



ALLIANCE BRIEF

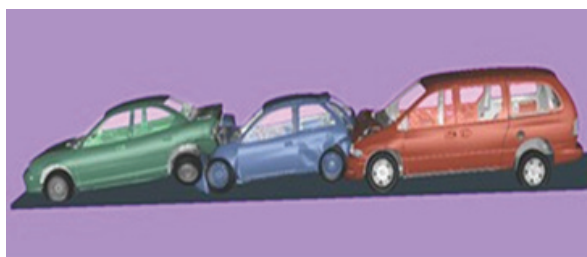
LSTC and QLogic

High Performance Computing

Overview

Today's challenging economic climate and globally competitive markets make lowering manufacturing costs more critical than ever. Whether you're an aerospace engineer designing a new wing for the latest commercial jet or an automotive engineer simulating multi-car crashes for the next generation of SUVs, the ability to run simulations faster will increase productivity, speed time-to-market, and improve your company's bottom line.

Companies in the aerospace, automotive, consumer electronics, and high-tech machinery business can realize significant benefits using QLogic high performance computing solutions. QLogic's products enable companies to perform process simulation, modeling, and optimization in less time so that products get to market faster with lower prototype and production costs.



Solution Highlights

- **Complete Simulations Faster**

Reducing the time-to-solution is critical for any engineering/design company. Interconnecting your cluster computing network using QLogic solutions can reduce this time. The result is faster time-to-market and higher quality products.

- **Improve Product Designs**

QLogic solutions enable companies to build larger node size clusters, run larger data sets, and expand simulation complexities in computer-aided designs.

- **Reduce or Eliminate Costs**

By better leveraging cluster computing and storage resources, engineering customers using QLogic's high performance switching and virtual cluster fabric solutions can reduce the costs and complexities of deploying and operating design and simulation data centers.

- **More Efficient Operations**

QLogic solutions enable the deployment of grid-computing architectures that allow for the pooling of computing and storage resources across research teams resulting in more efficient IT infrastructure use and lower product design costs.

LSTC

Headquartered in Livermore, California, Livermore Software Technology Corporation (LSTC) develops LS-DYNA®, LS-PrePost® and LS-OPT®. LSTC was founded in 1987 by John O. Hallquist.

LS-DYNA® is a general-purpose multi-physics simulation software package and can be used to model a wide range of physical events such as drop testing, fluid-structure interaction, and failure analysis. LS-DYNA is used widely in industries such as automotive and aerospace. Consider the following applications:

- Automotive crash test simulations to predict occupant safety
- Sheet metal forming simulations to predict failure during the manufacturing process
- Airplane bird strike simulations
- Jet engine containment simulations

QLogic – High Performance Cluster Technology

QLogic offers a comprehensive end-to-end product portfolio that includes multi-protocol fabric directors, edge fabric switches, InfiniBand adapters, and a complete software suite to install, operate, and maintain your high performance interconnect fabric. QLogic offers the most comprehensive and flexible interconnect fabric solutions on the market. Application requirements from 12–864 InfiniBand ports can be supported in a single chassis. Multi-chassis fabrics that support thousands of host nodes can be constructed to meet the most demanding compute cluster requirements. This offering, combined with the industry's only fabric management tools that enable an administrator to install and boot a fabric in minutes, helps to satisfy the growing demand for high-performance computational clusters and grids.

High Capacity Multi-Protocol Directors

- 51.8-Tbps throughput in a single chassis
- InfiniBand DDR supported across full switching portfolio
- Support for 20-to-40 Gbps node-to-node
- Up to 60 Gbps switch-to-switch bandpass

Comprehensive Fabric Management

- Centralized configuration and fabric initialization
- Accelerated fabric deployment and verification
- Fabric health and performance monitoring
- Fabric-wide diagnostics and maintenance
- Centralized management of virtual fabric services

Compatible Plus Software Stacks

- OpenFabrics/OpenFabrics Enterprise Distribution (OFED)
- Optional value-added capabilities
- Accelerated standard Message Passing Interface (MPI) stacks

QLogic InfiniBand Benefits

- Significantly improves application performance for faster time-to-solution
- Provides fabric and application scaling to thousands of CPUs
- Simplifies data center design and reduces operating costs

To Learn More

QLogic www.qlogic.com

LSTC: www.lstc.com



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