

## Adaptive Computing Boosts Performance and Reach of Africa's Largest Supercomputer

*South Africa's Centre for High Performance Computing Selects Leading HPC Software to Enhance Utilization, Performance and Resource Availability*

**Provo, Utah—April 12, 2010—** [Adaptive Computing](#), the company behind the [Moab](#)<sup>®</sup> unified intelligent automation technology, announced today that South Africa's Centre for High Performance Computing (CHPC), the continent's largest publicly funded high-performance computing facility, has chosen the Moab Adaptive HPC Suite™ as its intelligent automation software solution. With Adaptive Computing technology, CHPC is able to integrate and manage disparate server and OS architectures while eliminating customer wait times for access to the compute resources and improving utilization levels to over 95 percent. The resulting benefits translate into increased productivity and the availability of Africa's premier HPC capabilities to a much wider community.

CHPC's use of Adaptive Computing software aligns the facility's main objectives to enable South Africa to become globally competitive and to accelerate Africa's socioeconomic growth through the effective application of high-end cyber infrastructure. Prior to the formation of CHPC in 2007, South African research and business entities that required large computational resources had to seek out facilities abroad. Based in Cape Town, CHPC now provides compute resources to a variety of domestic industries, including life sciences, astronomy, animation, finance, climatology and computer science. For example, a South African company, Character Matters Studios, has been able to produce the nation's first full-length 3D animation film as a direct result of the newly introduced support for Microsoft Windows HPC Server 2008 based resources provided by CHPC. The film, entitled "The Lion of Judah," will be out in the Spring of 2010 in South Africa and United States.

"We discussed options with our peers and the overwhelming advice was that Moab was a powerful technology worthy of serious consideration, especially given the complex nature of CHPC's environment," said Dr. Happy Sithole, PhD, director of CHPC. "We knew that the paramount challenge would be managing a complex environment made up of a whole zoo of architectures. The facility's hybrid systems, integrated and powered by Moab<sup>®</sup>, improved CHPC's ability to meet its goals and improved researchers' productivity."

Adaptive Computing delivered the following capabilities and benefits:

- Integration of a variety of architectures including AMD Opteron, Intel Xeon, IBM Power PC, IBM Power 4+ and Sun Microsystems SPARC processor based systems running a mixture of operating systems including UNIX (Solaris), Linux (SLES) and Microsoft Windows HPC Server 2008. This allows CHPC to treat its diverse set of architectures as a unified pool of resources intelligently orchestrated through a centralized management system reducing administrative overhead and associated costs from managing multiple separate system domains with different tools and methodologies.
- Orchestrates multiple resource managers including IBM Tivoli LoadLeveler and SLURM dramatically improving the system's ability to detect completed workloads and release

resources for tasks waiting in the queue. This has improved utilization levels from 60 percent to over 95 percent and eliminated wait times enabling researchers to be more productive.

- Automatic provisioning of either Linux or Microsoft Windows HPC server environments from dual-boot systems on demand removing the administrative burden and time delays of doing it manually or the cost and inefficiencies of having separate dedicated resources for each operating environment. This dynamic infrastructure-as-a-service model has made CHPC's resources available to a much wider community as a result of greater responsiveness and an increased range of services.

“Moab Adaptive HPC Suite provides CHPC with the flexibility it needs to satisfy South Africa’s diverse user community while optimizing the throughput of its HPC infrastructure,” said Michael Jackson, COO and president of Adaptive Computing. “We are excited to play a role in advancing Africa’s economy by making invaluable technological resources available to a much broader range of organizations.”

### **About the Centre of High-Performance Computing**

The CHPC is one of three primary pillars of the national cyber-infrastructure intervention supported by South Africa’s Department of Science and Technology (DST). The South African National Research Network (SANReN) and the Very Large Databases (VLDB) complement the CHPC through the provision of high-speed, high-bandwidth connectivity, and the effective curation of a variety of notably large databases. The CHPC infrastructure is updated and maintained meticulously to comply with international standards.

### **About Adaptive Computing**

Adaptive Computing provides intelligent automation software for HPC, data center and cloud environments. The company’s infrastructure intelligence solutions, powered by Moab®, deliver policy-based governance, allowing customers to consolidate and virtualize resources, allocate and manage applications, optimize service levels and reduce operational costs. Adaptive Computing products manage the world’s largest computing installations and are the preferred intelligent automation solutions for the leading global HPC and data center vendors. For more information, call (801) 717-3700 or visit [www.adaptivecomputing.com](http://www.adaptivecomputing.com).

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