

## **Performance Testing of an International Private Bank's new web-based Client On-boarding and Risk Management Solution**

Banking services are being increasingly automated at financial institutions. As a result IT infrastructure is becoming more complex and the everyday operation of the business is showing a growing dependency on their banking systems. It is clear that efficiency is imperative in the private banking sector where competition is high because of the limited customer base. Due to the above business productivity is highly relying on the underlying system's effectiveness. To guarantee an efficient operation of banking systems, performance testing is crucial. On the other hand, performance testing also reduces operational costs. The costs of discovering and solving performance related issues show an exponential increase during the phases of a system's life-cycle. Therefore there is an obvious demand for early performance testing.

The student is going to manage the performance testing of a banking system to be deployed. The system will be used by both front and back office personnel and is not client-facing. The goals of the work are that the users of the system will have a guaranteed maximum response time of 3-5 seconds (with pre-defined exceptions), to quantify expected user volumes and to ensure that the system can handle these projected volumes. The overall business project consists of Phase I & Phase II. Business defined timeframes for performance testing will cover only Phase I during the timeline of the thesis. The main tasks of this thesis consist of:

- Analysis of current production volumes and of new user population
- Capturing testing scripts with a performance testing tool
- Running tests in User Acceptance Test (UAT) environment, first testing each module separately and after simulating a real user population on the system
- Monitoring performance and capture data
- Analysis of results
- Advise on required code changes and system configuration as needed

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