

ABSTRACT

Named Data Networking (NDN) intrinsically supports caching features in the network. This feature offers the potential to transmit content segments consisting of content requested from producers on the network. However, in NDN itself, there are a lot of caching techniques that are underutilized because of the complexity of the algorithm creation.

There are several caching techniques based on a replacement algorithm, including Optimal, which focuses more on content that will not be used in the near future to store content in the content store. But Optimal currently has a weakness, namely that it cannot combine content that will be accessed and most accessed when used together, Optimal Modification is made to combine content that will be accessed and most accessed in the decision stage of changing content so that optimal modification can improve optimal performance.

In this final project, optimal performance and optimal modification are compared. The simulation results show that the optimal modification is feasible to improve optimal performance. When the number of consumers, producers, size content store, and interest frequency increased, the hit ratio increased by 0,18%, 0,38%, 6,02%, and 0,45% in the network. Then, Increase In Interest, reduce packet drop by 100%. Meanwhile, for the Hop Count and delay, the difference is not too significant.

Keywords: ndnSIM, cache, Optimal, Modification