

Cross-Platform Solutions

Unified Ease-of-Use Experience

Adaptive Computing enables organizations to unify the HPC user, admin and manager experience across multi-scheduler environments on a per-service basis with their cross-scheduler solutions.

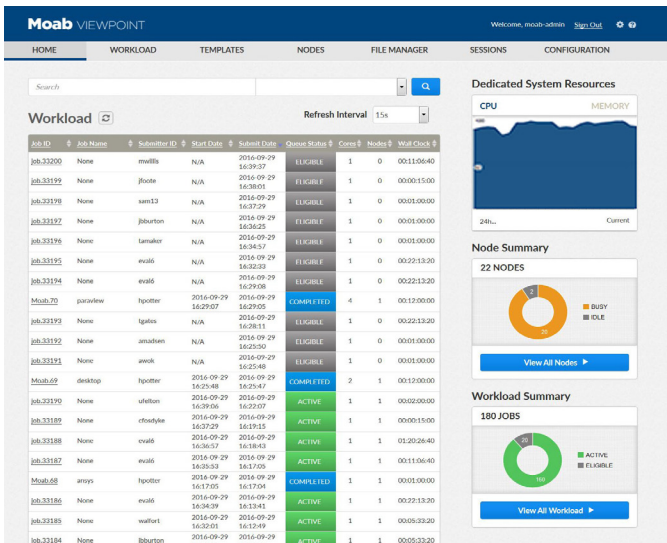
Avoid Fragmentation-based Waste

Organizations commonly encounter increased heterogeneity of their underlying HPC scheduler environment as hardware vendors bid differing solutions, peer departments set up different schedulers, and organizations pick up new systems through acquiring other entities.

This either leaves the overall organization in an unproductive disarray of technology requiring constant re-training or hinders collaboration and increases waste as departments continue to silo off their own resources and manage their own redundant administrative efforts.

Best-in-Class Cross-Platform Solutions

Adaptive Computing's new Cross-Platform Products solve this problem by enabling best-in-class offerings to be purchased individually and to be applied across third-party schedulers.



The screenshot shows the Moab Viewpoint dashboard with a navigation bar (HOME, WORKLOAD, TEMPLATES, NODES, FILE MANAGER, SESSIONS, CONFIGURATION) and a search bar. The main content area is divided into a 'Workload' table and several summary cards.

| Job ID | Job Name | Submitter ID | Start Date | Submit Date | Queue Status | Count | Nodes | Wall Clock |
|-----------|----------|--------------|---------------------|---------------------|--------------|-------|-------|-------------|
| job-33200 | None | mmwlls | N/A | 2016-09-29 16:39:27 | ELIGIBLE | 1 | 0 | 00:11:06:40 |
| job-33199 | None | jfoote | N/A | 2016-09-29 16:38:01 | ELIGIBLE | 1 | 0 | 00:00:15:00 |
| job-33198 | None | sams12 | N/A | 2016-09-29 16:37:29 | ELIGIBLE | 1 | 0 | 00:02:00:00 |
| job-33197 | None | jburton | N/A | 2016-09-29 16:36:25 | ELIGIBLE | 1 | 0 | 00:05:00:00 |
| job-33196 | None | lunaker | N/A | 2016-09-29 16:34:17 | ELIGIBLE | 1 | 0 | 00:05:00:00 |
| job-33195 | None | eval6 | N/A | 2016-09-29 16:32:23 | ELIGIBLE | 1 | 0 | 00:22:13:30 |
| job-33194 | None | eval6 | N/A | 2016-09-29 16:29:08 | ELIGIBLE | 1 | 0 | 00:22:13:20 |
| Moab_70 | paraview | ipcotter | 2016-09-29 16:29:07 | 2016-09-29 16:29:09 | COMPLETED | 4 | 1 | 00:12:00:00 |
| job-33193 | None | lgates | N/A | 2016-09-29 16:28:11 | ELIGIBLE | 1 | 0 | 00:22:13:20 |
| job-33192 | None | ansatheni | N/A | 2016-09-29 16:25:50 | ELIGIBLE | 1 | 0 | 00:01:00:00 |
| job-33191 | None | awak | N/A | 2016-09-29 16:25:48 | ELIGIBLE | 1 | 0 | 00:02:00:00 |
| Moab_62 | desktop | ipcotter | 2016-09-29 16:25:08 | 2016-09-29 16:25:17 | COMPLETED | 2 | 1 | 00:12:00:00 |
| job-33190 | None | uflinton | 2016-09-29 16:25:06 | 2016-09-29 16:25:07 | ACTIVE | 1 | 1 | 00:02:00:00 |
| job-33189 | None | rfoodyla | 2016-09-29 16:37:29 | 2016-09-29 16:19:15 | ACTIVE | 1 | 1 | 00:00:15:00 |
| job-33188 | None | eval6 | 2016-09-29 16:36:17 | 2016-09-29 16:18:43 | ACTIVE | 1 | 1 | 01:20:28:40 |
| job-33187 | None | eval6 | 2016-09-29 16:35:13 | 2016-09-29 16:17:09 | ACTIVE | 1 | 1 | 00:11:06:40 |
| Moab_68 | anrys | ipcotter | 2016-09-29 16:17:05 | 2016-09-29 16:17:07 | COMPLETED | 1 | 1 | 00:05:00:00 |
| job-33186 | None | eval6 | 2016-09-29 16:34:29 | 2016-09-29 16:13:41 | ACTIVE | 1 | 1 | 00:22:13:30 |
| job-33185 | None | wallert | 2016-09-29 16:32:01 | 2016-09-29 16:12:49 | ACTIVE | 1 | 1 | 00:05:32:20 |
| job-33184 | None | jburton | 2016-09-29 16:29:07 | 2016-09-29 16:09:04 | ACTIVE | 1 | 1 | 00:05:32:20 |

Summary cards on the right include: 'Dedicated System Resources' (CPU/MEMORY), 'Node Summary' (22 NODES, 24% BUSY, 76% IDLE), and 'Workload Summary' (180 JOBS, 30% ACTIVE, 70% ELIGIBLE).

Viewpoint Job Submission Portal Dashboard



Cross-Platform Solutions Attributes

- **Licensing Modularity**
 - **Per Component Pricing:** Buy what you want, when you want it
- **Cross-Platform Support**
 - **Choice:** Moab, Torque, Slurm, SGE/UGE, LSF, PBS Pro,
 - **Viewpoint Portal**
 - **Nitro High Throughput**
 - **Remote Visualization**
 - **Reporting & Analytics**
 - **Accounting**

Adaptive Computing customers can standardize on Moab and Torque, Slurm or other schedulers of their choice. Then they can apply the above best-in-class solutions on these systems as well as systems with non-matching schedulers, thereby maintaining a unified ease-of-use experience regardless of scheduler platform.

This allows new clusters that ship with alternate schedulers, or that are acquired through M&A activities to quickly become part of a productive overall experience.

Cross-Platform Solutions (cont'd)

Manager Benefits

Adaptive Computing's Cross-Platform Solutions allow business managers to achieve a unified accounting of usage across heterogeneous scheduler environments as well as to gain deeper insight into utilization, capacity planning and efficiency through unified reporting and analytics. Further it allows them to more rapidly ensure integration and productivity from consolidation projects or newly acquired business units.

User Benefits

Users don't have to be re-trained on each new cluster purchase and new users can achieve productivity quickly by using the Viewpoint Submission Portal. A unified Remote Visualization experience also helps users to become more personally productive and better able to collaborate from remote locations (home, remote offices, field, etc.).

Administrator Benefits

Cross-Platform Solutions also enable administrators to deliver higher productivity to their organization, from raw submission speed improvements (up to 100X) using Nitro High Throughput, to more efficient system utilization and user productivity. They spend less time solving user issues as users are better able to help themselves with easy-to-use system feedback provided via Viewpoint, along with best practices application templates, script wizards and other important time saving capabilities.

Summary

Adaptive Computing enables organizations to unify the HPC user, admin and manager experience across multi-scheduler environments on a per service basis with their Cross-Platform Solutions. This unified ease-of-use experience drives higher visibility and productivity and helps an organization accelerate the results that give them a competitive advantage.

Cross-Platform Solutions Compatibility

| | Moab | Torque | Slurm | PBS Pro | SGE/UGE | LSF |
|-----------------------|------|--------|-------|---------|---------|-----|
| Nitro High Throughput | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Viewpoint Portal | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Remote Visualization | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Reporting & Analytics | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Accounting | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

Cross-Platform Solutions

- **Viewpoint Job Submission Portal** - Easy-to-use job submission and management portal that includes best-practices application templates, script wizard, workload management, job details, integrated file management, and other ease-of-use capabilities.
- **Remote Visualization** - 2D/3D visualization solution which allows users to remotely view and interact with applications or entire desktops on a cluster via a common browser, saving money on expensive licenses or GPU's.
- **Reporting & Analytics** - Big data processing solution that correlates resource and workload information into customizable reports and dashboards.
- **Accounting** - Generalized accounting solution which provides resource usage tracking, charging and enforcement for Moab and Torque, or tracking and charging for other resource managers / schedulers with simple script changes.
- **Nitro (High Throughput)** - High throughput job launcher able to launch single node jobs up to 100X faster than a traditional scheduler.

Contact a solutions advisor by phone or email, or visit our web site today.

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