THE NEED FOR SPEED: VIRTUALIZED VS. NON-VIRTUALIZED TESTING ON THE MAINFRAME



"The need for speed." We've all heard this expression and it applies to the digital age more now than ever. To stay competitive, companies must move quickly or get out of the fast lane. How do you do that in the mainframe world, though? With the right tools.

BMC AMI DevX Total Test is one such tool, enabling developers to automatically create test cases in a virtualized or non-virtualized environment, which significantly reduces the time developers spend on manually testing. As companies move to a shift-left testing approach, catching defects early and testing often significantly reduces cost. Topaz for Total Test's Eclipse-based integrated development environment (IDE) allows users of all experience levels to quickly create and maintain test cases which can then be used for quality assurance (QA) testing or put into a continuous integration/continuous delivery (CI/CD) pipeline and automatically run as a regression test.

Virtualized testing is a process where developers can automatically create a test case using a BMC AMI DevX Code Debug debug session. The test case becomes "virtualized" because Topaz for Total Test creates stubs for all external files or environmental connections. When you run the test case, the program runs without the need for live input files or other dependencies. These inputs are replaced with automatically generated stubs, which takes the guesswork out of knowing whether you had the right input files or a corrupted database so you can focus on the main program for which you made the code change.

Non-virtualized testing is the process of running your program in a live environment. Developers can

simulate, with a repeatable test, how the program will react in a realistic environment. The non-virtualized testing approach is ideal for ensuring all dependencies to the program are working correctly. BMC provides a palette of non-virtualized testing options to help developers integrate Topaz for Total Test with tools such as BMC AMI DevX File-AID and BMC AMI DevX Performance Test. For our October 2021 release, we have delivered PL/I support for non-virtualized testing in Topaz for Total Test so developers can create repeatable test cases for their PL/I programs.

Both approaches allow developers the ability to increase velocity and productivity by testing automatically instead of manually. Having a good regression suite of test cases can help catch bugs early, where they are less impactful to the business. As customers move to a shift-left approach to testing, BMC AMI DevX Total Test gives developers the capability to reduce the time it takes to create a test manually, reducing bugs by automatically creating more test cases. All of this reduces time-to-market for code changes, which equates to cost savings for your organization.