



StackIQ Cluster Manager for HPC

Designing, deploying, and managing a high performance computing environment can be difficult for even the most experienced IT staff. To help simplify the task, StackIQ offers an integrated HPC management platform based on commodity servers and StackIQ Cluster Manager—the commercial version of the Rocks open source project. Rocks remains the de facto industry standard for managing high performance compute clusters. There are more than 10,000 clusters under management by Rocks.

STACKIQ CLUSTER MANAGER FOR HPC

StackIQ Cluster Manager for HPC brings enterprise-class management to high performance computing clusters. It is an integrated solution built on the most mature and widely used stack in high performance computing. With StackIQ Cluster Manager, you will achieve reliable cluster operations for repeatable results. It lets you select from a wide range of software modules (Rolls) to create the right software stack for your application. Once you have selected a software stack, the StackIQ Avalanche installer brings up every node in exactly the state you need—ready to go. The engineering and testing effort we put into our product frees administrators from the do-it-yourself, on-the-fly approach some products require, replacing it with a predictable, step-by-step approach to a working solution.



KEY FEATURES

- Complete lifecycle management of the entire cluster — hardware, operating system, network, and software
- Advanced cluster diagnostics
- Flexible, automated system configuration for heterogeneous physical infrastructure
- Script-free configuration and deployment
- Peer-to-peer Avalanche installer
- Disk and network management
- Extensibility via the “Rolls” framework, including support for latest HPC software (UGE, Moab, OFED, CUDA, and more)



SOLUTION COMPONENTS

With StackIQ Cluster Manager, you won't be left on your own to deal with any aspect of your HPC cluster. We include everything "in the box" to simplify the management of HPC environments.

- StackIQ Cluster Manager
- CentOS or Red Hat Enterprise Linux*
- Workload management software
- Integrated hardware support
- Interconnect software

Workload Management Rolls

The Grid Engine Roll provides intelligent scheduling and robust, flexible queue management.

The Univa Grid Engine Roll adds a number of features to Grid Engine including enterprise support, priority policies, and dynamic resource management.

The Moab Roll adds the Moab Cluster Suite providing an automated configuration for powerful workload and resource management that integrates scheduling, monitoring, and reporting for cluster workloads.

Interconnect Rolls

The OFED Roll includes drivers and firmware for Mellanox InfiniBand host channel adapters (HCAs) and Intel iWarp, including fabric management tools and multiple MPI environments.

The Solarflare Roll includes a preconfigured OpenLoad network and dramatically reduces application-to-application message latency—essential for high-frequency trading and scientific applications.

SUPPORT

An enterprise-grade solution needs enterprise-grade support. That's why StackIQ Cluster Manager features full support for the entire solution.

Standard Support — Standard support assists organizations during the proof-of-concept, staging, and deployment phases. Included are configuration and installation questions, explanation of routine maintenance, diagnosis of system issues, and any bug fixes or patches that may be necessary. Standard support subscriptions are intended for environments that are not mission-critical.

Enterprise Support — Enterprise support includes all of the support coverage from standard edition plus the ability to contact StackIQ support via email or phone, 24x7 with up to one-hour response times for mission critical production issues.

BENEFITS

Reduced time to production — Choose the software you want, set key parameters, then sit back and let the parallel Avalanche installer build your HPC cluster right from bare metal. There is no faster way to go from pallet to production.

Ease of operation — StackIQ Cluster management software provides all the tools you need to keep the cluster healthy and operating efficiently. StackIQ Cluster Manager handles your complete cluster environment from a single pane of glass, providing our users greater uptime, efficiency, and performance.

Extensibility — Modular architecture lets you customize your cluster to suit your particular needs. Our platform allows for the management of any application in your HPC environment through the Open Source Rocks framework. A wide variety of software components are readily available, or you can build your own.

Reduced time to scale — When it's time to scale out your cluster, StackIQ Cluster Manager makes it easy. Since the deployment and management engines were designed for scale, expanding your cluster or creating new ones at other locations is straightforward. No scripts to edit. No configuration guesswork.



4225 Executive Square, Suite 1000, La Jolla, CA 92037
Phone: 858.380.2020 | info@stackIQ.com | www.stackIQ.com