Performance evaluation of an adaptive forwarding strategy in Named Data Networking

ABSTRACT

Named Data Networking (NDN) is an envisioned Internet architecture that uses named data to locate the data of interest as opposed to the IP address of the stored data. The forwarding strategy is critical in this network to ensure the data is well received in a timely manner. Stochastic Adaptive Forwarding (SAF) is said to have an increased throughput and provide quick recovery as it efficiently chooses the potential forwarding link whenever there is a failure on the existing link. SAF is designed to consider both the context and content of the networks to optimize its forwarding behavior. This paper compares the performance of SAF and Best Route algorithms, in terms of Interest satisfaction ratio, cache hit ratio, delay, Interest retransmission rate and hop count value. The results show SAF outperforms Best Route except for the hop count value.