



Master of Science in Information Technology

Continuous Testing Framework for Microservices in Agile-Driven
Software Teams Using Azure DevOps.

Final Report

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Abstract

In the evolving software industry, microservices enable frequent delivery with isolated service and independent deployability. To provide satisfactory products, maintaining a quality standard is key to withholding customer trust and engagement. To achieve this, the quality requirements should be identified early, and quality gates added from the early development stages.

A Continuous Testing Framework will assist teams in identifying where and how the quality gates can be added in the process. This project aims to create such a framework favoring more of automated testing, which is required to cater to the speed of delivery.

This project proposes a framework at the unit and integration level of testing where the test is integrated with continuous deployment. Further, the implementation of parallelization and contract test is also reviewed. The metrics from the execution are available and downloadable artifacts for stakeholders.

Key Words: Microservices, Continuous Testing Framework, Continuous Deployment, Development Teams