

"DataSynapse has built its business on a grid computing platform that allows customized applications to use virtualization and automation to share IT resources in a heterogeneous environment...as organizations become more mature in managing IT services over time, a natural inclination is to optimize by consolidating and reducing costs."

- Gartner, Cool Vendors in IT Operations, 2006

Leveraging the power of grid computing to enable application virtualization for general purpose distributed analytics.

The Challenge

Industries such as Financial Services, Insurance, Aerospace/Defense and Automotive rely on sophisticated applications executing highly complex mathematical models for the necessary decision support services to differentiate their products and services from that of their competitors. In the financial sector, fixed-income markets demand the ability to frequently create and modify mathematical models to calculate bond pricing, perform yield analysis, calculate cash flows, and develop hedging strategies all to support multiple investment options and business strategies. Insurers, now more than ever, continually create and modify mathematical models for new product development, analyze reserves, and research the effects of dependencies all too meticulously calculate the risk that they are willing to accept and the prices they charge their subscribers. The Aerospace industry plans and builds products to last many years, if not decades. The planning for and the design of these products takes years and involves intense simulation, algorithmic design and computing power.

The common denominator: Complexity and intensive processing needs. Each one of these disciplines requires power and processing to execute the complex mathematics needed to create, release and/or update their products. Organizations can choose to buy more processing power which perpetuates their dedicated server environments or they can look beyond the static enterprise application silos and virtualize their applications, allowing them to run anywhere, for faster time-to-results.

Application virtualization abstracts and isolates applications from their dedicated operating systems and hardware. "Decoupling the application" enables the application to aggregate compute resources and run anywhere at any time within the datacenter based on policy, demand, and resource constraints. This innovative approach enables administrators to adaptively command and control complex enterprise application workloads and services.

Why Choose the Combined DataSynapse — MathWorks solution?

DataSynapse and MathWorks address these and other important concerns with a powerful joint solution comprised of DataSynapse GridServer and MathWorks MATLAB products. Both GridServer and MATLAB have a proven history in financial services, insurance and design environments. It is only natural that the two companies band together to create a much more efficient and long term cost effective solution to meet the needs of these markets.

A Powerful Joint Solution

The GridServer Adapter for MATLAB enables models built using MATLAB and the MATLAB Distributed Computing Toolbox and Engines to use DataSynapse's GridServer technology for the distribution and execution of MATLAB defined analytics.

The GridServer/MATLAB environment:

1. Decouples the application from static application silos.
2. Aggregates existing server power on which to distribute the workload, calculations, and models.
3. Allocates this capacity and processing power to shorten the amount of time it takes to design and run complex mathematical models, while simultaneously improving optimal operational performance to extend the lifespan of these systems.

No longer do MATLAB customers have to maintain and support separate grid environments. Having MATLAB applications participate in shared infrastructure governed by GridServer allows them to further lower costs per transaction, provide single source of support and eliminate dedicated overhead and create a single unified approach to distributed workloads regardless of the application. As a direct result, customers who take advantage of this partnership will see immediate process improvements through greater resiliency, guaranteed execution, and efficiency through automation of manual work processes and process adherence through policy based enforcement of priorities.

Using this solution, analysts can do their job with more confidence, accuracy and speed allowing them to meet key deadlines and ensuring service quality.

Advantages of the GridServer/MATLAB Joint Solution

- MATLAB is now a fully supported solution for customers already deploying other applications to their GridServer environment.
- Customers using MATLAB and the Distributed Computing Toolbox no longer need to maintain MATLAB as a separate and distinct siloed environment — the application is decoupled from the existing server silos — and runs within the GridServer infrastructure.
- Adaptively aggregates MATLAB workloads to dormant servers where capacity is not in demand.
- Allocates the necessary capacity to the job based on the demand of processing and capacity needed.
- Improve run-time execution speeds up to 90+%.
- Quick and easy development and execution of trading strategies for complex instruments.
- Execution of highly accurate and reliable calculations for applications requiring complex analysis.
- Dramatic increase in performance through put and execution speed resulting in improved decision making.
- Lower per request cost due to execution across a shared infrastructure.

About MathWorks

The MathWorks is the leading developer and supplier of software for technical computing and model based design. MathWorks offers two main products: MATLAB and Simulink. MATLAB is an interactive, extensible software development environment that offers high-performance numerical computation, data analysis, and visualization capabilities as well as application development tools.

About DataSynapse

Application Virtualization enables organizations to create a real-time infrastructure that aligns IT with the business. DataSynapse software matches application requirements with server capacity on demand to optimize performance and automate service level management. DataSynapse clients document significant benefits, including increased agility, improved quality of service, radically reduced costs and the ability to quickly realize new revenue streams. To learn more, visit www.datasynapse.com.