

## Sumerian helps global investment bank optimise capacity and de-risk change for critical pricing service

### Client challenge

Investment banks operating in today's tough economic climate have never been more reliant on highly performant, optimised trading services in order to improve bottom-line performance, reduce risk and increase competitive advantage. Key to achieving optimisation is effective capacity planning and understanding the impact of change, so that IT services can be proactively managed and the threat of business disruption allayed. However, with many typical trading services being underpinned by highly sensitive, complex environments (see Fig.1) comprising multi-tier grid architectures – the reality of doing so can prove extremely difficult.

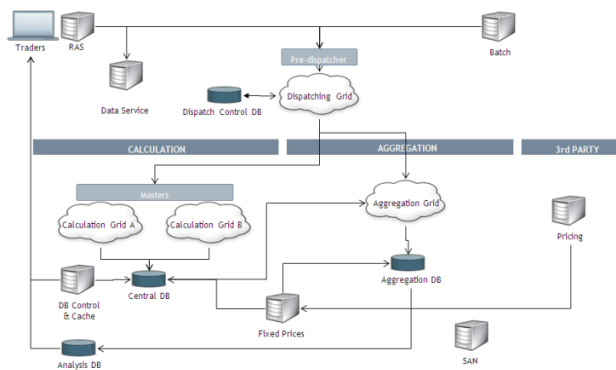


Fig. 1 - Example of pricing and risk calculation architecture

In one such environment, a leading European corporate and investment bank, with over 120,000 employees worldwide, was interested in finding ways in which it could optimise the capacity of its pricing and risk service – a critical backbone function to the business. The service architecture, which encompasses 3 high performance computing grids with approximately 2000 nodes, is particularly complex and sensitive to change. Although the IT team had a wealth of knowledge surrounding the service's individual sub-components, less was known about its end-to-end capacity limits, and in particular, how business portfolio volumes correlated to IT utilisation, performance and available capacity headroom. This being the case, the team had made an attempt to model the service, but had found it difficult to uphold due to its complex, changing nature and the significant resources it would require for ongoing management.

This meant that the team was not able to satisfactorily quantify the impact and risk (both in terms of IT and the business) of

### Summary

- Global investment bank with 120,000 employees
- Lacked visibility of critical pricing service's capacity
- Sumerian built baseline model, correlating business volumes to IT utilisation and capacity headroom
- Scenario modelling identified best options for upgrade changes and growth plans
- Ongoing weekly capacity forecasting de-risks service and informs optimisation improvements

any changes made to the service. And this need was particularly significant due to a number of proposed upgrades and growth plans the team was considering; these included a switch to virtualisation, increasing the business load by 100%, and introducing a new server and database upgrade.

In approaching Sumerian to assist, the team wanted to discover how an IT Analytics approach could provide the ongoing, accurate capacity and change impact modelling and reporting required to successfully optimise and manage such a critical business service - without introducing any risk to business performance.

### Sumerian solution

Sumerian was able to rapidly engage and deploy its Service Delivery Analytics (SDA) service into the bank. This subscription service works by capturing performance and capacity data from underlying system components such as network management tools, server metrics, message buses, batch log files and grid performance metrics, on an ongoing basis. Using this data in combination with metrics and data captured from the business trading side, Sumerian constructed an accurate model of the pricing environment; and by using in-depth regression analysis, could correlate the relationships between typical peak business load, IT utilisation and available capacity headroom (see Fig. 2).

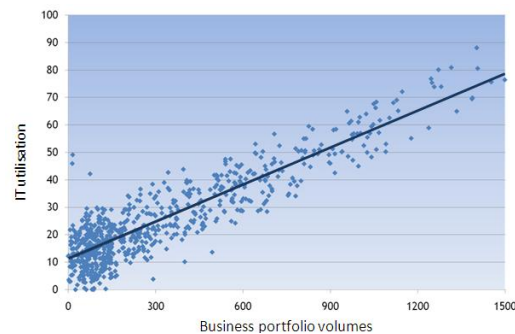


Fig. 2 – Finding the correlation between IT utilisation and business transactions

While this model alone was highly valuable in exposing the relationship between business throughput and IT capacity for forecasting purposes, it also provided the basis for predictive scenario modelling and quantifying the impact of change. For example, in modelling the impact of a switch to virtualisation, Sumerian's analysis concluded the server cluster was heavily imbalanced and through deploying virtualisation could reduce maximum utilisation by nearly 50%, giving them increased headroom and a much greater flexibility to meet changing business demands.

In terms of understanding the impact of growth by increasing the business load, Sumerian confirmed that there would be sufficient capacity to process the current volumes of portfolios, but during peak load periods, a bottleneck could appear in two key components. If the current load was to increase by a further 100%, nearly all sub-components would breach capacity at some point during the day. Finally, for the proposed server and database upgrade, Sumerian's modelling could accurately quantify that their introduction into the service would provide capacity and performance benefits by dramatically increasing the throughput of portfolios per hour to a far higher degree. To relay these findings back to the team, Sumerian provided a rich variety of reporting, which included direct analyst presentations and a tailored Web portal (see Fig.3) featuring an array of cutting-edge dashboards and visualisations.

and driving performance improvements on an ongoing basis. Each week, Sumerian provides a regular capacity forecast updated with the current business portfolio load, correlated to end-to-end capacity headroom. The report provides a robust mechanism for proactive, business-aligned capacity planning, enabling the team to ensure adequate estate resources are provisioned for both current and future business volumes. Furthermore, the reporting has proved so useful that the bank is now expanding its coverage to a further three key business services, including other teams within the organisation

In using Sumerian's scenario modelling to accurately determine the impact of change before applying it, the bank was able to de-risk its decision making and be sure in the knowledge that the proposed upgrades delivered on their expected value. Overall, Sumerian has helped the bank to proactively manage a service that is critical to the bank's trading operations, enabling it to optimise estate resources, reduce risk and deliver highly performant services now and for the future.

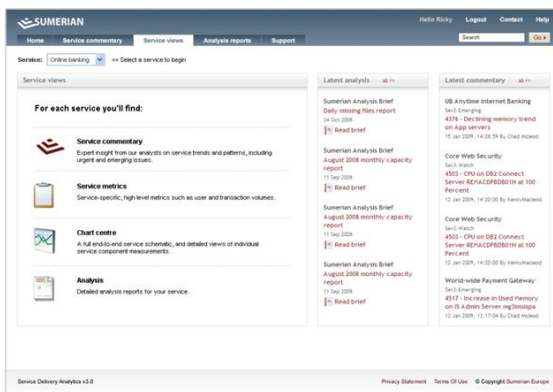


Fig. 3 – Example of Sumerian Web portal for reporting analysis findings

## Outcome and results

The SDA service provided by Sumerian was instrumental in helping the team improve its overall understanding of its capacity position in ways which were not previously possible. Sumerian's rapid deployment and ongoing ability to quantify business throughput against available IT capacity is helping the bank to advance the management of its risk and pricing environment to new levels of optimisation – de-risking change

### 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](mailto:info@sumerian.com) or visit our Web site at [www.sumerian.com](http://www.sumerian.com)