

Group Portfolio - Project Initiation Document (PID)

Industrial Consulting Project (COM617)

Aeryk Del Mundo

Afonso Marques Mendes Cabecadas

João Estrela Leite

Rui Coelho Pinto

Tebogo Dube

Support Tutor: Craig Gallen

Project Sponsor: Website Monitoring - OpenNMS Group

Contents

PROJECT SUMMARY & INTRODUCTION	3
REQUIREMENTS	4
SCOPE AND EXCLUSIONS	4
MONITORING AND EVALUATION.....	4
PROJECT ORGANISATION STRUCTURE	5
PROJECT DELIVERABLES	5
PROJECT MILESTONES & MANAGEMENT	5
IMPLEMENTATION	5
REFERENCES	6
APPENDICES	6

PROJECT SUMMARY & INTRODUCTION

Provide a summary of the project purpose, background, and context

When a large website has become faulty it can cause multiple sources of failure and it could cause the browser to fail to load or more likely the page may load very slowly which would impact the user experience. Our team has been involved in developing a software solution that can be used to monitor the user interface and reliability of the company's website automatically. We created a prototype solution that can be used to run simulated operations against the website and report on the results. We have used tools such as JMeter, InfluxDB and Grafana throughout this project; JMeter for performance, spike and unit testing to determine the speed responsiveness, InfluxDB which is a time series database written in Google's programming language "GO" that is optimized for storing and retrieving time series data and lastly Grafana is being used to visualize, alert on, and explore metrics from any location, it enables us to create a variety of graphs and visualizations that come from InfluxDB as the test runs, this platform is hosted in Docker.

PROJECT OBJECTIVES

This section identifies the key project objectives - what specifically will this project achieve?

REQUIREMENTS

Point by point statement of project requirements (based research and the gathering of appropriate project requirements from sprint 1)

Functional	Non-functional
<ul style="list-style-type: none">• Create a test plan<ul style="list-style-type: none">◦ Canary testing◦ Green/blue/red testing◦ Integration testing	<ul style="list-style-type: none">• Unit test
<ul style="list-style-type: none">• Make a request every x time (every 5 mins not sure)	
<ul style="list-style-type: none">• Store performance metrics in influxDB (metrics tbd)<ul style="list-style-type: none">◦ Status (main metric)◦ Latency◦ Sample size (Bytes)◦ Ms response (Maybe)◦ Number of Users (Our own site)	
<ul style="list-style-type: none">• Visually represent stored metrics in graphics with Grafana	
<ul style="list-style-type: none">• Developing a website to display graphics from grafana.	
<ul style="list-style-type: none">• Work on API requests from grafana to display the graphs	
<ul style="list-style-type: none">• Diagrams:<ul style="list-style-type: none">◦ Use case scenarios◦ Sequence diagram◦ Architecture/Deployment Diagram◦ Robustness diagram (maybe)	

SCOPE AND EXCLUSIONS

Describe the main work streams, work packages and products that will be delivered. What was done and was excluded.

MONITORING AND EVALUATION

How testing and feedback was collected, stored, and analyzed. If user testing was

undertaken, you need to present sample sizes which need to be back up, referenced, and justified.

PROJECT ORGANISATION STRUCTURE

Who did what and when

Our group agreed to use an application called “Discord” as a means of communication so we could plan out and discuss each sprint deadlines for this group project. One member of our team had been assigned to create a “logs” text channel so that everyone knew the tasks they would need to accomplish for each meeting we had. Often each task set would have two members of the group to work on it as we worked to our strengths to get the tasks done.

JMeter

InfluxDB and Grafana

Yaml scripts

Testing/Unit testing

Documentation

Docker/server

Deployment

PROJECT DELIVERABLES

Provide a complete list of the deliverables/products the project produced

PROJECT MILESTONES & MANAGEMENT

List the project milestones (key points in a project life cycle). They will be the target dates that had been met

IMPLEMENTATION

Documentation of the design and implementation of your product (use appendices for extra evidence)

RESULTS

Presentation of results of testing, feedback, and a valuation

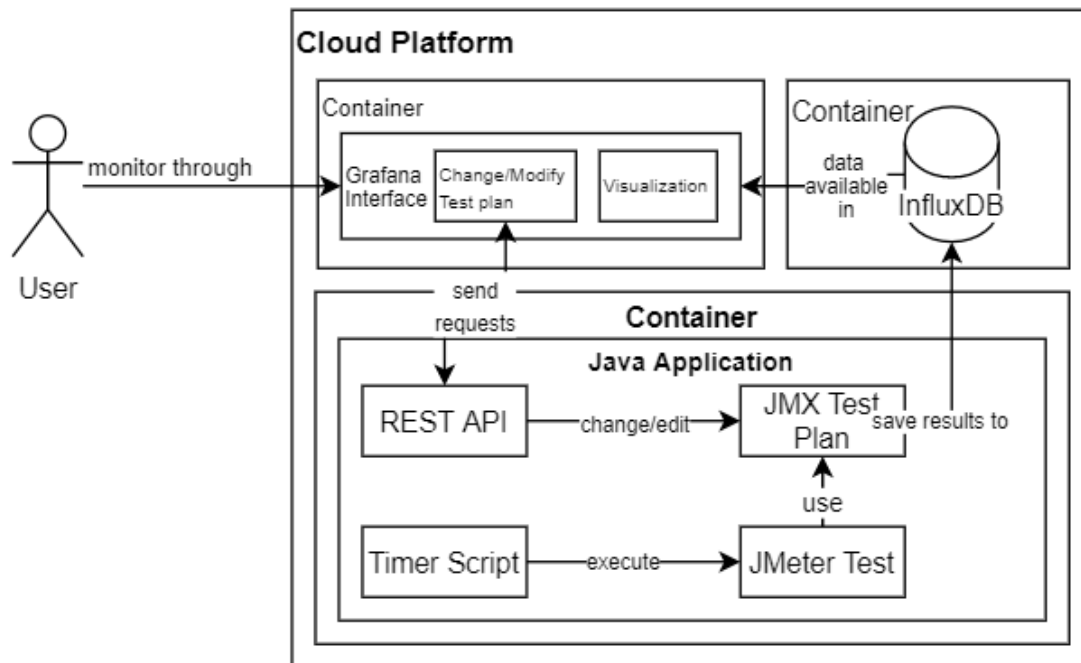
CONCLUSIONS AND RECOMMENDATION

Summary and presentation of the final product/artefact/solution and recommendations for any further work

REFERENCES

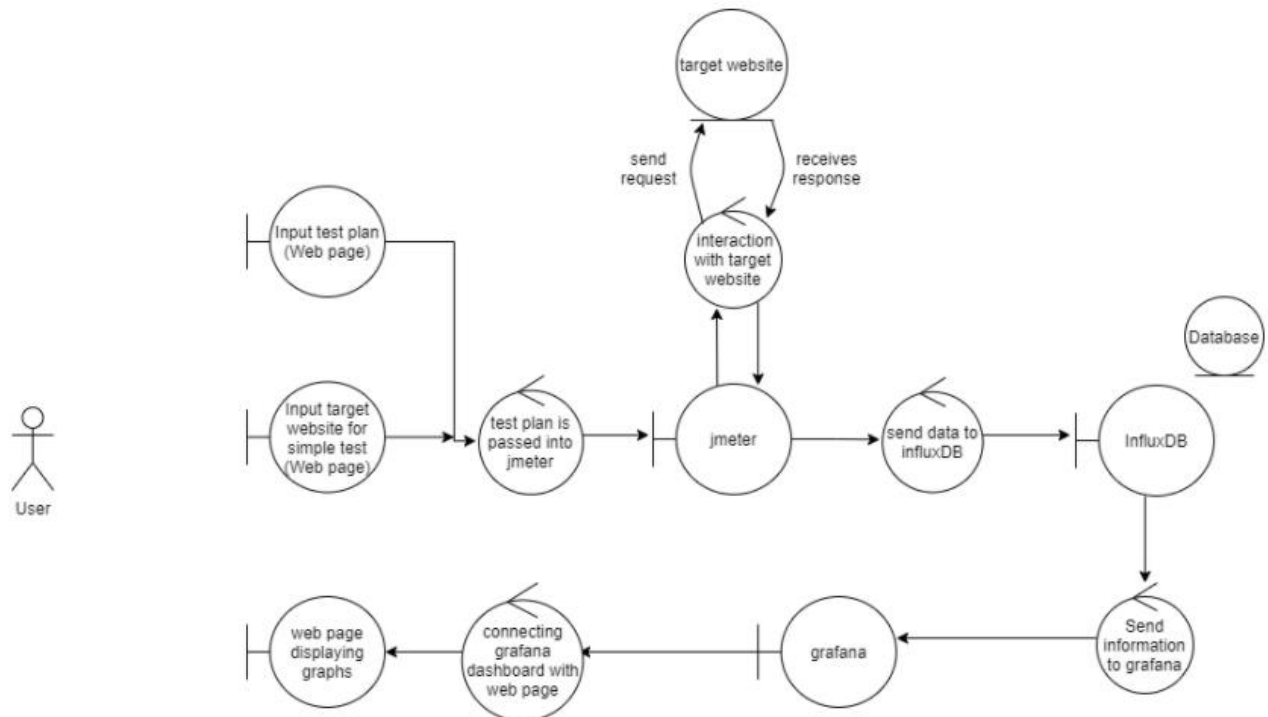
APPENDICES

Appendix A (System Diagram) -



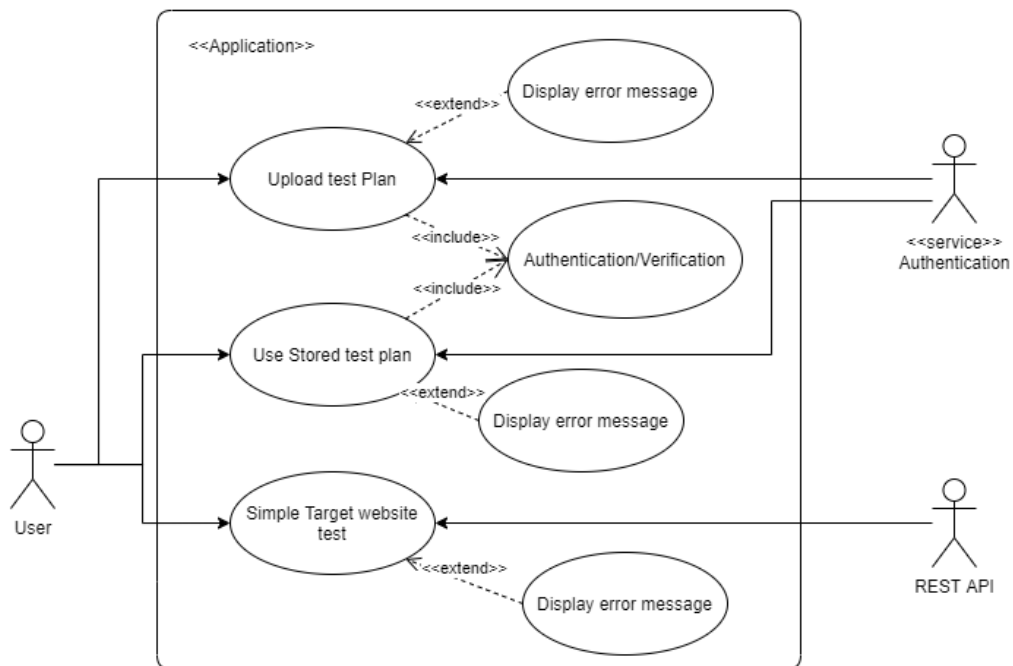
Appendix B (Robustness Diagram) -

(v2)



Appendix C (Use-Case Diagram) -

(v2)



Appendix D () -

Appendix E () -

Appendix F () -