PBS Control
HPC Administrator’s control center for managing, optimizing and forecasting HPC resources

Altair’s PBS Control is an easy-to-use web application for monitoring and managing jobs and nodes in a High-Performance Computing (HPC) environment. PBS Control has seamless cloud bursting capabilities along with advanced analytics to support data-driven planning and decision making. Administrators can perform what-if analysis using workload simulation to determine the most productive way to scale an HPC system’s resources.

**Highlights:**
- **Modern UX:** Drag-and-drop simplicity
- **Configure:** Easily configure your workload scheduling settings
- **Cloud Bursting:** Improve responsiveness, adding capacity exactly when needed
- **Workload Simulator:** Simulate and optimize infrastructure sizing
- **Analyze:** Advanced analytics to support decision making

**PBS Control Benefits:**
- **Single pane of glass:** configure, deploy, monitor, burst, manage, troubleshoot, simulate, analyze, tune
- **Real-time monitoring:** simplify troubleshooting and maintenance
- **Reporting:** PBS Analytics powered by Carriots Analytics™
- **Workload simulator:** simulate and optimize infrastructure sizing
- **Multi-cloud bursting:** burst to any cloud for peak loads
- **Modern UX:** drag-and-drop simplicity

**Why PBS Control:**

The PBS Control portal provides visibility into site resources and gives control to administrators to configure, deploy, monitor, troubleshoot, report, and simulate clusters and clouds. Administrator control includes bursting peak workloads.

- Monitor and manage an HPC cluster’s nodes and jobs
- Configure default WLM server and security settings, and manage queues, resources, resource defaults, and limits
- Run simulations to perform what-if analysis
- View HPC resource usage charts and simulation results
- Use cloud bursting to run jobs in the cloud and have the ability to dynamically add or remove nodes based on demand
- Deploy an HPC appliance on both public and private clouds

**PBS Control Capabilities:**
- **Design:** Burst your jobs to the cloud, where you can dynamically add or remove nodes based on demand.
- **Cloud bursting:** Cloud bursting is a configuration that is set up between...
an HPC cluster and a public cloud to deal with peaks in cluster demand. When resource capacity at the HPC reaches a certain point, the demand is directed to a public cloud so there is no interruption of services.

- On-demand use of cloud resources to maximize efficiency
- Improve responsiveness, adding capacity exactly when needed
- Automatic governance and cost controls via site-defined policy and quotas
- Understands on premise utilization, ensuring bursting only when cost-efficient
- Vendor-agnostic: no lock-in
- Fast: 1,000+ nodes in minutes

**Manage:** Manage resources by adding, updating and deleting HPC.

**Monitor:** Monitor and manage an HPC cluster's nodes and jobs. Monitoring is divided into sub-tabs for easy viewing.

- Dashboard - View the total core and node usage over a day, a week, or a month.

**Configure:** Easily configure Cloud bursting and set quotas to manage costs

- Jobs - Monitor and manage jobs submitted to your HPC clusters
- Nodes - Monitor and manage your HPC cluster's nodes

**Configure:** Configure default WLM server and security settings, and manage queues, resources, resource defaults, and limits.

**Analyze:** PBS Analytics, powered by Carriots Analytics, is an easy-to-use job accounting and reporting solution that provides PBS Works administrators with advanced analytics to support data-driven planning and decision making.

- Plan more intelligently by forecasting usage based on real historical data
- Ensure accurate chargeback to projects, business units, and regions
- Reduce spend by sharing expensive licenses and raising utilization
- Meet project deadlines by minimizing IT bottlenecks
- Save on electricity by identifying patterns of non-use
- Decide on procurements/purchases after visualizing resource demand and supply

**Simulate:** Run a simulation to perform what-if analysis to determine the most productive way to scale an HPC cluster's resources.

- Allows evaluation of HPC environment changes without affecting production or requiring dedicated development clusters
- Support for capacity planning to optimize hardware expansions
- Simulates scheduler performance under hypothetical configurations using historical job data and the PBS Pro scheduler
- Simulator integrates with PBS Analytics to compare simulated results to current real-world performance

**Get more work done by identifying and exploiting valleys in license usage**

**Plan more intelligently by forecasting usage based on real historical data**

**Ensure accurate chargeback to projects, business units, and regions**

**Reduce spend by sharing expensive licenses and raising utilization**

**Meet project deadlines by minimizing IT bottlenecks**

**Save on electricity by identifying patterns of non-use**

**Simulate and optimize infrastructure sizing**

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