



OpenFabrics Alliance

Interoperability Working Group (OFA-IWG)

January 2010 Logo Event Report

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 Report Rev1.4
 OFED Version: 1.5

Enclosed are the results from OFA Logo testing performed on the following devices under test (DUTs):

Mellanox IS5030Q 36 Port QDR InfiniBand Managed Switch

The test suite referenced in this report is available at the OFA website at test time release 1.30 (September 8, 2009 DRAFT) was used:

<http://www.iol.unh.edu/ofatestplan/>

The following table highlights the Mandatory test results required for the OpenFabrics Interoperability Logo for the DUT per the test plan referenced above and the current OpenFabrics Interoperability Logo Program (OFILP).

Mandatory Test Procedures	IWG Test Status	Result/Notes
10.1: IB Link Initialization	Mandatory	PASS
10.2: IB Fabric Initialization	Mandatory	PASS
10.3: IB IPoIB Connected Mode	Mandatory	PASS
10.4: IB IPoIB Datagram Mode	Mandatory	PASS
10.5: IB SM Failover and Handover	Mandatory	PASS
12.8: TI RDMA Operations – Using Command Line.	Mandatory	PASS

For specific details regarding issues please see the corresponding test result.

Summary of all results follows on the second page of this report.

Testing Completed 02/09/2010

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Review Completed 05/11/2010

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Table 1: Result Summary

The following table summarizes all results from the event pertinent to an IB device.

Note: **Failing a beta test does not necessarily indicate a failure of the device under test.** There are several reasons that a device might fail a beta test that are beyond the control of the device manufacturer. Such reasons include unresolved problems with the OFED software, with other vendors' devices, and with the test plan procedures.

Mandatory Test Procedures	IWG Test Status	Result/Notes
10.1: IB Link Initialization	Mandatory	PASS
10.2: IB Fabric Initialization	Mandatory	PASS
10.3: IB IPoIB Connected Mode	Mandatory	PASS
10.4: IB IPoIB Datagram Mode	Mandatory	PASS
10.5: IB SM Failover and Handover	Mandatory	PASS
12.8: TI RDMA Operations – Using Command Line.	Mandatory	PASS
12.9: TI RDMA Operations. Using XANStorm	Beta	Not Tested

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Report Revision History

- v1.0 Initial working copy
- v1.1 Updated to reflect retesting results
- v1.2 Added tested firmware md5sum
- v1.3 Updated results
- v1.4 Updated topology

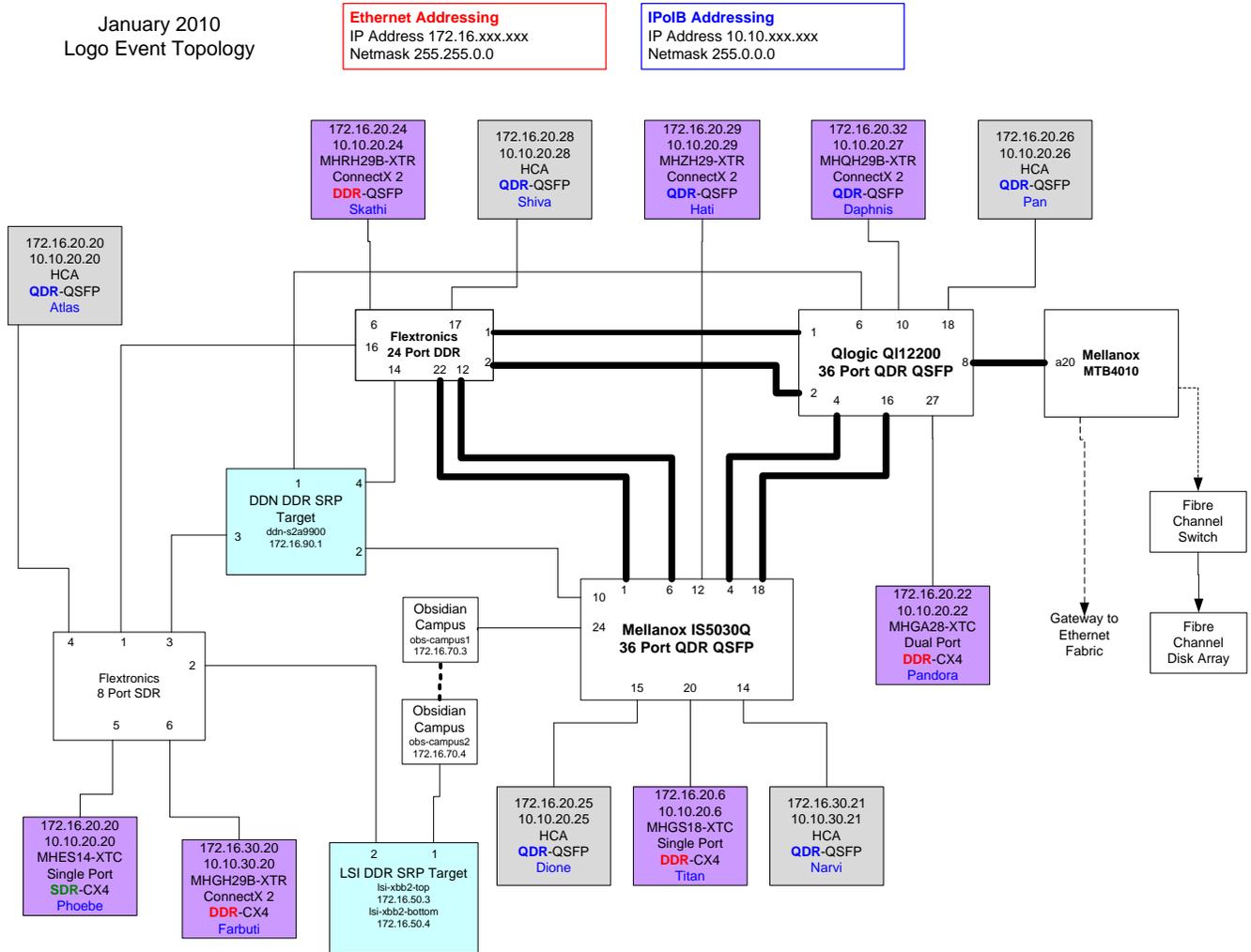
Table 2: Result Key

The following table contains possible results and their meanings:

Result:	Description:
PASS	The Device Under Test (DUT) was observed to exhibit conformant behavior.
PASS with Comments	The DUT was observed to exhibit conformant behavior however an additional explanation of the situation is included, such as due to time limitations only a portion of the testing was performed.
FAIL	The DUT was observed to exhibit non-conformant behavior.
Warning	The DUT was observed to exhibit behavior that is not recommended.
Informative	Results are for informative purposes only and are not judged on a pass or fail basis.
Refer to Comments	From the observations, a valid pass or fail could not be determined. An additional explanation of the situation is included.
Not Applicable	The DUT does not support the technology required to perform this test.
Not Available	Due to testing station limitations or time limitations, the tests could not be performed.
Borderline	The observed values of the specified parameters are valid at one extreme and invalid at the other.
Not Tested	Not tested due to the time constraints of the test period.

Table 3: DUT and Test Setup Information

Figure 1: The IB fabric configuration utilized for any tests requiring a multi-switch configuration is shown below.



DUT #1 Details			
Manufacturer	Mellanox	Firmware Rev	1.0.2
Model	IS5030Q	Hardware Rev	
Speed	QDR	Located in Host	NA
Additional Comments/Notes		Firmware bin md5sum	
Devices is a 36 port QDR Managed Switch		d0e1c814cb4d9f74885f36b78838b1b2	

Mandatory Tests - IB Device Test Summary Results:

Test Number and Name	Part(s)	Summary Note(s)	Result(s)
Group 10.1: IB Link Initialization	Test #1	No issues seen	PASS
Discussion:			
Physical link initialization was verified between this device and every other device in the fabric. Link status was observed visually via status lights on the device. Port width and link speed was verified via ibdiagnet.			

Link Partner	IS5030Q QDR
Mellanox MHGA28-XTC DDR	Pass
Mellanox MHGS18-XTC DDR	Pass
Mellanox MHES14-XTC SDR	Pass
Mellanox MHZH29-XTR QDR	Pass
Mellanox MHRH29b-XTR DDR	Pass
Mellanox MHQH29b-XTR QDR	Pass
Mellanox MHGH29b-XTR DDR	Pass
Mellanox IS5030Q - QDR	X
QLogic 12200 - QDR	Pass
Flextronics X430044 - DDR	Pass
Flextronics X430066 - SDR	Pass
Obsidian Longbow	Pass
Obsidian Campus	Pass
LSI XBB2 - DDR	Pass
DDN S2A9900 - DDR	Pass
Mellanox MTB4010 - QDR	Pass

Test Number and Name	Part(s)	Summary Note(s)	Result(s)
Group 10.2: IB Fabric Initialization	Test #1:	Issues seen	PASS
Discussion:			
The fabric configuration shown in Table 3 was used for this test. 'ibdiagnet -c 1000' showed no Port error counters increment. Only one SM is run at a time. All switches are power cycled between SM trials. All links are validated via use of 'ibdiagnet' and 'ibchecknet' was used to verify that there were no duplicate GUIDs. Refer to the table below for SM details.			
SMs tested include: <i>OFED OpenSM (SM Only)</i> , <i>QLogic 12200 (Managed Switch)</i> , and <i>Mellanox IS5030Q (Managed Switch)</i>			

Test Number and Name	Part(s)	Summary Note(s)	Result(s)
Group 10.3: IPoIB Connected Mode	Test #1	No Issues Seen	PASS
	Test #2	No Issues Seen	PASS
	Test #3	No Issues Seen	PASS

Discussion: Test #1

Test #1: An automated test script was used to send ICMP Echo Request packets with payloads of specific sizes between all hosts on the configured fabric. This procedure was repeated with each subnet manager independently managing the fabric.

Test #2: An HCA was disconnected from the fabric and reconnected in a different location; the ICMP Echo Reply packets ceased while the HCA was disconnected, and then resumed when it was reconnected. This procedure was repeated once with each subnet manager independently managing the fabric.

Test #3: An automated test script was used to transfer a 4MB file using the SFTP protocol between all hosts on the configured fabric. The file was transferred once in each direction between all hosts, and the contents of the file were verified after each transfer. This procedure was repeated with each subnet manager independently managing the fabric.

SMs tested include: *OFED OpenSM (SM Only)*, *QLogic 12200 (Managed Switch)*, and *Mellanox IS5030Q (Managed Switch)*

Test Number and Name	Part(s)	Summary Note(s)	Result(s)
Group 10.4: IPoIB Datagram Mode	Test #1	No Issues Seen	PASS
	Test #2	No Issues Seen	PASS
	Test #3	No Issues Seen	PASS

Discussion:

Test #1: An automated test script was used to send ICMP Echo Request packets with payloads of specific sizes between all hosts on the configured fabric. This procedure was repeated with each subnet manager independently managing the fabric.

The last packet size tested; 65507 bytes, was seen to lose the very first packet sent. This can be fixed by setting the systems qlen value to 33 and as such has no bearing on this device.

Test #2: An HCA was disconnected from the fabric and reconnected in a different location; the ICMP Echo Reply packets ceased while the HCA was disconnected, and then resumed when it was reconnected. This procedure was repeated once with each subnet manager independently managing the fabric.

Test #3: An automated test script was used to transfer a 4MB file using the SFTP protocol between all hosts on the configured fabric. The file was transferred once in each direction between all hosts, and the contents of the file were verified after each transfer. This procedure was repeated with each subnet manager independently managing the fabric.

SMs tested include: *OFED OpenSM (SM Only)*, *QLogic 12200 (Managed Switch)*, and *Mellanox IS5030Q (Managed Switch)*

Test Number and Name	Part(s)	Summary Note(s)	Result(s)
Group 10.5: IB SM Failover and Handover	Test #1	No issues seen	PASS
Discussion: Test Results			
SM failover/handover succeeded in a fabric utilizing this DUT			
SMs tested include: <i>OFED OpenSM (SM Only)</i>			

Test Number and Name	Part(s)	Summary Note(s)	Result(s)
Group 12.8: TI RDMA Operations. Using Command Line	Test #1	No Issues Seen	PASS
Discussion:			
Switches are stressed by loading all connected ports with RDMA write traffic while testing a control server/client pair to completion.			
SMs tested include: <i>OFED OpenSM (SM Only)</i> , <i>QLogic 12200 (Managed Switch)</i> , and <i>Mellanox IS5030Q (Managed Switch)</i>			

Beta Tests - IB Device Test Results:

Test Number and Name	Part(s)	Summary Note(s)	Result(s)
Group 12.9: TI RDMA Operations. Using XANStorm	Test #1	Not Tested	Not Tested
Discussion:			
Due to time constraints this test was not performed.			