

## Platform HPC 2.1



Incomplete is now obsolete  
Product Overview



### Key Benefits

- More science, less computer science
- Easy, integrated application support
- Powerful performance
- Scalable resource management
- Easiest and best customer support

### Key Features

- Integrated application support
- Complete, easy-to-use cluster management
- User-friendly, topology aware workload management
- Robust workload, system monitoring and reporting
- Web-based interface for access anywhere
- Dynamic operating system multi-boot
- GPU scheduling and monitoring
- Robust commercial MPI library (Platform MPI)

## Overview

Platform HPC makes it easy for you to harness the power, flexibility, and scalability of your HPC cluster. Whether you have a small or large cluster, Platform HPC quickly gets your cluster up and running. It simplifies the application integration process so that you can focus on your work, instead of managing your cluster.

Other HPC cluster solutions combine multiple tools and interfaces, which are not integrated, certified, or tested together. Platform HPC is the industry's easiest and most complete cluster solution. It includes a mature, robust set of management capabilities that are accessible through a unified portal interface. Backed by the industry's best customer support, Platform HPC incorporates nearly two decades of product and technology leadership.

## The most complete HPC cluster solution

### Cluster 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 cluster provisioning and management features or a third-party cluster manager.

### Workload management

Platform HPC includes a robust workload scheduling capability, 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.

### Workload, system monitoring and reporting

One of the key features of the unified web portal interface is an operational dashboard that provides comprehensive administrative reports. It enables you to make timely decisions and proactively manage compute resources against business demand. By correlating workload information with system load, you can easily identify issues with your cluster and troubleshoot issues with your jobs. When it's time for capacity planning, you can use the web portal to run detailed reports and analyses which quantify user needs and remove the guess work from capacity expansion.

## Unified web portal

While command line savvy users can continue using the command line interface, Platform HPC also provides a unified web portal that make it easy to submit, monitor, and manage jobs from any machine with a web browser. No client software installation is required in order to use and manage the cluster from a workstation, PC, laptop, or mobile device. As changes are made to the cluster configuration, Platform HPC automatically re-configures key components, ensuring that jobs are allocated to the appropriate resources.

The web portal is customizable and provides job data management, remote visualization and interactive job support. It also provides an interactive environment to easily package software as kits for application deployment as well as pre-integrated commercial application support.

## Integrated application support

Platform HPC comes complete with job submission templates for ANSYS Mechanical, ANSYS Fluent, ANSYS CFX, LS-DYNA, MSC Nastran, Schlumberger ECLIPSE, Simulia Abaqus, and Blast. By configuring these templates based on the application settings in your environment, you can start to using your cluster without writing scripts. These self documenting, user friendly interfaces, help minimize job submission errors. Platform HPC also includes standard benchmark tests to ensure that your cluster will deliver the best performance without manual tuning.

## Flexible OS provisioning

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 systems versions concurrently on the same cluster and, based on job resource requirements, dynamically boot the Linux or Windows operating system required to run the job. You can also use a web interface to manually switch nodes to the required OS to meet application demands, providing you with the flexibility to support special requests and accommodate unanticipated changes.

## MPI library (Platform MPI)

In order to make it easier for you to get your parallel applications up and running, the industry’s most robust and highest performing MPI implementation, Platform MPI, comes integrated with Platform HPC. 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.

## Platform HPC 2.1 System Requirements

Operating System Support	<ul style="list-style-type: none"><li>• Red Hat Enterprise Linux 5.5 x86 64 bit</li><li>• SUSE Linux Enterprise Server 10 SP3 and 11 SP1 x86 64 bit</li><li>• Scientific Linux 5.5 x86 64 bit</li><li>• CentOS 5.5 x86 64 bit</li></ul>
Installer Node/Head Node Minimum Requirements	<ul style="list-style-type: none"><li>• 2 GB of physical memory (RAM)</li><li>• 80 GB of free disk space</li><li>• Two Ethernet interfaces. One connects to corporate/public network and one (provision) connects to all compute nodes</li><li>• DVD drive</li></ul>
Compute Node Minimum Requirements for Package-based Installation	<ul style="list-style-type: none"><li>• 1 GB of physical memory (RAM)</li><li>• 40 GB of free disk space</li><li>• One Ethernet interface</li></ul>
Compute Node Minimum Requirements for Image-based Installation	<ul style="list-style-type: none"><li>• 3 GB of physical memory (RAM)</li><li>• 40 GB of free disk space</li><li>• One Ethernet interface</li></ul>
Compute Node Minimum Requirements for Diskless Installation	<ul style="list-style-type: none"><li>• 4 GB of physical memory (RAM)</li><li>• One Ethernet interface</li></ul>
Compute Node Minimum Requirements without using Platform HPC provisioning	<ul style="list-style-type: none"><li>• 512 MB of physical memory (RAM)</li><li>• 10 GB of free disk space</li><li>• One Ethernet interface</li></ul>
Max Number of Compute Nodes	<ul style="list-style-type: none"><li>• Platform HPC <i>Workgroup</i>: 32 nodes</li><li>• Platform HPC <i>Enterprise</i>: Unlimited</li></ul>



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](http://www.platform.com).

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