

Capgemini Provides “Load Testing as a Service” with NRG Global AppLoader as Tool of Choice

Introduction

Periodically, ENTERPRISE MANAGEMENT ASSOCIATES® (EMA™) analysts conduct Return On Investment (ROI) studies on enterprise management products that demonstrate above-average customer value. NRG Global, based in Los Angeles, California, U.S.A., markets innovative application performance testing solutions for use by Development, Quality Assurance (QA), and Production Support teams.

This EMA ROI case study profiles Capgemini AS France, which uses NRG Global for its Load Testing as a Service offering. Capgemini AS France is part of Capgemini, one of the world’s foremost providers of consulting, technology and outsourcing services with more than 125,000 employees in 44 countries.

HIGHLIGHTS

Vendor name: NRG Global

Product name: AppLoader

Product function: Load Testing

Vendor contact: Lywan Kummer
lywank@nrgglobal.com

Availability: Currently available

AppLoader’s Distinctive Differentiators: Price, Application Agnosticism, Graphically-based versus Script-bound

NRG Global offers a variety of software testing products that are highly innovative and affordably priced. While the initial acquisition cost for AppLoader is approximately \$25,000, traditional load testing products can cost \$200,000 or more. From this perspective, AppLoader is approximately 10% of the cost of a “Big Vendor” solution. In addition, customers with complex tiered or distributed applications gravitate to NRG Global because the technology is simple to deploy and use.

AppLoader’s distinctive differentiator lies in its unique technology, which relies on pixel locations and screen content (versus entirely on scripting) to find images and clues pointing to application content. The design is based on “understanding the communications between person and application” from the perspective of the user interface. NRG states, “Anything that a person can do, we can do.”

Unlike traditional products in this space, AppLoader is equally well adapted to testing a wide variety of application types. AppLoader is currently being used to test virtualized Citrix applications as well as distributed healthcare applications such as Cerner, Epic, GE Healthcare, Meditech, McKesson, and AllScripts. It is also well suited for higher education applications such as CampusVue, and business apps such as PeopleSoft, Oracle, and SAP. Because they are used to create custom applications, Web, Java, and .NET applications are additional candidates for AppLoader testing.

Its differentiators make AppLoader particularly suitable for testing personalized and/or dynamically changing screen content, both of which are common in today’s web applications. This sets the product apart from prior generation load testing products.

The NRG Global product line includes the following pre-integrated solutions:

- **AppLoader:** Load testing
- **Apps Watch:** Performance testing and monitoring
- **Log Watch:** Centralized log monitoring
- **Chroniker:** Availability monitoring and system management of “back-end” systems

AppLoader can typically be downloaded and running in an hour, and the company provides free assistance with Proof Of Concept (POC) implementations. For more information, please go to: <http://www.nrgglobal.com/>.

Problem Scenario

Although modern applications are business-critical – often supporting customer service and/or revenue-generation capabilities, for example – relatively few companies can reliably predict application performance prior to production deployment. Load testing bridges the gap between Development and Production by providing assurance that a new application is “production worthy,” performance-wise.

Load testing is one of the least understood, and most often overlooked, areas of software testing. The role of every software development organization is to deliver “bug free” applications. Software bugs are those elements within completed code that don’t conform to the original design, aren’t implemented correctly, or flat out don’t work. The role of Quality Assurance (QA) testing is to find and document any bugs that Development might have missed. The presumption is that once code has “passed” QA’s exacting standards it is ready to deploy into production.

The reality is that code can pass every QA test with flying colors and be virtually “bug free” and still fail to perform as a production application. Both Development and QA test code, not performance. Performance problems very easily go undetected during pre-deployment testing, when only a handful of users are on the system. They manifest in production when the tenth, hundredth, or thousandth user signs on.

Load testing reveals exactly how many users can concurrently access the system before performance and/or availability degrades. As limitations are revealed, code can be fixed and underlying hardware and software resources can be right-sized PRIOR to deployment. This, in turn, ensures that applications perform well in production from day one.

Load testing bridges the gap between Development and Production by providing assurance that a new application is “production worthy,” performance-wise.

Interviewee Title and Company

Olivier Carton

Manager of Industrial Validation Center, Capgemini AS France

Capgemini Load Testing as a Service

Capgemini offers IT consulting and outsourcing services for companies of virtually any size and in any industry. While Capgemini takes a vendor-neutral approach to the products it uses in general, the load testing practice documented in this case study has standardized on NRG Global AppLoader as its product of choice.

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Olivier Carton, the Capgemini industrial manager interviewed for this study, manages a team that provides load testing services for “any French Capgemini APPS France project doing development and needing such services.” During the initial stages of developing the practice, one roadblock was the high cost of traditional load testing solutions, along with the fact that they require a distinctive (and expensive) set of programming and scripting skills. These factors meant that the potential cost of load testing services was often prohibitive for both Capgemini and its customers.

Seeking a more lightweight, less expensive option, Capgemini heard about NRG Global AppLoader from clients who had used and liked the product. In addition to being less expensive overall, the Capgemini team also liked the breadth of applications, which can be tested by AppLoader.

Capgemini’s approach is that the best way to evaluate production performance is to simulate the “real” actions of virtual users. Capgemini’s practice supports testing of virtually any type of application architecture including fat-client, web, and Citrix-delivered services. Few competing products support testing of all of these application types and AppLoader is one of the few that does. Because of these factors, AppLoader has become the product of choice for the practice.

According to Olivier, “For companies which don’t routinely perform load tests prior to production implementations, users become de facto QA testers; performance problems manifest as the number of users ramps up.” Olivier’s experience is that “there is never enough time” for load testing to be done. Since it requires that the application be in its final form, it is typically one of the last testing steps completed before the application goes into production. At the same time, development projects are always compressed time-wise. Testing, the last step in the process, is often shortchanged. These time factors work in AppLoader’s favor as well. With little time to perform the tests, load testing scenarios must be easy to create and run. These differentiators led Capgemini AS France Industrialized Services to select it as the load testing solution of choice.

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Outcomes

The outcomes have been extremely positive. Not only are customers happy with the results, but the Capgemini testing team has seen a significant value proposition from its use of NRG products. Because of these positive results, Capgemini plans to extend this service offering to all of Continental Europe.

- **Best customer satisfaction of all products used by the Industrialization Centers:** Olivier’s team monitors the satisfaction of all of its service users. For client environments tested with AppLoader, the customer satisfaction level is 94%, the highest figure across the Industrialization segment. Per Olivier, “The product is very well received.”
- **Faster Project Completion:** On one major project, Olivier’s team was able to save 150 man-days by using NRG Global products versus more expensive and heavyweight solutions. Much of the savings was due to the fact that creating scenarios and scripts does not require extensive programming and therefore requires less time.
- **Better project planning predictability:** AppLoader’s simple deployment and ease of use mean that Olivier’s team can better predict the time required to complete a client testing project. Per Olivier, “The solution is predictable enough that we can give quite exact insight into how long it will take to run the testing campaign.” This predictability reduces the downtime and expense of underutilized consulting assets. It also improves customer satisfaction, since testing projects must be completed by specific dates so production deployment schedules can be maintained.
- **Penalty free projects:** Some projects have bonuses attached for completing work early and penalties for completing work late. Olivier’s team completed a recent project, which not only improved on its forecast, owing to the efficiency allowed by the tool, but also positively sustained its margin by the fact that Capgemini avoided payment of contracted late delivery penalties.

Quotes

“Load testing is hard to execute if you don’t have good tools, tools knowledge, and testing knowledge.”

“Load testing should be done throughout a project versus at the very end of the project. By that time, the system architecture has been established and infrastructure deployments have been designed and acquired. It’s too late to modify an architecture once everything is in place. It’s far earlier and cheaper to modify it early in the lifecycle.”

Olivier Carton, Manager of Industrial Validation Center, Capgemini France

About EMA

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