



Moab HPC Suite 8.1: Viewpoint

New Updates to Adaptive Computing's Next-Gen Admin Portal

Moab HPC Suite 8.1: Viewpoint

Moab Viewpoint is the next generation of Adaptive Computing's admin portal. This enhanced Web-based graphical user interface enables easy viewing of workload — status, reporting on resource utilization and other system metrics.

The Moab Viewpoint Portal plays an instrumental role in ensuring SLAs are met — a key component of Adaptive Computing's Big Workflow vision — by allowing HPC administrators to maximize uptime and prove services were delivered and resources were allocated fairly.

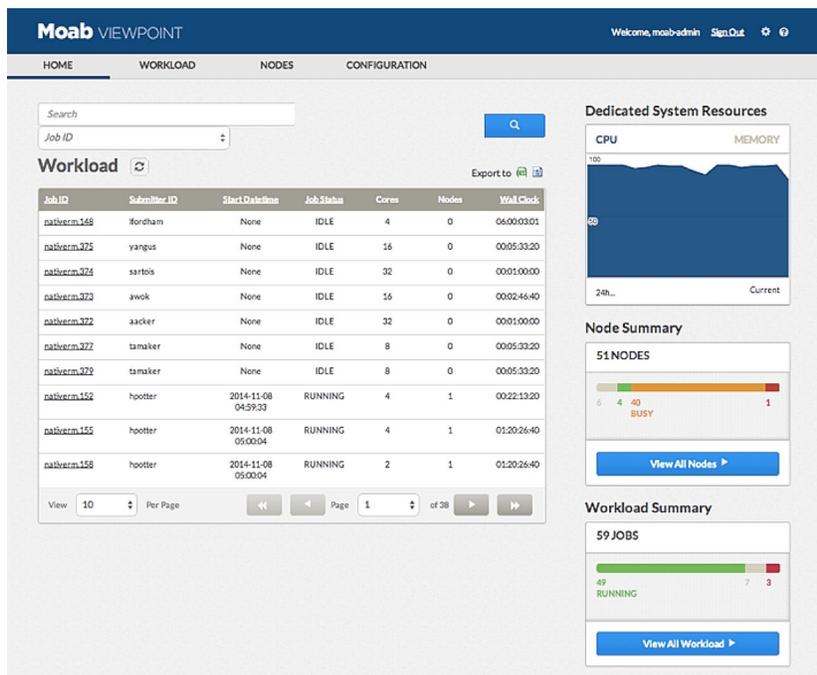
The December 2014 release of Moab HPC Suite-Enterprise Edition 8.1 marks a significant step forward for Moab Viewpoint. In addition to a clean, easy-to-use design interface, this release bolsters the portal's core services while introducing several new features to provide drastically improved visibility into the data center. Moab Viewpoint guarantees services to the business by allowing admins to simplify administrative reporting, workload status tracking and node usage tracking.

Administrative Reporting (Figure 1)

After logging into the Moab Viewpoint Portal, admins are taken to the dashboard, which offers a real-time snapshot of the HPC environment. The dashboard now offers more advanced reporting capabilities into the following areas:

- Workload View** – This section lists each individual job currently running in the system. Pertinent information about each job is listed, including the job ID, the user who submitted the job, the start time of the job, the job status and the amount of cores and nodes required to run the job.
- Dedicated System Resources** – This section displays the cluster's CPU and memory utilization over a 24-hour period.
- Node Summary** – This section shows the number of nodes currently in use, and also features a color-coded bar displaying the current states of the system's nodes (e.g., busy, running, idle, down, unknown).
- Workload Summary** – This section shows the quantity of jobs submitted to the system, as well as a color-coded bar displaying the current job state (e.g., running, removed, idle, completed).

Figure 1



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Workload Status Tracking

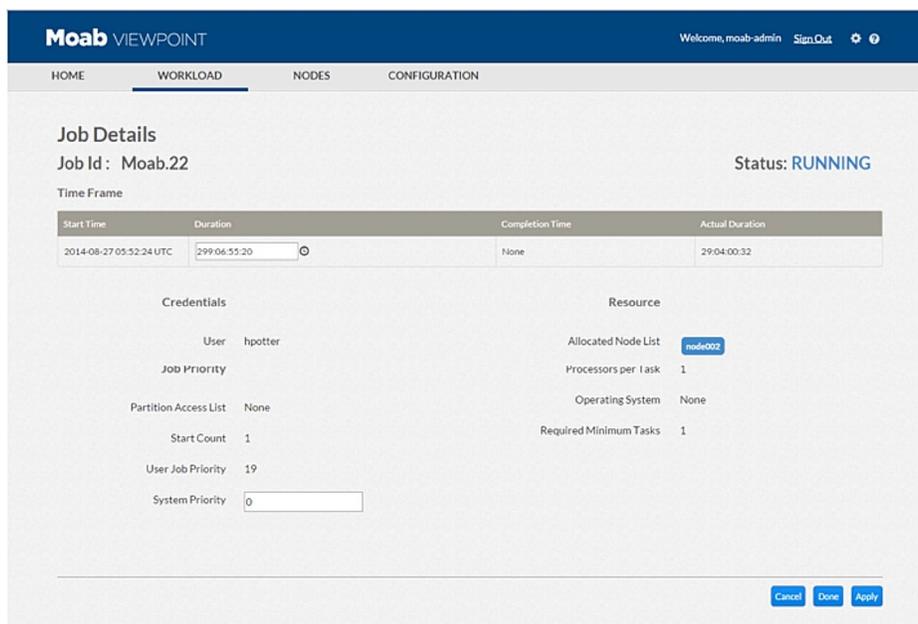
To provide a more holistic view of system workloads, Moab Viewpoint has improved admins' ability to track workload status. Under the Workload tab, admins can benefit from the following features:

- Workload List** – This provides the same comprehensive list of jobs as seen in the dashboard. (Figure 2)
- Searching & Filtering** – This update offers improved search capabilities (e.g., search by job ID or submitter ID) and filtering capabilities, such as filtering by job state (e.g. running, suspended, eligible, blocked, deferred, hold, failed, idle). This makes it easy for admins to troubleshoot jobs and respond to user issues.
- Job Details** – From the list of current jobs, admins can select a specific job and go to an individual job page that contains key details, such as job start time, duration, completion time, credentials, job priority, resource information and job requirements. From the individual job page, admins can make a number of modifications, including adjusting user job priority or system priority; updating requirements; and even canceling the job. This provides additional admin flexibility for jobs that have already been submitted. (Figure 3)

Figure 2

Job ID	Submitter ID	Start Date/Time	Job Status	Cores	Nodes	Wall Clock
nativism_1	mwillis	2014-09-26 11:19:51 UTC	IDLE	1	1	00:11:06:40
nativism_28	lbeverly	None	IDLE	1	0	01:09:33:00
Moab_45	hpotter	None	IDLE	1	0	94:23:59:59
Moab_46	hpotter	None	IDLE	1	0	99:23:59:59
Moab_47	hpotter	None	IDLE	1	0	99:23:59:59
Moab_48	hpotter	None	IDLE	1	0	99:23:59:59
Moab_50	hpotter	None	IDLE	1	0	99:23:59:59
Moab_51	hpotter	None	IDLE	1	0	99:23:59:59
Moab_52	hpotter	None	IDLE	1	0	99:23:59:59
Moab_53	hpotter	None	IDLE	1	0	00:00:01:40
Moab_54	hpotter	None	IDLE	1	0	00:00:00:01
Moab_22	hpotter	2014-08-27 05:52:24 UTC	RUNNING	1	1	299:06:55:20
Moab_28	hpotter	2014-08-31 22:58:29 UTC	RUNNING	1	1	921:22:13:20
Moab_33	hpotter	2014-09-17 03:49:23 UTC	RUNNING	1	1	14:11:13:20
Moab_35	hpotter	2014-09-17 03:50:41 UTC	RUNNING	1	1	2314:19:33:20
Moab_36	hpotter	2014-09-17 03:52:28 UTC	RUNNING	1	1	2314:19:33:20
Moab_37	hpotter	2014-09-17 03:53:17 UTC	RUNNING	1	1	2314:19:33:20
Moab_38	hpotter	2014-09-17 03:53:35 UTC	RUNNING	1	1	2314:19:33:20
Moab_39	hpotter	2014-09-17 03:57:06 UTC	RUNNING	1	1	2314:19:33:20
Moab_40	hpotter	2014-09-17 03:59:55 UTC	RUNNING	1	1	99:23:59:59

Figure 3



Node Usage Tracking

Moab Viewpoint also increases node visibility to provide a comprehensive picture of job resources. Under the Nodes tab, admins can leverage the following features:

- Node List** – This shows every node in the system and its accompanying node ID, status, class, feature, processors available/configured, jobs, CPU utilization and memory utilization. (*Figure 4*)
- Searching & Filtering** – This update offers improved search capabilities (e.g., search by node ID, class, feature) and more advanced filtering capabilities, such as filtering by node status (e.g., idle, busy, running, down, unknown). In addition, admins can set numeric ranges for filtering processors, jobs, CPU utilization and memory utilization (e.g., filter between 25–50% CPU utilization). This makes it easy for admins to respond to node failures and reroute jobs to available nodes, thereby maximizing system performance.
- Node Details** – From the list of server nodes, admins can select a particular node and go to an individual node page that contains relevant information, such as reservations, job quantity, CPU utilization, resource managers and more. (*Figure 5*)

Figure 4

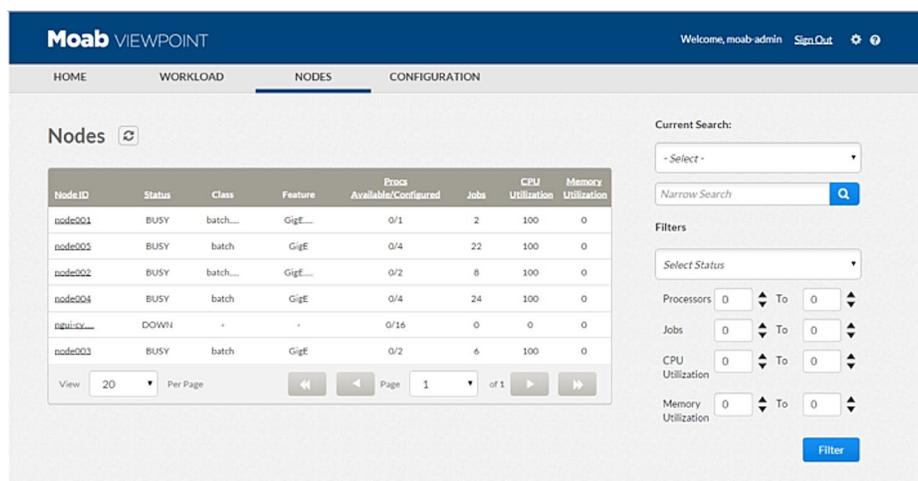
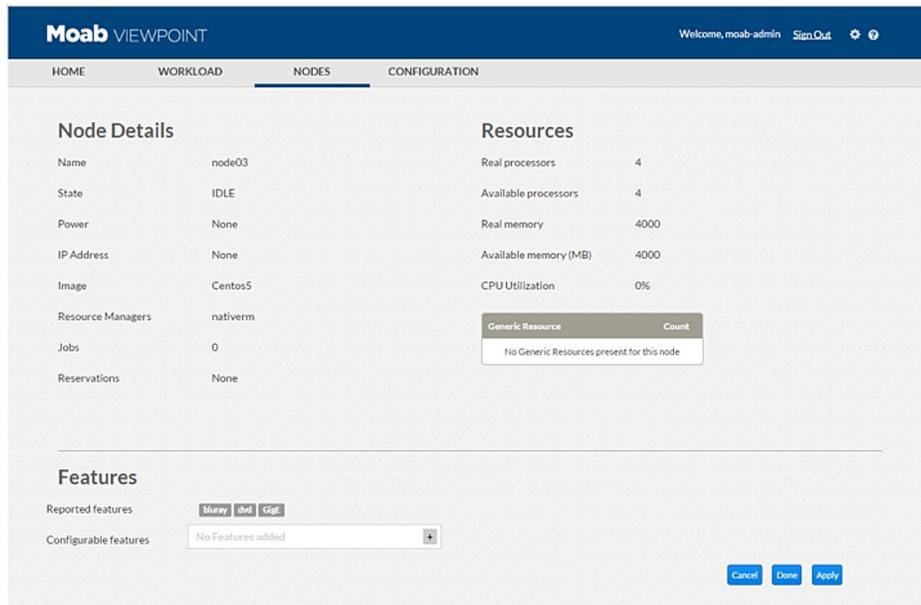


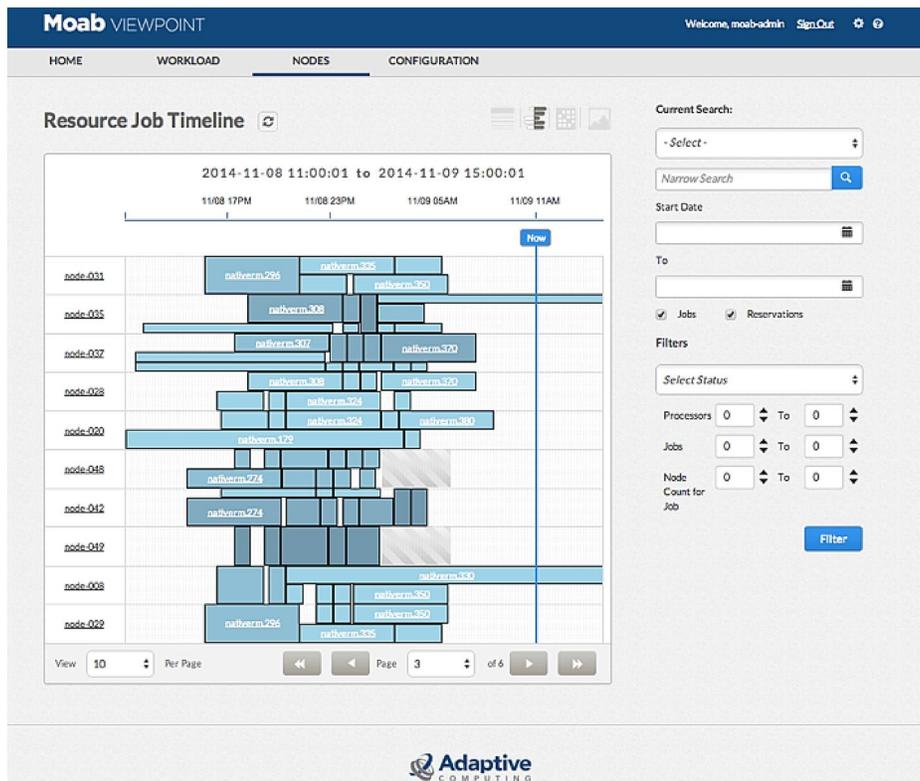
Figure 5



- Resource Job Timeline** – This major new feature presents individual node usage in a digestible, Tetris-like graph. It enables admins to monitor workload and resource utilization easier than ever before, and identify areas where system utilization can be improved. Each

node and its corresponding workload is displayed over a configurable time period. Jobs are presented in boxes of different dimensions to show their duration and number of cores being used, and different shades to indicate their size (the darker the box, the greater amount of cores used per job). (Figure 6)

Figure 6



Let's talk...Set up a Demonstration...and Test in your Environment

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