



OpenFabrics Alliance

Interoperability Working Group (OFA-IWG)

March 2008 Interoperability Event Report

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

Oded Bergman
 Voltaire
 Hamanofim 9
 Hertzeliya
 Israel

April 2, 2008
 Report Rev1.01

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

Voltaire IPSTOR iSER target

The test suite referenced in this report is available at the OFA website, at test time release 1.17 (March 3, 2008) was used:

<http://www.iol.unh.edu/services/testing/ofa/testplan.pdf>

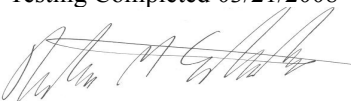
The following table highlights the Mandatory test results required for the OpenFabrics Interoperability Logo for the DUT per the testplan referenced above and the current OpenFabrics Interoperability Logo Program (OFILP).

Mandatory Test Procedures	IWG Test Status	Result/Notes
10.1: IB Link Initialization	Mandatory	Passed – no issues seen
10.2: IB Fabric Initialization	Mandatory	Passed – no issues seen
10.3: IB IPoIB Connected Mode	Mandatory	Not applicable to DUT
10.9: TI iSER	Mandatory	Passed – no issues seen
10.10: SRP	Mandatory	Not applicable to DUT
10.11: SDP	Mandatory	Not applicable to DUT

For specific details regarding issues please see the corresponding test result.

Summary of all results follows on the second page of this report.

Testing Completed 03/21/2008


 Dustin M. Schoenbrun dustin@iol.unh.edu
 Allen Hubbe ahubbe@iol.unh.edu



Review Completed 04/29/2008

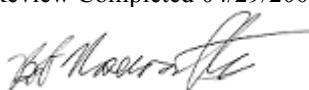

 Bob Noseworthy
ren@iol.unh.edu

Table 1: Result Summary

The following table summarizes all results from the event pertinent to an IB device.

Test Procedures	IWG Test Status	Result/Notes
10.1: IB Link Initialization	Mandatory	Passed – no issues seen
10.2: IB Fabric Initialization	Mandatory	Passed – no issues seen
10.3: IB IPoIB Connected Mode	Mandatory	Not applicable to DUT
10.4: IB IPoIB Datagram Mode	Beta	Not applicable to DUT
10.9: TI iSER	Mandatory	Passed – no issues seen
10.10: SRP	Mandatory	Not applicable to DUT
10.11: SDP	Mandatory	Not applicable to DUT
10.12: IB SM Failover and Handover	Beta	Not applicable to DUT
10.13: TI MPI - OSU	Beta	Not applicable to DUT
10.14: TI MPI - Intel	Beta	Not applicable to DUT
10.15: HP MPI - HP	Beta	Not applicable to DUT
10.16: TI uDAPL	Beta	Not applicable to DUT
10.18: IB FibreChannel Gateway	Beta	Not applicable to DUT
10.19: IB Ethernet Gateway	Beta	Not applicable to DUT
10.20: IB Reliable Datagram Sockets	Beta	Not applicable to DUT
10.21: TI Basic RDMA Interoperability	Beta	Not applicable to DUT
10.23-24: TI RDMA Operations over Interconnect Components	Beta	Not applicable to DUT

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/certificates_and_fingerprints.php

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 should report the following fingerprint information:

MD5 Fingerprint: E0CC 6585 6D0C 9BE6 0F10 2A52 D92E BDE6

SHA-1 Fingerprint: 8BBA 64F2 AFC5 54E9 A875 AF4E C623 DCE9 EC9C EB74

Report Revision History

- v1.0 Initial Release
- v1.01 Editorial/formatting improvements

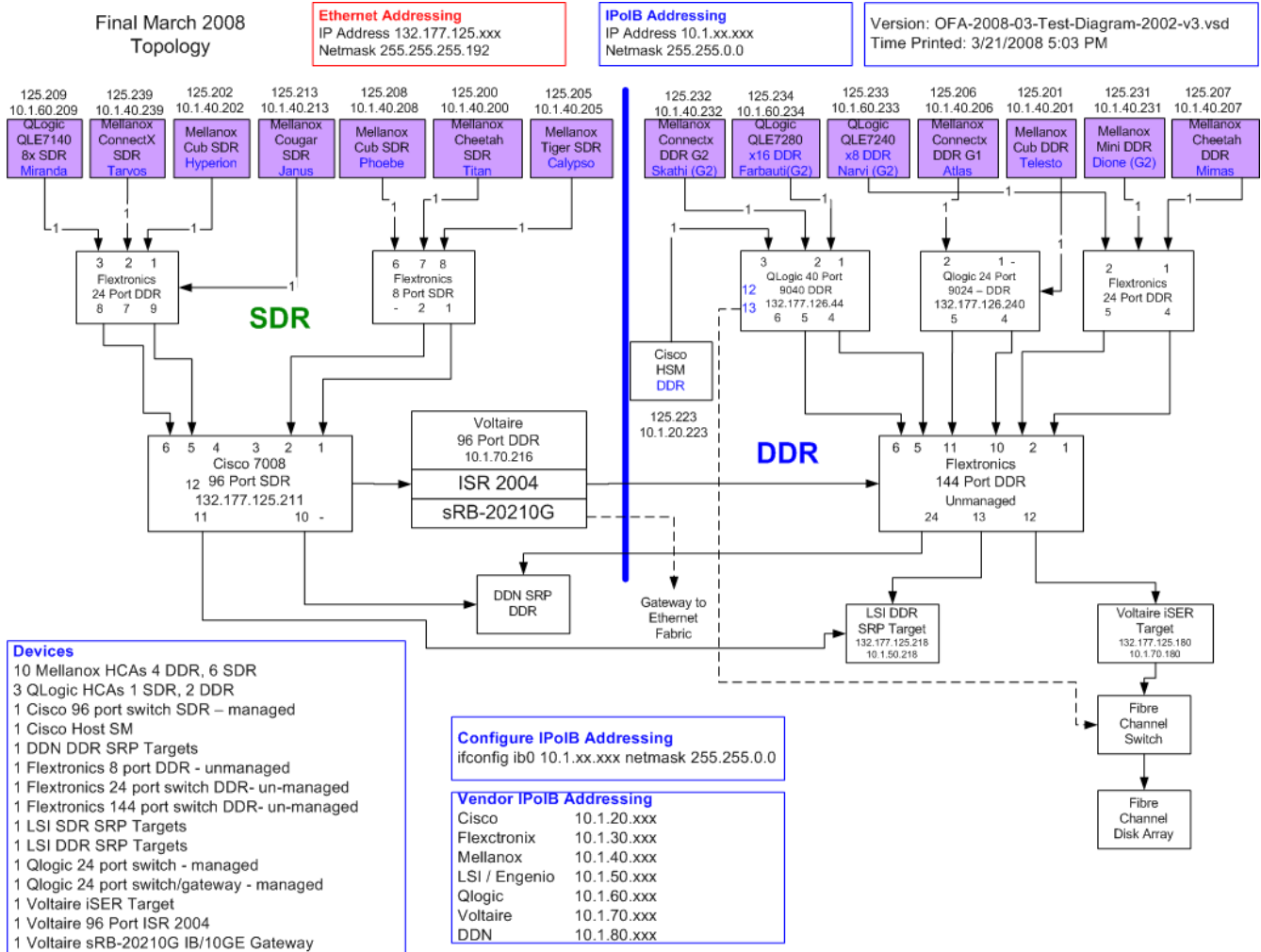
Table 2: Result Key

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, such as due to time limitations only a portion of the testing was performed.
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 specified parameters are valid at one extreme and invalid at the other.
Not Tested	Not tested due to the time constraints of the test period.

Table 3: 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	Voltaire	Firmware Rev	
Model	IPSTOR	Hardware Rev	
Speed	SDR 4x	IP Address in Fabric	10.1.70.180
Additional Comments/Notes			
Voltaire IPSTOR iSER Target			

Mandatory Tests - IB Device Test Summary Results:

The following tables detail results for tests identified by the OFA-IWG as mandatory tests for the OFA Interoperability Logo Program (OFILP) per the OFA-IWG Interoperability Test Plan Release 1.17 (March 3, 2008)

Test Number and Name	Part(s)	Summary Note(s)	Result(s)
Group 1: IB Link Initialize	Test #1: Phy link up all ports	Phy link is established	PASS
Discussion: Test #1: Phy link up all ports			
Physical link initialization was verified between this device and every switch in the fabric. Physical link initialization was not tested between this device and other non-switch devices. DDR cables were used for all link tests. Link status was observed visually via status lights on the device.			

Link Partner Device	Voltaire IPSTOR iSER Target
QLogic SilverStorm 9024 (Switch)	PASS
QLogic SilverStorm 9040 (Switch)	PASS
Voltaire ISR 2004 (Switch)	PASS
Cisco 7000D (Switch)	PASS
Flextronics F-X430066 (Switch)	PASS
Flextronics F-X430044 (Switch)	PASS
Flextronics F-X430081 (Switch)	PASS

Test Number and Name	Part(s)	Summary Note(s)	Result(s)
Group 2: IB Fabric Initialization	Test #1: Verify all SMs configure fabric	Port is Active with all SMs	PASS
Discussion: Test #1: Verify all SMs configure fabric			
The fabric configuration shown in Figure 1 was used for this test. 'ibdiagnet -c 1000' showed no Port errors counters increment. Only one SM is run at a time. All switches are power cycled between SM trials. All links are validated via use of 'ibdiagnet' and on each host 'ibstatus' to validate speed, width and link state. Refer to the table below for SM details.			

For Voltaire IPSTOR iSER Target	All ports Armed/Active	No Dup GUIDs	No Port errors
OFED OpenSM (SM Only)	PASS	PASS	PASS
QLogic SilverStorm 9024 (Managed Switch)	PASS	PASS	PASS
QLogic SilverStorm 9040 (Managed Switch)	PASS	PASS	PASS
Voltaire ISR 2004 (Managed Switch)	PASS	PASS	PASS
Cisco 7000D (Managed Switch)	PASS	PASS	PASS
Cisco High Performance (SM Only)	PASS	PASS	PASS

Test Number and Name	Part(s)	Summary Note(s)	Result(s)
Group 3: IPoIB Connected Mode	Test #1-3	Not Applicable to DUT	Not Applicable
Discussion: Test #1-3			

Test Number and Name	Part(s)	Summary Note(s)	Result(s)
Group 9: TI iSER	Test #1-4	Login and data transfer operations succeeded	PASS
Discussion: Test #1-4			
All iSER initiators were able to connect and perform data transfer operations with the iSER target. Due to time constraints, tests were run on a configured fabric and were not repeated for each subnet manager.			

For Voltaire IPStor (iSER Target / FibreChannel Gateway)	Test 1-4
Host: Miranda, with HCA: QLE7140	PASS
Host: Farbauti, G2 PCI Express, with HCA: QLE7280	PASS
Host: Narvi, G2 PCI Express, with HCA: QLE7240	PASS
Host: Tarvos, with HCA: Mellanox Connectx SDR	PASS
Host: Hyperion, with HCA: Mellanox LionCub SDR	PASS
Host: Janus, with HCA: Mellanox Cougar SDR	PASS
Host: Phoebe, with HCA: Mellanox LionCub SDR	PASS
Host: Titan, with HCA: Mellanox Cheetah SDR	PASS
Host: Calypso, with HCA: Mellanox Tiger SDR	PASS
Host: Skathi, G2 PCI Express, with HCA: Mellanox Connectx DDR	PASS
Host: Atlas, with HCA: Mellanox Connectx DDR	PASS
Host: Telesto, with HCA: Mellanox LionCub DDR	PASS
Host: Dione, G2 PCI Express, with HCA: Mellanox LionMini DDR	PASS
Host: Mimas, with HCA: Mellanox Cheetah DDR	PASS

Test Number and Name	Part(s)	Summary Note(s)	Result(s)
Group 10: IB SRP	Test #1:	Not Applicable to DUT	Not Applicable
Discussion: Test Result			

Test Number and Name	Part(s)	Summary Note(s)	Result(s)
Group 11: TI SDP	Test #1-3	Not Applicable to DUT	Not Applicable
Discussion: Test #1-4			

Beta Tests - IB Device Test Results:

The following table details results for tests identified by the OFA-IWG as beta tests for the OFA Interoperability Logo Program (OFILP) per the OFA-IWG Interoperability Test Plan Release 1.17 (March 3, 2008)

Test Number and Name	Part(s)	Summary Note(s)	Result(s)
Group 4: IPoIB Datagram Mode	Test #1-3	Not Applicable to DUT	Not Applicable
Discussion: Test #1-3			

Test Number and Name	Part(s)	Summary Note(s)	Result(s)
Group 12: IB SM Failover and Handover	Test #1-4	Not Applicable to DUT	Not Applicable
Discussion: Test Results			

Test Number and Name	Part(s)	Summary Note(s)	Result(s)
Group 13: TI MPI – Ohio State Univ.	Test #1-14	Not applicable to DUT	Not Applicable
Discussion: Test Results			

Test Number and Name	Part(s)	Summary Note(s)	Result(s)
Group 14: MPI – Intel	Test #1-21	Not applicable to DUT	Not Applicable
Discussion: Test Results			

Test Number and Name	Part(s)	Summary Note(s)	Result(s)
Group 15: MPI – Hewlett-Packard	Test #1-21	Not applicable to DUT	Not Applicable
Discussion: Test Results			

Test Number and Name	Part(s)	Summary Note(s)	Result(s)
Group 16: TI uDAPL	Test #1-10	Not Applicable to DUT	Not Applicable
Discussion: Test Results			

Test Number and Name	Part(s)	Summary Note(s)	Result(s)
Group 18: IB FibreChannel Gateway	Test #1-10	Not applicable to DUT	Not Applicable
Discussion: Test Results			

Test Number and Name	Part(s)	Summary Note(s)	Result(s)
Group 19: IB Ethernet Gateway	Test #1-10	Not applicable to DUT	Not Applicable
Discussion: Test Results			

Test Number and Name	Part(s)	Summary Note(s)	Result(s)
Group 20: IB Reliable Datagram Sockets	Test #1-10	Not Applicable to DUT	Not Applicable
Discussion: Test Results			

Test Number and Name	Part(s)	Summary Note(s)	Result(s)
Group 21: TI Basic RDMA Interoperability	Test #1-10	Not Applicable to DUT	Not Applicable
Discussion: Test Results			

Test Number and Name	Part(s)	Summary Note(s)	Result(s)
Group 23-24: TI RDMA Operations over Interconnect Components	Test #1-10	Not Applicable to DUT	Not Applicable
Discussion: Test Results			