**Call for Sessions**

Solving difficult network problems demands an ongoing collaboration between OpenFabrics Software (OFS) producers and consumers. (More words…)

This year’s workshop, while covering a broad range of topics, will feature a focus on three particularly prominent areas: a continuation of last year’s focus on the consumers of OpenFabrics Software, the inclusion of topics exploring the evolving relationship between the Alliance and the open source community, and persistent memory.

**Session Topics**

Proposals for sessions to be presented at the annual workshop may cover a variety of topics, such as:

Topics Related to the Open Source Community and its role in developing networking software

* Security enhancements (eg.g registration changes) in the RDMA subsystem
* New drivers (5 or 6 have shown up)
* rdma-core consolidated repository
* Security/Containers
  + Namespaces
  + SELinux
  + cgroups (resource limits)
  + VMs
* ARM SOC
* RDMA inside a VM without SRIOV
* Core code MR,CQ,WR and other redesign
* Major kernel-user API revision
* Topics related to user land code
  + NVMe for ULPs
  + NFSoRDMA ULP updates
  + ULP migration to new API
  + Offloaded IP networking (eg DPDK)

Using RDMA to Access Persistent Memory, Non-Volatile Memory

* RDMA fabrics for Persistent Memory (new or existing fabrics such as IB, OPA, iWARP or others)
* APIs for accessing persistent memory over a fabric
* Programming models for applications relying on remote persistent memory

Network APIs and Software

* OpenFabrics Interfaces (libfabric, kfabric)
* Extending the Verbs API
* APIs for data storage, data access
* Open UCX

Accelerators, FPGAs, GPUs

* Direct access to accelerator memory space from the fabric
* Plumbing for accelerator devices inside the kernel
* Technology for direct attach and fabric attach of accelerators
* The programmer’s perspective; using fabric attached accelerators

Distributed Applications and Services

* data analytics
* distributed and shared memory applications
* ~~fabric-attached storage~~
* pub/sub applications
* message queueing libraries/services
* parallel file systems, software-defined storage, fabric-attached storage
* software-defined networks

Communications Middleware and Programming Languages for Distributed Computing

* OpenSHMEM
* MPI
* UPC++
* GasNET
* Chapel
* Legion, OCR, other event-driven tasking runtimes

Deploying RDMA

* Building a system incorporating multiple RDMA technologies

Existing and Planned Network Deployments

* cloud-based deployments
* RDMA in the commercial enterprise
* ~~data analytics~~
* government and HPC
* virtualized data centers
* wide-area distributed computing or storage

Data Center RDMA

* virtualization of hosts, storage devices, networks, and network interfaces
* convergence of traditional bare-metal/bare-wire and virtualized cloud and container architectures

Data Intensive Computing and Data Analytics~~, Cloud Computing~~

* Hadoop, MapReduce
* Graph analytics (e.g. TensorFlow)
* KeyVal stores
* ~~storage connectivity using high-speed/low-latency fabrics~~
* ~~virtualization of hosts, storage devices, networks, and network interfaces~~
* ~~software defined storage, software defined networks~~
* ~~convergence of traditional bare-metal/bare-wire and virtualized cloud and container architectures~~

Management, Monitoring & Configuration

* Adaptive routing, congestion control, fabric performance monitoring, IB IPoIB, partitioned networks, QoS, routing between disjoint fabrics, security, subnet configuration, topologies~~, message queuing technologies~~

Security for RDMA Networks

Networking Technology

* Atomics, Hardware Platforms (x86, ARM, SoCs, embedded), IB Architecture, iWARP, Multicast & collective operations, RoCE, Scalable fabrics (existing and emerging), User-level protocols over RDMA (NFS, RPC, etc.), ~~Virtualization and virtualized container support,~~ network function virtualization, ~~software defined networking, software defined storage~~

'Gripe Fest'

[These are the major problems we never seem to make any progress on, year

 after year, there may not be presentations, but I can tell you I

 \*always\* have long hallway converstations on most of these topics

 every year..

 These might be good topics for the 'state the problem' 'view point

 A/B/C' open discussion format. In the past I think we have tried this

 type of format with a panel, but maybe we need to encourage more

 direct debate and somehow have the OFA take an official

 stance/project at the end?]

\* Maintainership models

  aka why is getting stuff upstream so hard/slow

  .. or .. why are the patches coming in so 'bad'

  .. or .. too many contributors, not enough reviewers

\* Endless ungoverned uAPI churn

  aka why can't the vendor's collaborate

  .. and .. are we making a mess for our future selves

\* Distribution issues

  aka why can't everyone just use what comes inbox with RH

\* ofiwg vs ofvwg

  aka why can't we all just get along

\* Copyright situation

  New this year!

\* Role of the OFA

  aka what should the OFA do anyhow besides run this conference

\* PCI-E peer to peer, RDMA and Linux

  aka why can't we get GPU direct patches into mainline

  .. or .. the first major roadblock to copy-free NVM + RDMA

\* IB vs not IB protocols

  aka Why is everything so IB specific anyhow

  .. or .. why can't my non-IB wire protocol work better

Grip Fest