Abstract

In a mobile ad hoc network (MANET), the topology of the network may change rapidly and unexpectedly due to mobility of nodes. Routing protocols operate differently under distinct environments. Thus, it is necessary to analyze the behavior of different routing protocols under distinct environments. Thus, setting up routes that meet high reliability is a very challenging issue. Another important problem in the MANETs is the energy consumption of nodes. Our study is more concentrated on IPv6 than IPv4. The IPv6-enabled network architecture will become the future standard. IPv6 based network is more protected than IPv4 network and also IPv6 has huge address space support. In this Paper study has been done on the performance observation of various routing protocols of MANET under IPv6 Environment. OPNET Modeler 14. 5 is used as simulation tool. We have analyzed the behavior of three routing protocols in the network protocol IPv4 & IPv6 and compared the performance of these protocols using OPNET Modeler 14. 5. IPv6 Migration planner helps in migrating the nodes to IPv6 Environment. Routing protocols are estimated under IPv6 environment on the basis of Wireless LAN Load, wireless LAN Data dropped, Throughput, and Network load. The objective of this research is to examine how these routing protocols act under IPv6 environment and identify which routing protocol performs better.

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