

A hybrid reactive routing protocol for Mobile Ad-hoc Networks

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Abstract

A lot of research effort has been put by researchers in developing routing protocols for Mobile Ad-hoc Networks (MANETs). Each protocol proposed and designed so far has its own merits and demerits. Researchers around the world continue to develop novel, advanced routing protocols that can route messages towards their destination in an efficient way while consuming minimum amounts of resources. In this work we take two well known MANET routing protocols, namely, the Ad-hoc On-demand Distance Vector routing protocol and the Epidemic routing protocol, and combine their preferred properties to formulate a new Hybrid routing protocol. We propose this routing protocol again as a reactive protocol with the objective of increasing the message delivery ratio while utilizing minimum mobile device resources. Our extensive simulation based experimental studies show that the newly proposed Hybrid protocol outperforms the other two protocols in many aspects under various testing scenarios.

Indexed keywords

Ad hoc on demand distance vector; Device resources; Epidemic routing; Experimental studies; Extensive simulations; Hybrid protocols; Hybrid routing protocols; Message delivery; Reactive protocols; Reactive routing protocol; Research efforts; Route messages

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