ABSTRACT

Named Data Network (NDN) is a new network architecture that is able to replace the communication model that is host-centric to data-centric. NDN has a temporary storage capable of storing copies of data called cache. To support the cache storage process, there are several caching techniques, one of them is cache replacement, which is a content replacement technique when the cache storage is full. In NDN there are two types of packets that represent the content delivery process, namely interest packets and data packets.

In this final project, research is conducted on the effect of changing content and nodes with LRU cache replacement on NDN virtual nodes. The research was conducted by periodically changing the number of content and nodes which were then analyzed based on the Cache Hit Ratio (CHR) and Round Trip Time (RTT) parameters.

The results of the analysis based on several scenarios of changes in the number of content and nodes periodically proved to be able to affect the value of the resulting CHR and RTT. The increasing amount of content has the effect of decreasing the CHR value and increasing the RTT value. Meanwhile, the increasing number of nodes has an impact on increasing the RTT value but there is no significant impact on the resulting CHR value.

***Keywords** : NDN, contents, nodes, LRU, Cache Hit Ratio, Round Trip Time.*