ABSTRACT

It is now known that in recent years the world of gaming has grown rapidly, reinforced by the presence of new devices/hardware that support the presence of the latest games with graphic quality that is close to realistic which requires the source of a device that is quite large but has an expensive price. If you use cloud gaming, you don't need a device that is too high. However, in cloud gaming, there are obstacles such as the use of large resources from virtual machines and having a fairly high response time

In this final project, a cloud gaming is designed using docker containers to reduce CPU performance and fog computing technology is used to reduce the response time of the cloud gaming. Testing is done by measuring throughput, packet loss, delay and jitter using wireshark

The results of the design show that the performance of fog computing gets better results than cloud computing alone in the gaming world where at a bandwidth of 10 Mbps, the delay obtained by cloud computing is 16 ms while fog computing is 14 ms. Less packet loss in fog computing. Jitter without fog computing is at 16 ms while using fog computing is at 14 ms which makes for a better gaming experience and docker containers reduce CPU workload by approx. 10% in rendering

Keywords : *Game, Hardware, Cloud Gaming, Delay, Docker Container, Fog Computing*