Bioscience

In Bioscience, where researchers must process terabytes of data for modeling and other applications, data centers leverage HPC technology to reduce wait times and improve productivity. These data centers have deployed multi-core, multi-processor servers and high-speed storage systems, but they may be hamstrung by sub-optimal performance of the network that links servers and storage.

Optimized application performance requires balanced performance capabilities across the data center which includes the fabric. With today's multi-core servers and faster storage I/O, the data center fabric itself must support tens of gigabytes per second of throughput with the scalability to improve over time. Mellanox InfiniBand adapters, switches, cables and software maximize productivity by delivering industry-leading bandwidth and the lowest latency interconnect. Only Mellanox provides advanced CPU offloads to get the highest server efficiency and application productivity. Mellanox Host Channel Adapters (HCA)s deliver the highest bandwidth and lowest latency of any standard interconnect enabling CPU efficiencies of greater than 95%.

THE MELLANOX SOLUTION

Mellanox Smart adapters eliminate processing bottlenecks by delivering up to 200Gb/s of reliable, lossless connectivity with sub-600ns of latency. One adapter can provide optimum connectivity for an entire blade server system, saving data centers the cost of maintaining multiple adapters.

Mellanox InfiniBand Smart switches and gateways enable data center fabric consolidation that further improves performance. Mellanox solutions are built on open standards delivering exceptional performance and business value.   Only Mellanox offers backwards and forwards compatibility, which future proofs your networking investment. What's more, Mellanox is the only interconnect that is built on offload architecture, freeing more CPU cycles for application processing with no CPU frequency sensitivity. MPI collectives are managed and executed from the network fabric and is the only interconnect that offers in-network co-processing capabilities.

KEY BENEFITS

- The world's fastest interconnect supporting up to 200Gb/s per port
- In-network co-processing capabilities and advanced offload engines
- Ultra-low, sub-600 ns of predictable latency
- Support for GPUDirect RDMA and GPUDirect ASYNC
- Lossless packet transmission
- Converged data center fabric reduces costs and power requirements

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