ABSTRACT

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OPTIMIZATION OF NETWORK SERVICE LEVEL AGREEMENT MONITORING USING ZABBIX AND GRAFANA WITH THE NETWORK DEVELOPMENT LIFE CYCLE METHOD

During the internship at PT. Lancar Wiguna Sejahtera (Lawson Indonesia), the intern assumed the role of Network Engineer & Messaging within the IT Operations division, under the direct supervision of the IT Operation Senior Manager. The intern acknowledges that computer networks constitute a fundamental pillar of modern information technology, facilitating connectivity and data distribution, which are critical in supporting various operational functions—particularly within the retail sector, as exemplified by PT. Lancar Wiguna Sejahtera (Lawson Indonesia). One of the primary challenges encountered is ensuring that the network's Service Level Agreement (SLA) is consistently met in accordance with established performance criteria. To address this issue, the implementation of an efficient and effective monitoring system is essential for optimizing network performance. This internship project aims to enhance SLA monitoring by employing Zabbix as the core monitoring system, integrated with Grafana for real-time data visualization. The project adopts the Network Development Life Cycle (NDLC) methodology, encompassing the phases of analysis, design, simulation, implementation, testing, and documentation. The outcomes of this optimization are expected to improve the visibility of network performance, expedite the identification of network-related issues, and support more rapid and accurate decision-making processes by the IT team. Ultimately, the implementation of this optimized monitoring solution is intended to help maintain operational stability across Lawson Indonesia's head office, branch offices, and retail stores, all of which are highly dependent on consistent network availability.

Keywords: *Monitoring System, Zabbix, Grafana, NDLC Method*