

ABSTRACT

Mobile Ad Hoc Networks (MANETs) are collections of wireless nodes that can be dynamically set up and only function without using existing network infrastructure. Manet is also a temporary network formed by several mobile nodes without an administrative center and cable infrastructure. In MANET, mobile hosts that are connected to wireless can move freely and also play a role as a router.

In this study, compared the performance of two TCP, TCP Linux and TCP Vegas against two MANET routing protocols, namely AODV (Ad Hoc On Demand Distance Vector) and DSDV (Destination Sequenced Distance Vector), performance will be tested using Network Simulator v2.35 software (NS-2.35). For the standard using IEEE 802.11p as the communication standard in MANET, in the simulation that I worked on using the number of nodes 15,30,45,60,75,90 with detailed workmanship I chose a random way point.

It can be concluded that in the first simulation by comparing DSDV and AODV using TCP Linux, DSDV performance is superior in terms of delay and throughput with an average value of performance delay of 0.415 ms. In the second simulation the comparison of DSDV and AODV using TCP Vegas, for AODV delay performance is superior for the small number of nodes seen in node 15 and 30 delay difference with DSDV 0.381 ms and 0.288 ms. The third simulation compares DSDV routing protocol using TCP Linux and TCP Vegas. TCP Linux delay performance is far superior to TCP Vegas, and in the third simulation of AODV routing protocol comparison using TCP Linux and TCP Vegas, the delay performance increases every time there is an increase in the number of TCP Linux nodes far superior to TCP Vegas. The best delay performance DSDV linux with an average delay of 0.415, the highest throughput of DSDV Vegas, the highest PDR of DSDV Vegas.

Kata kunci : ONE Simulator, NS-2, MANET, AODV,DSDV, TCP Vegas, TCP Linux.