OpenFabrics Alliance
Interoperability Working Group (OFA-IWG)
March 2008 Interoperability Event Report

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

DataDirect Networks S2A 9900 (InfiniBand SRP Target Connected Storage System)

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**	Not applicable to DUT
10.10: SRP	**Mandatory**	Passed – no issues seen
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

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Review Completed 04/29/2008

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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**	Not applicable to DUT
10.10: SRP	**Mandatory**	Passed – no issues seen
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

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Report Revision History

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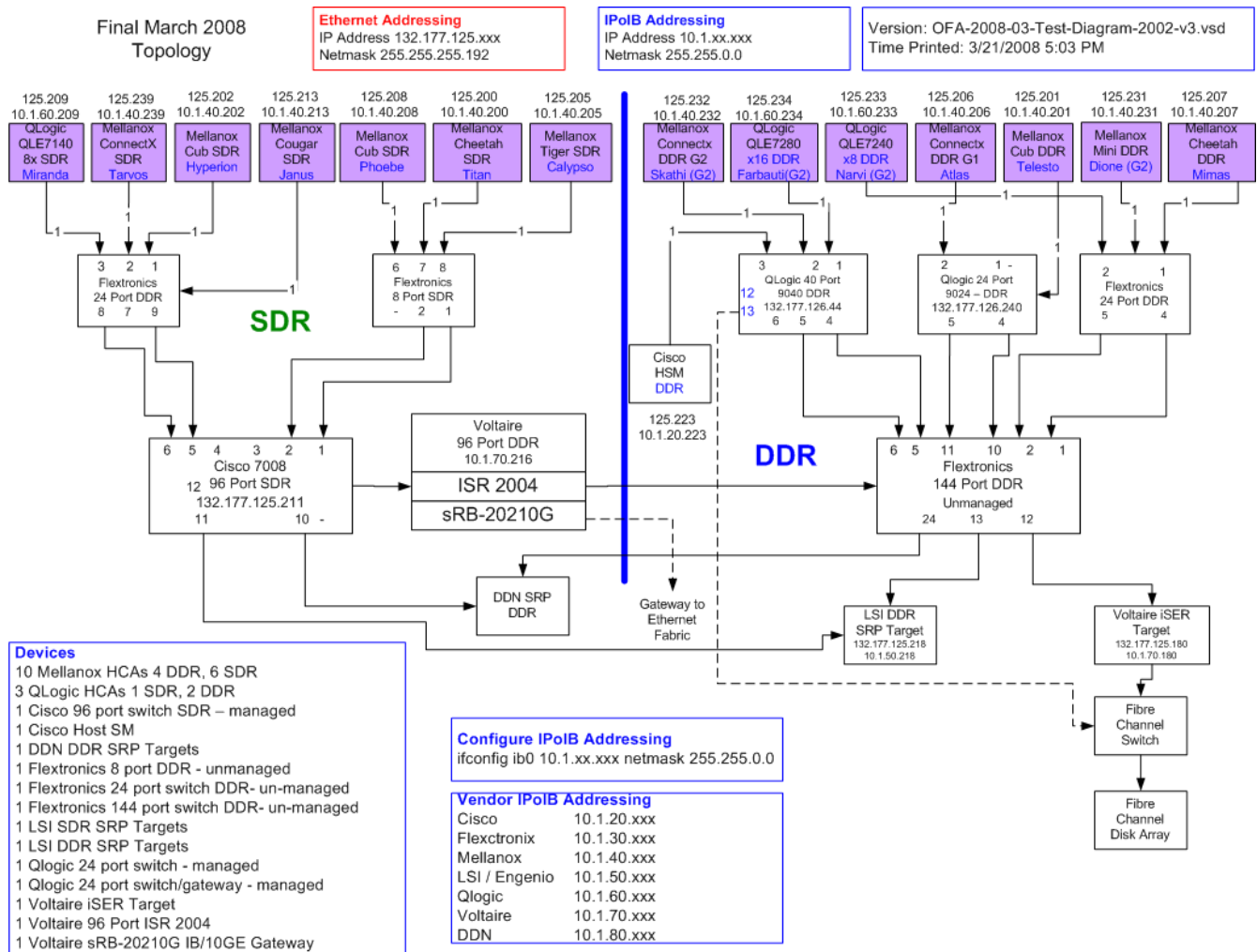- v1.01 Editorial/formatting improvements

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	DataDirect Networks	Firmware Rev	1.00
Model	S2A 9900	Hardware Rev	N/A
Speed	DDR 4x	IP Address in Fabric	N/A
Additional Comments/Notes			
DataDirect Networks S2A 9900 (Infiniband SRP Target Connected Storage System)			

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.			

For *DataDirect Networks S2A 9900*	Test 1
QLogic SilverStorm 9024 (Managed Switch)	**PASS**
QLogic SilverStorm 9040 (Managed Switch)	**PASS**
Voltaire ISR 2004 (Managed Switch)	**PASS**
Cisco 7000D (Managed 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 *DataDirect Networks S2A 9900*	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			
The OFA Logo Program does not require these tests for an SRP Target under test.			

Test Number and Name	Part(s)	Summary Note(s)	Result(s)
Group 9: TI iSER	Test #1-4	Not Applicable to DUT	**Not Applicable**
Discussion: Test #1-4			
The OFA Logo Program does not require these tests for an SRP Target under test.			

Test Number and Name	Part(s)	Summary Note(s)	Result(s)
Group 10: IB SRP	Test #1:	Automated Test Script	PASS
Discussion: Test Result			
The automated test script was revised since the version published in the test document. The automated test script runs the operations in the test plan with every available host and logs the results. The test log shows that the data transfer operation completed for each host to each available volume on the target, in both the read and write directions. Due to time constraints, tests were run on a configured fabric and were not repeated for each subnet manager.			

For *DataDirect Networks S2A 9900*	Verified Automated Test Result
Host: Miranda, with HCA: QLogic QLE7140 SDR	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: Farbauti, G2 PCI Express, with HCA: QLogic QLE7280 DDR	PASS
Host: Narvi, G2 PCI Express, with HCA: QLogic QLE7240 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 11: TI SDP	Test #1-3	Not Applicable to DUT	Not Applicable
Discussion: Test #1-4			
The OFA Logo Program does not require these tests for an SRP Target under test.			

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			
The OFA Logo Program does not require these tests for an SRP Target under test.			

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			
The OFA Logo Program does not require these tests for an SRP Target under test.			

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			
The OFA Logo Program does not require these tests for an SRP Target under test.			

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			
The OFA Logo Program does not require these tests for an SRP Target under test.			

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			
The OFA Logo Program does not require these tests for an SRP Target under test.			

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			
The OFA Logo Program does not require these tests for an SRP Target under test.			

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			
The OFA Logo Program does not require these tests for an SRP Target under test.			

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			
The OFA Logo Program does not require these tests for an SRP Target under test.			

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			
The OFA Logo Program does not require these tests for an SRP Target under test.			

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			
The OFA Logo Program does not require these tests for an SRP Target under test.			

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			
The OFA Logo Program does not require these tests for an SRP Target under test.			