

ABSTRACT

In the rapidly evolving digital era, the use of Enterprise Resource Planning (ERP) systems has become a cornerstone of operations for companies worldwide. ERP systems integrate various business aspects, including inventory management, finance, production, human resources, and logistics, to support strategic decision-making and enhance operational efficiency. In higher education institutions, ERP can expand the accessibility of academic information, facilitate human resources management, and strengthen financial management. Reliable network infrastructure is essential for effective ERP implementation. Wireless network technology enables flexible transmission of data without physical cables, offering advantages such as low cost, easy installation, and wide coverage, though it faces challenges like data security and unstable performance. Telkom University plans to implement an ERP system at the Faculty of Industrial Engineering. This study analyzes the readiness of the wireless network infrastructure by evaluating Quality of Service parameters including throughput, packet loss, delay, and jitter in three buildings: TULT Building, Cacuk B Building, and Mangudu Building. The method used is the Network Development Life Cycle (NDLC). The results indicate that the wireless network infrastructure at the Faculty of Industrial Engineering is adequate to support ERP implementation. QoS measurements show high throughput, low packet loss, acceptable delay, and minimal jitter. This conclusion provides a strong basis for the Faculty to effectively implement ERP and offers recommendations for improving network performance. This study can also serve as a reference for other institutions in developing reliable network infrastructure to support complex information systems.

Keywords— *wireless network, enterprise resource planning, network development life cycle, quality of services*