

## **Meeting 2/9/2012**

### **Attendees**

- 1) Brent Rothermel
- 2) Jess Robel
- 3) Nick Wood
- 4) Rupert Dance
- 5) Slava Pekelis

### **Slava**

- 1) Slava has tried a new image on the switch and it did not improve results on the switch. Sees stable and good link on one port and the other port is only DDR. He tried to work on the receiver side but remote options are very limited. When he works locally everything is working at QDR.
- 2) In process of providing image to QLogic. It may take another day or so. He will try and respond tonight with more details and information. He will know what he can and cannot do.

### **Brent**

- 1) What he will do is sweep transmit equalization and make sure it works across all revs of the switch. He will give the intersection of them all and then he will provide his opinion as to how much they need to change Receive EQ
- 2) Managed firmware is hard to update. Slava needs to go through proper channels in order to change from managed
- 3) Mellanox has 2 managed and 2 unmanaged QLogic switches. Brent asks Slava to run show inventory command which will show the hardware version of the switch. Older hardware may explain the difference between the local and remote results.
- 4) Brent says by improving the loss budget, you need less equalization and so the Mellanox switch may need to go down.

**Next meeting** on Tuesday 2/14/2012 at 8:00 PM Israel, 1:00 PM EST, 10:00 AM PST

## Meeting 2/6/2012

### Attendees

- 1) Bob Jaworski
- 2) Brent Rothermel
- 3) Jess Robel
- 4) Nick Wood
- 5) Oren Sela
- 6) Rupert Dance
- 7) Slava Pekelis

### Agenda

- 1) FDR HCA – Nick – the minimal spot checking they did confirms that the problem
- 2) Mellanox FDR Switch to QLogic Switch
- 3) QLogic- wants to talk about offline Interoperability testing and sharing of firmware etc

### Current Status

- 1) Testing has been with FDR
- 2) Brent
  - a) He looked into switch and sees what states are being transitioned. What is being exchanged?
  - b) Standard IB state machine and trying QDR initially but in all cases it fails and reverts to DDR. QLogic switch refuses DDR at first,
  - c) He feels Mellanox switch is failing. QLogic is passing QDR config test. He is using standard transmitter settings that work with other Mellanox QDR devices
  - d) He adjusted switch equalization he can come up to QDR
  - e) He feels it is a receiver issue on the Mellanox switch
  - f) He wants to offer to work with Mellanox and exchange Debug firmware to quantify margins so we can optimize transmitter and receiver.
  - g) He can tell Mellanox whether their transmitter
- 3) Oren
  - a) Can Mellanox try the same on the QLogic transmitter?
  - b) It is easier for Mellanox to give them debug FW for unmanaged switch.
- 4) Slava
  - a) He understands what Brent has said and has a similar experience in his lab. He has 4 QLogic switches in his lab and is using the latest FW from QLogic website.
  - b) He used the latest FDR cables from Mellanox and used the spare cables provided at PF20.
  - c) He verified they have a signal integrity issues but not with cables that pass the 12 dB range.
  - d) The OFA issues are not related to logical part but signal integrity and IBTA stuff. It needs to be solved but should not be part of the Logo Granting. He feels shorter cable or another port is OK to make sure link comes.
  - e) 3 of 4 links come up at QDR at his lab. The switches at UNH-IOL are used heavily and may have bad ports. The issue should be solved in IBTA

- f) Should be able to use QDR cables
  - g) This problem did not occur during the IBTA Plugfest. He thinks the QLogic switch is worn out.
  - h) The FDR switch is new and QLogic switch has been used
- 5) Nick
- a) How many ports and cables. He had a colleague do the work and every link with FDR used a Mellanox FDR cable (3 meter). When they see a failure they go from edge port to inner ports. Many tries before the count as failure. Check top and mezzanine. They try 12-15 individual tests. If they get any single link that shows it is linking correctly, then they pass it regardless of how many failures they get.
  - b) Only Link Init checks for Link quality. Other tests just make sure the device is up and not the speed.
  - c) It is only the managed switch that is failing.
  - d) The QLogic 12200 links with every other device in the switch.
- 6) Brent
- a) He saw some of the links come up at QDR depending on ports. He feels they are right on the edge and sometimes it works and sometimes it does not.
  - b) He feels that the ports are not worn out. He would like to see the revision number of the switches
- 7) Oren
- a) IBTA relies on physical link and 100% success
  - b) Asking for those kind of results in the OFA is not appropriate.
  - c) End user does not want to see QDR device come up in SDR.
- 8) Rupert
- a) IBTA does not do all to all testing
- 9) Slava
- a) He says there are two links between the FDR switch and the QLogic switch. One comes up as QDR and the other links at DDR.
  - b) Nick says he was not aware of this. The results Slava gathered were debugged after the GA event.
  - c) Managed switch is still in development and he cannot outsource the image. He asks Brent if he will disable management card. Slava will send procedures. Slava would like to have Mellanox FAE update the image.
- 10) Nick
- a) Personally check 25% of the ports. He has no way of burning the Managed Switch.
    - i) Slava check version and time stamp.
- 11) Oren
- a) It works in Slava's lab. With cooperation and exchange of firmware we should be able to resolve it.
- 12) Rupert
- a) We have agreed
  - b) We need to get this resolved in the next two weeks.
- 13) Brent and Bob
- a) No further questions
- 14) Bob Noseworthy

- a) The insertion life is 250 plus and so he does not think wear is the issues. This is not a degraded issue. This is a systemic issue.
- b) He suggests that if IBTA takes this over, then IBTA must be mandatory

15) Brent

- a) Brent is gone next week so we will try for a meeting on Thursday 2/9/2012