1 PBS Application Services 11.0.1 Release Notes

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Upgrade and Compatibility Notes

Important To use the new features or enhancements of the PBS Application Services 11.0.1, the Enterprise PBS Professional cluster must be upgraded to PBS Professional 10.4 or later.

Migrate your existing application definitions from a prior 10.x release to 11.0.1

To migrate your existing 10.x or later application definitions to 11.0.1:

1) If using the PBS Catalyst (web portal), export the configurations prior to the upgrade and shutdown of the PBS Application Services service.

2) Shut down the existing PBS Application Services service.

3) For non-PBS Catalyst (web portal) users, copy the following files and directories to a temporary location:

a) application definitions from the old `<AIF_HOME>/applications directory`

b) site-config.xml from the old `<AIF_HOME>/conf directory`

4) Install the new version of PBS Application Services **but do not start the service.**

5) For non-PBS Catalyst (web portal) users, copy the following back from the temporary location:

a) The application definitions into your new `<AIF_HOME>/applications directory`

b) The site-config.xml into the new `<AIF_HOME>/conf directory`

6) Start the new PBS Application Services daemon/service.

7) If using the PBS Catalyst (web portal), import the previously exported configurations.

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Enhancements

Support for command-line installation of PBS Application Services

A command-line (console) installer is now available for PBS Application Services. See the *PBS Application Services Administrator's Guide - Installation - Command Line Install* for more information on how to perform a console installation.

Improved performance for job submission

Job submission via PBS Application Services submit API is up to twice as fast as previous versions.

Support for CentOS

PBS Application Services now supports CentOS 5.4, 5.5, and 5.6 on x86 and x86_64.

Support for Windows 2008 R2 on x86_64

PBS Application Services now supports Windows 2008 R2 on x86_64.

Support of multiple vendor license servers

Previous releases of PBS Applications Services only supported one vendor license server, FLEXlm. Now PBS Application Services supports multiple vendor license servers. Currently support is provided for both FLEXlm and LMX license servers, out of the box, with no configuration needed. Other license servers can also be configured.

FileList API returns information about symbolically linked files, whether a file is readable, and whether a directory contains any files

The FileList API has been enhanced to return information about symbolical links. The additional information will determine if the symbolic link is pointing to a directory or to a file. The FileList API has also been enhanced to provide file attribute information "is readable" (true/false), and whether a directory contains any files, "has children" (true/false).

Support for replacing data in a file

A new API, FileDataReplace, allows the replacement of data in an existing file on a node where a job is running or in the PBS Application Services staging area.

Support for more robust filtering for GetJobs

Previously the GetJobs API allowed filtering either by username, jobid, or queue. The GetJobs API now allows a more robust means of filtering jobs with the ability to specify multiple filters and also the ability to exclude history jobs.

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Support for compressing and uncompressing files and directories

New API's have been added to the File Operations port, FileCompress & FileUncompress, to allow for compressing and uncompressing files and/or directories.

GetQueue API enhanced to return the default queue and from_route_only attribute

The GetQueue API has been enhanced to return the default queue and from_route_only attribute so that GUI's can determine appropriate queues for job submission.

GetServerVersion API enhanced to return platform information

The GetServerVersion API has been enhanced to return platform specific information so that an additional call to GetServerStatus does not need to be made.

FileSearch API enhanced

The FileSearch API has been enhanced to return the next match for the search in the file.

New FileExists API to the file operations port

A new API has been added to the File Operations port, FileExists, to tests whether a file exists.

New API added to the Job Submission port to run a custom action for a finished job

A new API, executeApplicationAction, has been added to the Job Submission port to allow a custom action to be run on a finished job.

New GetJobsSummary API added to Job Submission port

A new API, GetJobsSummary, has been added to the Job Submission port to allow a user to retrieve job information, similar to the GetJobs API. The new API returns a subset of the job information returned by the GetJobs API for improved performance.

Resolved Issues

FileList API was reporting an error when a hostname was defined as two characters or less in length

Hostnames that are at least two characters in length are now supported.

Applications created without defining the number of cpus caused a floating license unavailable error.

Application Services will set the number of cpus to 1 if the number of cpus is not defined when the application is created.

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File URL's of the form file://host/path were not being evaluated properly during job submission

Application Services now supports file URL's of form file://host/path through the Job Submission port.

Creating a queue without defining the queue type caused Job Monitoring to throw an exception and valid queues were not being displayed.

Job Monitoring displays valid queues even if a queue is created without defining the queue type.

Jobs that are submitted via qsub after Applications Services is installed go to a Wait state unless a private sandbox is defined.

Jobs submitted outside of Application Services without requesting a private sandbox are running properly but any files created by the job are not available to Application Services via the File Operations port.

Log level in server-log.xml configuration file was set to "debug" causing excessive logging

The default log level is now set to "info" to avoid excessive logging.

GetHosts API returns hostname as "localhost.localdomain"

The GetHosts API has been modified to return the actual hostname.

PBS mail options do not work from Application Services submitted jobs

Mail options are now functional for Application Services submitted jobs.

Application Services was not updating the sched_config file correctly when adding licenses

The pattern for the creation of server_dyn_res_records in the server.conf file has been updated with the following: DYN_RES_PATTERN=server_dyn_res: '$FEATURE !"$PYTHON_PATH" "$LICSTATUS_PATH" --get-licenses -F $FEATURE'.

When empty parameters were passed to the AddAppVersion and GetAppVersion API's an Operation File exception was thrown

The API's now return an Invalid Request Message.

The FileList API was returning an incorrect value for the isWritable element

The FileList API is now returning correct values for the isWritable element.

FileList API fails when file owner is reported as a numeric user id

The FileList API now supports numeric file owner ids.

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When a job specifying "-Wsandbox=PRIVATE" is submitted the PBSadd_spawn.py hook would not add the pbs_spawn stagein directive to the job

Implementation of a case insensitive match against "private" was made to the PBSadd_spawn hook.

filelist.py fails on broken links preventing browsing

Broken links are now handled by the filelist.py without effecting the browsing of a directory.

DirectoryCreate API failing due to special characters in the directory path

Application Services now supports special characters in the directory name and path. See the PBS Application Services Programming Guide for more information on which characters are supported. Note that the directory path or directory name must not begin with a space.

DirectoryCreate API always creates a directory with a time-stamp appended if the requested directory exists

If the directory to be created is a subdirectory of $STAGE_ROOT, i.e. $STAGE_ROOT/ directoryname, and the directory exists, then a timestamp will be appended to the directory name. Otherwise, if the directory exists but is not a subdirectory of $STAGE_ROOT, a FileAlreadyExists exception will be returned.

File Operations will fail for a running job when the following conditions are met: 1) using the default pbs_rcp (i.e. using rcp to copy data) 2) it is running on an execution node other than the headnode 3) the execution node has an x86_64 based architecture.

File Operations now support pbs_rcp for a job running on a non-headnode for the x86_64 based architecture.

Known Issues

Incorrect permissions are attached to the stage directory when defining a stage directory with spaces during installation of PBS Application Services on a Linux platform

Recommend against installing in a non-default location that includes spaces on a Linux platform.

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PBS Application Services implements an automatic STAGE_ROOT directory cleanup script which is enabled by default. If the STAGE_ROOT directory contains data that is not generated by Application Services, that data is at risk of being purged without notice. Examples of directories that are at risk if used as STAGE_ROOT could be /home, /var/spool, and /tmp.

Recommendation is to select a STAGE_ROOT directory where only Application Services data files will be stored.

Application Services file operation services will not work for jobs submitted via the command line outside Application Services without the sandbox option

Recommendation is to submit the job with sandbox=private so that the job's files will be available to File Operation services.

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