

Microsoft

High Productivity Computing Management Demo

HPC with Microsoft

An increasing number of businesses today are moving from specialized supercomputers to dedicated compute clusters – based on commodity components – to harness the power of supercomputing in order to help reduce time to insight, increase competitive advantage, and accelerate innovation.

But supercomputing, or high-performance computing—HPC—is about more than just “performance.” An evolving definition of HPC refers to High *Productivity* Computing. This includes: simplified cluster management tools to increase system administrators’ productivity; innovative parallel and many-core developer tools to increase developer productivity; and highly productive end user HPC environments.

Efficient Deployment

In HPC environments today, deploying, provisioning, and managing cluster nodes can be complex and time-consuming. Many existing management tools require customization and highly specialized, costly staff.

HPC on Windows drastically helps simplify deployment and administration through compatible, out of the box systems management tools.

Deployment through standardized image templates allows consistent set-up and re-provisioning of cluster nodes while helping ensure scalability via Windows Deployment Services.

Wide availability of compatible Microsoft partner applications and OEM eco-system support for Windows HPC Server 2008 can reduce the time required to get solutions up and running.

Better Utilization

HPC on Windows enhances cluster utilization.

At-a-glance monitoring of both cluster nodes *and* jobs from a single, intuitive user interface, enables administrators to manage larger clusters, while simplifying the process of isolating problem areas.

Administrators can drill down by running out-of-the-box diagnostic tests that correlate live data and pinpoint configuration errors for rapid problem resolution and greater availability.

Heterogeneous Clusters

HPC on Windows supports leading interoperability standards to extend existing infrastructure investments.

Built on reliable, proven, 64-bit technology, Windows HPC Server 2008 seamlessly works with existing Windows server infrastructure such as Active Directory®, Windows Deployment Services, and Microsoft System Center Operations Manager. Enhanced scripting capability provides the ability to manage clusters programmatically through a command-line interface, Windows PowerShell™ or other languages such as PERL.

Support for the Open Grid Forum's High Performance Computing Basic Profile offers job scheduling interoperability, while Subsystem for Unix Applications enables UNIX-based applications to be compiled and run in Windows systems, reducing the complexity of managing heterogeneous clusters.

Scalable Management

For customers considering larger scale cluster deployments, Microsoft has the ability to extend enterprise management tools to the traditional HPC environments.

HPC on Windows allows for integrated management through the new System Center family of leading IT management solutions, giving HPC professionals an enterprise scale operations console to enable self-managing dynamic systems.

Discover how Windows HPC Server 2008 can help drive significant productivity gains and accelerate time-to-insight. Take HPC farther with simplified cluster deployment and management, integrated client and cluster development tools, and streamlined workflows for heterogeneous environments. The next generation of HPC is here today.

To learn more about HPC on Windows, Microsoft partner offerings, and to download evaluation software, visit microsoft.com/hpc.