In bioscience, researchers must process terabytes of data for modeling and other applications. Bioscience 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 suboptimal 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 and switches maximize productivity by delivering industry-leading bandwidth and the lowest latency interconnect. Only Mellanox provides CPU offloads to get the highest server efficiency and application productivity. Mellanox HCAs deliver the highest bandwidth and lowest latency of any standard interconnect, enabling CPU efficiencies of greater than 95%.

**The Mellanox® Solution**

Mellanox adapters eliminate processing bottlenecks by delivering up to 56Gb/s of reliable, lossless connectivity with only 700 nanoseconds of latency. One adapter can provide optimum connectivity for an entire blade server system, saving data centers the cost of maintaining multiple Ethernet adapters. Mellanox InfiniBand switches and gateways enable data center fabric consolidation that further improves performance.

**KEY ADVANTAGES**

- The world’s fastest interconnect, supporting up to 56Gb/s per port
- Latency as low as 0.7 microseconds
- Lossless packet transmission
- Converged data center fabric reduces costs and power requirements