



GadgEon
Engineering Smartness



Parental Control Home Gateway

Company needed to build a Plug-Play device which redirects all the outward IP traffic in home network to a predefined DNS server hosted in cloud

Project Period: Ongoing

Team Size: 4 members

Protocols Used : ARP, HTTPS, MQTT, HTTP

Tools Used : Jasmine framework, Protractor, Selenium, Java Script, Jmeter, Appium

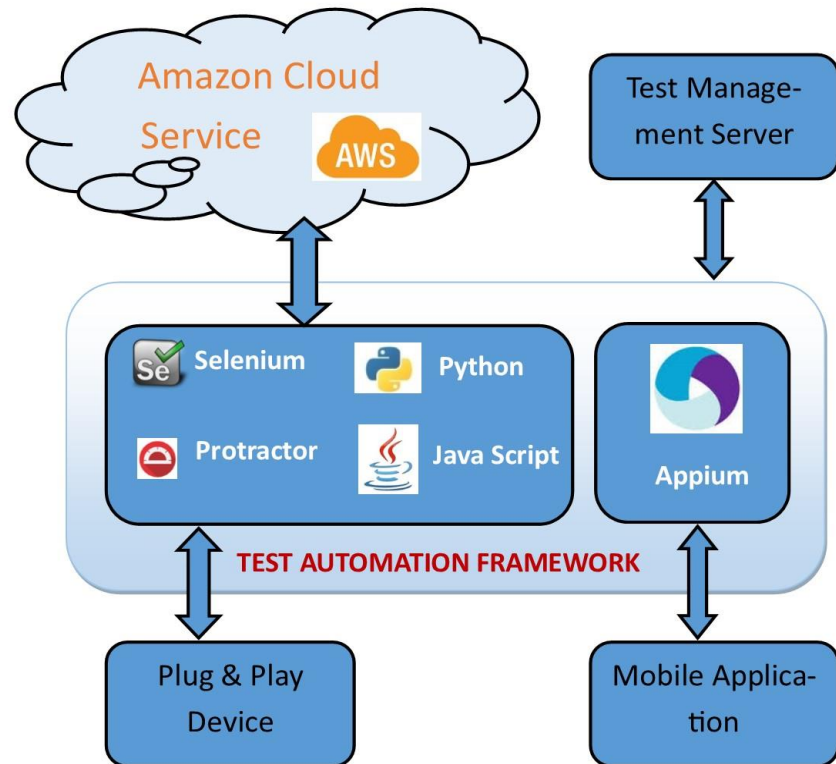
Challenge

- Develop end-to-end architecture for the IoT/Home Automation Solution
- Multi vendor Hardware support.
- Automating AngularJS and Non AngularJS WebUI , Device Interface and MobApp

Outcome

- Simple and reliable filtering product for secure browsing at home.
- GadgEon architected the full system from end node to Cloud Application and MobApp (for device management)
- Designed a Automation framework with custom helper libraries which can simultaneously interact with multiple web platforms, device and MobApp

Automation Framework Architecture



Tools / Technology Used

Cloud

- AWS IoT, API Gateway
- AWS Lambda , RDS, SNS , S3, CloudWatch

Device

- ARP-Spoofing , MQTT , HTTPS

MobApp

- MVC architecture , MMLanScan

Testing

- Jasmine framework, Protractor, Selenium, Java Script, Jmeter, Python, Appium, Jmeter, Owasp.

WHAT DID GADGEON DO?	PLATFORMS/TOOLS/TECHNOLOGIES USED
1) Defined Test Strategy for the complete system including Plug-Play device, Cloud Application 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) Protractor, Jasmine framework, Selenium, Java Script 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 b) Achieved 85 % of test coverage for functional test cases c) Achieved 100 % test coverage on regression test cases
6) Automated hardware device (Interface – SSH, WebUI)	a) Python, Selenium
7) Security testing on Mobile and cloud application to identify the security risks.	a) Owasp





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