

## **ABSTRACT**

*In the era of rapid advancement of information technology, ITSM becomes very important for organizations to ensure IT resources are used optimally to achieve business goals. iTop, which is based on the ITIL v4 framework, provides various modules for IT service management, but has limitations in network infrastructure monitoring. Therefore, this research integrates iTop with Nagios to overcome these weaknesses.*

*This research uses the Network Development Life Cycle (NDLC) methodology which consists of several stages, starting from requirements analysis, system design, to simulation prototyping. In this study, 3 tests were carried out by running 3 experimental scenario designs, namely testing the Nagios monitoring system, ticketing system on iTop and the integration system of Nagios monitoring and ticketing services with iTop. In order to be more detailed in obtaining test results, 3 Data Flow Diagrams were also designed to find out in detail the flow of information that occurs from the three aspects of testing. In 19 tests carried out with each achievement of the success parameter, showing the status of SUCCESSFUL TESTING and The results showed that the integration between iTop and Nagios can be done, although the creation of obstacle tickets obtained from the results of Nagios network monitoring does not occur automatically and in real time. However, iTop and Nagios connectivity are successfully integrated by executing the script create-ticket-manual-incident.php which creates tickets manually on the iTop service.*

**Keywords**—ITSM, iTop, Nagios, integration, network monitoring, Ticket