

# PBS Works 13.0

## Release Notes



 Altair | PBS Works™

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Enabling On-Demand Computing™

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# PBS Works Release Notes

The PBS Works 13.0 Release Notes contains the following sections:

- [About PBS Works](#)
- [PBS Works Product Suite](#)
- [Installing PBS Works](#)
- [What's New](#)
- [Resolved Issues](#)
- [Known Issues](#)

## About PBS Works

PBS Works™, Altair's suite of on-demand cloud computing technologies, allows enterprises to maximize Return On Investment (ROI) on existing infrastructure assets. PBS Works is the most widely implemented software environment for managing grid, cloud, and cluster computing resources worldwide. Compute Manager (CM), Display Manager (DM), Results Visualization Service (RVS) and Access Management Service (AMS) are available as part of the PBS Works Suite.

To obtain the latest release package, contact your Altair sales representative by writing to [sales@altair.com](mailto:sales@altair.com) or [support@altair.com](mailto:support@altair.com). For more information, visit us at [www.pbsworks.com](http://www.pbsworks.com).

## PBS Works Product Suite

The following PBS Works Product suites are available:

- [Compute Manager](#)
- [Display Manager](#)
- [Results Visualization Service](#)
- [Access Management Service](#)

## Compute Manager

Compute Manager (CM) is the foundational block in Altair's plan to build a modern, web-based enterprise simulation platform, providing an affordable solution to increase High Performance Computing productivity.

Users can submit and monitor jobs, manage workloads and review results over the web or on their desktop. With CM, users can:

- set up simulation jobs on distributed resources with easily configurable application definitions.
- monitor workloads on distributed resources, both graphically and analytically.
- manage simulation jobs, visualizing remote data and results directly inside the browser.
- enable secure and immediate access to distributed resources from virtually any Internet-enabled device.

## Display Manager

Display Manager (DM) provides users the ability to remotely visualize and interact with their data and applications, even across challenging data latency networks. DM enables users to run rich graphical applications provisioned in the PBS Professional complex through an easy and intuitive graphical user interface embedded into the web browser.

## Results Visualization Service

Results Visualization (RVS) is a service, available through a plug-in, which provides necessary features to access, process and visualize CAE results through an easy and intuitive graphical user interface, embedded directly into the web browser. The service allows users to access these features from a compatible browser to visualize XY plots and animate/rotate 3D models using an optional client side free HyperView Player plugin. In the current release, these features are accessible through the Compute Manager web interface.

## Access Management Service

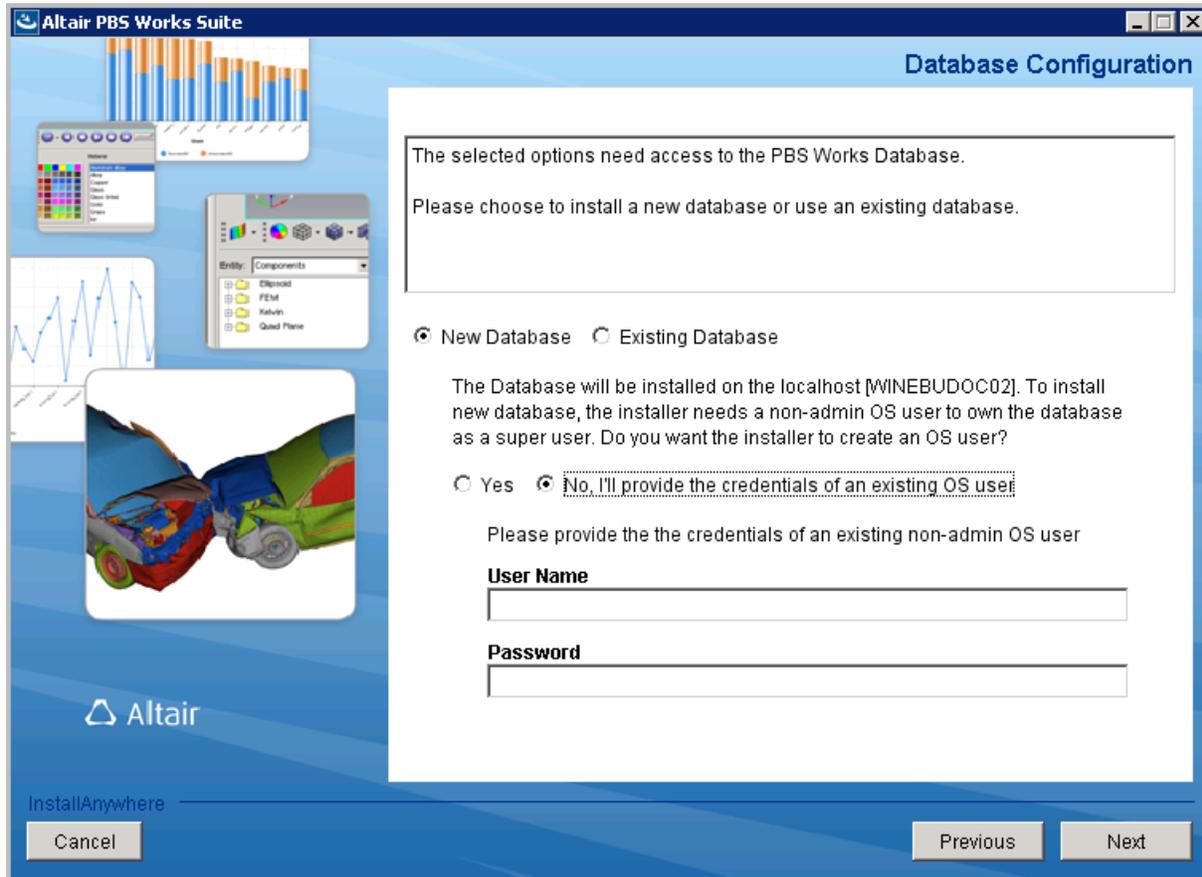
Access Management Service (AMS) provides a centralized configuration system for defining users and their groups, as well as access control policies. AMS also makes it possible for users to share application profiles with specific users or groups.

## Installing PBS Works

You must uninstall previous versions of PBS Works before attempting to install this version. Please refer to the PBS Works Installation Guide for information about installing PBS Works.

Please note, that during the installation of PBS Works two database options are available. You may choose to install a new database instance or you can point to an existing database existence. It is highly recommended to choose the new database instance, as connecting to an existing database

instance inadvertently deletes all data from the database.



Once PBS Works is installed, please review each installed component's administrative guide for information on post-installation steps.

## What's New

This section provides what's new in the PBS Works suite:

- [Compute Manager](#)
- [Display Manager](#)
- [Results Visualization Service](#)

## Compute Manager

This release delivers an improved user experience and a more integrated usage of CM and DM. Administrators can leverage the extended Dynamic Applications interfaces to automate repetitive tasks such as selecting "include files" and enforce best practices by moving checks on the client and pre-submission phases.

The new features of CM are as follows:

- Application Launch Framework (ALF): this is the framework Compute and Display Manager use to control client installed applications (i.e. launch the RDP viewer to connect to a remote session; open the selected remote file with a locally installed applications).
- CM has the ability to open files with DM based applications.
- Automatic job list refresh: Compute Manager updates status of the jobs in the job list automatically.
- Time based job filtering: job list can be filtered for jobs changed within a given timeframe (today, yesterday, last seven days, last thirty days).
- Operator role extension: designed users can terminate other users jobs.
- Easier login: Username and passwords can be cached by browsers
- Client side dynamic applications support: Application Definitions can run scripts on the client side.
- Text based filtering for jobs on the client side
- PAS servers are automatically registered for users when set by administrator
- Ability to disable remote file browsing
- Ability to add custom links to Compute Manager Monitoring page
- Ability to set initial directory when users log in the first time in Compute Manager
- Non blocking job submission and notifications

## Display Manager

The new features in DM are as follows:

- Redesigned framework for application launch and monitoring to enable tighter integrations and control.
- Display Manager can now control sessions and applications launched on Windows execution hosts through the tight integration with Microsoft Remote Desktop Protocol (RDP) and HP Remote Graphics Software (RGS).
- Redesigned interface with PBS Application Services for improved robustness and light-weight application integration. The minimum amount of configuration edits to publish an application through Display Manager has been greatly reduced.
- Redesigned GPU resource management reduces the dependencies on the workload manager and the file system configuration.
- Greater control over session timeout. The waiting time can be customized based on site requirements. While waiting, the session can be aborted if it is taking too long to start.
- Improved web browser based client allows to dynamically resize remote Linux desktops to match the actual viewer window area.
- Now, when configured to do so, Display Manager will provide for the remote session temporary files to be copied in a permanent location when the session is terminated.

## Results Visualization Service

The new features in RVS are as follows:

- Users can now visualize multiple results simultaneously in a dashboard.
- Dashboards can be saved as templates and reapplied on different result files.
- Plot and Animation results can be configured to auto refresh periodically while a simulation job is in progress.
- It is now possible to compare results from different jobs using the newly introduced overlay curve feature.
- New file extensions `.rvs` and `.rvst` are introduced for saving dashboard layouts.
- It is now possible to plot generic csv (comma separated values) files.
- An option is introduced to generate separate H3d file for each result type.
- Advanced filtering options are implemented for selecting Model components and Result types for visualization.
- It is now possible to switch between different contours in animation viewer, if the viewed H3d files contains multiple result types.

- Improved Performance for visualizing series result files such as Radioss (A00\*) and Dyna (d3plot\*) results
- Now, Results visualization features can also be accessed from Remote File Browser.

## Resolved Issues

The following section provides the resolved issues in PBS Works Suite:

- [Compute Manager](#)
- [Display Manager](#)
- [Results Visualization Service](#)

## Compute Manager

The following table provides the list of resolved issues in CM:

Summary	Description
Infinite uploading loop when specifying an incorrect path on IE8.	Sometimes on IE8 when attempting to upload a file to an invalid location, IE8 will place CM into a loop attempting to upload continuously.
“File already exists” message when the file does not.	When moving files from one location to another, sometimes a “File already exists, would you like to replace it?” dialog will appear, even if the file does not actually exist.
Internal 500 Page Error when attempting to open a file on a running job.	When a user clicks on a running job that is in fact no longer running, errors may occur when attempting to view any files related to this job.
Unable to download multiple files on a running array of jobs.	When working with job files of a Job Array, there is an issue with selecting multiple files from a sub job and downloading.
Files are not getting listed via the Remote File Browser.	This occurs when the logged in users does not have a /home directory on the remote cluster.
CM-388: “Page unresponsive” when attempting to open files larger than 1GB in Google Chrome.	It has been observed intermittently that when attempting to open large files via Chrome sometimes the page will become unresponsive.
CM-492: “File uploaded successfully”, even for failed uploads.	When uploading files to a Windows PAS instance, file upload can fail, however a success message is displayed instead.
CM-922: File download option not working some times.	The contextual menu download file(s) option can intermittently stop working.

Summary	Description
CM-935: File upload fails in case file name contains “%”.	When the user tries to upload a file or download a file that contains a percentage sign (%) in its name, the file upload fails.
CM-936: If file name contains “\$” symbol it gets truncated.	When the user tries to upload a file or download a file that contains a dollar sign (\$) in its name, any characters following the dollar sign are truncated from the filename.
CM-1028: Refresh button affects the "Group by Column" functionality in monitoring.	Using the refresh button to update the job lists causes the job list to switch to the previous grouping.
CM-1053: PAS server names containing spaces are not correctly handled.	If the name of the PAS server contains spaces it cannot be removed.
CM-1106: Not able to register CM for windows (Windows Server 2003 64-bit), if PAS password has special characters.	The registration of a PAS server fails, because the PBS Application Services administrator password contains special characters.
CM-1116: Empty job name causes submission to fail.	Job name is required for job submission, although it can be defined as “optional” within an application definition. When a job is submitted with an empty job name, the job fails.
CM-1118: Job submission can return an error and yet job could be successfully submitted.	When a job submission is taking a long time due to a long running pre-submission phase, Compute Manager may return a submission error even though the job is successfully submitted.
CM-1119: The user can't navigate to root "/" directory level using button navigation.	The remote file browser prevents the user from accessing the root directory “/” when navigating using the up one level or down one level buttons.
CM-1473: Compute Manager help does not work on Google Chrome.	When attempting to open up the user help via the interface, on Google Chrome, no page is displayed.

## Display Manager

The following table provides the list of resolved issues in DM:

Summary	Description
DM-320: Ghost mouse pointer in remote session	A second mouse pointer shadowing the client's appeared in the remote display window.
DM-484: The Continuous updates setting is not being saved.	Enabling the session setting "Choose Continuous updates" is not working. This setting enables the application to constantly send images to the client.
DM-503: The session settings ribbon is not visualized	Intermittently the settings bar accessible while in a DM session was not displayed when clicking on the corresponding button.
DM-518: Application interface might not be refreshed correctly.	Few tested OpenGL showed unwanted artifacts and wrong graphics when refreshing their interfaces (i.e. changing the set of displayed buttons)
DM-528: Shift+Left Mouse input does not work for certain applications	The combined usage of Shift+Left Mouse Button was not handled correctly for certain applications.
DM-531: PBS Pro jobs related to DM sessions cannot be removed from CM listing	CM failed to "remove" a terminated DM job from job history.
DM-550: Pop-out viewer slow under certain circumstances.	Removed behavior from pop-out JAVA viewer that caused very slow performance.
DM-558: Custom geometry setting not retained across logout/in	The setting for the user customized remote desktop geometry was cleared upon logout.
DM-606: Terminating a DM session can leave associated PBS Pro job running	Improved processes cleanup and monitoring, so that termination of a DM job is handled more quickly and correctly.

## Results Visualization Service

The following table provides the list of resolved issues in RVS:

Summary	Description
Saving the animation template fails, if the file access configuration is not valid.	Animation templates can be saved with a file copy configuration.
The Plot/Animate options in the context menu are not shown after a page refresh.	The options are shown even after a page refresh as the manifest file path is updated in the configuration file.
RVS-144: Results visualization fails on a PAS server which is configured with SSL.	Results can be visualized on a PAS server configured with SSL.

## Known Issues

The following section provides the known issues in PBS Works Suite:

- [Compute Manager](#)
- [Display Manager](#)
- [Results Visualization Service](#)

## Compute Manager

The following table provides the list of known issues in CM:

Summary	Description
Job filters are not working consistently on IE9.	<p><b>Problem:</b> Via the Job Monitoring page, you'll notice that there are column filters that allow for you to change the way job data is presented.</p> <p><b>Workaround:</b> Running Google Chrome Frame for Internet Explorer may help, although is not supported. We will continue to improve upon our Internet Explorer support.</p>
Multi-Selection of local files will not work on IE8.	<p><b>Problem:</b> Due largely to Internet Explorer 8's lack of full HTML 5 and CSS3 compliance, this feature is not available in IE8.</p> <p><b>Workaround:</b> An unsupported workaround is to install the Google Chrome Frame application. We will work to address this in the next release.</p>

Summary	Description
ALF and Dynamic Application Definitions features will not work unless the user's browser features the ability to run JAVA Applets.	<p>Local Dynamic Application Definition and ALF works with the browser that supports JAVA Applets. Only Safari, Firefox and IE, of the supported browsers, do. Chrome from v45 is not allowing JAVA applets to be run anymore.</p> <p><b>Requirement:</b> If the feature is needed, then users must use Safari, Firefox or IE. The requirement is required by both ALF/LocalDynAppDefs and Display Manager.</p>
CM-1117: Job monitoring window not correctly displayed.	<p><b>Problem:</b> When using Chrome 24.x and 25.x, the monitoring page will show overlapping columns when job arrays subjobs are viewed.</p> <p><b>Workaround:</b> No workaround in current version.</p>

## Display Manager

The following table provides the list of known issues in DM:

Summary	Description
Tooltips issue in Chrome.	<p><b>Problem:</b> In Google Chrome, tooltips for the Settings menu, application context menu, and Session Delete get hidden behind the application viewer.</p> <p><b>Workaround:</b> There is no workaround in the current version of DM. The fix is scheduled for the next release.</p>
In some cases, the TurboVNC server does not start on SLES 11.	<p><b>Problem:</b> The server fails to start and the following message is logged: "could not open default font 'fixed'".</p> <p><b>Workaround:</b> Verify and fix the font server on the operating system.</p>

Summary	Description
Display Manager does not work with Google Chrome version 45 or later due to the lack of support for the JAVA Plugin.	Refer: <a href="https://java.com/en/download/faq/chrome.xml">https://java.com/en/download/faq/chrome.xml</a>
DM-464: GUI issues on IE 8.	<p><b>Problem:</b> Check box selection in the Share Session and Open-In dialog boxes do not appear correctly and are not usable. The slider for changing image quality is not displayed in IE 8.</p> <p><b>Workaround:</b> A resolution is planned for the next release.</p>

## Results Visualization Service

The following table provides the list of known issues in RVS:

Summary	Description
For large TOC the browser displays the message "Unresponsive script is running. Do you wish to continue?"	<p><b>Problem:</b> This issue is noted when processing large data sets.</p> <p><b>Workaround:</b> Please click on Continue to view the TOC.</p>
RVS-264: On Windows Server the result files in a series cannot be viewed if the job directories are not directly accessible.	<b>Workaround:</b> The job directories have to be mapped to the server.
RVS-323 & RVS-325: The *.h3d output from MBD & Flex and *.maf are not supported for extracting animation.	<b>Workaround:</b> Not all file formats supported in HyperWorks desktop products are supported in Results Visualization Service.
RVS-330: HVP plug-in does not work on browser version for x86_64 architecture on Linux.	<b>Workaround:</b> Use a browser version of x86 architecture.

Summary	Description
<p>RVS-365: HVP (HyperView Player) browser plug-in does not display contour plot on Linux.</p>	<p><b>Workaround:</b> The contour for the animation result file can be viewed in HVP after downloading.</p>
<p>RVS-441: An extra component (Time) is displayed for some of the result files when they are plotted. This happens specifically for some of the Optistruct output files.</p>	<p><b>Problem:</b> This is because of a difference in how HyperGraph and RVS display the information.</p> <p><b>Workaround:</b> Please select the desired component for plotting and it should work as expected.</p>