Configuring Fabric Configuration Server

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This chapter describes the Fabric Configuration Server (FCS) feature provided in the Cisco MDS 9000 Family of directors and switches. It includes the following sections:

Information About FCS

The Fabric Configuration Server (FCS) provides discovery of topology attributes and maintains a repository of configuration information of fabric elements. A management application is usually connected to the FCS on the switch through an N port. The FCS views the entire fabric based on the following objects:

- Interconnect element (IE) object—Each switch in the fabric corresponds to an IE object. One or more IE objects form a fabric.

- Port object—Each physical port in an IE corresponds to a port object. This includes the switch ports (xE, Fx, and TL ports) and their attached Nx ports.

- Platform object—A set of nodes may be defined as a platform object to make it a single manageable entity. These nodes are end-devices (host systems, storage subsystems) attached to the fabric. Platform objects reside at the edge switches of the fabric.

Each object has its own set of attributes and values. A null value may also be defined for some attributes.

In the Cisco MDS 9000 Family switch environment, multiple VSANs constitute a fabric, where one instance of the FCS is present per VSAN.

As of Cisco NX-OS Release 4.1(1), FCS supports the discovery of virtual devices. The **fcs virtual-device-add** command, issued in FCS configuration submode, allows you to discover virtual devices in a particular VSAN or in all VSANs. The devices that are zoned for IVR must be discovered with this command and have request domain_ID (RDI) enabled, before activating the IVR zone set.

If you have attached a management application to a switch, all the frames directed towards the FCS in the switch are part of the port VSAN in the switch port (Fx port). Your view of the management application is limited only to this VSAN. However, information about other VSANs that this switch is part of can be obtained either through the SNMP or CLI.

In Figure 1: FCSs in a VSAN Environment, on page 2, Management Application 1 (M1) is connected through an F port with port VSAN ID 1, and Management Application 2 (M2) is connected through an F port with port VSAN ID 2. M1 can query the FCS information of switches S1 and S3, and M2 can query switches S3 and S4. Switch S2 information is not known to both of them. FCS operations can be done only on those switches that are visible in the VSAN. Note that M2 can send FCS requests only for VSAN 2 even though S3 is also a part of VSAN 1.

Figure 1: FCSs in a VSAN Environment
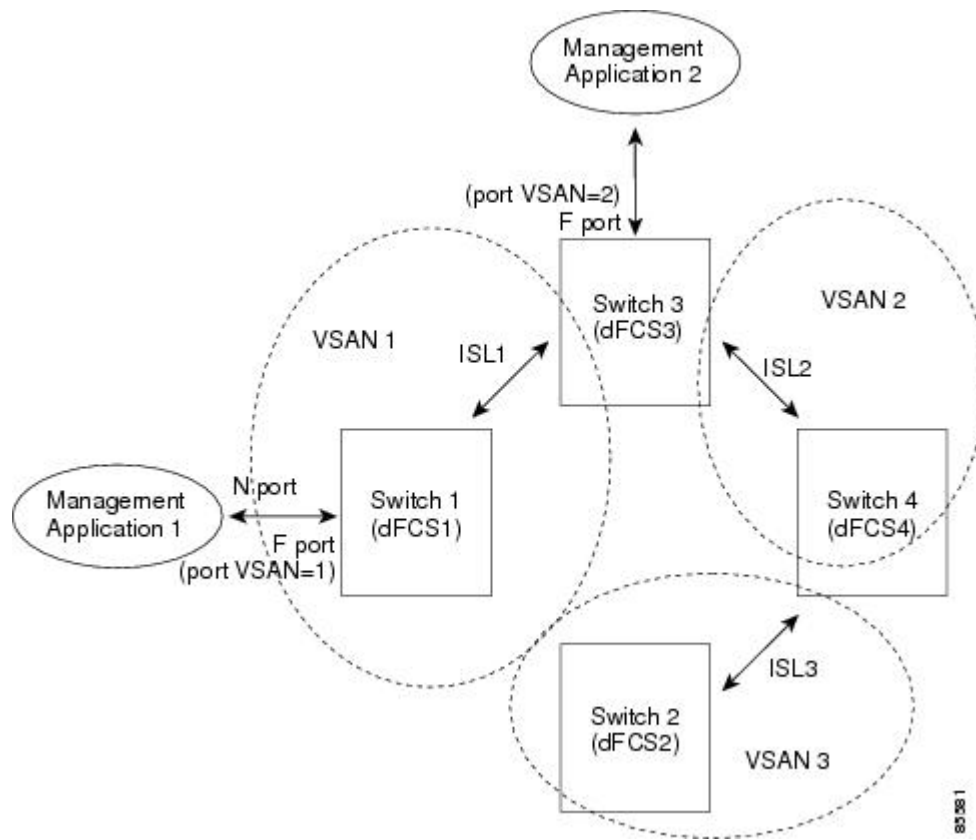
Significance of FCS

This section lists the significance of FCSs.

- FCSs support network management including the following:

    - N port management application can query and obtain information about fabric elements.

    - SNMP manager can use the FCS management information base (MIB) to start discovery and obtain information about the fabric topology.

- FCSs support TE and TL ports in addition to the standard F and E ports.

- FCS can maintain a group of modes with a logical name and management address when a platform registers with it. FCSs maintain a backup of all registrations in secondary storage and update it with every change. When a restart or switchover happens, FCSs retrieve the secondary storage information and rebuild its database.

• SNMP manager can query FCSs for all IEs, ports, and platforms in the fabric.

Default Settings

Table 1: Default FCS Settings , on page 3 lists the default FCS settings.

Table 1: Default FCS Settings

Parameters	Default
Global checking of the platform name	Disabled.
Platform node type	Unknown.

Configuring FCS

The Fabric Configuration Server (FCS) provides discovery of topology attributes and maintains a repository of configuration information of fabric elements.

This section includes the following topic:

Specifying an FCS Name

You can specify if the unique name verification is for the entire fabric (globally) or only for locally (default) registered platforms.

Creating an FCS Platform

To create an FCS platform, follow these steps:

Procedure

Step 1 Choose **FC > Advanced > Fabric Config Server**.

You see the Fabric Config Server dialog box.

Step 2 Click the **Platforms (Enclosures)** tab.

Step 3 Click **Create**.

You see the Create Fabric Config Server dialog box.

Step 4 Enter the VSAN ID, or select the ID from the drop-down list of available VSAN IDs.

Step 5 Enter the Fabric Configuration Server name in the Name field.

Step 6 Choose the type of server (**Gateway**, **Host**, **Storage**).

Step 7 Enter the WWNs for the server.

Step 8 Enter the management addresses for the server.

Step 9 Click **Create** to create the server, or click **Close** to discard your changes and return to the Fabric Config Server dialog box.

Displaying FCS Discovery

To display FCS discovery information, follow these steps:

Procedure

Step 1   Choose **FC > Advanced > Fabric Config Server**.

You see the Fabric Config Server dialog box.

Step 2   Click the **Discovery** tab.

Step 3   Click **Discover** to rediscover the fabric, or click **Refresh** to update the display.

Displaying FCS Interconnect Element

To display FCS interconnect element information, follow these steps:

Procedure

Step 1   Choose **FC > Advanced > Fabric Config Server**.

You see the Fabric Config Server dialog box.

Step 2   Click the **Interconnect Elements** tab.

Step 3   Click Close to close the dialog box.

Displaying FCS Fabric Ports

To display FCS discovery information, follow these steps:

Procedure

Step 1   Choose **FC > Advanced > Fabric Config Server**.

You see the Fabric Config Server dialog box.

Step 2   Click the **Fabric Ports** tab.

You see a list of fabric ports.

Step 3   Click **Refresh** to update the display.

Field Descriptions for FCS

This section displays the field descriptions for FCS.

Field	Description
FabricConfigServer - Request Rejects	Specifies if the Fabric Configuration Server should issue a notification on rejects.