

Configuring the IBM Flex System FC3171 8Gb SAN switch

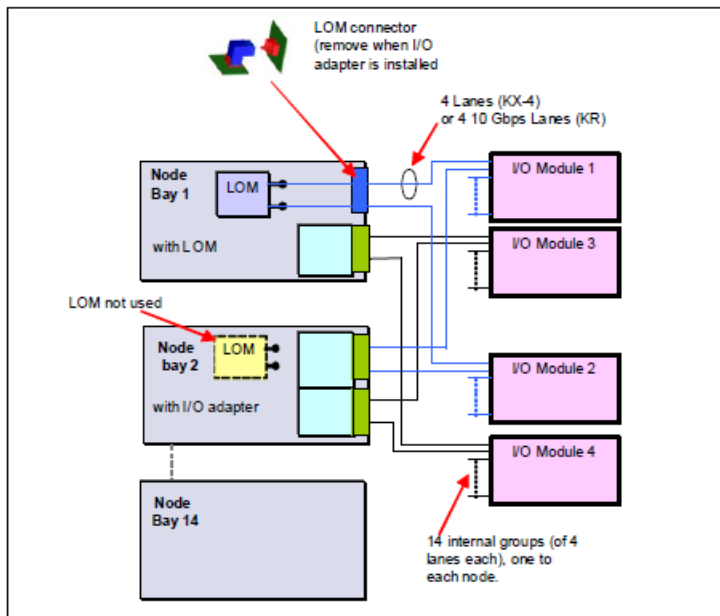
Prerequisites:

- One IBM Flex System Enterprise Chassis with Chassis Management Module (CMM), network I/O module, compute node, Mezzanine adapter
- An Ethernet network is already configured, if needed
- A Fibre Channel storage area network (SAN) is already configured, if needed

Steps:

Configure the FC3171 for OS deployment

1. Install the FC3171 8Gb SAN switch in the chassis and I/O cards in the compute nodes. Ensure that the I/O card is in the correct location for the desired switch bay. Refer to the chassis documentation for the location of physical bays. The I/O card must be a Fibre Channel card. Fibre Channel over Ethernet (FCoE) cards are not supported with the FC3171 8Gb SAN switch.



2. The FC3171 SAN switch has 14 internal ports and 6 external ports. The 14 internal ports map to the node bays, for example, port 6 connects to node bay 6. External ports are numbered 0, 15, 16, 17, 18, 19 (top to bottom).
3. Log in to the CMM GUI or CLI and ensure that the switch ports are set to enabled. If the ports are set to disabled, both the internal and external switch ports are disabled.

To enable the switch ports:

login to CMM CLI via SSH

env -T system:switch[x] where x is the switch slot
ifconfig -ep enabled

4. Ensure that your switch operating mode is correct for the SAN you are connected to. See the table below for SAN interoperability information. If the SAN isn't listed below it is not supported.

Table 6-2 SAN module feature comparison and interoperability

	FC5022 16Gb Switch	FC3171 8Gb SAN Switch	FC5022 16Gb Switch in Brocade Access Gateway mode	FC3171 8Gb SAN Pass-thru (and FC3171 8Gb SAN Switch in pass-thru mode)
Basic FC connectivity				
FC-SW-2 interoperability	Yes	Yes	Not applicable	Not applicable
Zoning	Yes	Yes	Not applicable	Not applicable
Maximum number of Domain IDs	239	239	Not applicable	Not applicable
Advanced FC connectivity				
Port Aggregation	Yes	No	Not applicable	Not applicable
Advanced fabric security	Yes	Yes	Not applicable	Not applicable
Interoperability (existing fabric)				
Brocade fabric interoperability	Yes	No	Yes	Yes
QLogic fabric interoperability	No	No	No	No
Cisco fabric interoperability	No	No	No	Yes

Follow these steps to change from a SAN switch to a SAN pass-thru

- *ssh* to switch ip, login USERID/PASSWORD
- *admin start*
- *config edit*
- *set config switch*
- Change Transparent mode to *True*
- Press enter through rest of prompts
- *config save*
- *config activate*

The switch reboots into Pass-thru mode. To change back to full fabric mode, perform the above operations but set Transparent mode to *False*

5. Plug an appropriate small form-factor pluggable (SFP) into the switch. To determine which small form-factor pluggable plus (SFP+) modules and cables are required to connect the switch to other fabric or storage devices, see the following link:
<http://www.ibm.com/systems/info/x86servers/serverproven/compat/us/>
6. Plug a supported fiber cable from the switch into the storage or SAN depending on desired configuration. Refer to your storage documentation to determine best fiber cabling schemes.
7. If using the FC3171 Pass-thru or the FC3171 SAN Switch in transparent mode ensure that the TH (transparent host) to TF (transparent fabric) port mapping is correct. The default mapping assumes all 6 external ports are connected. If this isn't the case the port mapping will need to be modified.

Refer to Mapping transparent fabric ports on a pass-thru module for configuring mapping in the IBM Flex System FC3171 8Gb SAN Switch Command Line Interface User's Guide at the following link:

In the information center (Internet):

<http://publib.boulder.ibm.com/infocenter/flexsys/information/topic/com.ibm.acc.networkdevices.doc/88y7936.pdf>

From the installed documentation on the IBM Flex System Management Console, navigate to: IBM Flex System information--> Network devices--> Network switches--> IBM Flex System FC3171 8Gb SAN Switch--> IBM Flex System FC3171 8Gb SAN Switch Command Line Interface User's Guide

If the port mapping isn't correct, your hosts may not be mapped to the correct external port, which would keep the host from logging into the upstream switch and accessing the SAN.

8. Retrieve the adapter world wide names (WWNs) from the CMM (select Chassis Management, then select Reports).
9. The best practice is single initiator zoning (initiator WWN to storage WWN), applicable to SAN Switch only. Refer to the switch documentation for information on how to configure zoning. Ensure that both switches 3 and 4 are zoned correctly.
10. Refer to your storage documentation to map a logical unit number (LUN) to the adapter WWN and any other configuration needed for the storage device being used.
11. Perform OS deployment.

If boot from SAN is being performed, refer to the Boot from SAN section of the [IBM Flex System Products and Technology](#) Redbook.

Ensure that the unified extensible firmware interface (UEFI)/BIOS of your host bus adapter (HBA) is enabled and that the adapter boot order is set correctly for SAN boot. Refer to your HBA User Guide for how to configure.