

Clustercorp and QLogic High Performance Computing



Overview

Clustercorp and QLogic have an alliance to bring you Rocks+ with QLogic InfiniBand support. With InfiniBand's ability to support very large clusters and Rocks+ enterprise-class support provides for faster installation and easier maintenance of a production-ready cluster.



Clustercorp

Clustercorp is a leader in commercial software, services, and support for Rocks-based HPC clusters. Clustercorp's primary product line, Rocks+, is a complete HPC cluster distribution that deploys and manages everything from the operating system to popular 3rd-party software stacks that turn complex HPC designs into repeatable turnkey solutions.

Rocks+

Rocks+ is a complete HPC Cluster software stack, including everything from the operating system to a modular applications level environment - all of which is available as a single DVD or a set of easily downloadable ISOs.

Rocks+ includes Rocks+Support, which addresses the biggest problem in building on an open source solution in a production environment – “the support gap”.

Rocks+Rolls is the second part of the equation, which includes intelligently designed software stacks that operate as plug-and-play, modular components for Rocks+. Clustercorp's Rolls can be added to a cluster by simply selecting a check-box at install time or using a simple command-line process post-install. Automating the burdensome process of application installation and configuration relieves administrators of an error-prone process and ensures end users a validated, known-good software environment.

Rocks+Moab adds the Moab Roll, which bolsters Rocks+ with an easy to use GUI, a commercial workload and resource manager, and great price-performance value. It includes the entire Moab Cluster Suite, and utilizes TORQUE resource manager to set up the cluster with a base configuration for resource management.

Solution Highlights

Provides Fabric and Application Scaling to 1000s of CPUs

QLogic high performance InfiniBand with its extremely low latency and substantial 20Gbit bandwidth offers support for very large clusters up to multi-thousands of nodes.

Reduce or Eliminate Costs

By better leveraging cluster compute and storage resources, customers utilizing 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 also enable the deployment of grid computing architectures, which allows for the pooling of compute and storage resources across multiple user groups. This results in better overall IT infrastructure utilization and lower overall cost of product deployment

QLogic Corporation

QLogic is a leading supplier of high performance clustering and storage networking solutions, which include host adapters and InfiniBand switches that are used by major corporations and government facilities. The company delivers a broad and diverse portfolio of products that includes InfiniBand switches and InfiniBand host channel adapters for the fast growing, high performance computing market. The company is also a leading supplier of Fibre Channel HBAs, blade server embedded Fibre Channel switches, Fibre Channel stackable switches, iSCSI HBAs, and iSCSI routers. QLogic products are delivered to small-to-medium businesses and large enterprises around the world via its channel partner community. QLogic products are also powering solutions from leading companies like Cisco, Dell, EMC, Hitachi Data Systems, HP, IBM, Network Appliance and Sun Microsystems. QLogic is a member of the S&P 500 Index.

QLogic – High Performance Cluster Technology

QLogic offers a comprehensive end-to-end product portfolio that includes Multi-Protocol Fabric Directors, Edge Fabric Switches, Host Channel Adapters (HCAs), 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 to 288 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

- 11.52Tb/s throughput in a single chassis
- InfiniBand DDR supported across full switching portfolio
- Support for 20Gb/s node-to-node
- Up to 60Gb/s switch-to-switch bandpass
- Single wire support for InfiniBand, Ethernet, and Fibre Channel

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

Multi-Protocol Gateways

- Virtual I/O Controller (VIC) functionality
- 10Gb Ethernet and 4Gb Fibre Channel
- Scale I/O and servers independently
- Pool and share I/O between servers

Widest Range of Host InfiniBand Adapters

- Widest choice of adapters
- SDR and DDR capable
- PCI-X and PCIe

Compatible Plus Software Stacks

- OpenFabrics / OFED
- Optional value-added capabilities
- Accelerated standard MPI stacks

QLogic InfiniBand Benefits

1. Significantly improves application performance for faster time-to-solution
2. Provides fabric and application scaling to 1000s of CPUs
3. Simplifies data center design and reduce operating costs
4. Eliminates the need for separate physical server connections to storage and network resources
5. Scale servers and I/O independently pool and share I/O between servers

To Learn More:

QLogic: www.qlogic.com

Clustercorp: www.Clustercorp.com