

ABSTRACT

IP network is a network architecture with a host-centric mechanism for communication. The functionality of this architecture does not match the trend of network usage, which is dominated by distributed content access. The host-centric mechanism can be replaced by a network that uses name-centric which is more suitable for meeting user needs. NDN (Named Data Networking) is one of the network architectures that uses a name-centric mechanism, where each data packet in the NDN will be given a prefix name. In addition, NDN also has a caching feature that can store content in the Content Store (CS).

Migration from IP architecture to NDN architecture cannot be done globally and massively in a short period of time. So an integration process between the two is needed so that the migration process can run more smoothly. A lot of research has been and is being done in integrating host-centric networks with name-centric networks, one of which uses the translation gateway method which is considered more profitable than other methods.

Translation gateway has the ability to connect two architectures, namely IP and NDN by translating IP packets into NDN packets and vice versa. The performance of IP to NDN and NDN to IP networks has a higher value than IP to IP networks due to the caching feature on each NDN network router. RTT, inter-arrival delay, and throughput values of IP to NDN and NDN to IP networks are better by 40%-98% compared to IP to IP networks. The use of a translation gateway can be a good alternative in helping the process of migrating a host-centric network to a name-centric network.

Keyword: integration, IP, NDN, gateway, translation