Adaptive COMPUTING

Intelligent Workload Management Software for HPC and Cloud Environments

Moab® HPC Suite

Product Overview

September 2013
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HPC Management Challenges

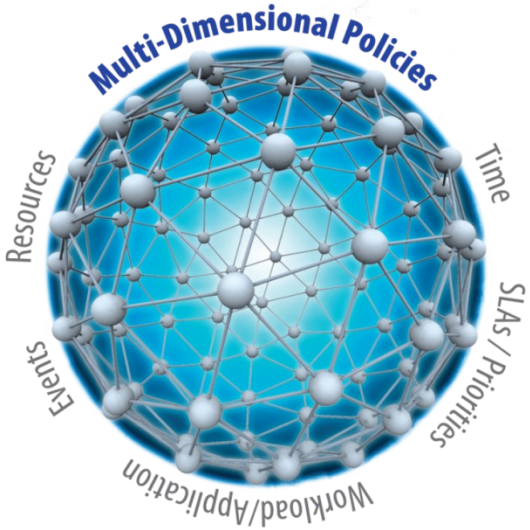
Inter-site workload management
Combining diverse clusters
Maintenance management
Meeting SLAs
Going green
Going cloud

Too complex expertise
Low utilization
Time to result
Job failures
High costs

Moab Intelligence Engine

Core Moab® technology

- Mimics real-world decision-making
- 12+ years battle tested
- Patented



Multi-dimensional policies across

- Service level agreements (SLA)
- Applications
- Resources
- Workloads
- Priorities
- Time

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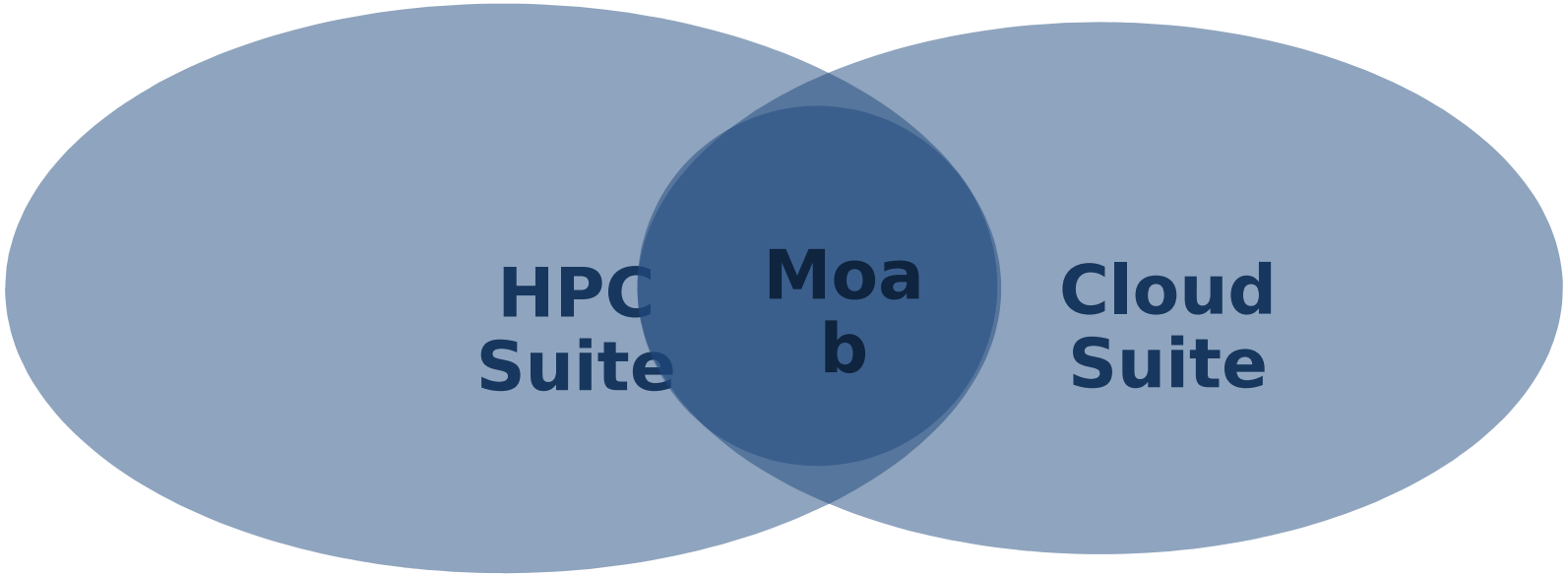
Portfolio Built Around Moab

- Ubiquitous decision-making engine
- Unified resource pools
- Inter-related techniques
- Out-of-box workload-specific suites



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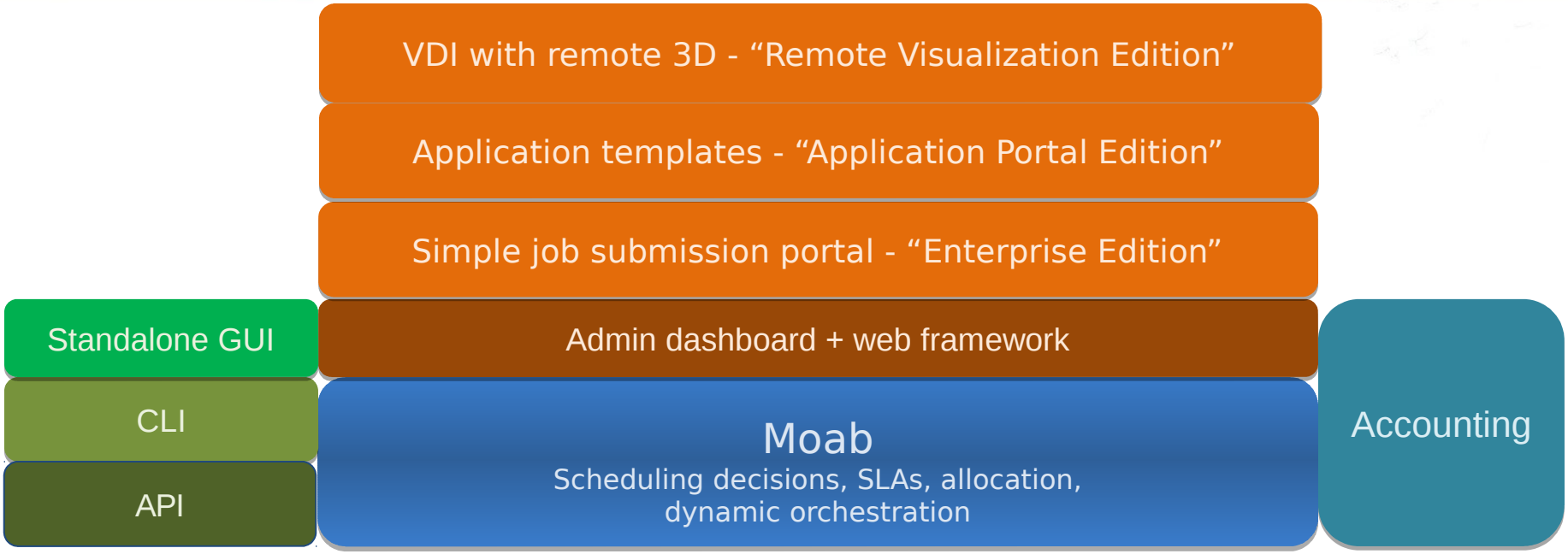
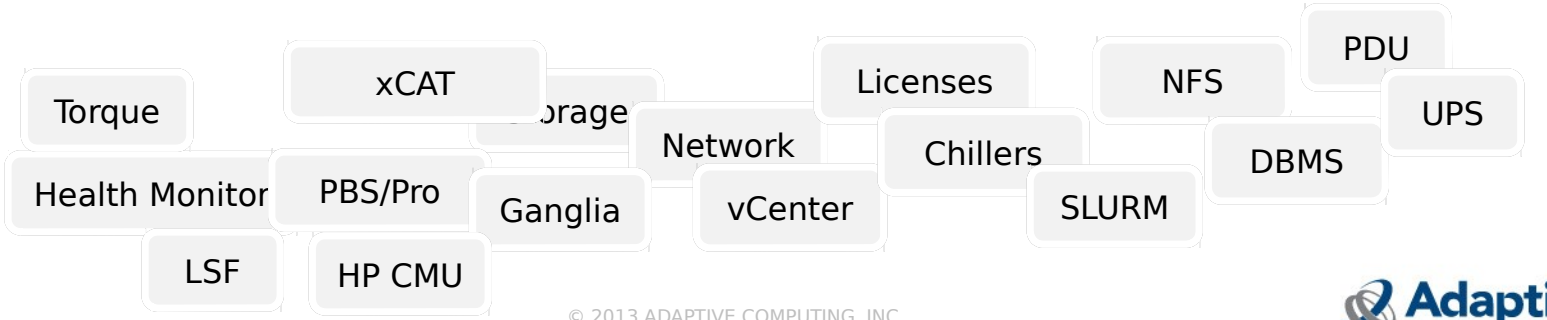
Moab in Top100 (June 2013)

№2 “Titan” Oak Ridge National Lab	“Hopper” Lawrence Berkeley N’Lab	“Cielo” Los Alamos National Lab	“Conte” Purdue University
“Hermit” University of Stuttgart	“Zin” Lawrence Livermore National Lab	“Big Red II” Indiana University	“Gaea C2” Oak Ridge National La
“Red Sky” Sandia National Lab	“Luna” Los Alamos National Lab	“Aspen” Los Alamos National Lab	“Pecos” Sandia National La
	“Keeneland” Georgia Institute of Technology	“Blackthorn” Atomic Weapons Establishment	“Gaea C1” Oak Ridge National La

Intelligent Workload Optimization





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Moab Cluster Manager

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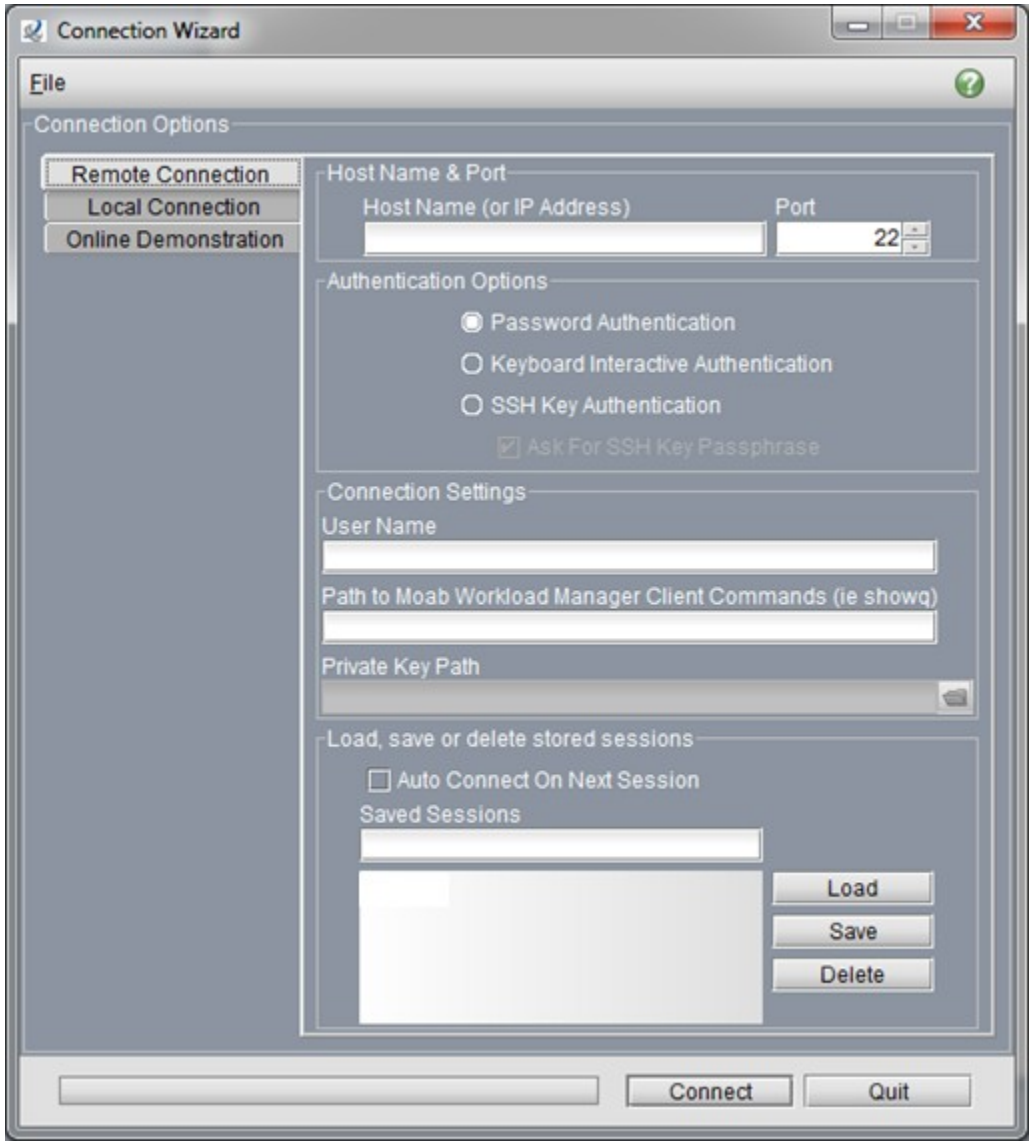
Login



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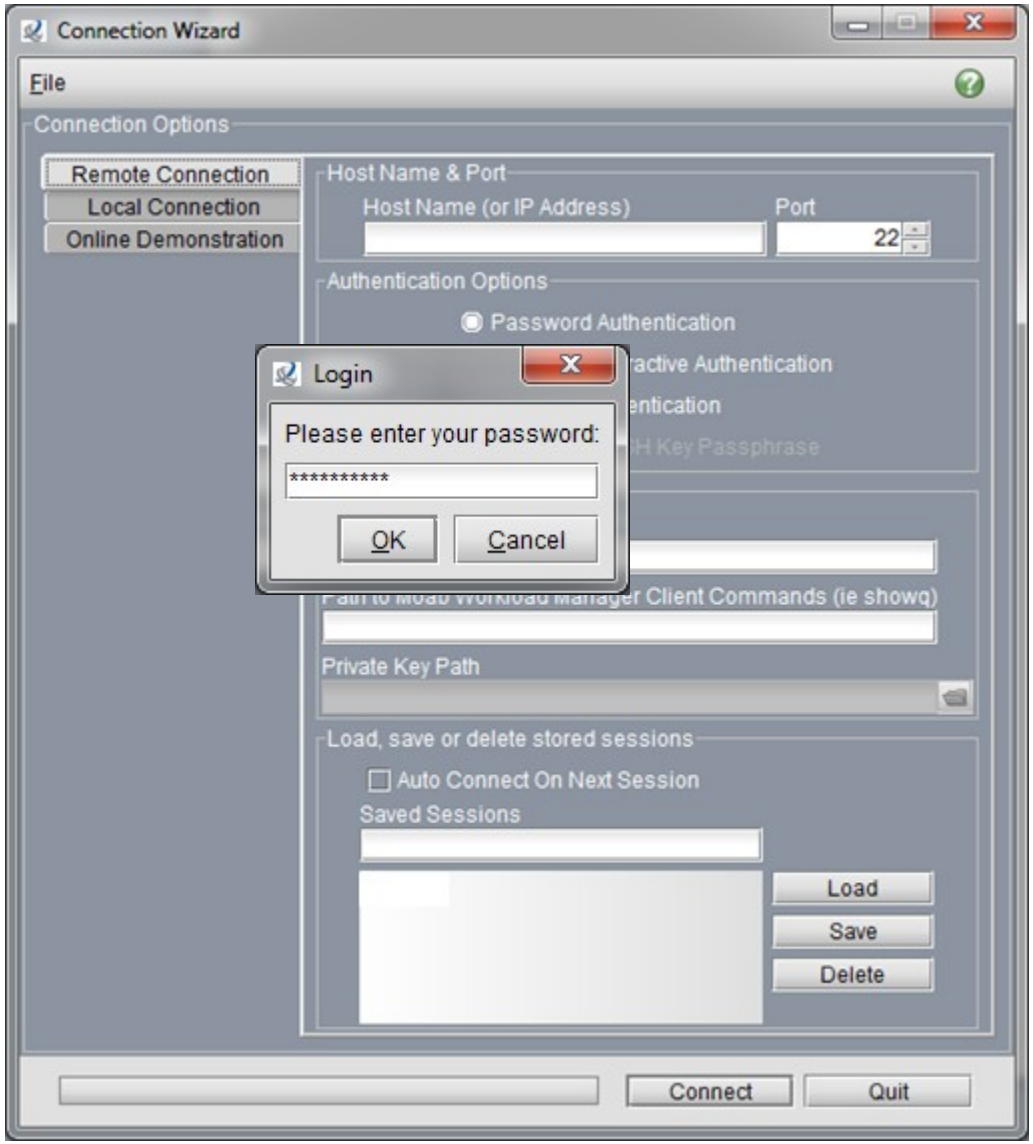
Login



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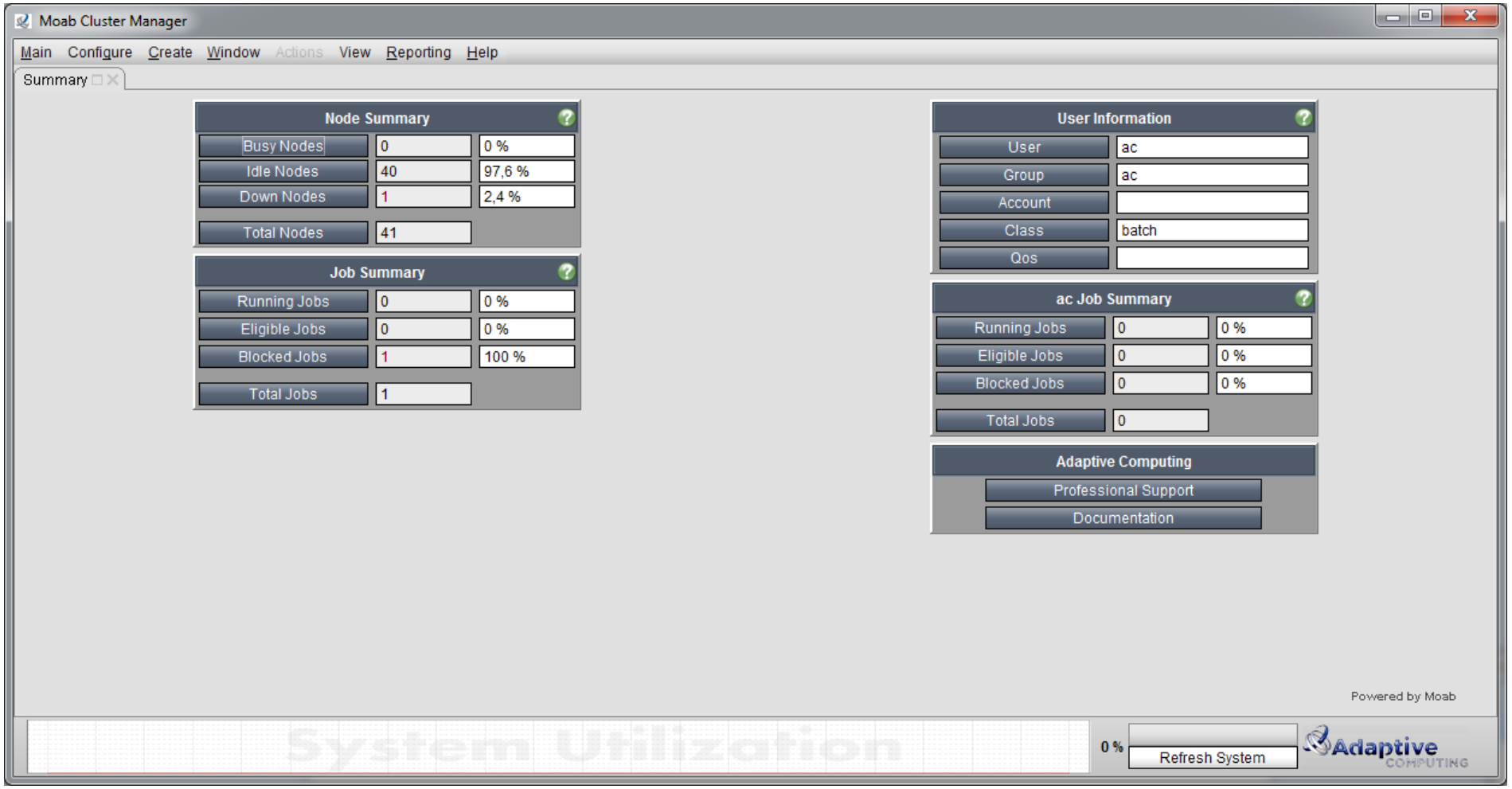
Summary



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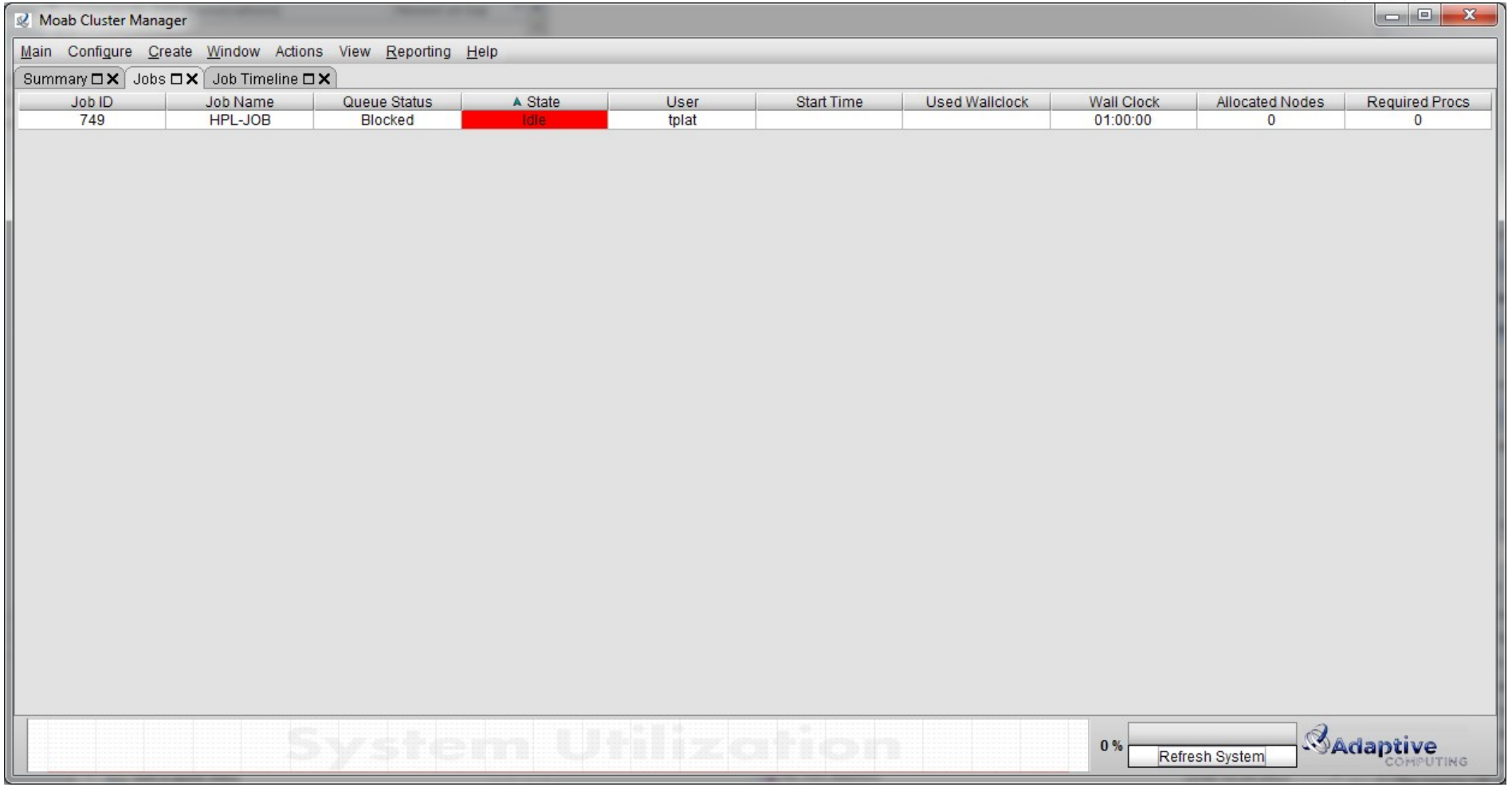
Jobs



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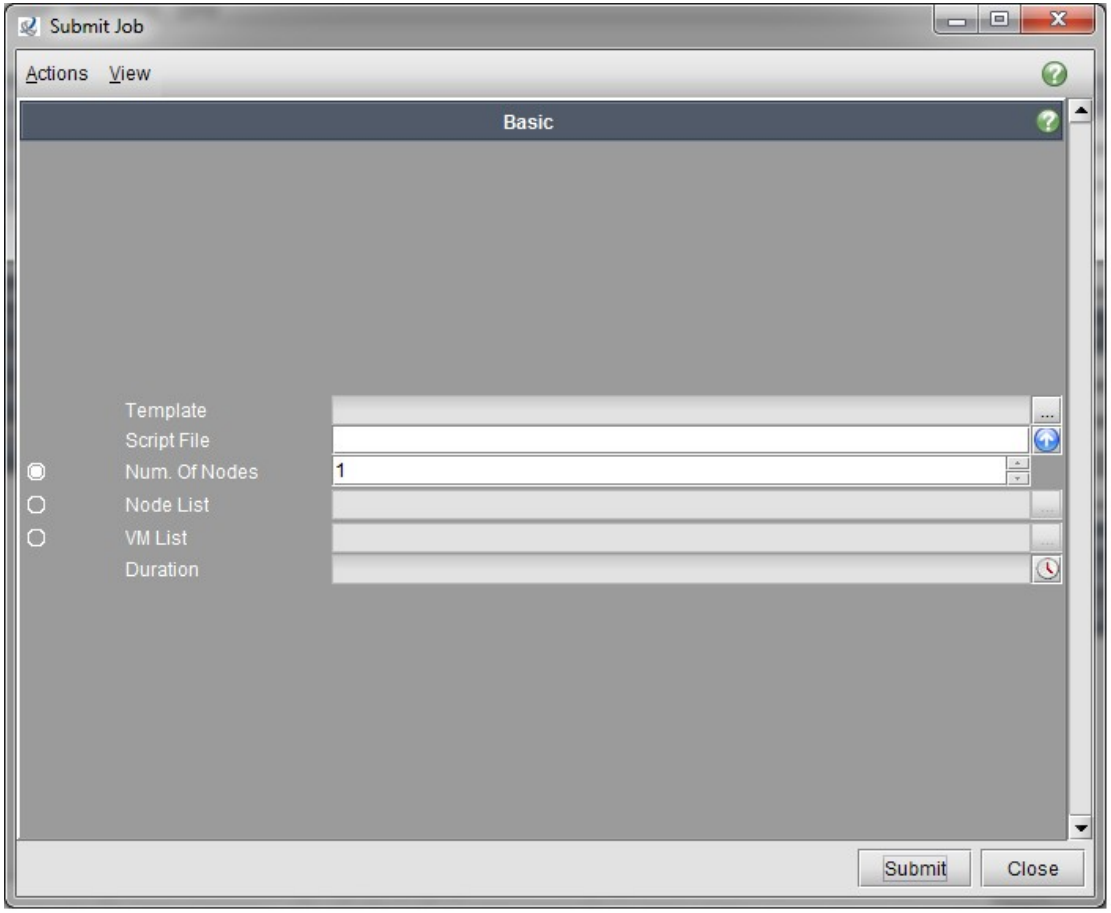
Job Submission – Basic Options



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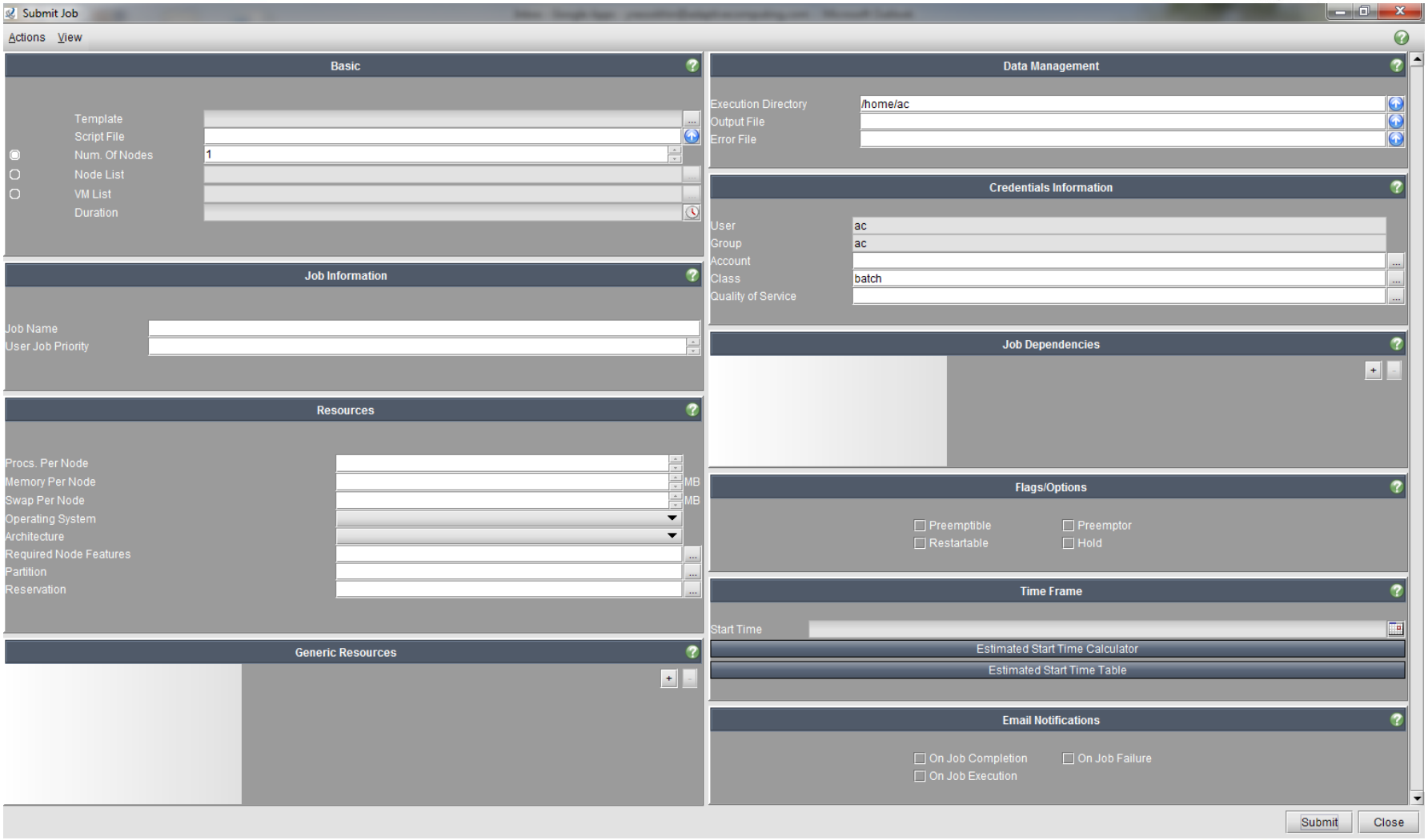
Job Submission – Advanced Options



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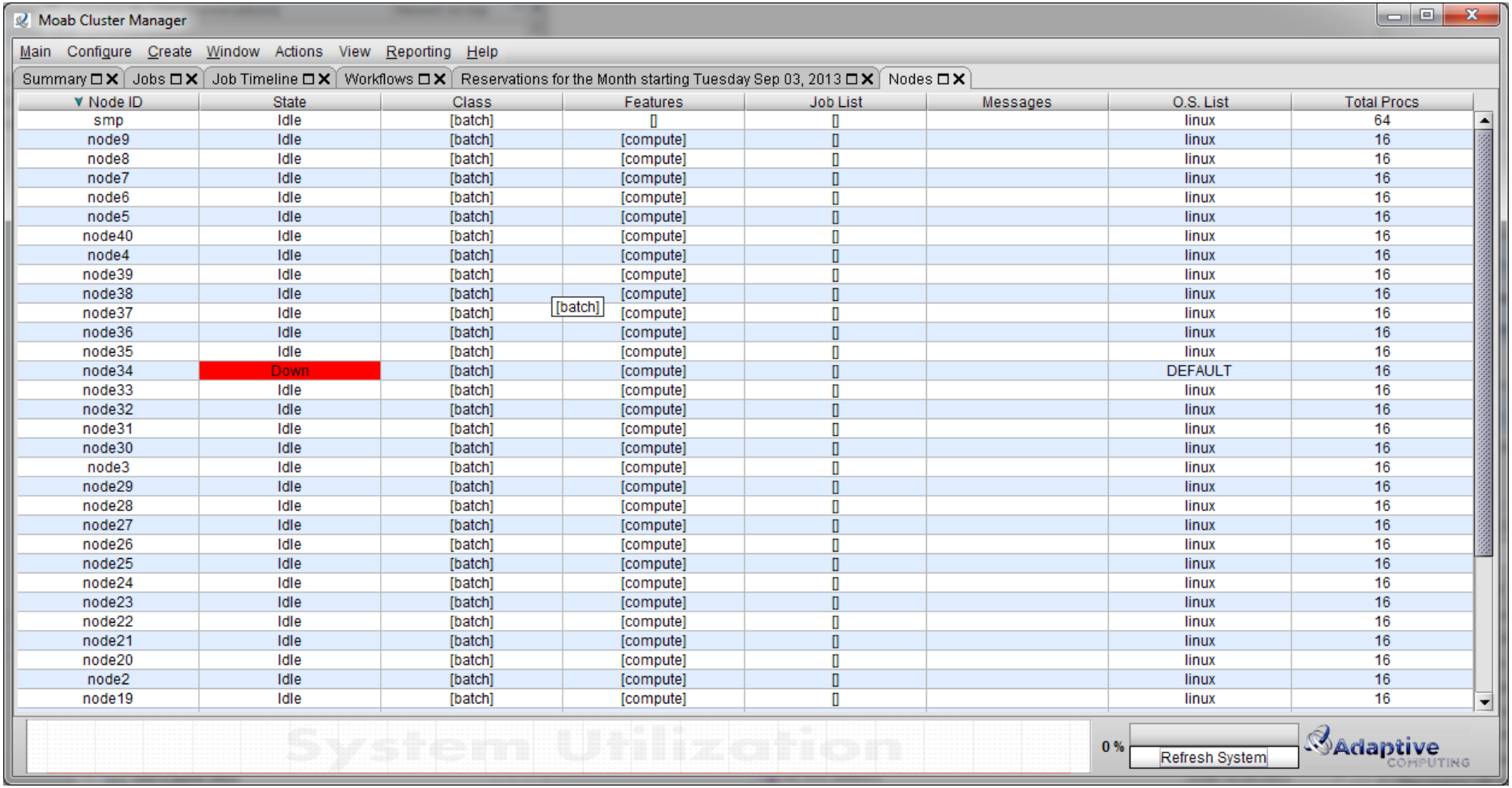
Nodes



Node ID	State	Class	Features	Job List	Messages	O.S. List	Total Procs
smp	Idle	[batch]	[]	[]		linux	64
node9	Idle	[batch]	[compute]	[]		linux	16
node8	Idle	[batch]	[compute]	[]		linux	16
node7	Idle	[batch]	[compute]	[]		linux	16
node6	Idle	[batch]	[compute]	[]		linux	16
node5	Idle	[batch]	[compute]	[]		linux	16
node40	Idle	[batch]	[compute]	[]		linux	16
node4	Idle	[batch]	[compute]	[]		linux	16
node39	Idle	[batch]	[compute]	[]		linux	16
node38	Idle	[batch]	[compute]	[]		linux	16
node37	Idle	[batch]	[compute]	[]		linux	16
node36	Idle	[batch]	[compute]	[]		linux	16
node35	Idle	[batch]	[compute]	[]		linux	16
node34	Down	[batch]	[compute]	[]		DEFAULT	16
node33	Idle	[batch]	[compute]	[]		linux	16
node32	Idle	[batch]	[compute]	[]		linux	16
node31	Idle	[batch]	[compute]	[]		linux	16
node30	Idle	[batch]	[compute]	[]		linux	16
node3	Idle	[batch]	[compute]	[]		linux	16
node29	Idle	[batch]	[compute]	[]		linux	16
node28	Idle	[batch]	[compute]	[]		linux	16
node27	Idle	[batch]	[compute]	[]		linux	16
node26	Idle	[batch]	[compute]	[]		linux	16
node25	Idle	[batch]	[compute]	[]		linux	16
node24	Idle	[batch]	[compute]	[]		linux	16
node23	Idle	[batch]	[compute]	[]		linux	16
node22	Idle	[batch]	[compute]	[]		linux	16
node21	Idle	[batch]	[compute]	[]		linux	16
node20	Idle	[batch]	[compute]	[]		linux	16
node2	Idle	[batch]	[compute]	[]		linux	16
node19	Idle	[batch]	[compute]	[]		linux	16

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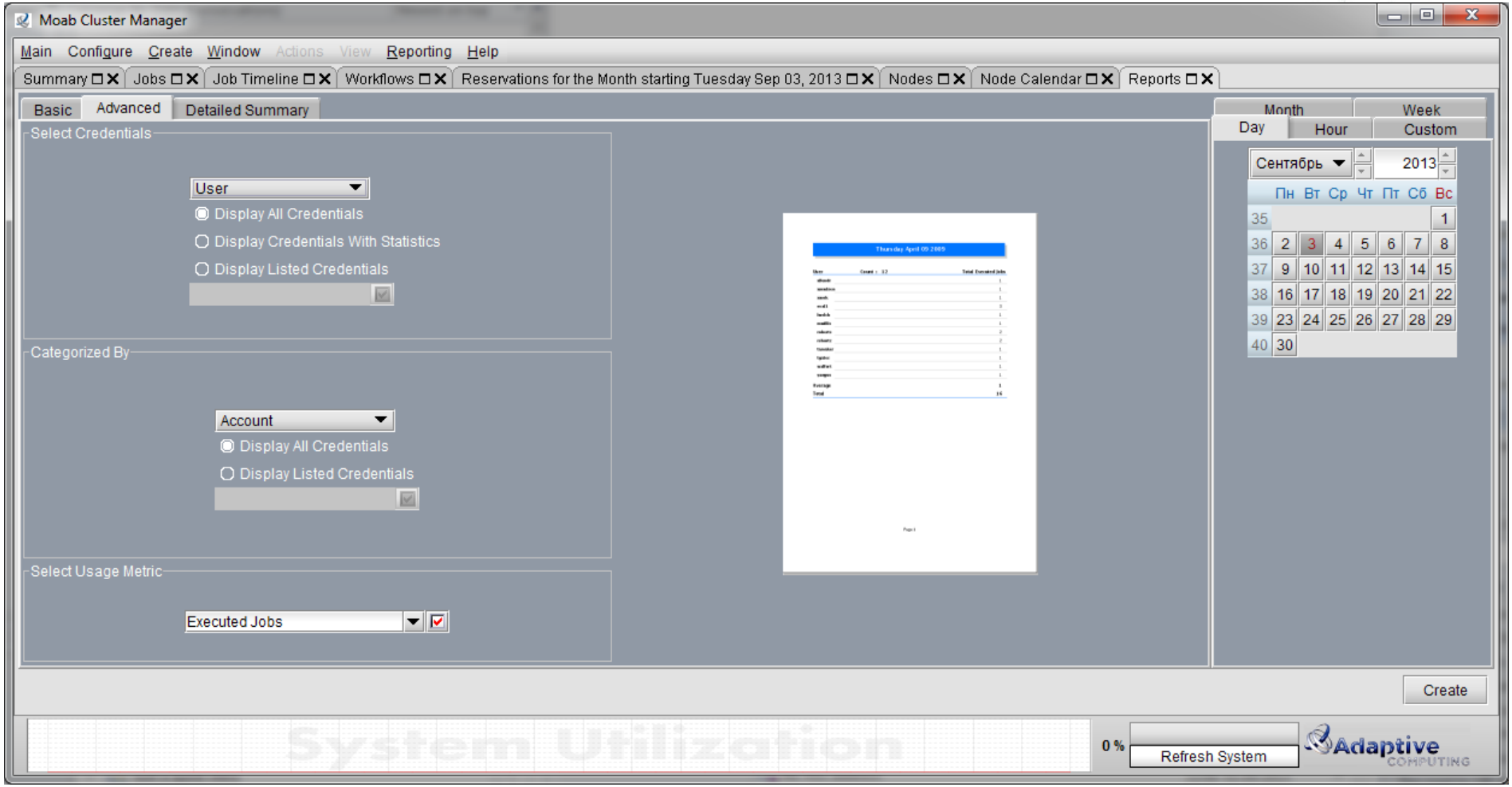
Reports



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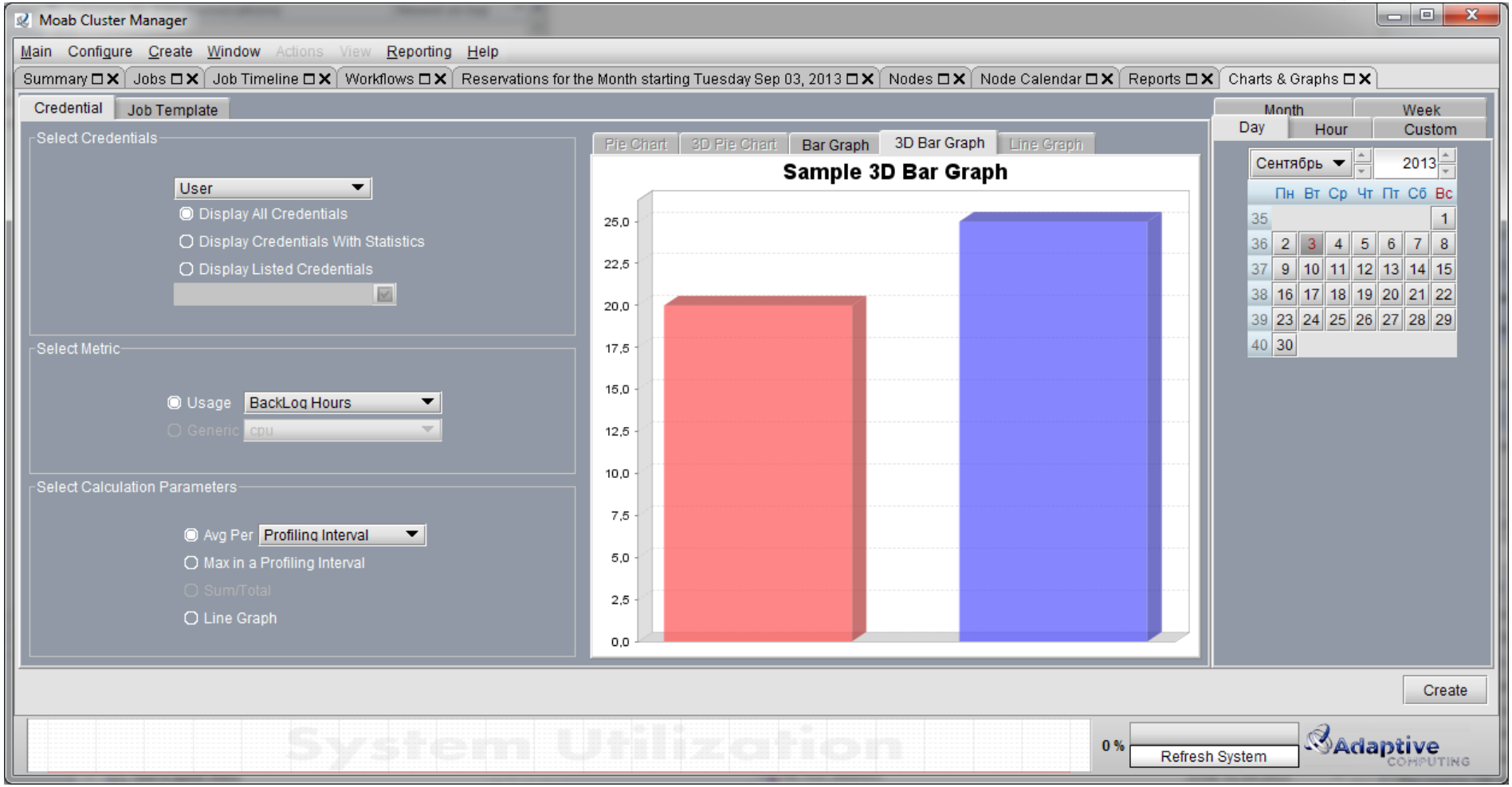
Charts And Graphs



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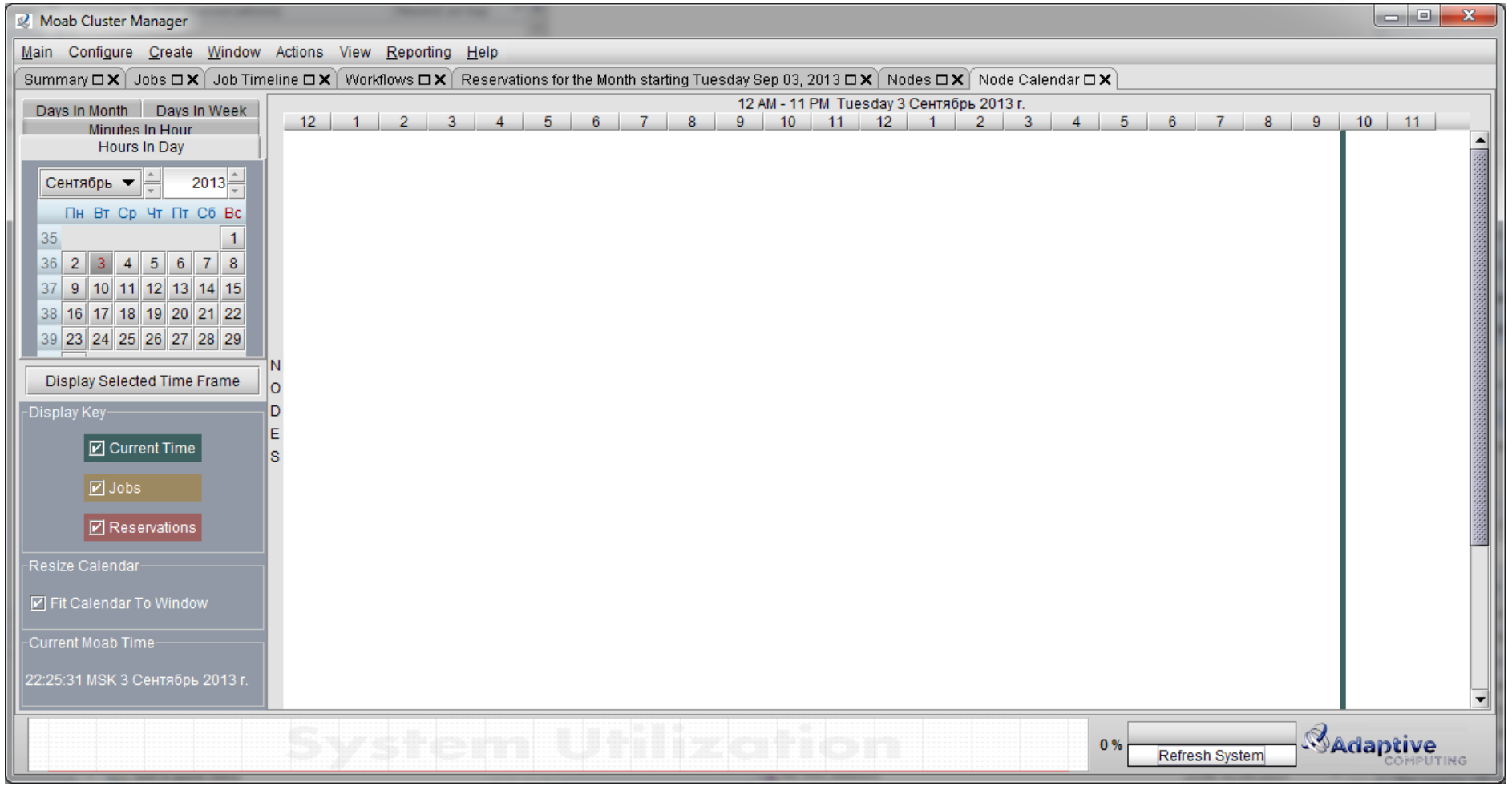
Nodes Calendar



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