

## ABSTRACT

*Hotspot is an area where people can access the internet network. If the hotspot application is not only in one place, it is difficult to manage and monitor the network because the network admin has to be at the hotspot to manage and monitor the network.*

*In this final project, a voucher-based hotspot network has been designed using the Google Cloud platform, which uses Usermanager, Zabbix and Grafana as a network management and monitoring system, and the PCQ method as a bandwidth management for hotspot users.*

*Throughput testing using the PCQ method has a slightly smaller amount of 6.1142 MB / s and the throughput without the PCQ method is 8.2918 Mbps. The packet loss using the PCQ method has 1.8677% of examiners, slightly larger than without using the PCQ method, namely 1.8198%. The delay test using the PCQ method obtained 1.077625 ms which was slightly greater than that without the PCQ method, namely 0.838202 ms. In testing the jitter using the PCQ method resulted in 1.077639 ms, slightly greater than that without the PCQ method, namely 0.838229 ms.*

**Keywords:** *Hotspot, Wi-Fi, Zabbix, Grafana, Google Cloud Platform*