

Viewpoint

Ease-of-Use Driven Productivity

Adaptive Computing's Viewpoint web-based graphical user interface aids in job submission, management, and other workload functions, creating greater self-sufficiency for end users while reducing administrator overhead.

End User Benefits

Features like portal-based job submission, application templates, script builders, job details, and file management increase the productivity of end users by speeding and simplifying the submission process. The portal's ease-of-use has the potential to expand an HPC user base to even non-IT skilled personnel.

These expanded user capabilities save administrators time spent managing users' requests. Best practices-based submission templates help speed the submission process and reduce potential errors. Also, the portal provides valuable feedback to users about their workloads to help them solve their own job issues and more efficiently utilize resources.

Beyond the typical standard job, job array, and application template submission, users may also submit Nitro high throughput workloads or remote visualization sessions if the supporting products are installed and configured.



End User Features

- **Job Submission Portal** - Submit and manage basic jobs through a simple and easy-to-use point-and-click web portal, in addition to the command line interface.
- **Application Templates** - Access or create and share templates which simplify the submission process for popular applications.
- **Script Builder** - Facilitate correct use of syntax and reduce new-to-HPC user error through drag-and-drop parameters in a visual interface.
- **Job Details** - Gain insight into job status and reasons for failure through explanatory messages, saving administrator time by helping users help themselves.
- **File Manager** - Navigate output files right from an internal browser that includes the ability to move, rename, delete, compress, uncompress, and preview files.
- **Integrated Remote Visualization** - Create and launch 2D/3D remote visualization sessions through pre-defined application templates. Dependent on separate remote visualization purchase.
- **Integrated High Throughput** - Create and launch Nitro high throughput sessions through pre-defined application templates. Dependent on separate purchase of Nitro.

The screenshot shows the Moab Viewpoint web interface. At the top, there is a navigation bar with 'HOME', 'WORKLOAD', 'TEMPLATES', 'NODES', 'FILE MANAGER', and 'CONFIGURATION'. Below this is a 'Create Job' section with a 'Free Form' tab. The form is divided into several sections: 'Basic Job Settings' (Name, Submission Script), 'Credentials' (Account, Queue / Class), 'Data Management' (Execution Path, Error Path, Output Path), and 'Resources' (Number of Cores, Total Memory (GB), Total Cores, Architecture). There is also a 'Time Management' section with a 'Duration' dropdown set to '1w 3d' and a 'Delay Start By' section with a calendar-like interface.

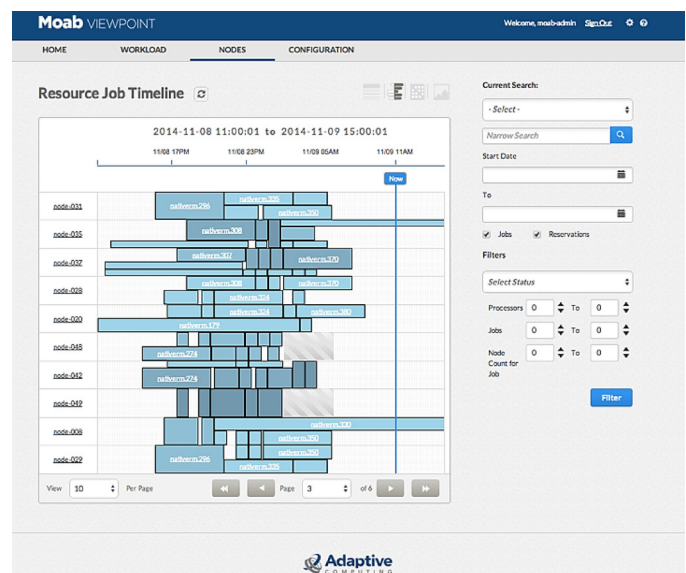
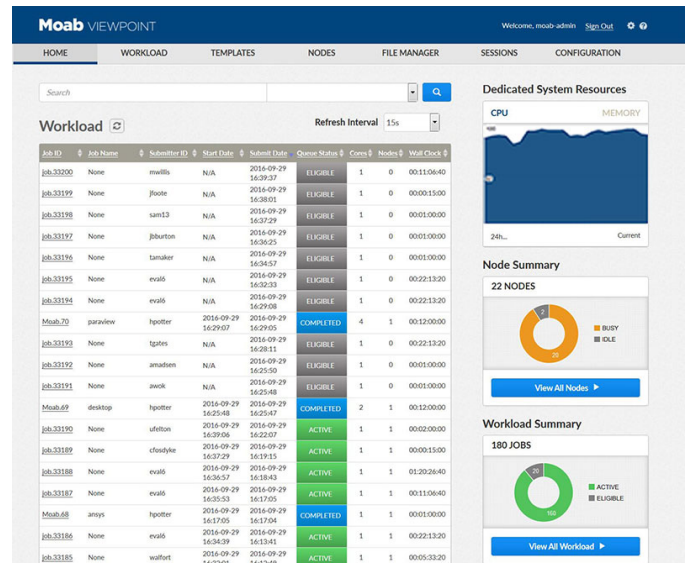
Viewpoint (cont'd)

Administrator Benefits

Viewpoint enables easy viewing of workload status, reporting on resource utilization, workload troubleshooting, and other system metrics for the administrator.

Administrator Features

- **Dashboard** - View the cluster's allocated CPU and memory utilization over a 24-hour period as well as the quantity of jobs submitted. The workload list is color-coded for easy viewing of current job state (running, removed, idle, completed, etc).
- **Application Templates** - Implement standard application templates and make those available to all or specific users. This automates best practices by pre-defining default values, hiding unnecessary options, and adding custom fields, thereby simplifying the submission process and optimizing application run time.
- **Searching and Filtering** - Identify workloads that are in specific states (e.g. running, suspended, eligible, blocked, deferred, hold, failed, idle), or that are from specific users and groups.
- **Workload Management** - Manage the priority of individual workloads, as well as assist in diagnosing job issues and take basic actions on target workloads such as placing the job on hold, canceling, etc.
- **Node Monitoring** - Monitor every node in the system and its accompanying node ID, status, class, feature, processors available/configured, jobs, CPU utilization, and memory utilization.
- **Resource Job Timeline** - View individual node usage in a digestible, Tetris-like graph. It enables admins to monitor workload and resource utilization more easily than ever before and to identify areas where system utilization can be improved.
- **User Role Management** - Manage which users are assigned to a role and the specific pages and functions that role has access to.
- **Reporting & Analytics Integration** - Configure reports and dashboards to visualize resource usage and workload performance with available add-on.



Summary

Viewpoint greatly improves the way both administrators and end users interact with their HPC environment. Its ease-of-use oriented features save time previously spent on complicated processes, improve efficient use of resources, and foster higher overall productivity.

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