OpenFabrics Alliance

Interoperability Logo Group (OFILG)
May 2012 Logo Event Report

UNH-IOL – 121 Technology Drive, Suite 2 – Durham, NH 03824 - +1-603-862-0090
OpenFabrics Interoperability Logo Group (OFILG) – ofalab@iol.unh.edu

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Idan Kligvasser
Mellanox Technologies LTD
Hermon Building 4th Floor
P.O. Box 586, Yokenam 20692
Israel

Date:	03 Jul 2012
Report Revision:	1.0
OFED Version on Compute Nodes:	1.5.4.1
Operating System on Compute Nodes:	SL 6.2

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

Mellanox MHQH29C-XTR   *Mellanox MHQH19B-XTR*

The test suite referenced in this report is available at the IOL website. Release 1.42 (2012-Apr-03) was used.

http://www.iol.unh.edu/services/testing/ofa/testsuites/OFA-IWG_Interoperability_Test_Plan-v1.42.pdf

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).

Additional beta testing than reflected in this report was performed using the DUT. A separate report will outline those results.

Test Procedures	IWG Test Status	Result/Notes
10.1: Link Initialization	**Mandatory**	**PASS**
10.2: Fabric Initialization	**Mandatory**	**PASS**
10.3: IPoIB Connected Mode	**Mandatory**	**PASS**
10.4: IPoIB Datagram Mode	**Mandatory**	**PASS**
10.5: SM Failover and Handover	**Mandatory**	**PASS**
10.6: SRP	**Mandatory**	**PASS**
12.1 TI iSER	**Mandatory**	**Not Available**
12.2: TI NFS over RDMA	**Mandatory**	**Not Tested**
12.3: TI RDS	**Mandatory**	**PASS**
12.4: TI SDP	**Mandatory**	**PASS**
12.5: TI uDAPL	**Mandatory**	**PASS**
12.6: TI RDMA Basic Interoperability	**Mandatory**	**PASS**
12.7: TI RDMA Stress	**Mandatory**	**PASS**
12.11: 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 05 June 2012

Edward L. Mossman
emossman@iol.unh.edu

Review Completed 03 July 2012

Bob Noseworthy
ren@iol.unh.edu

Result Summary

The Following table summarizes all results from the event pertinent to this IB device class.

Test Procedures	IWG Test Status	Result/Notes
10.1: Link Initialization	**Mandatory**	**PASS**
10.2: Fabric Initialization	**Mandatory**	**PASS**
10.3: IPoIB Connected Mode	**Mandatory**	**PASS**
10.4: IPoIB Datagram Mode	**Mandatory**	**PASS**
10.5: SM Failover and Handover	**Mandatory**	**PASS**
10.6: SRP	**Mandatory**	**PASS**
12.1 TI iSER	**Mandatory**	**Not Available**
12.2: TI NFS over RDMA	**Mandatory**	**Not Tested**
12.3: TI RDS	**Mandatory**	**PASS**
12.4: TI SDP	**Mandatory**	**PASS**
12.5: TI uDAPL	**Mandatory**	**PASS**
12.6: TI RDMA Basic Interoperability	**Mandatory**	**PASS**
12.7: TI RDMA Stress	**Mandatory**	**PASS**
12.11: TI MPI – Open	**Mandatory**	**PASS**

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Report Revision History

- v1.0 Initial working copy

Configuration Files

Description	Attachment
Scientific Linux 6.2 Configuration File	📎
OFED 1.5.4.1 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 explination of the situation is included.
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.
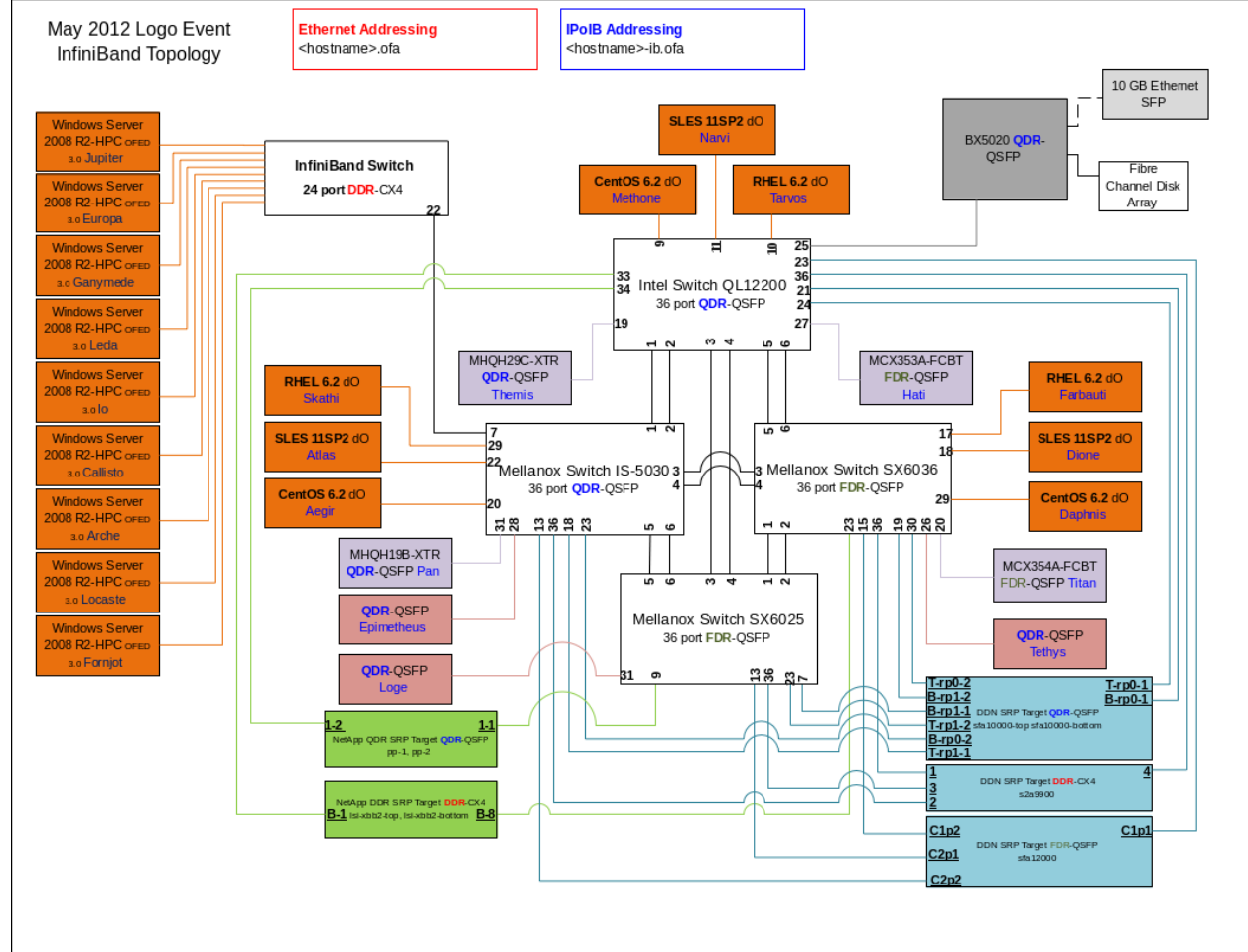
DUT #1 Details			
Manufacturer:	Mellanox	Firmware Revision:	2.10.1050
Model:	MHQH29C-XTR	Hardware Revision:	X2
Speed:	QDR	Located in Host:	Themis
Firmware MD5sum:	dc395ad38cc515d66ab0e4530d66c23d		
Additional Comments / Notes:			

DUT #2 Details			
Manufacturer:	Mellanox	Firmware Revision:	2.10.1050
Model:	MHQH19B-XTR	Hardware Revision:	X2
Speed:	QDR	Located in Host:	Pan
Firmware MD5sum:	031553f72a8bc2448afdc0a3a26ec78e		
Additional Comments / Notes:			

Mandatory Tests – IB Device Test Results:

10.1: 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
Intel 12200 (Switch) – QDR		PASS	PASS
Mellanox SX6025 (Switch) – FDR		PASS	PASS
Mellanox SX6036 (Switch) – FDR		PASS	PASS
Mellanox IS-5030 (Switch) – QDR		PASS	PASS
DataDirect Networks SFA12000 (SRP Target) – FDR		PASS	PASS
DataDirect Networks SFA10000 (SRP Target) – QDR		PASS	PASS
DataDirect Networks S2A9900 (SRP Target) – DDR		PASS	PASS
LSI Pikes Peak (SRP Target) – QDR		PASS	PASS
LSI XBB2 (SRP Target) – DDR		PASS	PASS
Mellanox BX5020 (Gateway) - QDR		PASS	PASS
Host: Themis	HCA: MHQH29C-XTR (QDR)	NA	PASS
Host: Pan	HCA: MHQH19B-XTR (QDR)	PASS	NA
Host: Hati	HCA: MCX353A-FCBT (FDR)	PASS	PASS
Host: Titan	HCA: MCX354A-FCBT (FDR)	PASS	PASS

10.2: Fabric Initialization

Subnet Manager				
OpenSM	IS-5030 SM	SX-6036 SM	12200 SM	WinOF SM
PASS	PASS	PASS	PASS	PASS
Result Discussion:				
All subnet managers used while testing with OFED 1.5.4.1 were able to correctly configure the selected topology.				

10.3: IPoIB Connected Mode

Part	Subnet Manager				
	OpenSM	**IS-5030 SM**	**SX-6036 SM**	**12200 SM**	**WinOF SM**
A	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
B	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
C	**PASS**	**PASS**	**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.					

10.4: IPoIB Datagram Mode

Part	Subnet Manager				
	OpenSM	**IS-5030 SM**	**SX-6036 SM**	**12200 SM**	**WinOF SM**
A	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
B	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
C	**PASS**	**PASS**	**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.					

10.5: SM Failover and Handover

SM Pairings		Result
OpenSM OFED 1.5.4.1	OpenSM OFED 1.5.4.1	**PASS**
Result Discussion:		
OpenSM was able to properly handle SM priority and state rules.		

10.6: SRP

Subnet Manager				
OpenSM	**IS-5030 SM**	**SX-6036 SM**	**12200 SM**	**WinOF SM**
PASS	**PASS**	**PASS**	**PASS**	**PASS**
Result Discussion:				
SRP communications between all HCAs and all SRP targets succeeded while the above mentioned SMs were in control of the fabric.				

12.1 TI iSER

Subnet Manager				
OpenSM	**IS-5030 SM**	**SX-6036 SM**	**12200 SM**	**WinOF SM**
Not Tested	**Not Tested**	**Not Tested**	**Not Tested**	**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.				

12.2: TI NFS over RDMA

Subnet Manager				
OpenSM	**IS-5030 SM**	**SX-6036 SM**	**12200 SM**	**WinOF SM**
Not Tested	Not Tested	Not Tested	Not Tested	Not Tested
Result Discussion:				
NFS over RDMA is not supported in the version of the Linux kernel used during this event (2.6.32); therefore this test could not be performed.				

12.3: TI RDS

	Subnet Manager				
Part	**OpenSM**	**IS-5030 SM**	**SX-6036 SM**	**QL12200 SM**	**WinOF SM**
A	PASS	PASS	PASS	PASS	PASS
B	PASS	PASS	PASS	PASS	PASS
Result Discussion:					
The reliable datagram socket protocol was tested between all HCAs; all communications completed successfully.					

12.4: TI SDP

	Subnet Manager				
Part	**OpenSM**	**IS-5030 SM**	**SX-6036 SM**	**12200 SM**	**WinOF SM**
A	PASS	PASS	PASS	PASS	PASS
B	PASS	PASS	PASS	PASS	PASS
C	PASS	PASS	PASS	PASS	PASS
Result Discussion:					
All communications using the SDP protocol completed successfully; each HCA acted as both a client and a server for all tests.					

12.5: TI uDAPL

Subnet Manager				
OpenSM	**IS-5030 SM**	**SX-6036 SM**	**12200 SM**	**WinOF SM**
PASS	PASS	PASS	PASS	PASS
Result Discussion:				
All communications using DAPL were seen to complete successfully as described in the referenced testplan; each HCA acted as both a client and a server for all tests.				

12.6: TI RDMA Basic Interoperability

Subnet Manager				
OpenSM	**IS-5030 SM**	**SX-6036 SM**	**12200 SM**	**WinOF SM**
PASS	PASS	PASS	PASS	PASS
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.				

12.7: TI RDMA Stress

Subnet Manager				
OpenSM	**IS-5030 SM**	**SX-6036 SM**	**12200 SM**	**WinOF SM**
PASS	**PASS**	**PASS**	**PASS**	**PASS**
Result Discussion:				
All IB switches were seen to properly handle a large load as indicated by the successfully completion of control communications between two HCAs while all other HCAs acted as noise on the fabric. Each HCA acted as both a client and a server for the control connection.				

12.11: TI MPI – Open

	Subnet Manager				
Part	**OpenSM**	**IS-5030 SM**	**SX-6036 SM**	**12200 SM**	**WinOF SM**
A	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
B	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Result Discussion:					
Complete heterogeneity; one process per system as described in the cluster topology.					