

Cluster Resources a Key Player on Team Behind World's Fastest Open Science Supercomputer at DOE's Oak Ridge National Laboratory

Moab helps Jaguar become first open science supercomputer to achieve petascale processing speed

PROVO, UTAH—November 17, 2008— The Department of Energy announced Monday that its Jaguar system had become the world's first supercomputer dedicated to open science to break the petaflop processing barrier with a peak theoretical performance of 1.64 quadrillion mathematical calculations per second. Jaguar achieved a sustained performance level of more than 1.3 petaflops in one of its first scientific application simulations.

The speed and power of the jaguar aptly characterize the newly achieved petascale capabilities of the Cray XT5 supercomputer system Jaguar at Oak Ridge National Laboratory (ORNL). From the beginning, Moab workload scheduling software from Cluster Resources has been an integral part of ORNL's progression leading to this accomplishment.

"Moab has been essential for getting the most out of Jaguar," says Don Maxwell, technical lead for Jaguar at Oak Ridge National Laboratory. "Moab gives us the flexibility to schedule resources to promote leadership science and maintain a very high rate of utilization. The feature set provided by Moab gives us the capability to change policies easily as requirements and priorities of the center and its users evolve.

"Development of Moab for the Cray XT platform was initiated in partnership with Cluster Resources three years ago, and we continue to work together to improve the scheduling capabilities for Jaguar."

As part of this combination of highly sophisticated software and hardware solutions, Moab's unique predictive scheduling capability optimizes utilization of Jaguar's more than 45,000 quad-core AMD Opteron processors, 360 TB memory, 10 petabyte file system, and other resources. In addition, Moab supports standing reservations, dynamic backfill, preemption, fairshare, quality of service, prioritization, and "run-this-job-next" policies.

Moab plus the open-source TORQUE* resource manager provides the best support for heterogeneous resources, such as multiple memory sites, architectures, and node features, as well as the ability to steer jobs to specific node sets and to enforce per-node scheduling policies and limits.

"We're proud to be a key member of the team that delivered Jaguar. To perform at this scale requires a level of intelligent management spanning optimization, SLA-enforcement, fault tolerance, and component integration which has not been previously available. We're excited to contribute to this accomplishment," David Jackson, CTO of Cluster Resources, commented. "Congratulations to Oak Ridge and system provider Cray for this historic delivery."

Moab and TORQUE optimize many of the world's fastest supercomputers, including the Roadrunner system at Los Alamos National Laboratory, which achieved petascale capability earlier this year.

To learn more about how Moab can optimize your high-performance computing system or data center, visit www.clusterresources.com or call (801) 717-3700.

About Cluster Resources

Cluster Resources, Inc. is a leading provider of workload and resource management software and services for cluster, grid, data center, cloud, and adaptive computing environments. With more than a decade of industry experience, Cluster Resources delivers software products and services that enable organizations to understand, control, and fully optimize their compute resources and related processes.

For more information visit www.clusterresources.com or call +1 (801) 717-3700 (for the Americas and Asia Pacific), +44 (1223) 437134 (for Europe, Middle East and Africa) or email info@clusterresources.com.

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