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Disclaimer

This document is not a Broadcom controlled document. It is a quick reference guide with FICON related setup commands only. Read the FICON Admin Guide before first. Consult the FOS Command Reference Guide for command usage details.

To do

- Add MAPS configuration

Configuration

Tip: Connect all Inter-Switch Links first and allow fabrics to merge before proceeding with configuration.

CONFIGURATION COMMANDS & CHECK LIST

√	CLI Command	Explanation/Comments
	firmwareshow	Not all versions of FOS are qualified for FICON. Check the Target Path

		firmware guide on MyBrocade for the latest target path code.
	<code>licenseadd</code>	Add all your license keys before starting.
	<code>lscfg --create FID</code>	The Fabric ID (FID) must be a number from 1-126. FID 127 & 128 are also permissible but FID 128 is recommended for the default switch and is the FID for the default switch as shipped from the factory. FID 127 is recommended to be reserved for a base switch. The FID must be the same in all switches in the same fabric. If you are not sure what FID number to use, use 1: <code>lscfg --create 1</code>
	<code>lscfg -config FID -slot x-y</code>	Use the same FID number used in the previous step. X and y is the range of slots to move. For example, to move all port cards to FID 1 in an 8510-8: <code>lscfg -config 1 -slot 1-4</code> <code>lscfg -config 1 -slot 9-12</code>
	<code>setcontext FID</code>	Use the <code>setcontext</code> command to set the logical switch context to the FID you created for FICON.
	<code>switchdisable</code>	Set the switch offline
	<code>switchname MySwitch</code>	A meaningless default switch name will be assigned so although not necessary, it is highly recommended that you give your switch a name.
	<code>chassisname MyChassis</code>	Not required but helpful to have a chassis name to refer to in the event support is required.
	<code>aptpolicy 3</code>	Set the routing policy: 1 - Port Based routing (PBR) – Do not use 2 - Device Based Routing (DBR) – Use only when FICON Dynamic Routing (FiDR) is not supported. This will be the case with older EC12 and older storage.

		3 Exchange Based Routing (EBR) – This should be the default and is typically what is used.
	<code>aptpolicy</code>	Show the current policy
	<code>configure</code>	The configure command prompts the user to set several parameters listed below. To keep the current setting, displayed in brackets “[...]”, just press enter. Typically, the only settings that will be changed are the domain ID, insistent domain ID, and logins per second parameters. Changing any other parameter should only be done when requested to do so by a qualified Brocade engineer.
Configure Command Parameter Prompts		
	<code>Fabric parameters</code>	Answer “y” or “yes” Prompts for the fabric parameters below. Typically, only the domain ID and insistent domain ID are changed.
Fabric Parameter Prompts		
	<code>Domain</code>	This is also the switch address. It is highly recommended that the switch ID used in HCD be the same as the switch address in hexadecimal. All switches ship from the factory with a default domain ID of 1. Best practice is to use unique Domain IDs (DID) for all switches on the data center floor. Older versions of FOS only allow decimal input so remember to convert from hex to decimal.
	<code>Other parameters</code>	DO NOT CHANGE
	<code>Disable Device Probing</code>	1
	<code>Insistent Domain ID Mode</code>	y
	<code>Address mode (256 Area limit)</code>	Only need to consider changing on 8 slot directors. It may be desirable to change the address mode on switches but doing so should only be done after consulting an SME. The address mode for an 8 slot director should be address



		mode 1. YOU MUST BIND ADDRESSES WHEN USING ADDRESS MODE 1. Use the Excel workbook to generate bind commands.
	High Integrity Fabric	Y
	Other parameters	DO NOT CHANGE
	Virtual Channel parameters and everything else - just keep answering "n" until you get to "system attributes".	N
	system attributes	Y – For bladed switches only
	Keep the defaults for all except: system.blade.bladeFaultOnHwErrMsk: (0x0..0xffff) [0x0]	0x1
	iodset	Sets In Order Delivery. Probably a legacy feature but set it anyway.
	mapsconfig --enableFPImon	Fabric Performance Impact (FPI) monitoring is included in the base MAPS policy so no license required.
	portcfgfec --enable -tts s/p	Gen5 F-Ports only. Enable FEC via TTS. See "FEC via TTS" for a list of commands for each port. Note that if the attached device does not support FEC via TTS, it will auto-negotiate to 8G, not 16G. FICON Express16 and all IBM DS88xx that supports 16G have auto-negotiate with FEC via TTS enabled by default. Check with EMC and HDS,
	switchenable	Enable the switch
	fabricname --set fabric_name	Not required but helpful to have a fabric name to refer to in the event support is required

And my sincere apologies for breaking the table and reversing the command – description columns

Sync Point: Configure all switches in the fabric to this point before continuing.



	If CUP will be used, ports with link addresses xxFE and xxFF must be disable. Your systems may not have any ports with these addresses. Recommended best practice is to leave them in the default switch.	<code>portdisable s/p</code>
	Enable CUP Management (requires a license)	<code>ficoncupset fmsmode enable</code> To validate: <code>ficoncupshow fmsmode</code>
	Missing interrupt time out. Only necessary if enabling CUP. This should be set to 180 by default but check it.	<code>ficoncupset MIHPTO 180</code> To validate: <code>ficoncupshow mihpto</code>
	For ports with fiber connections exceeding 10 kilometers, configuring the port for long distance mode will increase the number of BB credits available on that port.	<code>portcfglongdistance</code>
	Required if using 2-byte addressing. Recommended best practice for single byte addressing. The "*" says put the WWNs of all switches in the fabric in the SCC_POLICY.	<code>secpolicycreate "SCC_POLICY", "*"</code>
	Save the SCC_POLICY	<code>secpolicysave</code>
	Activate the SCC_POLICY	<code>secpolicyactivate</code>
	Use this command to validate the SCC_POLICY. The response should contain all the WWNs of the switches in the fabric.	<code>secpolicyshow</code>
	Distribute the SCC policy to all switches in the fabric. Even if there is just one switch in the fabric, you must do this.	<code>fddcfg --fabwideset "SCC:S"</code>
	Validation	<code>fddcfg --show</code>
	Not part of the set up. Requires an external FTP server or Brocade branded USB drive.	<code>supportsave</code>

Zoning

DISCUSSION

The recommended best practice is to create a large zone with all ports in it. The prohibit/allow matrix, PDCM, will not work if no zone is defined.

Network Advisor makes this job easy. If you don't have Network Advisor, you can point a browser to the IP address of the switch and use Web Tools (Element Manger) but that will only work for single switch fabrics and may not be supported in future versions of FOS.

Summary:

- Use Domain,Index (d,i) zoning only
- Create one zone and put all ports in it except the CUP port and E-Ports
- Create a zone configuration and add the above zone
- Activate

CLI COMMANDS

<code>defzone --show</code>	Use this command to validate the default zone settings
<code>defzone -noaccess</code>	Disabled the default zone.
<code>cfgshow</code>	Display current zoning information
<code>zonecreate, zoneadd, cfgcreate</code>	Use these commands to create the zones.
<code>cfgsave</code>	Answer "y" or "yes" to prompt This command saves and activates the default zone policy.

Clear Statistics, FICON Data, & Configuration Settings

When complete, clear out statistics. Multiple commands can be entered at once so just copy and paste all the commands below into a telnet session at once.

CHASSIS LEVEL - LOG & TRACE

```
date
supportsave -R
portlogclear
diagclearerror -all
tracedump -c
tracedump -c -s 5
tracedump -c
```

LOGICAL SWITCH – PORT STATISTICS

```
# Don't forget to setcontext
errclear
statsclear
slotstatsclear
```

LOGICAL SWITCH – CLEAR FICON DATA

```
# Don't forget to setcontext
ficonclear RLIR
ficonclear RNID
```

Miscellaneous

Typically, commands in this section are only used when repurposing a switch or setting special configurations.

FEC VIA TTS

Replace “1/” in commands below with “2/”, “3/”, etc .. for other ports.

```
portcfgfec --enable -tts -f 1/0
portcfgfec --enable -tts -f 1/1
portcfgfec --enable -tts -f 1/2
portcfgfec --enable -tts -f 1/3
portcfgfec --enable -tts -f 1/4
portcfgfec --enable -tts -f 1/5
portcfgfec --enable -tts -f 1/6
portcfgfec --enable -tts -f 1/7
```



BROCADE

FICON CLI Cheat Sheet

```
portcfgfec --enable -tts -f 1/8
portcfgfec --enable -tts -f 1/9
portcfgfec --enable -tts -f 1/10
portcfgfec --enable -tts -f 1/11
portcfgfec --enable -tts -f 1/12
portcfgfec --enable -tts -f 1/13
portcfgfec --enable -tts -f 1/14
portcfgfec --enable -tts -f 1/15
portcfgfec --enable -tts -f 1/16
portcfgfec --enable -tts -f 1/17
portcfgfec --enable -tts -f 1/18
portcfgfec --enable -tts -f 1/19
portcfgfec --enable -tts -f 1/20
portcfgfec --enable -tts -f 1/21
portcfgfec --enable -tts -f 1/22
portcfgfec --enable -tts -f 1/23
portcfgfec --enable -tts -f 1/24
portcfgfec --enable -tts -f 1/25
portcfgfec --enable -tts -f 1/26
portcfgfec --enable -tts -f 1/27
portcfgfec --enable -tts -f 1/28
portcfgfec --enable -tts -f 1/29
portcfgfec --enable -tts -f 1/30
portcfgfec --enable -tts -f 1/31
portcfgfec --enable -tts -f 1/32
portcfgfec --enable -tts -f 1/33
portcfgfec --enable -tts -f 1/34
portcfgfec --enable -tts -f 1/35
portcfgfec --enable -tts -f 1/36
portcfgfec --enable -tts -f 1/37
portcfgfec --enable -tts -f 1/38
portcfgfec --enable -tts -f 1/39
portcfgfec --enable -tts -f 1/40
portcfgfec --enable -tts -f 1/41
portcfgfec --enable -tts -f 1/42
portcfgfec --enable -tts -f 1/43
portcfgfec --enable -tts -f 1/44
portcfgfec --enable -tts -f 1/45
portcfgfec --enable -tts -f 1/46
portcfgfec --enable -tts -f 1/47
```

APM – MAY BLOCK CODE UPGRADES:

```
configshow -all | grep perf.Toptalker  
perfresourceshow -eeRes  
perfresourceshow --portttRes
```

ALL PORTS TO DEFAULT CONFIGURATION

Replace “1/” for each slot.

```
# Don't forget to setcontext  
portcfgdefault 1/0  
portcfgdefault 1/1  
portcfgdefault 1/2  
portcfgdefault 1/3  
portcfgdefault 1/4  
portcfgdefault 1/5  
portcfgdefault 1/6  
portcfgdefault 1/7  
portcfgdefault 1/8  
portcfgdefault 1/9  
portcfgdefault 1/10  
portcfgdefault 1/11  
portcfgdefault 1/12  
portcfgdefault 1/13  
portcfgdefault 1/14  
portcfgdefault 1/15  
portcfgdefault 1/16  
portcfgdefault 1/17  
portcfgdefault 1/18  
portcfgdefault 1/19  
portcfgdefault 1/20  
portcfgdefault 1/21  
portcfgdefault 1/22  
portcfgdefault 1/23  
portcfgdefault 1/24  
portcfgdefault 1/25  
portcfgdefault 1/26  
portcfgdefault 1/27  
portcfgdefault 1/28  
portcfgdefault 1/29  
portcfgdefault 1/30  
portcfgdefault 1/31  
portcfgdefault 1/32  
portcfgdefault 1/33
```

```
portcfgdefault 1/34
portcfgdefault 1/35
portcfgdefault 1/36
portcfgdefault 1/37
portcfgdefault 1/38
portcfgdefault 1/39
portcfgdefault 1/40
portcfgdefault 1/41
portcfgdefault 1/42
portcfgdefault 1/43
portcfgdefault 1/44
portcfgdefault 1/45
portcfgdefault 1/46
portcfgdefault 1/47
```

SET A GE TO DEFAULT

```
portcfgdefault 1/ge0
portcfgdefault 1/ge1
```

CLEAR OUT FICON DATA (RNID & RLIR)

CLEAR OUT AN SCC:S POLICY

These commands ask for user feedback so you much copy and paste them one at a time.

```
secpolicydelete SCC_POLICY
secpolicyactivate
fddcfg --fabwideset ""
```