

The logo for GadgEon, with 'Gadg' in blue and 'Eon' in orange.

Engineering Smartness

PENETRATION TESTING OF 360 DEGREE ACTION CAMERA WITH CLOUD CONNECTIVITY

April, 2020

Version 01



Penetration Testing of 360 Degree Action Camera App



Company needed to build complete software stack from embedded Linux to mobile app to cloud that support a highly-functional 360Degree action camera product based on Ambarella SOC. Automate end-to-end use case level testing including both the functional as well non-functional testing of all covered devices, cloud applications, and MobApp.

Solution Description

- Highly scalable video streaming cloud application using Wowza video stream engine and Google Cloud Storage for media storage.
- Google Container Engine for auto scalable deployment
- Live video streaming to Facebook, YouTube, 360MobApp using Wowza Stream Engine
- Custom Automation framework for Testing Device , MobApp and Cloud Application.
- Continuous Integration Framework support using Jenkins and Git
- Assured application scalability using Jmeter and BlazeMeter

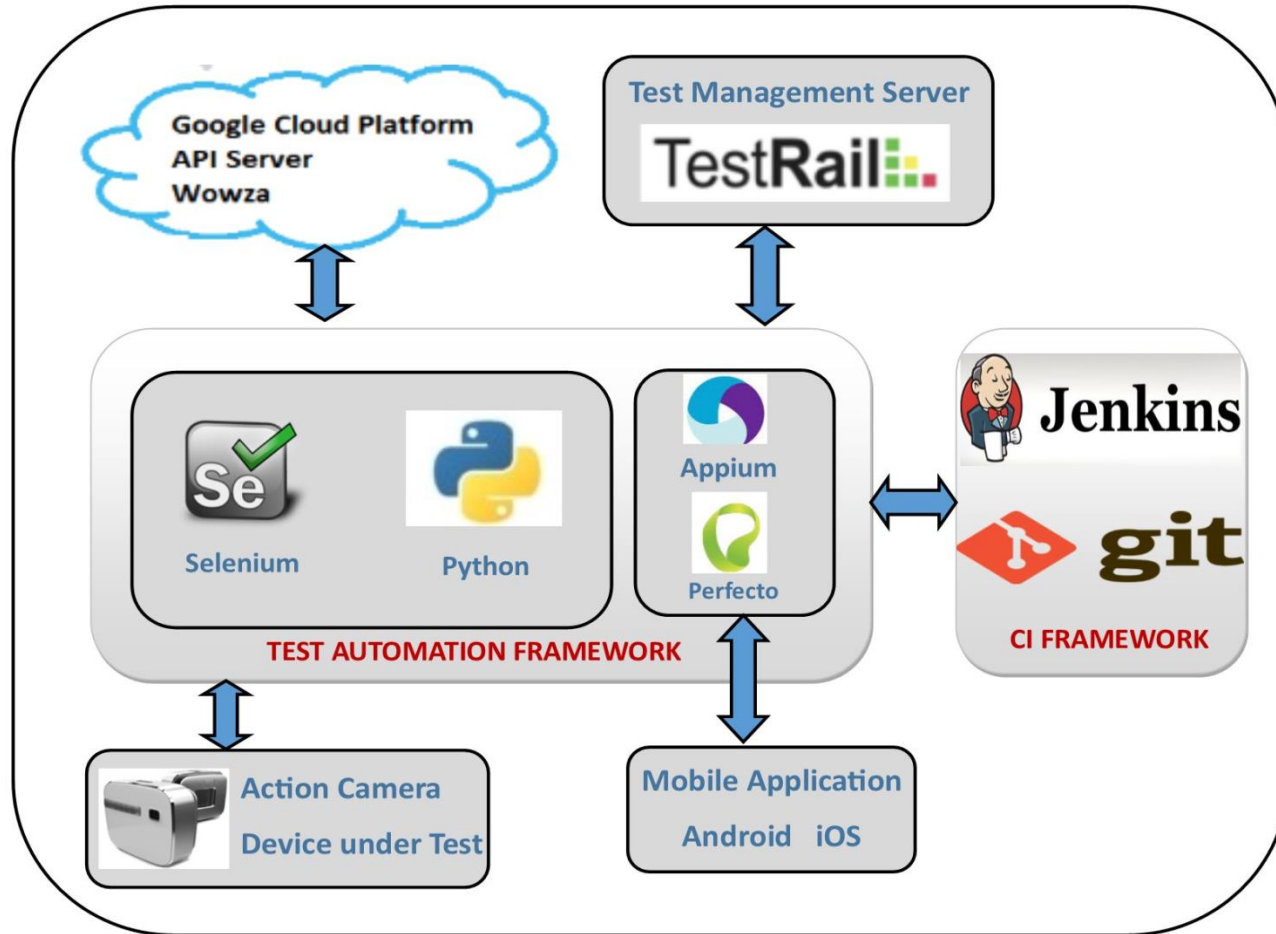
Outcome and Benefits Delivered

- Achieved 85 % of test coverage for functional test cases
- Achieved 100 % test coverage on regression test cases
- Crash test on application using heavy load (Eg : Continues image capture, video capture etc)
- Achieved 90% test coverage for non-functional testing including performance and penetration testing

The Solution / System Description

WHAT DID GADGEON DO?	PLATFORMS/TOOLS/TECHNOLOGIES USED
1) Defined Test Strategy for the complete system including 360Degree camera, Video Streaming Cloud platform, Social API platform and Mobile App.	a. Requirements Gathering & Analysis, defined functional test cases and uses case based on end to end scenarios
2) Performance benchmarking for Rest API's	a) Jmeter
3) Scalability Testing for RESTAPI's and Web socket	a) Jmeter , Blaze meter
4) Cloud application automation	<ul style="list-style-type: none"> a) Selenium, Robot framework, Python, Jmeter b) Automated all the test cases related to Admin Operations (100 % Test coverage) c) Query Performance check for identifying the database real time operational performance d) SQL Injection check to identify the vulnerabilities
5) iOS & Android Mobapp automation	<ul style="list-style-type: none"> a) Appium, Robot framework, Python b) Achieved 85 % of test coverage for functional test cases c) Achieved 100 % test coverage on regression test cases d) Crash test on application using heavy load(Eg : Continues image capture , video capture etc)
6) Security testing on Mobile and cloud application to identify the security risks.	a) Owasp
7) Continuous Integration Framework implementation	<ul style="list-style-type: none"> a) GIT b) Jenkins c) Robot Framework

System / Architecture Description



Tools / Technology Used

Cloud Service Automation

- Selenium
- Jmeter

Device Automation

- Python , Selenium, WiFi, BLE, SSH, HTTPS

MobApp Automation

- Appium, Perfecto

Continuous Integration

- Jenkins
- Git.

Test Management and Reports

- TestRail
- Robot Framework

THANK YOU



For More Details, Let's Connect



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