

## **ABSTRACT**

*Data communication is a process of sending data from client to client through a computer network, where the increasing use of data communication makes computer networks more complex. Complex computer networks make it difficult for network administrators to configure, especially routing protocol configuration. Network administrators are in charge of configuring routing protocols and managing networks, in addition, the more devices on the network allow human error from the administrator. Therefore, network automation is one solution that helps network administrators overcome this. This study focuses on analyzing the performance of network automation using paramiko and telnetlib libraries. The routing protocol used by OSPF for IGP and BGP for EGP. The scenario in this study is configuring IP addresses and configuring OSPF and BGP routing. As well as sending data using the FTP protocol to find out the performance of the routing protocol. Based on the test results, the telnetlib library is better in terms of configuration time to the router by 22.361%, convergence time by 10.69% when applied to IGP and EGP routing protocols. The EGP routing protocol has a better QoS result value of 21.59% from the IGP routing protocol on throughput and delay parameters.*

**Keywords:** *BGP, NetworkAutomation, OSPF, paramiko, telnetlib.*