

Solution Overview

New Era of Computing

Risk and Pricing Analytics delivered as a Service

With the economy showing cautious signs of recovery, firms in many sectors are looking to upgrade or increase their existing datacenter capabilities due to competitive and/or regulatory demands. In the past, if a firm needed additional IT capacity, the firm simply purchased new high-end servers, hired more staff and if necessary, opened a new data center. However in this new era of increasing compute needs due to increased risk sensitivities and regulations, IT budgets have been decreased or at best remained capped for many firms – forcing IT managers to do more, with same or less. Datacenter consolidation – not expansion whilst providing increasing compute capability - remains a top focus for the COO. IT managers now need alternative solutions that provide more IT capabilities without increasing capital expenditure.

Excelian Grid-as-a-Service (GaaS)

Excelian in partnership with Platform Computing, the world's leading cluster, grid and cloud vendor introduces Excelian GaaS. The Excelian GaaS allows firms to immediately increase their compute and analytics capabilities at the same or even lower operating costs. With years of experience in the Financial Services markets, Excelian and Platform Computing have built a high performance, on-demand, 24x7, grid service for banks and funds of all sizes to benefit from. The Excelian GaaS guarantees multi-purpose, computational grid infrastructure for running:

- Market and credit risk analytics
- Scenario simulation and strategy back-testing
- Asset and portfolio pricing and modeling

By purchasing Excelian GaaS, firms:

- Focus on building competitive features rather than adding servers and administrative headcount.
- Gain access to the latest technology at a fraction of the cost. Excelian GaaS's economy-of-scale business model provides clients both licensing and infrastructure resources through an affordable monthly Reservation Fee and per CPU/hour cost. Clients move from a fixed to variable cost model, effectively turning their capital expenditure into operational expenditure.
- Lower their operating risk. Excelian GaaS is a 24x7 guaranteed service.
- Faster time to market.

Excelian GaaS uses Platform Symphony, a proven mission-critical grid platform, to provide clients the right amount and type of IT resources as needed. Top banks worldwide including Citi, JPMorgan Chase and Société Générale rely on Platform Symphony.

- For the clients' end-users, the process is completely transparent. End-users will see faster application performance. Platform Symphony customers have seen performance gains of up to 20X for key analytics.
- For the clients' IT staff, Platform Symphony automatically provides the right type and amount of resources to run each application when needed.

On Demand Service at a Lower Cost

With Excelian GaaS, a client only pays for the resources used. If a client requires up to 2,000 CPU hours between 6pm and 6am daily, Excelian GaaS will guarantee that these resources are provisioned and available. Excelian will also provision 10% more just in case the client needs to use them. Users will be able to scale up or down their requirements based on detailed CPU/hours consumption and cost statistics provided by Excelian.

Platform Symphony enables Excelian to maximize their resource utilization 24x7. As a result, Excelian needs fewer servers – therefore less power and space – to deliver HPC capabilities with a guaranteed service level and a lower cost than other service providers. For firms with datacenters operating at their space or power limits, Excelian GaaS is one of the most cost-effective ways to increase compute capacity without incurring capital expenses.

On-Demand Service Delivers Faster Performance and Time-to-Market

The Excelian GaaS service is particularly suited for batch processing of long running jobs, and for providing burst capacity during the day when extra compute power is needed. Applications particularly well suited for Excelian GaaS and Platform Symphony include large scale analytics, batch simulations, regulatory compliance, stress testing, back testing etc. Such applications run significantly faster, up to 80% reduction or more in typical run-times.

For clients looking to grid-enable their applications, Excelian provides a wide range of services from grid-enabling, integration and on-boarding of clients' models and applications to training. Excelian offers on-site capability if required and professional services to get you up and running on an in-house grid, the Excelian GaaS service or both. For clients with grid-enabled applications, the Excelian GaaS solution significantly reduces implementation time compared to building an in-house grid.

Use Case for Excelian GaaS

A leading multi-national bank with datacenter operations in the City of London needed additional compute capacity for business growth and anticipated regulatory requirements. Unfortunately, space and power restrictions in the City hampered their growth plan. Delaying the expansion was not an option. Data volume growth particularly in market data necessitated scaling up their server capacities to process terabytes of data for trading and risk analytics.

The bank also faced uncertainty of future regulations. In the aftermath of the credit crisis, regulators such as The Basel Committee on Banking Supervision have proposed regulations such as Basel III to minimize the systemic risks of banks. Such regulations are likely to be mandated for implementation by the end of 2012. Unfortunately, the regulators disagree on specifics. Tightened risk limits particularly in counterparty credit risk exposures arising from derivatives will require banks to monitor their trading positions and calculate their exposures more frequently perhaps near “real-time” or intraday basis.

Faced with these challenges, the bank chose Excelian GaaS to provide additional compute capacity to run its core trading platform. The trading platform consisted of both in-house developed and commercial trading and risk applications including Murex.

Summary

Excelian and Platform Computing have teamed to deliver the industry’s most scalable, high performance compute grid infrastructure as a service: Excelian GaaS. Using Platform Symphony, the world’s leading grid middleware, Excelian GaaS enables banks and funds alike to securely and seamlessly access the latest and fastest servers at fraction of the cost required to purchase the hardware. For risk and IT managers faced with analyzing more data in “real-time”, but who are resource constrained – space, time, budget - the Excelian GaaS is the optimal solution for adding capacity fast without the overhead.

Excelian GaaS – Architectural Overview

Scalability, Performance, and Manageability

Excelian selected Platform Symphony as the foundation for its GaaS offering as they needed an extremely scalable compute platform to meet their clients’ diverse compute requirements. Built with a Service Oriented Architecture (SOA) model, Platform Symphony is an enterprise-class middleware that enables Excelian to fully virtualize their servers and to make them available as resources to all of their clients.

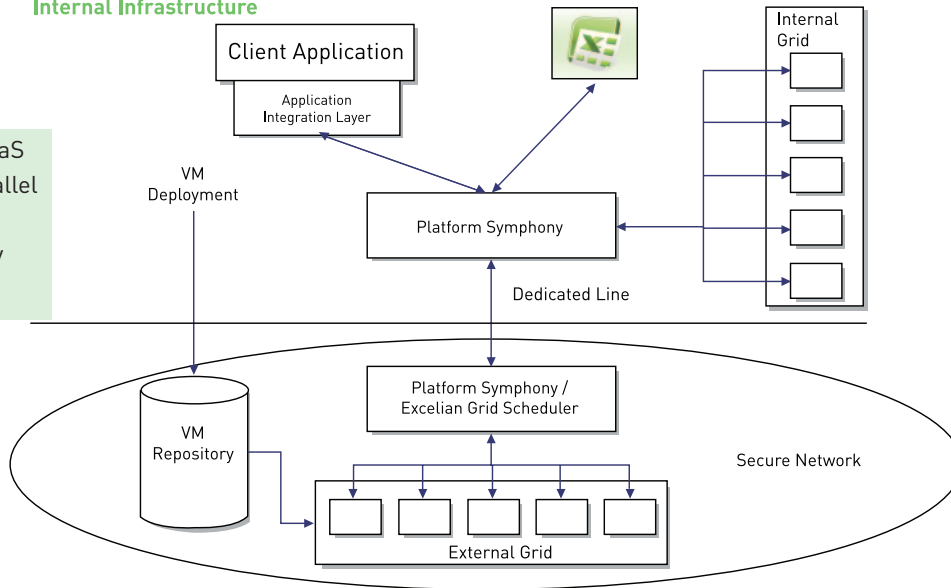
For clients, they won’t see any degradation in their application behavior by running it on the Excelian GaaS. Platform Symphony takes care of the job scheduling and workload management transparently. Its sophisticated policy based resource sharing both distributes and manages workloads/jobs optimally across all Excelian systems. All submitted jobs are self-contained and compute-node independent, allowing for maximum flexibility in where the jobs are executed. Excelian clients may then submit as many jobs as required without having to worrying about the underlying infrastructure scalability or workload distribution.

Platform Symphony has been and is recognized as the industry’s most scalable and fastest grid system, taking less than 1 millisecond to orchestrate and dispatch a job. For organizations that require “real-time” risk management, portfolio modeling, and other data analysis, Platform Symphony is the right solution. With Platform Symphony, firms have accelerating complex analytics up to 20-times or more. For clients, they will likely see an improvement in their application behavior by running it on the Excelian GaaS.

Security

Excelian GaaS supports the highest levels of security. To start, users access their resources through the Excelian GaaS portal using secure socket connections, or by dedicated line i.e. Virtual Private Network (VPN). Security is ensured throughout the user’s session.

Internal Infrastructure



Outsourced Infrastructure

Example of GaaS being used as an extension of customer's internal infrastructure

As shown in the diagram above, a Client Application (Client App) makes service requests using an application specific or an Excelian Application Programming Interface (API). The Excelian API supports the standard functionality of all leading grid providers, and is highly secure. The Client App submits jobs to the Grid Scheduler. Jobs are then run in a stateless mode on secured Virtual Machines (VMs). No data is stored on disk. Compiled code will only be available within secured VMs.

For added security, clients may deploy and manage their own configured and tested VMs in all stages of their development, testing, and production cycles. Clients may provide pre-configured VMs which are stored in an Excelian VM Repository as shown in the diagram. The VM hard disk may also be encrypted and its access restricted. All VMs may be encrypted in storage and in transit to the security levels required per client. Excelian provides Excelian Remote Gateway facility to clients' IT to securely deploy and manage these VMs on multiple physical servers located in the Excelian Data Centre. Excelian's security process and records are also available for audit.

Support and Maintenance

Excelian GaaS supports clients' need to rapidly build and deploy a variety of environments for test and development, as well as for production. Clients can deploy a VM

on-demand or time-based to create the environment needed for development and testing. Clients need not worry about additional costs. Excelian GaaS accounts for the VM overhead in the calculation of CPU usage.

Support is provided by Excelian and may be accessed at any time via the Excelian Supportal. Clients may choose additional support including access to an Excelian Support Engineer via Internet Relay Chat and to an extensive knowledge base. All Excelian staff are Platform Symphony trained and certified.

Summary

Excelian and Platform Computing have teamed to deliver the industry's most scalable, high performance compute grid infrastructure as a service: Excelian GaaS. Based on Platform Symphony, the world's leading SOA grid middleware, Excelian GaaS provides IT managers and application developers an extremely secure, scalable and flexible platform for "real-time" risk and pricing analytics. Platform Symphony delivers transparent workload distribution and resource management, optimizing application and network performance for both Excelian and Excelian clients alike. If Excelian clients need additional support, Excelian provides a wide range of services and support options from application development to deployment.

Platform Computing is the leader in cluster, grid and cloud management software - serving more than 2,000 of the world's most demanding organizations for over 18 years. Our workload and resource management solutions deliver IT responsiveness and lower costs for enterprise and HPC applications. Platform has strategic relationships with Cray, Dell™, HP, IBM®, Intel®, Microsoft®, Red Hat®, and SAS®. Visit www.platform.com.

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