

PBS Control 2018.2

Release Notes



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Altair® PBS Works™ 2018.2

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PBS Control Release Notes

These release notes describe the new features, bug fixes, and known issues for PBS Control. Please see the following sections:

- [About PBS Control](#)
- [System Requirements](#)
- [Supported Product Configurations](#)
- [Prerequisites for Installation](#)
- [New Features](#)
- [Resolved Issues](#)
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About PBS Control

Altair's PBS Control is an easy-to-use web application for monitoring and managing jobs and nodes of an High-Performance Computing (HPC) cluster with advanced analytics to support data-driven planning and decision making. Also, administrators can perform what-if analysis for determining the most productive way to scale an HPC system's resources by running simulations and manage cloud appliances.

Features include:

- 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
- One-click appliance deployment: effortless for public, hybrid, and on-premise / private clouds
- Modern UX: drag-and-drop simplicity


To obtain the latest release package, contact your Altair sales representative by writing to sales@altair.com or support@altair.com. For more information, visit us at www.pbsworks.com.

System Requirements

Supported Platforms

PBS Control is supported on the following Linux 64bit platforms:

- CentOS 7.2, 7.3, and 7.4
- RHEL 7.2, 7.3, and 7.4
- SLES 12 SP2
- OpenSUSE 42.2



Minor versions of the operating systems listed above can be installed. However, the installer will issue a warning message indicating that the unsupported operating system may not perform as expected. SLES 12 SP3 has not yet been tested.

Supported Browser

The latest version of the following browsers is supported:

- Chrome
- Firefox
- Safari

Hardware Requirements

PBS Control requires a minimum hardware configuration:

Table 1. Hardware requirements for PBS Control

Hardware	Minimum Requirement	Recommended
CPU	4 cores	4 cores
Memory (Physical)	8 GB	16 GB
Disk Space	2 GB	4 GB

Additional CPUs, memory, and disk space may be required depending upon the PBS Control components installed and the size of your site's HPC cluster. Large environments may need more memory for PBS Analytics.

PBSControl requires at least 4 CPUs @2.4Ghz and 16GB of RAM. It is recommended to use a dedicated machine for PBSControl. It also has a minimum disk space requirement of 30GB, with a recommendation of 50 GB.

Supported Product Configurations

The currently supported product configurations are:

PBS Professional	PAS	MongoDB	HyperWorks	PBS Analytics	PBSControl	PBS Control
13.1, 14.2, and 18.2	13.0 and 13.2	3.4 and 3.6	2017.x	2018.2	2018.2	2018.2

Prerequisites for Installation

Please read the *PBS Control Administrator's Guide* for information about deployment options, required ports, components that must be installed and the order in which they are installed, and any specific installation prerequisites.

New Features

- [Customizable Columns on the Job Detail and Node Detail Views](#)
- [Ability to Display Historical job Data](#)
- [New Server and Scheduler Configurations](#)
- [Routing Queue Support](#)
- [Usability Improvements](#)
- [Resource Limit Types Expansion](#)
- [Snapshot Import Improvements](#)
- [Auto-Generation of Node Detail Information](#)
- [Custom Hostname for Data Collectors](#)
- [Oracle Cloud Support](#)
- [Dynamic IP Assignment for Cloud Bursted Nodes](#)
- [Cloud Bursting Hook Improvements](#)

Customizable Columns on the Job Detail and Node Detail Views

Add columns to the Job Detail view by selecting job properties from an extensive list of available job properties, and similarly add node properties to the Node Detail view.

Ability to Display Historical job Data

Display finished jobs by enabling a toggle on the Job Detail view.

New Server and Scheduler Configurations

Additional Server configuration attributes have been added to the Configure tab of PBS Control, as well as Scheduler configuration attributes.

Routing Queue Support

Routing queue can now be added, updated and removed.

Usability Improvements

Layout enhancements have been made to the Configure tab to improve usability.

Resource Limit Types Expansion

Expanded support for resource usage limit types.

Snapshot Import Improvements

Improved robustness when importing snapshots.

Auto-Generation of Node Detail Information

Automatic import of node state data (pbsnodes -av) on a configurable scheduled basis.

Custom Hostname for Data Collectors

Data collectors can be installed anywhere with a custom hostname.

Oracle Cloud Support

Support for Oracle Cloud has been added to PBSCloud.

Dynamic IP Assignment for Cloud Bursting Nodes

Dynamic IP attribution allows AWS to assign a dynamic IP for cloud bursting nodes.

Cloud Bursting Hook Improvements

Improvements to the Cloud Bursting Hook that allows decisions to be made with awareness of chunk size and placement, and improvements regarding DNS management bug fixes.

Resolved Issues

This section provides information about issues that have been resolved with PBS Control 2018.2:

- [PC-1361 PBSA UI is slow and reports are sometimes not rendering](#)
- [PC-1620 Available cores in the Monitor Dashboard chart is wrong for week/month views](#)

PC-1361 PBSA UI is slow and reports are sometimes not rendering

Summary: After parsing is complete, it can take several minutes for charts to display.

Resolution: Improvements were made to decrease the time necessary for rendering the charts after parsing is complete.

PC-1620 Available cores in the Monitor Dashboard chart is wrong for week/month views

Summary: Sometimes the available cores line in the Monitoring Dashboard Cores chart starts at the wrong time for week and month views.

Resolution: This issue has been fixed and the available cores for weekly and monthly views now displays correctly.

Known Issues

This section provides information about known issues with PBS Control 2018.2:

- [PC-106 Analyze tab is slow to load](#)
- [PC-821 Charts are not correct when preemption is enabled in PBS](#)
- [PC-1013 Wait time of rerun jobs is reported wrong in PBSA](#)
- [PC-1181 Analytics data for nonexistent simulations persists after reinstalling PC](#)
- [PC-1408 Simulation failed with error: sim data 'NoneType' object has no attribute 'rfind'](#)
- [PC-1424 Network issue message displayed when navigating from Analyze to Simulate](#)
- [PC-1426 Killing a simulation causes a 504 Gateway time-out error](#)
- [PC-1439 Simulate tab become slow and unresponsive followed by a gateway error](#)
- [PC-1485 Analyze database went down while running simulations](#)
- [PC-1494 Simulate data appears in Analyze production charts](#)
- [PC-1556 PBS Control installation should work with default system libraries](#)

PC-106 Analyze tab is slow to load

Summary: The lag in load time is due to the loading of Envision. Performance optimization is planned for the 2018.2 release.

Work Around: No workaround for this issue.

PC-821 Charts are not correct when preemption is enabled in PBS

Summary: Preemption is not taken into consideration in the chart calculations. A fix is planned for a future release.

Work Around: No workaround for this issue.

PC-1013 Wait time of rerun jobs is reported wrong in PBSA

Summary: Wait time for jobs that have been rerun is being calculated incorrectly.

Work Around: No workaround for this issue.

PC-1181 Analytics data for nonexistent simulations persists after reinstalling PC

Summary: Simulation data from a previous install persists in Analytics after PBS Control is reinstalled.

Work Around: No workaround for this issue.

PC-1408 Simulation failed with error: sim data 'NoneType' object has no attribute 'rfind'

Summary: Simulations fail for an unknown reason with the following errors:

PBSA logs:

```
pbsworks.log:net.sf.ehcache.CacheException: Failed to serialize element due to ConcurrentModificationException. This is frequently the result of inappropriately sharing thread unsafe object (eg. ArrayList, HashMap, etc) between threads  
pbsworks.log:Caused by: java.util.ConcurrentModificationException
```

Simulation logs:

```
2018-02-12 09:10:41,935 DEBUG Checking for update in sim process 93ef2ba6-3ea3-4829-b666-286bdbb844ea with sim_request=None and the_mode>manual  
2018-02-12 09:10:41,937 DEBUG Setting state SIM_FINISHED  
2018-02-12 09:10:42,690 DEBUG Initiating PBSA analysis  
2018-02-12 09:10:45,827 CRITICAL While in sim process: While analyzing sim data 'NoneType' object has no attribute 'rfind'  
2018-02-12 09:10:45,828 DEBUG Processing _kill for 93ef2ba6-3ea3-4829-b666-286bdbb844ea with signal SIGUSR1
```

Work Around: A fix is planned for a future release.

PC-1424 Network issue message displayed when navigating from Analyze to Simulate

Summary: Intermittently, when navigating from the Analyze tab to the Simulate tab, the following error message is displayed:

We are experiencing network issues please try again...Please try again later.

Work Around: No workaround for this issue.

PC-1426 Killing a simulation causes a 504 Gateway time-out error

Summary: Killing a simulation, especially for large parameter sweeps, may take some time. This can result in a 504 Gateway time-out error.

Work Around: A temporary workaround was implemented for the 2018.1 release. A permanent solution will be implemented in a future release (see PC-1439). Please note that this JIRA ticket has been closed with the permanent solution being addressed by PC-1439.

PC-1439 Simulate tab become slow and unresponsive followed by a gateway error

Summary: After submitting a series of simulations, the system becomes slow and unresponsive. Eventually, it times out with a gateway error.

Work Around: A permanent solution will be implemented in a future release.

PC-1485 Analyze database went down while running simulations

Summary: An unknown internal error causes the Analyze database to go down.

Work Around: Restart the PBSA portal service.

PC-1494 Simulate data appears in Analyze production charts

Summary: If you are performing simulations on HPC clusters that are different than the clusters that you are monitoring in PBSA, extra values like user names, node names, group names, etc. from those clusters appear without values in PBSA charts and are available as Measures and Dimensions.

Work Around: A fix is planned for the 2018.2 release.

PC-1556 PBS Control installation should work with default system libraries

Summary: For some RHEL 7.4 or SLES 12 SP2 installations there may be incompatibilities with system libraries like OpenSSL that will be reported in the installer logs.

Work Around: Install the necessary system libraries needed for completing the installation.

