

Moab HPC Suite 7.2.8 – Enterprise Edition Release Notes

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New features

The following is a summary of key new features in Moab HPC Suite 7.2.8 – Enterprise Edition.

Moab Workload Manager

checkjob, showbf, and showstart support --blocking

The `checkjob`, `showbf`, and `showstart` commands now support the `--blocking` option, which produces real time information rather than cached information.

JOBFREETIME component of node allocation policy PRIORITY

A new component of the node allocation policy *PRIORITY* called *JOBFREETIME* specifies the number of seconds that the node will be idle between now and when the job is scheduled to start. For more information, see "[Node Allocation Policies](#)" in the Moab Workload Manager Administrator Guide.

Differences

This section contains differences in previously existing features that require a change in configuration or routine.

- [TORQUE Resource Manager on page 2](#)
- [Moab Workload Manager on page 1](#)

Moab Workload Manager

TORQUE job ID added to event records

The TORQUE job ID now appears in the JOBSTART and JOBEND event records.

Failed erasing job alerts escalated

The Moab log alert "Failed erasing job" has a higher log level.

TORQUE Resource Manager

Thread pool manager and thread stack sizes modified

The thread pool manager now frees idle nodes. Additionally, the default thread stack sizes changed to a maximum of 8 MB and a minimum of 1 MB.

Exit job improvements

The way TORQUE exits jobs on moms has been improved to reduce the number of stray jobs, make epilogue run only once, and stop the occurrence of single jobs showing up on nodes they should not.

Installation and upgrade information

Installing Moab HPC Suite 7.2.8 – Enterprise Edition

Complete Moab HPC Suite 7.2.8 installation instructions and requirements can be found in HTML or PDF format.

- 7.2.8 RPM Installation Guide – [HTML](#) – [PDF](#)
- 7.2.8 Tarball Installation Guide – [HTML](#) – [PDF](#)

Known issues

The following are known issues in the Moab HPC Suite 7.2.8 – Enterprise Edition. Following each issue description is an associated issue number in parentheses.

- A default job template is not applied to job array sub-jobs until after a Moab recycle. Restart Moab to apply the job template (MOAB-5121).
- When the resource manager reports a wiki attribute that Moab does not recognize and it contains "OS," Moab considers it the OS (MOAB-5120).
- Specifications in the Moab configuration files overwrite conflicting specifications in the `moab.dat` file. This means that if you dynamically change Moab configurations found in `moab.cfg` or its included configuration files, the changes may be lost upon restart (MOAB-4246).
- Node flags cannot be removed via the `moab.cfg`. They should be set and removed dynamically by running `mschedctl -m config` or using a resource manager (MOAB-4123).
- When you use a **JOBMIGRATEPOLICY** of **IMMEDIATE**, Moab does not call the CreateURL Native Accounting Manager Interface script (MOAB-6867).
- When you upgrade Moab and TORQUE, depending on the versions, you could encounter a problem where the core files are created frequently in `/opt/moab`. You can resolve this problem by removing the old library files from `/usr/local/lib` (TRQ-1082).

Resolved issues

The following is a list of some key bugs fixed in Moab HPC Suite 7.2.8 – Enterprise Edition. Following each issue description is an associated issue number in parentheses.

- **Moab did not recognize users' default groups configured in `/etc/groups`.** Moab now recognizes default groups (MOAB-6522).
- **Moab had several memory leaks.** Moab no longer has these memory leaks, use of `uninit` variable, and `double free` (MOAB-6811).
- **In a peer-to-peer grid, an issue with hop counts caused a node to disappear.** The cluster query race condition on hop counts has been resolved (MOAB-7034).
- **In an HA environment where the secondary server had taken over, Moab started writing to an old log file.** Moab now writes to the correct log file in this scenario.
- **In a Cray environment, submitting a job would fail when you specified a range in `mppnodes`.** Moab again supports specifying a range in `mppnodes` (MOAB-6808).
- **In a Cray environment, specifying `mpp*` parameters in `qsub` caused TORQUE and Moab to ignore feature requests.** Feature requests now work correctly when you use `mpp*` parameters with `qsub` (MOAB-7004).
- **Modifying a reservation start time did not cause relevant jobs to change start times and the `mdiag -r` output did not immediately reflect the update.** Moab now modifies job start time when its reservation has been modified and the `mdiag -r` output displays it immediately (MOAB-6861, MOAB-6933).
- **Moab would override the partition specified in a job template with the default partition.** Moab now only sets the default partition on a job template if you do not specify one (MOAB-6898).
- **Moab did not consistently evaluate secondary groups in environments where the scheduler flag `EXTENDEDGROUPSUPPORT` was set.** Moab now correctly evaluates the secondary groups (MOAB-6784).
- **Moab would crash when you wrote invalid configuration parameters in `mom_priv.config`.** Moab no longer crashes when the file contains an invalid option (MOAB-6905).
- **The job taskcount reverted to its old value after modification.** The taskcount no longer reverts after you run an `mjobctl -m` command (MOAB-6926).
- **MAXPS accepted invalid integers.** It no longer accepts integers larger than 64 bit (MOAB-6925).
- **Moab incorrectly allocated reservations with a superset hostlist.** Moab now correctly allocates these reservations (MOAB-6714).
- **The `mstat_converter` README file incorrectly documented the `moab.cfg` location.** The `mstat_converter` README has been updated to reflect the correct location of `$MOABHOMEDIR/etc/moab.cfg` (MOAB-6627, MOAB-6135).
- **Moab took progressively more time to process and load jobs that contained dependencies.** The speed of loading dependency jobs has increased substantially (MOAB-6900).

- **Moab iterations extended when it processed node features.** The Moab process for checking features has been optimized to improve iteration processing time (MOAB-6889).
- **Running `mschedctl -R` caused array jobs to break.** Recycling Moab no longer breaks non-running sub jobs (MOAB-6836).
- **Moab would create standing reservation instances in the wrong order.** Moab now creates standing reservations in order according to start time (MOAB-6104).
- **When you added new nodes to Moab after creating a reservation with the `-t ALL` flag, Moab did not automatically add them to the reservation.** Moab automatically adds new nodes to reservations configured with `-t ALL` (MOAB-6556).
- **Moab did not close database connections on restart.** Database connections close when you run `mschedctl -R` (MOAB-6160).
- **Moab would not honor the class `hostlist` when `acl_host_enable` was set.** Moab applies the class `hostlist` under these conditions (MOAB-6492).
- **When Moab scheduled multi-req jobs with `EXACTNODE` set, an incorrect node count caused job starvation.** The node count has been corrected and job starvation no longer occurs (MOAB-6670).
- **In a SLURM environment, Moab did not consider the `ppn` setting when the `NODEACCESSPOLICY` was `SINGLEJOB`.** Moab now considers `ppn` as it allocates jobs in a `SINGLEJOB` environment (MOAB-6580).
- **Moab crashed when it restarted with a job running and the `MAXNODE` limit had been exceeded.** Moab no longer crashes under these conditions (MOAB-6607).
- **Moab crashed due to an undefined buffer in a `vsnprintf` call.** This crash no longer occurs (MOAB-6726).
- **Moab reserved extra nodes for generic resources requested in MAM.** Moab no longer reserves an extra node for MAM `gres` (MOAB-6228).
- **Moab Account Manager returned multiple `ChargeDuration` fields in its output.** MAM now returns only one `ChargeDuration` (MOAB-6890).
- **Multi-req jobs were only charged for the first resource requested.** MAM charges for all resources used in multi-req jobs (INT-793).
- **TORQUE would track the wrong number of processors.** The issue where the total number of execution slots having a count off by one for every Cray compute node has been fixed (TRQ-2501).
- **A memory leak occurred on asynchronous `qrun -a` commands.** The memory leak no longer occurs, and a write after free error that could lead to memory corruption was also resolved (TRQ-2498).
- **For newer versions of nvidia drivers, the GPU status was only displayed at `pbs_mom` startup.** The GPUs now appear in the `pbsnodes` output (TRQ-2647).

Product documentation

Technical documentation

The online help for Moab HPC Suite 7.2.8 – Enterprise Edition is available in HTML and PDF format on the [Adaptive Computing Documentation page](#).