

The NE010 iWARP Adapter

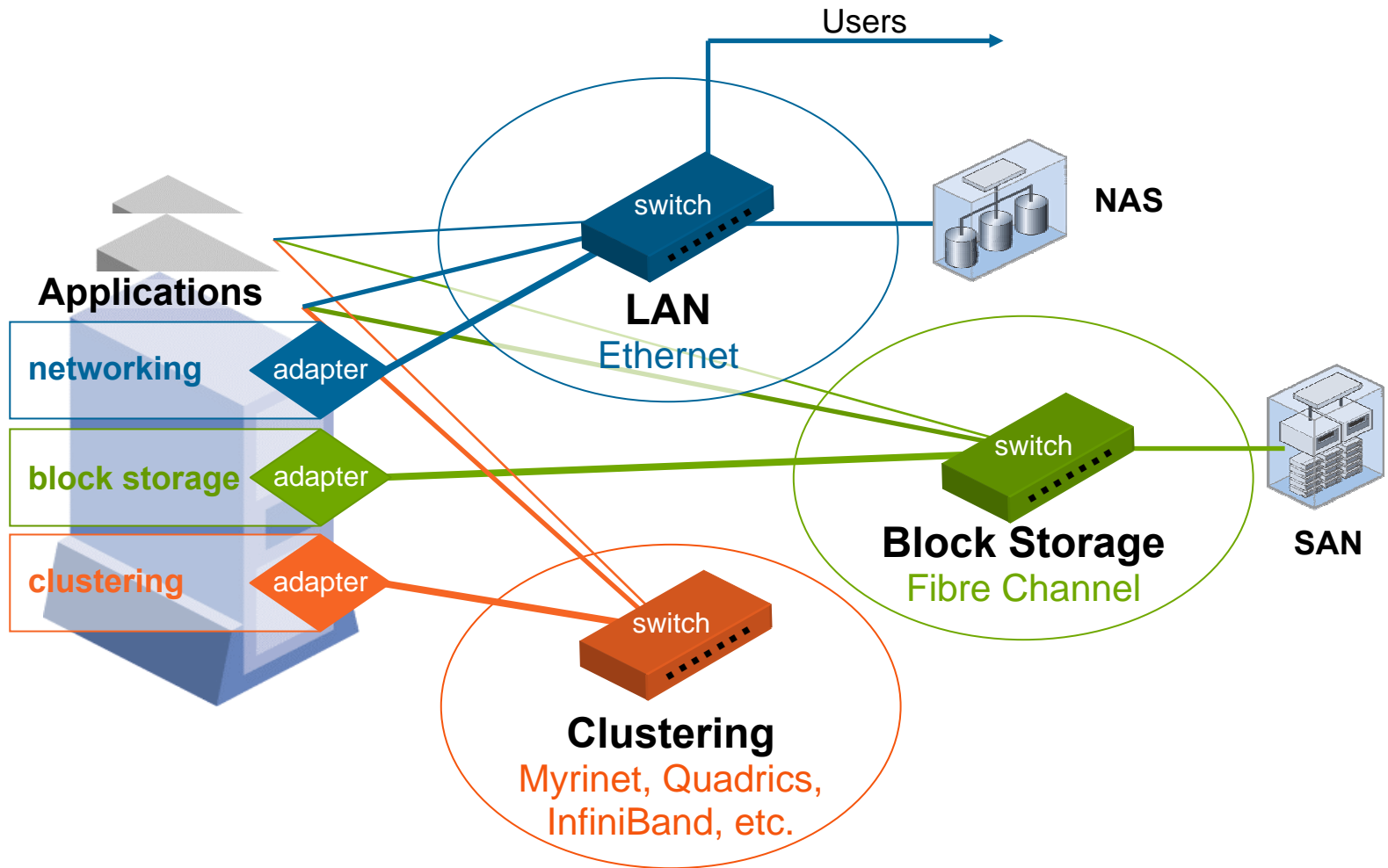


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A L L I A N C E

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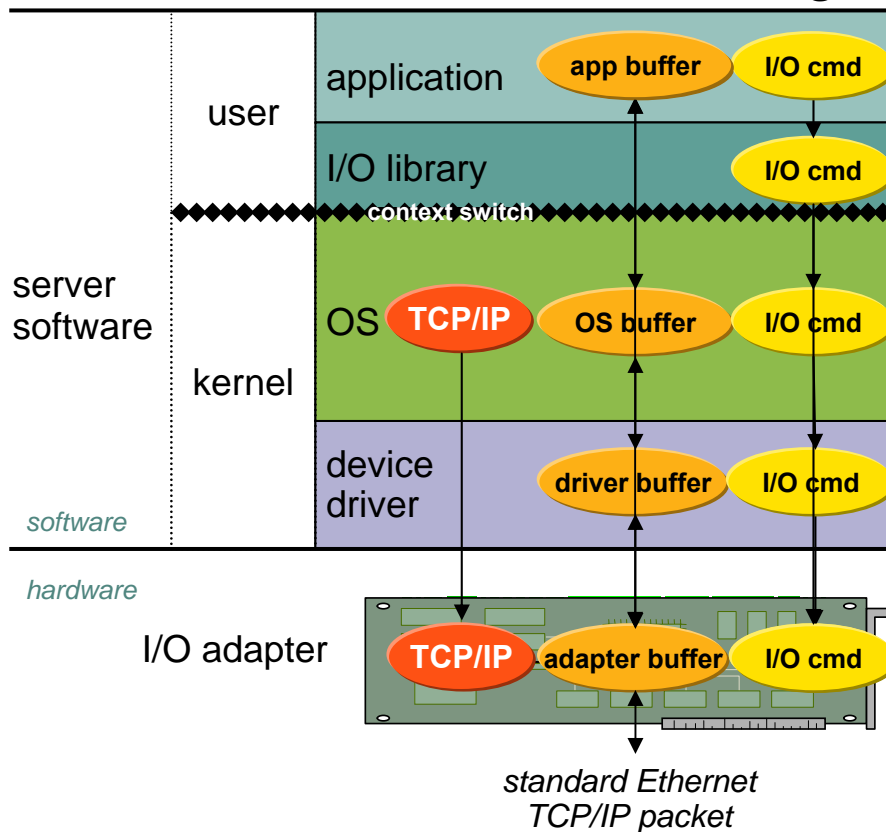
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Today's Data Center



Service* Solution

Protecting Data Integrity



% CPU Overhead

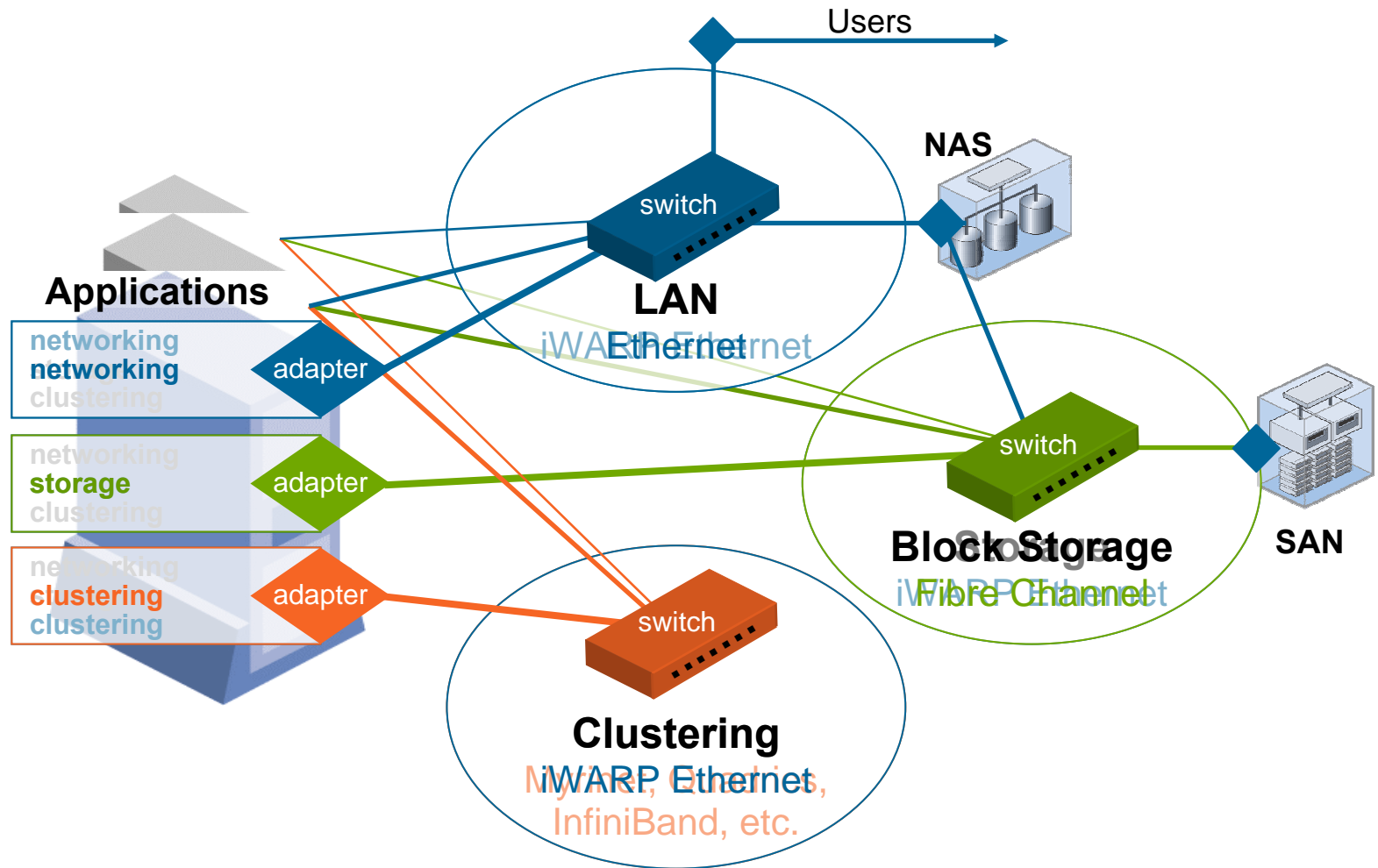


- **Transport (TCP) offload**
- **RDMA / DDP**
- **User-Level Direct Access / OS Bypass**

* **iWARP: IETF ratified extensions to the TCP/IP Ethernet Standard**

Tomorrow's Data Center

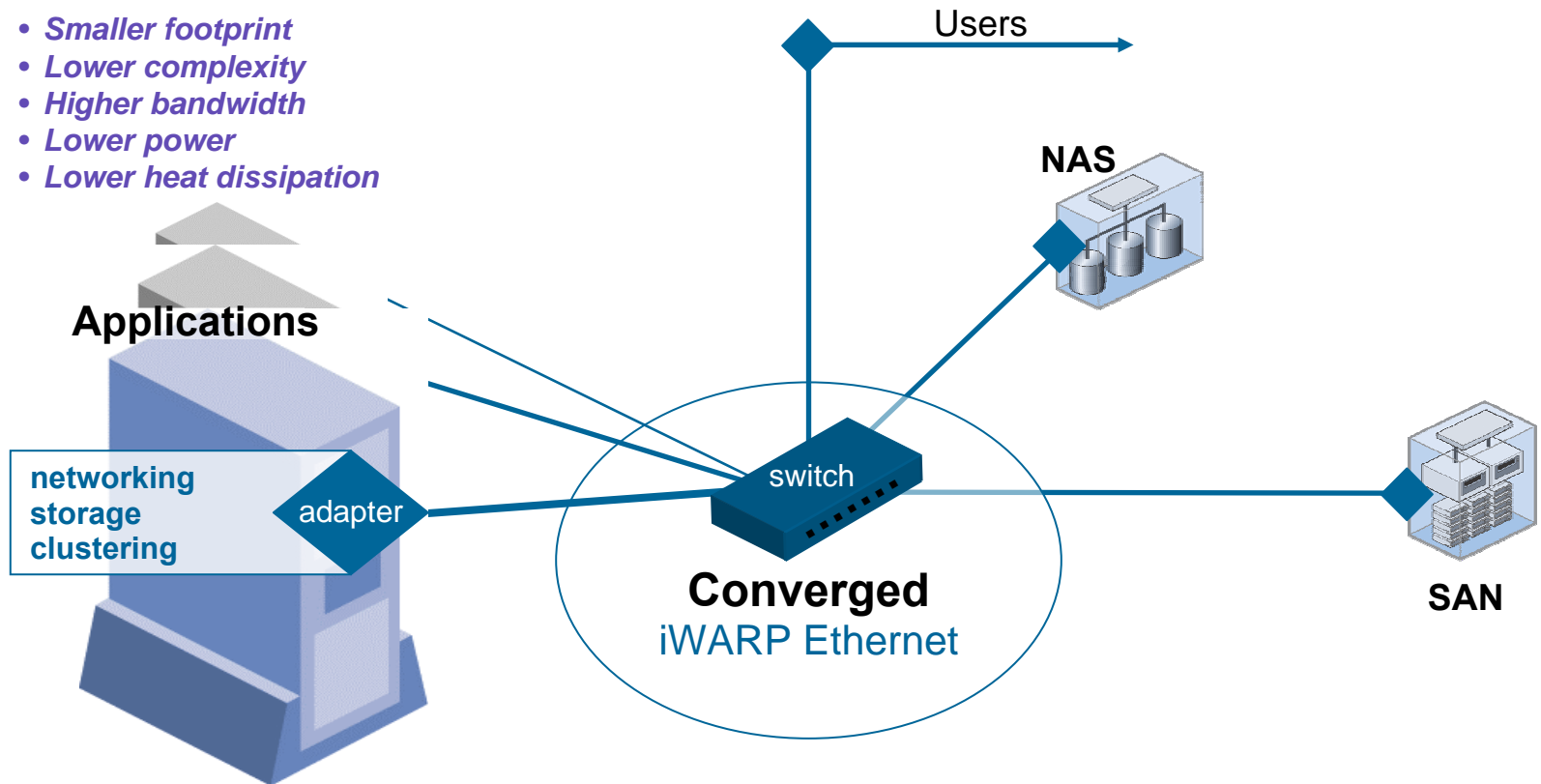
Separate Fabrics for Networking, Storage, and Clustering



Single Adapter for All Traffic

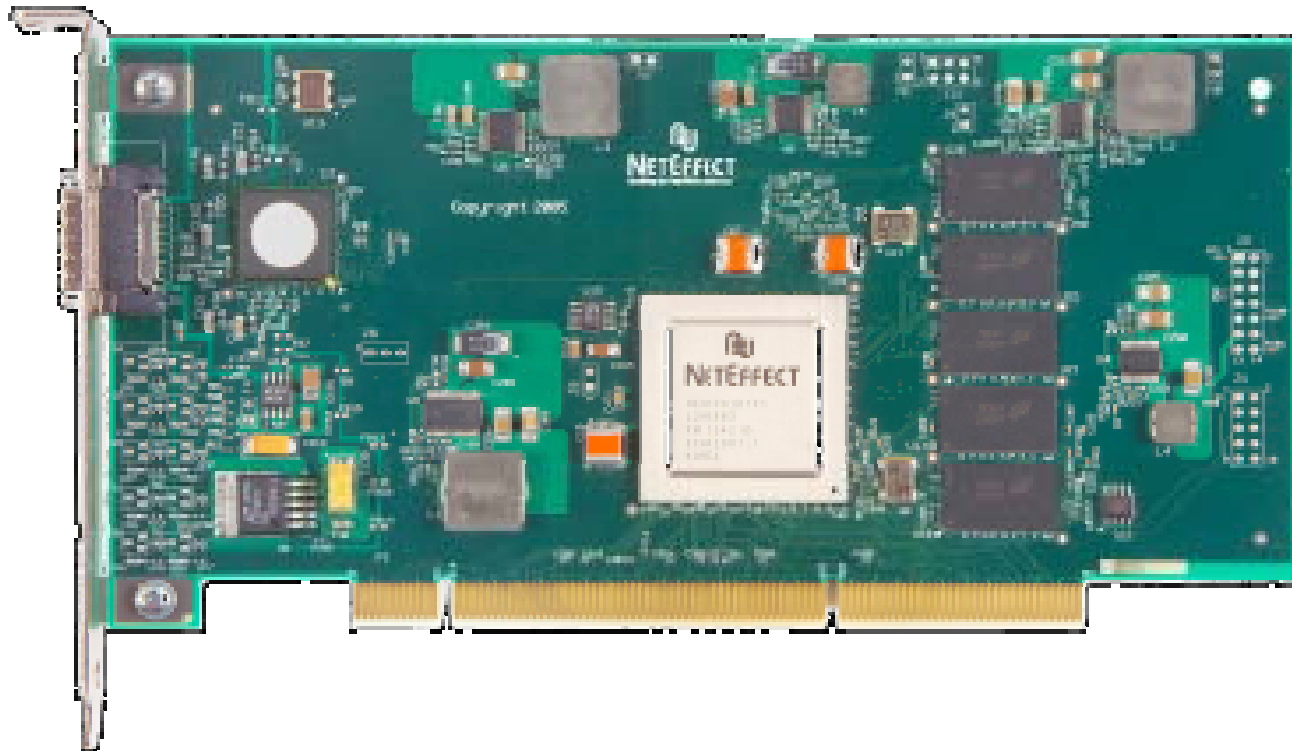
Converged Fabric for Networking, Storage, and Clustering

- *Smaller footprint*
- *Lower complexity*
- *Higher bandwidth*
- *Lower power*
- *Lower heat dissipation*



NetEffect's NE010

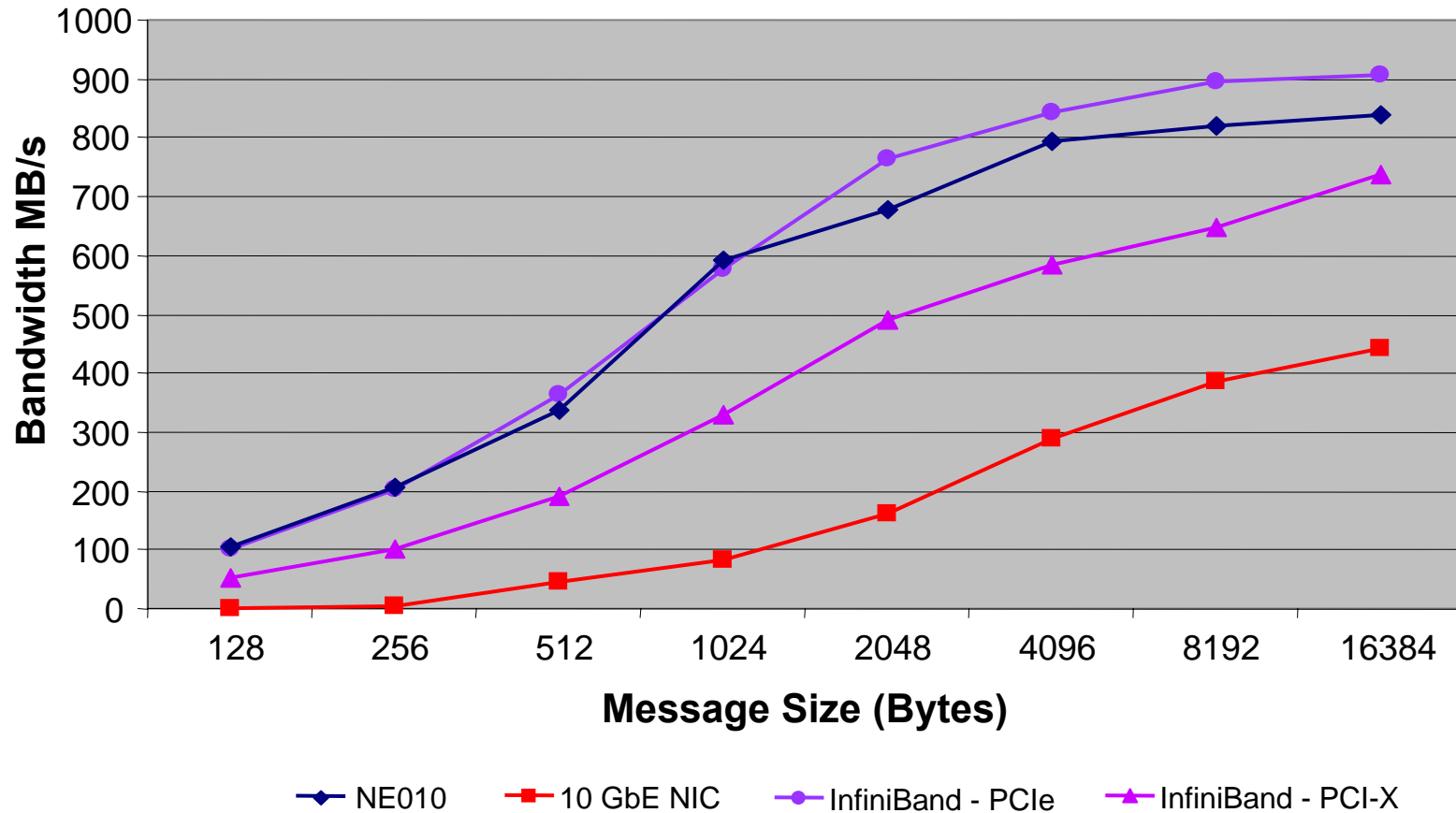
iWARP Ethernet Channel Adapter



High Bandwidth – Storage/Clustering Fabrics

Bandwidth Tests

NE010 vs InfiniBand & 10 GbE NIC



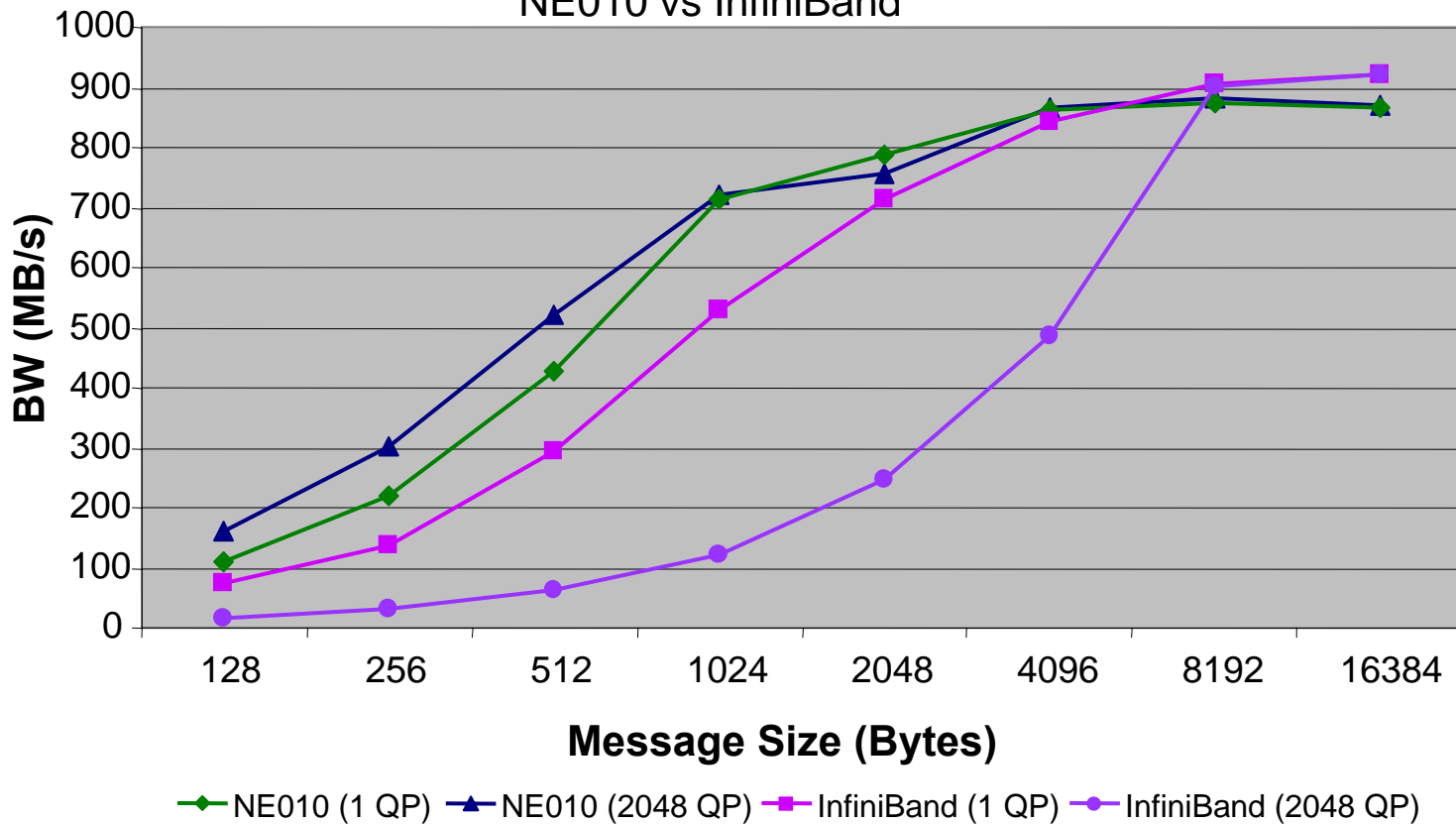
Source: InfiniBand - OSU website, 10 Gb NIC and NE010 - NetEffect Measured

Multiple Connections

Realistic Data Center Loads

Multiple QP Comparison

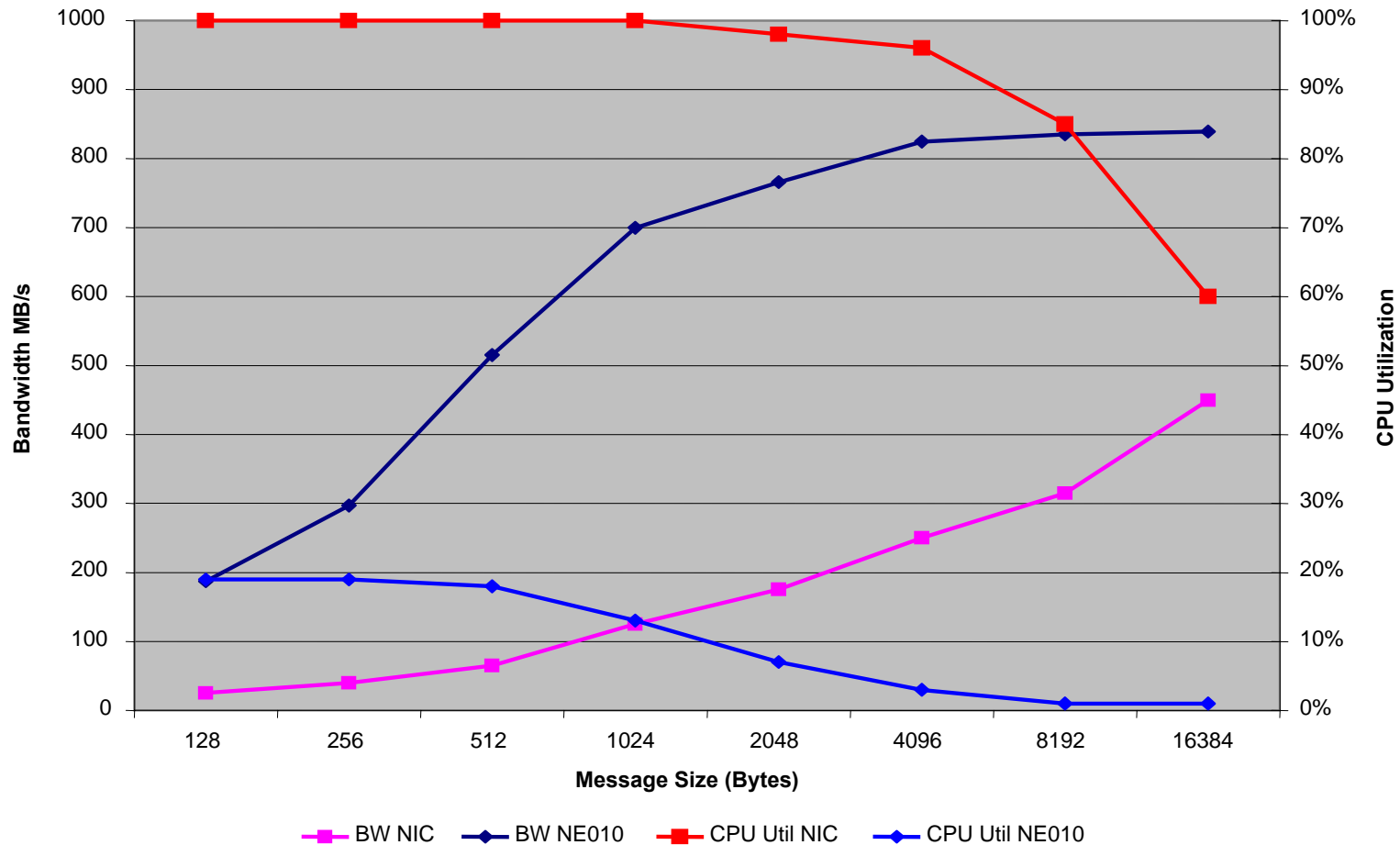
NE010 vs InfiniBand



Source: InfiniBand - Mellanox Website; NE010 - NetEffect Measured

NE010 Processor Off-load

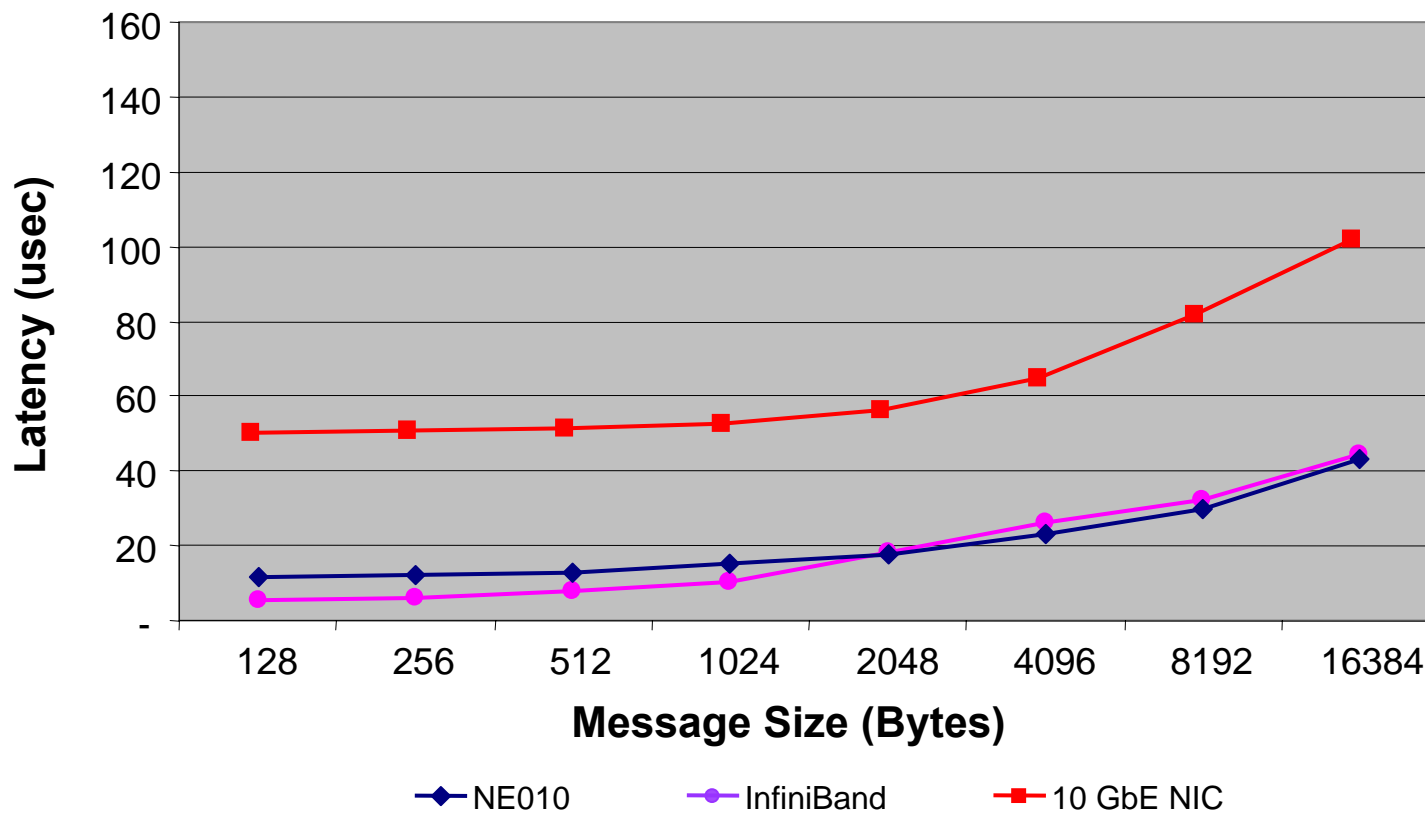
Bandwidth and CPU Utilization NE010 vs 10 GbE NIC



Low Latency – Required for Clustering Fabrics

Application Latency

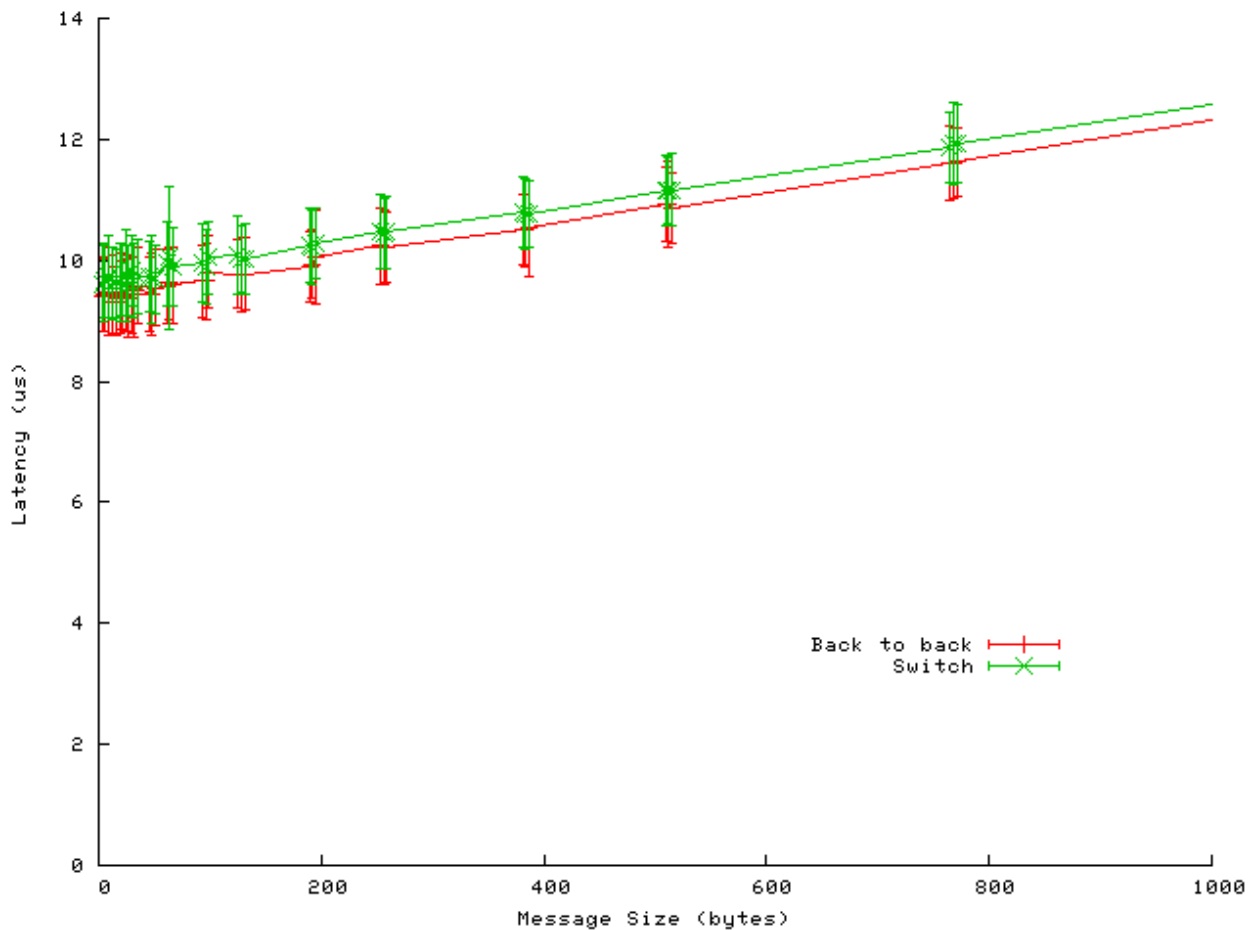
NE010 vs InfiniBand & 10 GbE NIC



Source: InfiniBand - OSU website, 10 Gb NIC and NE010 - NetEffect Measured

Low Latency – Required for Clustering Fabrics

Application Latency



D. Dalessandro – OSC May '06

Summary & Contact Information



- **iWARP** Enhanced TCP/IP Ethernet
 - Next Generation of Ethernet for All Data Center Fabrics
 - Full Implementation Necessary to Meet the Most Demanding Requirement – Clustering & Grid
 - True *Converged I/O Fabric for Large Clusters*
- **NetEffect** Delivers “Best of Breed” Performance
 - *Latency* Directly Competitive with Proprietary Clustering Fabrics
 - Superior Performance under Load for *Throughput* and *Bandwidth*
 - *Dramatically Lower CPU Utilization*

For more information contact:

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