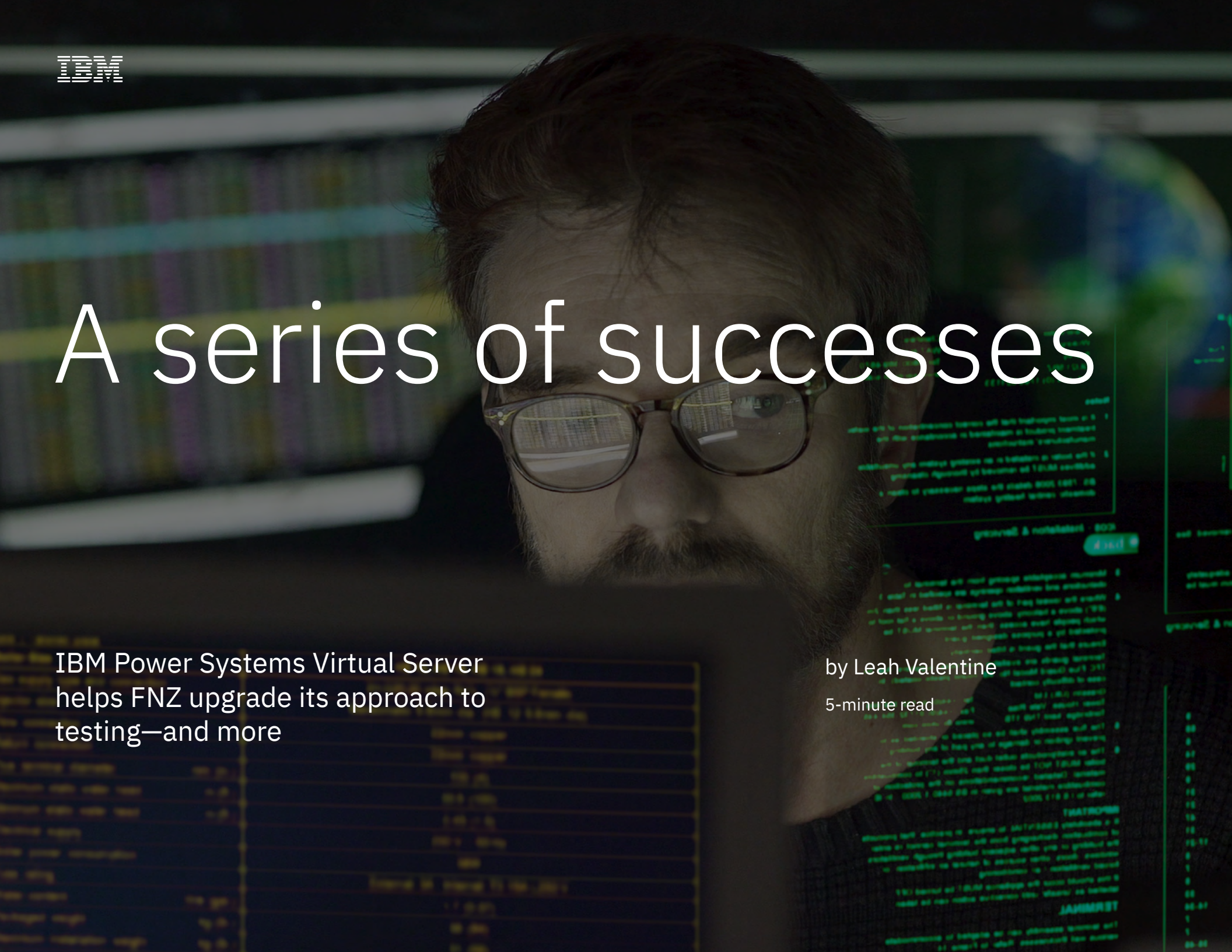

A series of successes

IBM Power Systems Virtual Server helps FNZ upgrade its approach to testing—and more

by Leah Valentine

5-minute read

Sometimes a single, successful change can bring about a series of related victories. Just ask John Cullen, Chief Technical Architect in the Asset Management Infrastructure Division of FNZ (UK) Ltd., a financial services company based in Edinburgh, Scotland.

Several years ago, Cullen and his team began to automate software testing with the goal of improving the speed with which they could roll out new releases of their core digital wealth management platform, Figaro. It worked—they were able to shave days off their test cycles.

But the testing team was sharing a logical partition (LPAR) with the development team, and over time their successful testing strategy started to slow down important software development. Cullen and team tried to address this by running their tests after business hours, but that proved to be less than ideal.

"We would make a change, wait for the test to run overnight, find out we'd introduced a bug, fix it, wait for the test to run overnight ... over and over, to the

point where we were starting to slow down our own processes—the opposite direction from where we wanted to go," explains Cullen.

Next, the team considered creating a separate, dedicated LPAR for running tests. "That would no doubt have solved our problem, but it wouldn't have been cost effective and it wouldn't have been scalable," says Cullen. "We want to keep adding more tests, so we needed a proper, cost-effective solution that would address the scalability problem."

Cullen found that solution with IBM Business Partner CSI Limited's test-as-a-service platform, which runs on IBM® Power® Systems Virtual Server.

FNZ can spin up a new virtual server in as little as

10

minutes

With the new platform, FNZ can complete tests at least

15x

more quickly

A powerful, scalable solution

Figaro is a very large system, with millions of lines of code, thousands of tables and about 25,000 program objects. Historically, it has run on IBM i on Power servers, so the move to IBM Power Systems Virtual Server was natural. But there's more to Cullen's choice than finding the right combination of server and operating system.

With IBM Power Systems Virtual Server and CSI's test-as-a-service offering, Cullen and team have as much compute power as they need, when they need it. "With this setup, we can request a virtual server with the required version of Figaro and the appropriate data set, run our tests against it, then delete the virtual server," Cullen says.

The ability to access the right version of Figaro is key. FNZ's current release schedule calls for new versions of the software every quarter, with patches every two weeks. For testing to be efficient and cost-effective, Cullen's team needs to be able to spin up an accurate, up-to-date version of the

> "All we have to do is find the right image, spin it up, run the tests and we're done."
>
> **John Cullen**, Chief Technical Architect, Asset Management Infrastructure Division, FNZ (UK) Ltd.

software on an as-needed basis. "We don't want a situation that in order to run a test, which might only take 15 minutes to execute, we have to install reams and reams of patches to get a working environment—it all has to be prebuilt," he says.

To accomplish this, the team relies on Docker containers, which use layers to build images. "You have a known starting point, and you add layers on top. We took the stock IBM Power images and gradually layered on more and more configuration software until we had a fully working environment," explains Cullen.

Now, Cullen's team has automated the entire image building process to keep everything up to date, using a watcher program to identify newly published artifacts. "Say we want to upgrade from version 1.2 to 1.3 of our system. When we push the version 1.3 patch to the artifact repository, the watcher sees that, then spins up the previous version on a virtual machine, installs the version 1.3 patch, saves the results and deletes the virtual machine."

As a result of this process, FNZ always has a test-ready environment. "All we have to do is find the right image, spin it up, run the tests and we're done," says Cullen.

Plus, with the Docker-based approach, if anything in the intermediary layers changes, they don't have to rebuild any of the surrounding layers. "It's quite efficient," notes Cullen.

The CSI solution also takes advantage of the IBM Cloud Pak® multicloud management technology, which runs on Red Hat® OpenShift®. Specifically, the offering's cloud automation management capabilities help FNZ organize, templatize and parameterize Terraform system definitions, while Red Hat Ansible® automation scripts fully deploy the application.

Plenty of possibilities

Today, Cullen and his team have accomplished more than their original objective of increasing the rate at which FNZ releases new versions of Figaro. They've created a robust automated testing environment that allows them to spin up new machines in as little as 10 minutes and then run multiple tests in parallel or in sequence. As a result, FNZ can carry out tests in the new environment at least 15 times faster than it could previously.

The environment also provides them with easy access to up-to-date software and the right amount of computing power without having to pay for anything they don't need. In fact, the IBM Power Systems Virtual Server can cost as little as GBP 100 per day.

Cullen confirms that FNZ is well on its way to a future in the cloud. "Now that we've got a solution that works for our testing group to automatically spin up Figaro environments on demand, we can use that for our development teams. They need their own dedicated environments for doing testing, particularly if they're doing performance testing where they need

an environment that's separated off and not affected by other activity that's happening within the system," he explains.

Cullen has other uses for the IBM solution in mind, including the possibility of offering a similar solution to FNZ customers. "One of the main reasons we wanted to look at an IBM Cloud solution rather than something that would just fix our short-term problem was to be able to stand up new instances of our software for different purposes. IBM Power Systems Virtual Server is going to enable us to do that."

To learn how IBM and CSI helped FNZ transform its core production environment, click here.

> "One of the main reasons we wanted to look at an IBM Cloud solution rather than something that would just fix our short-term problem was to be able to stand up new instances of our software for different purposes. IBM Power Systems Virtual Server is going to enable us to do that."

John Cullen, Chief Technical Architect, Asset Management Infrastructure Division, FNZ (UK) Ltd.

About FNZ (UK) Ltd.

FNZ (external link) is a global financial services company founded in 2004 and headquartered in Edinburgh, Scotland. Financial institutions use FNZ's solutions and services to help customers manage and grow their wealth. FNZ employs approximately 3,000 people and has operations in 12 countries. In 2019, FNZ acquired JHC Finance, a wealth management software firm. Its assets under management exceed GBP 700 billion.

Solution components

- IBM Cloud Pak®
- Red Hat OpenShift® on IBM Cloud®
- IBM® Power® Systems Virtual Server
- Red Hat® Ansible®

About CSI Limited

Founded in 1983, CSI (external link) is an IT managed services provider based in Birmingham, England. It provides infrastructure, data protection and cybersecurity solutions to various clients throughout Europe. CSI has been an IBM Business Partner since its founding.