**OFI WG Weekly telecom – 09/23/2014**

**Agenda**

* Begin a discussion on APIs for Storage and Data Access

**OFIWG Download Site:** [www.openfabrics.org](http://www.openfabrics.org) 🡪OFED/OFA Resources 🡪 OpenFabrics Interfaces WG

**APIs for Storage and Data Access**

Christoph – still wants to understand how low latency message passing fits in with libfabrics in the context of the four classes of applications. Answer is that it is considered part of the distributed computing class of applications, which includes message passing.

Liran – Mellanox believes that we have adequate support for existing storage protocols (SRP, iSER, etc) today over verbs.

Frank Yang (NetApp) – NetApp’s solutions generally require access to kernel services.

Stan Smith (Intel) – From an I/O perspective, we need to be looking into the future to define the objects (e.g QPs, CQs, EQs in the InfiniBand world) that will form the basis for I/O operations both now and in the future.

Reese (Cisco) – Has done an SRP provider, so has some familiarity with the needs. Thinks that the basic functions provided by libfabrics may not be far off (memory mgmt. may need to be beefed up a little), but the basics seem to be there.

Liran – but we have SRP over verbs today, libfabrics is exactly this. Why do we need something else?

Cisco (and others) – libfabrics is not the same as verbs, which as we have discussed in the past is not exactly the right model, since it is closely tied to IB-specific hardware architecture.

Companies expressing an interest include NetApp, Intel, IBM, Cray, Unisys, Cisco

Process-wise – how to move forward?

Intel – don’t want to derail the current focus on “1.0” at the end of this year.

Cray – But on the other hand, also don’t want to defer this too long. Just as a stake in the ground, if libfabrics for distributed computing comes out at the end of this year, it makes sense to shoot for six months after that for an I/O-specific version. How about beginning a requirements gathering exercise now?

Intel – anything that drops in between kernel and user space probably needs a discussion on the appropriate kernel mailing lists. What needs to be done in the kernel? Probably wouldn’t take libfabrics as defined today and drop it down to the kernel. The bigger question is, what does SRP need from an interface for block storage? What about for file I/O?

Reese (Cisco) – some kernelly stuff has been mentioned such as the memory registration interface. The slippery slope to introducing a kernel module is how much do you leverage from existing kernel verbs?

Christoph – Before beginning a discussion on kernel.org (or elsewhere) would be good to know what sort of kernel changes are needed.

Reese (Cisco) – suggests a smaller group to go off and look at the salient differences between user space and kernel space w.r.t. I/O and report back to the larger group.

Paul (Cray) – What about scoping? The class of applications described as Data and Data Access includes at least block storage, file I/O, Object storage, Storage at a Distance and others. Suggest we leave it to the small team to describe the scope of the effort.

**AR – Paul Grun**: Convene a meeting of an I/O APIs Interest Group.

**IP Issues**

Cisco remains concerned about IP issues. We had originally agreed to defer this until the OFA chairman (Jim Ryan) returns from sabbatical, but it now appears that we should begin looking into this.

This problem statement is that there is concern that there is no contribution agreement and hence no enforcement or statement that the code being contributed is given freely and is actually unencumbered free code. What happens if somebody puts some patented or ‘unfree’ code in?

Is there a difference between an OFA membership agreement and a contribution agreement?

**AR – Paul Grun:** do some research on OFA’s history with licensing.

**Agenda for next meeting**

Work through the ‘endpoints table’ from the face-to-face.

**Next regular telecom**

Next meeting: Tuesday, 9/23/14

9am-10am Pacific daylight time