Project Charter

**Project Title**:

Network Performance Evaluation on Linux Based Operating Systems – Physical Team

**Project Start Date:** 03/03/2025 **Projected Finish Date:** 31/10/2025

**Budget Information:**

The total estimated cost of the project is $118,774.71.

**Project Manager:**

Thomas Robinson ([cgr2690@autuni.ac.nz](mailto:cgr2690@autuni.ac.nz))

**Project Objectives:**

The goal of this project is to evaluate the performance of 3 latest Linux based Operating Systems distributions – Fedora, Ubuntu, Kali Linux. These operating systems need to be configured as software routers before running the evaluations. Tools such as iPerf or D-ITG are to be employed to generate the evaluation traffics.

**Main Project Success Criteria:**

Successfully gather data comparing IPv4 and IPv6, using TCP and UDP protocols, across 12 given packet sizes on 3 different Linux operating systems configured as software routers.

**Approach:**

The project team has chosen to go with Software Testing Life Cycle (STLC) as our chosen methodology. This is due to the focus of our project being systematic testing of multiple operating systems, with evaluation confidence and validation.

Unlike development-heavy methodologies like Waterfall or Scrum, STLC provides a dedicated, structured framework solely for testing, which aligns more closely with our project's objectives.

It allows us to focus on requirement analysis, evaluation planning, evaluation case development, evaluation environment setup, evaluation execution, and evaluation closure in a clear and organised sequence.

This ensures that each operating system configuration is thoroughly evaluated before moving forward, reducing the risk of undetected issues. By using STLC as our core methodology, we can maintain a high standard of accuracy and reliability throughout the project, while still allowing room for iteration and refinement within the testing phases.

**Roles and Responsibilities**

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| --- | --- | --- | --- | --- |
| **Role** | **Name** | **Organisation/**  **Position** | **Contact Information** | **Sign** |
| System Architect | **Nathan Quai Hoi** | System Architect | wgk6332@autuni.ac.nz | **NQH** |
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