OpenFabrics Alliance
Interoperability Logo Group (OFILG)
May 2014 Logo Event Report

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Report Revision:	1.0
OFED Version on Compute Nodes:	3.12
Operating System on Compute Nodes:	Scientific Linux 6.5

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

Mellanox SX6036	*Mellanox SX6025*
Mellanox IS-5030	*Mellanox SX6036G*

The test suite referenced in this report is available at the IOL website. Release 1.50 (2014-May-6) was used.

http://iol.unh.edu/ofatestplan

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

Test Procedures	IWG Test Status	Result/Notes
11.1: Link Initialization	**Mandatory**	**PASS**
11.2: 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**
13.2: TI NFS over RDMA	**Mandatory**	**PASS**
13.4: TI uDAPL	**Mandatory**	**PASS**
13.5: TI RDMA Basic Interoperability	**Mandatory**	**PASS**
13.6: TI RDMA Stress	**Mandatory**	**PASS**
13.8: 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 11 June 2014

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Review Completed 15 July 2014

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Result Summary

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

Test Procedures	IWG Test Status	Result/Notes
11.1: Link Initialization	Mandatory	PASS
11.2: 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: IB Ethernet Gateway	Beta	Not Tested
11.8: IB FibreChannel Gateway	Beta	Not Tested
13.2: TI NFS over RDMA	Mandatory	PASS
13.4: TI uDAPL	Mandatory	PASS
13.5: TI RDMA Basic Interoperability	Mandatory	PASS
13.6: TI RDMA Stress	Mandatory	PASS
13.7: TI RSockets	Beta	PASS
13.8: TI MPI – Open	Mandatory	PASS

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Report Revision History

- v1.0 Initial working copy

Configuration Files

Description	Attachment
Scientific Linux 6.5 Configuration File	📎
OFED 3.12 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.

May 2014 InfiniBand Topology

Ethernet Addressing
<hostname>.ofa

IPoIB Addressing
<hostname>-ib.ofa
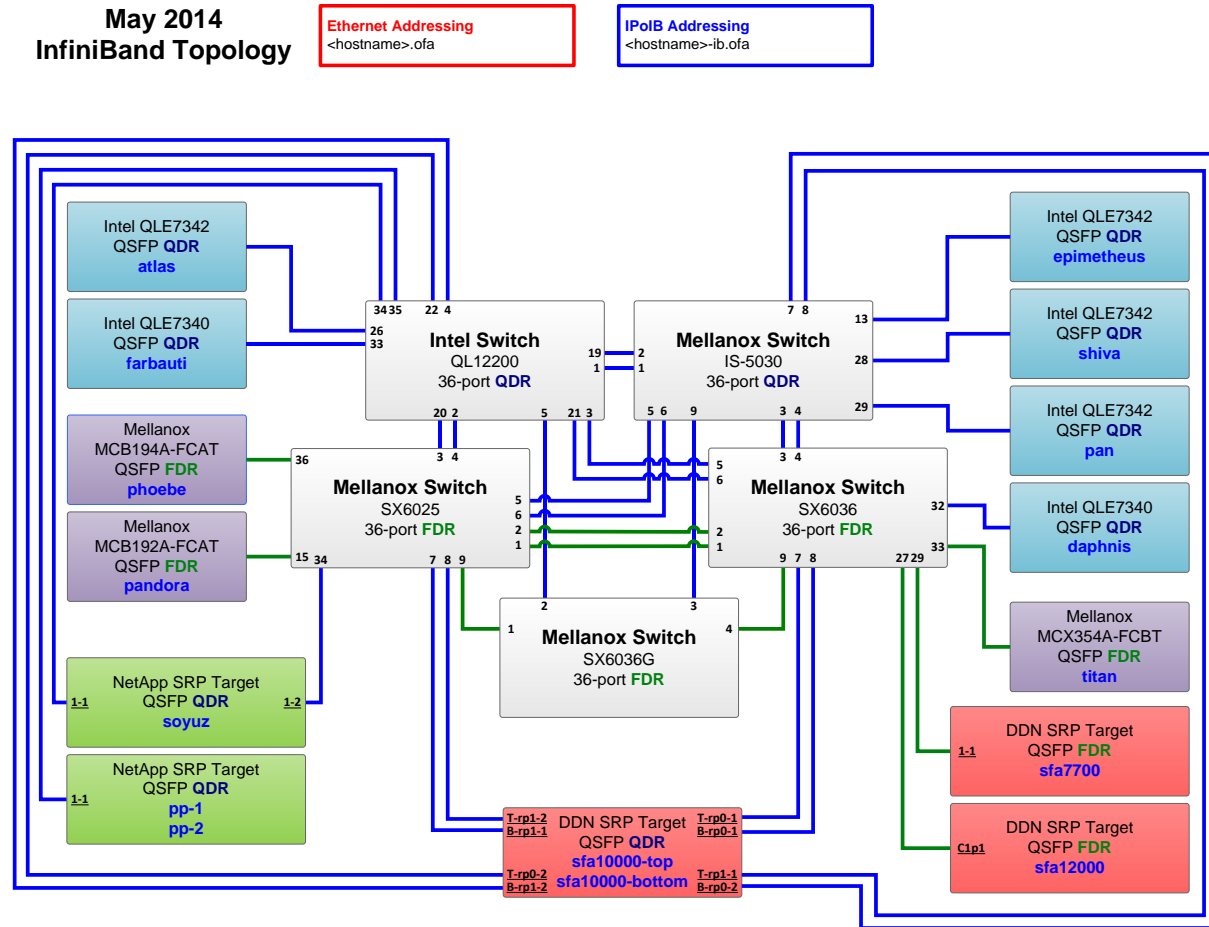
DUT #1 Details			
Manufacturer:	Mellanox	Firmware Revision:	9.1.9470
Model:	SX6036	Hardware Revision:	X2
Speed:	FDR	Located in Host:	NA
Firmware MD5sum:	51c91210054736d57d0128f44a6cd428		
Additional Comments / Notes:			

DUT #2 Details			
Manufacturer:	Mellanox	Firmware Revision:	9.2.4000
Model:	SX6025	Hardware Revision:	X2
Speed:	FDR	Located in Host:	NA
Firmware MD5sum:	ff440f1fe63b7a95f5b619316dcf41ad		
Additional Comments / Notes:			

DUT #3 Details			
Manufacturer:	Mellanox	Firmware Revision:	7.4.2200
Model:	IS-5030	Hardware Revision:	X2
Speed:	QDR	Located in Host:	NA
Firmware MD5sum:	da54969c3d6c074c3e166eabbb9fd4ee		
Additional Comments / Notes:			

DUT #4 Details			
Manufacturer:	Mellanox	Firmware Revision:	9.2.6530
Model:	SX6036g	Hardware Revision:	
Speed:	FDR	Located in Host:	NA
Firmware MD5sum:	N/A		
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		SX6025	SX6036	IS-5030	SX6036g
QLogic 12200 (Switch) – QDR		PASS	PASS	PASS	PASS
Mellanox SX6025 (Switch) – FDR		NA	PASS	PASS	PASS
Mellanox SX6036 (Switch) – FDR		PASS	NA	PASS	PASS
Mellanox IS-5030 (Switch) – QDR		PASS	PASS	NA	PASS
Mellanox SX6036g (Switch) – FDR		PASS	PASS	PASS	NA
DataDirect Networks SFA10000 (SRP Target) – QDR		PASS	PASS	PASS	PASS
DataDirect Networks SFA12000 (SRP Target) – FDR		PASS	PASS	PASS	PASS
DataDirect Networks SFA7700 (SRP Target) – FDR		PASS	PASS	PASS	PASS
NetApp Soyuz (SRP Target) – QDR		PASS	PASS	PASS	PASS
NetApp Pikes Peak (SRP Target) – QDR		PASS	PASS	PASS	PASS
Host: titan	HCA: MCX354A-FCBT (FDR)	PASS	PASS	PASS	PASS
Host: phoebe	HCA: MCB194A-FCAT (FDR)	PASS	PASS	PASS	PASS
Host: pandora	HCA: MCB192A-FCAT (FDR)	PASS	PASS	PASS	PASS
Host: atlas	HCA: QLE7342 (QDR)	PASS	PASS	PASS	PASS
Host: daphnis	HCA: QLE7340 (QDR)	PASS	PASS	PASS	PASS

11.2: Fabric Initialization

Subnet Manager	Result
OpenSM	PASS
Result Discussion:	
All subnet managers used while testing with OFED 3.12 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.	

13.2: TI NFS over RDMA

Subnet Manager	Result
OpenSM	PASS
Result Discussion:	
With the exception of the XXXX and YYYY HCAs, all other devices were able to complete the Connectathon test suite; each HCA acted as both a client and a server. XXXX and YYYY were unable to successfully complete the Connectathon test suite while running as the 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
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.	

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.	

13.8: 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 Fibre Channel Gateway test procedure present in the event topology.

13.7: TI RSockets

Subnet Manager	Result
OpenSM	PASS
Result Discussion:	

All HCAs were able to successfully perform all Asynchronous, Blocking, and Non-blocking procedures.