

# Investment bank dramatically boosts risk computation with hosted GPU cluster



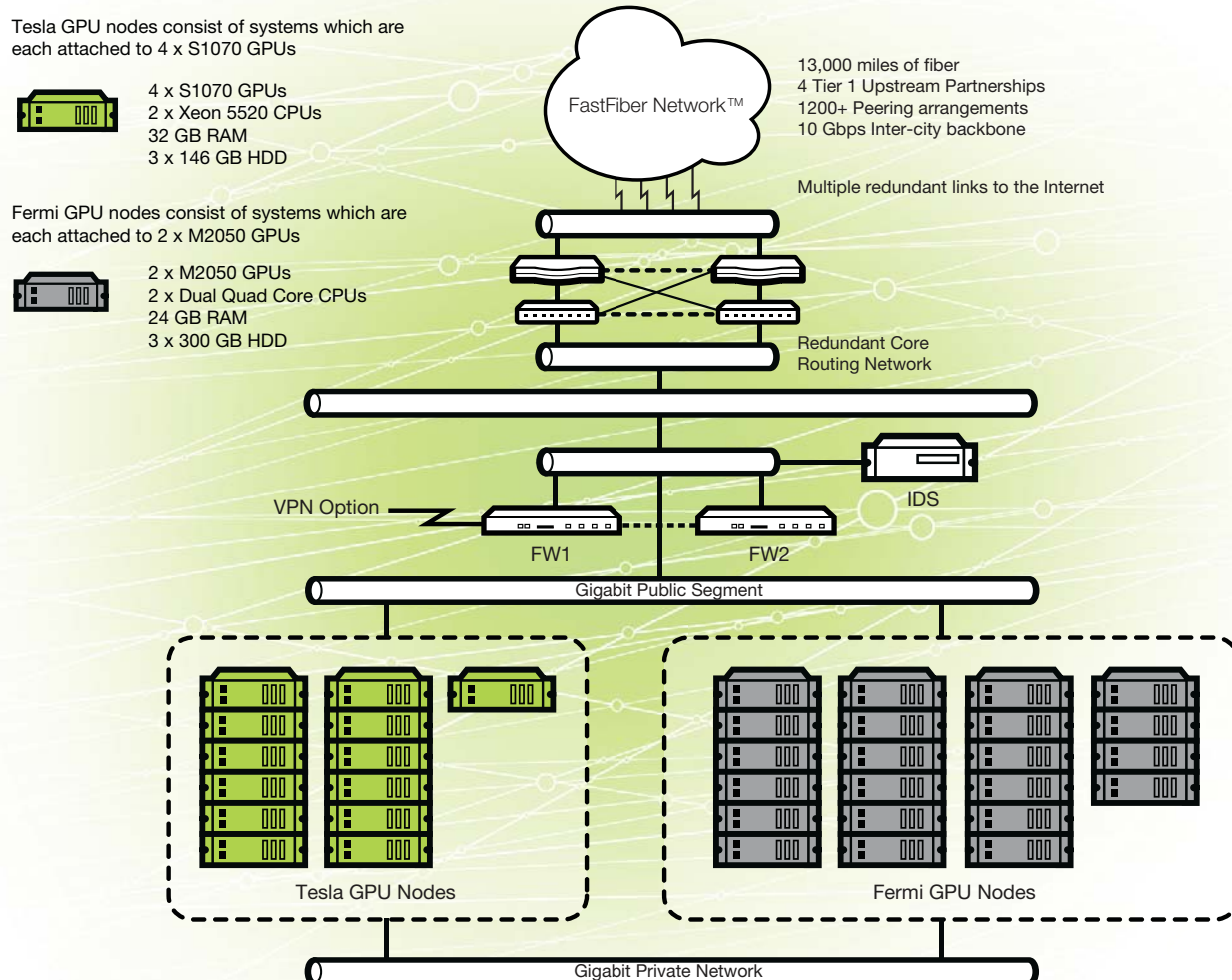
PEER 1 Hosting and Xcelerit successfully test 100-GPU state of the art Supercomputing cluster

A major investment bank has recently tested the performance of complex risk computations using the PEER 1 Hosting Supercomputing platform and the **Xcelerit SDK**, an acceleration toolkit which boosts the performance of compute-intensive applications on multi-core CPUs and GPUs.

PEER 1 Hosting offers a hosted GPU platform, powered by NVIDIA's Tesla M2050 (Fermi) cards in combination with its robust and wholly-owned 10Gb FastFiber Network™, that reliably, cost-effectively and quickly distributes data. Xcelerit SDK harnesses the full processing power of multi-core CPUs and GPUs achieving tremendous speedsups.

Together, PEER 1 Hosting and Xcelerit provide a solution which enables financial organizations to slash the time required for complex computations with large volumes of data by maximizing the power of the clustered GPUs or CPUs. The Xcelerit toolkit eliminates the need to address the complexity of GPU or multi-core programming.

## HOSTED CLUSTER LAYOUT - SOLUTION SCHEMATIC



## PROGRAM

The Xcelerit SDK is used to boost a program which computes the risk exposure for thousands of counterparties. It uses a Monte Carlo simulation to evaluate possible outcomes for a large number of scenarios and time steps. A sequential implementation of the program running on a single processor would take several days to complete.

## PERFORMANCE

The Xcelerit-powered program, performs at two orders of magnitude faster than a matching sequential implementation when deployed on a single GPU on the PEER 1 hosted cluster.

Performance increases on a quasi-linear model as the number of nodes increases.

An overall speed-up factor of approximately 6,000 times is achieved when exploiting the full 100 hosted GPU cluster compared to a matching sequential implementation running on a single CPU core.

## BENEFITS

**Computation Performance.** The hosted GPU cluster enables financial organizations to dramatically improve risk computation performance without the need to invest capital in GPU or Supercomputing hardware.

**Available in Europe.** PEER 1 Hosting offers the only hosted GPU cloud solution available in Europe.

**Pay-as-you-go.** Access to Supercomputing performance on a monthly or daily pay-as-you-go basis.

**Reduces Cost.** Eliminates expensive data centre rack space, power and cooling.

**Focus on Your Core Business Operations.** Simplifies implementation, allowing customers to focus IT resources on core business operations.

**Saves Power Consumption.** NVIDIA Tesla M2050 GPU Computing Module delivers supercomputing power at 1/10th the cost and 1/20th the power consumption.

**Xcelerit SDK.** The Xcelerit SDK allows companies to easily harness the huge processing power of multi-core CPUs and GPUs.

**Exploit Multiple Platforms.** Enables customers to exploit multiple platforms from a single portable source code.

**Automation.** Programmers only need to focus on high-level algorithm design and on problem-solving while Xcelerit SDK automatically handles execution on modern architectures, without worrying about low-level details (threads, load balancing, synchronisation, GPU-specific languages, etc.).

## SUMMARY

Hicham Lahlou, CEO, Xcelerit comments: "Our software toolkit combined with cloud-based hardware and the performance of GPUs delivers tangible benefits to financial organizations in terms of speed, scalability, and cost."

PEER 1 Hosting delivers cost-effective access to Supercomputing performance through its hosted GPUs available in data centers in the UK, and Toronto, Canada.

## SUMMARY *continued from previous page*

Xcelerit is a software tools company, committed to providing solutions to close the widening gap between hardware evolution and software performance. The company is targeting industries with compute-intensive problems to solve including Finance and Oil & Gas. Xcelerit is headquartered in Dublin, Ireland. More information at [www.xcelerit.com](http://www.xcelerit.com)

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## REQUIREMENTS

- Servers should have similar hardware and applications.
- Changes made to the code/application on one server should be reflected on the other server(s) in the rotation.

## CONTACT US TODAY

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- Go to [www.peer1.com](http://www.peer1.com) and chat with an online sales assistant.