OpenFabrics Alliance

Interoperability Logo Group (OFILG)

January 2014 Logo Event Report

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Date:	26 February 2014
Report Revision:	1.1
OFED Version on Compute Nodes:	3.5-2
Operating System on Compute Nodes:	SL 6.4

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

Mellanox MHQH29C-XTR *Mellanox MHQH19B-XTR*
Mellanox MCX353A-FCBT *Mellanox MCX354A-FCBT*

The test suite referenced in this report is available at the IOL website. Release 1.49 (2013-Nov-5) was used.

http://iol.unh.edu/ofatestplan

The following table highlights the Mandatory tests required for the OpenFabrics Interoperability Logo for the InfiniBand HCA device class per the Test Plan and the current OpenFabrics Interoperability Logo Program (OFILP).

Test Procedures	IWG Test Status	Result/Notes
11.1: Link Initialization	Mandatory	PASS
11.2: IB Fabric Initialization	Mandatory	PASS
11.3: IPoIB Connected Mode	Mandatory	PASS
11:4: IPoIB Datagram Mode	Mandatory	PASS
11.5: SM Failover and Handover	Mandatory	PASS
11.6: SRP	Mandatory	PASS
13.1: TI iSER	Mandatory	Not Available
13.2: TI NFS over RDMA	Mandatory	PASS
13.4: TI uDAPL	Mandatory	PASS
13.5: TI RDMA Basic Interop	Mandatory	PASS with Comments
13.6: TI RDMA Stress	Mandatory	PASS
13.7: TI MPI – Open	Mandatory	PASS

Summary of all results follows on the second page of this report.
For Specific details regarding issues, please see the corresponding test result.

Testing Completed 17 Jan 2014

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Review Completed 26 Feb 2014

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Result Summary

The Following table summarizes all results from the event pertinent to this IB device class (InfiniBand HCA)

Test Procedures	IWG Test Status	Result/Notes
11.1: Link Initialization	Mandatory	PASS
11.2: IB Fabric Initialization	Mandatory	PASS
11.3: IPoIB Connected Mode	Mandatory	PASS
11:4: IPoIB Datagram Mode	Mandatory	PASS
11.5: SM Failover and Handover	Mandatory	PASS
11.6: SRP	Mandatory	PASS
11.7: Ethernet Gateway	Beta	Not Tested
11.8: FibreChannel Gateway	Beta	Not Tested
13.1: TI iSER	Mandatory	Not Available
13.2: TI NFS over RDMA	Mandatory	PASS
13.4: TI uDAPL	Mandatory	PASS
13.5: TI RDMA Basic Interoperability	Mandatory	PASS with Comments
13.6: TI RDMA Stress	Mandatory	PASS
13.7: TI MPI – Open	Mandatory	PASS

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Report Revision History

- v1.0 Initial working copy
- v1.1 Modified tests 11.6, 13.2, and 13.6 to more accurately reflect the behavior of the DUT

Configuration Files

Description	Attachment
Scientific Linux 6.4 Configuration File	
OFED 3.5-2 Configuration File	

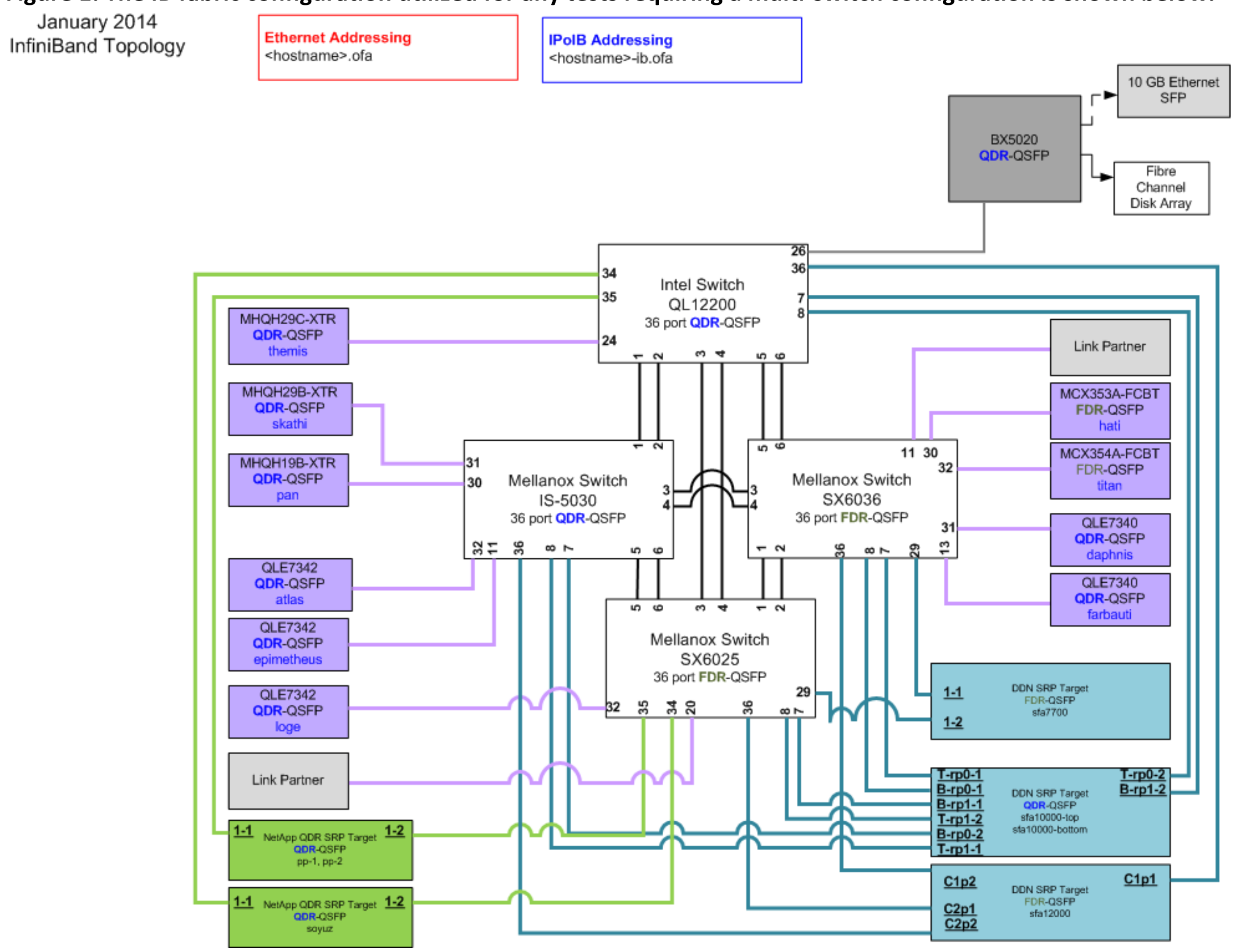
Result Key

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.
Qualified PASS	The DUT was observed to exhibit conformant behavior, with the exception of fault(s) or defect(s) which were previously known.
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 specific parameters are valid at one extreme and invalid at the other.
Not Tested	Not tested due to the time constraints of the test period.

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 Revision:	2.11.500
Model:	MHQH29C-XTR	Hardware Revision:	X1
Speed:	QDR	Located in Host:	themis
Firmware MD5sum:	2c2725eff305fd7d995a899def70150c		
Additional Comments / Notes:			

DUT #2 Details			
Manufacturer:	Mellanox	Firmware Revision:	2.11.500
Model:	MHQH19B-XTR	Hardware Revision:	X2
Speed:	QDR	Located in Host:	pan
Firmware MD5sum:	a99d1426cc19fc4576f109d6689e832b		
Additional Comments / Notes:			

DUT #3 Details			
Manufacturer:	Mellanox	Firmware Revision:	2.30.3000
Model:	MCX353A-FCBT	Hardware Revision:	X2
Speed:	FDR	Located in Host:	hati
Firmware MD5sum:	d551d2db16ab66167946cd184383e9dc		
Additional Comments / Notes:			

DUT #4 Details			
Manufacturer:	Mellanox	Firmware Revision:	2.30.3000
Model:	MCX354A-FCBT	Hardware Revision:	X2
Speed:	FDR	Located in Host:	titan
Firmware MD5sum:	6999a87654e69fe992c3da5219765bee		
Additional Comments / Notes:			

Mandatory Tests – IB Device Test Results:

11.1: Link Initialization

Results	
Part #1:	PASS
Discussion:	
All links established with the DUT were of the proper link speed and width.	

Link Partner		MHQH29C-XTR	MHQH19B-XTR	MCX353A-FCBT	MCX354A-FCBT
Intel 12200 (Switch) – QDR		PASS	PASS	PASS	PASS
Mellanox SX6025 (Switch) – FDR		PASS	PASS	PASS	PASS
Mellanox SX6036 (Switch) – FDR		PASS	PASS	PASS	PASS
Mellanox IS-5030 (Switch) – QDR		PASS	PASS	PASS	PASS
DataDirect Networks SFA12000 (SRP Target) – FDR		PASS	PASS	PASS	PASS
DataDirect Networks SFA10000 (SRP Target) – QDR		PASS	PASS	PASS	PASS
DataDirect Networks SFA7700 (SRP Target) – FDR		PASS	PASS	PASS	PASS
NetApp Soyuz (SRP Target) – QDR		PASS	PASS	PASS	PASS
LSI Pikes Peak (SRP Target) – QDR		PASS	PASS	PASS	PASS
Mellanox BX5020 (Gateway) - QDR		PASS	PASS	PASS	PASS
Host: themis	HCA: MHQH29C-XTR (QDR)	**NA**	PASS	PASS	PASS
Host: pan	HCA: MHQH19B-XTR (QDR)	PASS	**NA**	PASS	PASS
Host: hati	HCA: MCX353A-FCBT (FDR)	PASS	PASS	**NA**	PASS
Host: titan	HCA: MCX354A-FCBT (FDR)	PASS	PASS	PASS	**NA**
Host: daphnis	HCA: QLE7340 (QDR)	PASS	PASS	PASS	PASS
Host: loge	HCA: QLE7342 (QDR)	PASS	PASS	PASS	PASS

11.2: Fabric Initialization

Subnet Manager	Result
OpenSM	PASS
Result Discussion:	
All subnet managers used while testing with OFED 3.5-2 were able to correctly configure the selected topology.	

11.3: IPoIB Connected Mode

Subnet Manager	Part A	Part B	Part C
OpenSM	**PASS**	**PASS**	**PASS**
Result Discussion:			
IPoIB ping, SFTP, and SCP transactions completed successfully between all HCAs; each HCA acted as both a client and a server for all tests.			

11.4: IPoIB Datagram Mode

Subnet Manager	Part A	Part B	Part C
OpenSM	**PASS**	**PASS**	**PASS**
Result Discussion:			
IPoIB ping, SFTP, and SCP transactions completed successfully between all HCAs; each HCA acted as both a client and a server for all tests.			

11.5: SM Failover and Handover

SM Pairings	Result
OpenSM	**PASS**
Result Discussion:	
OpenSM was able to properly handle SM priority and state rules.	

11.6: SRP

Subnet Manager	Result
OpenSM	**PASS**
Result Discussion:	
SRP communications between all HCAs and all SRP targets succeeded while OpenSM was in control of the fabric.	

13.1 TI iSER

Subnet Manager	Result
OpenSM	**Not Tested**
Result Discussion:	
This test was not performed, as there are no devices that support the iSER test procedure present in the event topology.	

13.2: TI NFS over RDMA

Subnet Manager	Result
OpenSM	**PASS**
Result Discussion:	
All devices were able to complete the Connectathon test suite; each HCA acted as both a client and a server.	

13.4: TI uDAPL

Subnet Manager	Result
OpenSM	**PASS**
Result Discussion:	
All communications using DAPL were seen to complete successfully as described in the referenced test plan; each HCA acted as both a client and a server for all tests.	

13.5: TI RDMA Basic Interoperability

Subnet Manager	Result
OpenSM	**PASS with Comments**
Result Discussion:	
All devices were shown to correctly exchange core RDMA operations across a simple network path under nominal (unstressed) conditions; each HCA acted as both a client and a server for all tests. Failures between all HCAs performing small ib_send_bw command were observed. This is a known bug in OFED 3.5-2 and can be found here: bug 2457.	

13.6: TI RDMA Stress

Subnet Manager	Result
OpenSM	**PASS**
Result Discussion:	
All IB switches were seen to properly handle a large load as indicated by the successful completion of control communications between two HCAs while all other HCAs in the fabric were used to generate traffic in order to put a high load on the switch. Each HCA acted as both a client and a server for the control connection.	

13.7: TI MPI – Open

Subnet Manager	Part A	Part B
OpenSM	**PASS**	**PASS**
Result Discussion:		
Complete heterogeneity; 1 process per system.		

Beta Tests – IB Device Test Results:

11.7: IB Ethernet Gateway

Subnet Manager	Result
OpenSM	**Not Tested**
Result Discussion:	
This test was not performed, as there are no devices that support the Ethernet Gateway test procedure present in the event topology.	

11.8 IB FibreChannel Gateway

Subnet Manager	Result
OpenSM	**Not Tested**
Result Discussion:	
This test was not performed, as there are no devices that support the FibreChannel Gateway test procedure present in the event topology.	