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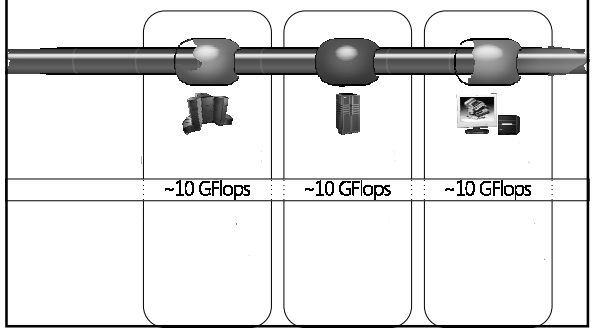
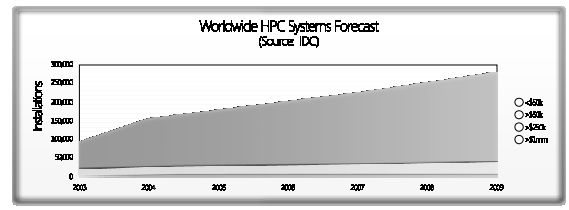
Market Perspective

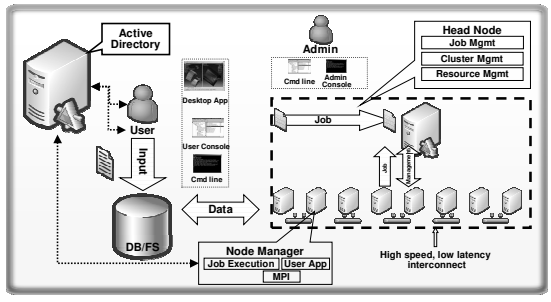


Market Outlook



- 70% HPC system growth in 2004
- Growth forecast coming from <$50k segment (clusters)
- x86 server clusters growing faster than market (15%-20% for HPC, 11.4% for x86 overall)

Windows Compute Cluster Server 2003



Windows Compute Cluster Server 2003

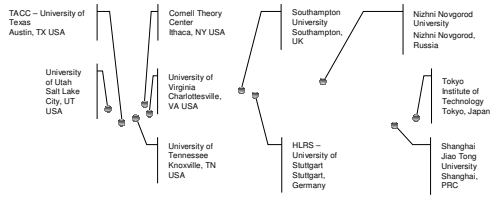
- Faster time-to-insight through simplified cluster deployment, job submission and status monitoring
- Better integration with existing Windows infrastructure allowing customers to leverage existing technology and skill-sets
- Familiar development environment allows developers to write parallel applications from within the powerful Visual Studio IDE

Target Verticals

Automotive | Aerospace | Life Sciences | Geo Services | Financial Services | Academia | Government

Partners

HPC Innovation Centers



CASPUR

"CASPUR wants to be a technology leader, and to do that we need to evaluate innovative solutions with a scientific curiosity."
Professor Romano Bizzarri, CASPUR Director

Windows Compute Cluster Server 2003

University consortium anticipates optimized infrastructure, time and cost savings with Compute Cluster Server

Customer Business Challenge	Solution	Customer Results/Benefits
▪ Inter-University Consortium for the Application of Super-Computing for Universities and Research (CASPUR) wants to extend its super-computing capabilities using Microsoft® technologies	▪ Plans to deploy Microsoft Windows® Compute Cluster Server 2003 and Microsoft Windows Server® 2003 R2	▪ Solution deployment and management predicted to be simple ▪ Expected time and cost savings ▪ Internal competencies will be enhanced ▪ Anticipated optimization of infrastructure

NORTHROP GRUMMAN
DEFINING THE FUTURE

"Windows Compute Cluster Server has caused a paradigm shift. Before I had to limit my problem size because I ran out of resources. Now I feel enabled to think bigger."
Thi Pham, PhD, Systems Engineer, Space Technology Sector, Northrop Grumman

Windows Compute Cluster Server 2003

Easier management of high-performance computing cluster helps typical projects complete twenty times faster

Customer Business Challenge	Solution	Customer Results/Benefits
▪ Main HPC cluster was used to capacity and smaller clusters were difficult to deploy and manage ▪ Access to HPC from user desktops was limited ▪ Smaller HPC projects took longer to complete	▪ Deployed Microsoft® Windows® Compute Cluster Server 2003, operating 30 nodes and 100 CPUs ▪ Integrated with existing third-party applications	▪ Easier administration and job management ▪ Nodes deploy in one hour instead of months ▪ Cluster availability increases to 500% ▪ Typical projects complete twenty times faster

BAE SYSTEMS

"Simplifying our fluid dynamics engineering platform will increase our ability to bring solutions to market and reduce risk and cost to both BAE Systems and its customers."
Jamil Appa, Group Leader, Technology and Engineering Services, BAE Systems

Windows Compute Cluster Server 2003

Aerospace firm speeds design, improves performance, lowers costs with clustered computing

Customer Business Challenge	Solution	Customer Results/Benefits
▪ Complex, lengthy design cycle with difficult collaboration and little knowledge reuse ▪ High costs due to expensive computing infrastructure ▪ Advanced IT skills required of engineers, slowing design	▪ Use Microsoft® Windows® Compute Cluster Server 2003, workflow orchestration, and developer tools to deliver interoperable, secure design platform based on CFD framework	▪ Reduced design cost through improved engineer productivity ▪ Reduced time to market ▪ Increased product performance ▪ Lower computing acquisition and maintenance costs