

HPCC (High Performance Computing Cluster) from LexisNexis



HPCC (High Performance Computing Cluster) from LexisNexis is a cluster computing platform used to solve Big Data problems. Its unique architecture and simple yet powerful data programming language (ECL) makes it a compelling solution to solve data intensive computing needs.

As a result of the information explosion, many organizations now have the need to process and analyze massive volumes of data. These data-intensive computing requirements can be addressed by scalable systems based on hardware clusters of commodity servers coupled with system software to provide a distributed file storage system, job execution environment, online query capability, parallel application processing, and parallel programming development tools. The HPCC provides all of these capabilities in an integrated, easy to implement and use, open source high performance computing environment.

HPCC Systems optimized with Mellanox InfiniBand Networking

Mellanox's complete end-to-end 56Gb/s InfiniBand solutions with Big Data specific acceleration technologies implement the world's fastest and most robust networking solutions for a complete, high-performance infrastructure for HPCC systems. These capabilities ensure optimum application and server performance and efficiency with:

- Up to 56Gb/s fabric speed to support servers (or blade servers) and storage connectivity in any configuration.
- As low as one microsecond application latency leveraging the most efficient remote direct memory access (RDMA) between servers and storage.
- RDMA-based solutions speed transaction processing by offloading many portions of a transaction from the server CPU and operating system.

KEY ADVANTAGES

- The world's fastest interconnect, supporting up to 56Gb/s per adapter
- The world's lowest latency, as low as 1 microsecond
- CPU offloads with the flexibility of RDMA capabilities
- Acceleration for higher TP/s
- Lossless packet transmission.
- Multi-protocol bridging for unified data center fabrics
- High Speed storage fabric manager
- Workload optimized network fabric manager

Mellanox's Unified Fabric Manager (UFM) is a platform to manage scale-out Ethernet and InfiniBand computing environments. It enables data center operators to efficiently provision, monitor and operate the modern data center fabric with high uptime and failover capabilities.

- Lossless transmission, ensuring that no packets are dropped and avoid retransmissions of data.
- Multi-protocol bridging - Mellanox BridgeX gateways allow for data center fabric consolidation, unifying InfiniBand, Fibre Channel, iSCSI, and Ethernet over a reliable high-speed interconnect.