

Accurate regression detection in volatile environments such as the public cloud is difficult. Cloud offers an accessible and scalable infrastructure to run benchmarks, but the traditional benchmarking methods often fail to predict regressions reliably. Duet method acknowledges the variability and runs the workloads in parallel, assuming similar outside impact symmetry. This thesis examines a duet variant that does not synchronize harness iterations which enables broader use of this method. The asynchronous duet method can detect 1 – 5% slowdowns for most of the tested benchmarks in volatile environments while reducing the overall costs by up to 50%. Measurements were obtained by a benchmark automation tool for running and processing benchmarks from multiple suites. This tool can run benchmarks with sequential and both duet methods utilizing containers for portability.