



# Mellanox - Introduction

Dror Goldenberg

ISC Container Workshop Frankfurt, June 2019



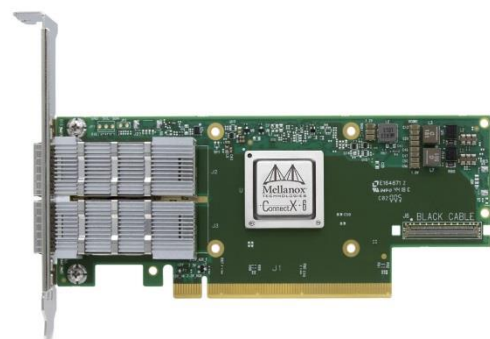






# SUPERCONNECTING

## the #1 Supercomputers



ConnectX<sup>®</sup> 6



Mellanox  
Quantum



HPC-X<sup>™</sup>

# Highest Performance HDR 200G InfiniBand

# Accelerating All Levels of HPC / AI Frameworks

## Application

- Data Analysis
- Real Time
- Deep Learning



## Communication

- Mellanox SHARP In-Network Computing
- MPI Tag Matching
- MPI Rendezvous
- Software Defined Virtual Devices



## Network

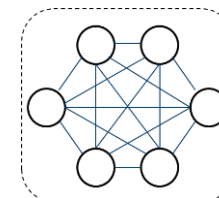
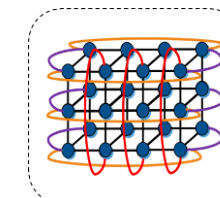
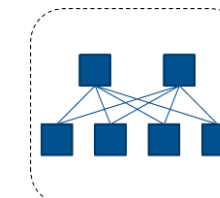
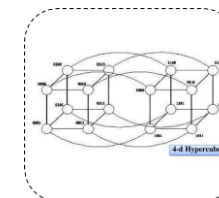
- Network Transport Offload
- RDMA and GPU-Direct RDMA
- SHIELD (Self-Healing Network)
- Enhanced Adaptive Routing and Congestion Control

GPUDirect



## Connectivity

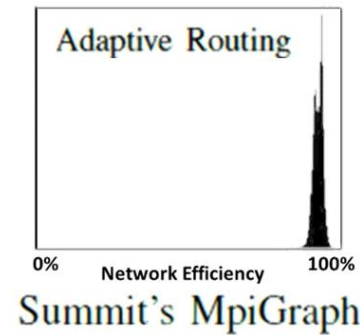
- Multi-Host Technology
- Socket-Direct Technology
- Enhanced Topologies



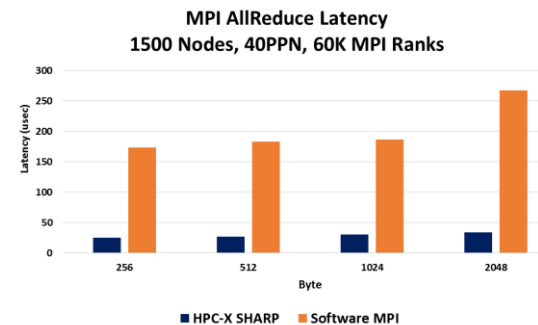
# Highest Performance and Scalability for Exascale Platforms



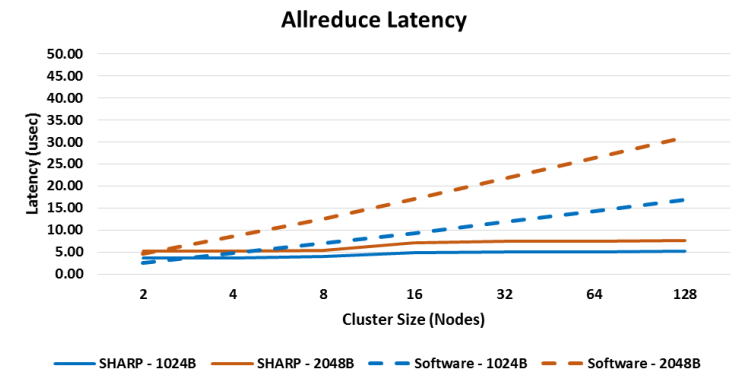
**96%**  
Network  
Utilization



**7X**  
Better

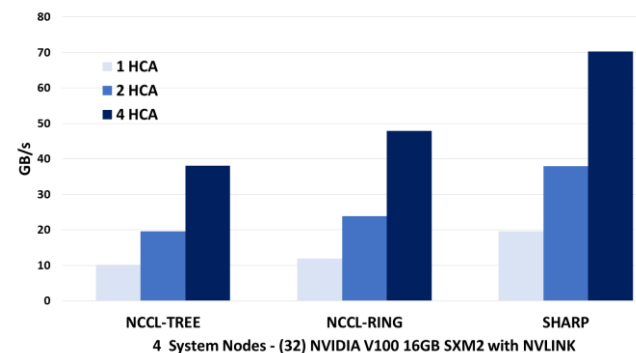


**Flat  
Latency**

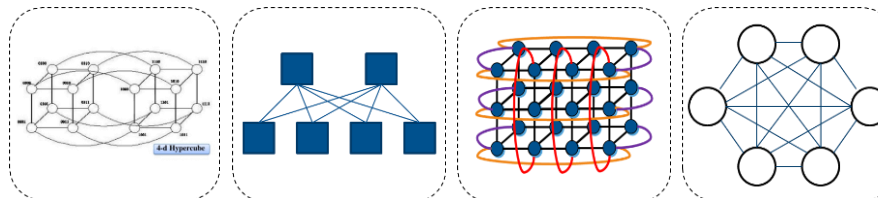


**2X**  
Better

Mellanox SHARP with NCCL 2.4



**5000X**  
Better



**XDR 1000G**

**NDR 400G**

**HDR 200G**

# Thank You!

