Better, faster, cheaper: Performance Engineering and Testing as a Service

Helping you achieve cost-effective, reliable application performance
What are the forces reshaping financial services IT?

The day-to-day performance of an application drives the rate and depth of end-user adoption. Providing users with fast, responsive applications requires comprehensive performance engineering, including performance tests prior to deployment. Performance testing measures current response times, capacity and scalability of a platform, as well as degradation under various loads and configurations in controlled and uncontrolled environments. Capco’s Performance Engineering and Testing as a Service can help you determine whether applications and platforms will meet the production demands of expected user loads, transactions and data volumes—and ultimately provide a user experience that boosts adoption and use.

The mechanics of performance engineering

Performance engineering and testing can be difficult in the technology environment of a financial services company, a complex ecosystem of solutions and stakeholders. But accurate performance measurement under various configurations—conducted in the context of business needs—is essential to identify bottlenecks and guide system tuning.

The need for performance testing is usually driven by business and technology events such as an acquisition, application development and implementation, legacy modernization, or core system conversion. A properly conducted performance engineering exercise minimizes the risk of production downtime and builds confidence in the organization's ability to meet service levels and uptime requirements.

While the need is immediate, building performance engineering and testing capabilities can take months and require significant investments in technology resources, tools and people. Performance engineering draws on skills in statistics, quantitative analysis, operating systems, databases, multi-tiered platforms, system modeling and test-tool programming. The pool of talent with the planning, testing and diagnostic skills to evaluate multi-tiered systems and technologies is limited and difficult to mobilize on short notice. Also, performance testing tools are expensive, costing up to $300,000 to deploy, with additional yearly maintenance fees.

Performance engineering and testing are usually executed late in the development cycle, after an application is stable and a production-mirroring environment has become available. Lasting from several weeks to several months, the typical performance engineering engagement involves test planners, performance testers, and performance engineers and analysts. In a financial services organization with multiple business engagements running on different schedules, demand for these personnel and tools goes through peaks and troughs, a potential challenge in mobilizing the right resources at the right time while avoiding under-utilization.
A performance assessment triggered by a business event can also create concurrent demand for technical skills from multiple sources affected by the event. This strains resources and makes it difficult to run performance tests on time. In some cases, excessive demand can result in certain tests not being conducted. Meanwhile, the cost of tools, additional staffing, training, maintenance, software extensions, and setup and teardown of test environments can soar.

How can financial institutions improve the picture?

Facing the complexity of performance engineering and testing, financial services companies are increasingly turning to a service provider to handle the job. Such an approach can provide several advantages, including:

- Performance engineering and testing services can be obtained on a pay-as-you-go basis. The service provider can staff up as needed when demand arises, while the financial institution eliminates the costs of maintaining internal staff and solutions that sit idle between testing assignments.
- A service provider offers deep performance engineering and testing skills, experience and capabilities gained through assignments across a variety of environments.
- Because it provides services to multiple institutions, a service provider can invest in, maintain and more fully use the advanced solutions required for effective performance testing.
- A service provider can provide a robust, model-driven performance engineering and testing methodology based on quantitative analysis.

What Capco offers

Capco’s Performance Engineering and Testing as a Service can help your institution deploy new applications with confidence that they’re ready to go to work. We can work with you to maximize the capacity of your IT systems, reduce the risk that a performance issue will affect business operations, and minimize your performance engineering and testing investment while maximizing ROI. Our service can help you:

- Translate business objectives into nonfunctional requirements for system throughput and response time
- Document end-user performance expectations and align them with overall application performance objectives and service-level standards
- Design workloads based on quantitative methods using user community modeling language (UCML) and queuing network models that accurately reflect the business requirements
- Design, script and run performance tests, including load/volume, stress and scalability, as well as tests to support capacity planning
- Coordinate with architects, developers, infrastructure and IT teams, application and platform owners, and other stakeholders to conduct root-cause analysis and troubleshoot performance issues
- Create performance test reports that express results in clear business language and provide actionable solutions for technical teams to implement

With our easy-to-use Performance Engineering and Testing as a Service, you only pay for the resources you use, avoiding the “shelfware” expense of idle staff and solutions. Service are managed entirely by Capco and provided through our Orlando, Florida, and Bangalore, India, technology centers, as well as through resources on-site at your location. Our performance testing tools are hosted and available on demand on the Amazon Cloud, a virtual environment that allows for flexibility in the deployment and execution of Capco’s performance tests.

Once initial planning and data collection are completed, you can run multiple performance tests on your business applications and uncover performance bottlenecks and system capacity issues. Capco will establish the performance test environment using Amazon Cloud or by leveraging existing environments and connectivity to target applications.

We work with you to define the application requirements for your business needs and help you identify business scenarios and test types. And we will develop and execute the test load scripts needed to test applications, diagnose performance problems and provide recommendations for performance improvements.

Benefits of Capco’s Performance Engineering and Testing as a Service include:

- Access to best-of-breed performance engineering experience and talent, on tap
- Defined methodology and accelerators built in
- Ready access to Capco’s performance testing tools and accelerators
- Packaged services that make performance testing affordable
- End-to-end consulting from planning, modeling, test environment management and test execution to analysis and reporting to closure
- Predictable annual costs for performance testing services
Service usage is tracked and billed on an hourly basis. This approach allows you to tie projects into your internal project billing mechanism, making it easier for the central quality organization to bill-back individual projects. To speed testing and reduce costs, we employ Capco-developed processes, methodologies, accelerators and frameworks. The accelerators extend existing toolsets to cover new protocols. The frameworks support the design of even more extensible scripts, reducing the need for rework.

Capco performance engineering and testing professionals have extensive diagnostic experience across a variety of core banking systems, platforms and applications. Because we focus exclusively on the financial services industry, we are uniquely equipped to provide the testing support you need— wherever and whenever you need it.

With our Performance Engineering and Testing as a Service available on demand, institutions no longer need to maintain full-time resources to manage and execute testing across the enterprise. The reduction in labor, toolset and training costs can provide substantial year-over-year budget savings.

A performance service you can count on

Financial institutions can invest considerable time, money and effort to establish internal performance engineering and testing resources, which will have to be kept up to date through ongoing staff development and system upgrades. Using this approach, an institution runs the risk of having inadequate staffing and capacity in times of high demand, and idle resources between demand peaks, with both quality and cost implications.

Capco’s Performance Engineering and Testing as a Service offers an economical, effective alternative to creating an internal capability. Our seasoned professionals, usage-based pricing and unmatched knowledge of the financial services industry can help you be confident that your applications will deliver the performance you need, at the right price.

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Phil Dorfer is a managing principal at Capco and leader of the Quality Management and Testing practice in North America. Phil has more than 12 years of IT consulting experience within the banking and insurance lines of business. He has spent the last decade advising clients with improving overall quality assurance and testing standards and processes as well as delivering large-scale systems implementations both onshore and offshore. Prior to joining Capco, Phil was a senior manager for the Business Transformation practice at Wipro consulting. Prior to that, he was a manager at BearingPoint and a key leader in its Quality Assurance and Testing practice.

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Patrick Martin is First Niagara Bank's VP of IT Quality Services. Patrick and his team are focused on creating a Better, Faster, Cheaper technology solutions delivery. Patrick implemented Technology's business analysis, quality and release management practices. His QA Services team created and implemented the Unified Lifecycle (SDLc), Application Lifecycle Management, Defect Prevention Inspections and Risk Measurements, reducing costs, risks and time to market. Patrick instigated QA Services' process improvement initiatives, delivering significant returns of investments. He received his bachelor of science in technology management from the University of Maryland. Patrick received the prestigious Smithsonian Innovation Laureate in 1999 for his work on Internet investigative technologies. He also received distinction as a White House Innovation grantee in 1999 for his work on knowledge-sharing technologies. He has more than 25 years of technology management experience.

About Capco

Capco is a global business and technology consultancy dedicated solely to the financial services industry. We work in this sector only. We recognize and understand the opportunities and the challenges our clients face. We apply focus, insight and determination to consulting, technology and transformation. We overcome complexity. We remove obstacles. We help our clients realize their potential for increasing success. The value we create, the insights we contribute and the skills of our people mean we are more than consultants. We are a true participant in the industry. Together with our clients we are forming the future of finance. We serve our clients from offices in leading financial centers across North America and Europe.

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