



TESTERY

# How Testery Helped Spirit of '76 Fireworks Load Test the Move to the Cloud

CASE STUDY



"I don't want to imagine the scenario if we hadn't done this. We would have come to a screeching halt. It was stressful enough fixing the issues weeks before the release.

I couldn't imagine doing that with sales not coming in and managers constantly asking me what's going on."

Kyle Hurt

Chief Enterprise Architect, Spirit of '76 Fireworks



## HIGHLIGHTS

### CHALLENGES

Moving from self-managed to Kubernetes in the cloud

Previous architecture wasn't scaling

Needed to prove that new architecture would scale to meet demand

### SOLUTION

Implemented smoke tests in cucumber.js

Ran smoke tests to simulate many concurrent users

Integrated tests with CI/CD pipeline

### RESULTS

Identified configuration-based scaling issues prior to the launch

Discovered defects to help developers focus on remaining issues to prepare for launch

Delivered on-time and on-budget

## THE CLIENT

Spirit of '76 was founded in 1987 with a clear purpose: to provide the safest and highest quality wholesale fireworks to independent dealers at the most competitive prices. They carry the hottest brands that consumers want, and have the knowledge to help dealers be successful.

Consumers all over the United States are satisfied when they can go to a fireworks stand and purchase these quality products supplied by Spirit of '76.

## THE CHALLENGES

Spirit of '76 has been building up their customer base for over 30 years. Their web application was having a hard time keeping up with the increased load and their site would periodically go down. They decided it was time to move from a self-managed infrastructure to the cloud.

Moving to the cloud would give them better scaling, more reliable deployments, allow them to move faster, and save costs. But moving to the cloud can also mean making some pretty significant changes. Even if they are mostly infrastructure changes, they should still be tested.

Spirit of '76 needed to be 100% sure it's new cloud infrastructure would handle the load.

“It was invaluable for us to do this to get ready for implementation. We would have been dead in the water without it.”

## THE SOLUTION

The Spirit of '76 team needed to move fast. In order to hit their one month deadline to launch their new site in the cloud, Spirit of '76 reached out to Testery. The goal was quickly getting a testing framework put into place that Spirit of '76 could build upon after the launch.

Testery added a suite of smoke tests that would double as test coverage and be used when running the load tests. The smoke tests were written in cucumber.js and tested real user flows using real browsers. Once the tests were sufficient and approved by Spirit of '76, Testery began testing the system at scale.

“I've worked with other 3rd parties and it's not always as seamless and painless as working with Testery. Testery was very flexible and responsive.”

We started out with a few concurrent users and gradually ramped it up until bottlenecks became apparent. For example, they were able to start seeing performance degradation due to issues with the setup of their Kubernetes clustered environment, inefficiencies in the code and a few bugs. They were able to quickly adjust their cluster configuration, remove the inefficiencies in the code, resolve their bugs, and identify better ways to leverage caching.

This was done with the teams working together as one team and doing multiple iterations of running load tests, figuring out bottlenecks, fixing them, and rerunning load tests. It was easy for them to make the relevant changes and optimizations to ensure that none of these issues would occur in production.

## THE RESULTS

After just a few weeks of testing, the staff at Spirit of '76 was ready to launch their website - just in time for their busy season. The team implemented its system and because of the testing they were able to more than double their load capacity (with the ability to easily scale further if needed) and reduce some page load times by more than 75%.

The Spirit of '76 team deemed working with Testery a huge success! They've proven their new system can scale and instead of having single-purpose load tests, they have a mission critical set of tests to verify the system continues to work.

Don't just feel like you're ready.  
Prove it.

Testery's next-generation testing grid  
and experienced test automation professionals  
will give you the proof you need  
to be ready for a successful launch.

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