

Platform HPC 3



Key Benefits

- More science, less computer science
- Faster time to system readiness
- Reduced user training requirements
- Easily integrate applications
- Improve workload throughput

Key Features

- Complete, easy-to-use cluster management product
- Next generation web-based interface
- Integrated application support
- User-friendly, topology aware workload management
- Robust workload and system monitoring and reporting
- Dynamic operating system multi-boot
- GPU scheduling, management and monitoring
- Robust commercial MPI library (Platform MPI)
- 3rd part management software integration

Overview

Platform HPC is the industry's easiest and most complete HPC management product. Its robust cluster and workload management capabilities are accessible using the latest design in web-based interfaces – making it powerful, yet easy to use. The application integration process is simplified, so that you can focus on your work, instead of managing your cluster.

Other HPC cluster solutions just combine multiple tools and interfaces, which are not integrated, certified, or tested together. Platform HPC is a single product with a unified set of management capabilities that make it easy for you to harness the power and scalability of your HPC cluster, resulting in shorter time to system readiness and user productivity as well as optimal throughput. Backed by the industry's best customer support, Platform HPC incorporate nearly two decades of product and technology leadership.

Most Complete HPC Management Product Easy to use web-based interface

Platform HPC includes a single, unified web-based interface with advanced capabilities that make it easy to manage all aspects of your cluster. The intuitive interface provides a robust set of management dashboards and reports that make it easy to monitor resource performance as well as alerts to ensure that you HPC infrastructure is optimally utilized.

Simplified cluster deployment and management

Using Platform HPC you can quickly provision and manage HPC clusters with unprecedented ease. It ensures maximum uptime and can transparently synchronize files to cluster nodes without any downtime or re-installation. In order to ensure compatibility with diverse compute environments, you have the option to use Platform HPC or third-party software to provision and manage your cluster.

Robust workload management

Platform HPC includes a robust workload scheduling engine, which is based on Platform LSF — the industry's most powerful, comprehensive, policy driven workload management solution for engineering and scientific distributed computing environments. By scheduling workloads intelligently according to policy, Platform HPC improves end user productivity with minimal system administrative effort. In addition, it allows HPC user teams to easily access and share all computing resources, while reducing time between simulation iterations.

Fully certified and supported by Platform Computing

Platform HPC provides you with the easiest and most robust HPC management capabilities while reducing your overall cluster cost with full support and certification from Platform Computing, the world leader in HPC management solutions.

Comprehensive monitoring and reporting

Platform HPC includes an operational dashboard that provides comprehensive administrative reports. It enables you to make timely decisions and correlate workload information with system load you can easily identify and troubleshoot issues with your cluster jobs. When it's time for capacity planning, you can run detailed reports and analyses which quantify user needs and remove the guess work from capacity expansion. Platform HPC provides the capability to customize the metrics you monitor, including integrating with 3rd party management software. This enables you to monitor and alert abnormal status for non-server devices in the HPC environment.

Dynamic OS multiboot

Platform HPC supports image-based installs, allowing cluster nodes to be rapidly "cloned" while also providing support for diskless nodes. Because of this, Platform HPC can deploy multiple operating system versions concurrently on the same resource and, based on job resource requirements, dynamically boot the Linux or Windows operating system required to run the job.

GPU scheduling and monitoring

Platform HPC provides the capability to schedule GPU enabled applications specifically to resources with GPUs. This is particularly advantageous in heterogeneous hardware and application environments as you can configure Platform

HPC so that only those jobs that can benefit from running on GPUs are allocated to those resources. Using the unified management interface, administrators can also monitor the GPU utilization, temperature and status as well as detect ECC error accumulation.

High performing MPI library

In order to make it easier to get parallel applications up and running, Platform HPC includes the industry's most robust and highest performing MPI implementation, Platform MPI, as well as various other industry-standard MPI implementations. Platform MPI provides consistent performance at application run-time and for application scaling, resulting in top performance results across a range of third-party benchmarks.

Integrated application support

Platform HPC enables you to fully harness the power of your cluster to optimize application performance. Scripting guidelines and job submission templates for commonly used commercial applications enable easy application integration and ensure that users are immediately productive - simplifying job submission, reducing job setup time and minimize operation errors. Once your applications are up and running, Platform HPC improves application performance by intelligently scheduling resources based on workload characteristics.

Platform HPC 3 System Requirements	
Operating System Support	<ul style="list-style-type: none">• Red Hat Enterprise Linux 5.6 and 6.1 x86 64 bit• SUSE Linux Enterprise Server 11 SP1 x86 64 bit• Scientific Linux 5.5 x86 64 bit• CentOS 5.6 x86 64 bit
Installer Node/Head Node Minimum Requirements	<ul style="list-style-type: none">• 2 GB of physical memory (RAM) and 80 GB of free disk space• Two Ethernet interfaces (public network and compute node connections)• DVD drive
Compute Node Minimum Requirements for Package-based Installation	<ul style="list-style-type: none">• 1 GB of physical memory (RAM) and 40 GB of free disk space• One Ethernet interface
Compute Node Minimum Requirements for Image-based Installation	<ul style="list-style-type: none">• 3 GB of physical memory (RAM) and 40 GB of free disk space• One Ethernet interface
Compute Node Minimum Requirements for Diskless Installation	<ul style="list-style-type: none">• 4 GB of physical memory (RAM)• One Ethernet interface
Compute Node Minimum Requirements without using Platform HPC provisioning	<ul style="list-style-type: none">• 512 MB of physical memory (RAM) and 10 GB of free disk space• One Ethernet interface
Max Number of Compute Nodes	<ul style="list-style-type: none">• Platform HPC Workgroup: 32 nodes• Platform HPC Enterprise: Unlimited

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 18 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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