**OFI WG Data Storage / Data Access Subteam Weekly telecom – 11/04/2014**

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**Agenda**

* role call,
* NetApp Requirements discussion

NetApp wishlist

1. Multi-destination RMA operation, prefer reliable unconnected transport, multi-cast RDMA. Requires distributing VAs and keys to every recipient. This also implies that the sender knows everyone who’s listening.

2. Multi-destination RMA operation

 A single IO operation targets multiple memory locations on multiple remote nodes

3. Reliable unconnected transport

 fencing / in-order delivery support for traffic between the same set of end points.

In-order, in this case, means placement in memory in order. Or a better way to say this, is a requirement for the adapter to place received data on the PCIe bus in order.

 Really looking for reliable connected, but with a lighter weight connection mechanism.

4. Single-sided RMA operation

5. Transparent multi-path with in-order delivery

 An ability to aggregate links/HCAs for increased bandwidth and resiliency

6. Delivery confirmation and memory write commit

 Ensure data commitment to destination memory on completion

7. Fast registration and invalidate stag operation

 mostly used in iSCSI operations

8. Ordering support

 in-order delivery, fencing

9. Remote notification support in RDMA operations

 Generate an event or completion at the remote end

10. Async completion notifications

11. physically/virtually discontiguous memory buffers

 Does this require virtually discontiguous memory registration?

It sounds like the requirement is to be able to register discontiguous virtual memory spaces with a single R\_key.

Bernard ready to present requirements for byte addressable memory in two weeks

Recap of volunteers from last meeting.

Start with requirements gathering - Volunteers?

- Bernard volunteers for requirements for byte addressable memory

- Venkat V – volunteers for file I/O, (LNET and also GPFS)

- Frank Y – has some write-ups on requirements and will present next week.

- Stan Smith – also has some perspective from a network standpoint, less so for filesystem, but more about what a filesystem would want from a network interface, specifically LNET/LND.

-Paul – some thoughts about storage over networks in general. Hard to commit to writing it down, but will try to do so ASAP.

**Agenda for next meeting**

**tbd**

**Next regular telecom**

Next meeting: Tuesday, 11/11/14

8am-9am Pacific daylight time