

Sumerian helps investment bank de-risk outsourcing of grid and achieve significant cost savings

Client challenge

The trading arm of a large UK investment bank needed to expand its high performance computing (HPC) grid to absorb the trading capacity of its newly merged organisation. Due to space constraints and an objective to reduce costs, the bank was seeking to outsource the grid from its City of London location to a new, more cost-effective datacentre outside the M25. The primary goal of the move was to find the right balance between performance and cost, while ensuring that its highly sensitive trading environment was not affected by any latency issues.

Because of the risk this presented, the IT team needed to provide assurances that end-user performance and links to external trading systems were not going to be impacted. In approaching Sumerian to assist, the bank envisaged that the use of IT Analytics could enable them to gain an accurate understanding of the applications' latency and performance requirements, and so de-risk their migration.

Sumerian solution

Sumerian approached the analysis by gaining a full understanding of the application architectures and how these related to the bank's underlying infrastructure. From this research Sumerian then captured data from the existing trading environment's grid infrastructure components to create models for all of the applications under migration consideration. These models were then populated with detailed measurements of existing application performance and task execution times to establish a baseline model of pre-change application latency and throughput dynamics.

Using these models Sumerian could then apply scenario modelling to determine whether the applications would be impacted by any latency issues due to the increased distance, and what type of datacentre hosting configuration was required to achieve the most optimal performance and cost returns; for example, whether applications could be hosted solely at the new, more cost-effective location, be spread across both locations, or if they needed to remain at the existing datacentre. From the results of this analysis Sumerian was able to recommend the most optimal post-move deployment architecture, including which parts of the infrastructure and component software needed to be altered to secure user-perceived latency and throughput in the post-change environment.

The challenge

- Investment arm of UK retail bank
- Needed to expand high performance computing (HPC) grid environment to absorb trading capacity of new merged organisation
- No internal datacentre space to support this growth, therefore wanted to outsource grid provision, but needed to ensure no impact or risk to critical trading application performance
- Needed to balance co-location/performance vs cost – circa £300M investment project

Value delivered

- Identified optimal datacentre footprint and application spread
- Validated feasibility of moving grid engines offsite to cost effective location whilst maintaining performance and latency targets, yielding multi-million pound savings
- De-risked migration programme by identifying and quantifying risks associated with potential deployment configurations
- Ensured purchased capacity optimised to meet new level of business volume and required trading system performance levels

Outcome and results

Sumerian's analysis showed that latency impact varied across the application suite, and also depended heavily on where the latency was introduced. As a result, Sumerian was able to make specific recommendations on how to deploy the applications into their new datacentre in such a way as to minimise impact to the business and de-risk their migration.

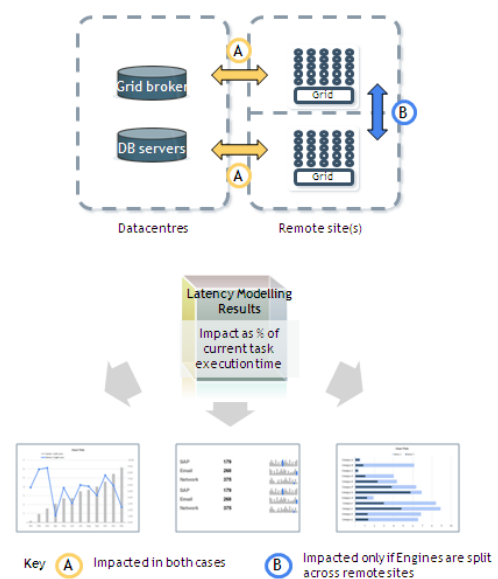



Fig. 1 – Scenario modelling latency impact to calculate impact on task execution time



In parallel, Sumerian was able to make specific recommendations to the application development teams on the amount of capacity required to ensure its applications were optimised to reduce their exposure to latency. These recommendations were then implemented by the development teams in advance of the move.

Above all, by using Sumerian to quantify and model the applications' latency requirements against the various scenarios under consideration, the IT team gained the validation it needed to ensure that the new outsourced grid datacentre environment could uphold the levels of performance demanded by the business – but also realise highly favourable cost savings on top.

More information

For further information on Sumerian or to arrange a demonstration of our services, contact us on 0141 229 7580, e-mail us at info@sumerian.com or visit our Web site at www.sumerian.com

