{ **Platform
Computing**

Platform HPC Enterprise - Dell Edition

**"All-in-one" cluster lifecycle
management suite**

Benefits
- Fast and flexible cluster deployment
- Optimized for maximum performance
- High scalability
- Reduced cluster cost of ownership
- Easy to use and manage

Key capabilities
- Fully integrated solution
- Broadest commercial support
- Multiple OS support
- Certified & supported
- Optimized for Dell systems

Overview
Faster result is a primary reason to use an HPC cluster, and Platform HPC Enterprise - Dell Edition provides the most advanced suite of HPC management components to enable this performance need. Platform HPC Enterprise - Dell Edition includes libraries that are optimized for popular vendor hardware servers and network components. Standard benchmark tests are included to ensure that your cluster will deliver the best performance without manual tuning. It also includes a range of industry standard and optimized MPI implementations making it easy to get your parallel applications up and running quickly. Platform LSF improves application performance by intelligently scheduling resources and workload. Whether you have small HPC clusters or a large-scale HPC center, Platform HPC Enterprise - Dell Edition provides cluster configuration and deployment, to management solutions for popular technical applications; all designed to work together to address cluster high performance needs.

Unique values
Most complete cluster capabilities
Performance is a primary driver for HPC, and Platform HPC

Enterprise - Dell Edition ensures that your applications will perform the fastest in an HPC environment. It includes industry standard, optimized MPI implementations that make it easy to get parallel applications up and running quickly. The Platform HPC Enterprise - Dell Edition libraries are optimized for Dell servers and network components. Platform LSF improves application performance by intelligently scheduling resources and workload. Standard benchmark tests are included to ensure that your cluster will deliver the best performance.

Most complete cluster functionality
Platform HPC Enterprise - Dell Edition is the industry's most complete suite of HPC cluster management tools. It includes all the cluster management tools you will need to easily deploy, run and manage your HPC environment while meeting the most demanding requirements for application performance and predictable workload management. The result is a complete cluster solution that provides superior performance, reliability and price while removing the complexity associated with clusters.

The tools available include:
- **Platform Cluster Manager - Dell Edition** – provides your servers with Linux provisioning and management
- **Platform LSF** – the industry's most robust and sophisticated workload scheduler
- **Platform MPI (formerly HP-MPI)** – the market's fastest MPI implementation
- **Platform Application Center** – an easy-to-use portal solution for users to manage their cluster jobs
- **Platform ISF Adaptive Cluster** – dynamically adapts your cluster to support multiple operating systems
- **Platform RTM** – a runtime manager allowing administrators to visualize the health of the HPC environment by correlating workload information with system load information

Powerful dynamic infrastructure management

Applications co-located on the same cluster often need different operating systems or software stacks. Platform ISF Adaptive Cluster, included in Platform HPC Enterprise - Dell Edition, allows a node to install multiple operating systems, and dynamically boot the correct OS to run a particular job. System administrators can also use a web interface to manually switch nodes to the required OS to meet application demands.

Extended visibility for ensuring user service level

Platform HPC Enterprise - Dell Edition includes Platform RTM runtime monitoring for system and workload information. By correlating workload information with system load, administrators can proactively be informed of the state of the cluster. With its capability to zoom in and out, Platform RTM helps users to easily pinpoint possible issues. Also, Platform RTM can provide statistics that quantify user needs and remove guess work for capacity planning.

Commercial support

Platform HPC Enterprise - Dell Edition is the only open Linux cluster solution that is fully supported by Dell. Unlike other cluster toolkits which are often collections of open-source software, the Platform HPC solution is the result of long-standing engineering collaboration between Dell and Platform Computing. With a focus on quality and certification, Platform Computing and Dell together provide a complete end-to-end cluster solution.
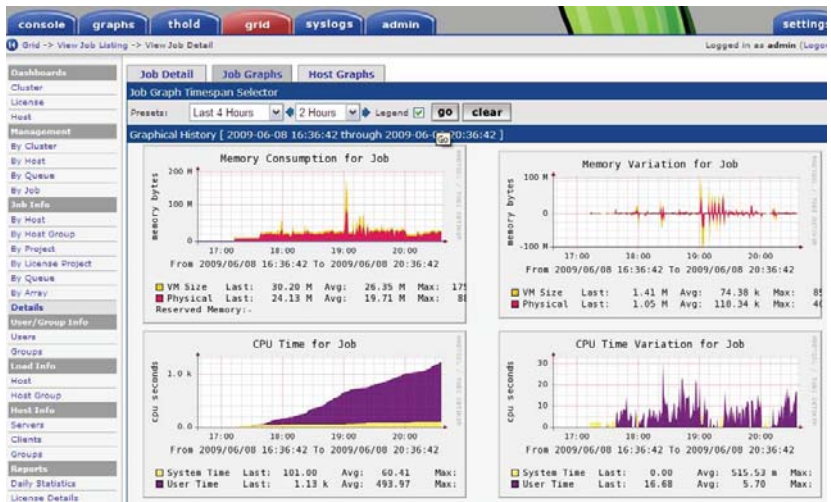
- Pre-tested and partner optimized
- Certified and validated
- Support "from the source" – developers on staff
- Largest global team of dedicated HPC support professionals
- Quality and reliable support
- "Steeped" in Linux and HPC competency
- Automated subscriptions for bulletins, patches and updates
- Free software upgrades
- Quality commercial support

Platform RTM: Correlating workload with system performance						
Capability / Feature	Platform HPC Enterprise Edition	NPACI ROCKS†	xCAT†	MOAB Cluster Suite†	SGE†	PBS Pro†
Cluster Provisioning and Management						
Initial cluster provisioning	✔	✔	✔	*	-	-
Multiple provisioning methods	✔	✗	✔	✗	-	-
Web-based cluster management	✔	✗	✗	✔	-	-
Node updates with no re-boot	✔	✗	✗	✗	-	-
Repository snapshots	✔	✗	✗	✗	-	-
Flexible node templates	✔	Weak	✔	*	-	-
Multiple OS and OS versions	✔	Weak	✔	*	-	-
Workload Management and Application Integration						
Integrated workload management	✔	✔	✗	✔	✔	✔
HPC libraries and toolsets	✔	✔	✗	✗	✗	✗
NVIDIA CUDA SDK support	✔	✔	*	*	*	*
Web-based job management	✔	✗	✗	✔	✔	*
Web-based job data management	✔	✗	✗	✗	✗	*
Multi-boot based on workload	✔	✗	✗	*	✗	✗
Advanced parallel job management	✔	✗	✗	✔	✗	✔
Commercial application integrations	✔	✗	✗	✗	✗	*
MPI Libraries						
Commercial grade MPI	✔	✗	✗	✗	✗	✗
Workload and system monitoring, reporting and correlation						
Workload monitoring	✔	✗	✗	✔	✔	✔
Workload reporting	✔	✗	✗	*	✔	*
System monitoring and reporting	✔	✔	✔	*	✗	✗
Workload and system load correlation	✔	✗	✗	✗	✗	*

* Item marked with an asterisk indicates that the feature is available, but requires a separately installed add-on package
- Item marked with a hyphen is not applicable.
† The chart data is comprised of product information as published by each respective company in January 2010.

Workload and system monitoring, reporting and correlation

Platform Computing is the leader in cluster, grid and cloud management software - serving more than 2,000 of the world's most demanding organizations for over 17 years. Our workload and resource management solutions deliver IT responsiveness and lower costs for enterprise and HPC applications. Platform has strategic relationships with Cray, Dell™, HP, IBM®, Intel®, Microsoft®, Red Hat®· and SAS®. Visit www.platform.com.

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