A recurring challenge in software testing is lack of time. Cloud computing offers the use of virtualized hardware, effectively unlimited storage, and software services that can aid in reducing the execution time of large test suites in a cost-effective manner. However, migrating software testing to the cloud is not a trivial activity, nor is it necessarily the best solution to all testing problems.

This talk uses real-world case studies to illustrate some of the issues and opportunities with software testing in the cloud. The talk introduces the SMART-T decision framework to support the migration process. The talk also demonstrates how to realize significant time savings using a distributed environment for concurrent execution of test cases in the cloud called HadoopUnit, which builds upon the Hadoop open-source platform.

Lessons learned from the case studies provide insight into the question of when cloud computing is the solution to software testing problems – and when it’s not. Our current work using a service-oriented architecture (SOA) to expose the cloud’s capabilities to provide software testing as a service (Taas) is also presented.

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