



Managing FLOGI and FDMI

This chapter describes the fabric login database and the Fabric-Device Management Interface information provided in the Cisco MDS 9020 Fabric Switch. It includes the following sections:

- [Displaying FLOGI Details, page 8-1](#)
- [Displaying FDMI, page 8-4](#)

Displaying FLOGI Details

In a Fibre Channel fabric, each host or disk requires an FC ID. Use the **show flogi** command to verify if a storage device is displayed in the fabric login (FLOGI) table, as in the following examples. If the required device is displayed in the FLOGI table, the fabric login is successful. Examine the FLOGI database on a switch that is directly connected to the host HBA and connected ports. (See Examples 8-1.)

Example 8-1 *Displays Details on the FLOGI Database*

```
switch# show flogi database
-----
INTERFACE FCID PORT NAME NODE NAME
-----
fc1/2 0x6101e1 21:00:00:04:cf:03:36:2f 20:00:00:04:cf:03:36:2f
fc1/2 0x6101e2 21:00:00:04:cf:03:38:6e 20:00:00:04:cf:03:38:6e
fc1/2 0x6101e4 21:00:00:04:cf:03:38:24 20:00:00:04:cf:03:38:24
fc1/2 0x6101e8 21:00:00:04:cf:03:38:4b 20:00:00:04:cf:03:38:4b
Total number of flogi = 4
```

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Displaying Name Server Database Entries

The name server stores name entries for all hosts in the Fibre Channel Network Switch (FCNS) database. The name server permits an Nx port to register attributes during a port login (PLOGI) (to the name server) to obtain attributes of other hosts. These attributes are deregistered when the Nx port logs out either explicitly or implicitly.

In a multiswitch fabric configuration, the name server instances running on each switch share information in a distributed database. One instance of the name server process runs on each switch.

Use the **show fcns** command to display the name server database and statistical information. (See Examples 8-2 and 8-3.)

Example 8-2 Displays the Name Server Database

```
switch# show fcns database
-----
FCID          TYPE  PWWN                               (VENDOR)          FC4-TYPE:FEATURE
-----
0x010000      N     50:06:0b:00:00:10:a7:80             (Cisco)            scsi-fcp fc-gs
0x010001      N     10:00:00:05:30:00:24:63             (Cisco)            ipfc
0x010002      N     50:06:04:82:c3:a0:98:52             (Company 1)        scsi-fcp 250
0x010100      N     21:00:00:e0:8b:02:99:36             (Company A)        scsi-fcp
0x020000      N     21:00:00:e0:8b:08:4b:20             (Company A)
0x020100      N     10:00:00:05:30:00:24:23             (Cisco)            ipfc
0x020200      N     21:01:00:e0:8b:22:99:36             (Company A)        scsi-fcp
```

Example 8-3 Displays the Name Server Database Details

```
switch# show fcns database detail
-----
FCID:0x0101e1
-----
port-wwn (vendor) :      21:00:00:20:37:d9:4f:66 ()
node-wwn :              20:00:00:20:37:d9:4f:66
class :                 3
node-ip-addr :          0.0.0.0
fc4-types:fc4_features : FCP
symbolic-port-name :    (NULL)
symbolic-node-name :    (NULL)
port-type :             NL
port-ip-addr :          0.0.0.0
fabric-port-wwn :      20:01:00:c0:dd:06:fc:00
-----
FCID:0x0101e2
-----
port-wwn (vendor) :      21:00:00:20:37:d9:4d:61 ()
node-wwn :              20:00:00:20:37:d9:4d:61
class :                 3
node-ip-addr :          0.0.0.0
fc4-types:fc4_features : FCP
symbolic-port-name :    (NULL)
symbolic-node-name :    (NULL)
port-type :             NL
port-ip-addr :          0.0.0.0
fabric-port-wwn :      20:01:00:c0:dd:06:fc:00
-----
FCID:0x0101e4
-----
port-wwn (vendor) :      21:00:00:20:37:d9:4a:fa ()
node-wwn :              20:00:00:20:37:d9:4a:fa
```

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```
class : 3
node-ip-addr : 0.0.0.0
fc4-types:fc4_features : FCP
symbolic-port-name : (NULL)
symbolic-node-name : (NULL)
port-type : NL
port-ip-addr : 0.0.0.0
fabric-port-wwn : 20:01:00:c0:dd:06:fc:00
-----
FCID:0x0101e8
-----
port-wwn (vendor) : 21:00:00:20:37:d9:4c:02 ( )
node-wwn : 20:00:00:20:37:d9:4c:02
class : 3
node-ip-addr : 0.0.0.0
fc4-types:fc4_features : FCP
symbolic-port-name : (NULL)
symbolic-node-name : (NULL)
port-type : NL
port-ip-addr : 0.0.0.0
fabric-port-wwn : 20:01:00:c0:dd:06:fc:00
```

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Displaying FDMI

Cisco MDS 9000 FabricWare provides support for the Fabric-Device Management Interface (FDMI) functionally, as described in the FC-GS-4 standard. FDMI enables management of devices such as Fibre Channel Host Bus Adapters (HBAs) through in-band communications. This addition complements the existing Fibre Channel name server and management server functions.

Using the FDMI functionality, the Cisco MDS 9000 FabricWare software can extract the following management information about attached HBAs and host operating systems without installing proprietary host agents:

- Manufacturer, model, and serial number
- Node name and node symbolic name
- Hardware, driver, and firmware versions
- Host operating system (OS) name and version number

All FDMI entries are stored in persistent storage and are retrieved when the FDMI process is started.

Use the **show fDMI** command to display the FDMI database information. (See Example 8-4.)

Example 8-4 *Displays All HBA Management Servers*

```
switch# show fDMI database
Registered HBA List
 10:00:00:00:c9:32:8d:77
 21:01:00:e0:8b:2a:f6:54

switch# show fDMI database detail
Registered HBA List
-----
HBA-ID: 10:00:00:00:c9:32:8d:77
-----
Node Name           :20:00:00:00:c9:32:8d:77
Manufacturer        :Emulex Corporation
Serial Num          :0000c9328d77
Model               :LP9002
Model Description   :Emulex LightPulse LP9002 2 Gigabit PCI Fibre Channel Adapter
Hardware Ver        :2002606D
Driver Ver          :SLI-2 SW_DATE:Feb 27 2003, v5-2.20a12
ROM Ver             :3.11A0
Firmware Ver        :3.90A7
OS Name/Ver         :Window 2000
CT Payload Len      :1300000
  Port-id: 10:00:00:00:c9:32:8d:77
-----
HBA-ID: 21:01:00:e0:8b:2a:f6:54
-----
Node Name           :20:01:00:e0:8b:2a:f6:54
Manufacturer        :QLogic Corporation
Serial Num          :\74262
Model               :QLA2342
Model Description   :QLogic QLA2342 PCI Fibre Channel Adapter
Hardware Ver        :FC5010409-10
Driver Ver          :8.2.3.10 Beta 2 Test 1 DBG (W2K VI)
ROM Ver             :1.24
Firmware Ver        :03.02.13.
OS Name/Ver         :500
CT Payload Len      :2040
  Port-id: 21:01:00:e0:8b:2a:f6:54
```