Quantitative Comparative Study of Selected Routing Protocols in MANET based on Security

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Abstract

Mobile ad-hoc network (MANET) is a sub class of ad-hoc network and it dynamically forms a temporary network without any support of central administration. Ad hoc network is a collection of wireless mobile nodes without any fixed infrastructure. The network is ad hoc because it does not rely on any pre-existing network infrastructure like routers in wired networks. Such networks have no fixed topology due to the high degree of node mobility. Node mobility may cause the routes change. Hence, routing in MANET is a critical task due to its highly dynamic environment. To accomplish this task, a variety of routing algorithms have been proposed and also the number remains increasing day by day. These protocols fall in to mainly three categories---Proactive, Reactive and Hybrid. But, it is difficult to determine which protocol performs best under a number of different scenarios. This paper presents the qualitative comparison of selected proactive routing protocols DSDV, OLSR and CGSR based on security.

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Index Terms

Computer Science
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Keywords

MANET, Proactive routing protocols, DSDV, OLSR, CGSR, Comparative study.