# 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

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><li>Create a test plan<ul><li>Canary testing</li><li>Green/blue/red testing</li><li>Integration testing</li></ul></li></ul> | <ul><li>Unit test</li></ul> |
| <ul><li>Make a request every x time (every 5 mins not sure)</li></ul> | |
| <ul><li>Store performance metrics in influxDB (metrics tbd)<ul><li>Status (main metric)</li><li>Latency</li><li>Sample size (Bytes)</li><li>Ms response (Maybe)</li><li>Number of Users (Our own site)</li></ul></li></ul> | |
| <ul><li>Visually represent stored metrics in graphics with Grafana</li></ul> | |
| <ul><li>Developing a website to display graphics from grafana.</li></ul> | |
| <ul><li>Work on API requests from grafana to display the graphs</li></ul> | |
| <ul><li>Diagrams:<ul><li>Use case scenarios</li><li>Sequence diagram</li><li>Architecture/Deployment Diagram</li><li>Robustness diagram (maybe)</li></ul></li></ul> | |

## 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

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

**PROJECT ORGANISATION STRUCTURE**

Who did what and when

**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**