Motivation
- FairMQ² lacked support of an efficient RDMA-accelerated inter-node transport.
- Fine in the beginning of the project, because it had production quality TCP/IP based backends.
- To become a viable choice also for HPC supercomputers, the new "OFI" transport is developed.
- Targets primarily Infiniband.

OpenFabrics Interfaces (OFI) Transport
- Based on the OFI libfabric technology.
- Maps a subset of libfabric API to the message queuing user API of FairMQ.
- Hides low level details of libfabric.
- Supports zero-copy send and receive operations.
- Optimizes for high bandwidth utilization.
- Usable with existing FairMQ user API.
- Targets Infiniband fabrics now, but can support practically every major HPC interconnect technology (supported by OFI) in the future with little extra development.
- Integrates with Boost.Asio event loop, see asiofi² (implementation detail).
- Specialized local memory allocation strategies are implemented (allocate physical pages eagerly, support hugepages).

Ongoing Work:
- Vectored I/O support.
- Scalability Protocols (PUB/SUB, PUSH/PULL, RED/REP).
- Performance profiling, tuning.
- Stability improvements.
- Memory allocator improvements.

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