

PBS Control 2018.3

Release Notes



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Altair® PBS Works™ 2018.3

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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](#)
- [Known Issues](#)

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	8 cores	8 cores
Memory (Physical)	16 GB	32 GB
Disk Space	80 GB	100 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 the Analytics service.

Supported Product Configurations

The currently supported product configurations are:

PBS Professional	PAS	MongoDB	PBS Control
14.2, and 18.2.x	13.0 and 13.2	3.4 and 3.6	2018.3

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

[Monitor Alerts](#)

[Scheduler Parameters](#)

[Simulation Improvements](#)

[Cloud Bursting Improvements](#)

[Additional Cloud Provider Support](#)

[Access Control](#)

[Analyze Licensing](#)

Monitor Alerts

Alerts can be sent via email when a nodes goes offline, CPU utilization drops below or rise above a specified percentage, or when a cluster becomes unavailable.

Scheduler Parameters

Additional PBS Professional Scheduler parameters are available for configuration.

Simulation Improvements

Improved simulation workflow including support for changes in scheduling policies, presentation of simulation results, and the ability to view the original simulation input.

Cloud Bursting Improvements

The following cloud bursting improvements have been made:

- Cloud bursting workflow has been unified under a single Cloud tab.
- Alerting for quotas, including new node hour quota.
- More efficient scaling for large AWS bursting.
- Burst nodes do not require external Internet access.
- Multiple deployments can share the same licensing.
- More debugging tools are available.

Additional Cloud Provider Support

Support for cloud providers: Deutsch Telecom, Huawei, and Orange Cloud (beta).

Access Control

Create roles to restrict access to the various features of PBS Control. Default roles are Manager and Operator.

Analyze Licensing

Licensing is now decoupled from Monitoring and based on current active nodes.

Resolved Issues

This section provides information about issues that have been resolved with PBS Control 2018.3:

- [PC-1408 Simulation failed with error: sim data 'NoneType' object has no attribute 'rfind'](#)
- [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-1408 Simulation failed with error: sim data 'NoneType' object has no attribute 'rfind'

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

While analyzing sim data 'NoneType' object has no attribute 'rfind'.

Resolution: A rewrite of the simulation workflow corrected this error.

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.

Resolution: A rewrite of the simulation workflow corrected this error.

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.

Resolution: A rewrite of the simulation workflow corrected this error.

Known Issues

This section provides information about known issues with PBS Control 2018.3:

- [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-1053 Parameter values are not updated when user updates the values on PBS server](#)
- [PC-1181 Analytics data for nonexistent simulations persists after reinstalling PC](#)
- [PC-1424 Network issue message displayed when navigating from Analyze to Simulate](#)
- [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-2137 Incorrect memory details shown when snapshot has server_dyn_res supported](#)
- [PC-2166 Unable to run simulations on SLES 12 SP2](#)
- [PC-2210 Subjobs are not moved when the move is performed on the job array parent](#)
- [PC-2227 Simulation fails when the count for a node class is set to zero](#)
- [PBSSIM-605 Simulator does not support RRTROS](#)

PC-106 Analyze tab is slow to load

Summary: The lag in load time is due to the loading of Envision.

Work Around: No workaround is available for this issue. A fix is planned for a future release of PBS Control.

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

Summary: Preemption is not taken into consideration in the chart calculations.

Work Around: No workaround is available for this issue. A fix is planned for a future release of PBS Control.

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 is available for this issue. A fix is planned for a future release of PBS Control.

PC-1053 Parameter values are not updated when user updates the values on PBS server

Summary: The PBS Professional Server and Scheduler parameters available on the Configure tab are not updated when a change is made on the PBS Server using qmgr or by updating a configuration file.

Work Around: All attributes of the PBS Server are updated upon each interaction with or operation on the Server. Therefore, two options are available for accessing changes made directly on the PBS Server:

- Make a change to a parameter via the Configure tab.
- Remove and re-add the cluster via the Configure tab.

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 is available for this issue. A fix is planned for a future release of PBS Control.

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 is available for this issue. A fix is planned for a future release of PBS Control.

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 Analytics 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 Analytics, extra values like user names, node names, group names, etc. from those clusters appear without values in Analytics charts and are available as Measures and Dimensions.

Work Around: No workaround is available for this issue. A fix is planned for a future release of PBS Control.

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.

PC-2137 Incorrect memory details shown when snapshot has server_dyn_res supported

Summary: After adding a snapshot, the memory for the node classes is incorrect when the cluster from which the snapshot is created has enabled support for dynamic server-level resources (server_dyn_res).

Work Around: No workaround is available for this issue. A fix is planned for a future release of PBS Control.

PC-2166 Unable to run simulations on SLES 12 SP2

Summary: On SLES 12 SP2 platforms, after a simulation is submitted the following error is displayed:

```
Invalid state detected for simulation: SIM_FAILED. Redirecting to the simulation list page.
```

Work Around: PAS 13.2 packages a Python which was compiled without certain SSL libraries. A workaround is to recompile Python:

1. Verify that an up-to-date version of PyOpenSSL (17x+) is installed on the machine hosting PBS Control.

```
rpm -qa pyOpenSSL*
```

You can find the release history of PyOpenSSL at <https://pypi.org/project/pyOpenSSL/#history>

2. Navigate to /opt/altair/pas/13.2/pas/python.
3. sudo to root.

```
sudo su
```

4. Recompile python.

```
make clean && ./configure --prefix=$PWD && make && make install
```

5. Restart PAS.

```
/etc/init.d/pas restart
```

PC-2210 Subjobs are not moved when the move is performed on the job array parent

Summary: When the parent job of a job array is moved to a different queue via the Monitor tab, the subjobs are not moved.

Work Around: No workaround is available for this issue. A fix is planned for a future release of PBS Control.

PC-2227 Simulation fails when the count for a node class is set to zero

Summary: Simulations fail when the count for a node class is set to zero. The error that is logged is:

```
PBSSimFileStorageException: Error while updating node classes: list index out of range
```

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

PBSSIM-605 Simulator does not support RRTROS

Summary: Support for the restrict_res_to_release_on_suspend server attribute is not available for simulations. This attribute specifies which consumable resources should be released by PBS when a job is suspended,

Work Around: No workaround is available for this issue. A fix is planned for a future release of PBS Control.