OpenFabrics Alliance

Interoperability Logo Group (OFILG)

May 2014 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

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

Date:	July 17, 2014
Report Revision:	1.0
OFED Version:	3.12
OS Version:	Scientific Linux 6.5

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

Mellanox MCX312A-XCBT

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

https://www.iol.unh.edu/ofatestplan

The following table highlights the Mandatory test results required for the OpenFabrics Interoperability Logo for the RoCE Network Adapter device class per the Test Plan referenced above and the current OpenFabrics Interoperability Logo Program (OFILP).

Test Procedures	IWG Test Status	Result/Notes
12.2: RoCE Link Initialization	Mandatory	PASS
13.4: TI uDAPL	Mandatory	PASS
13.5: TI RDMA Basic Interop	Mandatory	PASS
13.7: TI RSockets	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 June 11, 2014

David Wyman
dwyman@iol.unh.edu

UNH-IOL

Digitally signed by UNH-IOL
DN: cn=UNH-IOL, o=InterOperability Laboratory, ou=University of New Hampshire, email=info@iol.unh.edu, c=US
Date: 2014.07.30 11:39:30 -04'00'

Review Completed July 17, 2014

Edward L. Mossman
emossman@iol.unh.edu

Result Summary

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

Test Procedures	IWG Test Status	Result/Notes
12.2: RoCE Link Initialization	Mandatory	PASS
12.4: RoCE IPoCE	Beta	Not Available
13.2: TI NFS over RDMA	Beta	PASS with Comments
13.4: TI uDAPL	Mandatory	PASS
13.5: TI RDMA Basic Interop	Mandatory	PASS
13.6: TI RDMA Stress	Beta	Not Tested
13.7: TI RSockets	Mandatory	PASS
13.8: TI MPI – Open MPI	Mandatory	PASS

Digital Signature Information

This document was created using an Adobe digital signature. A digital signature helps to ensure the authenticity of the document, but only in this digital format. For information on how to verify this document's integrity proceed to the following site:

http://www.iol.unh.edu/certifyDoc/

If the document status still indicates "Validity of author NOT confirmed", then please contact the UNH-IOL to confirm the document's authenticity. To further validate the certificate integrity, Adobe 6.0 or later should report the following fingerprint information:

MD5 Fingerprint: 41 1E 00 9F 79 4D 02 EF E6 95 65 57 A4 71 4F 9F
SHA-1 Fingerprint: 44 51 9E 22 66 59 1A D3 A1 F9 0B EE BD 01 90 80 BE 61 A4 A8

Report Revision History

- v1.0 Initial Release

Configuration Files

Description	Attachment
Scientific Linux 6.5 Configuration File	
OFED 3.12 Configuration File	

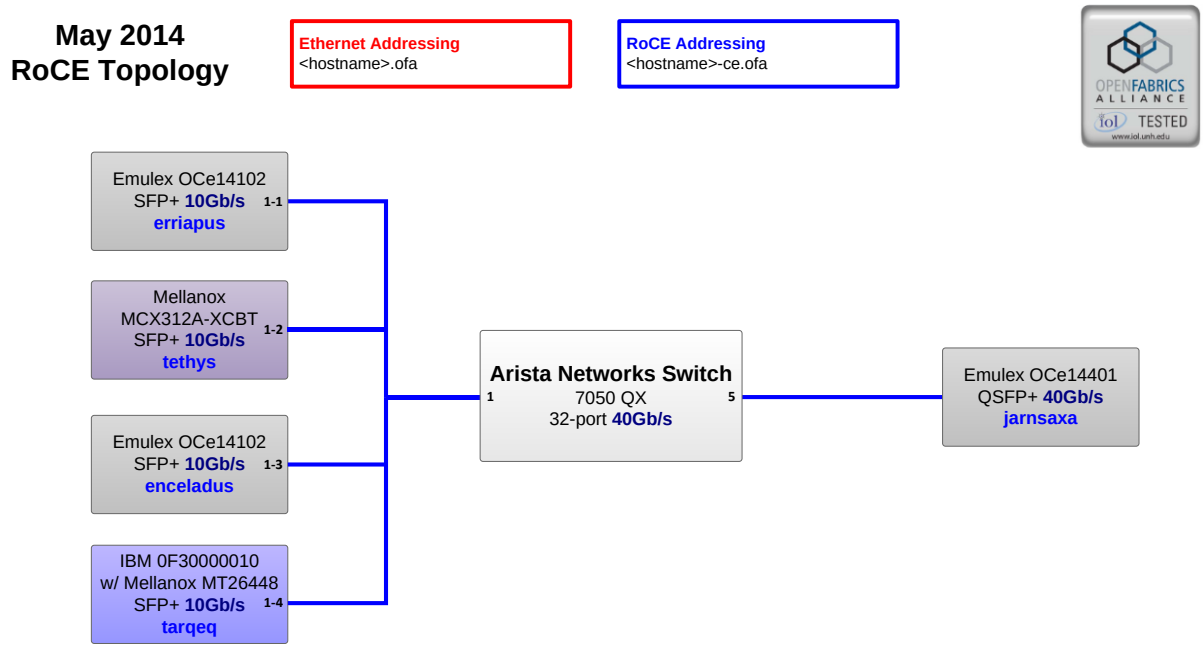
Result Key

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 RoCE fabric configuration utilized for all testing is shown below.



DUT Details			
Manufacturer:	Mellanox	Firmware Revision:	2.31.5050
Model:	MCX312A-XCBT	Hardware Revision:	00
Speed:	10Gb/s	Located in Host:	tethys
Firmware MD5sum:	75452e3090626af3841d45aea8924fe8		
Additional Comments / Notes:			

Mandatory Tests – RoCE Device Test Results:

12.2: RoCE Link Initialization

Test Result	PASS
Result Discussion:	
All RoCE Channel Adapters were observed to link at the expected speed.	

Link Partner	MCX312A-XCBT
RCA: Emulex OCe14102 in host enceladus	PASS
RCA: Emulex OCe14102 in host erriapus	PASS
RCA: Emulex OCe14401 in host jarnsaxa	PASS
RCA: IBM MT26448 in host tarqeq	PASS
RCA: Mellanox MCX312A-XCBT in host tethys	PASS
RCA: Mellanox MCX312A-XCBT in host methone	PASS

13.4: TI uDAPL

Test Result	PASS
Discussion:	
All of the Group 1: Point-to-Point and Group 2: Switched Topology tests were performed using OFED 3.12. Group 3: Switched Topology with Multiple Switches tests were not performed using OFED 3.12 due to time and equipment constraints.	

13.5: TI RDMA Basic Interoperability

Test Result	PASS
Discussion:	
RDMA read and write operations were observed to perform successfully between all RCAs in the cluster.	

13.6: TI RDMA Stress

Test Result	Not Tested
Discussion:	
This test requires a multi switch topology; it was therefore not performed due to equipment constraints.	

13.7: TI RSockets

Test Result	PASS
Discussion:	
All RCAs were able to successfully perform all Asynchronous, Blocking, and Non-blocking procedures.	

13.8: TI MPI – Open MPI

Test Result	PASS
Discussion:	
Intel MPI Benchmarks were performed between all Emulex and Mellanox RCAs. The RCA in the PPC64 system was excluded due to Open MPI's limitations in regards to heterogeneous rings.	

Beta Tests – RoCE Device Test Results:

12.4: RoCE IPoCE

Test Section	Part A	Part B	Part C
Test Result	**PASS**	**Not Available**	**PASS**
Result Discussion:			
Part A: All devices were observed to successfully ping each Link Partner in the topology. Step B: Not available, as this test requires a second Ethernet switch which was not available in the topology. Step C: Every node was observed to correctly SFTP the test file to every other node in the topology.			

13.2: TI NFS over RDMA

Test Result	PASS with Comments
Result Discussion:	
Due to an issue discovered in OFED 3.5-2 and persisting in OFED 3.12 that occurs between big and little endian architectures, this test was unable to be completed between all RCAs in the topology. See bug 2449 for additional information.	