

Microsoft Windows[®] HPC Server 2008

 **Windows[®] HPC Server 2008**

DESIGNED FOR WINDOWS[®] HPC SERVER 2008

ClusterVision designs clusters specifically for use with Microsoft Windows HPC Server 2008 to achieve maximum compatibility, stability and performance running the Microsoft HPC Server 2008 operating system and cluster management environment.

INSTALLED WITH WINDOWS[®] HPC SERVER 2008

Our Windows HPC clusters come with Windows HPC Server 2008 pre-installed and pre-configured as a turn-key solution, ready to be installed with your Windows applications immediately after installation at your site.

SUPPORTED BY MICROSOFT[®] & CLUSTERVISION

The offered clusters include hardware and Windows HPC Server 2008 support by ClusterVision and Microsoft.

For more information: www.clustervision.com/microsoft
Call +31 20 407 7550 or email sales@clustervision.com

About ClusterVision

ClusterVision is specialist in the design, implementation and support of turn-key computer clusters for High Performance Computing (HPC). ClusterVision has designed and built some of the largest and most complex compute, storage and database clusters in Europe, including the number 20 fastest supercomputer in the world and the fastest x86 cluster in Europe (TOP500).

ClusterVision was one of the early adopters of Microsoft[®] Windows HPC solutions and has installed several clusters with Windows across Europe. ClusterVision works closely with Microsoft to promote the adoption of Windows HPC Server 2008 in Europe.

ClusterVision offers Windows and Linux clusters based on servers and storage from IBM, Dell and Supermicro, often combined with high-speed interconnects such as InfiniBand, InfiniPath and Myri-10G.

ClusterVision has offices in Amsterdam, Geneva, Gloucester, Madrid, Milan, Munich, Oslo and Paris.



Example 8 or 16 Node Windows® Cluster

Graphics Login Node (Optional)

- 4U chassis, redundant hot-swappable power supply
- 2x Intel® Xeon® 5450 quad-core processors, 3GHz, 12MB cache
- 8GB DDRII ECC Registered Fully Buffered DIMM
- Hardware RAID controller, SATA, RAID1
- 2x SATAII hard disks, 500GB, hot-swappable, Enterprise RAID Edition
- DVD-RW
- nVidia GeForce 9800 graphics card
- 24" TFT monitor, Keyboard & Mouse



Master Node

- 4U chassis, redundant hot-swappable power supply
- 2x Intel® Xeon® 5450 quad-core processors, 3GHz, 12MB cache
- 16GB DDRII ECC Registered Fully Buffered DIMM
- Hardware RAID controller, SATA, RAID1
- 2x SATAII hard disks, 500GB, hot-swappable, Enterprise RAID Edition
- DVD-RW
- InfiniBand ConnectX or InfiniPath DDR PCI-Express card

8 or 16 Compute Nodes

- 1U chassis, single power supply
- 2x Intel® Xeon® 5450 quad-core processors, 3GHz, 12MB cache
- 16GB DDRII ECC Registered Fully Buffered DIMM
- SATAII hard disk, 80GB
- InfiniBand ConnectX or InfiniPath DDR PCI-Express card

Ethernet Network

- 24-port Layer 3, managed Ethernet switch, cables included

InfiniBand Network

- 24-port InfiniBand DDR switch, cables included

Managed Power Network

- APC Switched Rack PDU, 21 ports, cables included

Racking

- 24U or 48U Rack

Software

- Microsoft Windows HPC Server 2008 licenses

Service

- Onsite installation and training by a qualified ClusterVision engineer
- One year Microsoft Windows HPC Server 2008 support
- One year onsite next-business day warranty & support

8 node cluster: EUR CALL!

16 node cluster: EUR CALL!

Please contact us for AMD and/or Linux based solutions. Many options are available for CPU, memory, disk and storage upgrades.

Microsoft Windows® HPC Server 2008

Introduction

Windows HPC Server 2008 can be easily and quickly deployed using standard Windows deployment technologies, and additional compute nodes can be added to the compute cluster by simply plugging in the nodes and connecting them. The Microsoft Message Passing Interface (MS-MPI) implementation is fully compatible with the reference MPICH2. Integration with Active Directory enables role-based security for administration and users, and the use of Microsoft Management Console provides a familiar administrative and scheduling interface.

Core Technologies

Windows CCS supports the following core technologies:

- x64-based host and cluster nodes
- Message Passing Interface v2 (MPI2)
- Gigabit Ethernet, Ethernet over Remote Direct Memory Access (RDMA), Infiniband, and Myrinet networking technologies
- Third-party compilers and libraries

Key Features and Benefits

Simplified Cluster Deployment and Management

HPC Server 2008 offers rapid node deployment and cluster configuration, monitoring tools, and policy-based scheduling, which provides a scalable management environment that is easy to use, including:

- Automated setup with minimal prompted user input
- Setup wizards for networking, remote installation services, node management, and cluster security
- An integrated software stack with a built-in job scheduler and MPI stack to get you up and running quickly

Better Integration with IT Infrastructure

HPC Server 2008 integrates seamlessly with existing Windows infrastructure, allowing you to leverage existing skills and technology for system and node management, workload management, user management, and security. For example, HPC Server 2008 does the following:

- Leverages existing Active Directory deployments to simplify authentication and security setup
- Leverages Remote Installation Services for remote node installation
- Leverages Microsoft Systems Management Server (SMS) for managing node updates
- Leverages Microsoft Operations Manager (MOM) for system and job management
- Leverages Microsoft Management Console (MMC) for snap-in system tools

Broad Application Support

HPC Server 2008 is supported by leading applications in each target vertical, allowing you to deploy mainstream applications with a broad base of support. An integrated software stack designed and targeted for the high-performance computing market allows developers to build a broad range of applications and tools.

Familiar Development Environment

Developing applications for HPC Server 2008 allows developers to leverage their existing Windows-based skills and experience. Microsoft Visual Studio 2005 includes support for developing HPC applications (for example, parallel debugger). HPC Server 2008 includes an integrated MPI layer based on the industry-standard MPI2 specification, making it easier to port existing parallel applications.

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