



# RED HAT HPC SOLUTION

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## INTRODUCING THE RED HAT HPC SOLUTION

The Red Hat HPC Solution is a low cost, high performance computing solution. Designed for department-level clusters that exploit the power of industry-standard x86 64-bit hardware, this solution provides the essential tools needed to deploy, run, and manage an HPC cluster in one easy-to-install package.

## THE CHALLENGE

Analysts, engineers, and scientists are constantly pushing the computational limits of current IT resources. In response, businesses are increasingly adopting and utilizing High Performance Computing (HPC) clusters to gain a competitive edge. As a result, HPC is the fastest growing segment in the server industry today.

However, building, deploying, and managing an HPC cluster has historically been a costly do-it-yourself affair that took weeks, if not months, to complete. It was a technically complex project that involved tedious software integration work, a high level of technical expertise, project planning, and patience by IT administrators. And once it was installed, it required specialized IT skills to properly manage its day-to-day use.

## THE SOLUTION

The Red Hat HPC Solution removes these barriers and opens up high performance computing to users and workloads where it was previously too complex to utilize.

The Red Hat HPC Solution is a fully integrated, end-to-end solution that includes the essential tools necessary to simply deploy, run, and manage an HPC cluster.

It improves on other Linux-based cluster management toolkits by augmenting production-proven technologies with intuitive, yet powerful, management tools. These tools remove the need for highly specialized IT skills when installing the Red Hat HPC Solution (in most cases, installation takes less than an hour). Once de-

ployed, the easy-to-use toolset removes the complexity of the ongoing management of the cluster. This reduces the lifecycle management costs.

In addition, it provides a viable alternative to expensive supercomputers with proprietary architectures by delivering maximum application performance on today's low cost industry-standard servers.

By simplifying cluster installation, use, and ongoing management, the Red Hat HPC Solution enables users investigating physical phenomena or simulating business scenarios to focus on getting the results they need sooner.

## DETAILS

The Red Hat HPC Solution is a fully integrated, best-in-class software stack utilizing technology from two leaders in the HPC market – Red Hat and Platform Computing.

It fully integrates the powerful, easy-to-deploy cluster software framework of Platform Open Cluster Stack 5 with the world-class performance, security, and stability of Red Hat Enterprise Linux, the world's leading open source operating system.

This complete solution provides everything needed to get started with high performance computing: the operating system, device drivers, simple cluster installer, cluster management tools, resource and application monitor, interconnect support, and a powerful job scheduler – Platform Lava.

With the Red Hat HPC Solution, making changes to the cluster is a snap. With its elegant and powerful node group and repository manager, you can deploy new updates, patches, and software packaged as kits, or re-image new nodes in minutes with no interruption in uptime. Managing four hundred nodes requires as little effort as managing four nodes.

And of course, all of this is backed by Red Hat's global 24x7 industry-leading customer support services.



## THE RED HAT HPC SOLUTION HAS EVERYTHING YOU NEED TO SET UP AND RUN AN HPC CLUSTER

THE 10 COMPONENTS NEEDED FOR A COMPLETE HPC SOFTWARE STACK	INCLUDED WITH RED HAT HPC
1. Operating system	✓
2. Cluster deployment tools	✓
3. Node and cluster monitoring tools	✓
4. Network and node file system	✓
5. Message passing libraries	✓
6. Application workload manager	✓
7. Certification tools	✓
8. Performance benchmarking tools	✓
9. Support for high-speed interconnects	✓
10. Development tools	✓

### FASTER TIME TO SOLUTION

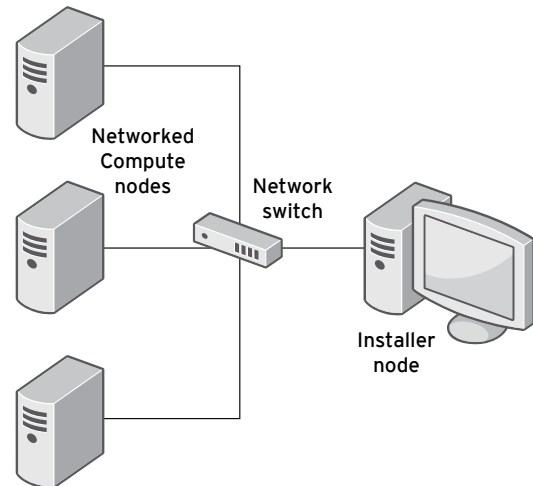
For many businesses, solving technical computing problems faster than the competition drives innovation and translates into a competitive advantage. An increasingly popular strategy for getting there is the utilization of High Performance Computing.

High Performance Computing allows businesses to utilize resources more effectively – both people and computing assets. With the Red Hat HPC Solution, the complexity of deploying, running, and managing an HPC cluster is removed so your experts can focus on solving your important business problems faster.

### FOR MORE INFORMATION

1-888-REDHAT1  
[www.redhat.com/hpc](http://www.redhat.com/hpc)

## RED HAT HPC SOLUTION



### FAST SET UP AND DEPLOYMENT

The Red Hat HPC Solution is designed to simplify the setup of all the head nodes and compute nodes of an HPC cluster. Start by following a few prompts to install the Red Hat HPC Solution on the head node. Once that is complete, the head node finishes the installation by setting up all the compute nodes. Total time to set up the cluster? Less than an hour!

### RED HAT HPC SOLUTION PRICING

**For up to 4 socket systems:**  
 Starts at \$249/node

### NOTES

**Available versions:**  
 Red Hat Enterprise Linux 5 with Platform Open Cluster Stack 5

**Supported architectures:**  
 x86-64, EM64T, AMD64