Scapa
Technologies

This case study describes the how Mansystems, a long-standing Scapa Technologies Services Partner organization, used Scapa TPP to demonstrate system scalability and pinpoint performance issues for one of their customers.

Mansystems provides industry-leading Service Management software solutions, training, and consultancy services to a broad-range of customers throughout the Netherlands.

The Business Problem

Mansystems, is a long-standing Scapa Technologies Services Partner organization, which provides industry-leading Service Management software solutions, training, and consultancy services to a broad-range of customers throughout the Netherlands. One of their customers was experiencing serious performance issues with a specific application running on their system. Mansystems consultants had performed significant "traditional" diagnostic investigations, for example, looking at log files, Oracle® statement tuning and measuring CPU. However, the root cause of the problem was proving elusive.

The Mansystems consultants decided to rebuild the customer's system in a laboratory environment and started experimenting with Scapa TPP test scripts running against the application. These scripts were produced easily and the tests run quickly. A major focus for these tests centred around a known issue with one function of the application. End-user experience showed that the application was taking up to 30 seconds to respond, thereby making the application frustrating to use and impacting significantly on productivity. PoC.

The Solution

However, despite the understandable focus on the application response issue, Scapa TPP tests demonstrated clearly that the root cause of the problem was more fundamental. In fact, the Scapa TPP tests had uncovered a serialization issue within the application. Scapa TPP testing had revealed that when a specific function was used, all end-users were exposed to severe delays because the system was unable to handle their responses.

At this stage, Mansystems engaged Scapa Technologies' Professional Services to verify the tests results and perform the same tests on both the laboratory system and the customer's environment.

Using Scapa TPP, the Scapa consultant ran some additional tests to collect information on the application's processes. These tests revealed that only a single thread of the application was utilising CPU resources, yet the running process was multi-threaded. Additionally, using Windows Memory Dumps, the Scapa consultant was able to identify that a multi-threaded compartment was communicating with a single-threaded compartment. This meant that the whole application was forced to work as a single-threaded application.

This information was supplied to Mansystems who, in turn, informed the software vendor. In this way a significant software quality issue was highlighted to the application vendor - one that they could not ignore.

The Result

Once the Scapa consultant had identified the issue, the application vendor provided a fix within a day. The problem had been traced to an upgrade of the compiler where an alteration had caused their multi-threaded application to become a single threaded application in the new release. The makefiles were fixed and the application recompiled.

The performance improvement was instant, overall user experience became consistent and the capacity of the system increased by a factor of 5.9.

Benefits

Mansystems and its customer gained huge benefits from this experience of testing using Scapa TPP, incuding:

- Scapa TPP gave Mansystems the ability to create and execute tests quickly and easily, helping to bring a successful resolution to all parties within days.
- The customer benefitted from significant improvements in user experience of their business-critical application.
- Additional testing by the Scapa Technologies consultant led to an increase in system capacity by a factor of 5.9.
- With the additional testing completed by the Scapa Technologies' consultant, a third party software quality issue was uncovered, reported and fixed within days. The Scapa consultant's systems knowledge and understanding proved invaluable, not just to Mansystems and it's customer, but also in helping the software vendor improve the performance of their application.