

USA Technologies

Micro Focus® Silk Performer™ ensures USA Technologies services meet demand spikes, satisfying customers and end-users.



Challenge

A leading provider of cashless, wireless POS payment systems for the vending, commercial laundry, and business center markets needed to scale testing to meet a growing network and millions of monthly transactions and comply with industry and government standards.

Solution

USA TECHNOLOGIES

USA Technologies is a leading provider of wireless, cashless, micro-transactions and networking services. The company's services enable unattended credit card payment technology and

networking of distributed assets in a variety of industries, including vending, hospitality, commercial laundry and energy management.

MAXIMIZING RELIABILITY AND SECURITY OF UNATTENDED VENDING DEVICES

Cash-based vending machines have been around for years, but for greater consumer convenience, businesses are now adding credit card payment technology to these devices. The unattended cash-based point of sale market represents \$250 billion dollars. There are 8 million machines in the United States representing \$47 billion dollars in transactions alone.

USA Technologies is a fast-growing company in this cashless payment systems market. Its wireless-based, thin client devices are installed in approximately 48,000 locations across the U.S. and Canada. In addition, the company's robust back-end credit card processing system handles millions of transactions a month.

From food vending to laundromats to copy centers, these cashless point-of-sale transactions are generally executed on unattended devices. Therefore, both reliability and data security are essential. The need to balance product requirements with staffing capabilities led executives to identify enhanced quality

“Since we strive for fast card authorization—no more than two to three seconds—Silk Performer helps us quickly identify and resolve bottlenecks. More importantly, we can isolate and fix problems more easily than before.”

ART ROYCE

Director of QA
USA Technologies



At a Glance

■ Industry

Electronics

■ Location

United States

■ Challenge

The organization needed scalable, functional load and stress testing for the millions of transactions processed by its system.

■ Solution

Use Silk Performer for flexible, automated software load, stress and performance testing.

■ Results

- + Improved customer and end-user satisfaction with peak-hour optimization
- + Improved consistency across compliance and testing
- + Reduced field service and development costs

assurance (QA) as important to their long-term success. The company hired a dedicated QA team and looked for more sophisticated tools to support product testing.

SCALE TESTING FOR GROWING NETWORK AND MILLIONS OF MONTHLY TRANSACTIONS

The vending business relies on consumer convenience. In these self-service environments, extensive credit card processing time can mean lost vending machine sales for USA Technologies' customers. Solid reliability and performance are critical, even during peak times such as lunch hour. The company recently developed lower-cost, smaller and easy-to-use endpoint devices, processing the transactions from these devices on a centralized processing network. This led to a pressing need for scalable, functional load and stress testing for the millions of transactions processed by the company's system.

COMPLY WITH INDUSTRY AND GOVERNMENTAL STANDARDS

USA Technologies is a publicly-traded company and complies with the Sarbanes-Oxley Act (SOX) as well as the evolving Payment Card Industry (PCI) Data Security Standard for credit card transactions. USA Technologies is recognized as a PCI Level 1 Service Provider. Company executives decided to proactively prepare for formalized development processes, including developing more mature development processes and formalizing testing for the company's growing cashless transaction network.

STREAMLINE TESTING FOR PROPRIETARY DEVICES AND NETWORK

USA Technologies' endpoint devices use a proprietary protocol that is encrypted to communicate securely with the central system for credit card transactions. The unique security used by the devices, along with system growth, meant the team's current tools could no longer support the complex testing requirements. The QA team needed sophisticated, flexible simulation tools to test communications and performance between endpoint devices and the centralized processing system.

SILK PERFORMER PROVIDES THE SOLUTION

The QA team evaluated a number of products to determine the load and performance testing solution they needed. In addition to robust product functionality, the company wanted to reduce costs and expand test access. In the end, only Silk Performer from Micro Focus offered advanced capabilities, flexible and cost-effective licensing, and excellent customer support.

"While our end-to-end offering required a really advanced tool, licensing and support were also major decision factors for us," says Art Royce, USA Technologies QA director. "We found the support to be better than the competition. Each time we contact customer support, we receive solid and useful answers quickly. Also, Silk Performer does not require a 'controller,' so we have the ability to test from anywhere and involve different teams without specific add-ons.

This makes it a very cost-effective solution with no testing bottlenecks or restrictions."

Royce only had time to work on the implementation in between other large projects. Even so, Silk Performer was up and running in just a couple of weeks. Technical support was key to the first implementation. The libraries from USA Technologies' proprietary endpoint device technology easily integrated with Silk Performer, so QA started generating results quickly. Useful wizards allowed other QA team members to add scripts without training.

Silk Performer delivers flexible, automated software load, stress and performance testing for USA Technologies. The tool is simple and easy to use for the company's QA staff and changing pool of contractors due to the visual interface for test creation, root cause analysis, and diagnostics. Silk Performer also removes the cost and complexity associated with other load testing tools that restrict usage to one team. The QA team, remote contractors, and developers don't need to schedule testing around each other. Everyone can create and execute tests at any time.

Results

IMPROVED CUSTOMER AND END-USER SATISFACTION WITH PEAK-HOUR OPTIMIZATION

USA Technologies now knows the exact vending consumer experience under load, thanks

to Silk Performer. The QA team creates realistic, extensive, reproducible tests for a variety of scenarios under different load conditions. This results in a higher quality product, a better user experience, and improved network performance for the millions of transactions processed each month.

COMPLIANCE AND TESTING CONSISTENCY

Silk Performer's ability to simulate virtual users and environments helps USA Technologies

with compliance requirements. Now, the QA team can proactively identify bottlenecks and resolve performance issues before devices and networks get rolled out to consumers. For example, in testing over-the-air updates to endpoint devices, QA found a major issue and resolved it quickly in the test environment during an early test cycle. The tool also supports USA Technologies' process formalization and consistency objectives, including test reuse and version control.

DECREASE IN FIELD SERVICE AND DEVELOPMENT COSTS

The flexibility of the solution allows streamlined, automated testing of multiple virtual devices using the company's proprietary communications protocol. The QA team is more efficient than before. Detailed diagnostics help identify and resolve performance issues much faster. Defects are also uncovered earlier in the development cycle, so the company experiences fewer problems in the field, thus reducing service costs.

**“We found the support to be better than the competition.
Each time we contact customer support, we receive
solid and useful answers quickly.”**

ART ROYCE
Director of QA
USA Technologies



Micro Focus
UK Headquarters
United Kingdom
+44 (0) 1635 565200

U.S. Headquarters
Rockville, Maryland
301 838 5000
877 772 4450

Additional contact information and office locations:
www.microfocus.com
www.borland.com