

MANAGE DIVERSE WORKLOADS WITH ALTAIR® PBS PROFESSIONAL®

Altair® PBS Professional® is a fast, powerful workload manager and job scheduler designed to improve productivity, optimize utilization, and simplify administration for clusters, clouds, and supercomputers — from the biggest high-performance computing (HPC) workloads to millions of small, high-throughput jobs. With dynamic policies, artificial intelligence (AI) workload support, a powerful customization API, and extensive hardware support, PBS Professional is ready to securely manage the most demanding challenges and maintain efficiency across your organization's HPC environment.

Proven, Trusted Workload Orchestration

From the smallest cluster to powerful Top500 systems, users across the globe trust PBS Professional to manage workloads in an array of commercial and public sectors including aerospace, energy, and automotive design. PBS Professional delivers powerful policy-driven scheduling, scalability, resiliency, and more. It ensures resources are always used optimally, without leaving critical jobs delayed in queues. It optimizes job scheduling and efficiently manages a diverse range of hardware and workloads. PBS Professional is the foundation of the Altair® HPCWorks® platform, providing access to remote visualization, cloud bursting, reporting and monitoring tools, and more.

Optimized Productivity and Efficiency

As HPC workloads become increasingly varied and complex, it gets harder to manage user needs and compute requirements without compromising productivity. PBS Professional optimizes job scheduling and efficiently manages a diverse range of hardware and workloads to increase productivity and save time and expense.

Support for Complex AI and Mixed Workloads

Many organizations are adopting AI to support critical applications, requiring a robust workload manager capable of handling demanding AI workloads. PBS Professional supports the vital resources necessary to run complex, mixed AI and HPC workloads, from Kubernetes to GPUs.

Flexibility and Configurability

PBS Professional includes a flexible plugin API that enables HPC administrators to configure clusters according to their organization's unique demands, with enhanced visibility and extensibility. PBS Professional has dozens of hook events, making it more configurable than any other workload manager — easily customizable to meet diverse industry requirements and accommodate individual HPC environments' intricacies.



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Find Out More:
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Exascale computing: Exascale means massive compute power, and PBS Professional is built to orchestrate and optimize the demands of exascale and beyond: 50,000 nodes in a cluster, 10 million jobs in a queue, and 1,000 concurrent active users. Many of the world's biggest computing systems use PBS Professional to power efficient workload management.

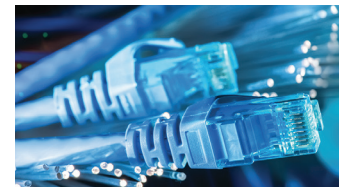
Powerful, policy-driven scheduler: PBS Professional accelerates job execution and selects optimal job placement across diverse, broadly distributed resources. It's easy to create intelligent policies to manage distributed, mixed-vendor computing assets as a single, unified system. PBS Professional is topology-aware and supports GPU scheduling.

Budget allocation and cost control: Manage budgets across your enterprise — on-premises, in the cloud, and for multiple clusters — by allocating your users credits for PBS Professional workloads. Credits can be provided in one or more customizable currencies. To give you visibility into HPC usage, PBS Professional includes full reporting of credit consumption by groups and individual users.

Unparalleled security: PBS Professional is the only workload manager and job scheduler to have achieved EAL3+ certification and the only workload manager offering integration with RedHat's SELinux cross-domain security (or multi-level security, MLS) technology.

Modern, web-driven interface: PBS Professional's powerful GraphQL interface provides job and node status operations. It includes common job submission, deletion, and alteration commands; job and node status queries; and an interactive API to craft queries.

Enterprise support: PBS Professional is backed by HPC experts around the world to ensure your computing environment operates optimally. Our developers continually work to enhance PBS Professional, resulting in world-class solutions and customer support.



PBS Professional orchestrates the most demanding workloads, delivering unparalleled security and expert support.

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