



Windows Technology Enters the Grid

Microsoft® Windows® Compute Cluster Engine Powers Platform™ Symphony Grid Solutions



Windows Server™ 2003
Compute Cluster Edition

Platform™

Customer Profile

Platform Computing Corporation is the industry leader in high performance computing (HPC) management software. Platform™ Symphony, the best performing enterprise grid software available for the financial services market, enables accelerated workload processing for compute and data-intensive applications. With the industry's most extensive library of third-party application integrations, Platform Symphony contains grid computing capabilities that fully utilize all existing IT resources, including desktops, servers, and mainframes, regardless of their operating system.

The Challenge

Financial Services companies are increasingly challenged with pressure to reduce costs, and maintain competitive growth, all while managing risks. As business velocity increases, speed is becoming a major competitive advantage. In capital markets, where algorithmic trading, options pricing, and risk calculations require high computing power, staying ahead of the competition can make the difference between a winning or a losing trade. Financial services companies need a way to integrate their end-user applications with high performance cluster processors, in a way that is cost-effective, user-friendly, and that also preserves investment in their underlying infrastructure.

Solution

Platform Symphony grid technology virtualizes a heterogeneous infrastructure for HPC processing. Microsoft® Windows® Server® 2003 Compute Cluster Edition is an inexpensive high performance cluster solution that extends an existing infrastructure in a way that is simple to deploy and use. Platform Symphony transparently runs workload on Windows CCE nodes, through the Platform Symphony API or user interface (UI). With the added security of Microsoft Active Directory® integration, Windows CCE and Platform Symphony provide a powerful, secure, and cost-effective HPC solution for financial service companies seeking to stay ahead of the competition.

Benefits

- Accelerated calculation speed
- Highly efficient resource allocation
- Fully integrated Windows clusters
- Centralized management
- Enhanced security for job processing

Overview

Platform™ Symphony running on Windows Server 2003 Compute Cluster Edition (CCE), and using Microsoft Office 2007 Excel® Services, provides a cost-effective way to quickly grid-enable massive calculations without placing the burden on IT services. Excel Services provide the resources for developers to build and test grid-ready applications, and then pass them directly to the compute cluster without modification. Leveraging this time savings, financial services companies can realize new revenue opportunities ahead of the competition.

Platform Symphony

Platform Symphony is enterprise grid software that virtualizes and distributes application services to create a shared, scalable, and reliable HPC infrastructure that fully utilizes all resources regardless of the underlying operating system (OS).

By virtually pooling distributed computing resources, Platform Symphony can help companies in the financial sector to gain faster execution of mission-critical pricing and risk problems. Through the increased availability and stability of grid technology, Platform Symphony enhances the productivity of users by allowing them to run more simulations, more quickly, with greater accuracy and precision.

Windows CCE

Windows CCE is HPC cluster technology that runs on industry-standard x64-based computers, making it a cost-effective addition to any existing Platform Symphony grid solution. Windows CCE is capable of processing large-scale, complex computing problems at the desktop, workgroup or datacenter level. It integrates easily with existing Unix/Linux datacenters through wizard-based setup procedures, and can either appear

as a cluster node in the grid, or it can function independently in local workgroup clusters. With the added security of Microsoft Active Directory directory services integration, Windows CCE enables companies to enhance the security of their calculations by extending user rights and access policies to HPC jobs.

Microsoft Excel and Excel Services

With a rich set of built-in functions, a straightforward programming model, and a large library of available third-party add-ins, Excel has become a staple tool for analysts running simulations in areas such as risk management, actuarial analysis and pricing applications. With Excel 2007 and Excel Services, users can employ powerful features to deploy Excel-based worksheets as shared calculation services.

The Combination

Solving pricing and risk problems demands HPC. Platform Symphony enables an enterprise-wide, heterogeneous grid with the ability to shift computing power to where and when it is needed. When added to the Platform Symphony grid, Windows CCE provides an inexpensive, and easy to deploy solution for scaling out the infrastructure, with the added benefit of integrated Active Directory security. With the addition of Excel Services, grid-ready applications can be quickly passed to the cluster without relying on IT for assistance in job submission and management.

This time savings amounts to faster results, increased accuracy, greater business agility, and the overall reduction in infrastructure TCO. The speed of Platform Symphony grids, powered by Windows CCE, provides financial services companies with a powerful, secure, and highly-scalable solution for real-time risk calculations using a distributed computing environment.

Microsoft®



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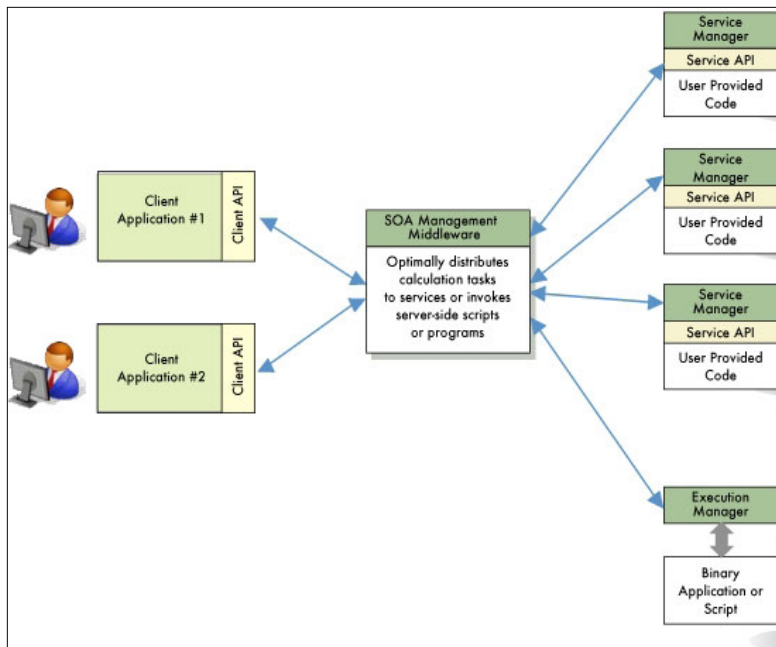


Windows Server[®] 2003
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Platform Symphony and Windows CCE Solution Architecture

With Windows CCE and Excel integrated into the Platform Symphony architecture:

- The Platform Symphony API enables application developers to use .NET and other languages to distribute Excel simulations across clusters of Windows CCE nodes.
- The client application uses the C#, C++, or COM API within Excel to submit calculations.
- The calculation logic and algorithms are packaged into Platform Symphony service packages that are distributed to the nodes in the clusters.
- Business users submit work from their Excel client interface, which is scheduled to available Windows CCE nodes in the cluster according to application service level agreements.



Windows CCE System Requirements

CPU Requirement:	64-bit architecture computer Intel Pentium, or Xeon family with Intel Extended Memory 64 Technology (EM64T) processor architecture, or AMD Opteron family, AMD Athlon family, or compatible processor(s).
Minimum RAM:	512 MB
Maximum RAM:	32 GB
Multiprocessor Support :	Up to 4 processors
Disk Space for Setup:	4 GB
Disk Volumes:	Head node requires a minimum of two volumes (C:\ and D:\). For additional roles, additional partitions are recommended. Compute node requires a single volume. RAID 0/1/5 may be used, but is not required.
Network Interface Cards:	All nodes require at least one. Each node may require additional network interface cards as appropriate for the network topology, for public network access or in support of an MPI network.

For More Information

For more information about Windows Compute Cluster Edition, please visit <http://www.microsoft.com/hpc>

To join the HPC Community, please visit <http://www.windowshpc.net>

For more information about Platform Symphony, please visit <http://www.platform.com>

For information about purchasing Windows Compute Cluster Edition, email hpcinfo@microsoft.com

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