-Id
          (MB)
  --------------------------------------------------------------------------------
  0x0     18200      Online LRF7150500001041 C:1 A:0 T:3 20:00:00:20:37:6b:d7:18
- ST318203FC       from Company 2  (Rev 0004)
  FCID is 0x9c03e8 in VSAN 1, PWWN is 21:00:00:20:37:38:a7:c1
  --------------------------------------------------------------------------------
  LUN     Capacity   Status Serial Number    Device-Id
          (MB)
  --------------------------------------------------------------------------------
  0x0     18210      Online LR43588300001011 C:1 A:0 T:3 20:00:00:20:37:38:a7:c1
...
```

Example 23-5 Displays Customized Discovered Targets

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