

Building Industry-Standard 1U/2U Turnkey Cluster Projects with Open Source Cluster Management Options



Business Benefits

- Easy to build and manage turnkey HPC Clusters
- Complete Commercial Support
- Integrated 3rd Party Applications
- Cost-effective
- Rocks+ includes cluster management middleware, libraries, compilers and workload mgmt tools
- Includes enterprise class commercial support from ClusterCorp, the leaders of the Rocks community
- Integrate/Unify management across diverse resources and environments in a cluster
- Control/Share resource usage between users, groups and projects
- Simplify use, access and control for both users and administrators
- Track, diagnose and report on cluster workload and status information
- Automate tasks and processes to streamline job turnaround and reduce administrative burden
- Scalable architecture that is grid ready, compatible and extensible
- Improve Cluster Performance with 90-99% Utilization

With flexible configuration designs and integrating industry-standard technologies, Appro offers complete turnkey cluster solutions with open source cluster management options for our 1U/2U cluster projects. Appro works with open source and commercially supported software such as ROCKS+ and MOAB from ClusterCorp to deploy a full service open source, customized and self-maintained cluster environment.

Rocks+ = Flexibility and Scalability

The design specification of a Rocks+ Cluster can vary from a small 16-node system built with a local Gigabit Ethernet network to a large-scale supercomputing cluster with thousands of cores and high-end interconnect such as InfiniBand. Rocks+ can manage each type of system with equal efficiency.

Rocks+ includes important additional software (i.e. Rolls – modular plug-ins to Rocks), which add a number of items to Rocks, to include:

- Intel Cluster Ready Roll
- Intel Developer Roll (Compilers)
- PGI Roll (Portland Group Compilers)
- Moab Roll (Cluster Resources)
- LSF Roll (Platform)
- TotalView Roll (Debugger)
- CUDA Roll (NVIDIA/Tesla)
- Absoft Roll (Compilers)
- Support Roll

Mellanox OFED Roll (there is no support for IB in Open Source Rocks). Rocks+ clusters may supplement a GbE management with a dedicated InfiniBand IPC fabric with fast switching and native RDMA capabilities to ensure maximum performance.

MOAB Cluster Suite = Efficiency

Moab Cluster Suite incorporates the following industry-leading applications from Cluster Resources:

- Moab Workload Manager® — a policy-based workload management and scheduling engine
- Moab Cluster Manager® — a powerful graphical cluster admin interface, monitor & reporting tool
- Moab Access Portal® — a web-based end-user job submission and management portal



System Compatibility

Operating system support for Linux (all), Unix (AIX, IRIX, HP-UX, FreeBSD, OSF/Tru-64, Solaris, etc.), Mac OSX & limited Windows support

Resource Manager support for LSF, TORQUE, PBSPro, SGE, SLURM, LoadLeveler, OpenPBS, BProc, and custom resource managers

About Rocks+ and MOAB Cluster Suite®

Rocks+ is the only open source commercial solution licensed based on Rocks that is designed specifically for HPC clusters. Moab Cluster Suite® is a professional cluster management solution that integrates scheduling, managing, monitoring and reporting of cluster workloads. Moab Cluster Suite simplifies and unifies management across one or multiple hardware, operating system, storage, network, license and resource manager environments to increase the ROI of cluster investments. Its task-oriented graphical management and flexible policy capabilities provide an intelligent management layer that guarantees service levels, speeds job processing and easily accommodates additional resources.



About Appro

Appro accelerates technical applications and business results unlocking the value of IT for the high-performance and enterprise computing markets environment through differentiated performance balanced architecture, open standards, and engineering expertise. Appro is a leading developer of innovative, high-performance, density-managed servers, cluster-solutions, storage subsystems, and high-end workstations for the high-performance and enterprise computing markets.

Appro's headquarters is in Milpitas, CA with an R&D and manufacturing partner in Asia and a sales and service office in Houston, Texas.

Learn More

For more information Appro Supercomputer Solutions please contact an Appro Sales Representative, visit www.appro.com or email us at clustersolutions@appro.com.



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