

Automated Testing on Z - Transcript

0:04 IBM Z has been the platform of choice for enterprise business applications for many years. These applications themselves have evolved to be really complex.

0:16 Hello, I'm Simon Gopinath. I am the chief architect for testing for IBM Z DevOps.

0:23 So with all these products and capabilities, what we are looking towards is a single testing pipeline for all, so whether your application is written in Java or Node.js or COBOL, if you're able to run the same kind of tests in the same kind of mock/stub behavior across all of your applications, or all of the different technologies that make up your application, that's really what makes you agile in testing.

0:50 Now, if you look at an end-to-end testing framework, and you divide that broadly into what can be tested before and after deployment, you have ZUnit and IBM ZVTP that allows you to test your changes before deployment. And then you have a variety of products; you have the IBM distribution for Galasa that you could use for your end-to-end tests.

1:14 You could spin up test environments with the help of ZD&T. And you could use -- and you have to use, rather -- a good test management suite to make sure that your test environments are all in sync and they are masked and obfuscated for the right amount of test.

1:30 Unit testing is a level of software testing where the individual units or components are tested. With ZUnit feature of IBM Developer for Z, you can now unit test your COBOL and PL/1 applications just like you could do any other language, and these tests can be checked into an SCM and reused.

1:50 ZUnit makes it easy to create the unit tests because you can create them off a recording. You can change the values, run negative tests and so on. But it is not enough for a business application that's driven by a CICS transaction to just make a unit test. How do you understand the impact of your unit test in the context of the transaction?

2:13 IBM Z Virtual Test Platform, or IBM ZVTP, allows you to test your transactions much early in the lifecycle by enabling you to run these tests without the need of a runtime environment.

2:29 IBM ZVTP allows you to record transactions or steps in a bad job and create test cases. These test cases are JSON files that can be checked into an SCM. Once you've finished your unit tests, you can run your IBM ZVTP test.

2:43 And what it does is it runs your application from just the load libraries without the need of a subsystem or middleware and it verifies is that the values match exactly what was recorded.

2:56 So if there is any change, if there is any impact, you can know about this much before deploying. Since an enterprise business application consists of so many moving parts, you need a test framework that can actually test each of these components, because it could be a 3270 application, it could be a JCL that you're running. It could be your Node.js application that's running off a container.

3:19 Galasa provides a framework that allows you to create a single test that spans all of these different technologies. Regardless of whether you're doing your unit testing, component testing, or this end-to-end integration tests, with Galasa, all of these tests can actually be checked into an SCM and reused. So this is really test as a call.

3:39 For more details about these products, please visit the IBM Z Virtual Test Platform product page.