OpenFabrics Alliance
Interoperability Logo Group (OFILG)
May 2011 Logo Event Report

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

Mellanox MHGA28-XTC	*Mellanox MHZH29-XTR*
Mellanox MHES14-XTC	*Mellanox MHQA19-XTR*
Mellanox MHRH29B-XTR	*Mellanox MHQH19B-XTR*
Mellanox MHQH29B-XTR	

The test suite referenced in this report is available at the IOL website. Release 1.36 (2011-Mar-01) was used.

http://www.iol.unh.edu/services/testing/ofa/testsuites/OFA-IWG_Interoperability_Test_Plan-v1.36.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)

Test Procedures	IWG Test Status	Result/Notes
10.1: Link Initialization	**Mandatory**	**PASS**
10.2: IB 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**
12.3: TI RDS	**Mandatory**	**PASS**
12.4: TI SDP	**Mandatory**	**PASS**
12.5: TI uDAPL	**Mandatory**	**PASS**
12.6: TI RDMA Basic Interop	**Mandatory**	**PASS**
12.8: TI RDMA Stress	**Mandatory**	**PASS**
12.11: TI MPI – Open	**Mandatory**	**PASS**
12.12: TI MPI – OSU	**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 13 June 2011

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Review Completed 05 July 2011

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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: IB 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
10.7: Ethernet Gateway	Beta	Not Tested
10.8: FibreChannel Gateway	Beta	Not Tested
12.1: TI iSER	Mandatory	Not Available
12.2: TI NFS over RDMA	Beta	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
12.8: TI RDMA Stress	Mandatory	PASS
12.10: TI MPI – Intel	Beta	Not Tested
12.11: TI MPI – Open	Mandatory	PASS
12.12: TI MPI – OSU	Mandatory	PASS

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Report Revision History

- v1.0 Initial working copy

Result Key

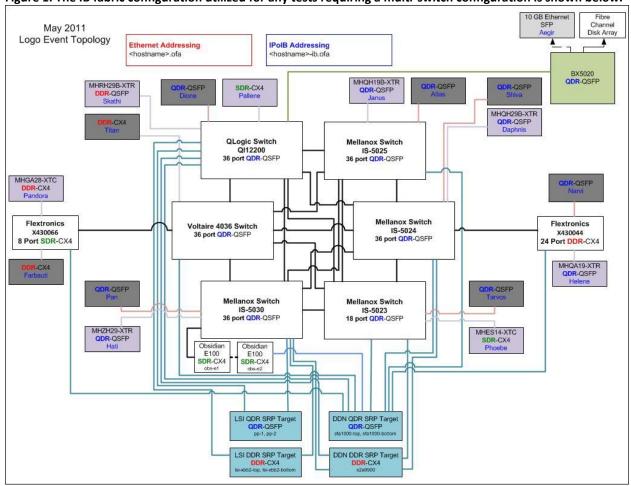The following table contains possible results and their meanings:

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:	5.3.940
Model:	MHGA28-XTC	Hardware Revision:	20
Speed:	DDR	Located in Host:	Pandora
Firmware MD5sum:	ccae1bef597d32ceebf19892b9eded4e		
Additional Comments / Notes:			

DUT #2 Details			
Manufacturer:	Mellanox	Firmware Revision:	1.2.940
Model:	MHES14-XTC	Hardware Revision:	a0
Speed:	SDR	Located in Host:	Phoebe
Firmware MD5sum:	61ce4bc7e15892c7f1a22d95089342b9		
Additional Comments / Notes:			

DUT #3 Details

Manufacturer:	Mellanox	Firmware Revision:	2.8.600
Model:	MHRH29B-XTR	Hardware Revision:	b0
Speed:	DDR	Located in Host:	Skathi
Firmware MD5sum:	5d5d423be5f280731fb7c398c3dd65f1		
Additional Comments / Notes:			

DUT #4 Details

Manufacturer:	Mellanox	Firmware Revision:	2.8.600
Model:	MHQH29B-XTR	Hardware Revision:	b0
Speed:	QDR	Located in Host:	Daphnis
Firmware MD5sum:	7a4ce38e325afce1dc035674bf68305a		
Additional Comments / Notes:			

DUT #5 Details

Manufacturer:	Mellanox	Firmware Revision:	2.8.600
Model:	MHZH29-XTR	Hardware Revision:	b0
Speed:	QDR	Located in Host:	Hati
Firmware MD5sum:	2178f11c23b4892164e67a417d501c5e		
Additional Comments / Notes:			

DUT #6 Details

Manufacturer:	Mellanox	Firmware Revision:	2.8.600
Model:	MHQA19-XTR	Hardware Revision:	b0
Speed:	QDR	Located in Host:	Helene
Firmware MD5sum:	7bd87386f636f073458671c7376ddf74		
Additional Comments / Notes:			

DUT #7 Details

Manufacturer:	Mellanox	Firmware Revision:	2.8.600
Model:	MHQH19B-XTR	Hardware Revision:	b0
Speed:	QDR	Located in Host:	Janus
Firmware MD5sum:	658a64ad43f57e06e4c3bf48ab9585ae		
Additional Comments / Notes:			

Mandatory Tests – IB Device Test Results:

10.1: Link Initialization

Results	
Part a:	**PASS**
Discussion:	
No issues seen	

Link Partner		MHRH29B-XTR	MHES4-XTC	MHGA28-XTC	MHQH29B-XTR	MHZH29-XTR	MHQA19-XTR	MHQH9B-CTR
QLogic 12200 (Switch) – QDR		P	P	P	P	P	P	P
Flextronics X430066 (Switch) – SDR		P	P	P	P	P	P	P
Flextronics X430044 (Switch) – DDR		P	P	P	P	P	P	P
Mellanox IS-5030 (Switch) – QDR		P	P	P	P	P	P	P
Mellanox IS-5025 (Switch) – QDR		P	P	P	P	P	P	P
Mellanox IS-5024 (Switch) – QDR		P	P	P	P	P	P	P
Mellanox IS-5023 (Switch) – QDR		P	P	P	P	P	P	P
Obsidian Longbow E100 (Range Extender) – SDR		P	P	P	P	P	P	P
Mellanox BX5020 (Gateway) - QDR		P	P	P	P	P	P	P
LSI XBB2 (SRP Target) – DDR		P	P	P	P	P	P	P
LSI Pikes Peak (SRP Target) – QDR		P	P	P	P	P	P	P
DataDirect Networks S2A9900 (SRP Target) – DDR		P	P	P	P	P	P	P
DataDirect Networks SFA10000 (SRP Target) – QDR		P	P	P	P	P	P	P
Host: Skathi G2 PCI e	HCA: MHRH29B-XTR – DDR	NA	P	P	P	P	P	P
Host: Phoebe	HCA: MHES14-XTC – SDR	P	NA	P	P	P	P	P
Host: Pandora	HCA: MHGA28-XTC – DDR	P	P	NA	P	P	P	P
Host: Daphnis G2 PCI e	HCA: MHQH29B-XTR – QDR	P	P	P	NA	P	P	P
Host: Hati G2 PCI e	HCA: MHZH29-XTR – QDR	P	P	P	P	NA	P	P
Host: Helene G2 PCI e	HCA: MHQA19-XTR – QDR	P	P	P	P	P	NA	P
Host: Janus	HCA: MHQH19B-XTR - QDR	P	P	P	P	P	P	NA

10.2: Fabric Initialization

Results	OpenSM	QLogic 12200 SM	Mellanox IS-5030 SM
Part a:	**PASS**	**PASS**	**PASS**
Discussion:			
No issues seen			

10.3: IPoIB Connected Mode

Results	OpenSM	QLogic 12200 SM	Mellanox IS-5030 SM
Part a: Pingtest	**PASS**	**PASS**	**PASS**
Part b: Fabric Convergence	**PASS**	**PASS**	**PASS**
Part c: SFTP	**PASS**	**PASS**	**PASS**
Discussion:			
No issues seen			

10.4: IPoIB Datagram Mode

Results	OpenSM	QLogic 12200 SM	Mellanox IS-5030 SM
Part a: Pingtest	**PASS**	**PASS**	**PASS**
Part b: Fabric Convergence	**PASS**	**PASS**	**PASS**
Part c: SFTP	**PASS**	**PASS**	**PASS**
Discussion:			
No issues seen			

10.5: SM Failover and Handover

Results	OpenSM	QLogic 12200 SM	Mellanox IS-5030 SM
Part a:	**PASS**	**NA**	**NA**
Discussion:			
No issues seen			

10.6: SRP

Results	OpenSM	QLogic 12200 SM	Mellanox IS-5030 SM
Part a:	**PASS**	**PASS**	**PASS**
Discussion:			
No issues seen			

12.1 TI iSER

Results	OpenSM	QLogic 12200 SM	Mellanox IS-5030 SM
Part a:	**Not Tested**	**Not Tested**	**Not Tested**
Discussion:			
No iSER target available in the tested cluster.			

12.3: TI RDS

Results	OpenSM	QLogic 12200 SM	Mellanox IS-5030 SM
Part a: Ping	**PASS**	**PASS**	**PASS**
Part b: Stress	**PASS**	**PASS**	**PASS**
Discussion:			
No issues seen			

12.4: TI SDP

Results	OpenSM	QLogic 12200 SM	Mellanox IS-5030 SM
Part a: Netperf	**PASS**	**PASS**	**PASS**
Part b: SFTP	**PASS**	**PASS**	**PASS**
Part c: SCP	**PASS**	**PASS**	**PASS**
Discussion:			
No issues seen			

12.5: TI uDAPL

Results	OpenSM	QLogic 12200 SM	Mellanox IS-5030 SM
Part a:	**PASS**	**PASS**	**PASS**
Discussion:			
No issues seen			

12.6: TI RDMA Basic Interoperability

Results	OpenSM	QLogic 12200 SM	Mellanox IS-5030 SM
Part a:	**PASS**	**PASS**	**PASS**
Discussion:			
Due to limitations of the testing tools an additional parameter had to be added to the command set. Specifically "-m 2048" to mitigate the problems faced when an Infiniband fabric does not utilize a single MTU size on all links. Additionally, large test iterations had to be increased to 300 as the tools would not run with anything smaller and small test iterations decreased to 25000 due to an exponential increase in execution time that was unacceptable.			

12.8: TI RDMA Stress

Results	OpenSM	QLogic 12200 SM	Mellanox IS-5030 SM
Part a:	**PASS**	**PASS**	**PASS**
Discussion:			
Due to limitations of the testing tools an additional parameter had to be added to the command set. Specifically "-m 2048" to mitigate the problems faced when an Infiniband fabric does not utilize a single MTU size on all links.			

12.11: TI MPI – Open

Results	OpenSM	QLogic 12200 SM	Mellanox IS-5030 SM
Part a: PingPing & PingPong	**PASS**	**PASS**	**PASS**
Part b: All	**PASS**	**PASS**	**PASS**
Discussion:			
Performed using the following clusters: Homogeneous Mellanox1 (20 processes, 4/system) – farbauti, daphnis, skathi, hati, DDR HCA Homogeneous Mellanox2 (20 processes, 4/system) – phoebe, helene, pallene, pandora, janus Heterogeneous All (64 processes, 4/system)			

12.12: TI MPI – OSU

Results	OpenSM	QLogic 12200 SM	Mellanox IS-5030 SM
Part a: PingPing & PingPong	**PASS**	**PASS**	**PASS**
Part b: All	**PASS**	**PASS**	**PASS**
Discussion:			
Mvapich 1 only. Performed using the following clusters: Homogeneous Mellanox1 (20 processes, 4/system) – farbauti, daphnis, skathi, hati, DDR HCA Homogeneous Mellanox2 (20 processes, 4/system) – phoebe, helene, pallene, pandora, janus Heterogeneous All (64 processes, 4/system)			

Beta Tests – IB Device Test Results:

10.7: IB Ethernet Gateway

Results	OpenSM	QLogic 12200 SM	Mellanox IS-5030 SM
Part a:	Not Tested	Not Tested	Not Tested
Discussion:			
No Ethernet gateway available in the tested cluster.			

10.8 IB FibreChannel Gateway

Results	OpenSM	QLogic 12200 SM	Mellanox IS-5030 SM
Part a:	Not Tested	Not Tested	Not Tested
Discussion:			
No FibreChannel gateway available in the tested cluster.			

12.2: TI NFS over RDMA

Results	OpenSM	QLogic 12200 SM	Mellanox IS-5030 SM
Part a:	Not Tested	Not Tested	Not Tested
Discussion:			
Due to time constraints this test was not performed.			

12.10: MPI – Intel

Results	OpenSM	QLogic 12200 SM	Mellanox IS-5030 SM
Part a: PingPing & PingPong	Not Tested	Not Tested	Not Tested
Part b: All	Not Tested	Not Tested	Not Tested
Discussion:			
Not performed.			