

ABSTRACT

Implementation of protocol on internet network at this time that is Transmission Control Protocol / Internet Protocol (TCP / IP). Where TCP / IP protocol can not work on a network with a very high Delay. The Delay Tolerant Network (DTN) allows a network to have a very high Delay and work on networks that do not have a definite end-to-end path. DTN handles the Delay problem by using the "Store-Carry-Forward" paradigm.

In the DTN network the process of carrying a message requires a node that has enough buffers. But in reality not all nodes can overcome all incoming messages. This situation can occur when a node in a network has a limited buffer size that can make message buildup or unloaded messages into the buffer. In that case a management buffer is required to provide rules and treatments for messages that will enter or exist within a node.

In this study using the Message Drop Control Source Relay (MDC-SR) Message Management buffer applied to MaxProp routing protocols that have low performance when using small buffer sizes. The MDC-SR has several mechanisms in the treatment of a message. Where messages are logged in from the destination of the message node and the mechanism of using the Upper Bound limit on the number of messages carried on a node. The message drop process applies when it meets one or both. This study also looked at testing by involving several nodes, message size variation, buffer size variation against Upper Bound limit.

The results of the buffer management research of Message Drop Control Source Relay can improve the performance of delivery probability, overhead ratio and message dropped on MaxProp routing but still have poor performance on latency average compared to the original routing of MaxProp protocol.

Keywords : *Delay Tolerant Network, Store-Carry-Forward, Message Drop Control Source Relay, Buffer, MaxProp.*