COIT13236 – Cyber Security Project

**KN University Network Design**

1. **Testing and Validation Plan**

Group 02

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# Testing and Validation Plan

**Testing and Validation Plan**

A thorough testing and approval plan guarantees that the network design and execution fulfill the necessary guidelines and function as expected. This cycle includes systematic testing, monitoring, and validation to identify and resolve issues before the network goes live.

**Components:**

**Testing Stages:**

Unit Testing: Test individual components or gadgets for legitimate functionality.

Integration Testing: Verify that various components and systems work together flawlessly.

System Testing: Test the whole network setup to guarantee it meets execution and security necessities.

**Validation Procedures:**

Acknowledgment Criteria: Characterize standards for effective network operation and performance.

Documentation: Archive testing results, issues, and goals.

**User Acceptance Testing (UAT):**

Feedback: Get feedback from end-clients to approve that the network addresses their needs and expectations.

Adjustments: Make vital changes based on client feedback.

**Performance Testing:**

Load Testing: Stimulate peak traffic conditions to test network performance under pressure.

Stress Testing: Evaluate the network's capacity to deal with outrageous circumstances and failures.

# References

IEEE (2024) Guidelines for Network Testing and Validation. Available at: https://www.ieee.org/publications/network-testing-guidelines.html (Accessed: 1 August 2024).

Shen, Z. and Choi, S. (2019) ‘An Overview of Network Testing Tools and Techniques’, International Journal of Network Management, 29(3), pp. 243-257. doi:10.1002/nem.2023