ABSTRACT

Directorate of Information Systems (SISFO) Telkom University (Tel-U) is a unit that provides information technology infrastructure services and network interconnection services (intranet and Internet) to support business processes at Telkom University. At this time in SISFO, the network device configuration process, configuration management and analysis of configuration management results are done manually. As the number of network devices available, the configuration process takes time and the process of analyzing the results of the configuration becomes more complex.

In this final project, a case study of the configuration automation system design and configuration analysis will be carried out which can be realized through network-based emulation at SISFO with a topology in the Tokong Nanas Building. In an agentless manner, the configuration automation system is built using Ansible through the push method and the declarative approach. This system is displayed on the Semaphore UI web then the log results are processed using Elasticsearch, namely search and analytics engine and Kibana as data visualization. Yaml is used as the main programming language on this system, capable of automating network devices as well as log reporting and configuration.

The results of this system test Ansible is able to configure vlan configurations, log logging of network devices and display visualization of information logs and network device configurations with an execution duration of 20 minutes 12 seconds on 7 Cisco vendor devices and 5 minutes 14 seconds execution duration on a Mikrotik vendor device, so it is able to reduce the length of time in network management.

Keywords: Ansible, Elasticsearch, *automation*, yml, *network configuration*.