Moab HPC Suite 10.1.0.1 Release Notes

March 2025

Contents

1. New Features

This topic contains a summary of key new features in Moab HPC Suite.

> In this topic:
>
> - Torque Resource Manager
> - Moab Workload Manager
> - Moab Accounting Manager
> - Moab Web Services
> - Moab Insight

Torque Resource Manager

7.1.0

No new features.

Moab Workload Manager

10.1.0

Setting MAXGREENSTANDBYPOOLSIZE to 0 allows all nodes to be turned off by default

Formerly, a value of zero for MAXGREENSTANDBYPOOLSIZE meant that there was no green pool (keeping all nodes online). This has been changed so that a value of -1 is used to disable the max green standby pool (default) and 0 can be used to keep no idle nodes around.

Moab Accounting Manager

10.1.0

No new features.

Moab Web Services

10.1.0

Support for Red Hat 8, SUSE 15, and Ubuntu

Support has been added for Red Hat 8, SUSE 15, and Ubuntu 18.04, 20.04, and 22.04.

Moab Insight

10.1.0.1

Support for Red Hat 8 and SUSE 15

Support has been added for Red Hat 8 and SUSE 15.

2. Differences

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

In this topic:

- Torque Resource Manager
- Moab Workload Manager
- Moab Accounting Manager
- Moab Web Services
- Moab Insight

Torque Resource Manager

7.1.0

None.

Moab Workload Manager

10.1.0

Setting MAXGREENSTANDBYPOOLSIZE to 0 now turns all nodes off by default

Formerly, a value of zero for MAXGREENSTANDBYPOOLSIZE meant that there was no green pool (keeping all nodes online). This has been changed so that a value of -1 is used to disable the max green standby pool (default) and 0 can be used to keep no idle nodes around.

Moab Accounting Manager

10.1.0

None.

Moab Web Services

10.1.0

Support for Red Hat 8, SUSE 15, and Ubuntu

Support has been added for Red Hat 8, SUSE 15, and Ubuntu 18.04, 20.04, and 22.04. Red Hat 6 and SUSE 11 are not supported in version 10.1.

MWS now requires MongoDB 4.2

In order to support a version of MongoDB that works across newer operating systems, MWS now requires the use of MongoDB 4.2.

Logging now configured in logback.groovy

With the migration of MWS from Grails 2 to Grails 3, the logging configuration has changed from log4j to logback. Whereas the logging used to be configured in the mws-config.groovy file, it is now configured in a separate logback.groovy file.

grails.plugin.springsecurity.oauthprovider.clients.clientSecret replaced with viewpoint.clientSecret

The viewpoint client secret in mws-config.groovy is now directly configured as the string value of the viewpoint.clientSecret parameter rather than configuring it into the clientSecret property of the grails.plugin.springsecurity.oauthProvider.clients stanza for the viewpoint client.

Removal of VM-related objects and properties

The removal of support for VMs in Moab 10.0 has resulted in the following changes in MWS:

- The Image object has been removed.

- From the Job object, the systemJobAction, targetedJobAction, targetJobName, vmUsagePolicy, and virtualMachines properties have been removed. The VMTRACKING and NOVMMIGRATE flags have been removed from the JobFlags. The osprovision2, storage, vmmap, vmmigrate, vmtracking options have been removed from the JobSystemJobTypes.

- From the Job Templates object, the vm property has been removed.

- From the Node object, the virtualMachines property has been removed. The Network and Storage options have been removed from the supported NodeTypes.

- Removal of support for the Auto VM Migration policy, the Hypervisor Allocation Overcommit policy and the Migration Exclusion List policy.

- From the Reservation and StandingReservation objects, NOVMMIGRATIONS and EVACVMS have been removed from the ReservationFlags. The vm option has been removed from the Trigger table.

- Removal of the Storage RM Service and the Virtual Machine RM Service.

The JobRequirement.image property has been renamed to JobRequirement.operatingSystem

With the obsoletion of VM-related support, JobRequirement.image has been renamed to JobRequirement.operatingSystem.

The Node.operatingSystem structure has been flattened and replaced with a simple string

With the obsoletion of VM-related support, Node.operatingSystem has changed from being an OperatingSystem object structure to a simple string.

The OpenStack Plugin has been removed

With the obsoletion of VM-related support, the OpenStack plugin has been removed.

Moab Insight

10.1.0.1

Support for Red Hat 8 and SUSE 15

Support has been added for Red Hat 8 and SUSE 15. Red Hat 6 is not supported in version 10.1.

Insight now requires MongoDB 4.2

In order to support a version of MongoDB that works across newer operating systems, Insight now requires the use of MongoDB 4.2.

3. Resolved Issues

When applicable, each resolved issue has the associated issue number in parentheses.

In this topic:

- Torque Resource Manager
- Moab Workload Manager
- Moab Accounting Manager
- Moab Web Services
- Moab Insight

Torque Resource Manager

7.1.0

- Increased the maximum number of Torque server connections (to 100).
- pbs_pbssimpleauth.so compiles but does not load. (TRQ-4485)
- Failure to set gpu modes on sister when using the -L request format. (TRQ-4472)
- Sister moms can fail to create cgroups directories if started before cgroups is mounted. (TRQ-4471)
- Mom not using Nvidia gpu support even though built with --enable-nvidia-gpus. (TRQ-4470)
- Job file with invalid user causes pbs_mom to core dump on startup. (TRQ-4469)
- Torque configures no gpus when max number of MIGs configured. (TRQ-4468)
- GPUs not recognized if MIG mode enabled but no MIGs defined. (TRQ-4461)

Moab Workload Manager

10.1.0

- Proxy jobs were not using cwd for IWD. (MOAB-9350)
- Fix potential segmentation fault in MJobArrayUpdateJobInfo. (MOAB-9349)
- MHOST is not being populated for showq -r. (MOAB-9344)

- Jobs created in MWS using an RM directive fail with message "Job rejected because no resources were available at this time". (MOAB-9341)

- Poweron jobs would mistakenly run if green and using the GLOBAL node. (MOAB-9339)

- Moab is not authorized to update the Moab MongoDB database on Red Hat 7-based systems. (MOAB-9337)

- Loading the resource manager configuration was failing under certain conditions with mschedctl -m. (MOAB-9334)

- When using MAXPROCPERNODE[<hostname>,...], the list of hostnames was being truncated to 64.

- Processor id is mistakenly used as the task count when used with Torque 7.0 and higher.

- mschedctl -m config can fail intermittently for RMCFG parameter modifications.

- Moab does not create multiple reservations with ReservationDepth > 1 when a reservation was specified for the job to run in.

- mdiag -q diag can crash Moab under some circumstances.

Moab Accounting Manager

10.1.0

- No known issues.

Moab Web Services

10.1.0.1

- The viewpoint-query-helper plugin edit page was not displaying the plugin configuration fields. (IN-596)

10.1.0

- Improved error message when Content-Type HTTP header is not set during creation of a principal. (WS-2578)

- The viewpoint-query-helper plugin was very slow. (WS-2569)

- MWS did not pass the number of GPUs requested to Moab correctly. (WS-2568)

- MWS could not handle a large volume of messages from ZMQ. (WS-2554)

Moab Insight

10.1.0.1

- Insight Kafka Linger Time in Milliseconds and Maximum Block Time in Milliseconds fields were always blank on the MWS health page. (IN-585)

- Insight did not report the status of the connection between Insight and Kafka to MWS. (IN-584)

- Fix bug where Insight's sync.py won't sync jobs whose states haven't changed even if other changes have happened to the job. (IN-581)

- JobSyncService incorrectly converted database objects during sync with Moab Mongo. (IN-579)

- sync.py did not set the completedDate for jobs known to be terminated. (IN-578)

- Fixed bug where stateLastUpdatedDate field was set to a long instead of a Date object when its containing job state was determined to be completed after syncing with Moab Mongo. (IN-577)

- Insight submitted multiple messages to the reporting framework for a completed job. (IN-570)

- The state of completed jobs was not set to completed in Insight's database. (IN-569)

- Destroyed Elastic nodes were still being counted when cluster/system samples were taken. (IN-563)

- Periodically sync jobs with Moab's mongo database to ensure that jobs for which Moab fails to send a completion message are not forever stuck in the Running state (Once per day by default). (IN-562)

4. Installation and Upgrade Information

This section identifies information useful when installing and upgrading.

In this topic:

- Compatibility Requirements

Compatibility Requirements

Torque 7.1 is not backward compatible with Torque 6.1 or earlier. When upgrading to Torque 7.1 from Torque 6.1 or earlier, the server, moms, and clients must be upgraded at the same time. The job format is compatible between Torque 7.1 and previous versions of Torque. After upgrading, any queued jobs should continue to work with the new version.

Moab Workload Manager 10.1 requires Torque Resource Manager 7.0 or later. Elastic Computing is not supported on Ubuntu.

Moab Web Services 10.1 requires Moab Workload Manager 10.1 or later.

Moab Insight 10.1 requires Moab Web Services 10.1 or later.