

Voltaire Introduces a Breakthrough Solution to Accelerate Distributed Applications by Orders of Magnitude

Voltaire FCA™ Enables Extreme Application Scalability; Introduces Mid-Size 40 Gb/s Director Switch for Commercial Enterprises

CHELMSFORD, Mass. and RA'ANANA, Israel – March 10, 2010 – Continuing on the path of innovation for scale-out data center fabrics, Voltaire Ltd. (NASDAQ: VOLT) today announced a ground-breaking new software and hardware solution that accelerates distributed application group communications in scale-out fabrics. Group communications challenges are common in cloud computing and high performance computing and addressing them is key to scaling out the data center. The first edition of Voltaire FCA™ accelerates high performance computing applications such as reservoir modeling, fluid dynamics, crash analysis and others by up to a factor of ten. Voltaire's patent pending Fabric Collective Accelerator™ (FCA™) accelerates MPI collective operations by using Voltaire switches and their on-board processors to offload significant parts of group communication onto the switching fabric while Voltaire Unified Fabric Manager™ (UFM™) orchestrates an efficient, topology-based collective flow. Working in concert, these products ensure that all bottlenecks are removed, at both the server and interconnect levels. The computational acceleration is achieved transparently without requiring changes to the application.

"With Voltaire FCA, the IMB Allreduce & Barrier benchmarks ran seven times faster on a 512 core portion of our Intel Xeon E5520 based cluster," said Niclas Andersson, technical director at the National Supercomputer Center in Sweden. "We are extremely proud to be the first customer to run Voltaire FCA in a large environment, and expect it to help us increase the efficiency and productivity of our research clusters by orders of magnitude."

"With their global, synchronous nature, collective operations often become the bottleneck when scaling MPI-based parallel applications to thousands of computers, and have been known to have a significant impact on the scalability of some applications with standards-based clusters," said Earl Joseph, program vice president, IDC. "Voltaire's FCA provides an innovative way to help remove the congestion created by collective operations in HPC and is also applicable to other distributed computing frameworks such as MapReduce in cloud computing."

Until now, typical solutions for accelerating collectives over standards-based clusters were based on host-based offload, addressing only a small part of the challenge residing at the server level. The Voltaire fabric-wide solution leverages Voltaire's unique switch design, which incorporates a CPU on every module, eliminating congestion and reducing latency throughout the fabric. "This is the industry's first fully integrated solution to offload collective operations across the full fabric topology," said Asaf Somekh, vice president of marketing, Voltaire. "Using the Voltaire FCA software combined with the intelligence on the switch, dramatically accelerates the collectives process, so customers can boost application performance by orders of magnitude."

Voltaire FCA works with Voltaire's complete portfolio of 40 Gb/s InfiniBand switches and will be available in early Q2 2010.

Introducing the Grid Director™ 4200

Voltaire also today introduced a mid-size 40 Gb/s InfiniBand director switch expanding its full line of 40 Gb/s platforms. The Voltaire Grid Director 4200 is a high performance, ultra-low latency InfiniBand switch that is ideal for high performance clusters running scientific, commercial HPC and enterprise applications. With configurations of up to 162 ports of 40 Gb/s per port InfiniBand connectivity, the Grid Director 4200 delivers 11.52 Tb/s of bandwidth and between 100 and 300 nanoseconds of port-to-port latency.

As a mid-size 40 Gb/s switching solution, the Grid Director 4200 is designed to provide an excellent price-performance ratio for mid-size clusters, along with the reliability and manageability expected from a director-class switch.

The Grid Director 4200 will be available at the end of March, 2010.