Cerner

CASE STUDY

"Scapa TPP demonstrated its ability to handle the dynamic nature of Cerner's healthcare information technology solutions...The skill level and knowledge of the consulting resources, as well as the support engineers, (at Scapa Technologies) is tremendous"
- Chuck Hunt, Senior Team Lead, Abilities Lab., Cerner Corporation

Scapa Technologies

Scapa TPP testing in complex real-world environments brings many business benefits; ensuring user experience, predicting system capacity etc. This case study describes Cerner Corporation's use of Scapa TPP to accurately measure and predict system capacity and demonstrate scalability and reliability of its Millennium platform.

Why Scapa TPP

Scapa TPP is the only test tool with the power, flexibility and feature list required for proper and accurate performance, capacity and scalability testing of solutions from Microsoft®, Citrix®, VMware®, BMC Software® and others. With a highly scalable engine technology, tests can be scaled to hundreds of thousands of users. Automate via an API or using any automated GUI scripting tool or language of choice – such as WinTask, AutoIT, .Net™, Winium, Selenium, Python, C# etc.

Why Scapa TPP was selected

The Abilities Lab at Cerner Corporation provides, among other things, performance testing of Cerner Millennium solutions. The Lab's mission is to validate the performance, scalability and reliability of Millennium to support capacity planning and system sizing efforts. It also validates new technologies, including hardware and software designed to decrease total cost of ownership and improve performance. Cerner Millennium solutions have been chosen by NHS Connecting for Health in the UK Southern Cluster. As a part of the UK Southern Cluster project, the Abilities Lab was required to complete a volume and performance test to demonstrate Millennium's performance and reliability.

Testing platforms currently in use at Cerner include Citrix, HTTP & Microsoft®. The testing platform selected for this project was Cerner Millennium solutions deployed across the Citrix platform. The Abilities Lab required a testing tool with several specific functionality requirements, including:

- ability to automate several dynamic windows solutions in the Citrix environment.
- avoid bitmap synchronization which had been found to provide unreliable test results.
- provide true text recognition and text capture capabilities.

In order to meet testing requirements and to provide optimal performance and stability of the solutions, the volume and performance test would have to use proper load balancing by incorporating web application servers in combination with Citrix. The final requirement of the testing tool was that it had to be able to provide scripting and testing on two protocols: Web and Citrix.

The search began for a tool that could meet the Abilities Lab's needs by producing reliable, reusable scripts that could run on Citrix. Several other vendor tools were reviewed, but these fell short of meeting the requirements that had been specified.

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Solution

Scapa Technologies was discovered on a web site providing independent Citrix, Terminal Server, Server-Based Computing, and Thin Client resources (www.BrianMadden.com). Scapa TPP was recommended for its ability to test the performance of applications running on all thin client environments. A product demonstration ensued, demonstrating not only the capabilities of Scapa TPP but also of GUI automation scripting tool that captures text and is able to use generalization within Scapa TPP. The demonstration included the automation of a part of one of Cerner's solutions and illustrated Scapa TPP's ability to run tests with dynamic data. This gave the Lab confidence in Scapa TPP and showed it could handle the dynamic nature of Cerner's solutions.

With the initial investigation complete, a larger scale Proof of Concept was agreed. Cerner Abilities Lab engineers worked in conjunction with Scapa Technologies consultants to create several workflow scenarios. The team performed several tests during the Proof of Concept. With the support received during this Proof of Concept, the Lab understood that Scapa TPP could handle the job and that support would be available when needed. A trusting relationship had been built between the two organizations.

The Result

With the successful completion of the Proof of Concept, the Cerner Abilities Lab purchased Scapa TPP. In addition, a Scapa Technologies Technical Consultant was hired for a week of in-house Scapa TPP training and to provide instruction to improve script reliability. The training session was extremely helpful and was an important piece in the success of the UK Southern Cluster project. Scapa Technologies consultants are very knowledgeable, not only about the product and script development, but about application performance testing in general. Following the training, the eight required workflows for the UK Southern Cluster Volume and Performance Test were scripted by the Lab's Automated Testing Tools team. The team developed a "Cerner Automated Testing" architecture within and around the scripts by including common functions, robust wrapper functions and external C++ DLL functions. This architecture increased the ease of scripting and created robust, reliable scripts. The Lab has since completed hundreds of low volume, full volume and saturation tests.

Benefits

Scapa TPP provides the flexibility for performance and scalability testing, not only on the Citrix platform as in this case, but on many other protocols as well. With a reliable method of conducting performance and scalability tests, the Abilities Lab
is looking at other ways that Scapa TPP can be utilized. Recently, some initial testing of Cerner's Provision PACS solution running on Linux has been successful. Scripting has also begun for the Abilities Lab Release Volume and Resource Utilization testing which will consist of a combination of thin client and fat client testing. After several months of volume and performance tests for the UK Southern Cluster, it is safe to say that the project's success was due, in part, to the people at Scapa Technologies.