

## Performance Testing

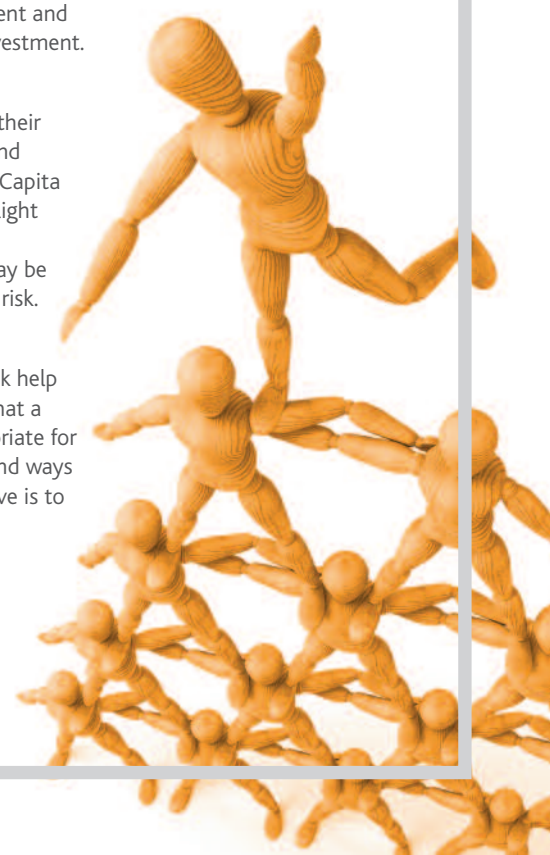
**Capita Assurance and Testing provides performance testing services as part of an end-to-end perspective on software quality assurance. We use performance test approaches, tools and techniques to de-risk our clients' implementations. This ensures that meeting an organisation's business objectives is not prejudiced by poor performance, particularly in respect of the customer experience.**

Performance testing is a structured, repeatable exercise where we test the business system (application, infrastructure, database, network, etc.) in ways that realistically represent the expected use. We use the typical daily loads in terms of numbers of concurrent users, numbers of types of transaction, etc. as well as using extrapolated peak loads and increasing loads. Often organisations will not have captured their current or possible peak loads, so we provide support in defining these.

Through numerous client engagements we have developed significant expertise in the following common performance testing scenarios:

- > **Application migrations –**  
We establish a performance baseline with the organisation which is a measure of the performance of a particular known system implementation against a known workload for the existing system. This is then compared against the results of the same tests conducted on the new system, so that variations can be either explained or resolved.
- > **New application launches –**  
In these scenarios organisations want to ensure that a new application will not fail in its initial operation. This can be an all too common problem with web-based solutions. Testing will normally address how much more than the planned uptake can be handled by the current system configuration. However, in these instances the objective is as much to identify under-investment in equipment and bandwidth as it is to identify over-investment.
- > **Performance process reviews –**  
Here, organisations want to see how their current performance test processes and approaches stand up to industry and Capita best practice. The objective is to highlight opportunities for improvement and particularly to identify where they may be unknowingly accepting unreasonable risk.
- > **Test tool evaluations and proof of concept –**  
Here, organisations seek help in selecting, evaluating and proving that a given performance test tool is appropriate for their systems portfolio, approaches and ways of working. In these cases the objective is to find the toolset that best fits their technologies, approach to delivery and budget.

We use performance test approaches, tools and techniques to de-risk our clients' implementations.



## Understanding performance across multiple system architectures, application technologies and application types

Capita has delivered a wide range of performance testing engagements for our clients. The knowledge and understanding we have gained has allowed us to develop an excellent understanding of performance across multiple system architectures, application technologies and application types including: web technologies, .NET, SharePoint, other Microsoft technologies, Java, Oracle, Citrix, SAP, Siebel, Interwoven, ATG, and Drupal.

These technologies have been deployed through many different types and scale of N-tier client server configurations, as well as many types of presentation layer implementations.

Whilst we are tool independent we are very familiar with the market and capability leaders, and are therefore able to guide clients to the solution that best fits their technologies, approach to delivery and budget. We also have very good working relationships with all of the tool providers which we leverage for the benefit of our clients.

**Our services highlight areas for remediation - whether application or infrastructure – and feed these back into the development process so the system can be tuned.**

### Speed, Scalability, Stability

We use a variety of testing techniques and tools to determine and report on the current performance in three main categories:

#### Speed

- > How fast are user response times?
- > Are there bottle-necks and what is causing them?
- > How does the system behave with different transaction mixes?

#### Scalability

- > Does the application handle the expected user load?
- > What happens during peak loads?
- > What are the stress rates and points of failure?

#### Stability

- > Is the application stable under expected and unexpected user loads?
- > Will the current infrastructure support the application?
- > Is the system optimally configured for performance?
- > How reliable is the system?

Gathering this data is only the start. Once the data has been captured it needs to be analysed, interpreted and the findings applied, and this is where many organisations struggle. Our services highlight areas for remediation - whether application or infrastructure – and feed these back into the development process so the system can be tuned. Once the changes have been applied, the performance model can be revised and the system retested. By keeping the end-to-end solution in mind, our approach will guide the development and configuration process as the solution is built and modified.



## Benefits of Capita's approach to performance testing

The combination of Capita's expertise and iterative, diagnostic approach helps our clients to:

- Validate the business solution performance
- Optimise the use of existing technical infrastructure and prevent both under and over investment
- Address unique performance, load and scalability challenges
- Reduce application development costs and support overheads by removing issues earlier in the lifecycle
- Mitigate the risks of public and operational failure
- Avoid having to find future ad hoc performance fixes which are usually very expensive
- Improve long-term business and infrastructure planning
- Optimise the most important performance metric – the business and user experience.

We can offer our clients a flexible service, including performance testing delivery from offshore locations. We believe that this blend of cost-effective delivery options, in-depth understanding of performance testing and an open and adaptable approach to toolsets makes our performance testing services unique.

## About Capita Assurance and Testing

Capita Assurance and Testing is the UK's leading independent systems quality assurance and testing solutions provider. We provide the full spectrum of governance, assurance, functional and non-functional testing services. Our services help organisations at all stages of test maturity to reduce risk, optimise cost and increase efficiency and business performance across the full IT lifecycle.

As part of Capita Plc, Capita Assurance and Testing combines the agility of an independent specialist with the confidence and security of a FTSE 100 company and leading UK outsourcer.

## CAPITA ASSURANCE AND TESTING

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