



## Intelligent HPC Workload Management



# Moab® HPC Suite **BASIC EDITION**

### Overview

Moab® HPC Suite – Basic Edition is an intelligent workload management solution. It automates the scheduling, managing, monitoring, and reporting of HPC workloads on massive scale, multi-technology installations. The patented Moab intelligence engine uses multi-dimensional policies to accelerate running workloads across the ideal combination of diverse resources. These policies balance high utilization and throughput goals with competing workload priorities and SLA requirements. The speed and accuracy of the automated scheduling decisions optimizes workload throughput and resource utilization. This gets more work accomplished in less time, and in the right priority order. Moab HPC Suite - Basic Edition optimizes the value and satisfaction from HPC systems while reducing management cost and complexity.

### Drive Higher ROI from Your HPC

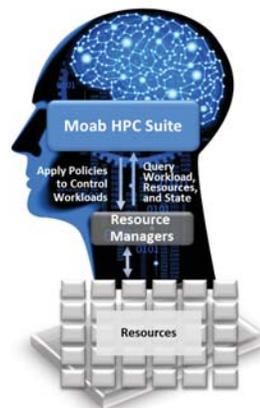
Moab HPC Suite - Basic Edition provides intelligent workload management that accelerates productivity, automates uptime and ensures SLA's and priorities are met. It quickly delivers powerful benefits that drive more ROI and results from your HPC system including:

- Higher job throughput
- Massive scalability for faster response and extensibility
- Optimum utilization of 90-99% on a consistent basis
- Fast, simple job submission and management to increase productivity
- Reduced cluster management and support costs, as well as complexity, across heterogeneous systems
- Reduced job failures and auto-recovery from failures
- SLAs consistently met for improved user and organization satisfaction

### Productivity Acceleration

Moab HPC Suite - Basic Edition accelerates overall system, user and administrator productivity. Moab provides the scalability, management efficiency, and easy job submission that gets results delivered from HPC resources faster and at a lower cost including:

- **Massive multi-point scalability** to accelerate job response and throughput, including high throughput computing
- **Workload-optimized resource allocation** to get more results out of heterogeneous resources and reduce costs
- **Optimized, intelligent scheduling** packs workload and backfills around priority jobs to efficiently use resources, including topology-based scheduling
- **Optimized scheduling and management of accelerators**, both Intel MIC and GPGUs, for jobs to maximize their utilization and effectiveness
- **Unified workload management for heterogeneous cluster** to maximize resource availability and administration efficiency
- **Simplified job submission and management** with advanced job arrays, self-service portal, and templates
- **Administrator dashboards and reporting tools** reduce management complexity, time and costs
- **High throughput** enables 100x faster throughput on short jobs



**Moab is the “brain” of an HPC system, intelligently optimizing workload throughput while balancing service levels and priorities.**



# Moab® HPC Suite BASIC EDITION

**Moab manages the world's top systems and is ready to manage yours. We are the largest supplier of HPC job and workload management software to HPC sites. Many of the Top 500 systems and most innovative HPC systems rely on Moab to optimize throughput and utilization while balancing SLA requirements.**

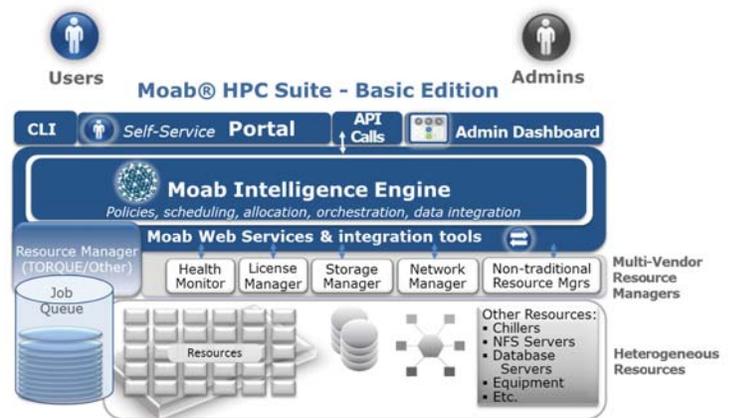
## Uptime Automation

Job and resource failures in HPC systems lead to delayed results, higher support costs, and missed organizational opportunities or objectives. Moab HPC Suite - Basic Edition intelligently automates workload and resource uptime in the HPC system to ensure that jobs complete successfully and reliably to avoid these failures. Organizations can benefit from capabilities such as:

- **Intelligent resource placement to prevent job failures** with granular resource modeling to meet workload requirements and avoid at-risk resources
- **Auto-response to failures and events** with configurable actions to pre-failure conditions, amber alerts, or other metrics and monitors
- **Workload-aware future maintenance scheduling** that helps maintain a stable HPC system without disrupting workload productivity
- **Professional technical support** to ensure your workload management stays up and running at peak performance

## Auto SLA Enforcement

Moab HPC Suite - Basic Edition uses the powerful Moab intelligence engine to optimally schedule and dynamically adjust workload to consistently meet service level agreements (SLAs), guarantees, or business priorities. This automatically



ensures that the right workloads are completed at the optimal times, balancing the complex number of using departments, priorities, and SLAs. Moab HPC Suite - Basic Edition provides:

- **Resource sharing and usage policies** that schedule resources in line with resource sharing agreements (i.e. usage limits, access controls, and dynamic fairshare policies)
- **SLA and priority policies** to make sure the highest priority workloads are processed first (i.e. Quality of Service and hierarchical priority weighting policies)
- **Continuous plus future reservations scheduling** that ensures priorities and guarantees are proactively met as conditions or workload changes (i.e. future reservations, pre-emption, etc.)

## Intelligent Workload Management

As today's leading HPC facilities move beyond petascale towards exascale systems that incorporate increasingly sophisticated and specialized technologies, equally sophisticated and intelligent management capabilities are essential. With a proven history of managing the most advanced, diverse, and data-intensive systems in the Top500, Moab continues to be the preferred workload management solution for next generation HPC facilities.

For more information on Moab HPC Suite - Basic Edition visit [www.adaptivecomputing.com](http://www.adaptivecomputing.com).

**Contact a solutions advisor by phone or email, or visit our Web site today**

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