

# RapidIO and Multicast: Investigations using real time chat

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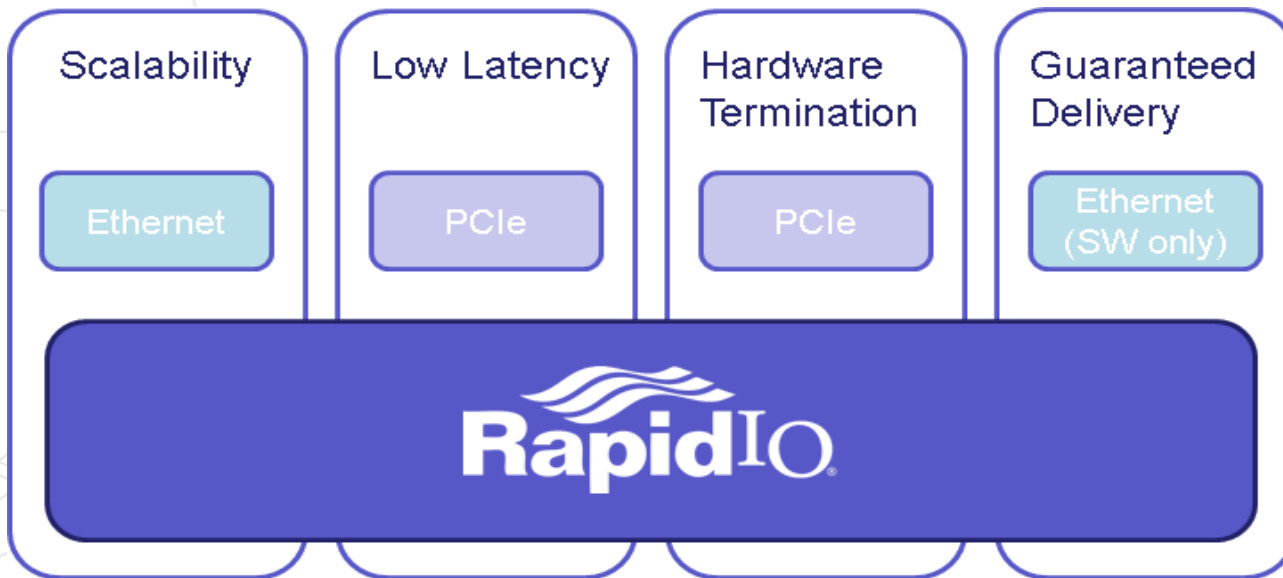
# RapidIO

- › A packet-switched high-performance interconnect
- › Used in 4G base stations worldwide



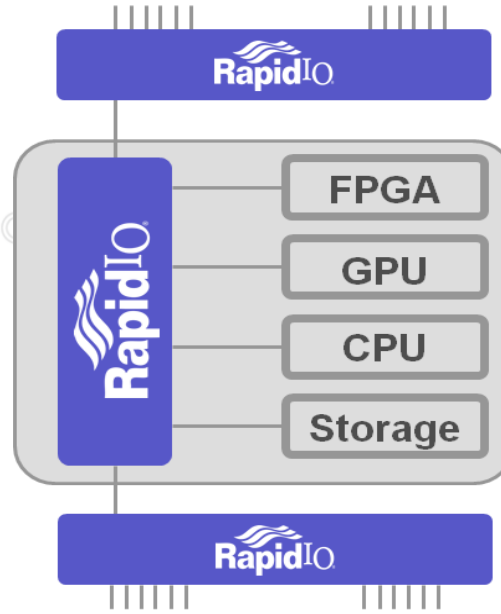
# RapidIO

› Combines features of Ethernet and PCIe



# RapidIO

› Supports heterogeneous systems



# RapidIO

**Data is transmitted using:**

› **Channelized Messages**

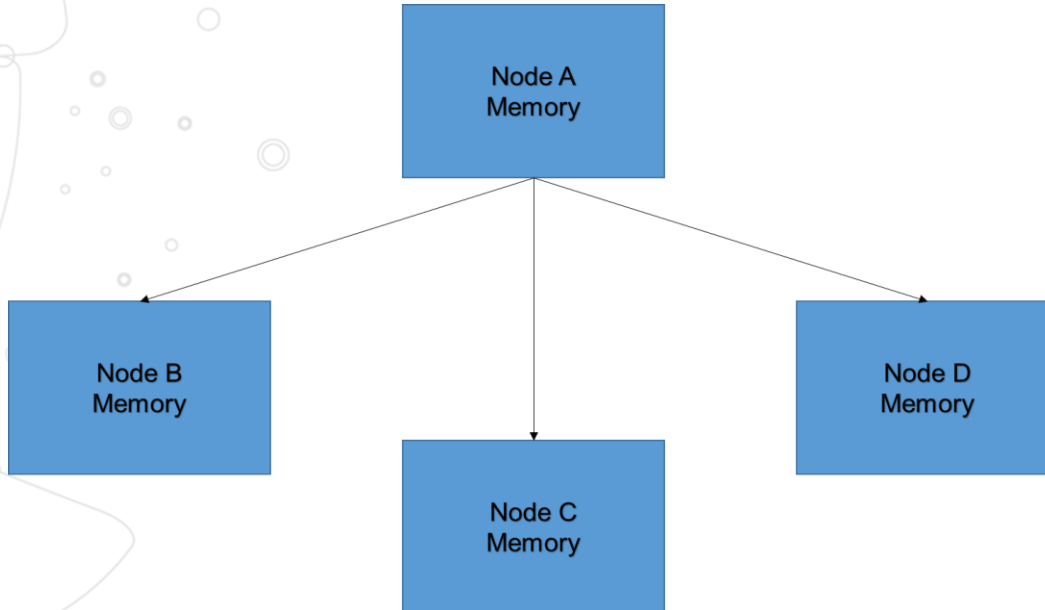
- **Typically used for orchestration**
- **Limited in size**

› **Remote Direct Memory Access**

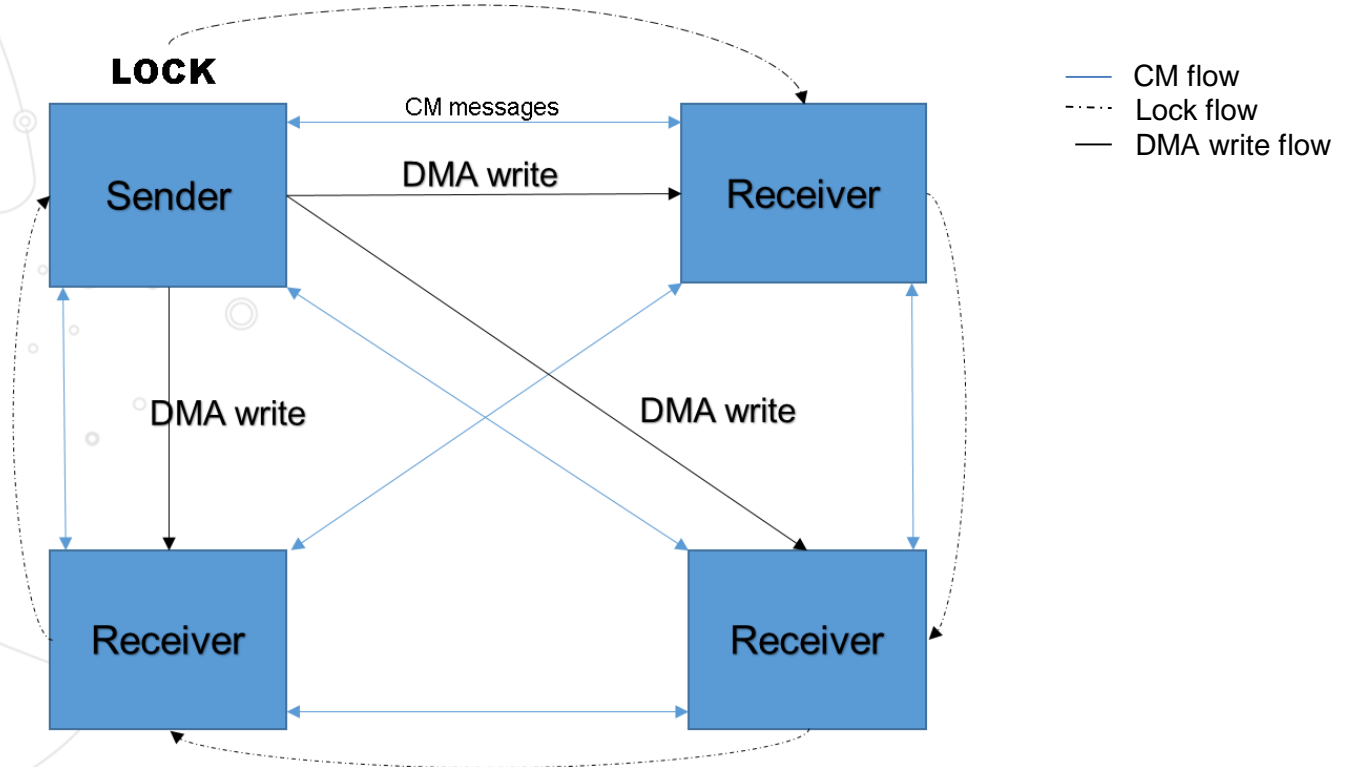
- **Supports zero copy**
- **Typically used for large data transactions**

# Motivation

- › Explore multicast capabilities of RapidIO – perform multicast DMA writes



# Application Flow Control



# Project Activities

- > Created multicast chat application infrastructure:**
  - **Established connections**
  - **Performed multicast remote DMA writes**
  - **Implemented locking mechanism**
  
- > Currently measuring performance**
  - **Latency**
  - **Reliability**





# Future Work

- › **Complete measuring application performance**
- › **Create interface for multicast chat application**